

CATALOG 2021

# Pilot devices, 22 mm

## The complete offering



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**ABB pilot devices are engineered for total reliability. Their innovative design simplify the entire process, from selection to installation. Enclosures, signal towers and signal beacons complete the portfolio.**

# Pilot devices

## The complete offering

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# Pilot devices

## Reliable in all applications

Whether it is installed in an EV charger or in the testing equipment of an elevator ABB pilot devices will work as a reliable interface for operators. They are designed and tested to withstand extreme environments.



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01



—  
02



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03

- 01 Elevator
- 02 EV charging
- 03 Marine

## A small upgrade that can make a big difference.

Trust is everything. And in industrial environments, it is essential to have human-machine interfaces you can count on. Whenever you start or stop a process, the response must be assured. That's why ABB pilot devices are designed and engineered to deliver total reliability.

Continuous production, maximum uptime and higher profits require exceptional process reliability.



When it comes to the safety of your people, dependability is essential.



—  
04

—  
04 Food and beverage

—  
05 Marine and ports

—  
05

The details matter. Work starts and stops with pilot devices and so does your productivity and safety. Rely on ABB pilot devices to perform when it matters the most.



## Pilot devices

Reliable products, easy to select and install



ABB pilot devices are engineered for total reliability. Our products are tested to extremes and proven in the toughest environments. Their innovative design simplify the entire process, from selection to installation. Enclosures, signal towers and signal beacons complete the portfolio.



### Continuous operation

#### **Engineered for tough environments**

ABB pilot devices are designed with protection degree of up to IP69K and 4X, guaranteeing reliability in extreme environments – making ABB pilot devices ideal for use in demanding industries such as construction and food and beverage. An innovative design that automatically cleans contacts ensures high reliability for all products.



### Global availability

#### **Simple selection and stock management**

ABB's core offering includes the pilot devices most in demand, so product selection is easier, stock management is simpler and product availability is higher.

Support for exporters is world-class, thanks to ABB's standardized global range, certified to comply with all major international standards.



### Easy to install

#### **Save time and space**

The unique design of ABB's modular ranges enable tool-free installation that is quick and simple. It provides high flexibility for last-minute changes. With its all-in-one construction, the compact range reduces installation space and saves time.

# Pilot devices

## Reliability that lasts

### Continuous operation

#### Longer lifetime

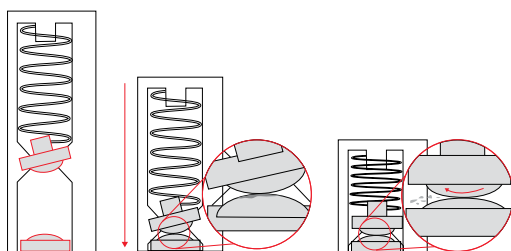
- ABB pilot Devices are engineered and tested to sustain frequent use over time in any environment

#### High mechanical durability

- Tested to achieve mechanical life time of up to 10 million operations

#### Ensuring electric connectivity

- Self-cleaning contacts ensure reliable operation without the need for maintenance, increasing uptime



The built-in wiping mechanism cleans the contacts when operated to remove dust and oxidation on the contacts and improve conductivity.

#### Dust and water proof

All ABB pilot devices are impenetrable to dust and are extremely resistant to water exposure.

#### IP66

IP66-classed pilot devices can withstand high-pressure water jets and are suitable for tough outdoor use.

#### IP67

IP67-classed pilot devices can withstand immersion in one metre of water for 30 minutes. They are suitable for use in the harshest environments with water and dust.

#### IP69K

IP69K pilot devices can withstand both rough treatment and intensive, high-temperature cleaning. They are ideal for environments with high sanitary requirements, such as the food and beverage industry.

**Find full test description in general technical data section.**

—  
01 Mechanical durability test

—  
02 Total protection against any kind of dust

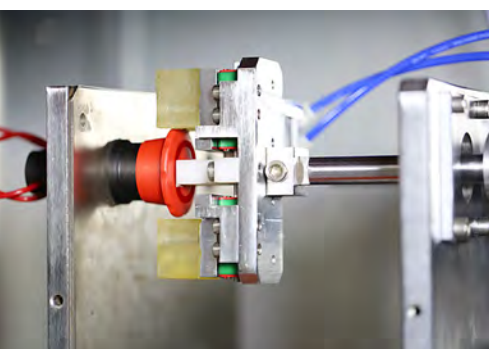
—  
03 Powerful water jets projected against the front from a distance of 3 meters

### Testing that goes beyond the standards

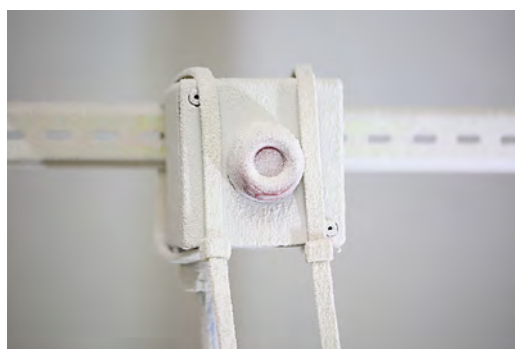


Watch the video

—  
Trust ABB to produce products that work in any environment.



01



02



03

## Pilot devices

### Global quality, local support



#### Global availability

##### **Available worldwide from ABB**

Achieve truly global solutions

- Same products and quality all around the world
- Local support available everywhere with ABB's global distribution network
- All certificates and spare parts available globally.

##### **Always the right solution with the wide range of LEDs**

Save time and money on your projects with fewer order codes for your illuminated products.

With supply voltage of 6.3 V DC to 415 V AC for both modular and compact range, ABB covers all the needs with no additional transformers.

#### Easy to install

Reduce installation time by choosing between the flexible modular ranges and the all-in-one compact range of pilot devices.

Mixing and matching the two ranges enables faster and more flexible purchasing and design. Fastening of the nut is tool-free and most accessories can be used for both ranges.

## Modular plastic range

### Flexible configuration

A versatile selection of operators with high levels of flexibility and a broad choice of electrical ratings. Find the perfect solution for almost every application.



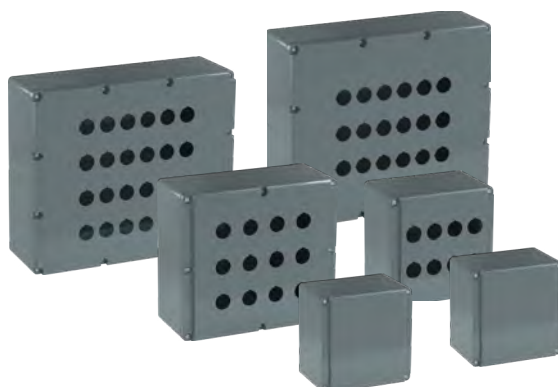
## Modular metal range

Designed for demanding applications

ABB's modular metal range combines ultimate reliability with the total flexibility of a modular range. For mining, construction and heavy industry applications, find the right solution here.



IP66 aluminium metal enclosures are available to accompany this range



## Compact range

### All-in-one solution

The most efficient solution available, reducing installation time and cost. The compact range have the highest level of dust and water resistance on the market.



Pushbuttons



Heavy duty pushbuttons



Mushroom pushbuttons



Emergency stop pushbuttons



Machine stop pushbuttons



Pilot lights



Selector switches



Buzzers

Fewer order codes make selection easy and save time.

All-in-one design makes installation fast.



Improve reliability:  
Higher protection levels  
with IP66, IP67 and  
IP69K classification and  
4X (NEMA)

Compact:  
Just 42 mm  
built in depth





# Pilot devices, 22 mm

## Modular plastic range

### Ordering details

|    |                                                     |
|----|-----------------------------------------------------|
| 14 | Mounting instructions                               |
| 15 | Non-illuminated pushbuttons                         |
| 17 | Illuminated flush pushbuttons                       |
| 19 | Non-illuminated double pushbuttons                  |
| 20 | Illuminated double pushbuttons                      |
| 22 | Mushroom pushbuttons                                |
| 23 | Emergency stop pushbuttons                          |
| 24 | Machine stop pushbuttons                            |
| 25 | Heavy duty pushbuttons                              |
| 26 | Non-illuminated selector switches                   |
| 32 | Illuminated selector switches - 2, 3 and 4 position |
| 36 | Key-operated selector switches - 2 and 3 position   |
| 38 | Potentiometers                                      |
| 39 | Reset pushbuttons                                   |
| 41 | Joysticks                                           |
| 42 | Toggle switches                                     |

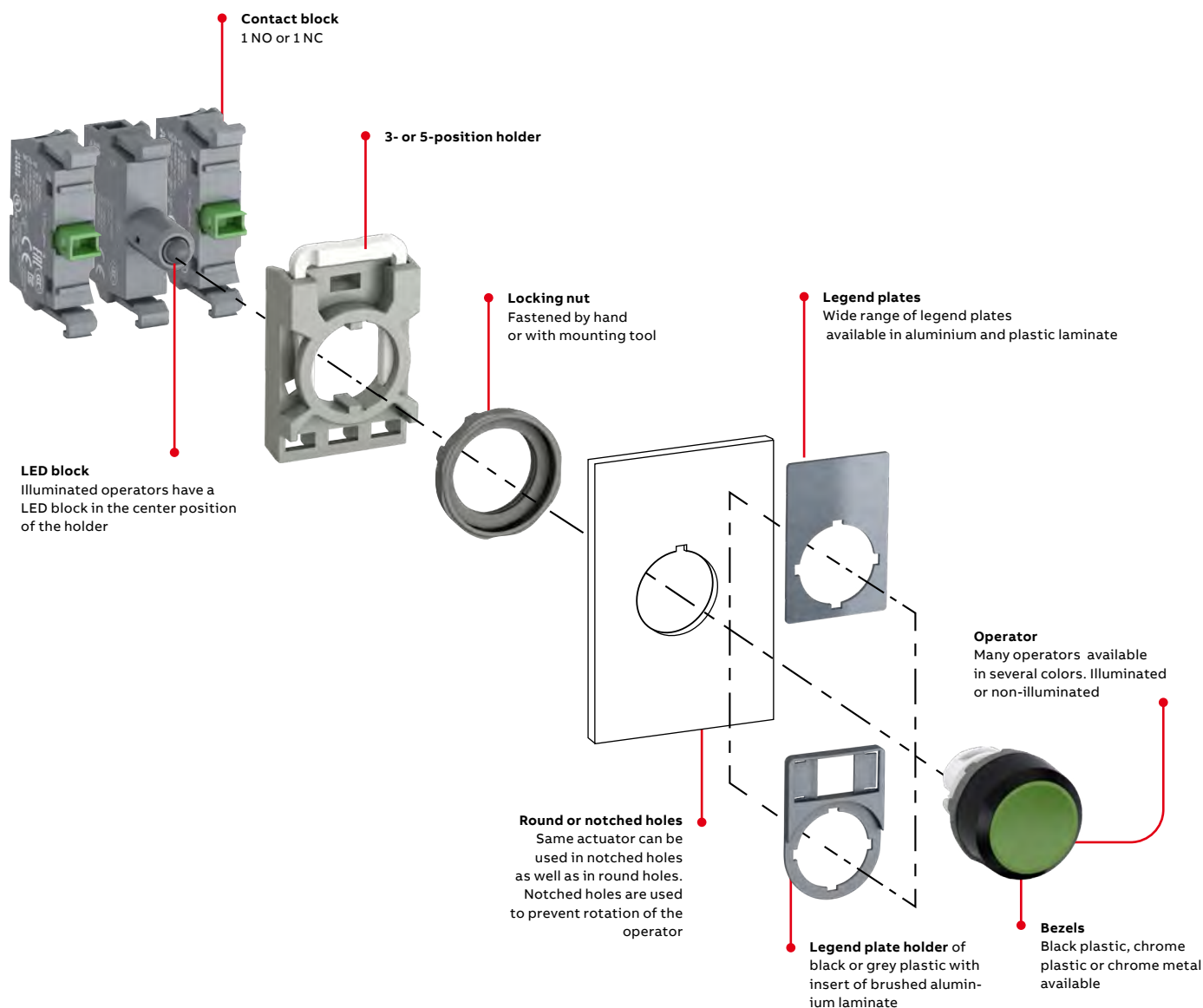
### Accessories for modular range

|    |                                               |
|----|-----------------------------------------------|
| 43 | Contact block configuration                   |
| 44 | Holders and contact blocks for front mounting |
| 45 | LED blocks for front mounting                 |
| 47 | Other accessories                             |

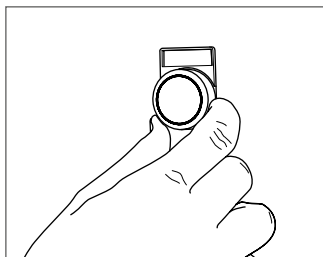
### Technical data

|    |               |
|----|---------------|
| 53 | Drilling plan |
|----|---------------|

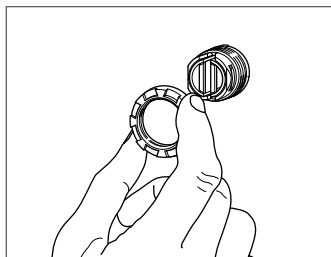
## Modular plastic range



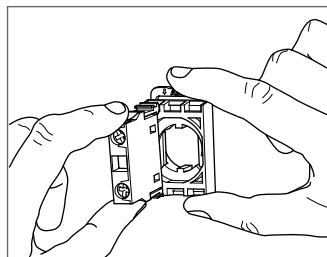
### Easy to install



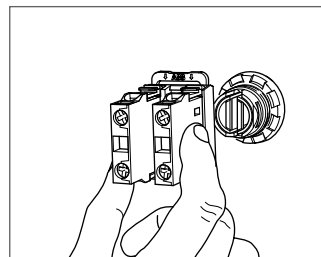
The operator is to be inserted from the front...



...and secured at the back with the nut.

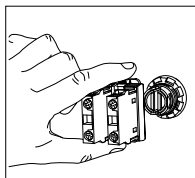
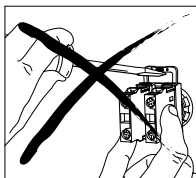


The contact blocks/LED block are then snapped on to the holder...



...and the holder snaps on to the operator.

### ...and to remove



Press down the spring on the holder and pull the holder from the actuator.

### Simple and fast installation



Watch the video

## Modular plastic range

### Non-illuminated flush pushbuttons



MP1-10R



MP1-10Y



MP1-30L



MP2-10G

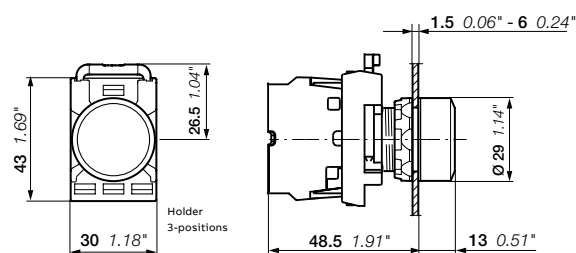


MP2-10W



MP2-20B

| Operator          | Bezel          | Type    | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------|----------------|---------|-----------------|---------|-------------------|
| <b>Momentary</b>  |                |         |                 |         |                   |
| ● Red             | Black plastic  | MP1-10R | 1SFA611100R1001 | 1       | 0.016             |
|                   | Chrome plastic | MP1-20R | 1SFA611100R2001 | 1       | 0.016             |
|                   | Chrome metal   | MP1-30R | 1SFA611100R3001 | 1       | 0.026             |
| ● Green           | Black plastic  | MP1-10G | 1SFA611100R1002 | 1       | 0.016             |
|                   | Chrome plastic | MP1-20G | 1SFA611100R2002 | 1       | 0.016             |
|                   | Chrome metal   | MP1-30G | 1SFA611100R3002 | 1       | 0.026             |
| ● Yellow          | Black plastic  | MP1-10Y | 1SFA611100R1003 | 1       | 0.016             |
|                   | Chrome plastic | MP1-20Y | 1SFA611100R2003 | 1       | 0.016             |
|                   | Chrome metal   | MP1-30Y | 1SFA611100R3003 | 1       | 0.026             |
| ● Blue            | Black plastic  | MP1-10L | 1SFA611100R1004 | 1       | 0.016             |
|                   | Chrome plastic | MP1-20L | 1SFA611100R2004 | 1       | 0.016             |
|                   | Chrome metal   | MP1-30L | 1SFA611100R3004 | 1       | 0.026             |
| ○ White           | Black plastic  | MP1-10W | 1SFA611100R1005 | 1       | 0.016             |
|                   | Chrome plastic | MP1-20W | 1SFA611100R2005 | 1       | 0.016             |
|                   | Chrome metal   | MP1-30W | 1SFA611100R3005 | 1       | 0.026             |
| ● Black           | Black plastic  | MP1-10B | 1SFA611100R1006 | 1       | 0.016             |
|                   | Chrome plastic | MP1-20B | 1SFA611100R2006 | 1       | 0.016             |
|                   | Chrome metal   | MP1-30B | 1SFA611100R3006 | 1       | 0.026             |
| ○ Clear           | Black plastic  | MP1-10C | 1SFA611100R1008 | 1       | 0.016             |
|                   | Chrome plastic | MP1-20C | 1SFA611100R2008 | 1       | 0.016             |
|                   | Chrome metal   | MP1-30C | 1SFA611100R3008 | 1       | 0.026             |
| <b>Maintained</b> |                |         |                 |         |                   |
| ● Red             | Black plastic  | MP2-10R | 1SFA611101R1001 | 1       | 0.016             |
|                   | Chrome plastic | MP2-20R | 1SFA611101R2001 | 1       | 0.016             |
|                   | Chrome metal   | MP2-30R | 1SFA611101R3001 | 1       | 0.026             |
| ● Green           | Black plastic  | MP2-10G | 1SFA611101R1002 | 1       | 0.016             |
|                   | Chrome plastic | MP2-20G | 1SFA611101R2002 | 1       | 0.016             |
|                   | Chrome metal   | MP2-30G | 1SFA611101R3002 | 1       | 0.026             |
| ● Yellow          | Black plastic  | MP2-10Y | 1SFA611101R1003 | 1       | 0.016             |
|                   | Chrome metal   | MP2-30Y | 1SFA611101R3003 | 1       | 0.026             |
| ● Blue            | Black plastic  | MP2-10L | 1SFA611101R1004 | 1       | 0.016             |
|                   | Chrome plastic | MP2-20L | 1SFA611101R2004 | 1       | 0.016             |
|                   | Chrome metal   | MP2-30L | 1SFA611101R3004 | 1       | 0.026             |
| ○ White           | Black plastic  | MP2-10W | 1SFA611101R1005 | 1       | 0.016             |
|                   | Chrome plastic | MP2-20W | 1SFA611101R2005 | 1       | 0.016             |
|                   | Chrome metal   | MP2-30W | 1SFA611101R3005 | 1       | 0.026             |
| ● Black           | Black plastic  | MP2-10B | 1SFA611101R1006 | 1       | 0.016             |
|                   | Chrome plastic | MP2-20B | 1SFA611101R2006 | 1       | 0.016             |
|                   | Chrome metal   | MP2-30B | 1SFA611101R3006 | 1       | 0.026             |
| ○ Clear           | Black plastic  | MP2-10C | 1SFA611101R1008 | 1       | 0.016             |



MP1, MP2

Dimensions (mm, inches)

## Modular plastic range

### Non-illuminated extended pushbuttons



MP3-10R

1SFC151006V0001



MP3-20Y

1SFC151028V0001



MP3-10W

1SFC151013V0001



MP3-10C

1SFC15133V0001



MP4-10G

1SFC151012V0001



MP4-10L

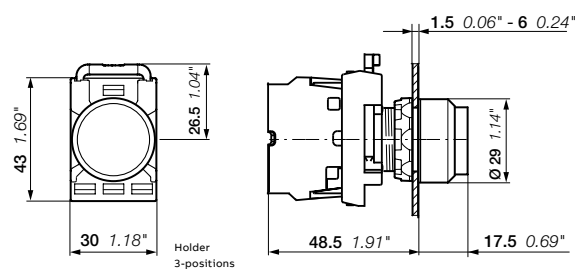
1SFC151019V0001



MP4-10B

1SFC151011V0001

| Operator          | Bezel          | Type    | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------|----------------|---------|-----------------|---------|-------------------|
| <b>Momentary</b>  |                |         |                 |         |                   |
| ● Red             | Black plastic  | MP3-10R | 1SFA611102R1001 | 1       | 0.016             |
|                   | Chrome plastic | MP3-20R | 1SFA611102R2001 | 1       | 0.016             |
|                   | Chrome metal   | MP3-30R | 1SFA611102R3001 | 1       | 0.026             |
| ● Green           | Black plastic  | MP3-10G | 1SFA611102R1002 | 1       | 0.016             |
|                   | Chrome plastic | MP3-20G | 1SFA611102R2002 | 1       | 0.016             |
|                   | Chrome metal   | MP3-30G | 1SFA611102R3002 | 1       | 0.026             |
| ● Yellow          | Black plastic  | MP3-10Y | 1SFA611102R1003 | 1       | 0.016             |
|                   | Chrome plastic | MP3-20Y | 1SFA611102R2003 | 1       | 0.016             |
|                   | Chrome metal   | MP3-30Y | 1SFA611102R3003 | 1       | 0.026             |
| ● Blue            | Black plastic  | MP3-10L | 1SFA611102R1004 | 1       | 0.016             |
|                   | Chrome plastic | MP3-20L | 1SFA611102R2004 | 1       | 0.016             |
|                   | Chrome metal   | MP3-30L | 1SFA611102R3004 | 1       | 0.026             |
| ○ White           | Black plastic  | MP3-10W | 1SFA611102R1005 | 1       | 0.016             |
|                   | Chrome plastic | MP3-20W | 1SFA611102R2005 | 1       | 0.016             |
|                   | Chrome metal   | MP3-30W | 1SFA611102R3005 | 1       | 0.026             |
| ● Black           | Black plastic  | MP3-10B | 1SFA611102R1006 | 1       | 0.016             |
|                   | Chrome plastic | MP3-20B | 1SFA611102R2006 | 1       | 0.016             |
|                   | Chrome metal   | MP3-30B | 1SFA611102R3006 | 1       | 0.026             |
| ○ Clear           | Black plastic  | MP3-10C | 1SFA611102R1008 | 1       | 0.016             |
|                   | Chrome metal   | MP3-30C | 1SFA611102R3008 | 1       | 0.026             |
| <b>Maintained</b> |                |         |                 |         |                   |
| ● Red             | Black plastic  | MP4-10R | 1SFA611103R1001 | 1       | 0.016             |
|                   | Chrome plastic | MP4-20R | 1SFA611103R2001 | 1       | 0.016             |
| ● Green           | Black plastic  | MP4-10G | 1SFA611103R1002 | 1       | 0.016             |
|                   | Chrome plastic | MP4-20G | 1SFA611103R2002 | 1       | 0.016             |
| ● Yellow          | Black plastic  | MP4-10Y | 1SFA611103R1003 | 1       | 0.016             |
|                   | Chrome plastic | MP4-20Y | 1SFA611103R2003 | 1       | 0.016             |
| ● Blue            | Black plastic  | MP4-10L | 1SFA611103R1004 | 1       | 0.016             |
|                   | Chrome plastic | MP4-20L | 1SFA611103R2004 | 1       | 0.016             |
| ○ White           | Black plastic  | MP4-10W | 1SFA611103R1005 | 1       | 0.016             |
| ● Black           | Black plastic  | MP4-10B | 1SFA611103R1006 | 1       | 0.016             |
|                   | Chrome metal   | MP4-30B | 1SFA611103R3006 | 1       | 0.026             |
| ○ Clear           | Black plastic  | MP4-10C | 1SFA611103R1008 | 1       | 0.016             |



MP3, MP4

Dimensions (mm, inches)

## Modular plastic range

### Illuminated flush pushbuttons



MP1-31G

15FCL51048V0001



MP1-11Y

15FCL51042V0001



MP1-21L

15FCL51045V0001



MP2-31R

15FCL51046V0001



MP2-11L

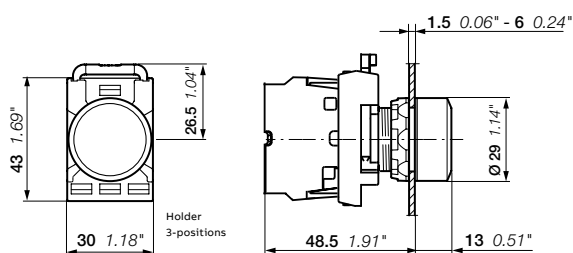
15FCL51040V0001



MP2-11C

15FCL51044V0001

| Operator          | Bezel          | Type    | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------|----------------|---------|-----------------|---------|-------------------|
| <b>Momentary</b>  |                |         |                 |         |                   |
| ● Red             | Black plastic  | MP1-11R | 1SFA611100R1101 | 1       | 0.016             |
|                   | Chrome plastic | MP1-21R | 1SFA611100R2101 | 1       | 0.016             |
|                   | Chrome metal   | MP1-31R | 1SFA611100R3101 | 1       | 0.026             |
| ● Green           | Black plastic  | MP1-11G | 1SFA611100R1102 | 1       | 0.016             |
|                   | Chrome plastic | MP1-21G | 1SFA611100R2102 | 1       | 0.016             |
|                   | Chrome metal   | MP1-31G | 1SFA611100R3102 | 1       | 0.026             |
| ● Yellow          | Black plastic  | MP1-11Y | 1SFA611100R1103 | 1       | 0.016             |
|                   | Chrome plastic | MP1-21Y | 1SFA611100R2103 | 1       | 0.016             |
|                   | Chrome metal   | MP1-31Y | 1SFA611100R3103 | 1       | 0.026             |
| ● Blue            | Black plastic  | MP1-11L | 1SFA611100R1104 | 1       | 0.016             |
|                   | Chrome plastic | MP1-21L | 1SFA611100R2104 | 1       | 0.016             |
|                   | Chrome metal   | MP1-31L | 1SFA611100R3104 | 1       | 0.026             |
| ○ White           | Black plastic  | MP1-11W | 1SFA611100R1105 | 1       | 0.016             |
|                   | Chrome plastic | MP1-21W | 1SFA611100R2105 | 1       | 0.016             |
|                   | Chrome metal   | MP1-31W | 1SFA611100R3105 | 1       | 0.026             |
| ○ Clear           | Black plastic  | MP1-11C | 1SFA611100R1108 | 1       | 0.016             |
|                   | Chrome plastic | MP1-21C | 1SFA611100R2108 | 1       | 0.016             |
|                   | Chrome metal   | MP1-31C | 1SFA611100R3108 | 1       | 0.026             |
| <b>Maintained</b> |                |         |                 |         |                   |
| ● Red             | Black plastic  | MP2-11R | 1SFA611101R1101 | 1       | 0.016             |
|                   | Chrome plastic | MP2-21R | 1SFA611101R2101 | 1       | 0.016             |
|                   | Chrome metal   | MP2-31R | 1SFA611101R3101 | 1       | 0.026             |
| ● Green           | Black plastic  | MP2-11G | 1SFA611101R1102 | 1       | 0.016             |
|                   | Chrome plastic | MP2-21G | 1SFA611101R2102 | 1       | 0.016             |
|                   | Chrome metal   | MP2-31G | 1SFA611101R3102 | 1       | 0.026             |
| ● Yellow          | Black plastic  | MP2-11Y | 1SFA611101R1103 | 1       | 0.016             |
|                   | Chrome plastic | MP2-21Y | 1SFA611101R2103 | 1       | 0.016             |
|                   | Chrome metal   | MP2-31Y | 1SFA611101R3103 | 1       | 0.026             |
| ● Blue            | Black plastic  | MP2-11L | 1SFA611101R1104 | 1       | 0.016             |
|                   | Chrome plastic | MP2-21L | 1SFA611101R2104 | 1       | 0.016             |
|                   | Chrome metal   | MP2-31L | 1SFA611101R3104 | 1       | 0.026             |
| ○ White           | Black plastic  | MP2-11W | 1SFA611101R1105 | 1       | 0.016             |
|                   | Chrome plastic | MP2-21W | 1SFA611101R2105 | 1       | 0.016             |
|                   | Chrome metal   | MP2-31W | 1SFA611101R3105 | 1       | 0.026             |
| ○ Clear           | Black plastic  | MP2-11C | 1SFA611101R1108 | 1       | 0.016             |
|                   | Chrome metal   | MP2-31C | 1SFA611101R3108 | 1       | 0.026             |



MP1, MP2

Dimensions (mm, inches)

## Modular plastic range

### Illuminated extended pushbuttons



MP3-11R

1SFC151065V0001



MP3-31G

1SFC151062V0001



MP3-11W

1SFC151072V0001



MP4-11Y

1SFC151063V0001



MP4-31L

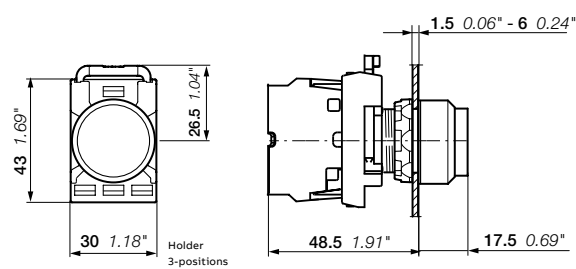
1SFC151061V0001



MP4-21C

1SFC151067V0001

| Operator          | Bezel          | Type    | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------|----------------|---------|-----------------|---------|-------------------|
| <b>Momentary</b>  |                |         |                 |         |                   |
| ● Red             | Black plastic  | MP3-11R | 1SFA611102R1101 | 1       | 0.016             |
|                   | Chrome plastic | MP3-21R | 1SFA611102R2101 | 1       | 0.016             |
|                   | Chrome metal   | MP3-31R | 1SFA611102R3101 | 1       | 0.026             |
| ● Green           | Black plastic  | MP3-11G | 1SFA611102R1102 | 1       | 0.016             |
|                   | Chrome plastic | MP3-21G | 1SFA611102R2102 | 1       | 0.016             |
|                   | Chrome metal   | MP3-31G | 1SFA611102R3102 | 1       | 0.026             |
| ● Yellow          | Black plastic  | MP3-11Y | 1SFA611102R1103 | 1       | 0.016             |
|                   | Chrome plastic | MP3-21Y | 1SFA611102R2103 | 1       | 0.016             |
|                   | Chrome metal   | MP3-31Y | 1SFA611102R3103 | 1       | 0.026             |
| ● Blue            | Black plastic  | MP3-11L | 1SFA611102R1104 | 1       | 0.016             |
|                   | Chrome plastic | MP3-21L | 1SFA611102R2104 | 1       | 0.016             |
|                   | Chrome metal   | MP3-31L | 1SFA611102R3104 | 1       | 0.026             |
| ○ White           | Black plastic  | MP3-11W | 1SFA611102R1105 | 1       | 0.016             |
|                   | Chrome plastic | MP3-21W | 1SFA611102R2105 | 1       | 0.016             |
|                   | Chrome metal   | MP3-31W | 1SFA611102R3105 | 1       | 0.026             |
| ○ Clear           | Black plastic  | MP3-11C | 1SFA611102R1108 | 1       | 0.016             |
|                   | Chrome plastic | MP3-21C | 1SFA611102R2108 | 1       | 0.016             |
|                   | Chrome metal   | MP3-31C | 1SFA611102R3108 | 1       | 0.026             |
| <b>Maintained</b> |                |         |                 |         |                   |
| ● Red             | Black plastic  | MP4-11R | 1SFA611103R1101 | 1       | 0.016             |
|                   | Chrome plastic | MP4-21R | 1SFA611103R2101 | 1       | 0.016             |
|                   | Chrome metal   | MP4-31R | 1SFA611103R3101 | 1       | 0.026             |
| ● Green           | Black plastic  | MP4-11G | 1SFA611103R1102 | 1       | 0.016             |
|                   | Chrome plastic | MP4-21G | 1SFA611103R2102 | 1       | 0.016             |
|                   | Chrome metal   | MP4-31G | 1SFA611103R3102 | 1       | 0.026             |
| ● Yellow          | Black plastic  | MP4-11Y | 1SFA611103R1103 | 1       | 0.016             |
|                   | Chrome plastic | MP4-21Y | 1SFA611103R2103 | 1       | 0.016             |
| ● Blue            | Black plastic  | MP4-11L | 1SFA611103R1104 | 1       | 0.016             |
|                   | Chrome plastic | MP4-21L | 1SFA611103R2104 | 1       | 0.016             |
|                   | Chrome metal   | MP4-31L | 1SFA611103R3104 | 1       | 0.026             |
| ○ White           | Black plastic  | MP4-11W | 1SFA611103R1105 | 1       | 0.016             |
|                   | Chrome plastic | MP4-21W | 1SFA611103R2105 | 1       | 0.016             |
| ○ Clear           | Black plastic  | MP4-11C | 1SFA611103R1108 | 1       | 0.016             |
|                   | Chrome plastic | MP4-21C | 1SFA611103R2108 | 1       | 0.016             |
|                   | Chrome metal   | MP4-31C | 1SFA611103R3108 | 1       | 0.026             |



MP3, MP4

Dimensions (mm, inches)

## Modular plastic range

Non-illuminated double pushbuttons momentary



MPD1-11B



MPD5-11B



MPD13-11B



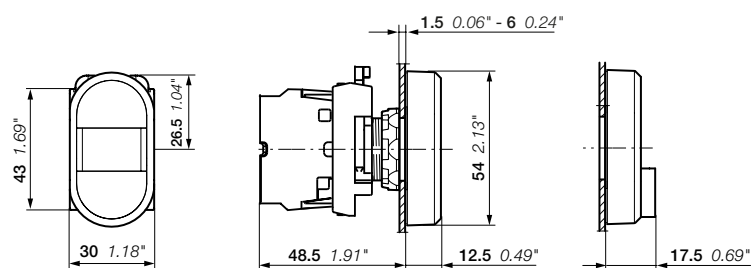
MPD15-11B



MA1-8139

| Operator upper button            | Operator lower button | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|----------------------------------|-----------------------|-----------|-----------------|---------|-------------------|
| <b>Flush pushbutton</b>          |                       |           |                 |         |                   |
| ● Green                          | ● Red                 |           |                 |         |                   |
| No text                          | No text               | MPD1-11B  | 1SFA611130R1106 | 1       | 0.025             |
| I                                | O                     | MPD2-11B  | 1SFA611131R1106 | 1       | 0.025             |
| ON                               | OFF                   | MPD3-11B  | 1SFA611132R1106 | 1       | 0.025             |
| START                            | STOP                  | MPD4-11B  | 1SFA611133R1106 | 1       | 0.025             |
| ○ White                          | ● Black               |           |                 |         |                   |
| No text                          | No text               | MPD5-11B  | 1SFA611134R1106 | 1       | 0.025             |
| I                                | O                     | MPD6-11B  | 1SFA611135R1106 | 1       | 0.025             |
| ON                               | OFF                   | MPD7-11B  | 1SFA611136R1106 | 1       | 0.025             |
| START                            | STOP                  | MPD8-11B  | 1SFA611137R1106 | 1       | 0.025             |
| ● Black                          | ● Red                 |           |                 |         |                   |
| No text                          | No text               | MPD9-11B  | 1SFA611138R1106 | 1       | 0.025             |
| <b>Extended lower pushbutton</b> |                       |           |                 |         |                   |
| ● Green                          | ● Red                 |           |                 |         |                   |
| No text                          | No text               | MPD12-11B | 1SFA611141R1106 | 1       | 0.025             |
| I                                | O                     | MPD13-11B | 1SFA611142R1106 | 1       | 0.025             |
| ON                               | OFF                   | MPD14-11B | 1SFA611143R1106 | 1       | 0.025             |
| START                            | STOP                  | MPD15-11B | 1SFA611144R1106 | 1       | 0.025             |
| ○ White                          | ● Black               |           |                 |         |                   |
| No text                          | No text               | MPD16-11B | 1SFA611145R1106 | 1       | 0.025             |
| I                                | O                     | MPD17-11B | 1SFA611146R1106 | 1       | 0.025             |
| ON                               | OFF                   | MPD18-11B | 1SFA611147R1106 | 1       | 0.025             |
| START                            | STOP                  | MPD19-11B | 1SFA611148R1106 | 1       | 0.025             |
| <b>Accessories</b>               |                       |           |                 |         |                   |
| <b>Legend plate holder</b>       |                       |           |                 |         |                   |
| 2-position                       |                       | MA1-8139  | 1SFA611920R8139 | 10      | 0.030             |

Note: Insert not included. Suitable for insert size 27 x 15 mm. Refer to Legend plates section.



MPD

Dimensions (mm, inches)

## Modular plastic range

### Illuminated double pushbuttons momentary - Flush lower button



MPD4-11C

1SFC151088V0001



MPD5-11C

1SFC151100V0001



MPD2-11R

1SFC151078V0001



MDP3-11G

1SFC151083V0001

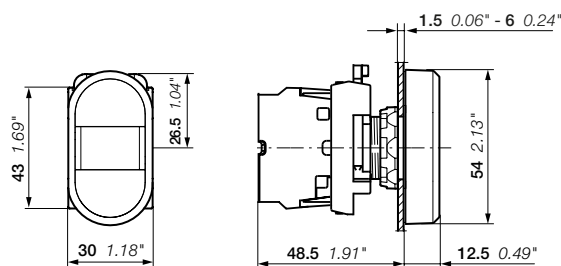


MA1-8139

1SFC15134F0001

| Operator upper button         | Operator lower button | Type            | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------------------|-----------------------|-----------------|-----------------|---------|-------------------|
| <b>Clear light indicator</b>  |                       |                 |                 |         |                   |
| ● Green                       | ● Red                 |                 |                 |         |                   |
| No text                       | No text               | MPD1-11C        | 1SFA611130R1108 | 1       | 0.025             |
| I                             | O                     | MPD2-11C        | 1SFA611131R1108 | 1       | 0.025             |
| ON                            | OFF                   | MPD3-11C        | 1SFA611132R1108 | 1       | 0.025             |
| START                         | STOP                  | MPD4-11C        | 1SFA611133R1108 | 1       | 0.025             |
| ○ White                       | ● Black               |                 |                 |         |                   |
| No text                       | No text               | MPD5-11C        | 1SFA611134R1108 | 1       | 0.025             |
| I                             | O                     | MPD6-11C        | 1SFA611135R1108 | 1       | 0.025             |
| START                         | STOP                  | MPD8-11C        | 1SFA611137R1108 | 1       | 0.025             |
| <b>Red light indicator</b>    |                       |                 |                 |         |                   |
| ● Green                       | ● Red                 |                 |                 |         |                   |
| No text                       | No text               | MPD1-11R        | 1SFA611130R1101 | 1       | 0.025             |
| I                             | O                     | MPD2-11R        | 1SFA611131R1101 | 1       | 0.025             |
| ON                            | OFF                   | MPD3-11R        | 1SFA611132R1101 | 1       | 0.025             |
| START                         | STOP                  | MPD4-11R        | 1SFA611133R1101 | 1       | 0.025             |
| ○ White                       | ● Black               |                 |                 |         |                   |
| No text                       | No text               | MPD5-11R        | 1SFA611134R1101 | 1       | 0.025             |
| <b>Green light indicator</b>  |                       |                 |                 |         |                   |
| ● Green                       | ● Red                 |                 |                 |         |                   |
| No text                       | No text               | MPD1-11G        | 1SFA611130R1102 | 1       | 0.025             |
| I                             | O                     | MPD2-11G        | 1SFA611131R1102 | 1       | 0.025             |
| ON                            | OFF                   | MPD3-11G        | 1SFA611132R1102 | 1       | 0.025             |
| START                         | STOP                  | MPD4-11G        | 1SFA611133R1102 | 1       | 0.025             |
| ○ White                       | ● Black               |                 |                 |         |                   |
| No text                       | No text               | MPD5-11G        | 1SFA611134R1102 | 1       | 0.025             |
| I                             | O                     | MPD6-11G        | 1SFA611135R1102 | 1       | 0.025             |
| ON                            | OFF                   | MPD7-11G        | 1SFA611136R1102 | 1       | 0.025             |
| START                         | STOP                  | MPD8-11G        | 1SFA611137R1102 | 1       | 0.025             |
| <b>Yellow light indicator</b> |                       |                 |                 |         |                   |
| ● Green                       | ● Red                 |                 |                 |         |                   |
| No text                       | No text               | MPD1-11Y        | 1SFA611130R1103 | 1       | 0.025             |
| I                             | O                     | MPD2-11Y        | 1SFA611131R1103 | 1       | 0.025             |
| ON                            | OFF                   | MPD3-11Y        | 1SFA611132R1103 | 1       | 0.025             |
| START                         | STOP                  | MPD4-11Y        | 1SFA611133R1103 | 1       | 0.025             |
| ○ White                       | ● Black               |                 |                 |         |                   |
| No text                       | No text               | MPD5-11Y        | 1SFA611134R1103 | 1       | 0.025             |
| <b>Accessories</b>            |                       |                 |                 |         |                   |
| <b>Legend plate holder</b>    |                       |                 |                 |         |                   |
| 2-position                    | MA1-8139              | 1SFA611920R8139 | 10              | 0.030   |                   |

Note: Insert not included. Suitable for insert size 27 x 15 mm. Refer to Legend plates section.



MPD

Dimensions (mm, inches)

## Modular plastic range

Illuminated double pushbuttons momentary - Extended lower button



MPD12-11C

1SFA611141R1108



MPD14-11C

1SFA611143R1108



MDP13-11R

1SFA611142R1101



MDP14-11G

1SFA611143R1102



MDP12-11Y

1SFA611141R1103

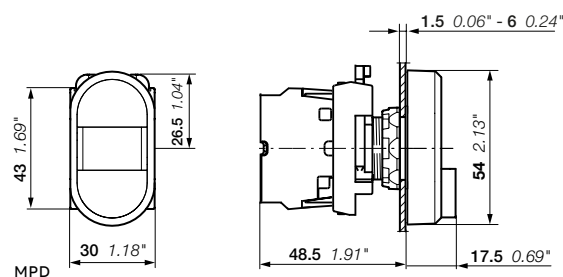


MA1-8139

1SFA611920R8139

| Operator upper button         | Operator lower button | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------------------|-----------------------|-----------|-----------------|---------|-------------------|
| <b>Clear light indicator</b>  |                       |           |                 |         |                   |
| ● Green                       | ● Red                 |           |                 |         |                   |
| No text                       | No text               | MPD12-11C | 1SFA611141R1108 | 1       | 0.025             |
| I                             | O                     | MPD13-11C | 1SFA611142R1108 | 1       | 0.025             |
| ON                            | OFF                   | MPD14-11C | 1SFA611143R1108 | 1       | 0.025             |
| START                         | STOP                  | MPD15-11C | 1SFA611144R1108 | 1       | 0.025             |
| ○ White                       | ● Black               |           |                 |         |                   |
| No text                       | No text               | MPD16-11C | 1SFA611145R1108 | 1       | 0.025             |
| I                             | O                     | MPD17-11C | 1SFA611146R1108 | 1       | 0.025             |
| START                         | STOP                  | MPD19-11C | 1SFA611148R1108 | 1       | 0.025             |
| <b>Red light indicator</b>    |                       |           |                 |         |                   |
| ● Green                       | ● Red                 |           |                 |         |                   |
| No text                       | No text               | MPD12-11R | 1SFA611141R1101 | 1       | 0.025             |
| I                             | O                     | MPD13-11R | 1SFA611142R1101 | 1       | 0.025             |
| ON                            | OFF                   | MPD14-11R | 1SFA611143R1101 | 1       | 0.025             |
| START                         | STOP                  | MPD15-11R | 1SFA611144R1101 | 1       | 0.025             |
| ○ White                       | ● Black               |           |                 |         |                   |
| No text                       | No text               | MPD16-11R | 1SFA611145R1101 | 1       | 0.025             |
| <b>Green light indicator</b>  |                       |           |                 |         |                   |
| ● Green                       | ● Red                 |           |                 |         |                   |
| No text                       | No text               | MPD12-11G | 1SFA611141R1102 | 1       | 0.025             |
| I                             | O                     | MPD13-11G | 1SFA611142R1102 | 1       | 0.025             |
| ON                            | OFF                   | MPD14-11G | 1SFA611143R1102 | 1       | 0.025             |
| START                         | STOP                  | MPD15-11G | 1SFA611144R1102 | 1       | 0.025             |
| ○ White                       | ● Black               |           |                 |         |                   |
| No text                       | No text               | MPD16-11G | 1SFA611145R1102 | 1       | 0.025             |
| I                             | O                     | MPD17-11G | 1SFA611146R1102 | 1       | 0.025             |
| START                         | STOP                  | MPD19-11G | 1SFA611148R1102 | 1       | 0.025             |
| <b>Yellow light indicator</b> |                       |           |                 |         |                   |
| ● Green                       | ● Red                 |           |                 |         |                   |
| No text                       | No text               | MPD12-11Y | 1SFA611141R1103 | 1       | 0.025             |
| I                             | O                     | MPD13-11Y | 1SFA611142R1103 | 1       | 0.025             |
| ON                            | OFF                   | MPD14-11Y | 1SFA611143R1103 | 1       | 0.025             |
| START                         | STOP                  | MPD15-11Y | 1SFA611144R1103 | 1       | 0.025             |
| ○ White                       | ● Black               |           |                 |         |                   |
| No text                       | No text               | MPD16-11Y | 1SFA611145R1103 | 1       | 0.025             |
| I                             | O                     | MPD17-11Y | 1SFA611146R1103 | 1       | 0.025             |
| <b>Accessories</b>            |                       |           |                 |         |                   |
| <b>Legend plate holder</b>    |                       |           |                 |         |                   |
| 2-position                    |                       | MA1-8139  | 1SFA611920R8139 | 10      | 0.030             |

Note: Insert not included. Suitable for insert size 27 x 15 mm. Refer to Legend plates section.



Dimensions (mm, inches)

## Modular plastic range

## Mushroom pushbuttons momentary



MPM1-10G

LSFC151007V0001



MPM1-10B

USFC151010V0001



MPM2-10R

SFC151073V0001



MPM2-10Y

SFC151074V0001



MPM1-11G

1SFC151173V0001



MPM2-11R

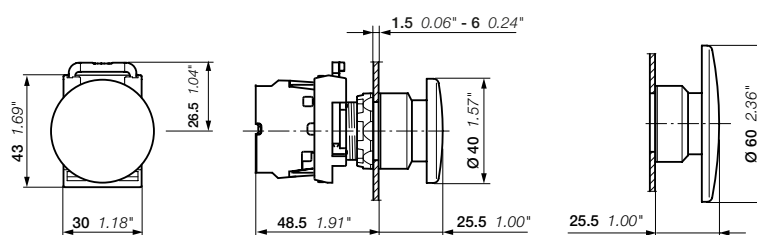
LSFC151155V00 01

**Non illuminated**

| Operator | Type     | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|----------|----------|-----------------|------------|-------------------------|
| Ø 40 mm  |          |                 |            |                         |
| Red      | MPM1-10R | 1SFA611124R1001 | 1          | 0.018                   |
| Green    | MPM1-10G | 1SFA611124R1002 | 1          | 0.018                   |
| Yellow   | MPM1-10Y | 1SFA611124R1003 | 1          | 0.018                   |
| Black    | MPM1-10B | 1SFA611124R1006 | 1          | 0.018                   |
| Ø 60 mm  |          |                 |            |                         |
| Red      | MPM2-10R | 1SFA611125R1001 | 1          | 0.020                   |
| Yellow   | MPM2-10Y | 1SFA611125R1003 | 1          | 0.020                   |
| Black    | MPM2-10B | 1SFA611125R1006 | 1          | 0.020                   |

**Illuminated**

| Operator | Type     | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|----------|----------|-----------------|------------|-------------------------|
| Ø 40 mm  |          |                 |            |                         |
| Red      | MPM1-11R | 1SFA611124R1101 | 1          | 0.018                   |
| Green    | MPM1-11G | 1SFA611124R1102 | 1          | 0.018                   |
| Yellow   | MPM1-11Y | 1SFA611124R1103 | 1          | 0.018                   |
| Ø 60 mm  |          |                 |            |                         |
| Red      | MPM2-11R | 1SFA611125R1101 | 1          | 0.020                   |
| Yellow   | MPM2-11Y | 1SFA611125R1103 | 1          | 0.020                   |



MPM1, MPM2

Dimensions (mm, inches)

## Modular plastic range

### Emergency stop pushbuttons



MPET3-10R

1SFC151070V0001



MPEK3-11R

1SFC15108V0001



MPET4-10R

1SFC151098V0001



MPMP4-10R

1SFC151106V0001



MPMP3-11R

1SFC151103V0001



MPMT4-11R

1SFC151105V0001

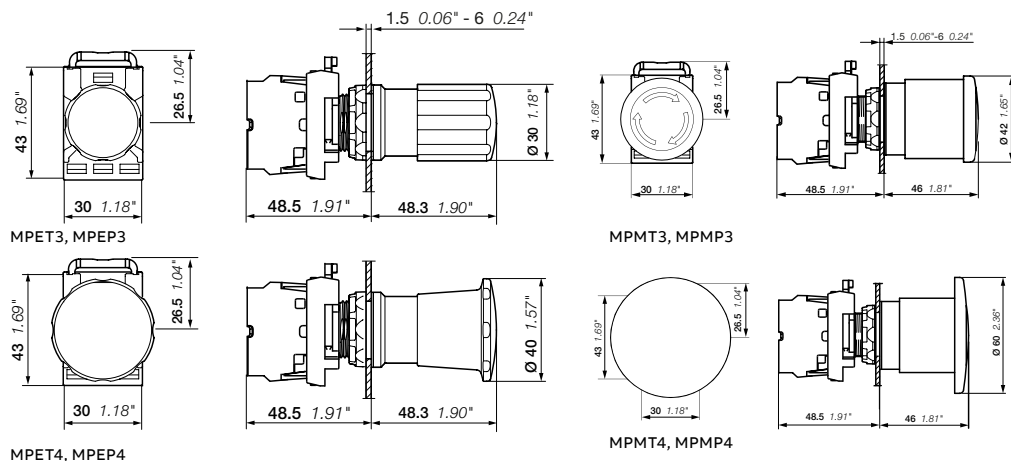
#### Non illuminated

The emergency stops pushbuttons conform to the standard EN/IEC 60947-5-5, Safety of machinery EN/ISO 13850, IEC 60204-1 and to Machinery directive 2006/42/EC.

| Operator       | Release method  | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|----------------|-----------------|-----------|-----------------|---------|-------------------|
| <b>Ø 30 mm</b> |                 |           |                 |         |                   |
| Red            | Twist release   | MPET3-10R | 1SFA611520R1001 | 1       | 0.036             |
| Red            | Pull release    | MPEP3-10R | 1SFA611521R1001 | 1       | 0.036             |
| Red            | Key code 455    | MPEK3-11R | 1SFA611522R1101 | 1       | 0.065             |
| Red            | Key code 421    | MPEK3-12R | 1SFA611522R1201 | 1       | 0.065             |
| Red            | Key code 3433-E | MPEK3-13R | 1SFA611522R1301 | 1       | 0.065             |
| <b>Ø 40 mm</b> |                 |           |                 |         |                   |
| Red            | Twist release   | MPET4-10R | 1SFA611523R1001 | 1       | 0.036             |
| Red            | Pull release    | MPEP4-10R | 1SFA611524R1001 | 1       | 0.036             |
| Red            | Key code 455    | MPEK4-11R | 1SFA611525R1101 | 1       | 0.065             |
| Red            | Key code 421    | MPEK4-12R | 1SFA611525R1201 | 1       | 0.065             |
| Red            | Key code 3433-E | MPEK4-13R | 1SFA611525R1301 | 1       | 0.065             |
| <b>Ø 60 mm</b> |                 |           |                 |         |                   |
| Red            | Twist release   | MPMT4-10R | 1SFA611513R1001 | 1       | 0.048             |
| Red            | Pull release    | MPMP4-10R | 1SFA611514R1001 | 1       | 0.048             |

#### Illuminated

| Operator       | Release method | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|----------------|----------------|-----------|-----------------|---------|-------------------|
| <b>Ø 40 mm</b> |                |           |                 |         |                   |
| Red            | Twist release  | MPMT3-11R | 1SFA611510R1101 | 1       | 0.041             |
| Red            | Pull release   | MPMP3-11R | 1SFA611511R1101 | 1       | 0.041             |
| <b>Ø 60 mm</b> |                |           |                 |         |                   |
| Red            | Twist release  | MPMT4-11R | 1SFA611513R1101 | 1       | 0.048             |
| Red            | Pull release   | MPMP4-11R | 1SFA611514R1101 | 1       | 0.048             |



Dimensions (mm, inches)

Modular plastic range  
Machine stop pushbuttons



MPET3-10B

1SFC151094V0001



MPET4-10B

1SFC151096V0001

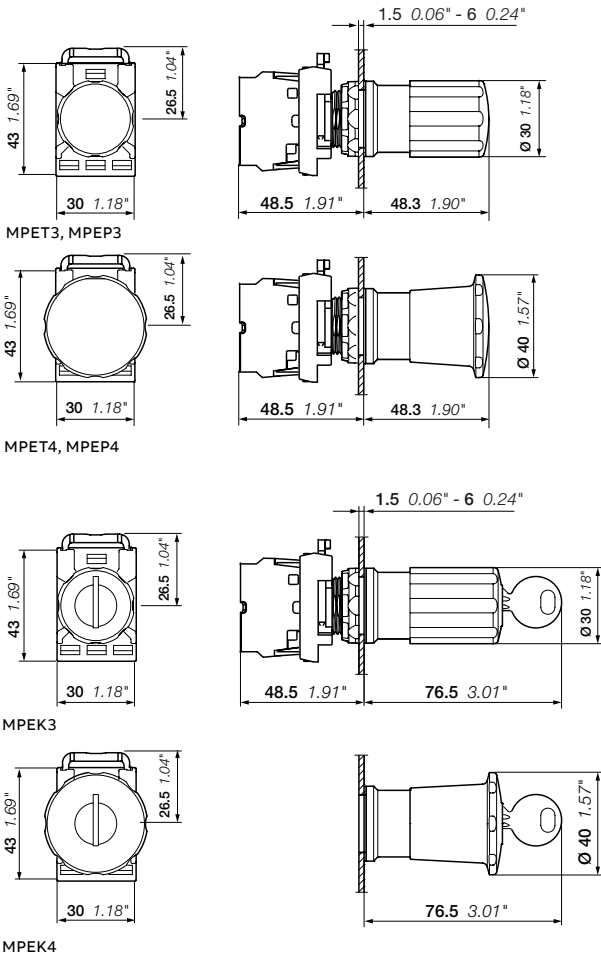


MPEK4-11B

1SFC151110V0001

Non illuminated

| Operator | Release method | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|----------|----------------|-----------|-----------------|---------|-------------------|
| Ø 30 mm  |                |           |                 |         |                   |
| ● Black  | Twist release  | MPET3-10B | 1SFA611520R1006 | 1       | 0.036             |
| ● Black  | Pull release   | MPEP3-10B | 1SFA611521R1006 | 1       | 0.036             |
| ● Black  | Key code 455   | MPEK3-11B | 1SFA611522R1106 | 1       | 0.065             |
| Ø 40 mm  |                |           |                 |         |                   |
| ● Black  | Twist release  | MPET4-10B | 1SFA611523R1006 | 1       | 0.036             |
| ● Black  | Pull release   | MPEP4-10B | 1SFA611524R1006 | 1       | 0.036             |
| ● Black  | Key code 455   | MPEK4-11B | 1SFA611525R1106 | 1       | 0.065             |



Dimensions (mm, inches)

## Modular plastic range

### Heavy duty pushbuttons



KP6-40R

1SFC151335V0001



KP6-40G

1SFC151336V0001



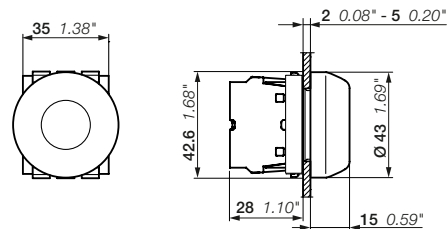
KP6-40B

1SFC151337V0001

#### Description

For 30 mm mounting hole, 3-position holder included

| Color | Type    | Order code      | Pkg qty | Weight (1 pce) kg |
|-------|---------|-----------------|---------|-------------------|
| Red   | KP6-40R | 1SFA616105R4001 | 1       | 0.028             |
| Green | KP6-40G | 1SFA616105R4002 | 1       | 0.028             |
| Black | KP6-40B | 1SFA616105R4006 | 1       | 0.028             |



KP6

## Modular plastic range

### Pilot lights



ML1-100R

1SFC151134V0001



ML1-100G

1SFC151135V0001



ML1-100Y

1SFC151136V0001



ML1-100C

1SFC151138V0001



ML1-100L

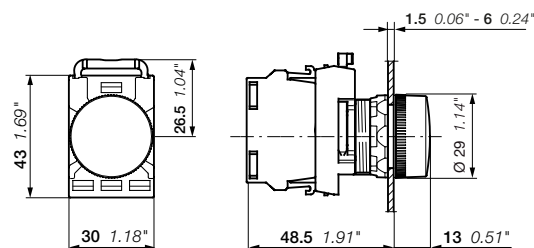
1SFC151137V0001

| Color  | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|--------|----------|-----------------|---------|-------------------|
| Red    | ML1-100R | 1SFA611400R1001 | 1       | 0.018             |
| Green  | ML1-100G | 1SFA611400R1002 | 1       | 0.018             |
| Yellow | ML1-100Y | 1SFA611400R1003 | 1       | 0.018             |
| Blue   | ML1-100L | 1SFA611400R1004 | 1       | 0.018             |
| White  | ML1-100W | 1SFA611400R1005 | 1       | 0.018             |
| Clear  | ML1-100C | 1SFA611400R1008 | 1       | 0.018             |

#### Lens

| Light diffusing lens | KA1-8005 | 1SFA616920R8005 | 10 | 0.001 |
|----------------------|----------|-----------------|----|-------|
|----------------------|----------|-----------------|----|-------|

Note: Light diffusing lens is used to improve spread of illumination from LED blocks. Cannot be used together with text cap.



ML1

Dimensions (mm, inches)

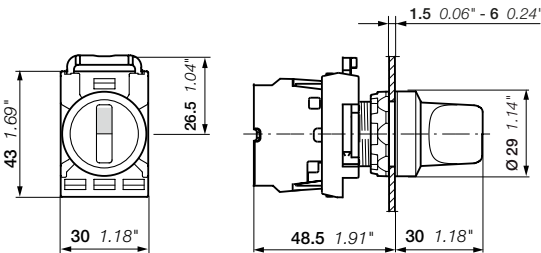
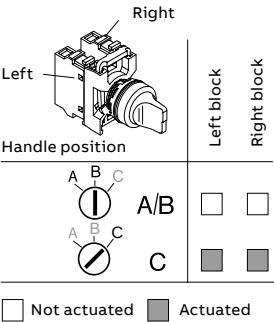
Modular plastic range

Non-illuminated selector switches - 2-position - Short handle



| Operating principle | Color   | Bezel          | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|----------------|-----------|-----------------|---------|-------------------|
|                     | ● Red   | Black plastic  | M2SS1-10R | 1SFA611200R1001 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS1-20R | 1SFA611200R2001 | 1       | 0.015             |
|                     |         | Chrome metal   | M2SS1-30R | 1SFA611200R3001 | 1       | 0.024             |
|                     | ● Black | Black plastic  | M2SS1-10B | 1SFA611200R1006 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS1-20B | 1SFA611200R2006 | 1       | 0.015             |
|                     |         | Chrome metal   | M2SS1-30B | 1SFA611200R3006 | 1       | 0.024             |
|                     | ● Grey  | Black plastic  | M2SS1-10U | 1SFA611200R1007 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS1-20U | 1SFA611200R2007 | 1       | 0.015             |
|                     | ● Red   | Black plastic  | M2SS2-10R | 1SFA611201R1001 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS2-20R | 1SFA611201R2001 | 1       | 0.015             |
|                     |         | Chrome metal   | M2SS2-30R | 1SFA611201R3001 | 1       | 0.024             |
|                     | ● Black | Black plastic  | M2SS2-10B | 1SFA611201R1006 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS2-20B | 1SFA611201R2006 | 1       | 0.015             |
|                     |         | Chrome metal   | M2SS2-30B | 1SFA611201R3006 | 1       | 0.024             |
|                     | ● Grey  | Black plastic  | M2SS2-10U | 1SFA611201R1007 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS2-20U | 1SFA611201R2007 | 1       | 0.015             |
|                     |         | Chrome metal   | M2SS2-30U | 1SFA611201R3007 | 1       | 0.024             |
|                     | ● Red   | Black plastic  | M2SS3-10R | 1SFA611202R1001 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS3-20R | 1SFA611202R2001 | 1       | 0.015             |
|                     |         | Chrome metal   | M2SS3-30R | 1SFA611202R3001 | 1       | 0.024             |
|                     | ● Black | Black plastic  | M2SS3-10B | 1SFA611202R1006 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS3-20B | 1SFA611202R2006 | 1       | 0.015             |
|                     |         | Chrome metal   | M2SS3-30B | 1SFA611202R3006 | 1       | 0.024             |
|                     | ● Grey  | Black plastic  | M2SS3-10U | 1SFA611202R1007 | 1       | 0.015             |
|                     |         | Chrome plastic | M2SS3-20U | 1SFA611202R2007 | 1       | 0.015             |
|                     |         |                |           |                 |         |                   |

Contacts actuated



M2SS  
Dimensions (mm, inches)

## Modular plastic range

Non-illuminated selector switches - 2-position - Long handle



M2SS4-10R



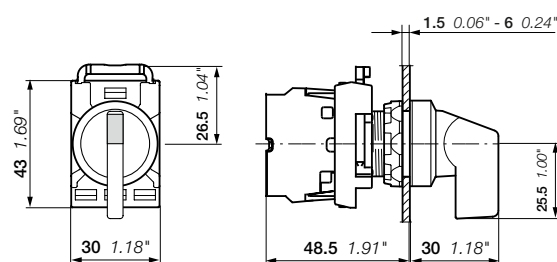
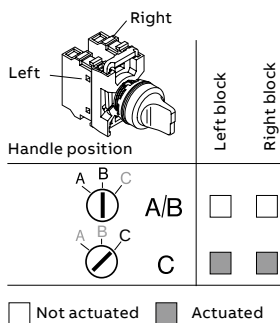
M2SS4-30B



M2SS4-10U

| Operating principle | Color   | Bezel          | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|----------------|-----------|-----------------|---------|-------------------|
|                     | ● Red   | Black plastic  | M2SS4-10R | 1SFA611203R1001 | 1       | 0.018             |
|                     |         | Chrome plastic | M2SS4-20R | 1SFA611203R2001 | 1       | 0.018             |
|                     | ● Black | Black plastic  | M2SS4-10B | 1SFA611203R1006 | 1       | 0.018             |
|                     |         | Chrome plastic | M2SS4-20B | 1SFA611203R2006 | 1       | 0.018             |
|                     |         | Chrome metal   | M2SS4-30B | 1SFA611203R3006 | 1       | 0.027             |
|                     | ● Grey  | Black plastic  | M2SS4-10U | 1SFA611203R1007 | 1       | 0.018             |
|                     | ● Red   | Black plastic  | M2SS5-10R | 1SFA611204R1001 | 1       | 0.018             |
|                     |         | Chrome plastic | M2SS5-20R | 1SFA611204R2001 | 1       | 0.018             |
|                     |         | Chrome metal   | M2SS5-30R | 1SFA611204R3001 | 1       | 0.027             |
|                     | ● Black | Black plastic  | M2SS5-10B | 1SFA611204R1006 | 1       | 0.018             |
|                     |         | Chrome plastic | M2SS5-20B | 1SFA611204R2006 | 1       | 0.018             |
|                     |         | Chrome metal   | M2SS5-30B | 1SFA611204R3006 | 1       | 0.027             |
|                     | ● Red   | Black plastic  | M2SS6-10R | 1SFA611205R1001 | 1       | 0.018             |
|                     | ● Black | Black plastic  | M2SS6-10B | 1SFA611205R1006 | 1       | 0.018             |
|                     |         | Chrome plastic | M2SS6-20B | 1SFA611205R2006 | 1       | 0.018             |
|                     |         | Chrome metal   | M2SS6-30B | 1SFA611205R3006 | 1       | 0.027             |
|                     | ● Grey  | Black plastic  | M2SS6-10U | 1SFA611205R1007 | 1       | 0.018             |
|                     |         | Chrome plastic | M2SS6-20U | 1SFA611205R2007 | 1       | 0.018             |

### Contacts actuated



M2SS

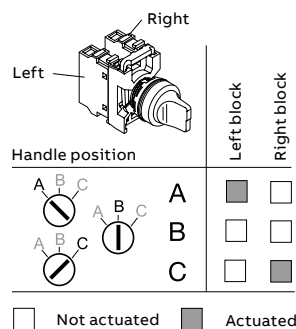
Dimensions (mm, inches)

## Modular plastic range

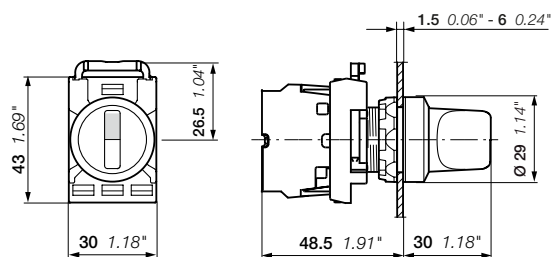
### Non-illuminated selector switches - 3-position - Short handle



#### Contacts actuated



| Operating principle | Color   | Bezel          | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|----------------|-----------|-----------------|---------|-------------------|
|                     | ● Red   | Black plastic  | M3SS1-10R | 1SFA611210R1001 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS1-20R | 1SFA611210R2001 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS1-30R | 1SFA611210R3001 | 1       | 0.024             |
|                     | ● Black | Black plastic  | M3SS1-10B | 1SFA611210R1006 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS1-20B | 1SFA611210R2006 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS1-30B | 1SFA611210R3006 | 1       | 0.024             |
|                     | ● Grey  | Black plastic  | M3SS1-10U | 1SFA611210R1007 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS1-20U | 1SFA611210R2007 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS1-30U | 1SFA611210R3007 | 1       | 0.024             |
|                     | ● Red   | Black plastic  | M3SS2-10R | 1SFA611211R1001 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS2-20R | 1SFA611211R2001 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS2-30R | 1SFA611211R3001 | 1       | 0.024             |
|                     | ● Black | Black plastic  | M3SS2-10B | 1SFA611211R1006 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS2-20B | 1SFA611211R2006 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS2-30B | 1SFA611211R3006 | 1       | 0.024             |
|                     | ● Grey  | Black plastic  | M3SS2-10U | 1SFA611211R1007 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS2-20U | 1SFA611211R2007 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS2-30U | 1SFA611211R3007 | 1       | 0.024             |
|                     | ● Red   | Black plastic  | M3SS3-10R | 1SFA611212R1001 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS3-20R | 1SFA611212R2001 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS3-30R | 1SFA611212R3001 | 1       | 0.024             |
|                     | ● Black | Black plastic  | M3SS3-10B | 1SFA611212R1006 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS3-20B | 1SFA611212R2006 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS3-30B | 1SFA611212R3006 | 1       | 0.024             |
|                     | ● Grey  | Black plastic  | M3SS3-10U | 1SFA611212R1007 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS3-20U | 1SFA611212R2007 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS3-30U | 1SFA611212R3007 | 1       | 0.024             |
|                     | ● Red   | Black plastic  | M3SS7-10R | 1SFA611216R1001 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS7-20R | 1SFA611216R2001 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS7-30R | 1SFA611216R3001 | 1       | 0.024             |
|                     | ● Black | Black plastic  | M3SS7-10B | 1SFA611216R1006 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS7-20B | 1SFA611216R2006 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS7-30B | 1SFA611216R3006 | 1       | 0.024             |
|                     | ● Grey  | Black plastic  | M3SS7-10U | 1SFA611216R1007 | 1       | 0.015             |
|                     |         | Chrome plastic | M3SS7-20U | 1SFA611216R2007 | 1       | 0.015             |
|                     |         | Chrome metal   | M3SS7-30U | 1SFA611216R3007 | 1       | 0.024             |



M3SS

Dimensions (mm, inches)

## Modular plastic range

Non-illuminated selector switches - 3-position - Long handle



M3SS4-10R



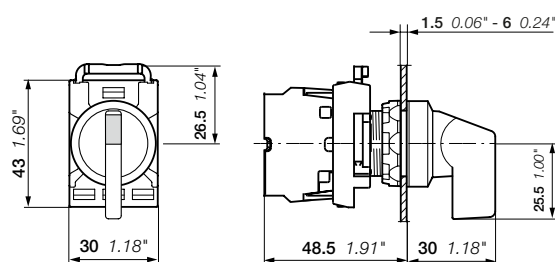
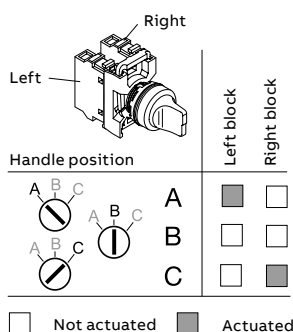
M3SS5-30B



M3SS6-10U

| Operating principle | Color   | Bezel          | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|----------------|-----------|-----------------|---------|-------------------|
|                     | ● Red   | Black plastic  | M3SS4-10R | 1SFA611213R1001 | 1       | 0.018             |
|                     |         | Chrome plastic | M3SS4-20R | 1SFA611213R2001 | 1       | 0.018             |
|                     | ● Black | Black plastic  | M3SS4-10B | 1SFA611213R1006 | 1       | 0.018             |
|                     |         | Chrome plastic | M3SS4-20B | 1SFA611213R2006 | 1       | 0.018             |
|                     |         | Chrome metal   | M3SS4-30B | 1SFA611213R3006 | 1       | 0.027             |
|                     | ● Grey  | Black plastic  | M3SS4-10U | 1SFA611213R1007 | 1       | 0.018             |
|                     |         | Chrome plastic | M3SS4-20U | 1SFA611213R2007 | 1       | 0.018             |
|                     | ● Red   | Black plastic  | M3SS5-10R | 1SFA611214R1001 | 1       | 0.018             |
|                     |         | Chrome metal   | M3SS5-30R | 1SFA611214R3001 | 1       | 0.018             |
|                     | ● Black | Black plastic  | M3SS5-10B | 1SFA611214R1006 | 1       | 0.018             |
|                     |         | Chrome plastic | M3SS5-20B | 1SFA611214R2006 | 1       | 0.018             |
|                     |         | Chrome metal   | M3SS5-30B | 1SFA611214R3006 | 1       | 0.027             |
|                     | ● Grey  | Black plastic  | M3SS5-10U | 1SFA611214R1007 | 1       | 0.018             |
|                     |         | Chrome plastic | M3SS5-20U | 1SFA611214R2007 | 1       | 0.018             |
|                     | ● Red   | Black plastic  | M3SS6-10R | 1SFA611215R1001 | 1       | 0.018             |
|                     | ● Black | Black plastic  | M3SS6-10B | 1SFA611215R1006 | 1       | 0.018             |
|                     |         | Chrome plastic | M3SS6-20B | 1SFA611215R2006 | 1       | 0.018             |
|                     |         | Chrome metal   | M3SS6-30B | 1SFA611215R3006 | 1       | 0.027             |
|                     | ● Grey  | Black plastic  | M3SS6-10U | 1SFA611215R1007 | 1       | 0.018             |
|                     | ● Red   | Black plastic  | M3SS8-10R | 1SFA611217R1001 | 1       | 0.018             |
|                     | ● Black | Black plastic  | M3SS8-10B | 1SFA611217R1006 | 1       | 0.018             |
|                     |         | Chrome plastic | M3SS8-20B | 1SFA611217R2006 | 1       | 0.018             |
|                     |         | Chrome metal   | M3SS8-30B | 1SFA611217R3006 | 1       | 0.027             |
|                     | ● Grey  | Black plastic  | M3SS8-10U | 1SFA611217R1007 | 1       | 0.018             |

### Contacts actuated



M3SS

Dimensions (mm, inches)

Modular plastic range

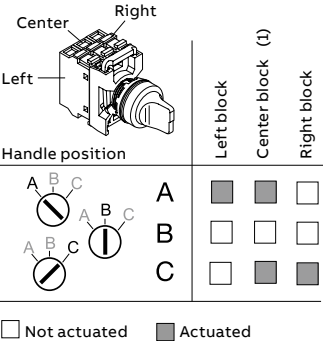
Non-illuminated selector switches - 3-position - Short handle



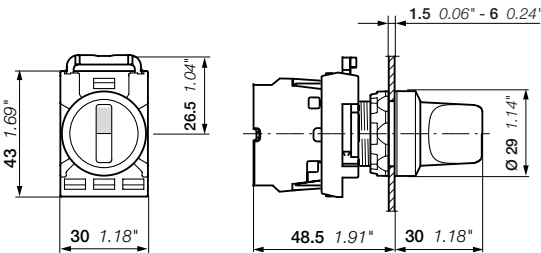
Center block operating

| Operating principle | Color   | Bezel         | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|---------------|------------|-----------------|---------|-------------------|
|                     | ● Black | Black plastic | M3SSC1-10B | 1SFA611250R1006 | 1       | 0.015             |
|                     |         | Chrome metal  | M3SSC1-30B | 1SFA611250R3006 | 1       | 0.024             |
|                     | ● Black | Black plastic | M3SSC2-10B | 1SFA611251R1006 | 1       | 0.015             |
|                     |         | Chrome metal  | M3SSC2-30B | 1SFA611251R3006 | 1       | 0.024             |
|                     | ● Black | Black plastic | M3SSC3-10B | 1SFA611252R1006 | 1       | 0.015             |
|                     |         | Chrome metal  | M3SSC3-30B | 1SFA611252R3006 | 1       | 0.024             |
|                     | ● Black | Black plastic | M3SSC7-10B | 1SFA611256R1006 | 1       | 0.015             |
|                     |         | Chrome metal  | M3SSC7-30B | 1SFA611256R3006 | 1       | 0.024             |

Contacts actuated



(1) To connect 3 separate circuits, one to each position ABC, use 1 NO in left position and right position and 1 NC in center position.



M3SSC  
Dimensions (mm, inches)

Modular range

Non-illuminated selector switches - 4-position



M4SS1-10B

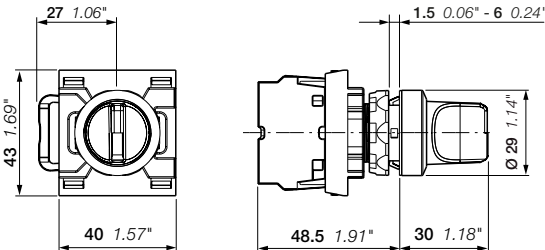
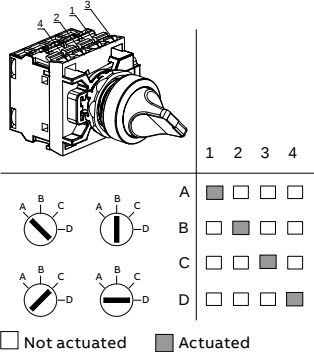


M4SS2-30R

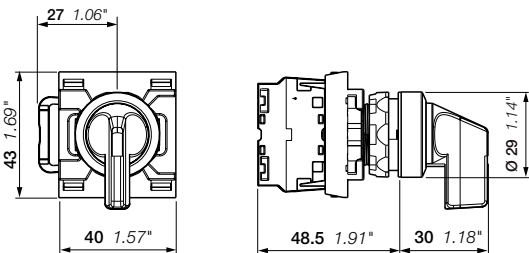
4 position holder included. Contact blocks need to order separately.

| Operating principle | Color   | Bezel         | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|---------------|-----------|-----------------|---------|-------------------|
| Short handle        |         |               |           |                 |         |                   |
|                     | ● Red   | Black plastic | M4SS1-10R | 1SFA611290R4001 | 1       | 0.027             |
|                     |         | Chrome metal  | M4SS1-30R | 1SFA611290R6001 | 1       | 0.036             |
|                     | ● Black | Black plastic | M4SS1-10B | 1SFA611290R4006 | 1       | 0.027             |
|                     |         | Chrome metal  | M4SS1-30B | 1SFA611290R6006 | 1       | 0.036             |
| Long handle         |         |               |           |                 |         |                   |
|                     | ● Red   | Black plastic | M4SS2-10R | 1SFA611291R4001 | 1       | 0.030             |
|                     |         | Chrome metal  | M4SS2-30R | 1SFA611291R6001 | 1       | 0.039             |
|                     | ● Black | Black plastic | M4SS2-10B | 1SFA611291R4006 | 1       | 0.030             |
|                     |         | Chrome metal  | M4SS2-30B | 1SFA611291R6006 | 1       | 0.039             |

Contacts actuated



M4SS Short handle



M4SS Long handle

Dimensions (mm, inches)

## Modular plastic range

### Illuminated selector switches - 2-position - Short handle



M2SS1-11R



M2SS1-31G



M2SS1-11Y

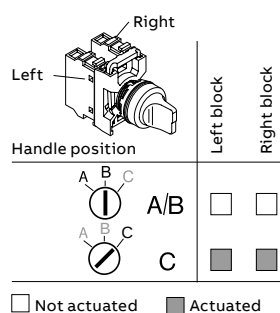


M2SS2-11L

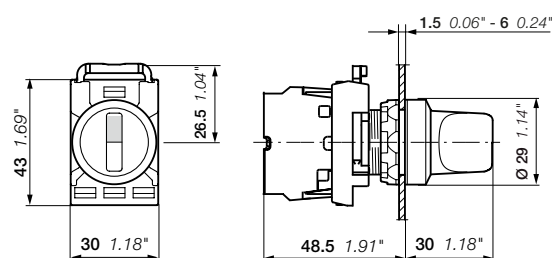


M2SS3-11C

#### Contacts actuated



| Operating principle | Color  | Bezel          | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|--------|----------------|-----------|-----------------|---------|-------------------|
|                     | Red    | Black plastic  | M2SS1-11R | 1SFA611200R1101 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS1-21R | 1SFA611200R2101 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS1-31R | 1SFA611200R3101 | 1       | 0.024             |
|                     | Green  | Black plastic  | M2SS1-11G | 1SFA611200R1102 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS1-21G | 1SFA611200R2102 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS1-31G | 1SFA611200R3102 | 1       | 0.024             |
|                     | Yellow | Black plastic  | M2SS1-11Y | 1SFA611200R1103 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS1-21Y | 1SFA611200R2103 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS1-31Y | 1SFA611200R3103 | 1       | 0.024             |
|                     | Blue   | Black plastic  | M2SS1-11L | 1SFA611200R1104 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS1-21L | 1SFA611200R2104 | 1       | 0.015             |
|                     | Clear  | Black plastic  | M2SS1-11C | 1SFA611200R1108 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS1-21C | 1SFA611200R2108 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS1-31C | 1SFA611200R3108 | 1       | 0.024             |
|                     | Red    | Black plastic  | M2SS2-11R | 1SFA611201R1101 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS2-21R | 1SFA611201R2101 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS2-31R | 1SFA611201R3101 | 1       | 0.024             |
|                     | Green  | Black plastic  | M2SS2-11G | 1SFA611201R1102 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS2-21G | 1SFA611201R2102 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS2-31G | 1SFA611201R3102 | 1       | 0.024             |
|                     | Yellow | Black plastic  | M2SS2-11Y | 1SFA611201R1103 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS2-21Y | 1SFA611201R2103 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS2-31Y | 1SFA611201R3103 | 1       | 0.024             |
|                     | Blue   | Black plastic  | M2SS2-11L | 1SFA611201R1104 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS2-21L | 1SFA611201R2104 | 1       | 0.015             |
|                     | Clear  | Black plastic  | M2SS2-11C | 1SFA611201R1108 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS2-21C | 1SFA611201R2108 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS2-31C | 1SFA611201R3108 | 1       | 0.024             |
|                     | Red    | Black plastic  | M2SS3-11R | 1SFA611202R1101 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS3-21R | 1SFA611202R2101 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS3-31R | 1SFA611202R3101 | 1       | 0.024             |
|                     | Green  | Black plastic  | M2SS3-11G | 1SFA611202R1102 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS3-21G | 1SFA611202R2102 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS3-31G | 1SFA611202R3102 | 1       | 0.024             |
|                     | Yellow | Black plastic  | M2SS3-11Y | 1SFA611202R1103 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS3-31Y | 1SFA611202R3103 | 1       | 0.024             |
|                     | Blue   | Black plastic  | M2SS3-11L | 1SFA611202R1104 | 1       | 0.015             |
|                     |        | Chrome plastic | M2SS3-11C | 1SFA611202R1108 | 1       | 0.015             |
|                     | Clear  | Black plastic  | M2SS3-11C | 1SFA611202R1108 | 1       | 0.015             |
|                     |        | Chrome metal   | M2SS3-31C | 1SFA611202R3108 | 1       | 0.024             |



M2SS

Dimensions (mm, inches)

## Modular plastic range

### Illuminated selector switches - 2-position - Long handle



M2SS4-11R

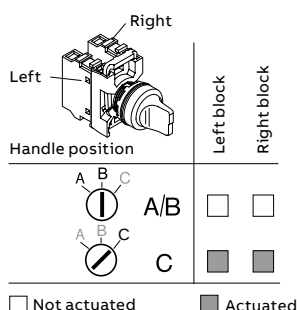


M2SS4-31G

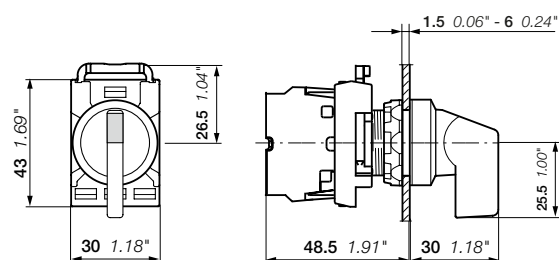


M2SS5-11Y

#### Contacts actuated



| Operating principle | Color  | Bezel          | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|--------|----------------|-----------|-----------------|---------|-------------------|
|                     | Red    | Black plastic  | M2SS4-11R | 1SFA611203R1101 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS4-21R | 1SFA611203R2101 | 1       | 0.018             |
|                     | Green  | Black plastic  | M2SS4-11G | 1SFA611203R1102 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS4-21G | 1SFA611203R2102 | 1       | 0.018             |
|                     | Yellow | Black plastic  | M2SS4-11Y | 1SFA611203R1103 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS4-21Y | 1SFA611203R2103 | 1       | 0.018             |
|                     | Blue   | Black plastic  | M2SS4-11L | 1SFA611203R1104 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS4-21L | 1SFA611203R2104 | 1       | 0.018             |
|                     | Clear  | Black plastic  | M2SS4-11C | 1SFA611203R1108 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS4-21C | 1SFA611203R2108 | 1       | 0.018             |
|                     | Clear  | Chrome metal   | M2SS4-31C | 1SFA611203R3108 | 1       | 0.027             |
|                     | Red    | Black plastic  | M2SS5-11R | 1SFA611204R1101 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS5-21R | 1SFA611204R2101 | 1       | 0.018             |
|                     |        | Chrome metal   | M2SS5-31R | 1SFA611204R3101 | 1       | 0.027             |
|                     | Green  | Black plastic  | M2SS5-11G | 1SFA611204R1102 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS5-21G | 1SFA611204R2102 | 1       | 0.018             |
|                     |        | Chrome metal   | M2SS5-31G | 1SFA611204R3102 | 1       | 0.027             |
|                     | Yellow | Black plastic  | M2SS5-11Y | 1SFA611204R1103 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS5-21Y | 1SFA611204R2103 | 1       | 0.018             |
|                     |        | Chrome metal   | M2SS5-31Y | 1SFA611204R3103 | 1       | 0.027             |
|                     | Blue   | Black plastic  | M2SS5-11L | 1SFA611204R1104 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS5-21L | 1SFA611204R2104 | 1       | 0.018             |
|                     |        | Chrome metal   | M2SS5-31L | 1SFA611204R3104 | 1       | 0.027             |
|                     | Clear  | Black plastic  | M2SS5-11C | 1SFA611204R1108 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS5-21C | 1SFA611204R2108 | 1       | 0.018             |
|                     |        | Chrome metal   | M2SS5-31C | 1SFA611204R3108 | 1       | 0.027             |
|                     | Red    | Black plastic  | M2SS6-11R | 1SFA611205R1101 | 1       | 0.018             |
|                     |        | Chrome plastic | M2SS6-21R | 1SFA611205R2101 | 1       | 0.018             |
|                     |        | Chrome metal   | M2SS6-31R | 1SFA611205R3101 | 1       | 0.027             |



M2SS

Dimensions (mm, inches)

## Modular plastic range

### Illuminated selector switches - 3-position - Short handle



M2SS1-11R

1SFC151131V0001



M2SS1-11G

1SFC151141V0001



M3SS2-11Y

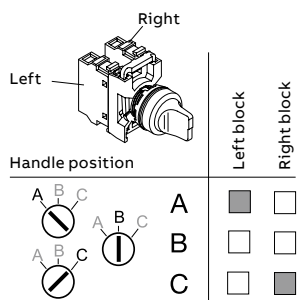
1SFC151140V0001



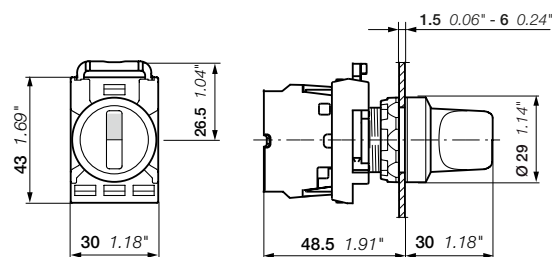
M3SS3-31C

1SFC151146V0001

#### Contacts actuated



| Operating principle | Color  | Bezel          | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|--------|----------------|-----------|-----------------|---------|-------------------|
|                     | Red    | Black plastic  | M3SS1-11R | 1SFA611210R1101 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS1-21R | 1SFA611210R2101 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS1-31R | 1SFA611210R3101 | 1       | 0.024             |
|                     | Green  | Black plastic  | M3SS1-11G | 1SFA611210R1102 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS1-21G | 1SFA611210R2102 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS1-31G | 1SFA611210R3102 | 1       | 0.024             |
|                     | Yellow | Black plastic  | M3SS1-11Y | 1SFA611210R1103 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS1-21Y | 1SFA611210R2103 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS1-31Y | 1SFA611210R3103 | 1       | 0.024             |
|                     | Blue   | Black plastic  | M3SS1-11L | 1SFA611210R1104 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS1-21L | 1SFA611210R2104 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS1-31L | 1SFA611210R3104 | 1       | 0.024             |
|                     | Red    | Black plastic  | M3SS2-11R | 1SFA611211R1101 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS2-21R | 1SFA611211R2101 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS2-31R | 1SFA611211R3101 | 1       | 0.024             |
|                     | Green  | Black plastic  | M3SS2-11G | 1SFA611211R1102 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS2-21G | 1SFA611211R2102 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS2-31G | 1SFA611211R3102 | 1       | 0.024             |
|                     | Yellow | Black plastic  | M3SS2-11Y | 1SFA611211R1103 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS2-21Y | 1SFA611211R2103 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS2-31Y | 1SFA611211R3103 | 1       | 0.024             |
|                     | Blue   | Black plastic  | M3SS2-11L | 1SFA611211R1104 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS2-21L | 1SFA611211R2104 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS2-31L | 1SFA611211R3104 | 1       | 0.024             |
|                     | Red    | Black plastic  | M3SS3-11R | 1SFA611212R1101 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS3-21R | 1SFA611212R2101 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS3-31R | 1SFA611212R3101 | 1       | 0.024             |
|                     | Green  | Black plastic  | M3SS3-11G | 1SFA611212R1102 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS3-21G | 1SFA611212R2102 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS3-31G | 1SFA611212R3102 | 1       | 0.024             |
|                     | Yellow | Black plastic  | M3SS3-11Y | 1SFA611212R1103 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS3-21Y | 1SFA611212R2103 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS3-31Y | 1SFA611212R3103 | 1       | 0.024             |
|                     | Blue   | Black plastic  | M3SS3-11L | 1SFA611212R1104 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS3-21L | 1SFA611212R2104 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS3-31L | 1SFA611212R3104 | 1       | 0.024             |
|                     | Red    | Black plastic  | M3SS7-11R | 1SFA611216R1101 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS7-21G | 1SFA611216R2102 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS7-31G | 1SFA611216R3102 | 1       | 0.024             |
|                     | Green  | Black plastic  | M3SS7-11G | 1SFA611216R1102 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS7-21G | 1SFA611216R2102 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS7-31G | 1SFA611216R3102 | 1       | 0.024             |
|                     | Yellow | Black plastic  | M3SS7-11Y | 1SFA611216R1103 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS7-21Y | 1SFA611216R2103 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS7-31Y | 1SFA611216R3103 | 1       | 0.024             |
|                     | Blue   | Black plastic  | M3SS7-11L | 1SFA611216R1104 | 1       | 0.015             |
|                     |        | Chrome plastic | M3SS7-21L | 1SFA611216R2104 | 1       | 0.015             |
|                     |        | Chrome metal   | M3SS7-31L | 1SFA611216R3104 | 1       | 0.024             |



M3SS

Dimensions (mm, inches)

## Modular plastic range

Illuminated selector switches - 3-position - Long handle



M3SS4-11R



M3SS4-11G

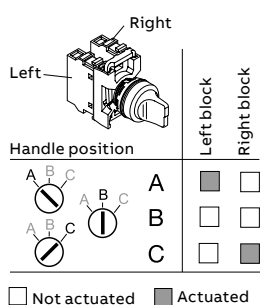


M3SS4-11Y

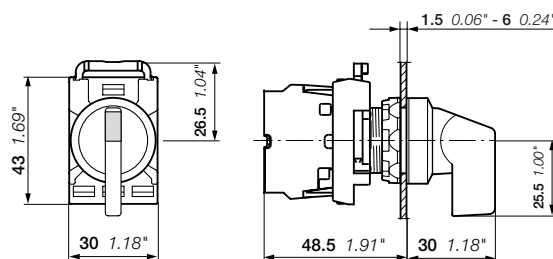


M3SS4-31C

### Contacts actuated



| Operating principle | Color  | Bezel          | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|--------|----------------|-----------|-----------------|---------|-------------------|
|                     | Red    | Black plastic  | M3SS4-11R | 1SFA611213R1101 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS4-21R | 1SFA611213R2101 | 1       | 0.018             |
|                     |        | Chrome metal   | M3SS4-31R | 1SFA611213R3101 | 1       | 0.027             |
|                     | Green  | Black plastic  | M3SS4-11G | 1SFA611213R1102 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS4-21G | 1SFA611213R2102 | 1       | 0.018             |
|                     | Yellow | Black plastic  | M3SS4-11Y | 1SFA611213R1103 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS4-21Y | 1SFA611213R2103 | 1       | 0.018             |
|                     | Blue   | Black plastic  | M3SS4-11L | 1SFA611213R1104 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS4-21L | 1SFA611213R2104 | 1       | 0.018             |
|                     | Clear  | Black plastic  | M3SS4-11C | 1SFA611213R1108 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS4-21C | 1SFA611213R2108 | 1       | 0.018             |
|                     |        | Chrome metal   | M3SS4-31C | 1SFA611213R3108 | 1       | 0.027             |
|                     | Red    | Black plastic  | M3SS5-11R | 1SFA611214R1101 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS5-21R | 1SFA611214R2101 | 1       | 0.018             |
|                     |        | Chrome metal   | M3SS5-31G | 1SFA611214R3102 | 1       | 0.027             |
|                     | Green  | Black plastic  | M3SS5-11G | 1SFA611214R1102 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS5-21G | 1SFA611214R2102 | 1       | 0.018             |
|                     | Yellow | Black plastic  | M3SS5-11Y | 1SFA611214R1103 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS5-21Y | 1SFA611214R2103 | 1       | 0.018             |
|                     | Blue   | Black plastic  | M3SS5-11L | 1SFA611214R1104 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS5-21L | 1SFA611214R2104 | 1       | 0.018             |
|                     | Clear  | Black plastic  | M3SS5-11C | 1SFA611214R1108 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS5-21C | 1SFA611214R2108 | 1       | 0.018             |
|                     |        | Chrome metal   | M3SS5-31C | 1SFA611214R3108 | 1       | 0.027             |
|                     | Red    | Black plastic  | M3SS6-11R | 1SFA611215R1101 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS6-21R | 1SFA611215R2101 | 1       | 0.018             |
|                     |        | Chrome metal   | M3SS6-31R | 1SFA611215R3101 | 1       | 0.027             |
|                     | Green  | Black plastic  | M3SS6-11G | 1SFA611215R1102 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS6-21G | 1SFA611215R2102 | 1       | 0.018             |
|                     | Yellow | Black plastic  | M3SS6-11Y | 1SFA611215R1103 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS6-21Y | 1SFA611215R2103 | 1       | 0.018             |
|                     | Blue   | Black plastic  | M3SS6-11L | 1SFA611215R1104 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS6-21L | 1SFA611215R2104 | 1       | 0.018             |
|                     | Clear  | Black plastic  | M3SS6-11C | 1SFA611215R1108 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS6-21C | 1SFA611215R2108 | 1       | 0.018             |
|                     |        | Chrome metal   | M3SS6-31C | 1SFA611215R3108 | 1       | 0.027             |
|                     | Red    | Black plastic  | M3SS8-11R | 1SFA611217R1101 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS8-21R | 1SFA611217R2101 | 1       | 0.018             |
|                     |        | Chrome metal   | M3SS8-31R | 1SFA611217R3101 | 1       | 0.027             |
|                     | Green  | Black plastic  | M3SS8-11G | 1SFA611217R1102 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS8-21G | 1SFA611217R2102 | 1       | 0.018             |
|                     | Yellow | Black plastic  | M3SS8-11Y | 1SFA611217R1103 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS8-21Y | 1SFA611217R2103 | 1       | 0.018             |
|                     | Blue   | Black plastic  | M3SS8-11L | 1SFA611217R1104 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS8-21L | 1SFA611217R2104 | 1       | 0.018             |
|                     | Clear  | Black plastic  | M3SS8-11C | 1SFA611217R1108 | 1       | 0.018             |
|                     |        | Chrome plastic | M3SS8-21C | 1SFA611217R2108 | 1       | 0.018             |
|                     |        | Chrome metal   | M3SS8-31C | 1SFA611217R3108 | 1       | 0.027             |



M3SS

Dimensions (mm, inches)

## Modular plastic range

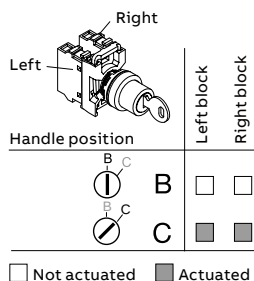
### Key-operated selector switches - 2-position



M2SSK1-101

1SFCU51133V0001

#### Contacts actuated

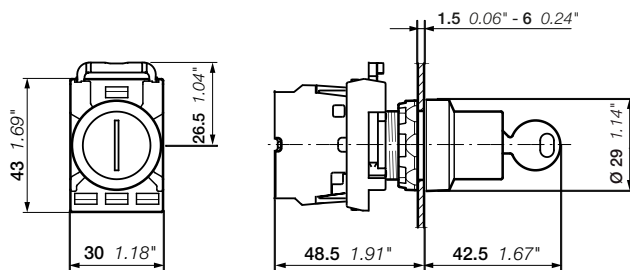


#### Description

Key-operated selector switches are delivered in black color.

| Operating principle                       | Key                  | Bezel          | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------------------------------|----------------------|----------------|------------|-----------------|---------|-------------------|
| <br>Key can be removed in both positions  | Key code 455         | Black plastic  | M2SSK1-101 | 1SFA611280R1001 | 1       | 0.045             |
|                                           |                      | Chrome plastic | M2SSK1-201 | 1SFA611280R2001 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK1-301 | 1SFA611280R3001 | 1       | 0.054             |
|                                           | Key code 421         | Black plastic  | M2SSK1-102 | 1SFA611280R1002 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK1-302 | 1SFA611280R3002 | 1       | 0.054             |
|                                           | Key code 3433-E      | Black plastic  | M2SSK1-103 | 1SFA611280R1003 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK1-303 | 1SFA611280R3003 | 1       | 0.054             |
|                                           | Random selection (1) | Black plastic  | M2SSK1-104 | 1SFA611280R1004 | 25      | 0.045             |
|                                           |                      | Chrome metal   | M2SSK1-304 | 1SFA611280R3004 | 25      | 0.054             |
| <br>Key can be removed in B position only | Key code 455         | Black plastic  | M2SSK2-101 | 1SFA611281R1001 | 1       | 0.045             |
|                                           |                      | Chrome plastic | M2SSK2-201 | 1SFA611281R2001 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK2-301 | 1SFA611281R3001 | 1       | 0.054             |
|                                           | Key code 421         | Black plastic  | M2SSK2-102 | 1SFA611281R1002 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK2-302 | 1SFA611281R3002 | 1       | 0.054             |
|                                           | Key code 3433-E      | Black plastic  | M2SSK2-103 | 1SFA611281R1003 | 1       | 0.045             |
|                                           |                      | Chrome plastic | M2SSK2-203 | 1SFA611281R2003 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK2-303 | 1SFA611281R3003 | 1       | 0.054             |
|                                           | Random selection (1) | Black plastic  | M2SSK2-104 | 1SFA611281R1004 | 25      | 0.045             |
|                                           |                      | Chrome metal   | M2SSK2-304 | 1SFA611281R3004 | 25      | 0.054             |
| <br>Key can be removed in position B only | Key code 455         | Black plastic  | M2SSK3-101 | 1SFA611282R1001 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK3-301 | 1SFA611282R3001 | 1       | 0.054             |
|                                           | Key code 421         | Black plastic  | M2SSK3-102 | 1SFA611282R1002 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK3-302 | 1SFA611282R3002 | 1       | 0.054             |
|                                           | Key code 3433-E      | Black plastic  | M2SSK3-103 | 1SFA611282R1003 | 1       | 0.045             |
|                                           |                      | Chrome metal   | M2SSK3-303 | 1SFA611282R3003 | 1       | 0.054             |
|                                           | Random selection (1) | Black plastic  | M2SSK3-104 | 1SFA611282R1004 | 25      | 0.045             |
|                                           |                      | Chrome metal   | M2SSK3-304 | 1SFA611282R3004 | 25      | 0.054             |
| <br>Key can be removed in A only          | Key code 455         | Black plastic  | M2SSK4-101 | 1SFA611289R1001 | 1       | 0.045             |
|                                           |                      |                |            |                 |         |                   |

(1) The order code includes 25 keys operated selector switches. Each selector switch includes unique key code. Key codes 455, 421 and 3433-E not included.



M2SSK

Dimensions (mm, inches)

## Modular plastic range

### Key-operated selector switches - 3-position



M2SSK1-101

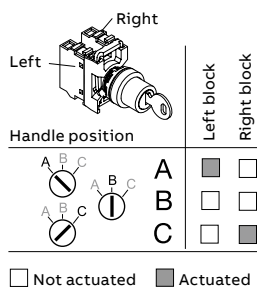
1SFC151133V0001

#### Description

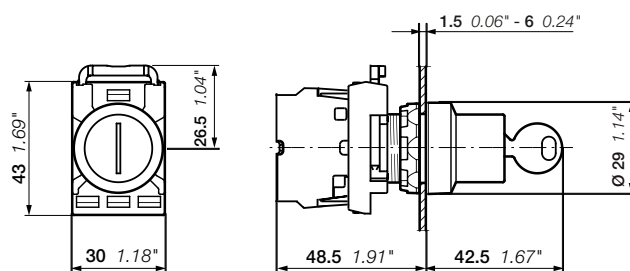
Key-operated selector switches are delivered in black color.

| Operating principle                                                                                                          | key                  | Bezel          | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|------------|-----------------|---------|-------------------|
| <br>Key can be removed in all positions     | Key code 455         | Black plastic  | M3SSK1-101 | 1SFA611283R1001 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome plastic | M3SSK1-201 | 1SFA611283R2001 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK1-301 | 1SFA611283R3001 | 1       | 0.054             |
|                                                                                                                              | Key code 421         | Black plastic  | M3SSK1-102 | 1SFA611283R1002 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK1-302 | 1SFA611283R3002 | 1       | 0.054             |
|                                                                                                                              | Key code 3433-E      | Black plastic  | M3SSK1-103 | 1SFA611283R1003 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK1-303 | 1SFA611283R3003 | 1       | 0.054             |
|                                                                                                                              | Random selection (1) | Black plastic  | M3SSK1-104 | 1SFA611283R1004 | 25      | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK1-304 | 1SFA611283R3004 | 25      | 0.054             |
| <br>Key can be removed in position B only   | Key code 455         | Black plastic  | M3SSK2-101 | 1SFA611284R1001 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK2-301 | 1SFA611284R3001 | 1       | 0.054             |
|                                                                                                                              | Key code 421         | Black plastic  | M3SSK2-102 | 1SFA611284R1002 | 1       | 0.045             |
|                                                                                                                              | Key code 3433-E      | Black plastic  | M3SSK2-103 | 1SFA611284R1003 | 1       | 0.045             |
|                                                                                                                              | Random selection (1) | Black plastic  | M3SSK2-104 | 1SFA611284R1004 | 25      | 0.045             |
| <br>Key can be removed in position B only  | Key code 455         | Black plastic  | M3SSK3-101 | 1SFA611285R1001 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK3-301 | 1SFA611285R3001 | 1       | 0.054             |
|                                                                                                                              | Key code 421         | Black plastic  | M3SSK3-102 | 1SFA611285R1002 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK3-302 | 1SFA611285R3002 | 1       | 0.054             |
|                                                                                                                              | Key code 3433-E      | Black plastic  | M3SSK3-103 | 1SFA611285R1003 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK3-303 | 1SFA611285R3003 | 1       | 0.054             |
| <br>Key can be removed in position A only | Key code 455         | Black plastic  | M3SSK4-101 | 1SFA611286R1001 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK4-301 | 1SFA611286R3001 | 1       | 0.054             |
|                                                                                                                              | Key code 421         | Black plastic  | M3SSK4-102 | 1SFA611286R1002 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK4-302 | 1SFA611286R3002 | 1       | 0.054             |
| <br>Key can be removed in all positions   | Key code 455         | Black plastic  | M3SSK5-101 | 1SFA611287R1001 | 1       | 0.045             |
|                                                                                                                              |                      | Chrome metal   | M3SSK5-301 | 1SFA611287R3001 | 1       | 0.054             |
|                                                                                                                              | Key code 3433-E      | Black plastic  | M3SSK5-103 | 1SFA611287R1003 | 1       | 0.045             |
| <br>Key can be removed in A only          | Key code 455         | Black plastic  | M3SSK6-101 | 1SFA611288R1001 | 1       | 0.045             |

#### Contacts actuated



(1) The order code includes 25 key operated selector switches. Each selector switch includes unique key code. Key codes 455, 421 and 3433-E not included.



M3SSK

Dimensions (mm, inches)

Modular plastic range

Potentiometers



MT-110B

Description

Black knob with integrated position indication and marking in white.

| Bezel                            | Type    | Order code      | Pkg qty         | Weight (1 pce) kg |
|----------------------------------|---------|-----------------|-----------------|-------------------|
| <b>Knob with resistor 5 kΩ</b>   |         |                 |                 |                   |
| Black plastic                    | MT-105B | 1SFA611410R1056 | 1               | 0.040             |
| Chrome plastic                   | MT-205B | 1SFA611410R2056 | 1               | 0.040             |
| Chrome metal                     | MT-305B | 1SFA611410R3056 | 1               | 0.049             |
| <b>Knob with resistor 10 kΩ</b>  |         |                 |                 |                   |
| Black plastic                    | MT-110B | 1SFA611410R1106 | 1               | 0.040             |
| Chrome plastic                   | MT-210B | 1SFA611410R2106 | 1               | 0.040             |
| Chrome metal                     | MT-310B | 1SFA611410R3106 | 1               | 0.048             |
| <b>Knob with resistor 50 kΩ</b>  |         |                 |                 |                   |
| Black plastic                    | MT-150B | 1SFA611410R1506 | 1               | 0.040             |
| Chrome plastic                   | MT-250B | 1SFA611410R2506 | 1               | 0.040             |
| Chrome metal                     | MT-350B | 1SFA611410R3506 | 1               | 0.049             |
| <b>Knob without resistor (1)</b> |         |                 |                 |                   |
| Black plastic                    | MT-1B   | 1SFA611410R1006 | 10              | 0.022             |
| Chrome metal                     | MT-3B   | 1SFA611410R3006 | 10              | 0.030             |
| <b>Legend plates aluminum</b>    |         |                 |                 |                   |
| 29.6 x 44.5 mm                   | Ø 22 mm | –               | SK615562-87     | 10 0.002          |
| 48.5 x 44.5 mm, scale: 0-10      | Ø 22 mm | –               | SK615562-88     | 10 0.002          |
| 48.5 x 44.5 mm, scale: 0-50      | Ø 22 mm | MA6-1252        | 1SFA611930R1252 | 10 0.002          |

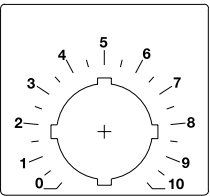
(1) Knob without resistor: for shaft diameter 6-6.35 mm. Min. shaft length 20 mm.



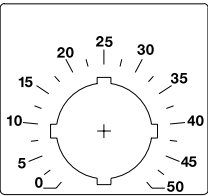
MA6-1252



SK615562-87



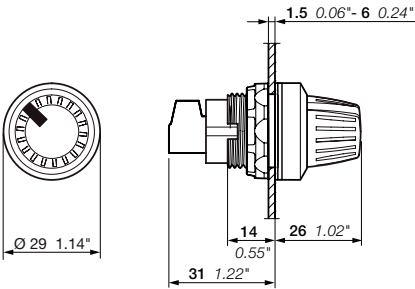
SK615562-88



MA6-1252

Technical data

|                       |                   |
|-----------------------|-------------------|
| Power rating          | 2 W               |
| Mechanical angle      | 280°              |
| Insulation voltage    | 900 V             |
| Operating temperature | -1 ... + 70° C    |
| Resistance tolerance  | ± 10 ohm          |
| Mechanical life       | 20 000 operations |



MT

Dimensions (mm, inches)

## Modular plastic range

### Reset pushbuttons



KPR1-100G

1SFC151235V0001



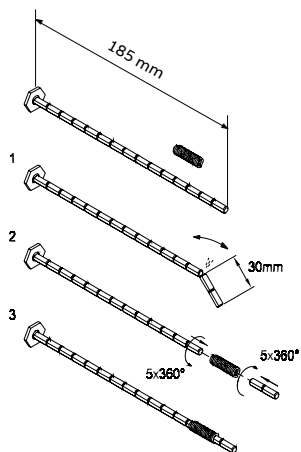
KPR1-101L

1SFC151234V0001



KPR1-104B

1SFC151229V0001



KA1-8046



KA1-8047

1SFC151381V0001

#### Description

Reset pushbuttons are momentary and include only black plastic bezel.

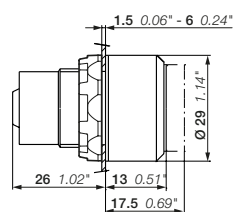
| Color                         | Text    | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------------------|---------|-----------|-----------------|---------|-------------------|
| <b>Flush reset pushbutton</b> |         |           |                 |         |                   |
| ● Red                         | No text | KPR1-100R | 1SFA616160R1001 | 10      | 0.020             |
| ● Green                       | No text | KPR1-100G | 1SFA616160R1002 | 10      | 0.020             |
|                               | I       | KPR1-102G | 1SFA616160R1022 | 10      | 0.020             |
| ● Yellow                      | No text | KPR1-100Y | 1SFA616160R1003 | 10      | 0.020             |
| ● Blue                        | No text | KPR1-100L | 1SFA616160R1004 | 10      | 0.020             |
|                               | R       | KPR1-101L | 1SFA616160R1014 | 10      | 0.020             |
| ○ White                       | No text | KPR1-100W | 1SFA616160R1005 | 10      | 0.020             |
|                               | R       | KPR1-101W | 1SFA616160R1015 | 10      | 0.020             |
|                               | I       | KPR1-102W | 1SFA616160R1025 | 10      | 0.020             |
|                               | II      | KPR1-103W | 1SFA616160R1035 | 10      | 0.020             |
| ● Black                       | No text | KPR1-100B | 1SFA616160R1006 | 10      | 0.020             |
|                               | RESET   | KPR1-104B | 1SFA616160R1046 | 10      | 0.020             |

#### Extended reset pushbutton

|         |         |           |                 |    |       |
|---------|---------|-----------|-----------------|----|-------|
| ● Red   | No text | KPR2-100R | 1SFA616161R1001 | 10 | 0.021 |
|         | O       | KPR2-105R | 1SFA616161R1051 | 10 | 0.021 |
| ● Black | No text | KPR2-100B | 1SFA616161R1006 | 10 | 0.021 |

#### Accessories

|                | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|----------------|----------|-----------------|---------|-------------------|
| Shaft          | KA1-8046 | 1SFA616920R8046 | 10      | 0.007             |
| Flexible joint | KA1-8047 | 1SFA616920R8047 | 10      | 0.005             |



KPR1, KPR2

Dimensions (mm, inches)

Modular plastic range  
Reset pushbuttons with shaft



KPR3-100R



KPR3-104B

15FC15125V0001

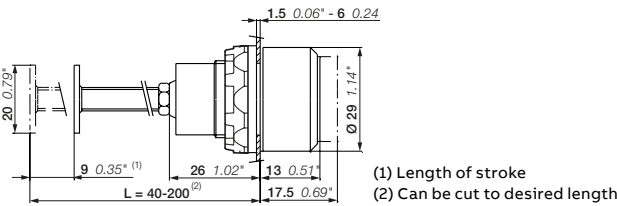
15FC15122V0001

Description

Reset pushbuttons are momentary and include only black plastic bezel.

| Color                     | Text    | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------------|---------|-----------|-----------------|---------|-------------------|
| Flush reset pushbutton    |         |           |                 |         |                   |
| ● Red                     | No text | KPR3-100R | 1SFA616162R1001 | 1       | 0.027             |
| ● Green                   | No text | KPR3-100G | 1SFA616162R1002 | 1       | 0.027             |
|                           | II      | KPR3-103G | 1SFA616162R1032 | 1       | 0.027             |
| ● Yellow                  | No text | KPR3-100Y | 1SFA616162R1003 | 1       | 0.027             |
| ● Blue                    | No text | KPR3-100L | 1SFA616162R1004 | 1       | 0.027             |
|                           | R       | KPR3-101L | 1SFA616162R1014 | 1       | 0.027             |
| ○ White                   | No text | KPR3-100W | 1SFA616162R1005 | 1       | 0.027             |
|                           | R       | KPR3-101W | 1SFA616162R1015 | 1       | 0.027             |
| ● Black                   | No text | KPR3-100B | 1SFA616162R1006 | 1       | 0.027             |
|                           | RESET   | KPR3-104B | 1SFA616162R1046 | 1       | 0.027             |
| Extended reset pushbutton |         |           |                 |         |                   |
| ● Red                     | No text | KPR4-100R | 1SFA616163R1001 | 1       | 0.028             |
| ○                         |         | KPR4-105R | 1SFA616163R1051 | 1       | 0.028             |
|                           |         |           |                 |         |                   |
| ● Black                   | No text | KPR4-100B | 1SFA616163R1006 | 1       | 0.028             |
|                           | O       | KPR4-105B | 1SFA616163R1056 | 1       | 0.028             |

Note: Flexible joint not included.



KPR3, KPR4

Dimensions (mm, inches)

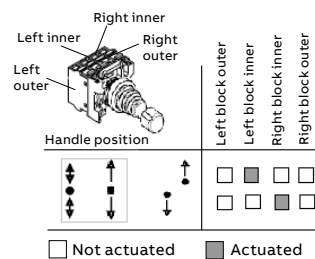
## Modular plastic range

### Joysticks

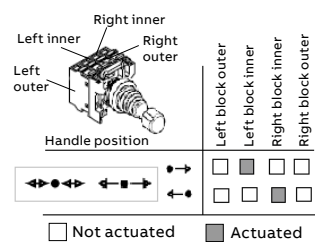


MJS1-60B

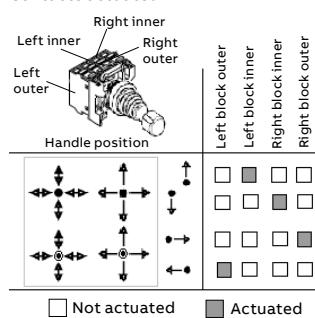
#### Contacts actuated



#### Contacts actuated



#### Contacts actuated



MA1-8138



MA1-8137

### Description

IP protection degree : IP66, IP67 and IP69K. 4-position holder included.

| Position                         | Bezel         | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|----------------------------------|---------------|----------|-----------------|---------|-------------------|
| <b>Without latching function</b> |               |          |                 |         |                   |
| ↑                                | Black plastic | MJS1-40B | 1SFA611701R4006 | 1       | 0.043             |
| ↓                                | Chrome metal  | MJS1-60B | 1SFA611701R6006 | 1       | 0.052             |
| ↕                                | Black plastic | MJS2-40B | 1SFA611702R4006 | 1       | 0.043             |
| ↕                                | Chrome metal  | MJS2-60B | 1SFA611702R6006 | 1       | 0.052             |
| ↔                                | Black plastic | MJS3-40B | 1SFA611703R4006 | 1       | 0.043             |
| ↔                                | Chrome metal  | MJS3-60B | 1SFA611703R6006 | 1       | 0.052             |
| ↕↔                               | Black plastic | MJS4-40B | 1SFA611704R4006 | 1       | 0.043             |
| ↕↔                               | Chrome metal  | MJS4-60B | 1SFA611704R6006 | 1       | 0.052             |
| ↕↔↕                              | Black plastic | MJS5-40B | 1SFA611705R4006 | 1       | 0.043             |
| ↕↔↕                              | Chrome metal  | MJS5-60B | 1SFA611705R6006 | 1       | 0.052             |
| ↕↔↕↔                             | Black plastic | MJS6-40B | 1SFA611706R4006 | 1       | 0.043             |
| ↕↔↕↔                             | Chrome metal  | MJS6-60B | 1SFA611706R6006 | 1       | 0.052             |

### With latching function

|      |               |           |                 |   |       |
|------|---------------|-----------|-----------------|---|-------|
| ↑    | Black plastic | MJS7-40B  | 1SFA611707R4006 | 1 | 0.043 |
| ↓    | Chrome metal  | MJS7-60B  | 1SFA611707R6006 | 1 | 0.052 |
| ↕    | Black plastic | MJS9-40B  | 1SFA611709R4006 | 1 | 0.043 |
| ↕    | Chrome metal  | MJS9-60B  | 1SFA611709R6006 | 1 | 0.052 |
| ↔    | Black plastic | MJS8-40B  | 1SFA611708R4006 | 1 | 0.043 |
| ↔    | Chrome metal  | MJS8-60B  | 1SFA611708R6006 | 1 | 0.052 |
| ↕↔   | Black plastic | MJS10-40B | 1SFA611710R6006 | 1 | 0.052 |
| ↕↔   | Chrome metal  | MJS10-60B | 1SFA611710R6006 | 1 | 0.052 |
| ↕↔↕  | Black plastic | MJS11-40B | 1SFA611711R4006 | 1 | 0.043 |
| ↕↔↕  | Chrome metal  | MJS11-60B | 1SFA611711R6006 | 1 | 0.052 |
| ↕↔↕↔ | Black plastic | MJS12-40B | 1SFA611712R4006 | 1 | 0.043 |
| ↕↔↕↔ | Chrome metal  | MJS12-60B | 1SFA611712R6006 | 1 | 0.052 |

### Accessories

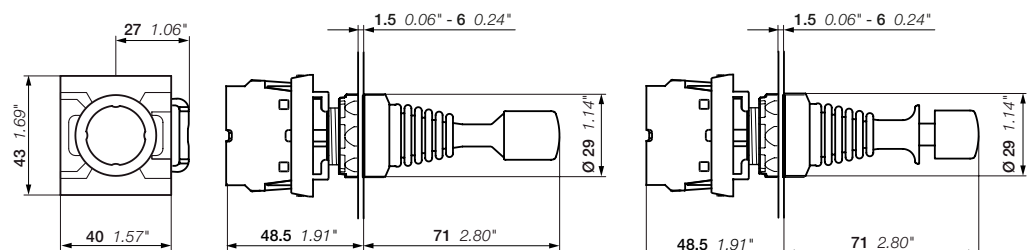
| Type | Order code | Pkg qty | Weight (1 pce) kg |
|------|------------|---------|-------------------|
|------|------------|---------|-------------------|

#### Legend plates, 66 x 59 aluminum laminate with adhesive back

|                                     |          |                 |    |       |
|-------------------------------------|----------|-----------------|----|-------|
| 2-position - Up - Down              | MA6-1240 | 1SFA611930R1240 | 10 | 0.004 |
| 2-position - Left - Right           | MA6-1241 | 1SFA611930R1241 | 10 | 0.004 |
| 4-position Up - down - right - left | MA6-1242 | 1SFA611930R1242 | 10 | 0.004 |

#### Legend plates holder (inserts not included, suitable for insert size 27x15)

|            |          |                 |    |       |
|------------|----------|-----------------|----|-------|
| 2-position | MA1-8138 | 1SFA611920R8138 | 10 | 0.002 |
| 4-position | MA1-8137 | 1SFA611920R8137 | 10 | 0.003 |



MJS

Dimensions (mm, inches)

without latching function

with latching function

Modular plastic range  
Toggle switches



MTS1-10B



MTS1-30B

Contacts actuated, 2-position

|                 |   |                                     |                                     |                                     |
|-----------------|---|-------------------------------------|-------------------------------------|-------------------------------------|
|                 |   |                                     |                                     |                                     |
| Handle position |   | Left block                          | Center block                        | Right block                         |
|                 | A | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|                 | C | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

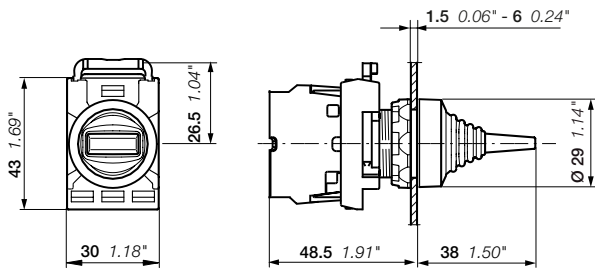
☐ Not actuated    ☒ Actuated

Contacts actuated, 3-position

|                 |   |                                     |                                     |                                     |
|-----------------|---|-------------------------------------|-------------------------------------|-------------------------------------|
|                 |   |                                     |                                     |                                     |
| Handle position |   | Left block                          | Center block                        | Right block                         |
|                 | A | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|                 | B | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
|                 | C | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

☐ Not actuated    ☒ Actuated

| Operating principle | Bezel          | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|----------------|----------|-----------------|---------|-------------------|
| 2-position          |                |          |                 |         |                   |
|                     | Black plastic  | MTS1-10B | 1SFA611300R1006 | 10      | 0.014             |
|                     | Chrome plastic | MTS1-20B | 1SFA611300R2006 | 10      | 0.014             |
|                     | Chrome metal   | MTS1-30B | 1SFA611300R3006 | 10      | 0.023             |
| 3-position          |                |          |                 |         |                   |
|                     | Black plastic  | MTS3-10B | 1SFA611302R1006 | 10      | 0.014             |
|                     | Chrome plastic | MTS3-20B | 1SFA611302R2006 | 10      | 0.014             |
|                     | Chrome metal   | MTS3-30B | 1SFA611302R3006 | 10      | 0.023             |
|                     | Black plastic  | MTS2-10B | 1SFA611301R1006 | 10      | 0.014             |
|                     | Chrome plastic | MTS2-20B | 1SFA611301R2006 | 10      | 0.014             |
|                     | Chrome metal   | MTS2-30B | 1SFA611301R3006 | 10      | 0.023             |



MTS

Dimensions (mm, inches)

## Modular plastic range

### Contact block configuration

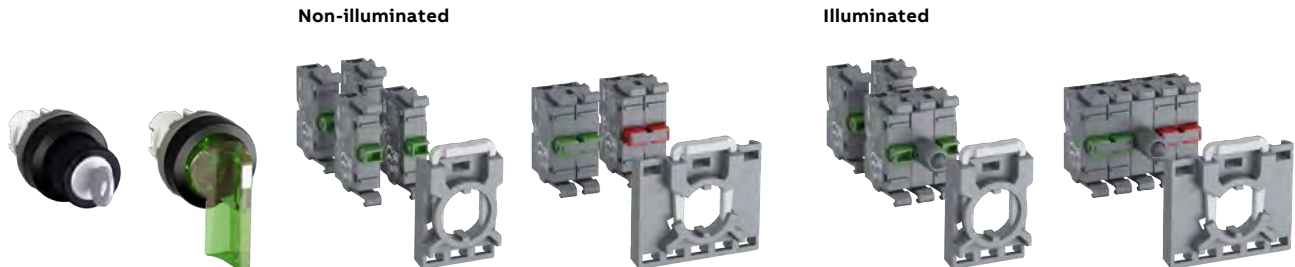
#### Pushbuttons - Heavy duty pushbuttons (1) - Mushrooms pushbuttons



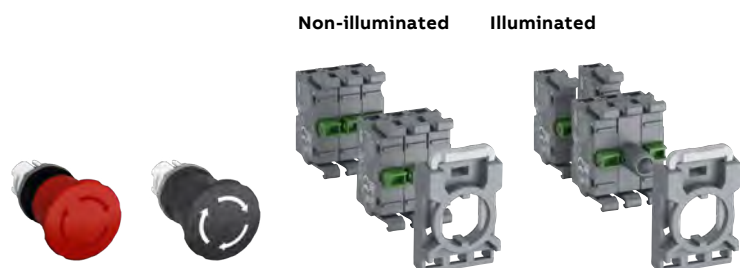
#### Double pushbuttons



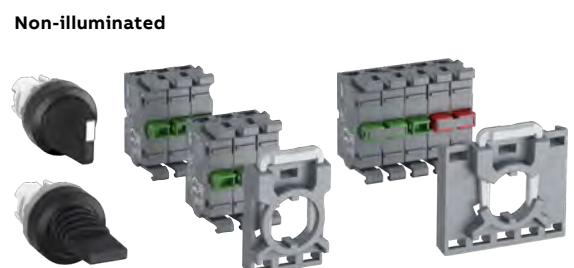
#### Selector switches



#### Emergency stop pushbuttons - Machine stop pushbuttons



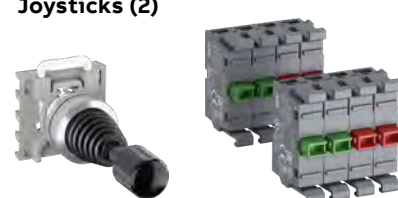
#### Toggle switches - Center block operating selector switches



#### Pilot lights



#### Joysticks (2)



Note: locking nut included with all operators.

(2) Holder is included for joystick.

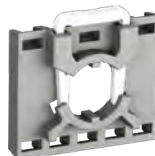
## Modular plastic range

### Holders and contact blocks for front mounting



MCBH-00

1SFC151401V0001



MCBH5-00

1SFC151277V0001



MCB-10

1SFC151366V0001



MCB-02

1SFC151369V0001

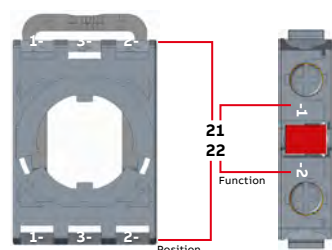


MCBL-01

1SFC151283V0001

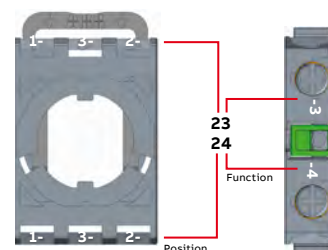
| Description                                        | Contacts | Type     | Order code      | Pkg qty | Weight (1 pce) |
|----------------------------------------------------|----------|----------|-----------------|---------|----------------|
| kg                                                 |          |          |                 |         |                |
| <b>Holders</b>                                     |          |          |                 |         |                |
| 3-position                                         | --       | MCBH-00  | 1SFA611605R1100 | 10      | 0.006          |
| 5-position                                         | --       | MCBH5-00 | 1SFA611601R1100 | 10      | 0.008          |
| <b>Single contact blocks</b>                       |          |          |                 |         |                |
| For 3 & 5-position holder                          | 1 0      | MCB-10   | 1SFA611610R1001 | 10      | 0.013          |
|                                                    | 0 1      | MCB-01   | 1SFA611610R1010 | 10      | 0.013          |
| <b>Single contact blocks, gold plated contacts</b> |          |          |                 |         |                |
| For 3 & 5-position holder                          | 1 0      | MCB-10G  | 1SFA611610R1101 | 10      | 0.013          |
|                                                    | 0 1      | MCB-01G  | 1SFA611610R1110 | 10      | 0.013          |
| <b>Double contact blocks</b>                       |          |          |                 |         |                |
| For 3 & 5-position holder                          | 2 0      | MCB-20   | 1SFA611610R1002 | 10      | 0.026          |
|                                                    | 0 2      | MCB-02   | 1SFA611610R1020 | 10      | 0.026          |
|                                                    | 1 1      | MCB-11   | 1SFA611610R1011 | 10      | 0.026          |
| <b>Double contact blocks, gold plated contacts</b> |          |          |                 |         |                |
| For 3 & 5-position holder                          | 2 0      | MCB-20G  | 1SFA611610R1102 | 10      | 0.026          |
|                                                    | 0 2      | MCB-02G  | 1SFA611610R1120 | 10      | 0.026          |
|                                                    | 1 1      | MCB-11G  | 1SFA611610R1111 | 10      | 0.026          |
| <b>Micro switch contact blocks</b>                 |          |          |                 |         |                |
| For 3-position holder                              | 1 0      | MCBL-10  | 1SFA611612R1010 | 10      | 0.013          |
|                                                    | 0 1      | MCBL-01  | 1SFA611612R1001 | 10      | 0.013          |

Note: 3 micro switch contact blocks max. allowed. If more than 3 contact blocks are needed, micro switch contact block to be mounted on the second stack.



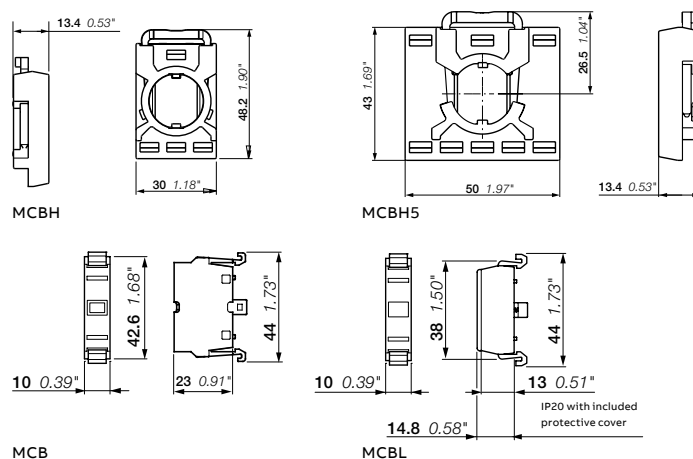
#### Combined markings

|    |    |    |
|----|----|----|
| 11 | 31 | 21 |
| 12 | 32 | 22 |



#### Combined markings

|    |    |    |
|----|----|----|
| 13 | 33 | 23 |
| 14 | 34 | 24 |



Dimensions (mm, inches)

## Modular plastic range

### LED blocks for front mounting



| Color                                                             | Rated current<br>mA | Wavelength<br>nm | Luminance<br>mcd | Type      | Order code      | Pkg<br>qty | Weight<br>(1pce)<br>kg |
|-------------------------------------------------------------------|---------------------|------------------|------------------|-----------|-----------------|------------|------------------------|
| <b>Rated voltage 12 V DC</b>                                      |                     |                  |                  |           |                 |            |                        |
| Red                                                               | 12.0                | 620              | 320              | MLBL-00R  | 1SFA611621R1001 | 10         | 0.012                  |
| Green                                                             | 12.0                | 520              | 1500             | MLBL-00G  | 1SFA611621R1002 | 10         | 0.012                  |
| Yellow                                                            | 12.0                | 588              | 380              | MLBL-00Y  | 1SFA611621R1003 | 10         | 0.012                  |
| Blue                                                              | 12.0                | 468              | 450              | MLBL-00L  | 1SFA611621R1004 | 10         | 0.012                  |
| White                                                             | 12.0                | (1)              | 600              | MLBL-00W  | 1SFA611621R1005 | 10         | 0.012                  |
| <b>Rated voltage 24 V AC/DC</b>                                   |                     |                  |                  |           |                 |            |                        |
| Red                                                               | 10.0                | 620              | 250              | MLBL-01R  | 1SFA611621R1011 | 10         | 0.012                  |
| Green                                                             | 10.0                | 520              | 1500             | MLBL-01G  | 1SFA611621R1012 | 10         | 0.012                  |
| Yellow                                                            | 10.0                | 588              | 250              | MLBL-01Y  | 1SFA611621R1013 | 10         | 0.012                  |
| Blue                                                              | 10.0                | 468              | 450              | MLBL-01L  | 1SFA611621R1014 | 10         | 0.012                  |
| White                                                             | 10.0                | (1)              | 600              | MLBL-01W  | 1SFA611621R1015 | 10         | 0.012                  |
| <b>Rated voltage 48 V AC/DC</b>                                   |                     |                  |                  |           |                 |            |                        |
| Red                                                               | 10.0                | 620              | 260              | MLBL-02R  | 1SFA611621R1021 | 10         | 0.012                  |
| Green                                                             | 13.0                | 520              | 1500             | MLBL-02G  | 1SFA611621R1022 | 10         | 0.012                  |
| Yellow                                                            | 10.0                | 588              | 300              | MLBL-02Y  | 1SFA611621R1023 | 10         | 0.012                  |
| Blue                                                              | 13.0                | 468              | 450              | MLBL-02L  | 1SFA611621R1024 | 10         | 0.012                  |
| White                                                             | 13.0                | (1)              | 600              | MLBL-02W  | 1SFA611621R1025 | 10         | 0.012                  |
| <b>Rated voltage 60 V AC/DC</b>                                   |                     |                  |                  |           |                 |            |                        |
| Red                                                               | 13.0                | 620              | 350              | MLBL-03R  | 1SFA611621R1031 | 10         | 0.012                  |
| Green                                                             | 13.0                | 520              | 2000             | MLBL-03G  | 1SFA611621R1032 | 10         | 0.012                  |
| Yellow                                                            | 13.0                | 588              | 400              | MLBL-03Y  | 1SFA611621R1033 | 10         | 0.012                  |
| Blue                                                              | 13.0                | 468              | 550              | MLBL-03L  | 1SFA611621R1034 | 10         | 0.012                  |
| White                                                             | 13.0                | (1)              | 750              | MLBL-03W  | 1SFA611621R1035 | 10         | 0.012                  |
| <b>Rated voltage 110-130 V AC</b>                                 |                     |                  |                  |           |                 |            |                        |
| Red                                                               | 10.0                | 620              | 200              | MLBL-04R  | 1SFA611621R1041 | 10         | 0.012                  |
| Green                                                             | 10.0                | 520              | 1200             | MLBL-04G  | 1SFA611621R1042 | 10         | 0.012                  |
| Yellow                                                            | 10.0                | 588              | 250              | MLBL-04Y  | 1SFA611621R1043 | 10         | 0.012                  |
| Blue                                                              | 10.0                | 468              | 400              | MLBL-04L  | 1SFA611621R1044 | 10         | 0.012                  |
| White                                                             | 10.0                | (1)              | 500              | MLBL-04W  | 1SFA611621R1045 | 10         | 0.012                  |
| <b>Rated voltage 110-130 V AC high anti-inductive voltage (2)</b> |                     |                  |                  |           |                 |            |                        |
| Red                                                               | 10.0                | 620              | 250              | MLBL-04AR | 1SFA611621R3041 | 10         | 0.012                  |
| Green                                                             | 10.0                | 520              | 1500             | MLBL-04AG | 1SFA611621R3042 | 10         | 0.012                  |
| Yellow                                                            | 10.0                | 582              | 300              | MLBL-04AY | 1SFA611621R3043 | 10         | 0.012                  |
| Blue                                                              | 10.0                | 468              | 450              | MLBL-04AL | 1SFA611621R3044 | 10         | 0.012                  |
| White                                                             | 10.0                | (1)              | 600              | MLBL-04AW | 1SFA611621R3045 | 10         | 0.012                  |
| <b>Rated voltage 110-130 V DC</b>                                 |                     |                  |                  |           |                 |            |                        |
| Red                                                               | 10.0                | 620              | 250              | MLBL-05R  | 1SFA611621R1051 | 10         | 0.012                  |
| Green                                                             | 10.0                | 520              | 1500             | MLBL-05G  | 1SFA611621R1052 | 10         | 0.012                  |
| Yellow                                                            | 10.0                | 588              | 300              | MLBL-05Y  | 1SFA611621R1053 | 10         | 0.012                  |
| Blue                                                              | 10.0                | 468              | 450              | MLBL-05L  | 1SFA611621R1054 | 10         | 0.012                  |
| White                                                             | 10.0                | (1)              | 600              | MLBL-05W  | 1SFA611621R1055 | 10         | 0.012                  |
| <b>Rated voltage 220 V DC</b>                                     |                     |                  |                  |           |                 |            |                        |
| Red                                                               | 8.0                 | 620              | 180              | MLBL-06R  | 1SFA611621R1061 | 10         | 0.012                  |
| Green                                                             | 8.0                 | 520              | 110              | MLBL-06G  | 1SFA611621R1062 | 10         | 0.012                  |
| Yellow                                                            | 8.0                 | 588              | 200              | MLBL-06Y  | 1SFA611621R1063 | 10         | 0.012                  |
| Blue                                                              | 8.0                 | 468              | 450              | MLBL-06L  | 1SFA611621R1064 | 10         | 0.012                  |
| White                                                             | 8.0                 | (1)              | 600              | MLBL-06W  | 1SFA611621R1065 | 10         | 0.012                  |

Note: care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

(1) X=0.31, Y=0.32 according to the ICI Chromaticity diagram.

(2) Higher threshold to light up LED to be used in application where there is risk of large induced voltages.

## Modular plastic range

### LED blocks for front mounting

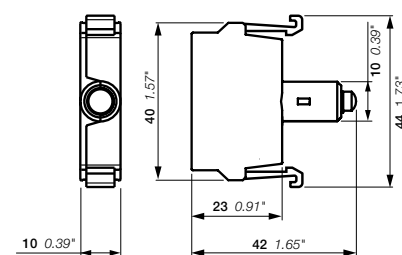


| Color                                                         | Rated current<br>mA | Wavelength<br>nm | Luminance<br>mcd | Type     | Order code      | Pkg<br>qty | Weight<br>(1pce)<br>kg |
|---------------------------------------------------------------|---------------------|------------------|------------------|----------|-----------------|------------|------------------------|
| <b>Rated voltage 230 V AC</b>                                 |                     |                  |                  |          |                 |            |                        |
| Red                                                           | 10.0                | 620              | 250              | MLBL-07R | 1SFA611621R1071 | 10         | 0.012                  |
| Green                                                         | 10.0                | 520              | 1500             | MLBL-07G | 1SFA611621R1072 | 10         | 0.012                  |
| Yellow                                                        | 10.0                | 588              | 300              | MLBL-07Y | 1SFA611621R1073 | 10         | 0.012                  |
| Blue                                                          | 10.0                | 468              | 450              | MLBL-07L | 1SFA611621R1074 | 10         | 0.012                  |
| White                                                         | 10.0                | (1)              | 600              | MLBL-07W | 1SFA611621R1075 | 10         | 0.012                  |
| <b>Rated voltage 230 V AC high anti-inductive voltage (2)</b> |                     |                  |                  |          |                 |            |                        |
| Red                                                           | 10.0                | 620              | 250              | MLBL-99R | 1SFA611621R1991 | 10         | 0.012                  |
| Green                                                         | 10.0                | 520              | 1500             | MLBL-99G | 1SFA611621R1992 | 10         | 0.012                  |
| Yellow                                                        | 10.0                | 588              | 300              | MLBL-99Y | 1SFA611621R1993 | 10         | 0.012                  |
| Blue                                                          | 10.0                | 468              | 450              | MLBL-99L | 1SFA611621R1994 | 10         | 0.012                  |
| White                                                         | 10.0                | (1)              | 600              | MLBL-99W | 1SFA611621R1995 | 10         | 0.012                  |
| <b>Rated voltage 380 V AC</b>                                 |                     |                  |                  |          |                 |            |                        |
| Red                                                           | 10.0                | 620              | 250              | MLBL-08R | 1SFA611621R1081 | 10         | 0.012                  |
| Green                                                         | 10.0                | 520              | 1500             | MLBL-08G | 1SFA611621R1082 | 10         | 0.012                  |
| Yellow                                                        | 10.0                | 582              | 300              | MLBL-08Y | 1SFA611621R1083 | 10         | 0.012                  |
| Blue                                                          | 10.0                | 468              | 450              | MLBL-08L | 1SFA611621R1084 | 10         | 0.012                  |
| White                                                         | 10.0                | (1)              | 600              | MLBL-08W | 1SFA611621R1085 | 10         | 0.012                  |
| <b>Rated voltage 415 V AC</b>                                 |                     |                  |                  |          |                 |            |                        |
| Red                                                           | 11                  | 620              | 280              | MLBL-09R | 1SFA611621R1091 | 10         | 0.012                  |
| Green                                                         | 11                  | 520              | 1800             | MLBL-09G | 1SFA611621R1092 | 10         | 0.012                  |
| Yellow                                                        | 11                  | 588              | 350              | MLBL-09Y | 1SFA611621R1093 | 10         | 0.012                  |
| Blue                                                          | 11                  | 468              | 500              | MLBL-09L | 1SFA611621R1094 | 10         | 0.012                  |
| White                                                         | 11                  | (1)              | 650              | MLBL-09W | 1SFA611621R1095 | 10         | 0.012                  |

Note: care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

(1) X=0.31, Y=0.32 according to the ICI Chromaticity diagram.

(2) Higher threshold to light up LED to be used in application where there is risk of large induced voltages.



MLBL

Dimensions (mm, inches)

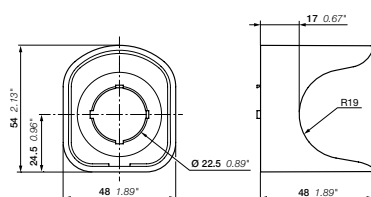
## Modular plastic range

### Accessories



| Description                                                                                        | Bezel / color           | Type     | Order code      | Pkg qty | Weight (1pce) kg |
|----------------------------------------------------------------------------------------------------|-------------------------|----------|-----------------|---------|------------------|
| <b>30 mm adaptors for 22 mm operator (1.5 - 4 mm panel thickness)</b>                              |                         |          |                 |         |                  |
| Emergency stop pushbuttons, MPM                                                                    | Black plastic           | KA1-8027 | 1SFA616920R8027 | 1       | 0.007            |
|                                                                                                    | Chrome metal            | KA1-8028 | 1SFA616920R8028 | 1       | 0.021            |
| Pushbuttons, selector switches, pilot lights, potentiometers, emergency stop pushbuttons, MPE, MJS | Black plastic           | KA1-8029 | 1SFA616920R8029 | 1       | 0.010            |
| Flush mounted pushbuttons                                                                          | Chrome metal            | KA1-8073 | 1SFA616920R8073 | 1       | 0.050            |
| Flush mounted selector switches                                                                    | Chrome metal            | MA1-8074 | 1SFA611920R8074 | 1       | 0.050            |
| <b>Protective membrane, silicone</b>                                                               |                         |          |                 |         |                  |
| Flush pushbutton                                                                                   |                         | MA1-8052 | 1SFA611920R8052 | 10      | 0.002            |
| Double pushbutton                                                                                  |                         | MA1-8126 | 1SFA611920R8126 | 10      | 0.002            |
| Extended pushbutton                                                                                |                         | MA1-8002 | 1SFA611920R8002 | 10      | 0.002            |
| <b>Protective ring</b>                                                                             |                         |          |                 |         |                  |
| To prevent accidental operation. Cannot be used together with Legend plate holder                  |                         |          |                 |         |                  |
| Flush and extended pushbuttons                                                                     | Clear plastic           | -        | SK615512-1      | 10      | 0.002            |
| Flush pushbuttons                                                                                  | Metal and black plastic | KA1-8010 | 1SFA616920R8010 | 10      | 0.008            |
| <b>Bezel</b>                                                                                       |                         |          |                 |         |                  |
| Pushbuttons                                                                                        | Black plastic           | KA1-8022 | 1SFA616920R8022 | 10      | 0.002            |
|                                                                                                    | Chrome plastic          | KA1-8020 | 1SFA616920R8020 | 10      | 0.002            |
|                                                                                                    | Chrome metal            | KA1-8021 | 1SFA616920R8021 | 10      | 0.015            |
| Selector switches                                                                                  | Black plastic           | KA1-8080 | 1SFA616920R8080 | 10      | 0.002            |
|                                                                                                    | Chrome metal            | KA1-8024 | 1SFA616920R8024 | 10      | 0.015            |
| <b>Square bezel</b>                                                                                |                         |          |                 |         |                  |
| Black plastic                                                                                      | -                       | -        | SK616016-2      | 10      | 0.001            |
| <b>Lockable shroud</b>                                                                             |                         |          |                 |         |                  |
| Pushbuttons, selector switches                                                                     | Plastic                 | MA1-8153 | 1SFA611920R8153 | 1       | 0.023            |
| Emergency stop 30 mm                                                                               | Metal                   | -        | SK615502-D      | 1       | 0.080            |
| <b>Touch guard</b>                                                                                 |                         |          |                 |         |                  |
| Touch guard                                                                                        |                         | MA1-8152 | 1SFA611920R8152 | 1       | 0.023            |
| <b>Shroud with anti rotation tabs, slot for pad-lock and with water drainage</b>                   |                         |          |                 |         |                  |
| Emergency stop, machine stop 40 mm                                                                 | Yellow                  | MA1-8053 | 1SFA611920R8053 | 1       | 0.020            |
|                                                                                                    | Grey                    | MA1-8128 | 1SFA611920R8128 | 1       | 0.020            |

Note: Din-rail adaptor should be used with 2 contact blocks for rear mounting type MCB..B.



MA1

Dimensions (mm, inches)

## Modular plastic range

### Accessories



MA1-8131

1SFC151276V0001



MDB-2

1SFC15145F0001



MA1-8015

1SFC151275V0001



MA1-8149

1SFC151004F0001



MA1-8019

1SFC151385V0001

| Description                                                                                                                                                                                                                | Bezel / color | Type     | Order code      | Pkg<br>qty | Weight<br>(1pce)<br>kg |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|-----------------|------------|------------------------|
| <b>DIN-rail adaptor</b>                                                                                                                                                                                                    |               |          |                 |            |                        |
| DIN-rail adaptor                                                                                                                                                                                                           |               | MA1-8131 | 1SFA611920R8131 | 1          | 0.020                  |
| DIN-rail adaptor<br>with one dummy block                                                                                                                                                                                   |               | MA1-8001 | 1SFA611920R8001 | 1          | 0.028                  |
| Dummy block                                                                                                                                                                                                                |               | MDB-2    | 1SFA611630R1002 | 10         | 0.003                  |
| Note: Din-rail adaptor should be used with 2 contact blocks for rear mounting type MCB..B.<br>Note: Dummy blocks are used when only one contact block or a compact pilot device is used together with the DIN-rail adaptor |               |          |                 |            |                        |
| <b>Mounting tools</b>                                                                                                                                                                                                      |               |          |                 |            |                        |
| Mounting tool for tightening the locking nut                                                                                                                                                                               |               | MA1-8015 | 1SFA611920R8015 | 1          | 0.021                  |
| Mounting tool for power tool                                                                                                                                                                                               |               | MA1-8149 | 1SFA611920R8149 | 1          | 0.155                  |
| <b>Extra key</b>                                                                                                                                                                                                           |               |          |                 |            |                        |
| Key code 455                                                                                                                                                                                                               |               |          | SK616021-71     | 10         | 0.007                  |
| Key code 421                                                                                                                                                                                                               |               |          | SK616021-72     | 10         | 0.007                  |
| Key code 3433-E                                                                                                                                                                                                            |               |          | SK616021-73     | 10         | 0.007                  |
| <b>Locking nut</b>                                                                                                                                                                                                         |               |          |                 |            |                        |
| Locking nut                                                                                                                                                                                                                |               | MA1-8019 | 1SFA611920R8019 | 10         | 0.001                  |

## Modular plastic range

### Technical data

| Standards and approvals |                                                                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC / EN 60947-1        | Low Voltage switchgear and controlgear - Part 1: General rules                                                                                                         |
| IEC / EN 60947-5-1      | Low Voltage switchgear and controlgear - part 5-1: control circuit devices and switching elements - Electromechanical control circuit devices                          |
| IEC / EN 60947-5-5      | Low Voltage switchgear and controlgear - part 5-5: control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function |
| IEC / EN 60073          | Basic and safety principles for man-machine interface, marking and identification coding principles for indicators and actuators                                       |
| IEC / EN 60529          | Degrees of protection provided by enclosures (IP code)                                                                                                                 |
| EN 50013                | Low Voltage switchgear and controlgear for industrial use, terminal marking and distinctive number for particular control switches                                     |
| DIN 40050-9             | Road vehicles; Degrees of protection (IP-code); protection against foreign objects; water and contact; electrical equipment                                            |
| UL 508                  | Industrial control equipment                                                                                                                                           |
| CSA C22.2 No 14         | Industrial control equipment                                                                                                                                           |

#### Environmental data

##### Degrees of protection

| Operators                                                | IEC/EN DIN    | UL/CSA                      |
|----------------------------------------------------------|---------------|-----------------------------|
| Pushbutton: MP                                           | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Double pushbutton: MPD                                   | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Mushroom pushbutton: MPM                                 | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Emergency stop pushbuttons: MPMT, MPMP, MPET, MPEP, MPEK | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Selector switch: M2SS, M3SS                              | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Key-operated selector switch: M2SSK, M3SSK               | IP66          | Type 1, 3R, 4, 4X, 12       |
| Toggle switch: MTS2, MTS3                                | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Heavy duty pushbutton: KP6                               | -             | Type 1, 3R, 4, 4X           |
| Reset pushbutton: KPR                                    | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Joystick: MJS                                            | IP66, 67, 69K | Type 1, 4X (indoor), 12, 13 |
| Pilot light: ML                                          | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Potentiometer: MT                                        | IP66          | Type 1, 3R, 4, 4X, 12, 13   |
| Contact block : MCB                                      | IP20          | -                           |
| Plastic enclosure: MEP                                   | IP66          | Type 1, 3R, 4, 4X, 12, 13   |

Note: Specified degree of protection is for operator mounted on panel. If other items are mounted in between, please make sure that they are correctly sealed.

#### Temperature

|                                      |               |
|--------------------------------------|---------------|
| Ambient temperature during operation | -25 to +70 °C |
| Storage temperature                  | -40 to +85 °C |

#### Connecting capacity

| Contact block type                                                                                                    | MCB | MCBL                       | MLBL |
|-----------------------------------------------------------------------------------------------------------------------|-----|----------------------------|------|
| Connection capacity (min. ... max.)                                                                                   |     |                            |      |
|  Solid/stranded                      | 1x  | 0.75...2.5 mm <sup>2</sup> |      |
|  Solid/stranded                      | 2x  | 0.75...2.5 mm <sup>2</sup> |      |
|  Flexible                            | 1x  | 0.75...2.5 mm <sup>2</sup> |      |
|  Flexible                            | 2x  | 0.75...2.5 mm <sup>2</sup> |      |
|  Flexible with non insulated ferrule | 1x  | 0.75...2.5 mm <sup>2</sup> |      |
|  Flexible with non insulated ferrule | 2x  | 0.75...2.5 mm <sup>2</sup> |      |
|  Flexible with insulated ferrule     | 1x  | 0.75...2.5 mm <sup>2</sup> |      |
|  Flexible with insulated ferrule     | 2x  | 0.75...2.5 mm <sup>2</sup> |      |
|  Lugs                                | L≤  | 7.0 mm                     |      |
|                                                                                                                       | l>  | 3.5 mm                     |      |
| Connection capacity acc. to UL/CSA 1 or 2 x                                                                           |     | AWG 18...14                |      |
| Stripping length                                                                                                      |     | 8 mm                       |      |
| Tightening torque                                                                                                     |     |                            |      |
| Cable terminals M3.5                                                                                                  |     | 0.9 Nm                     |      |
| Recommended screwdriver for cable terminal                                                                            |     | Pozidriv No. 2             |      |
| Operators locking nut                                                                                                 |     | Min. 2 Nm / Max. 2.3 Nm    |      |

#### Material

No ozone depleting substances in the products. All front of panel plastic components are made of polycarbonate

|                  |                                                                                                                                           |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| PC polycarbonate | High impact strength, good outdoor resistance. Chemical resistance (see table below)                                                      |
| PSU polysulphone | Can withstand high temperatures, acids, basic solutions, alkaline compounds, oils, alcohols                                               |
| PA polyamide     | Can withstand high temperatures, aliphatic, aromatic and chlorinated hydrocarbons, esters, ketone-aldehydes, alcohols and basic solutions |
| PBT              | Can withstand high temperature, aliphatic and aromatic hydrocarbons, acids, basic solutions, alcohols, grease and oils                    |
| Zinc             | Good corrosion resistance in inland-, sea and industrial atmosphere                                                                       |
| Light-alloy      | Good corrosion resistance in inland-, sea and industrial atmosphere                                                                       |

#### Chemical resistance for polycarbonate

| Chemical class            | Effects                                                                                                                                                                     |       |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Alcohols and alkalis      | Generally compatible at low concentration and room temperature. Higher concentrations and elevated temperatures can result in etching and attack evidenced by decomposition |       |
| Aliphatic hydrocarbons    | Generally compatible                                                                                                                                                        |       |
| Amines                    | Surface crystallization and chemical attack.                                                                                                                                | Avoid |
| Aromatic hydrocarbons     | Partial solvents and severe stress cracking agents (i.e., xylene, toluene)                                                                                                  | Avoid |
| Detergents and cleaners   | Mild soap solutions are generally compatible. Strong alkaline materials should be avoided                                                                                   |       |
| Esters                    | Cause severe crystallization. Partial solvents                                                                                                                              | Avoid |
| Greases and oils          | Pure petroleum types generally compatible. Many additives used with them are not                                                                                            |       |
| Halogenated, hydrocarbons | Solvents                                                                                                                                                                    | Avoid |
| Ketones                   | Cause severe crystallization and stress cracking. Partial solvents                                                                                                          | Avoid |
| Silicone oil and greases  | Generally compatible up to 85 °C                                                                                                                                            |       |

## Modular plastic range

### Technical data

#### Electrical data

MCB Standard contact blocks (standard and gold plated)

Self cleaning silver contacts, NC contact with positive opening.  
At voltages and currents below 24 V and 5.6 mA we recommend our micro switch blocks.

#### Ratings as per IEC 60947-5-1

|                                  |                  |
|----------------------------------|------------------|
| Rated insulation voltage, $U_i$  | 690 V            |
| Rated thermal current, $I_{th}$  | 10 A             |
| Rated operational current, $I_e$ | at: 120 V 8 A    |
| Utilization category AC 15,      | at: 230 V 6 A    |
|                                  | at: 400 V 4 A    |
|                                  | at: 690 V 2 A    |
| Rated operational current, $I_e$ | at: 24 V 5 A     |
| utilisation category DC 13,      | at: 125 V 1.1 A  |
|                                  | at: 250 V 0.55 A |
| Rated impulse withstand voltage  | $U_{imp}$ 6 kV   |
| Rated frequency                  | 50/60 Hz         |
| Pollution degree                 | 3                |

#### Ratings as per UL, CSA, NEMA

|                           | A600<br>AC      | Q600<br>DC       |
|---------------------------|-----------------|------------------|
| Rated insulation voltage  | 600 V           | 600 V            |
| Rated thermal current     | 10 A            | 2.5 A            |
| Rated operational current | at: 120 V 6 A   | at: 125 V 0.55 A |
|                           | at: 240 V 3 A   | at: 250 V 0.27 A |
|                           | at: 480 V 1.5 A | at: 480 V 0.10 A |
|                           | at: 600 V 1.2 A | at: 600 V 0.10 A |

#### Max. number of contact blocks per operator

The contact blocks can be stacked in max two levels on the 3-block holder. Only one level is accepted on the 5-block holder.

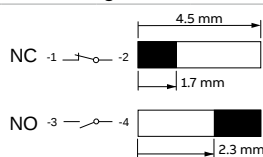
|                                                                                                                                              |   |
|----------------------------------------------------------------------------------------------------------------------------------------------|---|
| Pushbutton, toggle switch, mushroom pushbutton, double pushbutton, selector switch, key-operated selector switch and emergency stop operator | 6 |
| Joystick                                                                                                                                     | 8 |

#### Short circuit protection

Max. fuse at 1 kA

gG 16A

Diagram for make and break contact MCB, MCBL



#### Micro switch block

##### Ratings as per IEC 60947-5-1

|                                  |                 |
|----------------------------------|-----------------|
| Rated insulation voltage, $U_i$  | 125 V           |
| Rated thermal current, $I_{th}$  | 3 A             |
| Rated operational current, $I_e$ | at: 125 V 0.5 A |
| utilisation category AC 14,      |                 |
| Rated operational current, $I_e$ | at: 24 V 0.3 A  |
| utilization category DC 13,      |                 |
| Rated operational current, $I_e$ | at: 24 V 0.1 A  |
| utilization category DC 12,      |                 |

##### Ratings as per UL 508

|  |          |       |
|--|----------|-------|
|  | 125 V AC | 3 A   |
|  | 60 V DC  | 0.2 A |
|  | 48 V DC  | 0.1 A |

#### Minimum switching capacity

|                            |         |        |
|----------------------------|---------|--------|
| Standard contact blocks    | 24 V DC | 5.6 mA |
| Gold plated contact blocks | 5 V DC  | 12 mA  |
|                            | 12 V DC | 1 mA   |
| Micro switch blocks        | 3 V DC  | 1 mA   |

#### Mechanical data

##### Mechanical life

|                                                    |                       |
|----------------------------------------------------|-----------------------|
| Standard contact blocks MCB                        | 10 million operations |
| Micro switch block MCBL                            | 1 million operations  |
| Pushbuttons MP, momentary mushroom pushbuttons MPM | 2 million operations  |

#### Selector switches M2SS, M3SS

|                                                |                   |  |                    |
|------------------------------------------------|-------------------|--|--------------------|
| Standard contact blocks and micro switch block | 3-position holder |  | 500 000 operations |
| Standard contact blocks                        | 3-position holder |  |                    |
| Standard contact blocks                        | 5-position holder |  |                    |
| Standard contact blocks in two stacks          | 3-position holder |  |                    |

#### Selector switches - center block operating M3SSC

|                                       |                   |  |                    |
|---------------------------------------|-------------------|--|--------------------|
| Standard contact blocks               | 3-position holder |  | 250 000 operations |
| Standard contact blocks in two stacks | 3-position holder |  | 150 000 operations |

#### Key-operated selector switch M2SSK, M3SSK and double pushbutton MPD

#### Emergency stop pushbuttons MPET, MPEP, MPEK

#### Toggle switch MTS

#### Joystick MJS

|                                                |                   |  |                    |
|------------------------------------------------|-------------------|--|--------------------|
| Micro switch block                             | 4-position holder |  | 500 000 operations |
| Standard contact blocks                        | 4-position holder |  |                    |
| Standard contact blocks and micro switch block | 4-position holder |  | 400 000 operations |
| Standard contact blocks in two stacks          | 4-position holder |  | 300 000 operations |

#### LED blocks MBL

Service life for LED means number of service hours until the brightness has been reduced down 50%. Service life 50 000 h operating at 25 °C, 40-70% rh (relative humidity)

|                                 |                                                                               |
|---------------------------------|-------------------------------------------------------------------------------|
| Color of white LED              | $x=0.31$ $y=0.32$ means the position of color in the ICI Chromaticity diagram |
| Voltage tolerance on LED blocks | -30 to +10% voltage is acceptable without affecting the Service life          |
| Voltage peaks on LED blocks     | Voltage peaks up to 1000 V. Current peaks up to 500 mA during a few msec.     |
| Glowing light                   | All integrated LED bulbs have a function built in to cut leakage currents     |
| Rated frequency                 | 50/60 Hz for AC supplied products                                             |

## Modular plastic range

### Technical data

#### LED blocks front and rear mounting MLBL

| Color                                                          | Current    |      | Illuminance |       | Anti ... inductive<br>peak voltage | Main wavelength | Color<br>temperature |
|----------------------------------------------------------------|------------|------|-------------|-------|------------------------------------|-----------------|----------------------|
|                                                                | mA<br>Min. | Max. | lx<br>Min.  | Max.  | V                                  | Nm              | K                    |
| Voltage range 12 V DC                                          |            |      |             |       |                                    |                 |                      |
| Red                                                            | 11         | 15   | 1000        | 3500  | 5                                  | 620 ... 625     | –                    |
| Green                                                          | 8          | 12   | 3700        | 12500 | 5                                  | 515 ... 520     | –                    |
| Yellow                                                         | 11         | 15   | 1200        | 4250  | 5                                  | 585 ... 590     | –                    |
| Blue                                                           | 8          | 12   | 1500        | 5300  | 5                                  | 465 ... 470     | –                    |
| o Clear                                                        | 8          | 12   | 1800        | 8500  | 5                                  | –               | 8000 ... 12000       |
| Voltage range 24 V AC / DC                                     |            |      |             |       |                                    |                 |                      |
| Red                                                            | 8          | 12   | 900         | 3100  | 5                                  | 620 ... 625     | –                    |
| Green                                                          | 8          | 12   | 3000        | 11500 | 5                                  | 515 ... 520     | –                    |
| Yellow                                                         | 8          | 12   | 1000        | 3400  | 5                                  | 585 ... 590     | –                    |
| Blue                                                           | 8          | 12   | 1500        | 5300  | 5                                  | 465 ... 470     | –                    |
| o Clear                                                        | 8          | 11   | 1800        | 8500  | 5                                  | –               | 8000 ... 12000       |
| Voltage range 48 V AC / DC                                     |            |      |             |       |                                    |                 |                      |
| Red                                                            | 8          | 12   | 900         | 3100  | 5                                  | 620 ... 625     | –                    |
| Green                                                          | 8          | 12   | 3000        | 11500 | 5                                  | 515 ... 520     | –                    |
| Yellow                                                         | 8          | 12   | 1000        | 3400  | 5                                  | 585 ... 590     | –                    |
| Blue                                                           | 8          | 12   | 1500        | 5300  | 5                                  | 465 ... 470     | –                    |
| o Clear                                                        | 8          | 12   | 1800        | 8500  | 5                                  | –               | 8000 ... 12000       |
| Voltage range 60 V AC / DC                                     |            |      |             |       |                                    |                 |                      |
| Red                                                            | 8          | 12   | 900         | 3100  | 5                                  | 620 ... 625     | –                    |
| Green                                                          | 8          | 12   | 3000        | 11500 | 5                                  | 515 ... 520     | –                    |
| Yellow                                                         | 8          | 12   | 1000        | 3400  | 5                                  | 585 ... 590     | –                    |
| Blue                                                           | 8          | 12   | 1500        | 5300  | 5                                  | 465 ... 470     | –                    |
| o Clear                                                        | 8          | 12   | 1800        | 8500  | 5                                  | –               | 8000 ... 12000       |
| Voltage range 110 ... 130 V AC                                 |            |      |             |       |                                    |                 |                      |
| Red                                                            | 8          | 12   | 900         | 3100  | 15                                 | 620 ... 625     | –                    |
| Green                                                          | 8          | 12   | 3200        | 12000 | 15                                 | 515 ... 520     | –                    |
| Yellow                                                         | 8          | 12   | 1000        | 3700  | 15                                 | 585 ... 590     | –                    |
| Blue                                                           | 8          | 12   | 1550        | 5500  | 15                                 | 465 ... 470     | –                    |
| o Clear                                                        | 8          | 12   | 1850        | 8800  | 15                                 | –               | 8000 ... 12000       |
| Voltage range 110 ... 130 V AC high anti-inductive voltage (1) |            |      |             |       |                                    |                 |                      |
| Red                                                            | 14         | 16   | 700         | 2600  | 25                                 | 620 ... 625     | –                    |
| Green                                                          | 14         | 16   | 2100        | 8200  | 25                                 | 515 ... 520     | –                    |
| Yellow                                                         | 14         | 16   | 750         | 3000  | 25                                 | 585 ... 590     | –                    |
| Blue                                                           | 14         | 16   | 1000        | 5000  | 25                                 | 465 ... 470     | –                    |
| o Clear                                                        | 14         | 16   | 1500        | 8100  | 25                                 | –               | 8000 ... 12000       |
| Voltage range 110 ... 130 V DC                                 |            |      |             |       |                                    |                 |                      |
| Red                                                            | 8          | 12   | 900         | 3100  | 15                                 | 620 ... 625     | –                    |
| Green                                                          | 8          | 12   | 3000        | 11500 | 15                                 | 515 ... 520     | –                    |
| Yellow                                                         | 8          | 12   | 1000        | 3400  | 15                                 | 585 ... 590     | –                    |
| Blue                                                           | 8          | 12   | 1500        | 5300  | 15                                 | 465 ... 470     | –                    |
| o Clear                                                        | 8          | 12   | 1800        | 8500  | 15                                 | –               | 8000 ... 12000       |

**Note:**

The testing distance of illuminance is 2 mm, between top of lens and the sensor surface. Clean test environment, supply voltage at 50/60 Hz with harmonized wave and without length high frequency.

Rated voltage tolerance of LED blocks: -30% to +10%.

(1) Higher threshold to light up LED to be used in applications where there is risk of large induced voltages.

## Modular plastic range

### Technical data

| Color                                                         | Current |      | Illuminance |       | Anti-inductive peak voltage | Main wavelength | Color temperature |
|---------------------------------------------------------------|---------|------|-------------|-------|-----------------------------|-----------------|-------------------|
|                                                               | mA Min. | Max. | lx Min.     | Max.  | V                           | Nm              | K                 |
| <b>Voltage range 220 V DC</b>                                 |         |      |             |       |                             |                 |                   |
| ● Red                                                         | 7       | 10   | 700         | 2300  | 15                          | 620 ... 625     | –                 |
| ● Green                                                       | 7       | 10   | 2400        | 8000  | 15                          | 515 ... 520     | –                 |
| ● Yellow                                                      | 7       | 10   | 800         | 3100  | 15                          | 585 ... 590     | –                 |
| ● Blue                                                        | 7       | 10   | 1200        | 4350  | 15                          | 465 ... 470     | –                 |
| ○ Clear                                                       | 7       | 10   | 1400        | 7000  | 15                          | –               | 8000 ... 12000    |
| <b>Voltage range 230 V AC</b>                                 |         |      |             |       |                             |                 |                   |
| ● Red                                                         | 8       | 12   | 900         | 3100  | 15                          | 620 ... 625     | –                 |
| ● Green                                                       | 8       | 12   | 3000        | 11500 | 15                          | 515 ... 520     | –                 |
| ● Yellow                                                      | 8       | 12   | 1000        | 3400  | 15                          | 585 ... 590     | –                 |
| ● Blue                                                        | 7       | 11   | 1500        | 5300  | 15                          | 465 ... 470     | –                 |
| ○ Clear                                                       | 7       | 11   | 1800        | 8500  | 15                          | –               | 8000 ... 12000    |
| <b>Voltage range 380 V AC</b>                                 |         |      |             |       |                             |                 |                   |
| ● Red                                                         | 8       | 12   | 900         | 3100  | 15                          | 620 ... 625     | –                 |
| ● Green                                                       | 8       | 12   | 3000        | 11500 | 15                          | 515 ... 520     | –                 |
| ● Yellow                                                      | 8       | 12   | 1000        | 3400  | 15                          | 585 ... 590     | –                 |
| ● Blue                                                        | 8       | 12   | 1500        | 5300  | 15                          | 465 ... 470     | –                 |
| ○ Clear                                                       | 8       | 12   | 1800        | 8500  | 15                          | –               | 8000 ... 12000    |
| <b>Voltage range 415 V AC</b>                                 |         |      |             |       |                             |                 |                   |
| ● Red                                                         | 8       | 12   | 900         | 3100  | 15                          | 620 ... 625     | –                 |
| ● Green                                                       | 8       | 12   | 3000        | 11500 | 15                          | 515 ... 520     | –                 |
| ● Yellow                                                      | 8       | 12   | 1000        | 3400  | 15                          | 585 ... 590     | –                 |
| ● Blue                                                        | 8       | 12   | 1500        | 5300  | 15                          | 465 ... 470     | –                 |
| ○ Clear                                                       | 8       | 12   | 1800        | 8500  | 15                          | –               | 8000 ... 12000    |
| <b>Voltage range 230 V AC high anti-inductive voltage (1)</b> |         |      |             |       |                             |                 |                   |
| ● Red                                                         | 8       | 12   | 480         | 1700  | 55                          | 620 ... 625     | –                 |
| ● Green                                                       | 6       | 11   | 1500        | 5800  | 55                          | 515 ... 520     | –                 |
| ● Yellow                                                      | 8       | 12   | 530         | 1900  | 55                          | 585 ... 590     | –                 |
| ● Blue                                                        | 6       | 11   | 850         | 3100  | 55                          | 465 ... 470     | –                 |
| ○ Clear                                                       | 6       | 11   | 1000        | 5200  | 55                          | –               | 8000 ... 12000    |

Note:

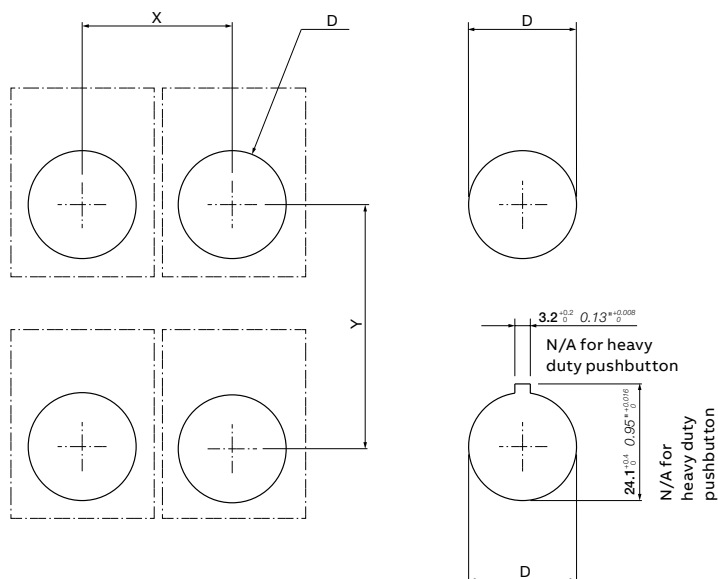
The testing distance of illuminance is 2 mm, between top of lens and the sensor surface. Clean test environment, supply voltage at 50/60 Hz with harmonized wave and without length high frequency.

Rated voltage tolerance of LED blocks: ... 30% to +10%.

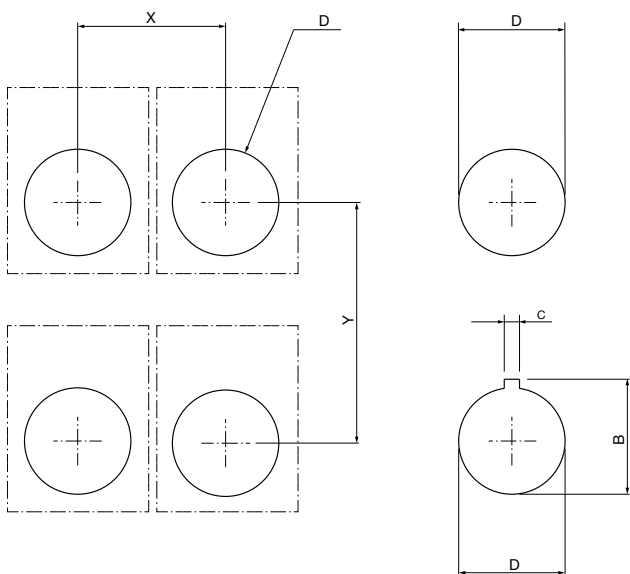
(1) Higher threshold to light up LED to be used in applications where there is risk of large induced voltages.

## Modular plastic range

### Drilling plan



| Description                                                                                                                             | X         | Y         | D                    |                       | Panel thickness     |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|----------------------|-----------------------|---------------------|
|                                                                                                                                         |           |           | Ø mm                 | inch                  |                     |
| Pushbutton, pilot light, selector switch short handle, potentiometer, toggle switch, 30 mm emergency stop, key-operated selector switch | 31 1.22"  | 50 1.97"  | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| Pushbutton, pilot light, selector switch short handle (with legend plate)                                                               | 31 1.22"  | 55 2.17"  | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| Mushroom pushbutton, emergency stop, machine stop (60 mm)                                                                               | 45 1.77"  | 50 1.97"  | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| Mushroom pushbutton, emergency stop, machine stop (40 mm)                                                                               | 65 2.56"  | 70 2.76"  | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| Double pushbutton                                                                                                                       | 31 1.22"  | 55 2.17"  | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| Double pushbutton (with legend plate)                                                                                                   | 31 1.22"  | 95 3.74"  | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| Heavy duty pushbutton                                                                                                                   | 50 1.97"  | 50 1.97"  | Ø 30.5 $^{+0.5}_{0}$ | 1.20" $^{+0.02}_{0}$  | 2 0.08" - 5 0.20"   |
| Potentiometer (with legend plate)                                                                                                       | 51 2.01"  | 50 1.97"  | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| Toggle switch (with legend plate)                                                                                                       | 31 1.22"  | 66 2.60"  | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| Joystick (with legend plate)                                                                                                            | 100 3.94" | 100 3.94" | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |



| Accessories    | X        | Y        | D                    |                       | B                  | C                     | Panel thickness     |
|----------------|----------|----------|----------------------|-----------------------|--------------------|-----------------------|---------------------|
|                |          |          | Ø mm                 | inch                  | Ø mm               | inch                  |                     |
| 5 block holder | 51 2.01" | 50 1.97" | Ø 22.3 $^{+0.4}_{0}$ | 0.88" $^{+0.016}_{0}$ | 24.1 $^{+0.4}_{0}$ | 0.95" $^{+0.016}_{0}$ | 1.5 0.06" - 6 0.24" |
| 30 mm adaptor  | 42 1.65" | 52 2.05" | Ø 30.5 $^{+0.5}_{0}$ | 1.20" $^{+0.02}_{0}$  | 33 $^{+0.5}_{0}$   | 1.30" $^{+0.02}_{0}$  | 2 0.08" - 7 0.28"   |



## Pilot devices, 22 mm

### Modular metal range

#### Ordering details

|    |                                                |
|----|------------------------------------------------|
| 56 | Non-illuminated pushbuttons momentary          |
| 57 | Non-illuminated marked pushbuttons momentary   |
| 58 | Illuminated pushbuttons momentary              |
| 59 | Non-illuminated mushroom pushbuttons           |
| 60 | Illuminated mushroom pushbuttons               |
| 61 | Pilot lights                                   |
| 62 | Non-illuminated selector switches - 2-position |
| 63 | Illuminated selector switches - 2-position     |
| 64 | Non-illuminated selector switches - 3-position |
| 65 | Illuminated selector switches - 3-position     |
| 66 | Non-illuminated selector switches              |
| 68 | Key-operated selector switches                 |
| 72 | Joysticks                                      |
| 74 | Toggle switches                                |
| 75 | Selector pushbuttons                           |

#### Accessories for modular range

|    |                                               |
|----|-----------------------------------------------|
| 76 | Holders and contact blocks for front mounting |
| 77 | Power supplies                                |
| 78 | LED bulbs for power supplies                  |
| 79 | LED blocks for front mounting                 |
| 80 | Accessories                                   |
| 81 | Metal enclosures                              |

#### 83 Technical data

#### 85 Dimension

#### 86 Drilling plan

Modular metal range

Non-illuminated pushbuttons momentary



P9MPNRG  
with holder

1SFC151476V0001



P9MPNGG

1SFC151529V0001



P9MPNBG

1SFC151530V0001



P9MPNNG

1SFC151526V0001



P9MPNRS

1SFC151519V0001



P9MPNVS

1SFC151518V0001



P9MPNLS

1SFC151521V0001



P9MPNNS

1SFC151520V0001



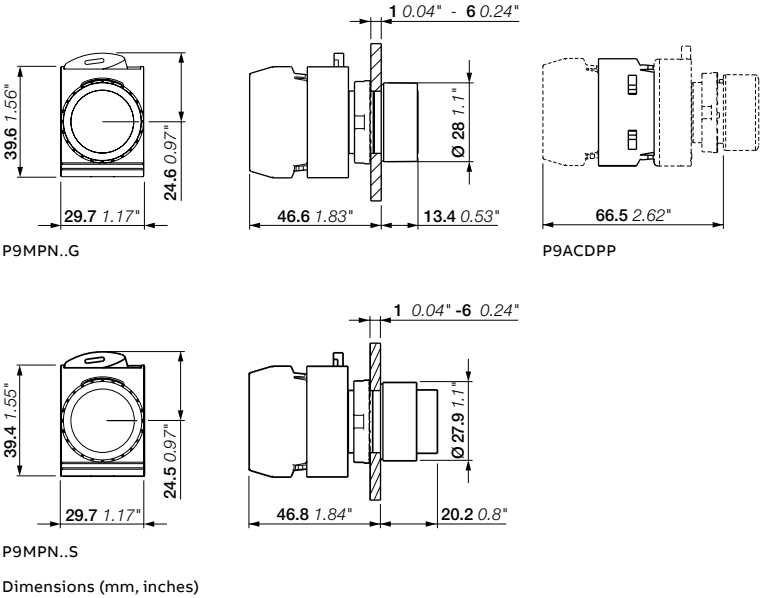
P9ACDPP

1SFC151628V0001

Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Operator                                                                                                                               | Type    | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|----------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|------------|-------------------------|
| Flush pushbutton                                                                                                                       |         |                 |            |                         |
| ● Red                                                                                                                                  | P9MPNRG | 1SFA184001R9001 | 1          | 0.058                   |
| ● Green                                                                                                                                | P9MPNVG | 1SFA184002R9002 | 1          | 0.058                   |
| ● Yellow                                                                                                                               | P9MPNGG | 1SFA184003R9003 | 1          | 0.058                   |
| ● Blue                                                                                                                                 | P9MPNLG | 1SFA184006R9004 | 1          | 0.058                   |
| ○ White                                                                                                                                | P9MPNBG | 1SFA184007R9005 | 1          | 0.058                   |
| ● Black                                                                                                                                | P9MPNNG | 1SFA184000R9006 | 1          | 0.058                   |
| ● Grey                                                                                                                                 | P9MPNHG | 1SFA184008R9007 | 1          | 0.058                   |
| Extended pushbutton                                                                                                                    |         |                 |            |                         |
| ● Red                                                                                                                                  | P9MPNRS | 1SFA184011R9001 | 1          | 0.062                   |
| ● Green                                                                                                                                | P9MPNVS | 1SFA184012R9002 | 1          | 0.062                   |
| ● Yellow                                                                                                                               | P9MPNGS | 1SFA184057R9003 | 1          | 0.062                   |
| ● Blue                                                                                                                                 | P9MPNLS | 1SFA184016R9004 | 1          | 0.062                   |
| ○ White                                                                                                                                | P9MPNBS | 1SFA184017R9005 | 1          | 0.062                   |
| ● Black                                                                                                                                | P9MPNNS | 1SFA184010R9006 | 1          | 0.062                   |
| Maintained accessory                                                                                                                   |         |                 |            |                         |
| Device for standard pushbuttons, illuminated pushbuttons:<br>To be used only with contact blocks P9B01VN, P9B01VR, P9B10VA and P9B01FN | P9ACDPP | 1SFA187843R8000 | 1          | 0.012                   |



## Modular metal range

### Non-illuminated marked pushbuttons momentary



P9MPNKG037

15FCL151454V0001



P9MPNKG030

15FCL151449V0001



P9MPNKG028

15FCL151447V0001



P9MPNKG029

15FCL151446V0001



P9MPNKG029

15FCL151445V0001



P9MPNKG006



P9MPNRS029

15FCL151647V0001

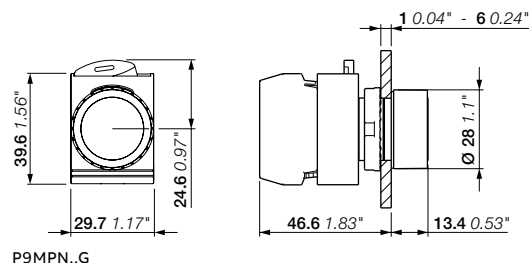
#### Flush pushbuttons

Each reference includes the satin chrome metal body and nut together with the holder.

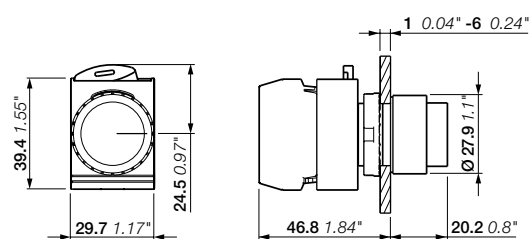
| Text/symbol              | Color | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|--------------------------|-------|------------|-----------------|---------|-------------------|
| <b>Flush pushbuttons</b> |       |            |                 |         |                   |
| START                    | Green | P9MPNVG020 | 1SFA187149R9502 | 1       | 0.058             |
| STOP                     | Red   | P9MPNRG020 | 1SFA187147R9501 | 1       | 0.058             |
|                          | Black | P9MPNNG020 | 1SFA188908R9506 | 1       | 0.058             |
| R                        | Blue  | P9MPNKG037 | 1SFA187143R9504 | 1       | 0.058             |
| ⊕                        | Green | P9MPNVG030 | 1SFA187146R9502 | 1       | 0.058             |
|                          | White | P9MPNKG030 | 1SFA188057R9505 | 1       | 0.058             |
|                          | Black | P9MPNNG030 | 1SFA187145R9506 | 1       | 0.058             |
| I                        | Green | P9MPNVG028 | 1SFA187112R9502 | 1       | 0.058             |
|                          | White | P9MPNKG028 | 1SFA187151R9505 | 1       | 0.058             |
|                          | Black | P9MPNNG028 | 1SFA187111R9506 | 1       | 0.058             |
| O                        | Red   | P9MPNRG029 | 1SFA187110R9501 | 1       | 0.058             |
|                          | Black | P9MPNNG029 | 1SFA187150R9506 | 1       | 0.058             |
| →                        | Green | P9MPNVG006 | 1SFA187118R9502 | 1       | 0.058             |
|                          | White | P9MPNKG006 | 1SFA187152R9505 | 1       | 0.058             |
|                          | Black | P9MPNNG006 | 1SFA187117R9506 | 1       | 0.058             |
| ↯                        | Black | P9MPNNG085 | 1SFA188886R9506 | 1       | 0.058             |
| ↔                        | Blue  | P9MPNKG007 | 1SFA188900R9504 | 1       | 0.058             |
| ⚡                        | Black | P9MPNNG002 | 1SFA187139R9506 | 1       | 0.058             |

#### Extended pushbutton

|   |       |            |                 |   |       |
|---|-------|------------|-----------------|---|-------|
| O | Red   | P9MPNRS029 | 1SFA187210R9501 | 1 | 0.058 |
| O | Black | P9MPNNS029 | 1SFA187250R9506 | 1 | 0.058 |
| ⏏ | Black | P9MPNNS032 | 1SFA187235R9506 | 1 | 0.058 |



P9MPN..G



P9MPN..S

Dimensions (mm, inches)

## Modular metal range

### Illuminated pushbuttons momentary



P9MPLVGD  
with holder

1SFC151475V0001



P9MPLGGD

1SFC151571V0001



P9MPLRGD

1SFC151568V0001



P9MPLRSD

1SFC151532V0001



P9MPLBGD

1SFC151572V0001



P9MPLGGV

1SFC151439V0001



P9MPLLGV

1SFC151438V0001



P9MPLASD

1SFC151566V0001



P9MPLVSD

1SFC151531V0001



P9ACDPP

1SFC151628V0001

#### Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Operator                                    | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------------------------------|----------|-----------------|---------|-------------------|
| <b>Flush pushbutton - Plastic lens type</b> |          |                 |         |                   |
| ● Red                                       | P9MPLRGD | 1SFA184491R9101 | 1       | 0.057             |
| ● Green                                     | P9MPLVGD | 1SFA184492R9102 | 1       | 0.057             |
| ● Yellow                                    | P9MPLGGD | 1SFA184493R9103 | 1       | 0.057             |
| ● Blue                                      | P9MPLBGD | 1SFA184496R9104 | 1       | 0.057             |
| ○ White                                     | P9MPLBGD | 1SFA184497R9105 | 1       | 0.057             |
| ● Orange                                    | P9MPLAGD | 1SFA184495R9109 | 1       | 0.057             |
| ○ Clear                                     | P9MPLIGD | 1SFA184498R9108 | 1       | 0.057             |

#### Flush pushbutton - Glass lens type

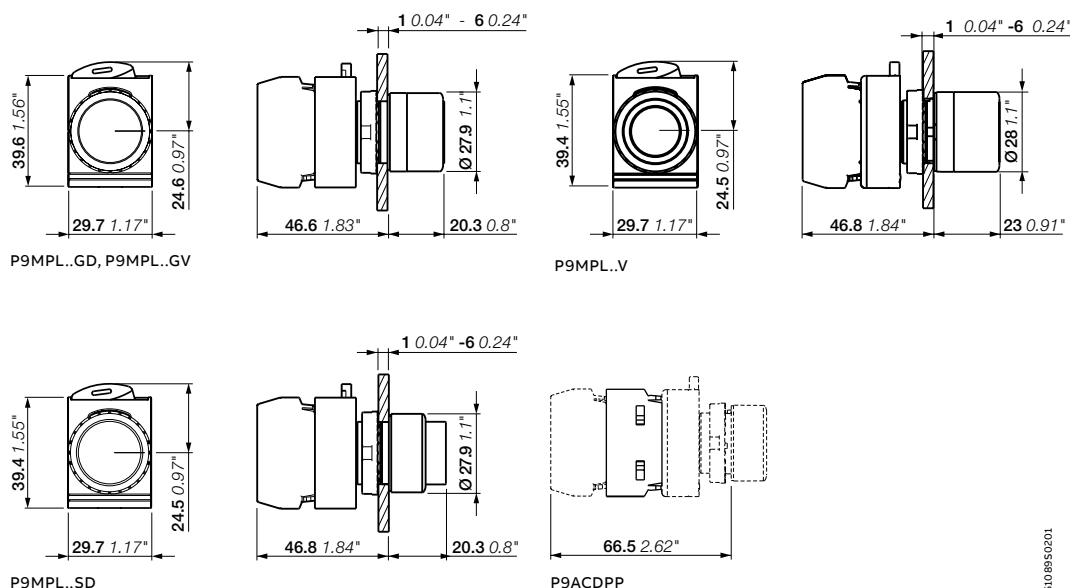
|          |          |                 |   |       |
|----------|----------|-----------------|---|-------|
| ● Red    | P9MPLRGV | 1SFA184521R9101 | 1 | 0.060 |
| ● Green  | P9MPLVGV | 1SFA184522R9102 | 1 | 0.060 |
| ● Yellow | P9MPLGGV | 1SFA184523R9103 | 1 | 0.060 |
| ● Blue   | P9MPLBGV | 1SFA184526R9104 | 1 | 0.060 |
| ○ White  | P9MPLBGV | 1SFA184527R9105 | 1 | 0.060 |

#### Extended pushbutton - Plastic lens type

|          |          |                 |   |       |
|----------|----------|-----------------|---|-------|
| ● Red    | P9MPLRSD | 1SFA184501R9101 | 1 | 0.059 |
| ● Green  | P9MPLVSD | 1SFA184502R9102 | 1 | 0.059 |
| ● Yellow | P9MPLGSD | 1SFA184503R9103 | 1 | 0.059 |
| ● Blue   | P9MPLBSD | 1SFA184506R9104 | 1 | 0.059 |
| ○ White  | P9MPLBSD | 1SFA184507R9105 | 1 | 0.059 |
| ● Orange | P9MPLASD | 1SFA184505R9109 | 1 | 0.059 |

#### Maintained accessory

|                                                                                                                                        |         |                 |   |       |
|----------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|---|-------|
| Device for standard pushbuttons, illuminated pushbuttons:<br>To be used only with contact blocks P9B01VN, P9B01VR, P9B10VA and P9B01FN | P9ACDPP | 1SFA187843R8000 | 1 | 0.012 |
|----------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|---|-------|



Dimensions (mm, inches)

## Modular metal range

### Non-illuminated mushroom pushbuttons



P9MER3RN  
with holder

1SFC151479V0001



P9MEM4VN

1SFC151600V0001



P9MEM3GN

1SFC151608V0001



P9MEM6NN

1SFC151595V0001



P9MEM6GN

1SFC151596V0001



P9MET4VN1

1SFC151591V0001



P9MER4RN

1SFC151441V0001



P9MET4NN1

1SFC151592V0001



P9MEC4RN01

1SFC151488V0001



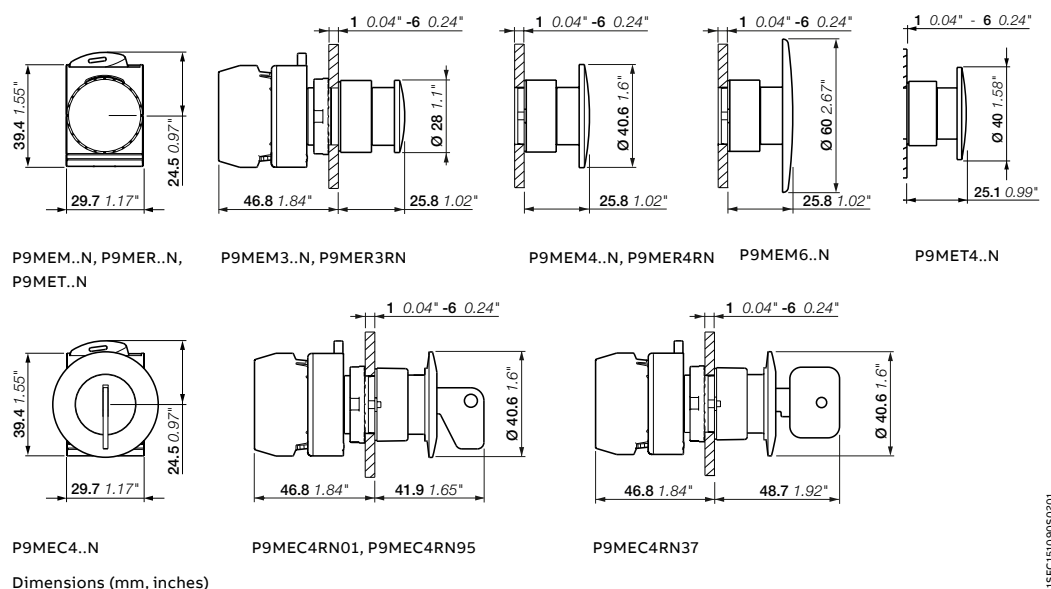
P9MEC4RN37

1SFC151467V0001

#### Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Color                      | Release method | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|----------------------------|----------------|------------|-----------------|---------|-------------------|
| <b>Momentary</b>           |                |            |                 |         |                   |
| <b>Ø 28 mm</b>             |                |            |                 |         |                   |
| Red                        | –              | P9MEM3RN   | 1SFA184031R9001 | 1       | 0.060             |
| Green                      | –              | P9MEM3VN   | 1SFA184032R9002 | 1       | 0.060             |
| Yellow                     | –              | P9MEM3GN   | 1SFA184033R9003 | 1       | 0.060             |
| Black                      | –              | P9MEM3NN   | 1SFA184030R9006 | 1       | 0.060             |
| <b>Ø 40 mm</b>             |                |            |                 |         |                   |
| Red                        | –              | P9MEM4RN   | 1SFA184041R9001 | 1       | 0.061             |
| Green                      | –              | P9MEM4VN   | 1SFA184042R9002 | 1       | 0.061             |
| Yellow                     | –              | P9MEM4GN   | 1SFA184043R9003 | 1       | 0.061             |
| Black                      | –              | P9MEM4NN   | 1SFA184040R9006 | 1       | 0.061             |
| <b>Ø 60 mm</b>             |                |            |                 |         |                   |
| Red                        | –              | P9MEM6RN   | 1SFA184051R9001 | 1       | 0.070             |
| Green                      | –              | P9MEM6VN   | 1SFA184052R9002 | 1       | 0.070             |
| Yellow                     | –              | P9MEM6GN   | 1SFA184053R9003 | 1       | 0.070             |
| Black                      | –              | P9MEM6NN   | 1SFA184050R9006 | 1       | 0.070             |
| <b>Maintained</b>          |                |            |                 |         |                   |
| <b>Ø 28 mm</b>             |                |            |                 |         |                   |
| Red                        | Twist release  | P9MER3RN   | 1SFA184070R9001 | 1       | 0.066             |
| <b>Ø 40 mm</b>             |                |            |                 |         |                   |
| Red                        | Pull release   | P9MET4RN1  | 1SFA184061R9001 | 1       | 0.069             |
|                            | Twist release  | P9MER4RN   | 1SFA184071R9001 | 1       | 0.069             |
| Green                      | Pull release   | P9MET4VN1  | 1SFA184062R9002 | 1       | 0.069             |
| Yellow                     | Pull release   | P9MET4GN1  | 1SFA184063R9003 | 1       | 0.069             |
| Black                      | Pull release   | P9MET4NN1  | 1SFA184060R9006 | 1       | 0.069             |
| <b>Maintained with key</b> |                |            |                 |         |                   |
| <b>Ø 40 mm</b>             |                |            |                 |         |                   |
| Red                        | Key code 01    | P9MEC4RN01 | 1SFA192000R9001 | 1       | 0.090             |
|                            | Key code 37    | P9MEC4RN37 | 1SFA192012R9001 | 1       | 0.090             |
|                            | Key code 95    | P9MEC4RN95 | 1SFA184073R9001 | 1       | 0.090             |



Dimensions (mm, inches)

Modular metal range

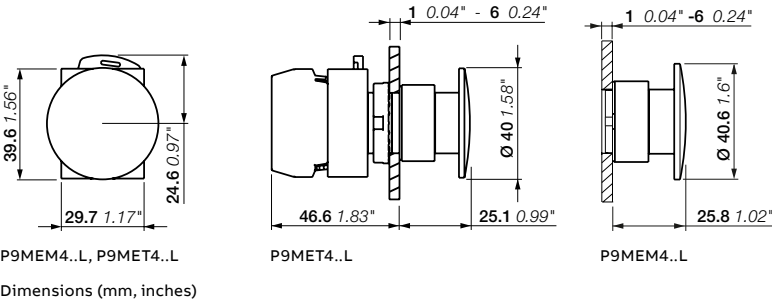
Illuminated mushroom pushbuttons



Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Color      | Release method | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|------------|----------------|-----------|-----------------|---------|-------------------|
| Momentary  |                |           |                 |         |                   |
| Ø 40 mm    |                |           |                 |         |                   |
| Red        | –              | P9MEM4RL  | 1SFA184551R9101 | 1       | 0.062             |
| Green      | –              | P9MEM4VL  | 1SFA184552R9102 | 1       | 0.062             |
| Yellow     | –              | P9MEM4GL  | 1SFA184553R9103 | 1       | 0.062             |
| Blue       | –              | P9MEM4LL  | 1SFA184556R9104 | 1       | 0.062             |
| Maintained |                |           |                 |         |                   |
| Ø 40 mm    |                |           |                 |         |                   |
| Red        | Pull release   | P9MET4RL1 | 1SFA184561R9101 | 1       | 0.062             |
| Green      | Pull release   | P9MET4VL1 | 1SFA184562R9102 | 1       | 0.062             |
| Yellow     | Pull release   | P9MET4GL1 | 1SFA184563R9103 | 1       | 0.062             |
| Blue       | Pull release   | P9MET4LL1 | 1SFA184566R9104 | 1       | 0.062             |



Modular metal range

Pilot lights



P9MLBD  
with holder

1SFC151478V0001



P9MLRD

1SFC151579V0001



P9MLVD

1SFC151578V0001



P9MLGD

1SFC151582V0001



P9MLLD

1SFC151580V0001



P9MLID

1SFC151581V0001



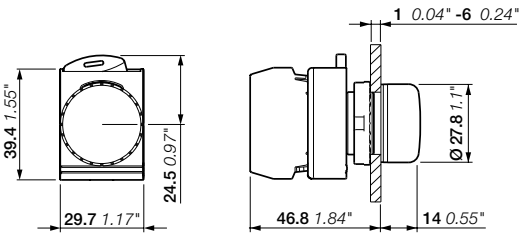
P9MLAD

1SFC151584V0001

Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Color                        | Type   | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|------------------------------|--------|-----------------|------------|-------------------------|
| Operator - Plastic lens type |        |                 |            |                         |
| ● Red                        | P9MLRD | 1SFA184791R9001 | 1          | 0.050                   |
| ● Green                      | P9MLVD | 1SFA184792R9002 | 1          | 0.050                   |
| ● Yellow                     | P9MLGD | 1SFA184793R9003 | 1          | 0.050                   |
| ● Blue                       | P9MLLD | 1SFA184796R9004 | 1          | 0.050                   |
| ○ White                      | P9MLBD | 1SFA184797R9005 | 1          | 0.050                   |
| ○ Clear                      | P9MLID | 1SFA184798R9008 | 1          | 0.050                   |
| ● Orange                     | P9MLAD | 1SFA184795R9009 | 1          | 0.050                   |



P9ML...D

Dimensions (mm, inches)

Modular metal range

Non-illuminated selector switches - 2-position



Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Operating principle | Color  | CAM function | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|--------|--------------|----------|-----------------|---------|-------------------|
| Short handle        |        |              |          |                 |         |                   |
|                     | Yellow | I            | P9MSMI0G | 1SFA184123R9003 | 1       | 0.065             |
|                     | Black  | I            | P9MSMI0N | 1SFA184120R9006 | 1       | 0.065             |
|                     | Red    | D            | P9MSMD0R | 1SFA184111R9001 | 1       | 0.065             |
|                     | Black  | D            | P9MSMD0N | 1SFA184110R9006 | 1       | 0.065             |
|                     | Red    | I            | P9MSMI5R | 1SFA184151R9001 | 1       | 0.065             |
|                     | Green  | I            | P9MSMI5V | 1SFA184152R9002 | 1       | 0.065             |
|                     | Black  | I            | P9MSMI5N | 1SFA184150R9006 | 1       | 0.065             |
|                     | Red    | D            | P9MSMD5R | 1SFA184141R9001 | 1       | 0.065             |
|                     | Yellow | D            | P9MSMD5G | 1SFA184143R9003 | 1       | 0.065             |
|                     | Black  | D            | P9MSMD5N | 1SFA184140R9006 | 1       | 0.065             |

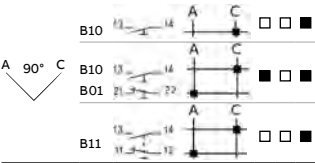
Long handle

|  |        |   |          |                 |   |       |
|--|--------|---|----------|-----------------|---|-------|
|  | Black  | I | P9MSVI0N | 1SFA184371R9006 | 1 | 0.068 |
|  | Yellow | D | P9MSVD0G | 1SFA184822R9003 | 1 | 0.068 |
|  | Black  | D | P9MSVD0N | 1SFA184370R9006 |   |       |
|  | Black  | I | P9MSVI5N | 1SFA184374R9006 | 1 | 0.068 |
|  | Black  | D | P9MSVD5N | 1SFA184373R9006 | 1 | 0.068 |

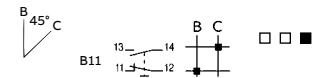
Electrical diagram

| Positions | Contacts | Position on flange |
|-----------|----------|--------------------|
|           |          | 2 3 1              |

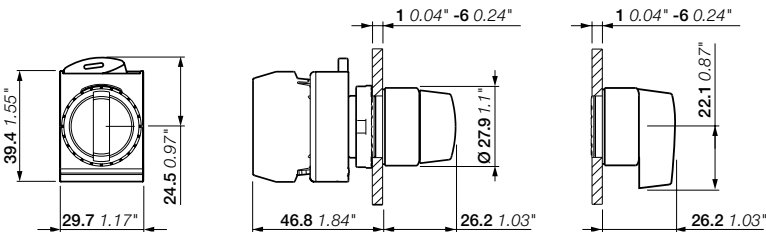
CAM function D



CAM function I



Note: dot in this diagram = contact closed.  
B10 = P9B10VN, P9B10FN contact blocks  
B01 = P9B01VN, P9B01FN contact blocks  
B11 = P9B11VN contact blocks



P9MSM, P9MSV

Dimensions (mm, inches)

## Modular metal range

### Illuminated selector switches - 2-position



P9MSLD0R

1SFC151511V0001



P9MSLD0G

1SFC151509V0001



P9MSLD0B

1SFC151510V0001



P9MSLD0A

1SFC151512V0001



P9MSAD0V

1SFC151494V0001

#### Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Operating principle | Color  | CAM function | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|--------|--------------|----------|-----------------|---------|-------------------|
| <b>Short handle</b> |        |              |          |                 |         |                   |
|                     | Red    | D            | P9MSLD0R | 1SFA184591R9101 | 1       | 0.059             |
|                     | Green  | D            | P9MSLD0V | 1SFA184592R9102 | 1       | 0.059             |
|                     | Yellow | D            | P9MSLD0G | 1SFA184593R9103 | 1       | 0.059             |
|                     | Blue   | D            | P9MSLD0L | 1SFA184596R9104 | 1       | 0.059             |
|                     | White  | D            | P9MSLD0B | 1SFA184597R9105 | 1       | 0.059             |
|                     | Orange | D            | P9MSLD0A | 1SFA184595R9109 | 1       | 0.059             |
|                     | Clear  | D            | P9MSLD0I | 1SFA184598R9108 | 1       | 0.059             |

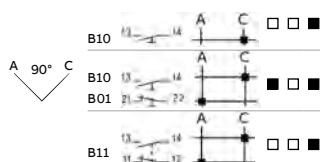
#### Long handle

|  |       |   |          |                 |   |       |
|--|-------|---|----------|-----------------|---|-------|
|  | Red   | D | P9MSAD0R | 1SFA184641R9101 | 1 | 0.060 |
|  | Green | D | P9MSAD0V | 1SFA184642R9102 | 1 | 0.060 |
|  | Blue  | D | P9MSAD0L | 1SFA184646R9104 | 1 | 0.060 |
|  | White | D | P9MSAD0B | 1SFA184647R9105 | 1 | 0.060 |

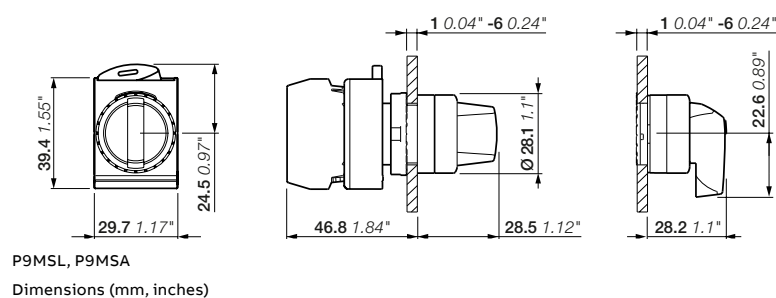
#### Electrical diagram

| Positions | Contacts | Position on flange |
|-----------|----------|--------------------|
|           |          | 2 3 1              |

CAM function D



Note: dot in this diagram = contact closed.  
 B10 = P9B10VN, P9B10FN contact blocks  
 B01 = P9B01VN, P9B01FN contact blocks  
 B11 = P9B11VN contact blocks

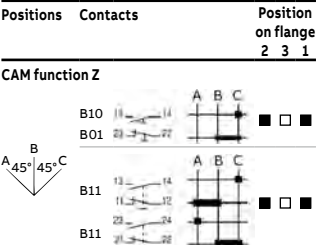


Modular metal range

Non-illuminated selector switches - 3-position



Electrical diagram

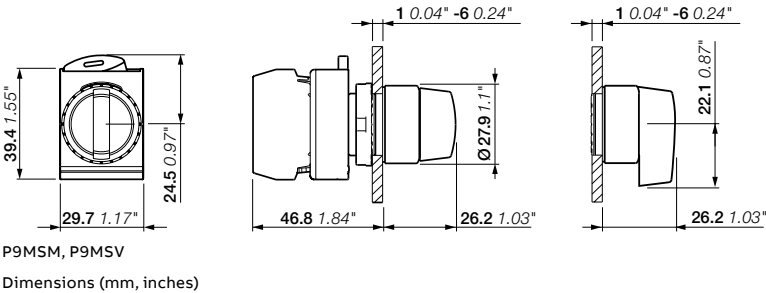


Note: dot in this diagram = contact closed.  
B10 = P9B10VN, P9B10FN contact blocks  
B01 = P9B01VN, P9B01FN contact blocks  
B11 = P9B11VN contact blocks

Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Operating principle | Color   | CAM function | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|--------------|----------|-----------------|---------|-------------------|
| Short handle        |         |              |          |                 |         |                   |
|                     | ● Red   | Z            | P9MSMZ0R | 1SFA184201R9001 | 1       | 0.065             |
|                     | ● Black | Z            | P9MSMZ0N | 1SFA184200R9006 | 1       | 0.065             |
|                     | ● Red   | Z            | P9MSMZ3R | 1SFA184321R9001 | 1       | 0.065             |
|                     | ● Black | Z            | P9MSMZ3N | 1SFA184320R9006 | 1       | 0.065             |
|                     | ● Black | Z            | P9MSMZ5N | 1SFA184280R9006 | 1       | 0.065             |
|                     | ● Red   | Z            | P9MSMZ1R | 1SFA184241R9001 | 1       | 0.065             |
|                     | ● Black | Z            | P9MSMZ1N | 1SFA184240R9006 | 1       | 0.065             |
| Long handle         |         |              |          |                 |         |                   |
|                     | ● Red   | Z            | P9MSVZ0R | 1SFA184856R9001 | 1       | 0.068             |
|                     | ● Black | Z            | P9MSVZ0N | 1SFA184379R9006 | 1       | 0.068             |
|                     | ● Black | Z            | P9MSVZ3N | 1SFA184391R9006 | 1       | 0.068             |
|                     | ● Black | Z            | P9MSVZ5N | 1SFA184387R9006 | 1       | 0.068             |
|                     | ● Black | Z            | P9MSVZ1N | 1SFA184383R9006 | 1       | 0.068             |



## Modular metal range

### Illuminated selector switches - 3-position



1SFC151511V0001



1SFC151509V0001



1SFC151510V0001



1SFC151513V0001



1SFC151494V0001



1SFC151497V0001



1SFC151493V0001

#### Description

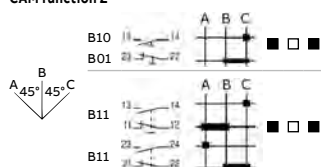
Each reference includes the satin chrome metal body and nut together with the holder.

| Operating principle | Color  | CAM function | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|--------|--------------|----------|-----------------|---------|-------------------|
| <b>Short handle</b> |        |              |          |                 |         |                   |
|                     | Red    | Z            | P9MSLZ0R | 1SFA184601R9101 | 1       | 0.065             |
|                     | Green  | Z            | P9MSLZ0V | 1SFA184602R9102 | 1       | 0.065             |
|                     | Yellow | Z            | P9MSLZ0G | 1SFA184603R9103 | 1       | 0.065             |
|                     | Blue   | Z            | P9MSLZ0L | 1SFA184606R9104 | 1       | 0.065             |
|                     | White  | Z            | P9MSLZ0B | 1SFA184607R9105 | 1       | 0.065             |
|                     | Orange | Z            | P9MSLZ0A | 1SFA184605R9109 | 1       | 0.065             |
|                     | Red    | Z            | P9MSLZ3R | 1SFA184631R9101 | 1       | 0.065             |
|                     | Green  | Z            | P9MSLZ3V | 1SFA184632R9102 | 1       | 0.065             |
|                     | Yellow | Z            | P9MSLZ3G | 1SFA184633R9103 | 1       | 0.065             |
|                     | Blue   | Z            | P9MSLZ3L | 1SFA184636R9104 | 1       | 0.065             |
|                     | White  | Z            | P9MSLZ3B | 1SFA184637R9105 | 1       | 0.065             |
|                     | Orange | Z            | P9MSLZ3A | 1SFA184635R9109 | 1       | 0.065             |
|                     | Clear  | Z            | P9MSLZ3I | 1SFA184638R9108 | 1       | 0.065             |
|                     | Red    | Z            | P9MSLZ5R | 1SFA184621R9101 | 1       | 0.065             |
|                     | Green  | Z            | P9MSLZ5V | 1SFA184622R9102 | 1       | 0.065             |
|                     | Blue   | Z            | P9MSLZ5L | 1SFA184626R9104 | 1       | 0.065             |
|                     | Clear  | Z            | P9MSLZ5I | 1SFA184628R9108 | 1       | 0.065             |
|                     | Red    | Z            | P9MSLZ1R | 1SFA184611R9101 | 1       | 0.065             |
|                     | Green  | Z            | P9MSLZ1V | 1SFA184612R9102 | 1       | 0.065             |
|                     | Yellow | Z            | P9MSLZ1G | 1SFA184613R9103 | 1       | 0.065             |
|                     | Blue   | Z            | P9MSLZ1L | 1SFA184616R9104 | 1       | 0.065             |
|                     | White  | Z            | P9MSLZ1B | 1SFA184617R9105 | 1       | 0.065             |
| <b>Long handle</b>  |        |              |          |                 |         |                   |
|                     | Green  | Z            | P9MSAZ0V | 1SFA184652R9102 | 1       | 0.068             |
|                     | White  | Z            | P9MSAZ0B | 1SFA184657R9105 | 1       | 0.068             |
|                     | Green  | Z            | P9MSAZ3V | 1SFA184682R9102 | 1       | 0.068             |
|                     | White  | Z            | P9MSAZ3B | 1SFA184687R9105 | 1       | 0.068             |
|                     | Orange | Z            | P9MSAZ3A | 1SFA184685R9109 | 1       | 0.068             |

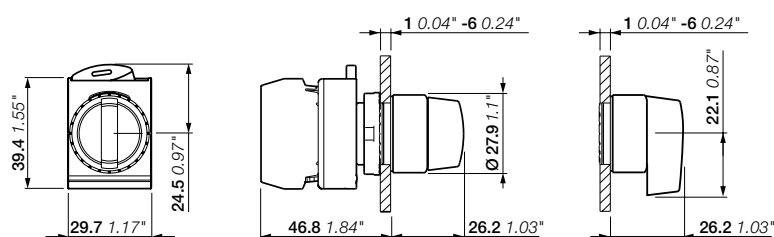
#### Electrical diagram

| Positions | Contacts | Position on flange |
|-----------|----------|--------------------|
|           |          | 2 3 1              |

CAM function Z



Note: dot in this diagram = contact closed.  
 B10 = P9B10VN, P9B10FN contact blocks  
 B01 = P9B01VN, P9B01FN contact blocks  
 B11 = P9B11VN contact blocks



P9MSL, P9MSA

Dimensions (mm, inches)

Modular metal range

Non-illuminated selector switches - 4-position

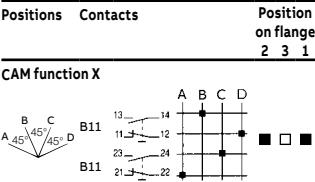


P9MSMX0N  
with holder



P9MSMX0N

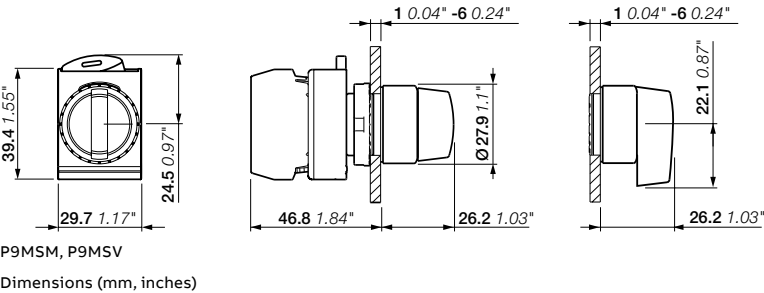
Electrical diagram



Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Operating principle | Color   | CAM function | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|--------------|----------|-----------------|---------|-------------------|
| Short handle        |         |              |          |                 |         |                   |
|                     | ● Black | X            | P9MSMX0N | 1SFA184397R9006 | 1       | 0.065             |
|                     | ● Black | X            | P9MSMX5N | 1SFA184340R9006 | 1       | 0.065             |
| Long handle         |         |              |          |                 |         |                   |
|                     | ● Black | X            | P9MSVX0N | 1SFA184392R9006 | 1       | 0.068             |
|                     | ● Black | X            | P9MSVX5N | 1SFA184393R9006 | 1       | 0.068             |



## Modular metal range

### Non-illuminated selector switches - 5-position



1SFC151511V0001

P9MSMYOR

#### Description

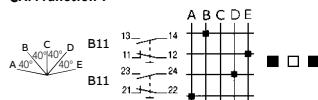
Each reference includes the satin chrome metal body and nut together with the holder.

| Operating principle | Color   | CAM function | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|---------|--------------|----------|-----------------|---------|-------------------|
| <b>Short handle</b> |         |              |          |                 |         |                   |
|                     | ● Black | W            | P9MSMW0N | 1SFA184360R9006 | 1       | 0.065             |
|                     | ● Red   | Y            | P9MSMYOR | 1SFA184351R9001 | 1       | 0.065             |
|                     | ● Black | Y            | P9MSMY0N | 1SFA184350R9006 | 1       | 0.065             |

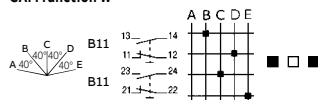
#### Electrical diagram

| Positions | Contacts | Position on flange |
|-----------|----------|--------------------|
|           |          | 2 3 1              |

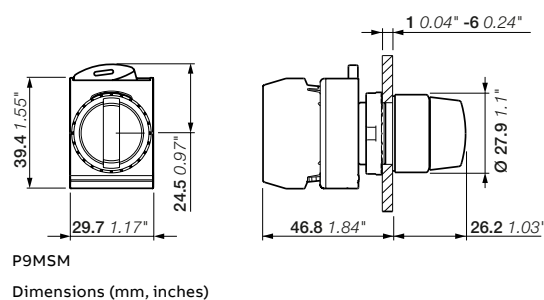
##### CAM function Y



##### CAM function W



Note: dot in this diagram = contact closed.  
 B10 = P9B10VN, P9B10FN contact blocks  
 B01 = P9B01VN, P9B01FN contact blocks  
 B11 = P9B11VN contact blocks



## Modular metal range

### Key-operated selector switches - 2-position



P9MSCI0C37  
with holder



P9MSCI0C95

#### Description

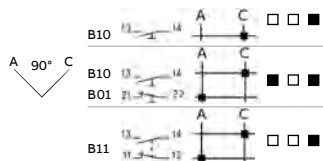
Each reference includes the satin chrome metal body and nut together with the holder, 2 keys included.

| Operating principle | Key code | Key head color | CAM function | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|----------|----------------|--------------|------------|-----------------|---------|-------------------|
|                     | 37       | Red/Metal      | I            | P9MSCI0C37 | 1SFA192162R9006 | 1       | 0.120             |
|                     | 01       | Metal          | I            | P9MSCI0C01 | 1SFA192150R9006 | 1       | 0.120             |
|                     | 95       | Metal          | I            | P9MSCI0C95 | 1SFA184403R9006 | 1       | 0.120             |
|                     | 01       | Metal          | I            | P9MSCI0E01 | 1SFA192165R9006 | 1       | 0.120             |
|                     | 95       | Metal          | I            | P9MSCI0E95 | 1SFA184404R9006 | 1       | 0.120             |
|                     | 95       | Metal          | I            | P9MSCI0N95 | 1SFA184405R9006 | 1       | 0.120             |
|                     | 37       | Red/Metal      | D            | P9MSCD0A37 | 1SFA192117R9006 | 1       | 0.120             |
|                     | 01       | Metal          | D            | P9MSCD0A01 | 1SFA192105R9006 | 1       | 0.120             |
|                     | 95       | Metal          | D            | P9MSCD0A95 | 1SFA184400R9006 | 1       | 0.120             |
|                     | 01       | Metal          | D            | P9MSCD0E01 | 1SFA192120R9006 | 1       | 0.120             |
|                     | 95       | Metal          | D            | P9MSCD0E95 | 1SFA184401R9006 | 1       | 0.120             |
|                     | 37       | Red/Metal      | D            | P9MSCD0K37 | 1SFA192147R9006 | 1       | 0.120             |
|                     | 01       | Metal          | D            | P9MSCD0K01 | 1SFA192135R9006 | 1       | 0.120             |
|                     | 95       | Metal          | D            | P9MSCD0K95 | 1SFA184402R9006 | 1       | 0.120             |
|                     | 37       | Red/Metal      | I            | P9MSCI5C37 | 1SFA192267R9006 | 1       | 0.120             |
|                     | 01       | Metal          | I            | P9MSCI5C01 | 1SFA192255R9006 | 1       | 0.120             |
|                     | 95       | Metal          | I            | P9MSCI5C95 | 1SFA184410R9006 | 1       | 0.120             |
|                     | 37       | Red/Metal      | D            | P9MSCD5A37 | 1SFA192252R9006 | 1       | 0.120             |
|                     | 01       | Metal          | D            | P9MSCD5A01 | 1SFA192240R9006 | 1       | 0.120             |
|                     | 95       | Metal          | D            | P9MSCD5A95 | 1SFA184409R9006 | 1       | 0.120             |
|                     | 33       | Yellow         | D            | P9MSCD5A33 | 1SFA192250R9006 | 1       | 0.120             |

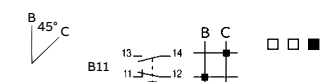
#### Electrical diagram

| Positions | Contacts | Position on flange |
|-----------|----------|--------------------|
|           |          | 2 3 1              |

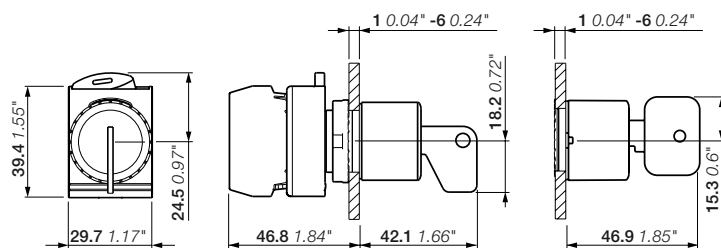
##### CAM function D



##### CAM function I



Note: dot in this diagram = contact closed.  
 B10 = P9B10VN, P9B10FN contact blocks  
 B01 = P9B01VN, P9B01FN contact blocks  
 B11 = P9B11VN contact blocks



P9MSC..01, P9MSC..95  
Dimensions (mm, inches)

P9MSC..37

## Modular metal range

### Key-operated selector switches - 3-position



P9MSCZ0T37  
with holder

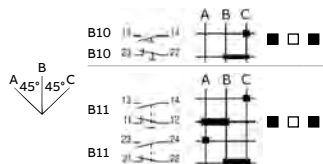


P9MSCZ0T95

#### Electrical diagram

| Positions | Contacts | Position<br>on flange |
|-----------|----------|-----------------------|
|           |          | 2 3 1                 |

#### CAM function Z

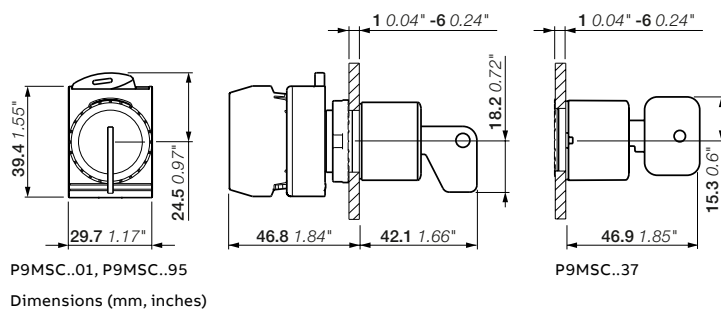


Note: dot in this diagram = contact closed.  
B10 = P9B10VN, P9B10FN contact blocks  
B01 = P9B01VN, P9B01FN contact blocks  
B11 = P9B11VN contact blocks

#### Description

Each reference includes the satin chrome metal body and nut together with the holder, 2 keys included.

| Operating principle                                                               | Key code | Key head color | CAM function | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|-----------------------------------------------------------------------------------|----------|----------------|--------------|------------|-----------------|---------|-------------------|
|  | 37       | Red/Metal      | Z            | P9MSCZ0T37 | 1SFA192702R9006 | 1       | 0.120             |
|                                                                                   | 01       | Metal          | Z            | P9MSCZ0T01 | 1SFA192690R9006 | 1       | 0.120             |
|                                                                                   | 95       | Metal          | Z            | P9MSCZ0T95 | 1SFA184439R9006 | 1       | 0.120             |
| Key can be removed in all positions                                               |          |                |              |            |                 |         |                   |
| Key can be removed in A position only                                             | 95       | Metal          | Z            | P9MSCZ0A95 | 1SFA184433R9006 | 1       | 0.120             |
| Key can be removed in B position only                                             | 95       | Metal          | Z            | P9MSCZ0C95 | 1SFA184434R9006 | 1       | 0.120             |
| Key can be removed in A and B positions                                           | 95       | Metal          | Z            | P9MSCZ0H95 | 1SFA184436R9006 | 1       | 0.120             |
| Key can be removed in B and C positions                                           | 95       | Metal          | Z            | P9MSCZ0N95 | 1SFA184438R9006 | 1       | 0.120             |
| Key can be removed in position B only                                             | 95       | Metal          | Z            | P9MSCZ1C95 | 1SFA184449R9006 | 1       | 0.120             |
| Key can be removed in A and C positions                                           | 95       | Metal          | Z            | P9MSCZ1N95 | 1SFA184451R9006 | 1       | 0.120             |



## Modular metal range

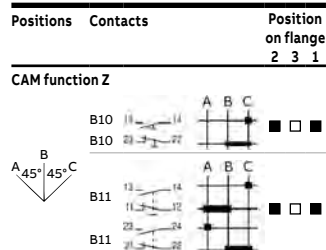
### Key-operated selector switches - 3-position



P9MSCZ3C01  
with holder

1SFC151470V0001

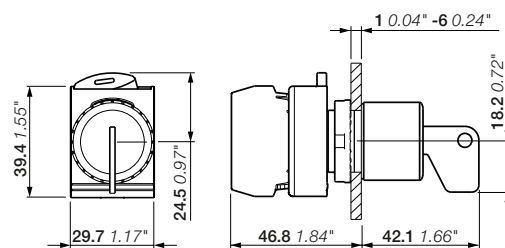
#### Electrical diagram



#### Description

Each reference includes the satin chrome metal body and nut together with the holder, 2 keys included.

| Operating principle | Key code                                | Key head color | CAM function | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------|-----------------------------------------|----------------|--------------|------------|-----------------|---------|-------------------|
|                     | 01                                      | Metal          | Z            | P9MSCZ3C01 | 1SFA193110R9006 | 1       | 0.120             |
|                     | Key can be removed in B position only   |                |              |            |                 |         |                   |
|                     | 95                                      | Metal          | Z            | P9MSCZ3C95 | 1SFA184467R9006 | 1       | 0.120             |
|                     | Key can be removed in B position only   |                |              |            |                 |         |                   |
|                     | 01                                      | Metal          | Z            | P9MSCZ5A01 | 1SFA193020R9006 | 1       | 0.120             |
|                     | Key can be removed in A position only   |                |              |            |                 |         |                   |
|                     | 95                                      | Metal          | Z            | P9MSCZ5A95 | 1SFA184461R9006 | 1       | 0.120             |
|                     | Key can be removed in A position only   |                |              |            |                 |         |                   |
|                     | 95                                      | Metal          | Z            | P9MSCZ5C95 | 1SFA184462R9006 | 1       | 0.120             |
|                     | Key can be removed in B position only   |                |              |            |                 |         |                   |
|                     | 01                                      | Metal          | Z            | P9MSCZ5H01 | 1SFA193050R9006 | 1       | 0.120             |
|                     | Key can be removed in A and B positions |                |              |            |                 |         |                   |
|                     | 95                                      | Metal          | Z            | P9MSCZ5H95 | 1SFA184463R9006 | 1       | 0.120             |
|                     | Key can be removed in A and B positions |                |              |            |                 |         |                   |



P9MSC..01, P9MSC..95  
Dimensions (mm, inches)

Modular metal range

Key-operated selector switches - 4-position



P9MSCX0A95  
with holder

Description

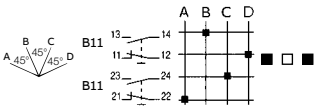
Each reference includes the satin chrome metal body and nut together with the holder, 2 keys included.

| Operating principle                 | Key code                         | Key head color | CAM function | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|-------------------------------------|----------------------------------|----------------|--------------|------------|-----------------|---------|-------------------|
|                                     | 95                               | Metal          | X            | P9MSCX0A95 | 1SFA184468R9006 | 1       | 0.120             |
|                                     | Key can be removed in A position |                |              |            |                 |         |                   |
|                                     | 01                               | Metal          | X            | P9MSCX0Z01 | 1SFA193335R9006 | 1       | 0.120             |
| Key can be removed in all positions | 95                               | Metal          | X            | P9MSCX0Z95 | 1SFA184482R9006 | 1       | 0.120             |

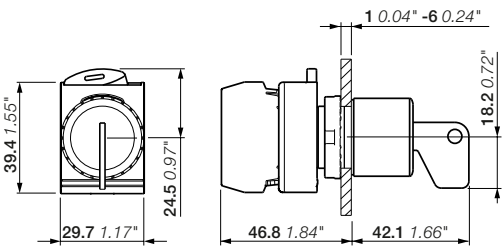
Electrical diagram

| Positions | Contacts | Position on flange |
|-----------|----------|--------------------|
|           |          | 2 3 1              |

CAM function X



Note: dot in this diagram = contact closed.  
B11 = P9B11VN contact blocks



P9MSC..01, P9MSC..95  
Dimensions (mm, inches)

## Modular metal range

### Joysticks - 2-position and 4-position



P9MMN2A  
with holder



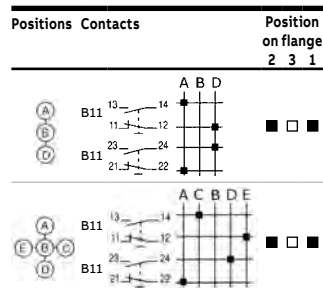
P9MMB2FG

#### Description

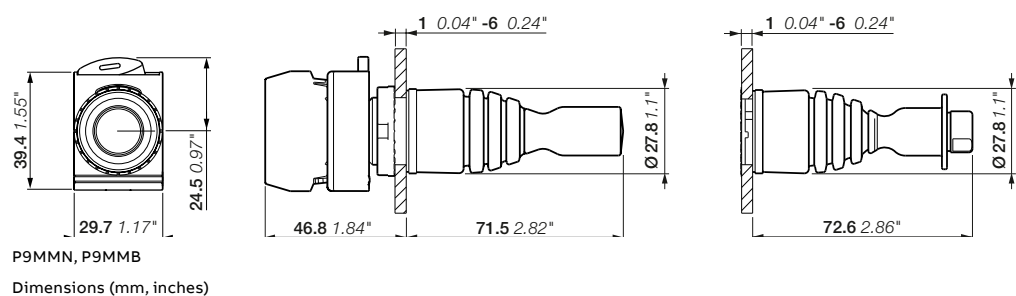
Each reference includes the satin chrome metal body and nut together with the holder.

| Position                         | Material Color | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|----------------------------------|----------------|----------|-----------------|---------|-------------------|
| <b>Without latching function</b> |                |          |                 |         |                   |
|                                  | Rubber/Black   | P9MMN2F  | 1SFA184700R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMN2T  | 1SFA184701R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMN2A  | 1SFA184702R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMN2B  | 1SFA184703R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMN4F  | 1SFA184720R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMN4T  | 1SFA184721R9006 | 1       | 0.090             |
|                                  | Silicone/Grey  | P9MMN4TG | 1SFA184716R9006 | 1       | 0.090             |
| <b>With latching function</b>    |                |          |                 |         |                   |
|                                  | Rubber/Black   | P9MMB2F  | 1SFA184710R9006 | 1       | 0.090             |
|                                  | Silicone/Grey  | P9MMB2FG | 1SFA184709R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMB2T  | 1SFA184711R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMB2A  | 1SFA184712R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMB4F  | 1SFA184740R9006 | 1       | 0.090             |
|                                  | Rubber/Black   | P9MMB4T  | 1SFA184741R9006 | 1       | 0.090             |
|                                  | Silicone/Grey  | P9MMB4TG | 1SFA184744R9006 | 1       | 0.090             |

#### Electrical diagram



Note: dot in this diagram = contact closed.  
B11= P9B11VN contact blocks



P9MMN, P9MMB

Dimensions (mm, inches)

Modular metal range

Joysticks - Accessories



P9ARSCMN

1SFC151435V0001



P9ARSCMB

1SFC151614V0001



P9ARSGMN

1SFC151434V0001



P9ARSGMB

1SFC151613V0001

Accessories

| Description                                 | Color   | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------------------------------|---------|----------|-----------------|---------|-------------------|
| Rubber boot for joystick without latching   | ● Black | P9ARSCMN | 1SFA188043R8000 | 5       | 0.008             |
| Rubber boot for joystick with latching      | ● Black | P9ARSCMB | 1SFA188044R8000 | 5       | 0.008             |
| Silicone boot for joystick without latching | ● Grey  | P9ARSGMN | 1SFA187495R8000 | 5       | 0.008             |
| Silicone boot for joystick with latching    | ● Grey  | P9ARSGMB | 1SFA187496R8000 | 5       | 0.008             |

Modular metal range

Toggle switches



P9MCB  
with holder

Contacts actuated

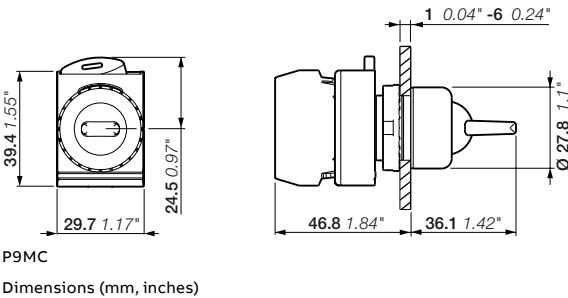
| Positions                                       | Contacts                                                | Position<br>on flange                                                                                                                                                                                                            |
|-------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 |                                                         | 2 3 1                                                                                                                                                                                                                            |
| CAM function D                                  |                                                         |                                                                                                                                                                                                                                  |
| <div><div>A</div><div>B</div></div>             | <div>B11<div><div>1314</div><div>1112</div></div></div> | <div><div>A</div><div>B</div></div> <div><div><div><div></div></div><div><div></div></div></div><div><div><div></div></div><div><div></div></div></div></div>                                                                    |
| CAM function B                                  |                                                         |                                                                                                                                                                                                                                  |
| <div><div>A</div><div>B</div><div>C</div></div> | <div>B11<div><div>1314</div><div>1112</div></div></div> | <div><div>A</div><div>B</div><div>C</div></div> <div><div><div><div></div></div><div><div></div></div></div><div><div><div></div></div><div><div></div></div></div><div><div><div></div></div><div><div></div></div></div></div> |

B11 = P9B11VN contact blocks

Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Operating principle                             | CAM<br>function | Type  | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|-------------------------------------------------|-----------------|-------|-----------------|------------|-------------------------|
| 2 position                                      |                 |       |                 |            |                         |
| <div><div>A</div><div>C</div></div>             | D               | P9MCD | 1SFA184695R9006 | 1          | 0.073                   |
| 3 position                                      |                 |       |                 |            |                         |
| <div><div>A</div><div>B</div><div>C</div></div> | B               | P9MCB | 1SFA184696R9006 | 1          | 0.073                   |
| <div><div>A</div><div>B</div><div>C</div></div> | B               | P9MCC | 1SFA184697R9006 | 1          | 0.073                   |



Modular metal range

Selector pushbuttons



P9MPS22G  
with holder

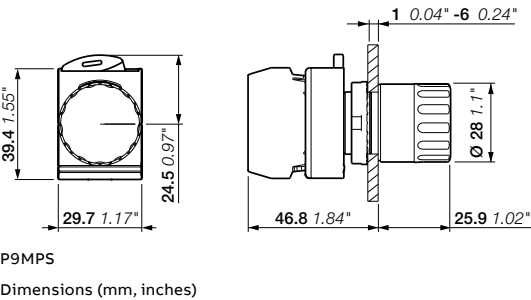
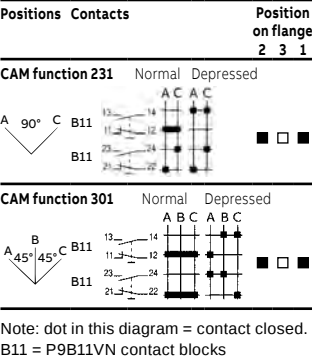
1SFC151474V0001

Description

Each reference includes the satin chrome metal body and nut together with the holder.

| Operating principle | CAM function | Type     | Order code      | Pkg qty | Weight (1 pce)<br>kg |
|---------------------|--------------|----------|-----------------|---------|----------------------|
| 2 position          |              |          |                 |         |                      |
|                     | 231          | P9MPS22G | 1SFA184691R9006 | 1       | 0.069                |
| 3 position          |              |          |                 |         |                      |
|                     | 301          | P9MPS34G | 1SFA184693R9006 | 1       | 0.065                |

Electrical diagram



## Modular metal range

Holders and contact blocks for front mounting



P9ACFS3

1SFC151627V0001



P9ACFS5

1SFC151626V0001



P9B10VN

1SFC151611V0001



P9B20VN

1SFC151610V0001



P9B10VA

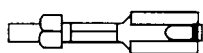
1SFC151611V0001



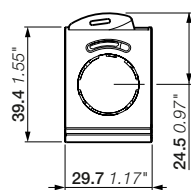
P9B10FN

1SFC151612V0001

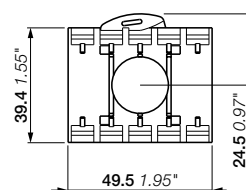
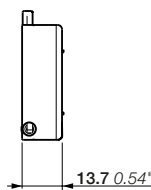
(1)



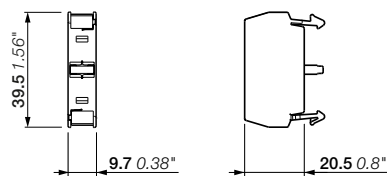
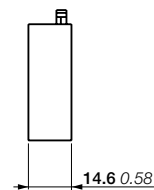
1x (6.35 x 0.8 mm)  
2x (2.8 x 0.8 mm)



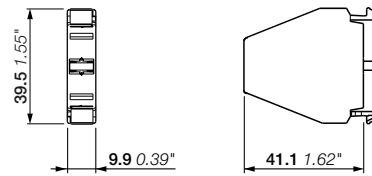
P9ACFS3



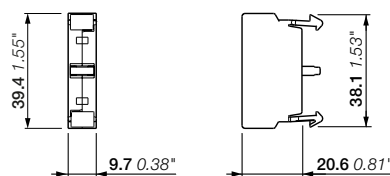
P9ACFS5



P9B10VN, P9B01VN, P9B10VA, P9B01VR



P9B20VN, P9B02VN, P9B11VN



P9B10FN, P9B01FN

Dimensions (mm, inches)

### Screw terminals

| Description | Contacts | Type | Order code | Pkg qty | Weight (1 pce) |
|-------------|----------|------|------------|---------|----------------|
|             |          |      |            |         | kg             |

### Holders

|            |     |         |                 |   |       |
|------------|-----|---------|-----------------|---|-------|
| 3-position | - - | P9ACFS3 | 1SFA187841R8000 | 1 | 0.009 |
| 5-position | - - | P9ACFS5 | 1SFA187842R8000 | 1 | 0.016 |

### Single contact blocks

|                           |     |            |                 |     |       |
|---------------------------|-----|------------|-----------------|-----|-------|
| For 3 & 5-position holder | 1 0 | P9B10VN    | 1SFA187002R8001 | 1   | 0.009 |
|                           | 1 0 | P9B10VN-AA | 1SFA215832R8001 | 200 | 0.009 |
|                           | 0 1 | P9B01VN    | 1SFA187001R8010 | 1   | 0.009 |

### Double contact blocks

|                           |     |            |                 |     |       |
|---------------------------|-----|------------|-----------------|-----|-------|
| For 3 & 5-position holder | 2 0 | P9B20VN    | 1SFA187009R8002 | 1   | 0.016 |
|                           | 0 2 | P9B02VN    | 1SFA187008R8020 | 1   | 0.016 |
|                           | 0 2 | P9B02VN-AA | 1SFA205236R8020 | 200 | 0.016 |
|                           | 1 1 | P9B11VN    | 1SFA187000R8011 | 1   | 0.016 |
|                           | 1 1 | P9B11VN-AA | 1SFA242712R8011 | 500 | 0.016 |

### Single contact blocks with N.O. early make contacts and N.C. late break contacts

|                           |     |         |                 |   |       |
|---------------------------|-----|---------|-----------------|---|-------|
| For 3 & 5-position holder | 1 0 | P9B10VA | 1SFA187004R8201 | 1 | 0.009 |
|                           | 0 1 | P9B01VR | 1SFA187003R8110 | 1 | 0.010 |

### Faston terminals

#### Single contact blocks (1)

|                           |     |            |                 |     |       |
|---------------------------|-----|------------|-----------------|-----|-------|
| For 3 & 5-position holder | 1 0 | P9B10FN    | 1SFA187013R8301 | 1   | 0.009 |
|                           | 1 0 | P9B10FN-AA | 1SFA215835R8301 | 200 | 0.009 |
|                           | 0 1 | P9B01FN    | 1SFA187012R8310 | 1   | 0.009 |

## Modular metal range

### Power supplies



P9PDNV0



P9PDTV0



P9PDNF0

#### Contacts actuated

Power supplies

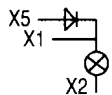
Position  
on flange  
2 3 1

P9PDNV0



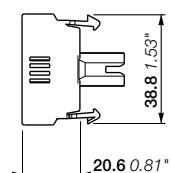
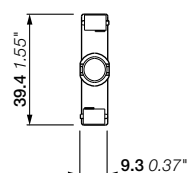
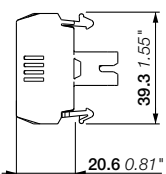
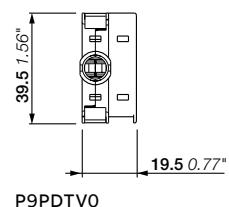
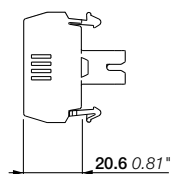
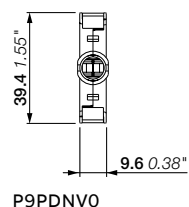
□ ■ □

P9PDTV0 - P9PDNF0



■ ■ □

| Description                                                                                                                | Type       | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|----------------------------------------------------------------------------------------------------------------------------|------------|-----------------|------------|-------------------------|
| <b>Screw terminals</b>                                                                                                     |            |                 |            |                         |
| Full voltage<br>IEC: BA9S max 380 V - 2 W bulb<br>not included<br>UL - CSA: BA9S max 250 V - 2 W bulb<br>not included      | P9PDNV0    | 1SFA187020R1080 | 1          | 0.010                   |
|                                                                                                                            | P9PDNV0-AA | 1SFA215831R1000 | 100        | 0.010                   |
| Test full voltage<br>IEC: BA9S max 380 V - 2 W bulb<br>not included<br>UL - CSA: BA9S max 250 V - 2 W bulb<br>not included | P9PDTV0    | 1SFA187027R8000 | 1          | 0.018                   |
| Note: P9PDTV0 are not included in UL listing.                                                                              |            |                 |            |                         |
| <b>Faston terminals</b>                                                                                                    |            |                 |            |                         |
| Full voltage                                                                                                               | P9PDNF0    | 1SFA187055R1300 | 1          | 0.013                   |
| IEC: BA9S max 380 V - 2 W bulbs<br>not included<br>UL - CSA: BA9S max 250 V... - 2 W bulbs<br>not included                 | P9PDNF0-AA | 1SFA215834R1300 | 100        | 0.013                   |



Dimensions (mm, inches)

## Modular metal range

LED bulbs for power supplies



BA9S6LEDB

1SFC151630V0001

| Color                                  | Type        | Order code      | Pkg qty | Weight (1 pce) kg |
|----------------------------------------|-------------|-----------------|---------|-------------------|
| <b>Rated voltage 6 V AC/DC</b>         |             |                 |         |                   |
| ● Red                                  | BA9S6LEDR   | 1SFA187163R1001 | 5       | 0.002             |
| ● Green                                | BA9S6LEDV   | 1SFA187164R1002 | 5       | 0.002             |
| ● Yellow                               | BA9S6LEDG   | 1SFA187161R1003 | 5       | 0.002             |
| ● Blue                                 | BA9S6LEDL   | 1SFA187162R1004 | 5       | 0.002             |
| ○ White                                | BA9S6LEDB   | 1SFA187160R1005 | 5       | 0.002             |
| <b>Rated voltage 12 V AC/DC</b>        |             |                 |         |                   |
| ● Red                                  | BA9S12LEDR  | 1SFA187168R1011 | 5       | 0.002             |
| ● Green                                | BA9S12LEDV  | 1SFA187169R1012 | 5       | 0.002             |
| ● Yellow                               | BA9S12LEDG  | 1SFA187166R1013 | 5       | 0.002             |
| ● Blue                                 | BA9S12LEDL  | 1SFA187167R1014 | 5       | 0.002             |
| ○ White                                | BA9S12LEDB  | 1SFA187165R1015 | 5       | 0.002             |
| <b>Rated voltage 24 V AC/DC</b>        |             |                 |         |                   |
| ● Red                                  | BA9S24LEDR  | 1SFA187173R1021 | 5       | 0.002             |
| ● Green                                | BA9S24LEDV  | 1SFA187174R1022 | 5       | 0.002             |
| ● Yellow                               | BA9S24LEDG  | 1SFA187171R1023 | 5       | 0.002             |
| ● Blue                                 | BA9S24LEDL  | 1SFA187172R1024 | 5       | 0.002             |
| ○ White                                | BA9S24LEDB  | 1SFA187170R1025 | 5       | 0.002             |
| <b>Rated voltage 48 V AC/DC</b>        |             |                 |         |                   |
| ● Red                                  | BA9S48LEDR  | 1SFA187178R1031 | 5       | 0.002             |
| ● Green                                | BA9S48LEDV  | 1SFA187179R1032 | 5       | 0.002             |
| ● Yellow                               | BA9S48LEDG  | 1SFA187176R1033 | 5       | 0.002             |
| ● Blue                                 | BA9S48LEDL  | 1SFA187177R1034 | 5       | 0.002             |
| ○ White                                | BA9S48LEDB  | 1SFA187175R1035 | 5       | 0.002             |
| <b>Rated voltage 60 V AC/DC</b>        |             |                 |         |                   |
| ○ White                                | BA9S60LED   | 1SFA187191R1045 | 5       | 0.002             |
| <b>Rated voltage 110 - 120 V AC/DC</b> |             |                 |         |                   |
| ● Red                                  | BA9S110LEDR | 1SFA187183R1041 | 5       | 0.002             |
| ● Green                                | BA9S110LEDV | 1SFA187184R1042 | 5       | 0.002             |
| ● Yellow                               | BA9S110LEDG | 1SFA187181R1043 | 5       | 0.002             |
| ● Blue                                 | BA9S110LEDL | 1SFA187182R1044 | 5       | 0.002             |
| ○ White                                | BA9S110LEDB | 1SFA187180R1045 | 5       | 0.002             |
| <b>Rated voltage 130 V AC/DC</b>       |             |                 |         |                   |
| ○ White                                | BA9S130LED  | 1SFA187190R1045 | 5       | 0.002             |
| <b>Rated voltage 230 V AC</b>          |             |                 |         |                   |
| ● Red                                  | BA9S230LEDR | 1SFA187188R1051 | 5       | 0.002             |
| ● Green                                | BA9S230LEDV | 1SFA187189R1052 | 5       | 0.002             |
| ● Yellow                               | BA9S230LEDG | 1SFA187186R1053 | 5       | 0.002             |
| ● Blue                                 | BA9S230LEDL | 1SFA187187R1054 | 5       | 0.002             |
| ○ White                                | BA9S230LEDB | 1SFA187185R1055 | 5       | 0.002             |

## Modular metal range

LED blocks for front mounting



P9PLNVDR

1SFC151499V0001

### Standard Light

| Color                           | Type      | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------------------|-----------|-----------------|---------|-------------------|
| <b>Rated voltage 24 V AC/DC</b> |           |                 |         |                   |
| ● Red                           | P9PLNVDR  | 1SFA197004R1011 | 1       | 0.020             |
| ● Green                         | P9PLNVDV  | 1SFA197005R1012 | 1       | 0.020             |
| ● Yellow                        | P9PLNV DG | 1SFA197002R1013 | 1       | 0.020             |
| ● Blue                          | P9PLNV DL | 1SFA197003R1014 | 1       | 0.020             |
| ○ White                         | P9PLNV DB | 1SFA197001R1015 | 1       | 0.020             |

### Rated voltage 120 V AC

|          |          |                 |   |       |
|----------|----------|-----------------|---|-------|
| ● Red    | P9PLNVJR | 1SFA197010R1041 | 1 | 0.020 |
| ● Green  | P9PLNVJV | 1SFA197011R1042 | 1 | 0.020 |
| ● Yellow | P9PLNVJG | 1SFA197008R1043 | 1 | 0.020 |
| ● Blue   | P9PLNVJL | 1SFA197009R1044 | 1 | 0.020 |
| ○ White  | P9PLNVJB | 1SFA197007R1045 | 1 | 0.020 |

### Rated voltage 230 V AC

|          |          |                 |   |       |
|----------|----------|-----------------|---|-------|
| ● Red    | P9PLNVNR | 1SFA197016R1071 | 1 | 0.020 |
| ● Green  | P9PLNVNV | 1SFA197017R1072 | 1 | 0.020 |
| ● Yellow | P9PLNVNG | 1SFA197014R1073 | 1 | 0.020 |
| ● Blue   | P9PLNVNL | 1SFA197015R1074 | 1 | 0.020 |
| ○ White  | P9PLNVNB | 1SFA197013R1075 | 1 | 0.020 |

### Flashing Light

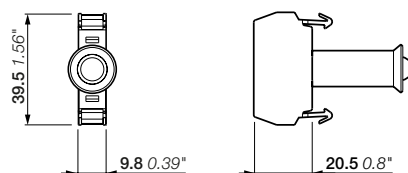
| Color                           | Type     | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------------------|----------|-----------------|---------|-------------------|
| <b>Rated voltage 24 V AC/DC</b> |          |                 |         |                   |
| ● Red                           | P9PLFVDR | 1SFA197022R1011 | 1       | 0.020             |
| ● Green                         | P9PLFVDV | 1SFA197023R1012 | 1       | 0.020             |
| ● Yellow                        | P9PLFVDG | 1SFA197020R1013 | 1       | 0.020             |
| ● Blue                          | P9PLFVDL | 1SFA197021R1014 | 1       | 0.020             |
| ○ White                         | P9PLFVDB | 1SFA197019R1015 | 1       | 0.020             |
| ● Orange                        | P9PLFVDA | 1SFA197018R1019 | 1       | 0.020             |

### Rated voltage 120 V AC

|          |          |                 |   |       |
|----------|----------|-----------------|---|-------|
| ● Red    | P9PLFVJR | 1SFA197028R1041 | 1 | 0.020 |
| ● Yellow | P9PLFVJG | 1SFA197026R1043 | 1 | 0.020 |
| ○ White  | P9PLFVJB | 1SFA197025R1045 | 1 | 0.020 |

### Rated voltage 230 V AC

|          |          |                 |   |       |
|----------|----------|-----------------|---|-------|
| ● Red    | P9PLFVNR | 1SFA197034R1071 | 1 | 0.020 |
| ● Yellow | P9PLFVNG | 1SFA197032R1073 | 1 | 0.020 |
| ○ White  | P9PLFVNB | 1SFA197031R1075 | 1 | 0.020 |



P9PL

Dimensions (mm, inches)

## Modular metal range

### Accessories



P9ACRCL

1SFC151463V0001



P9ACDPP

1SFC151628V0001



P9ACWAF

1SFC151629V0001



P9ARAM32

1SFC151464V0001



P9ACA6

1SFC151462V0001



080CPR

1SFC151460V0001



080CPN

1SFC151461V0001



P9ARCST

1SFC151465V0001

| Description | Contacts | Type | Order code | Pkg qty | Weight (1 pce) |
|-------------|----------|------|------------|---------|----------------|
|             |          |      |            |         | kg             |

#### Protection cover

Protection cover padlockable for standard pushbuttons, illuminated pushbuttons, selector switches, illuminated selector switches

P9ACRCL

1SFA187840R8000

1

0.039

#### Maintained accessory

Device for standard pushbuttons, illuminated pushbuttons:  
To be used only with contact blocks P9B01VN, P9B01VR, P9B10VA and P9B01FN

P9ACDPP

1SFA187843R8000

1

0.012

#### Tools

Locking ring wrench

P9ACWAF

1SFA187845R8000

1

0.037

#### Adapter ring

Adapter ring for 30 mm hole to mount P9 22 mm in a 30 mm hole

P9ARAM32

1SFA188801R8000

5

0.006

#### Terminal adapter

PCB adapter for faston contacts

P9ACA6

1SFA188804R8000

5

0.051

### Rubber protective caps (IP66) for standard pushbuttons

#### Flush pushbuttons

| Description      |  | Type   | Order code      | Pkg qty | Weight (1 pce) |
|------------------|--|--------|-----------------|---------|----------------|
| nutrillic rubber |  |        |                 |         |                |
|                  |  |        |                 |         | kg             |
| ● Red            |  | 080CPR | 1SFA170191R8000 | 5       | 0.004          |
| ● Green          |  | 080CPV | 1SFA170192R8000 | 5       | 0.004          |
| ● Black          |  | 080CPN | 1SFA170190R8000 | 5       | 0.004          |
| ○ Clear          |  | 080CPT | 1SFA170198R8000 | 5       | 0.004          |

#### Extended pushbuttons

|         |  |         |                 |   |       |
|---------|--|---------|-----------------|---|-------|
| ○ Clear |  | P9ARCST | 1SFA187490R8000 | 5 | 0.004 |
|---------|--|---------|-----------------|---|-------|

## Modular metal range

Metal enclosures with holes and accessories



080SP8



080SP12



080SP18



080SP24

### Enclosure with holes for pilot devices

Empty enclosures in aluminium, IP66. Grey color.

| Description                                       | Hole types | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------------------------------------|------------|------------|-----------------|---------|-------------------|
| <b>With hole for cable gland</b>                  |            |            |                 |         |                   |
| 1-seat                                            | 1          | 080SP1     | 1SFA170801R1001 | 1       | 0.313             |
| 2-seat                                            | 2          | 080SP2     | 1SFA170802R1002 | 1       | 0.440             |
| 3-seat                                            | 3          | 080SP3     | 1SFA170803R1003 | 1       | 0.695             |
| 4-seat                                            | 4          | 080SP4     | 1SFA170804R1004 | 1       | 0.435             |
| 6-seat                                            | 6          | 080SP6     | 1SFA170806R1006 | 1       | 0.694             |
| 8-seat                                            | 8          | 080SP8     | 1SFA170807R1008 | 1       | 0.932             |
| 12-seat                                           | 12         | 080SP12    | 1SFA170808R1012 | 1       | 1.685             |
| 18-seat                                           | 18         | 080SP18    | 1SFA170809R1018 | 1       | 2.891             |
| 24-seat                                           | 24         | 080SP24    | 1SFA170810R1024 | 1       | 2.912             |
| <b>With hole for cable gland and deep base</b>    |            |            |                 |         |                   |
| 1-seat                                            | 1M         | 080SP1M    | 1SFA170831R1001 | 1       | 0.402             |
| 2-seat                                            | 2M         | 080SP2M    | 1SFA170832R1002 | 1       | 0.540             |
| 4-seat                                            | 4M         | 080SP4M    | 1SFA170834R1004 | 1       | 0.530             |
| <b>Without hole for cable gland</b>               |            |            |                 |         |                   |
| 1-seat                                            | 1          | 080SP1SFE  | 1SFA170836R3001 | 1       | 0.335             |
| 2-seat                                            | 2          | 080SP2SFE  | 1SFA170842R3002 | 1       | 0.442             |
| 3-seat                                            | 3          | 080SP3SFE  | 1SFA170848R3003 | 1       | 0.715             |
| 4-seat                                            | 4          | 080SP4SFE  | 1SFA170850R3004 | 1       | 0.453             |
| 6-seat                                            | 6          | 080SP6SFE  | 1SFA170852R3006 | 1       | 0.705             |
| 8-seat                                            | 8          | 080SP8SFE  | 1SFA170854R3008 | 1       | 0.990             |
| 12-seat                                           | 12         | 080SP12SFE | 1SFA170857R3012 | 1       | 1.737             |
| <b>Without hole for cable gland and deep base</b> |            |            |                 |         |                   |
| 1-seat                                            | 1M         | 080SP1MSFE | 1SFA170839R3001 | 1       | 0.416             |

## Modular metal range

### Metal enclosures without holes



1SFCL51642V0001

080SP1SFC



1SFCL51634V0001

080SP3SFC



1SFCL51482V0001

080SP8SF

#### Enclosure without holes for pilot devices

Empty enclosures in aluminium, IP66. Grey color.

| Description                                       | Size type | Type       | Order code      | Pkg qty | Weight (1 pce) kg |
|---------------------------------------------------|-----------|------------|-----------------|---------|-------------------|
| <b>With hole for cable gland</b>                  |           |            |                 |         |                   |
|                                                   | 1         | 080SP1SFC  | 1SFA170835R2000 | 1       | 0.324             |
|                                                   | 2         | 080SP2SFC  | 1SFA170841R2000 | 1       | 0.444             |
|                                                   | 3         | 080SP3SFC  | 1SFA170847R2000 | 1       | 0.708             |
|                                                   | 8         | 080SP8SFC  | 1SFA170853R2000 | 1       | 0.977             |
|                                                   | 12        | 080SP12SFC | 1SFA170856R2000 | 1       | 1.720             |
|                                                   | 18        | 080SP18SFC | 1SFA170859R2000 | 1       | 2.948             |
| <b>With hole for cable gland and deep base</b>    |           |            |                 |         |                   |
|                                                   | 1M        | 080SP1MSFC | 1SFA170838R2000 | 1       | 0.405             |
|                                                   | 2M        | 080SP2MSFC | 1SFA170844R2000 | 1       | 0.542             |
| <b>Without hole for cable gland</b>               |           |            |                 |         |                   |
|                                                   | 1         | 080SP1SF   | 1SFA170837R4000 | 1       | 0.333             |
|                                                   | 2         | 080SP2SF   | 1SFA170843R4000 | 1       | 0.446             |
|                                                   | 3         | 080SP3SF   | 1SFA170849R4000 | 1       | 0.735             |
|                                                   | 8         | 080SP8SF   | 1SFA170855R4000 | 1       | 1.019             |
|                                                   | 12        | 080SP12SF  | 1SFA170858R4000 | 1       | 1.775             |
|                                                   | 18        | 080SP18SF  | 1SFA170861R4000 | 1       | 3.050             |
| <b>Without hole for cable gland and deep base</b> |           |            |                 |         |                   |
|                                                   | 1M        | 080SP1MSF  | 1SFA170840R4000 | 1       | 0.414             |
|                                                   | 2M        | 080SP2MSF  | 1SFA170846R4000 | 1       | 0.553             |

## Modular metal range

### Technical data

#### Standards and approvals

|                    |                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| IEC / EN 60947-1   | Low Voltage switchgear and controlgear - Part 1: General rules                                                                                |
| IEC / EN 60947-5-1 | Low Voltage switchgear and controlgear - part 5-1: control circuit devices and switching elements - Electromechanical control circuit devices |
| IEC / EN 60073     | Basic and safety principles for man-machine interface, marking and identification coding principles for indicators and actuators              |
| IEC / EN 60529     | Degrees of protection provided by enclosures (IP code)                                                                                        |
| UL 508             | Industrial control equipment                                                                                                                  |
| CSA C22.2 No 14    | Industrial control equipment                                                                                                                  |

#### Environmental data

##### Degrees of protection

| Operators                                 | IEC/EN DIN  | UL/CSA                           |
|-------------------------------------------|-------------|----------------------------------|
| Modular metal range: P9M                  | IP66        | Type 1, 3, 3R, 3S, 4, 4X, 12, 13 |
| Contact block: P9B                        | IP2x        | -                                |
| Metallic enclosures: 080SP                | IP66, IP69K | -                                |
| For size 080SP1, 1M, 2, 2M, 3, 4, 4M or 6 | IP66, IP69K | Type 1, 3, 3R, 3S, 4, 4X, 12, 13 |

#### Connecting capacity

|                                                                                     |                                     |                                |
|-------------------------------------------------------------------------------------|-------------------------------------|--------------------------------|
|  | Solid/stranded                      | 1 x 0.75...2.5 mm <sup>2</sup> |
|  |                                     | 2 x 0.75...2.5 mm <sup>2</sup> |
|  | Flexible                            | 1 x 0.75...2.5 mm <sup>2</sup> |
|  |                                     | 2 x 0.75...2.5 mm <sup>2</sup> |
|  | Flexible with non insulated ferrule | 1 x 0.75...2.5 mm <sup>2</sup> |
|  |                                     | 2 x 0.75...2.5 mm <sup>2</sup> |
|  | Flexible with insulated ferrule     | 1 x 0.75...2.5 mm <sup>2</sup> |
|  |                                     | 2 x 0.75...2.5 mm <sup>2</sup> |
|  | Lugs                                | L < 7.0 mm                     |
|                                                                                     |                                     | L > 3.5 mm                     |
| Connection capacity acc. to UL / CSA                                                |                                     | AWG 18...14                    |
| Stripping length                                                                    |                                     | 10 mm                          |

#### Tightening torques

|                                            |                         |
|--------------------------------------------|-------------------------|
| Cable terminals M3.5                       | 0.9 Nm                  |
| Recommended screwdriver for cable terminal | Pozidriv 2              |
| Operators locking nut                      | Min. 2 Nm / Max. 2.3 Nm |

#### Electrical data

P9B Standard contact blocks

Self cleaning silver contacts, NC contact with positive opening.

#### Ratings as per IEC 60947-5-1

|                                                              |           |        |
|--------------------------------------------------------------|-----------|--------|
| Rated insulation voltage, Ui                                 | 690 V     |        |
| Rated thermal current, Ith                                   | 10 A      |        |
| Rated operational current, Ie                                | at: 24 V  | 10 A   |
| Utilization category AC 15,                                  | at: 48 V  | 10 A   |
|                                                              | at: 60 V  | 10 A   |
|                                                              | at: 110 V | 6 A    |
|                                                              | at: 220V  | 3 A    |
|                                                              | at: 380 V | 2 A    |
|                                                              | at: 500 V | 1.5 A  |
|                                                              | at: 600 V | 1.2 A  |
| Rated operational current, Ie<br>utilisation category DC 13, | at: 24 V  | 2.5 A  |
|                                                              | at: 48 V  | 1.4 A  |
|                                                              | at: 60 V  | 1 A    |
|                                                              | at: 110 V | 0.55 A |
|                                                              | at: 220V  | 0.27 A |
|                                                              | at: 300 V | 0.2 A  |
| Rated impulse withstand<br>voltage                           | Uimp      | 4 kV   |
| Rated frequency                                              | 50/60 Hz  |        |

#### Performances according to CSA and UL

|                  |        |
|------------------|--------|
| AC heavy duty    | (A600) |
| DC standard duty | (Q300) |

#### Number of electrical contacts

| Holder                                      | Standard<br>3 positions | Optional<br>5 positions |
|---------------------------------------------|-------------------------|-------------------------|
| Momentary pushbuttons                       |                         |                         |
| Momentary mushroom pushbuttons              | Max 6                   | Max 8                   |
| Standard selector switches                  |                         |                         |
| Key selector switches                       | Max 4                   | Max 8                   |
| Joysticks                                   |                         |                         |
| Selector pushbuttons                        | Max 4                   | –                       |
| Toggle switches                             |                         |                         |
| Maintained mushroom pushbuttons             | Max 4                   | –                       |
| Illuminated pushbuttons                     |                         |                         |
| Illuminated momentary mushroom pushbuttons  | Max 4                   | Max 4                   |
| Illuminated selector switches               |                         |                         |
| Illuminated maintained mushroom pushbuttons | Max 2                   | Max 2                   |

#### Short circuit protection

With fuses 16 A gG acc. to IEC 60269-1 and IEC 60269-3

#### Minimum switching capacity

|                         |         |      |
|-------------------------|---------|------|
| Standard contact blocks | 12 V DC | 5 mA |
|-------------------------|---------|------|

Modular metal range

Technical data

Mechanical endurance

|                               |                      |
|-------------------------------|----------------------|
| Joysticks                     | 500 000 operations   |
| Key pushbuttons               |                      |
| Toggle switches               |                      |
| Illuminated selector switches |                      |
| Maintained accessory          |                      |
| Standard selector switches    | 1 million operations |
| Key selector switches         |                      |
| Illuminated pushbuttons       |                      |
| Selector pushbuttons          |                      |
| Standard pushbuttons          | 3 million operations |
| Mushroom head pushbuttons     |                      |

Performances of the contacts

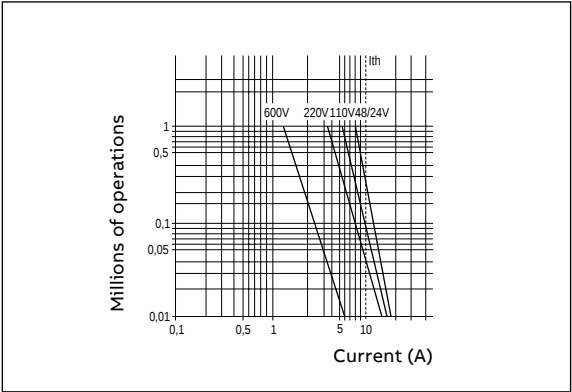
- Slow acting
- Self-cleaning sliding
- NC forced breaking
- Double movable bridge
- Four switching points
- Double break

Identification of the terminals

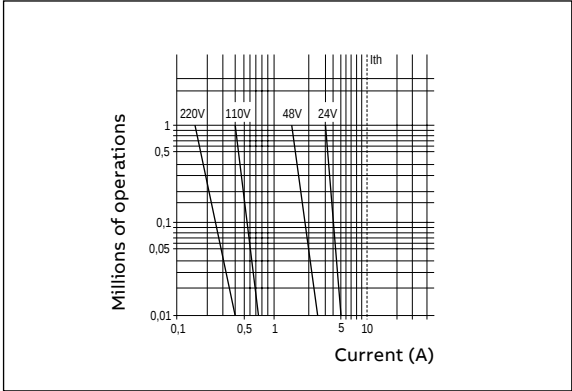
According EN 50013

Electrical endurance

Alternative current 50/60Hz cat. AC 15



Direct current cat. DC 13



Rear panel modularity

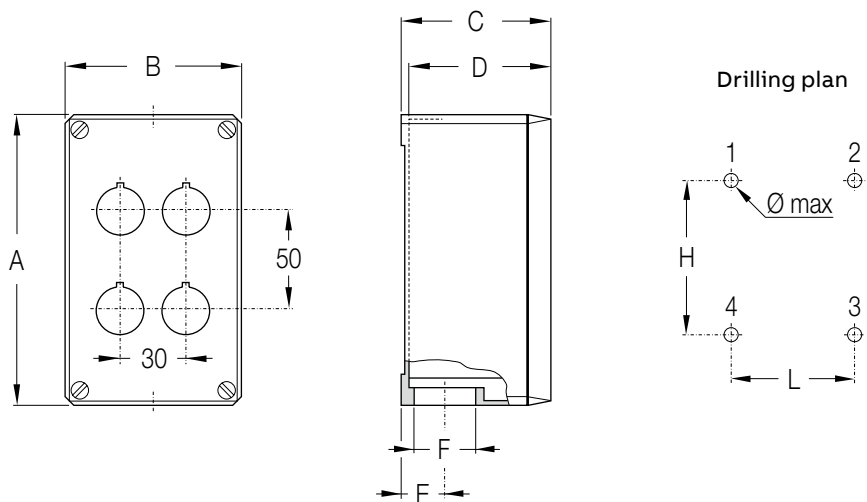
The P9 series is composed with 10 mm or a multiple of 10 mm modular units, fitted side by side on a proper mounting flange.

The standard operators are supplied with a three position flange with a capacity of 3 units of 10 mm or 1 of 10 mm and 1 of 20 mm or 1 of 30 mm.

When the three position flange is not enough to satisfy the applications needs, the five position flange is required to add two more units of 10 mm mounted side by side. Using the five position flange take into account the bigger with (50 mm instead of 30 mm).

## Modular metal range

### Dimension



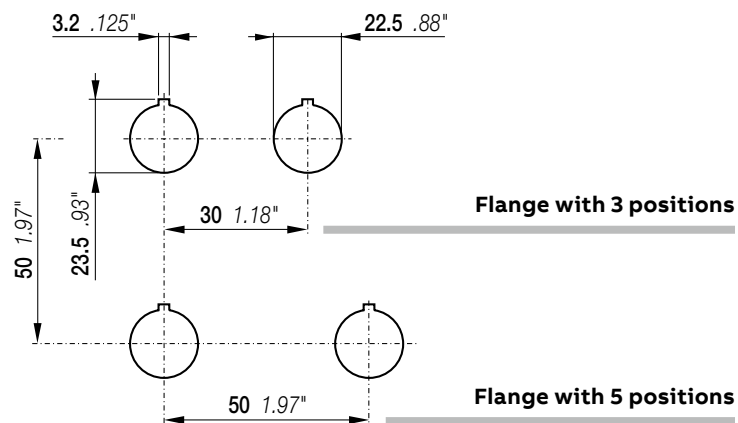
| Size type | Holes Ø 22 |           | Dimensions |       |     |       |       |      |      |      |      |      |       | Drilling plan |                |                       |
|-----------|------------|-----------|------------|-------|-----|-------|-------|------|------|------|------|------|-------|---------------|----------------|-----------------------|
|           | Vertic.    | Horizont. | A          |       | B   |       | C     |      | D    |      | E    |      | F     | H x L x Ø max |                | Position of the holes |
|           |            |           | mm         | in    | mm  | in    | mm    | in   | mm   | in   | mm   | in   |       | mm            | in             |                       |
| 1         | 1          | -         | 87         | 3.43  | 87  | 3.43  | 75    | 2.95 | 72   | 2.83 | 21.5 | 0.85 | PG 21 | 74x55x4       | 2.91x2.17x0.16 | 1-3                   |
| 1M        | 1          | -         | 87         | 3.43  | 87  | 3.43  | 100   | 3.94 | 97   | 3.82 | 21.5 | 0.85 | PG 21 | 68x55x4       | 2.68x2.17x0.16 | 1-3                   |
| 2         | 2          | -         | 145        | 5.71  | 87  | 3.43  | 75    | 2.95 | 72   | 2.83 | 21.5 | 0.85 | PG 21 | 132x55x4      | 5.2x2.17x0.16  | 1-3                   |
| 2M        | 2          | -         | 145        | 5.71  | 87  | 3.43  | 100   | 3.94 | 97   | 3.82 | 21.5 | 0.85 | PG 21 | 126x55x4      | 4.96x2.17x0.16 | 1-3                   |
| 3         | 3          | -         | 195        | 7.68  | 87  | 3.43  | 100   | 3.94 | 97   | 3.82 | 21.5 | 0.85 | PG 21 | 176x55x4      | 6.93x2.17x0.16 | 1-3                   |
| 4         | 2          | 2         | 145        | 5.71  | 87  | 3.43  | 75    | 2.95 | 72   | 2.83 | 21.5 | 0.85 | PG 21 | 132x55x4      | 5.2x2.17x0.16  | 1-3                   |
| 4M        | 2          | 2         | 145        | 5.71  | 87  | 3.43  | 100   | 3.94 | 97   | 3.82 | 21.5 | 0.85 | PG 21 | 126x55x4      | 4.96x2.17x0.16 | 1-3                   |
| 6         | 3          | 2         | 195        | 7.68  | 87  | 3.43  | 100   | 3.94 | 97   | 3.82 | 21.5 | 0.85 | PG 21 | 176x55x4      | 6.93x2.17x0.16 | 1-3                   |
| 8         | 2          | 4         | 152        | 5.98  | 152 | 5.98  | 101.5 | 4    | 98.5 | 3.88 | 27   | 1.06 | PG 29 | 136x119x6     | 5.35x4.69x0.24 | 1-2-3-4               |
| 12        | 3          | 4         | 205        | 8.07  | 230 | 9.06  | 101.5 | 4    | 98.5 | 3.88 | 27   | 1.06 | PG 29 | 172x214x6     | 6.77x8.43x0.24 | 1-2-3-4               |
| 18        | 3          | 6         | 257        | 10.12 | 300 | 11.81 | 101.5 | 4    | 98.5 | 3.88 | 35   | 1.38 | PG 36 | 221x282x6     | 8.7x11.1x0.24  | 1-2-3-4               |
| 24        | 4          | 6         | 257        | 10.12 | 300 | 11.81 | 101.5 | 4    | 98.5 | 3.88 | 35   | 1.38 | PG 36 | 221x282x6     | 8.7x11.1x0.24  | 1-2-3-4               |

## Modular metal range

### Drilling plan

#### Mounting

Fitted for panels 1 to 6 mm thick with holes drilled according to IEC60947-5-1 standard.







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# Pilot devices, 22 mm

## Compact range

### Ordering details

|     |                                            |
|-----|--------------------------------------------|
| 91  | Non-illuminated flush pushbuttons          |
| 93  | Non-illuminated extended pushbuttons       |
| 95  | Illuminated flush pushbuttons              |
| 97  | Illuminated extended pushbuttons           |
| 99  | Non-illuminated mushroom pushbuttons       |
| 100 | Non-illuminated emergency stop pushbuttons |
| 101 | Non-illuminated machine stop pushbuttons   |
| 102 | Heavy duty pushbuttons                     |
| 103 | Pilot lights                               |
| 106 | LED bulbs for CL-100 pilot lights          |
| 107 | Non-illuminated selector switches          |
| 109 | Buzzers                                    |

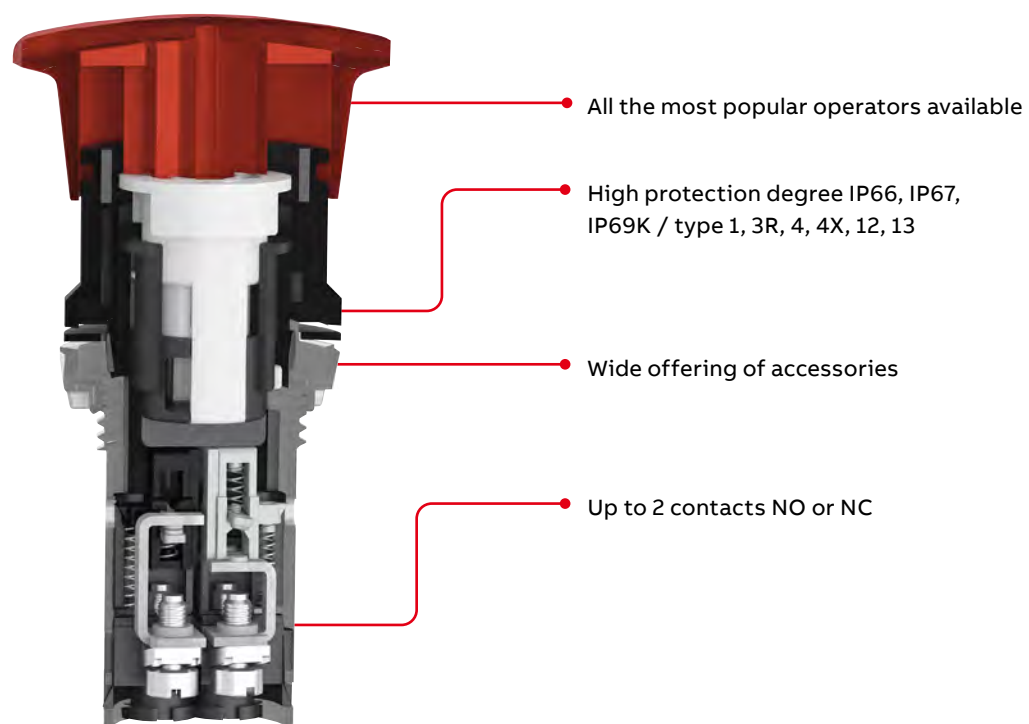
### 110 Accessories

### 112 Technical data

### 118 Drilling plan

## Compact range

The compact range is the most efficient solution reducing both installation time and cost thanks to the all-in-one design. It is perfect for tough environment thanks to the market leading level of dust and water resistance.

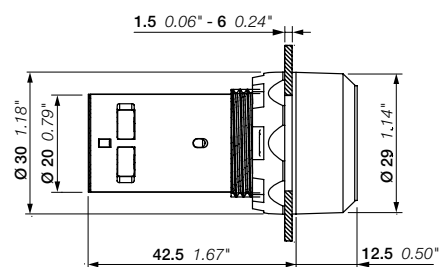


## Compact range

### Non-illuminated flush pushbuttons - Momentary



| Operator | Bezel         | Contacts | Type       | Order code      | Pkg qty | Weight (1 pce) |
|----------|---------------|----------|------------|-----------------|---------|----------------|
|          |               |          |            |                 |         | kg             |
| ● Red    | Black plastic | 1 0      | CP1-10R-10 | 1SFA619100R1011 | 10      | 0.018          |
|          |               | 0 1      | CP1-10R-01 | 1SFA619100R1041 | 10      | 0.018          |
|          |               | 1 1      | CP1-10R-11 | 1SFA619100R1071 | 10      | 0.022          |
|          |               | 2 0      | CP1-10R-20 | 1SFA619100R1021 | 10      | 0.022          |
|          |               | 0 2      | CP1-10R-02 | 1SFA619100R1051 | 10      | 0.022          |
|          |               | 1 0      | CP1-30R-10 | 1SFA619100R3011 | 10      | 0.032          |
|          | Chrome metal  | 0 1      | CP1-30R-01 | 1SFA619100R3041 | 10      | 0.032          |
|          |               | 1 1      | CP1-30R-11 | 1SFA619100R3071 | 10      | 0.036          |
|          |               | 2 0      | CP1-30R-20 | 1SFA619100R3021 | 10      | 0.036          |
|          |               | 0 2      | CP1-30R-02 | 1SFA619100R3051 | 10      | 0.036          |
|          | ● Green       | 1 0      | CP1-10G-10 | 1SFA619100R1012 | 10      | 0.018          |
|          |               | 1 1      | CP1-10G-11 | 1SFA619100R1072 | 10      | 0.022          |
|          |               | 2 0      | CP1-10G-20 | 1SFA619100R1022 | 10      | 0.022          |
|          | Chrome metal  | 1 0      | CP1-30G-10 | 1SFA619100R3012 | 10      | 0.032          |
|          |               | 1 1      | CP1-30G-11 | 1SFA619100R3072 | 10      | 0.036          |
|          |               | 2 0      | CP1-30G-20 | 1SFA619100R3022 | 10      | 0.036          |
| ● Yellow | Black plastic | 1 0      | CP1-10Y-10 | 1SFA619100R1013 | 10      | 0.018          |
|          |               | 1 1      | CP1-10Y-11 | 1SFA619100R1073 | 10      | 0.022          |
|          |               | 2 0      | CP1-10Y-20 | 1SFA619100R1023 | 10      | 0.022          |
|          | Chrome metal  | 1 0      | CP1-30Y-10 | 1SFA619100R3013 | 10      | 0.032          |
|          |               | 1 1      | CP1-30Y-11 | 1SFA619100R3073 | 10      | 0.036          |
|          |               | 2 0      | CP1-30Y-20 | 1SFA619100R3023 | 10      | 0.036          |
| ● Blue   | Black plastic | 1 0      | CP1-10L-10 | 1SFA619100R1014 | 10      | 0.018          |
|          |               | 1 1      | CP1-10L-11 | 1SFA619100R1074 | 10      | 0.022          |
|          |               | 2 0      | CP1-10L-20 | 1SFA619100R1024 | 10      | 0.022          |
|          | Chrome metal  | 1 0      | CP1-30L-10 | 1SFA619100R3014 | 10      | 0.032          |
|          |               | 1 1      | CP1-30L-11 | 1SFA619100R3074 | 10      | 0.036          |
|          |               | 2 0      | CP1-30L-20 | 1SFA619100R3024 | 10      | 0.036          |
| ○ White  | Black plastic | 1 0      | CP1-10W-10 | 1SFA619100R1015 | 10      | 0.018          |
|          |               | 1 1      | CP1-10W-11 | 1SFA619100R1075 | 10      | 0.022          |
|          |               | 2 0      | CP1-10W-20 | 1SFA619100R1025 | 10      | 0.022          |
|          | Chrome metal  | 1 0      | CP1-30W-10 | 1SFA619100R3015 | 10      | 0.032          |
|          |               | 1 1      | CP1-30W-11 | 1SFA619100R3075 | 10      | 0.036          |
|          |               | 2 0      | CP1-30W-20 | 1SFA619100R3025 | 10      | 0.036          |
| ● Black  | Black plastic | 1 0      | CP1-10B-10 | 1SFA619100R1016 | 10      | 0.018          |
|          |               | 0 1      | CP1-10B-01 | 1SFA619100R1046 | 10      | 0.018          |
|          |               | 1 1      | CP1-10B-11 | 1SFA619100R1076 | 10      | 0.022          |
|          |               | 2 0      | CP1-10B-20 | 1SFA619100R1026 | 10      | 0.022          |
|          |               | 0 2      | CP1-10B-02 | 1SFA619100R1056 | 10      | 0.022          |
|          | Chrome metal  | 1 0      | CP1-30B-10 | 1SFA619100R3016 | 10      | 0.032          |
|          |               | 0 1      | CP1-30B-01 | 1SFA619100R3046 | 10      | 0.032          |
|          |               | 1 1      | CP1-30B-11 | 1SFA619100R3076 | 10      | 0.036          |
|          |               | 2 0      | CP1-30B-20 | 1SFA619100R3026 | 10      | 0.036          |
|          |               | 0 2      | CP1-30B-02 | 1SFA619100R3056 | 10      | 0.036          |



CP1

Dimensions (mm, inches)

## Compact range

### Non-illuminated flush pushbuttons - Maintained



CP2-10R-10

1SFC151176V0001



CP2-10G-10

1SFC151178V0001



CP2-10Y-10

1SFC151184V0001



CP2-30L-10

1SFC151183V0001



CP2-10W-10

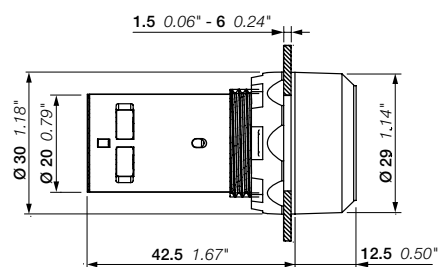
1SFC151174V0001



CP2-30B-10

1SFC151181V0001

| Operator | Bezel         | Contacts                                                                          | Type       | Order code      | Pkg qty | Weight (1 pce) |
|----------|---------------|-----------------------------------------------------------------------------------|------------|-----------------|---------|----------------|
|          |               |  |            |                 |         | kg             |
| ● Red    | Black plastic | 1 0                                                                               | CP2-10R-10 | 1SFA619101R1011 | 10      | 0.018          |
|          |               | 0 1                                                                               | CP2-10R-01 | 1SFA619101R1041 | 10      | 0.018          |
|          |               | 1 1                                                                               | CP2-10R-11 | 1SFA619101R1071 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP2-10R-20 | 1SFA619101R1021 | 10      | 0.022          |
|          |               | 0 2                                                                               | CP2-10R-02 | 1SFA619101R1051 | 10      | 0.022          |
|          | Chrome metal  | 1 0                                                                               | CP2-30R-10 | 1SFA619101R3011 | 10      | 0.032          |
|          |               | 0 1                                                                               | CP2-30R-01 | 1SFA619101R3041 | 10      | 0.032          |
|          |               | 1 1                                                                               | CP2-30R-11 | 1SFA619101R3071 | 10      | 0.036          |
|          |               | 2 0                                                                               | CP2-30R-20 | 1SFA619101R3021 | 10      | 0.036          |
|          |               | 0 2                                                                               | CP2-30R-02 | 1SFA619101R3051 | 10      | 0.036          |
| ● Green  | Black plastic | 1 0                                                                               | CP2-10G-10 | 1SFA619101R1012 | 10      | 0.018          |
|          |               | 1 1                                                                               | CP2-10G-11 | 1SFA619101R1072 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP2-10G-20 | 1SFA619101R1022 | 10      | 0.022          |
|          | Chrome metal  | 1 0                                                                               | CP2-30G-10 | 1SFA619101R3012 | 10      | 0.032          |
|          |               | 1 1                                                                               | CP2-30G-11 | 1SFA619101R3072 | 10      | 0.036          |
|          |               | 2 0                                                                               | CP2-30G-20 | 1SFA619101R3022 | 10      | 0.036          |
| ● Yellow | Black plastic | 1 0                                                                               | CP2-10Y-10 | 1SFA619101R1013 | 10      | 0.018          |
|          |               | 1 1                                                                               | CP2-10Y-11 | 1SFA619101R1073 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP2-10Y-20 | 1SFA619101R1023 | 10      | 0.022          |
|          | Chrome metal  | 1 1                                                                               | CP2-30Y-11 | 1SFA619101R3073 | 10      | 0.036          |
|          |               | 2 0                                                                               | CP2-30Y-20 | 1SFA619101R3023 | 10      | 0.036          |
|          |               |                                                                                   |            |                 |         |                |
| ● Blue   | Black plastic | 1 0                                                                               | CP2-10L-10 | 1SFA619101R1014 | 10      | 0.018          |
|          |               | 1 1                                                                               | CP2-10L-11 | 1SFA619101R1074 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP2-10L-20 | 1SFA619101R1024 | 10      | 0.022          |
|          | Chrome metal  | 1 0                                                                               | CP2-30L-10 | 1SFA619101R3014 | 10      | 0.032          |
|          |               | 2 0                                                                               | CP2-30L-20 | 1SFA619101R3024 | 10      | 0.036          |
|          |               |                                                                                   |            |                 |         |                |
| ○ White  | Black plastic | 1 0                                                                               | CP2-10W-10 | 1SFA619101R1015 | 10      | 0.018          |
|          |               | 1 1                                                                               | CP2-10W-11 | 1SFA619101R1075 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP2-10W-20 | 1SFA619101R1025 | 10      | 0.022          |
|          | Chrome metal  | 1 0                                                                               | CP2-30W-10 | 1SFA619101R3015 | 10      | 0.032          |
|          |               | 2 0                                                                               | CP2-30W-20 | 1SFA619101R3025 | 10      | 0.036          |
|          |               |                                                                                   |            |                 |         |                |
| ● Black  | Black plastic | 1 0                                                                               | CP2-10B-10 | 1SFA619101R1016 | 10      | 0.018          |
|          |               | 0 1                                                                               | CP2-10B-01 | 1SFA619101R1046 | 10      | 0.018          |
|          |               | 1 1                                                                               | CP2-10B-11 | 1SFA619101R1076 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP2-10B-20 | 1SFA619101R1026 | 10      | 0.022          |
|          |               | 0 2                                                                               | CP2-10B-02 | 1SFA619101R1056 | 10      | 0.022          |
|          | Chrome metal  | 1 0                                                                               | CP2-30B-10 | 1SFA619101R3016 | 10      | 0.032          |
|          |               | 0 1                                                                               | CP2-30B-01 | 1SFA619101R3046 | 10      | 0.032          |
|          |               | 1 1                                                                               | CP2-30B-11 | 1SFA619101R3076 | 10      | 0.036          |
|          |               | 2 0                                                                               | CP2-30B-20 | 1SFA619101R3026 | 10      | 0.036          |
|          |               |                                                                                   |            |                 |         |                |



CP2

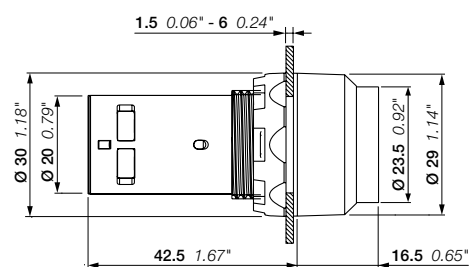
Dimensions (mm, inches)

## Compact range

### Non-illuminated extended pushbuttons - Momentary



| Operator | Bezel         | Contacts                                                                          | Type       | Order code      | Pkg qty | Weight (1 pce) |
|----------|---------------|-----------------------------------------------------------------------------------|------------|-----------------|---------|----------------|
|          |               |  |            |                 |         | kg             |
| ● Red    | Black plastic | 1 0                                                                               | CP3-10R-10 | 1SFA619102R1011 | 10      | 0.019          |
|          |               | 0 1                                                                               | CP3-10R-01 | 1SFA619102R1041 | 10      | 0.019          |
|          |               | 1 1                                                                               | CP3-10R-11 | 1SFA619102R1071 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP3-10R-20 | 1SFA619102R1021 | 10      | 0.022          |
|          |               | 0 2                                                                               | CP3-10R-02 | 1SFA619102R1051 | 10      | 0.022          |
|          | Chrome metal  | 0 1                                                                               | CP3-30R-01 | 1SFA619102R3041 | 10      | 0.033          |
|          |               | 1 1                                                                               | CP3-30R-11 | 1SFA619102R3071 | 10      | 0.036          |
|          |               | 2 0                                                                               | CP3-30R-20 | 1SFA619102R3021 | 10      | 0.036          |
| ● Green  | Black plastic | 1 0                                                                               | CP3-10G-10 | 1SFA619102R1012 | 10      | 0.019          |
|          |               | 1 1                                                                               | CP3-10G-11 | 1SFA619102R1072 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP3-10G-20 | 1SFA619102R1022 | 10      | 0.022          |
|          | Chrome metal  | 1 0                                                                               | CP3-30G-10 | 1SFA619102R3012 | 10      | 0.033          |
|          |               | 1 1                                                                               | CP3-30G-11 | 1SFA619102R3072 | 10      | 0.036          |
|          |               | 2 0                                                                               | CP3-30G-20 | 1SFA619102R3022 | 10      | 0.036          |
| ● Yellow | Black plastic | 1 0                                                                               | CP3-10Y-10 | 1SFA619102R1013 | 10      | 0.019          |
|          |               | 1 1                                                                               | CP3-10Y-11 | 1SFA619102R1073 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP3-10Y-20 | 1SFA619102R1023 | 10      | 0.022          |
|          | Chrome metal  | 2 0                                                                               | CP3-30Y-20 | 1SFA619102R3023 | 10      | 0.036          |
| ● Blue   | Black plastic | 1 0                                                                               | CP3-10L-10 | 1SFA619102R1014 | 10      | 0.019          |
|          |               | 1 1                                                                               | CP3-10L-11 | 1SFA619102R1074 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP3-10L-20 | 1SFA619102R1024 | 10      | 0.022          |
|          | Chrome metal  | 2 0                                                                               | CP3-30L-20 | 1SFA619102R3024 | 10      | 0.036          |
| ○ White  | Black plastic | 1 0                                                                               | CP3-10W-10 | 1SFA619102R1015 | 10      | 0.019          |
|          |               | 1 1                                                                               | CP3-10W-11 | 1SFA619102R1075 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP3-10W-20 | 1SFA619102R1025 | 10      | 0.022          |
|          | Chrome metal  | 1 0                                                                               | CP3-30W-10 | 1SFA619102R3015 | 10      | 0.033          |
|          |               | 1 1                                                                               | CP3-30W-11 | 1SFA619102R3075 | 10      | 0.036          |
|          |               | 2 0                                                                               | CP3-30W-20 | 1SFA619102R3025 | 10      | 0.036          |
| ● Black  | Black plastic | 1 0                                                                               | CP3-10B-10 | 1SFA619102R1016 | 10      | 0.019          |
|          |               | 0 1                                                                               | CP3-10B-01 | 1SFA619102R1046 | 10      | 0.019          |
|          |               | 1 1                                                                               | CP3-10B-11 | 1SFA619102R1076 | 10      | 0.022          |
|          |               | 2 0                                                                               | CP3-10B-20 | 1SFA619102R1026 | 10      | 0.022          |
|          |               | 0 2                                                                               | CP3-10B-02 | 1SFA619102R1056 | 10      | 0.022          |
|          | Chrome metal  | 1 0                                                                               | CP3-30B-10 | 1SFA619102R3016 | 10      | 0.033          |
|          |               | 0 1                                                                               | CP3-30B-01 | 1SFA619102R3046 | 10      | 0.033          |
|          |               | 1 1                                                                               | CP3-30B-11 | 1SFA619102R3076 | 10      | 0.036          |
|          |               | 2 0                                                                               | CP3-30B-20 | 1SFA619102R3026 | 10      | 0.036          |



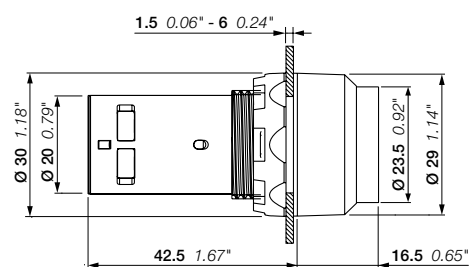
Dimensions (mm, inches)

## Compact range

Non-illuminated extended pushbuttons - Maintained



| Operator | Bezel         | Contacts | Type       | Order code      | Pkg qty | Weight (1 pce) |
|----------|---------------|----------|------------|-----------------|---------|----------------|
|          |               |          |            |                 |         | kg             |
| ● Red    | Black plastic | 1 0      | CP4-10R-10 | 1SFA619103R1011 | 10      | 0.019          |
|          |               | 0 1      | CP4-10R-01 | 1SFA619103R1041 | 10      | 0.019          |
|          |               | 1 1      | CP4-10R-11 | 1SFA619103R1071 | 10      | 0.022          |
|          |               | 2 0      | CP4-10R-20 | 1SFA619103R1021 | 10      | 0.022          |
|          |               | 0 2      | CP4-10R-02 | 1SFA619103R1051 | 10      | 0.022          |
| ● Green  | Chrome metal  | 1 1      | CP4-30R-11 | 1SFA619103R3071 | 10      | 0.036          |
|          | Black plastic | 1 0      | CP4-10G-10 | 1SFA619103R1012 | 10      | 0.019          |
|          |               | 1 1      | CP4-10G-11 | 1SFA619103R1072 | 10      | 0.022          |
|          |               | 2 0      | CP4-10G-20 | 1SFA619103R1022 | 10      | 0.022          |
|          | Chrome metal  | 1 0      | CP4-30G-10 | 1SFA619103R3012 | 10      | 0.033          |
| ● Yellow | Black plastic | 2 0      | CP4-30G-20 | 1SFA619103R3022 | 10      | 0.036          |
|          |               | 1 0      | CP4-10Y-10 | 1SFA619103R1013 | 10      | 0.019          |
| ● Blue   | Black plastic | 1 1      | CP4-10Y-11 | 1SFA619103R1073 | 10      | 0.022          |
|          |               | 1 0      | CP4-10L-10 | 1SFA619103R1014 | 10      | 0.019          |
| ○ White  | Black plastic | 1 1      | CP4-10L-11 | 1SFA619103R1074 | 10      | 0.022          |
|          |               | 1 0      | CP4-10W-10 | 1SFA619103R1015 | 10      | 0.019          |
| ● Black  | Black plastic | 1 1      | CP4-10W-11 | 1SFA619103R1075 | 10      | 0.022          |
|          |               | 1 0      | CP4-10B-10 | 1SFA619103R1016 | 10      | 0.019          |
|          |               | 1 1      | CP4-10B-11 | 1SFA619103R1076 | 10      | 0.022          |
|          |               | 2 0      | CP4-10B-20 | 1SFA619103R1026 | 10      | 0.022          |
|          |               | 0 2      | CP4-10B-02 | 1SFA619103R1056 | 10      | 0.022          |



CP4

Dimensions (mm, inches)

## Compact range

### Illuminated flush pushbuttons - Momentary



CP1-11R-10

1SFC15151V0001



CP1-11G-10

1SFC151188V0001



CP1-31Y-10

1SFC151189V0001



CP1-11L-10

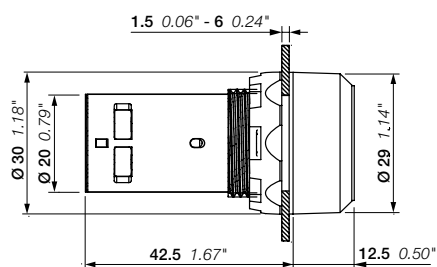
1SFC151149V0001



CP1-31C-10

1SFC151179V0001

| Operator                                 | Bezel         | Contacts | Type       | Order code      | Pkg qty | Weight (1 pce) |
|------------------------------------------|---------------|----------|------------|-----------------|---------|----------------|
|                                          |               |          |            |                 |         | kg             |
| <b>Rated voltage 24 V AC / DC</b>        |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP1-11R-10 | 1SFA619100R1111 | 10      | 0.025          |
|                                          |               | 0 1      | CP1-11R-01 | 1SFA619100R1141 | 10      | 0.025          |
|                                          | Chrome metal  | 1 0      | CP1-31R-10 | 1SFA619100R3111 | 10      | 0.039          |
|                                          |               | 0 1      | CP1-31R-01 | 1SFA619100R3141 | 10      | 0.039          |
| ● Green                                  | Black plastic | 1 0      | CP1-11G-10 | 1SFA619100R1112 | 10      | 0.025          |
|                                          | Chrome metal  | 1 0      | CP1-31G-10 | 1SFA619100R3112 | 10      | 0.039          |
| ● Yellow                                 | Black plastic | 1 0      | CP1-11Y-10 | 1SFA619100R1113 | 10      | 0.025          |
|                                          | Chrome metal  | 1 0      | CP1-31Y-10 | 1SFA619100R3113 | 10      | 0.039          |
| ● Blue                                   | Black plastic | 1 0      | CP1-11L-10 | 1SFA619100R1114 | 10      | 0.025          |
|                                          | Chrome metal  | 1 0      | CP1-31L-10 | 1SFA619100R3114 | 10      | 0.039          |
|                                          |               | 0 1      | CP1-31L-01 | 1SFA619100R3144 | 10      | 0.039          |
| ○ Clear                                  | Black plastic | 1 0      | CP1-11C-10 | 1SFA619100R1118 | 10      | 0.025          |
|                                          | Chrome metal  | 1 0      | CP1-31C-10 | 1SFA619100R3118 | 10      | 0.039          |
| <b>Rated voltage 110...130 V AC / DC</b> |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP1-12R-10 | 1SFA619100R1211 | 10      | 0.025          |
|                                          |               | 0 1      | CP1-12R-01 | 1SFA619100R1241 | 10      | 0.025          |
| ● Green                                  | Black plastic | 1 0      | CP1-12G-10 | 1SFA619100R1212 | 10      | 0.025          |
| ● Yellow                                 | Black plastic | 1 0      | CP1-12Y-10 | 1SFA619100R1213 | 10      | 0.025          |
| ● Blue                                   | Black plastic | 1 0      | CP1-12L-10 | 1SFA619100R1214 | 10      | 0.025          |
| ○ Clear                                  | Black plastic | 1 0      | CP1-12C-10 | 1SFA619100R1218 | 10      | 0.025          |
| <b>Rated voltage 220 V AC / DC</b>       |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP1-13R-10 | 1SFA619100R1311 | 10      | 0.025          |
|                                          |               | 0 1      | CP1-13R-01 | 1SFA619100R1341 | 10      | 0.025          |
| ● Green                                  | Black plastic | 1 0      | CP1-13G-10 | 1SFA619100R1312 | 10      | 0.025          |
| ● Yellow                                 | Black plastic | 1 0      | CP1-13Y-10 | 1SFA619100R1313 | 10      | 0.025          |
| ● Blue                                   | Black plastic | 1 0      | CP1-13L-10 | 1SFA619100R1314 | 10      | 0.025          |
| ○ Clear                                  | Black plastic | 1 0      | CP1-13C-10 | 1SFA619100R1318 | 10      | 0.025          |



CP1

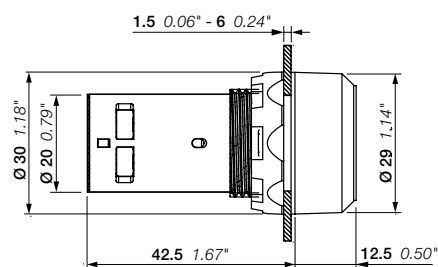
Dimensions (mm, inches)

## Compact range

### Illuminated flush pushbuttons - Maintained



| Operator                                 | Bezel         | Contacts | Type       | Order code      | Pkg qty | Weight (1 pce) |
|------------------------------------------|---------------|----------|------------|-----------------|---------|----------------|
|                                          |               |          |            |                 |         | kg             |
| <b>Rated voltage 24 V AC / DC</b>        |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP2-11R-10 | 1SFA619101R1111 | 10      | 0.025          |
|                                          |               | 0 1      | CP2-11R-01 | 1SFA619101R1141 | 10      | 0.025          |
| ● Green                                  | Black plastic | 1 0      | CP2-11G-10 | 1SFA619101R1112 | 10      | 0.025          |
| ● Yellow                                 | Black plastic | 1 0      | CP2-11Y-10 | 1SFA619101R1113 | 10      | 0.025          |
| ● Blue                                   | Black plastic | 1 0      | CP2-11L-10 | 1SFA619101R1114 | 10      | 0.025          |
| ○ Clear                                  | Black plastic | 1 0      | CP2-11C-10 | 1SFA619101R1118 | 10      | 0.025          |
| <b>Rated voltage 110...130 V AC / DC</b> |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP2-12R-10 | 1SFA619101R1211 | 10      | 0.025          |
|                                          |               | 0 1      | CP2-12R-01 | 1SFA619101R1241 | 10      | 0.025          |
| ● Green                                  | Black plastic | 1 0      | CP2-12G-10 | 1SFA619101R1212 | 10      | 0.025          |
| ● Yellow                                 | Black plastic | 1 0      | CP2-12Y-10 | 1SFA619101R1213 | 10      | 0.025          |
| ● Blue                                   | Black plastic | 1 0      | CP2-12L-10 | 1SFA619101R1214 | 10      | 0.025          |
| ○ Clear                                  | Black plastic | 1 0      | CP2-12C-10 | 1SFA619101R1218 | 10      | 0.025          |
| <b>Rated voltage 220 V AC / DC</b>       |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP2-13R-10 | 1SFA619101R1311 | 10      | 0.025          |
|                                          |               | 0 1      | CP2-13R-01 | 1SFA619101R1341 | 10      | 0.025          |
| ● Green                                  | Black plastic | 1 0      | CP2-13G-10 | 1SFA619101R1312 | 10      | 0.025          |
| ● Yellow                                 | Black plastic | 1 0      | CP2-13Y-10 | 1SFA619101R1313 | 10      | 0.025          |
| ● Blue                                   | Black plastic | 1 0      | CP2-13L-10 | 1SFA619101R1314 | 10      | 0.025          |
| ○ Clear                                  | Black plastic | 1 0      | CP2-13C-10 | 1SFA619101R1318 | 10      | 0.025          |



CP1

Dimensions (mm, inches)

## Compact range

### Illuminated extended pushbuttons - Momentary



CP3-11R-10

1SFC151210V0001



CP3-11G-10

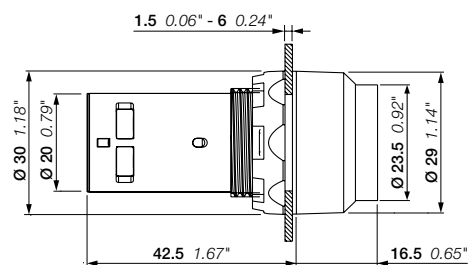
1SFC151213V0001



CP3-11Y-10

1SFC151208V0001

| Operator                                 | Bezel         | Contacts | Type       | Order code      | Pkg qty | Weight (1 pce) |
|------------------------------------------|---------------|----------|------------|-----------------|---------|----------------|
|                                          |               |          |            |                 |         | kg             |
| <b>Rated voltage 24 V AC / DC</b>        |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP3-11R-10 | 1SFA619102R1111 | 10      | 0.025          |
|                                          |               | 0 1      | CP3-11R-01 | 1SFA619102R1141 | 10      | 0.025          |
| ● Green                                  | Black plastic | 1 0      | CP3-11G-10 | 1SFA619102R1112 | 10      | 0.025          |
| ● Yellow                                 | Black plastic | 1 0      | CP3-11Y-10 | 1SFA619102R1113 | 10      | 0.025          |
| ● Blue                                   | Black plastic | 1 0      | CP3-11L-10 | 1SFA619102R1114 | 10      | 0.025          |
| ○ Clear                                  | Black plastic | 1 0      | CP3-11C-10 | 1SFA619102R1118 | 10      | 0.025          |
| <b>Rated voltage 110...130 V AC / DC</b> |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP3-12R-10 | 1SFA619102R1211 | 10      | 0.025          |
|                                          |               | 0 1      | CP3-12R-01 | 1SFA619102R1241 | 10      | 0.025          |
| ● Green                                  | Black plastic | 1 0      | CP3-12G-10 | 1SFA619102R1212 | 10      | 0.025          |
| ● Yellow                                 | Black plastic | 1 0      | CP3-12Y-10 | 1SFA619102R1213 | 10      | 0.025          |
| ● Blue                                   | Black plastic | 1 0      | CP3-12L-10 | 1SFA619102R1214 | 10      | 0.025          |
| ○ Clear                                  | Black plastic | 1 0      | CP3-12C-10 | 1SFA619102R1218 | 10      | 0.025          |
| <b>Rated voltage 220 V AC / DC</b>       |               |          |            |                 |         |                |
| ● Red                                    | Black plastic | 1 0      | CP3-13R-10 | 1SFA619102R1311 | 10      | 0.025          |
|                                          |               | 0 1      | CP3-13R-01 | 1SFA619102R1341 | 10      | 0.025          |
| ● Green                                  | Black plastic | 1 0      | CP3-13G-10 | 1SFA619102R1312 | 10      | 0.025          |
| ● Yellow                                 | Black plastic | 1 0      | CP3-13Y-10 | 1SFA619102R1313 | 10      | 0.025          |
| ● Blue                                   | Black plastic | 1 0      | CP3-13L-10 | 1SFA619102R1314 | 10      | 0.025          |
| ○ Clear                                  | Black plastic | 1 0      | CP3-13C-10 | 1SFA619102R1318 | 10      | 0.025          |



CP3

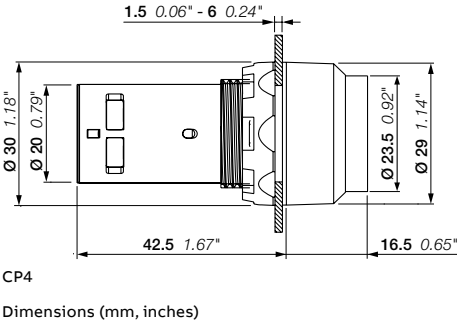
Dimensions (mm, inches)

Compact range

Illuminated extended pushbuttons - Maintained



| Operator                          | Bezel         | Contacts | Type       | Order code      | Pkg qty | Weight (1 pce) |
|-----------------------------------|---------------|----------|------------|-----------------|---------|----------------|
|                                   |               |          |            |                 |         | kg             |
| Rated voltage 24 V AC / DC        |               |          |            |                 |         |                |
| ● Red                             | Black plastic | 1 0      | CP4-11R-10 | 1SFA619103R1111 | 10      | 0.025          |
|                                   |               | 0 1      | CP4-11R-01 | 1SFA619103R1141 | 10      | 0.025          |
| ● Green                           | Black plastic | 1 0      | CP4-11G-10 | 1SFA619103R1112 | 10      | 0.025          |
| ● Yellow                          | Black plastic | 1 0      | CP4-11Y-10 | 1SFA619103R1113 | 10      | 0.025          |
| ● Blue                            | Black plastic | 1 0      | CP4-11L-10 | 1SFA619103R1114 | 10      | 0.025          |
| ○ Clear                           | Black plastic | 1 0      | CP4-11C-10 | 1SFA619103R1118 | 10      | 0.025          |
| Rated voltage 110...130 V AC / DC |               |          |            |                 |         |                |
| ● Red                             | Black plastic | 1 0      | CP4-12R-10 | 1SFA619103R1211 | 10      | 0.025          |
|                                   |               | 0 1      | CP4-12R-01 | 1SFA619103R1241 | 10      | 0.025          |
| ● Green                           | Black plastic | 1 0      | CP4-12G-10 | 1SFA619103R1212 | 10      | 0.025          |
| ● Yellow                          | Black plastic | 1 0      | CP4-12Y-10 | 1SFA619103R1213 | 10      | 0.025          |
| ● Blue                            | Black plastic | 1 0      | CP4-12L-10 | 1SFA619103R1214 | 10      | 0.025          |
| ○ Clear                           | Black plastic | 1 0      | CP4-12C-10 | 1SFA619103R1218 | 10      | 0.025          |
| Rated voltage 230 V AC / DC       |               |          |            |                 |         |                |
| ● Red                             | Black plastic | 1 0      | CP4-13R-10 | 1SFA619103R1311 | 10      | 0.025          |
|                                   |               | 0 1      | CP4-13R-01 | 1SFA619103R1341 | 10      | 0.025          |
| ● Green                           | Black plastic | 1 0      | CP4-13G-10 | 1SFA619103R1312 | 10      | 0.025          |
| ● Yellow                          | Black plastic | 1 0      | CP4-13Y-10 | 1SFA619103R1313 | 10      | 0.025          |
| ● Blue                            | Black plastic | 1 0      | CP4-13L-10 | 1SFA619103R1314 | 10      | 0.025          |
| ○ Clear                           | Black plastic | 1 0      | CP4-13C-10 | 1SFA619103R1318 | 10      | 0.025          |



Compact range

Non-illuminated mushroom pushbuttons - Momentary



CPM3-10R-11

1SFCL51258V0001



CPM3-10G-11

1SFCL51357V0001



CPM3-10Y-11

1SFCL51259V0001



CPM3-10L-11

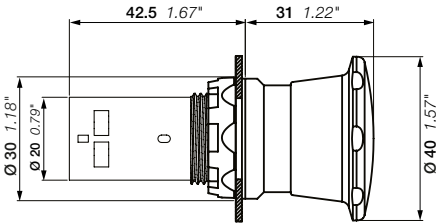
1SFCL51260V0001



CPM3-10B-11

1SFCL51358V0001

| Operator | Contacts | Type        | Order code      | Pkg qty | Weight (1 pce) |
|----------|----------|-------------|-----------------|---------|----------------|
|          |          |             |                 |         | kg             |
| Ø 40 mm  |          |             |                 |         |                |
| ● Red    | 1 1      | CPM3-10R-11 | 1SFA619126R1071 | 1       | 0.036          |
| ● Green  | 1 1      | CPM3-10G-11 | 1SFA619126R1072 | 1       | 0.036          |
| ● Yellow | 1 1      | CPM3-10Y-11 | 1SFA619126R1073 | 1       | 0.036          |
| ● Blue   | 1 1      | CPM3-10L-11 | 1SFA619126R1074 | 1       | 0.036          |
| ● Black  | 1 1      | CPM3-10B-11 | 1SFA619126R1076 | 1       | 0.036          |



CPM3  
Dimensions (mm, inches)

Compact range

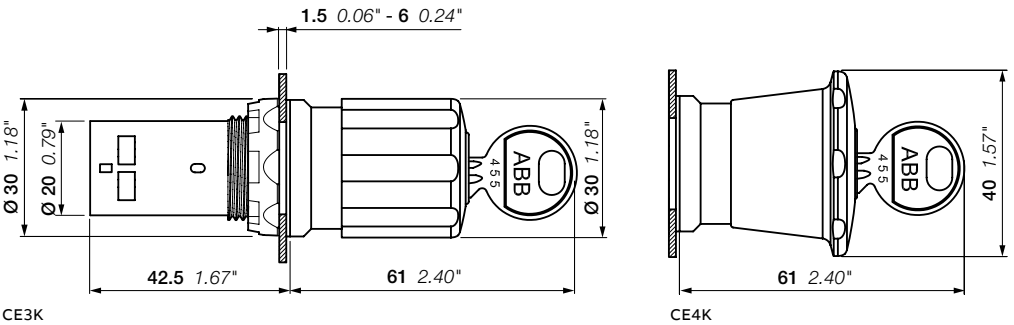
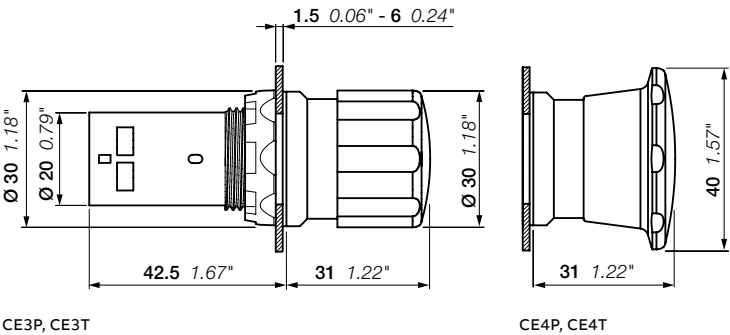
Non-illuminated emergency stop pushbuttons



Description

The emergency stop pushbuttons conform to the standard EN/IEC 60947-5-5, Safety of machinery standard EN/ISO 13850, IEC 60204-1 and to Machinery directive 2006/42/EC.

| Operator | Release method | Contacts | Type         | Order code      | Pkg qty | Weight (1 pce) |
|----------|----------------|----------|--------------|-----------------|---------|----------------|
|          |                |          |              |                 |         | kg             |
| Ø 30 mm  |                |          |              |                 |         |                |
| ● Red    | Twist release  | 0 1      | CE3T-10R-01  | 1SFA619500R1041 | 1       | 0.032          |
|          |                | 1 1      | CE3T-10R-11  | 1SFA619500R1071 | 1       | 0.032          |
|          |                | 0 2      | CE3T-10R-02  | 1SFA619500R1051 | 1       | 0.032          |
| ● Red    | Pull release   | 0 1      | CE3P-10R-01  | 1SFA619501R1041 | 1       | 0.032          |
|          |                | 1 1      | CE3P-10R-11  | 1SFA619501R1071 | 1       | 0.032          |
|          |                | 0 2      | CE3P-10R-02  | 1SFA619501R1051 | 1       | 0.032          |
| ● Red    | Key code 455   | 0 1      | CE3K1-10R-01 | 1SFA619502R1041 | 1       | 0.060          |
|          |                | 1 1      | CE3K1-10R-11 | 1SFA619502R1071 | 1       | 0.060          |
|          |                | 0 2      | CE3K1-10R-02 | 1SFA619502R1051 | 1       | 0.060          |
| Ø 40 mm  |                |          |              |                 |         |                |
| ● Red    | Twist release  | 0 1      | CE4T-10R-01  | 1SFA619550R1041 | 1       | 0.036          |
|          |                | 1 1      | CE4T-10R-11  | 1SFA619550R1071 | 1       | 0.036          |
|          |                | 0 2      | CE4T-10R-02  | 1SFA619550R1051 | 1       | 0.036          |
| ● Red    | Pull release   | 0 1      | CE4P-10R-01  | 1SFA619551R1041 | 1       | 0.036          |
|          |                | 1 1      | CE4P-10R-11  | 1SFA619551R1071 | 1       | 0.036          |
|          |                | 0 2      | CE4P-10R-02  | 1SFA619551R1051 | 1       | 0.036          |
| ● Red    | Key code 455   | 0 1      | CE4K1-10R-01 | 1SFA619552R1041 | 1       | 0.064          |
|          |                | 1 1      | CE4K1-10R-11 | 1SFA619552R1071 | 1       | 0.064          |
|          |                | 0 2      | CE4K1-10R-02 | 1SFA619552R1051 | 1       | 0.064          |



Dimensions (mm, inches)

## Compact range

### Non-illuminated machine stop pushbuttons



CE3T-10B-11

1SFC151167V0001



CE3P-10B-11

1SFC151168V0001



CE4T-10B-11

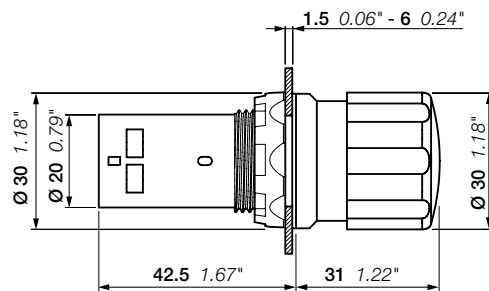
1SFC151170V0001



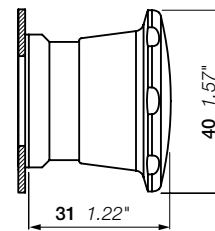
CE4P-10B-11

1SFC151171V0001

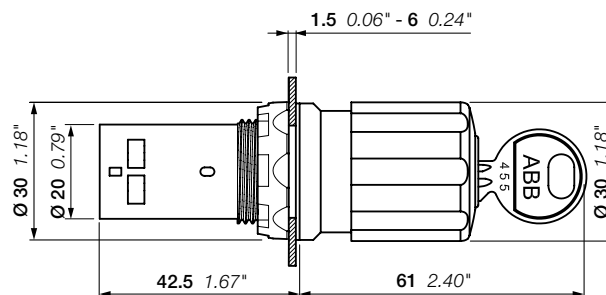
| Operator | Release method | Contacts | Type         | Order code      | Pkg<br>qty | Weight<br>(1 pce) |
|----------|----------------|----------|--------------|-----------------|------------|-------------------|
|          |                |          |              |                 |            | kg                |
| Ø 30 mm  |                |          |              |                 |            |                   |
| ● Black  | Twist release  | 0 1      | CE3T-10B-01  | 1SFA619500R1046 | 1          | 0.032             |
|          |                | 1 1      | CE3T-10B-11  | 1SFA619500R1076 | 1          | 0.032             |
| ● Black  | Pull release   | 1 1      | CE3P-10B-11  | 1SFA619501R1076 | 1          | 0.032             |
| ● Black  | Key code 455   | 1 1      | CE3K1-10B-11 | 1SFA619502R1076 | 1          | 0.060             |
| Ø 40 mm  |                |          |              |                 |            |                   |
| ● Black  | Twist release  | 1 0      | CE4T-10B-10  | 1SFA619550R1016 | 1          | 0.032             |
|          |                | 0 1      | CE4T-10B-01  | 1SFA619550R1046 | 1          | 0.032             |
|          |                | 1 1      | CE4T-10B-11  | 1SFA619550R1076 | 1          | 0.032             |
|          |                | 2 0      | CE4T-10B-20  | 1SFA619550R1026 | 1          | 0.032             |
|          |                | 0 2      | CE4T-10B-02  | 1SFA619550R1056 | 1          | 0.032             |
| ● Black  | Pull release   | 1 1      | CE4P-10B-11  | 1SFA619551R1076 | 1          | 0.032             |
| ● Black  | Key code 455   | 1 1      | CE4K1-10B-11 | 1SFA619552R1076 | 1          | 0.064             |



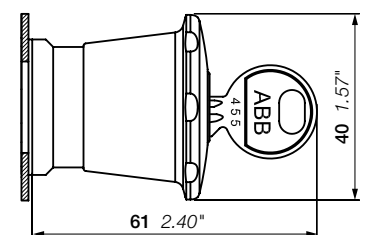
CE3P, CE3T



CE4P, CE4T



CE3K



CE4K

Dimensions (mm, inches)

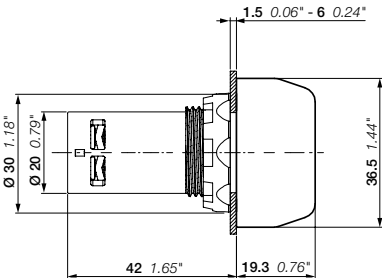
Compact range

Heavy duty pushbuttons



Description  
Silicone rubber cap.

| Color   | Contacts | Type       | Order code      | Pkg qty | Weight (1 pce) |
|---------|----------|------------|-----------------|---------|----------------|
|         |          |            |                 |         | kg             |
| ● Red   | 1 1      | CP6-10R-11 | 1SFA619105R1071 | 10      | 0.031          |
|         | 2 0      | CP6-10R-20 | 1SFA619105R1021 | 10      | 0.031          |
|         | 0 2      | CP6-10R-02 | 1SFA619105R1051 | 10      | 0.031          |
| ● Green | 1 1      | CP6-10G-11 | 1SFA619105R1072 | 10      | 0.031          |
|         | 2 0      | CP6-10G-20 | 1SFA619105R1022 | 10      | 0.031          |
| ● Black | 1 1      | CP6-10B-11 | 1SFA619105R1076 | 10      | 0.031          |
|         | 2 0      | CP6-10B-20 | 1SFA619105R1026 | 10      | 0.031          |
|         | 0 2      | CP6-10B-02 | 1SFA619105R1056 | 10      | 0.031          |



CP6

Dimensions (mm, inches)

## Compact range

### Pilot lights



CL2-502R

1SFC151338V0001



CL2-506G

1SFC151339V0001



CL2-508Y

1SFC151340V0001



CL2-506L

1SFC151341V0001



CL2-506C

1SFC151342V0001

#### Description

Integrated LED, no bulb needed.

| Color | Rated current<br>mA | Anti-in-<br>ductive<br>voltage<br>Vpeak | Wave-<br>length<br>nm | Illumi-<br>nation<br>lx | Type | Order code | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|-------|---------------------|-----------------------------------------|-----------------------|-------------------------|------|------------|------------|-------------------------|
|-------|---------------------|-----------------------------------------|-----------------------|-------------------------|------|------------|------------|-------------------------|

#### Voltage 6.3 V

|          |    |   |     |     |          |                 |    |       |
|----------|----|---|-----|-----|----------|-----------------|----|-------|
| ● Red    | 16 | 2 | 625 | 70  | CL2-506R | 1SFA619403R5061 | 10 | 0.016 |
| ● Green  | 16 | 2 | 520 | 125 | CL2-506G | 1SFA619403R5062 | 10 | 0.016 |
| ● Yellow | 16 | 2 | 590 | 75  | CL2-506Y | 1SFA619403R5063 | 10 | 0.016 |
| ● Blue   | 16 | 2 | 470 | 10  | CL2-506L | 1SFA619403R5064 | 10 | 0.016 |
| ○ Clear  | 16 | 2 | (1) | 290 | CL2-506C | 1SFA619403R5068 | 10 | 0.016 |

#### Voltage 12 V DC

|          |    |     |     |     |          |                 |    |       |
|----------|----|-----|-----|-----|----------|-----------------|----|-------|
| ● Red    | 16 | 2   | 625 | 110 | CL2-501R | 1SFA619403R5011 | 10 | 0.016 |
| ● Green  | 16 | 2.5 | 520 | 165 | CL2-501G | 1SFA619403R5012 | 10 | 0.016 |
| ● Yellow | 16 | 2.5 | 590 | 85  | CL2-501Y | 1SFA619403R5013 | 10 | 0.016 |
| ● Blue   | 16 | 2.5 | 470 | 15  | CL2-501L | 1SFA619403R5014 | 10 | 0.016 |
| ○ Clear  | 16 | 2.5 | (1) | 320 | CL2-501C | 1SFA619403R5018 | 10 | 0.016 |

#### Voltage 24 V AC / DC

|          |    |   |     |     |          |                 |    |       |
|----------|----|---|-----|-----|----------|-----------------|----|-------|
| ● Red    | 16 | 6 | 625 | 80  | CL2-502R | 1SFA619403R5021 | 10 | 0.016 |
| ● Green  | 16 | 6 | 520 | 135 | CL2-502G | 1SFA619403R5022 | 10 | 0.016 |
| ● Yellow | 16 | 6 | 590 | 55  | CL2-502Y | 1SFA619403R5023 | 10 | 0.016 |
| ● Blue   | 16 | 6 | 470 | 10  | CL2-502L | 1SFA619403R5024 | 10 | 0.016 |
| ○ Clear  | 16 | 6 | (1) | 230 | CL2-502C | 1SFA619403R5028 | 10 | 0.016 |

#### Voltage 48 ... 60 V AC / DC

|          |       |   |     |     |          |                 |    |       |
|----------|-------|---|-----|-----|----------|-----------------|----|-------|
| ● Red    | 13-17 | 7 | 625 | 75  | CL2-507R | 1SFA619403R5071 | 10 | 0.016 |
| ● Green  | 13-17 | 7 | 520 | 140 | CL2-507G | 1SFA619403R5072 | 10 | 0.016 |
| ● Yellow | 13-17 | 7 | 590 | 80  | CL2-507Y | 1SFA619403R5073 | 10 | 0.016 |
| ● Blue   | 13-17 | 7 | 470 | 10  | CL2-507L | 1SFA619403R5074 | 10 | 0.016 |
| ○ Clear  | 13-17 | 7 | (1) | 260 | CL2-507C | 1SFA619403R5078 | 10 | 0.016 |

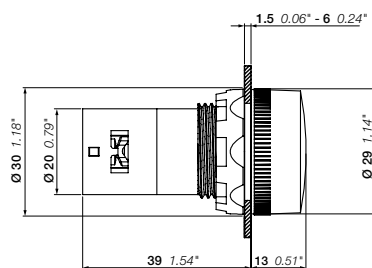
#### Voltage 110 ... 130 V AC

|          |       |    |     |     |          |                 |    |       |
|----------|-------|----|-----|-----|----------|-----------------|----|-------|
| ● Red    | 15-17 | 20 | 625 | 85  | CL2-513R | 1SFA619403R5131 | 10 | 0.016 |
| ● Green  | 15-17 | 20 | 520 | 90  | CL2-513G | 1SFA619403R5132 | 10 | 0.016 |
| ● Yellow | 15-17 | 20 | 590 | 85  | CL2-513Y | 1SFA619403R5133 | 10 | 0.016 |
| ● Blue   | 15-17 | 20 | 470 | 10  | CL2-513L | 1SFA619403R5134 | 10 | 0.016 |
| ○ Clear  | 15-17 | 20 | (1) | 340 | CL2-513C | 1SFA619403R5138 | 10 | 0.016 |

#### Voltage 110 ... 130 V DC

|          |     |    |     |     |          |                 |    |       |
|----------|-----|----|-----|-----|----------|-----------------|----|-------|
| ● Red    | 8-9 | 20 | 625 | 55  | CL2-515R | 1SFA619403R5151 | 10 | 0.016 |
| ● Green  | 8-9 | 20 | 520 | 125 | CL2-515G | 1SFA619403R5152 | 10 | 0.016 |
| ● Yellow | 8-9 | 20 | 590 | 50  | CL2-515Y | 1SFA619403R5153 | 10 | 0.016 |
| ● Blue   | 8-9 | 20 | 470 | 10  | CL2-515L | 1SFA619403R5154 | 10 | 0.016 |
| ○ Clear  | 8-9 | 20 | (1) | 210 | CL2-515C | 1SFA619403R5158 | 10 | 0.016 |

(1) X = 0.31, Y = 0.32



CL2

Dimensions (mm, inches)

## Compact range

### Pilot lights



CL2-502R

1SFC151338V0001



CL2-506G

1SFC151339V0001



CL2-508Y

1SFC151340V0001



CL2-506L

1SFC151341V0001



CL2-506C

1SFC151342V0001

#### Description

Integrated LED, no bulb needed.

| Color | Rated current<br>mA | Anti-inductive voltage<br>Vpeak | Wave-length<br>nm | Illumi-nation<br>lx | Type | Order code | Pkg qty | Weight (1 pce)<br>kg |
|-------|---------------------|---------------------------------|-------------------|---------------------|------|------------|---------|----------------------|
|-------|---------------------|---------------------------------|-------------------|---------------------|------|------------|---------|----------------------|

#### Voltage 220 V DC

|          |   |    |     |     |          |                 |    |       |
|----------|---|----|-----|-----|----------|-----------------|----|-------|
| ● Red    | 6 | 20 | 625 | 40  | CL2-520R | 1SFA619403R5201 | 10 | 0.016 |
| ● Green  | 6 | 20 | 520 | 90  | CL2-520G | 1SFA619403R5202 | 10 | 0.016 |
| ● Yellow | 6 | 20 | 590 | 30  | CL2-520Y | 1SFA619403R5203 | 10 | 0.016 |
| ● Blue   | 6 | 20 | 470 | 5   | CL2-520L | 1SFA619403R5204 | 10 | 0.016 |
| ○ Clear  | 6 | 20 | (1) | 120 | CL2-520C | 1SFA619403R5208 | 10 | 0.016 |

#### Voltage 230 V AC

|          |    |    |     |     |          |                 |    |       |
|----------|----|----|-----|-----|----------|-----------------|----|-------|
| ● Red    | 17 | 30 | 625 | 95  | CL2-523R | 1SFA619403R5231 | 10 | 0.016 |
| ● Green  | 17 | 35 | 520 | 155 | CL2-523G | 1SFA619403R5232 | 10 | 0.016 |
| ● Yellow | 17 | 35 | 590 | 70  | CL2-523Y | 1SFA619403R5233 | 10 | 0.016 |
| ● Blue   | 17 | 35 | 470 | 10  | CL2-523L | 1SFA619403R5234 | 10 | 0.016 |
| ○ Clear  | 17 | 35 | (1) | 225 | CL2-523C | 1SFA619403R5238 | 10 | 0.016 |

#### Rated voltage 230 V AC high anti-inductive voltage (2)

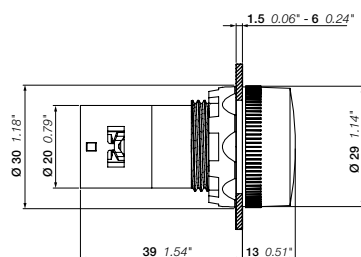
|          |    |    |     |     |          |                 |    |       |
|----------|----|----|-----|-----|----------|-----------------|----|-------|
| ● Red    | 17 | 60 | 625 | 75  | CL2-623R | 1SFA619403R6231 | 10 | 0.016 |
| ● Green  | 17 | 80 | 520 | 70  | CL2-623G | 1SFA619403R6232 | 10 | 0.016 |
| ● Yellow | 17 | 70 | 590 | 50  | CL2-623Y | 1SFA619403R6233 | 10 | 0.016 |
| ● Blue   | 17 | 80 | 470 | 5   | CL2-623L | 1SFA619403R6234 | 10 | 0.016 |
| ○ Clear  | 17 | 80 | (1) | 155 | CL2-623C | 1SFA619403R6238 | 10 | 0.016 |

#### Rated voltage 380 ... 415 V AC

|          |       |    |     |     |          |                 |    |       |
|----------|-------|----|-----|-----|----------|-----------------|----|-------|
| ● Red    | 15-17 | 55 | 625 | 85  | CL2-542R | 1SFA619403R5421 | 10 | 0.016 |
| ● Green  | 15-17 | 65 | 520 | 130 | CL2-542G | 1SFA619403R5422 | 10 | 0.016 |
| ● Yellow | 15-17 | 65 | 590 | 60  | CL2-542Y | 1SFA619403R5423 | 10 | 0.016 |
| ● Blue   | 15-17 | 65 | 470 | 10  | CL2-542L | 1SFA619403R5424 | 10 | 0.016 |
| ○ Clear  | 15-17 | 65 | (1) | 395 | CL2-542C | 1SFA619403R5428 | 10 | 0.016 |

(1) X = 0.31, Y = 0.32

(2) Higher threshold to light up LED to be used in application where there is risk of large induced voltages.



CL2

Dimensions (mm, inches)

## Compact range

### Pilot lights BA 9s



CL-100R

1SFC151256V0001



CL-100L

1SFC151257V0001

#### Description

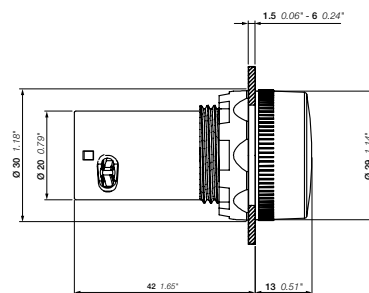
Bulb not included and should be ordered separately, see Accessories section for order codes and information.

| Color    | Type    | Order code      | Pkg qty | Weight (1 pce) kg |
|----------|---------|-----------------|---------|-------------------|
| ● Red    | CL-100R | 1SFA619402R1001 | 10      | 0.018             |
| ● Green  | CL-100G | 1SFA619402R1002 | 10      | 0.018             |
| ● Yellow | CL-100Y | 1SFA619402R1003 | 10      | 0.018             |
| ● Blue   | CL-100L | 1SFA619402R1004 | 10      | 0.018             |
| ○ White  | CL-100W | 1SFA619402R1005 | 10      | 0.018             |
| ○ Clear  | CL-100C | 1SFA619402R1008 | 10      | 0.018             |

## Accessories for compact range

### Flashing LED bulbs for CL-100 pilot lights

| Color                                                                        | Wavelength nm | Type | Order code | Pkg qty | Weight (1 pce) kg |
|------------------------------------------------------------------------------|---------------|------|------------|---------|-------------------|
| <b>Rated voltage 24 V DC rated current 25 mA, service life &gt; 50 000 h</b> |               |      |            |         |                   |
| ● Red                                                                        | 630           | –    | 4950512-1  | 20      | 0.005             |
| ● Green                                                                      | 565           | –    | 4950512-2  | 20      | 0.005             |
| ● Yellow                                                                     | 585           | –    | 4950512-3  | 20      | 0.005             |



CL100

Dimensions (mm, inches)

## Accessories for compact range

### LED bulbs for CL-100 pilot lights



KA2...

1SFC151178F0001

| Color                                                                                    | Wavelength<br>nm | Luminance<br>mdc | Type     | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|------------------------------------------------------------------------------------------|------------------|------------------|----------|-----------------|------------|-------------------------|
| <b>Rated voltage 12 V DC rated current 15 mA, service life &gt; 50 000 h</b>             |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 250              | KA2-2011 | 1SFA616921R2011 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 1000             | KA2-2012 | 1SFA616921R2012 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 250              | KA2-2013 | 1SFA616921R2013 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 450              | KA2-2014 | 1SFA616921R2014 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 600              | KA2-2015 | 1SFA616921R2015 | 20         | 0.005                   |
| <b>Rated voltage 24 V (AC) / DC rated current 15 mA, service life &gt; 50 000 h</b>      |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 250              | KA2-2021 | 1SFA616921R2021 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 800              | KA2-2022 | 1SFA616921R2022 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 250              | KA2-2023 | 1SFA616921R2023 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 400              | KA2-2024 | 1SFA616921R2024 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 500              | KA2-2025 | 1SFA616921R2025 | 20         | 0.005                   |
| <b>Rated voltage 36 V (AC) / DC rated current 12 mA, service life &gt; 50 000 h</b>      |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 200              | KA2-2031 | 1SFA616921R2031 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 2000             | KA2-2032 | 1SFA616921R2032 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 200              | KA2-2033 | 1SFA616921R2033 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 750              | KA2-2034 | 1SFA616921R2034 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 1400             | KA2-2035 | 1SFA616921R2035 | 20         | 0.005                   |
| <b>Rated voltage 48 V (AC) / DC rated current 12 mA, service life &gt; 50 000 h</b>      |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 200              | KA2-2041 | 1SFA616921R2041 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 1700             | KA2-2042 | 1SFA616921R2042 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 240              | KA2-2043 | 1SFA616921R2043 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 720              | KA2-2044 | 1SFA616921R2044 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 1200             | KA2-2045 | 1SFA616921R2045 | 20         | 0.005                   |
| <b>Rated voltage 60 V (AC) / DC rated current 10 mA, service life &gt; 50 000 h</b>      |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 160              | KA2-2051 | 1SFA616921R2051 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 1400             | KA2-2052 | 1SFA616921R2052 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 200              | KA2-2053 | 1SFA616921R2053 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 600              | KA2-2054 | 1SFA616921R2054 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 1000             | KA2-2055 | 1SFA616921R2055 | 20         | 0.005                   |
| <b>Rated voltage 110 ... 130 V AC rated current 4-6 mA, service life 25 000 h</b>        |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 60-100           | KA2-2131 | 1SFA616921R2131 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 500-850          | KA2-2132 | 1SFA616921R2132 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 70-120           | KA2-2133 | 1SFA616921R2133 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 220-350          | KA2-2134 | 1SFA616921R2134 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 350-600          | KA2-2135 | 1SFA616921R2135 | 20         | 0.005                   |
| <b>Rated voltage 110 ... 130 V (AC) / DC rated current 4-6 mA, service life 25 000 h</b> |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 60               | KA2-2141 | 1SFA616921R2141 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 500              | KA2-2142 | 1SFA616921R2142 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 70               | KA2-2143 | 1SFA616921R2143 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 220              | KA2-2144 | 1SFA616921R2144 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 350              | KA2-2145 | 1SFA616921R2145 | 20         | 0.005                   |
| <b>Rated voltage 230 V AC rated current 4 mA, service life 25 000 h</b>                  |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 60               | KA2-2221 | 1SFA616921R2221 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 500              | KA2-2222 | 1SFA616921R2222 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 70               | KA2-2223 | 1SFA616921R2223 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 220              | KA2-2224 | 1SFA616921R2224 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 350              | KA2-2225 | 1SFA616921R2225 | 20         | 0.005                   |
| <b>Rated voltage 230 V (AC) / DC rated current 4 mA, service life 25 000 h</b>           |                  |                  |          |                 |            |                         |
| ● Red                                                                                    | 630              | 60               | KA2-2231 | 1SFA616921R2231 | 20         | 0.005                   |
| ● Green                                                                                  | 525              | 500              | KA2-2232 | 1SFA616921R2232 | 20         | 0.005                   |
| ● Yellow                                                                                 | 592              | 70               | KA2-2233 | 1SFA616921R2233 | 20         | 0.005                   |
| ● Blue                                                                                   | 470              | 220              | KA2-2234 | 1SFA616921R2234 | 20         | 0.005                   |
| ○ White                                                                                  | (1)              | 350              | KA2-2235 | 1SFA616921R2235 | 20         | 0.005                   |

Note: Choose the same color on the LED as on the lamp cap. (1) X=0.31, Y=0.32 according to the ICI chromaticity diagram.

## Compact range

### Non-illuminated selector switches - 2-position



C2SS1-10B-10



C2SS3-30B-10

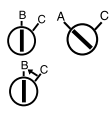
#### Description

Compact selector switches are delivered in black color.

| Operating principle                                                                 | Bezel         | Contacts                                                                          | Type         | Order code      | Pkg qty | Weight (1 pce) |
|-------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|--------------|-----------------|---------|----------------|
|                                                                                     |               |  |              |                 |         | kg             |
| Short handle                                                                        |               |                                                                                   |              |                 |         |                |
|    | Black plastic | 1 0                                                                               | C2SS1-10B-10 | 1SFA619200R1016 | 10      | 0.02           |
|                                                                                     |               | 0 1                                                                               | C2SS1-10B-01 | 1SFA619200R1046 | 10      | 0.02           |
|                                                                                     |               | 1 1                                                                               | C2SS1-10B-11 | 1SFA619200R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0                                                                               | C2SS1-10B-20 | 1SFA619200R1026 | 10      | 0.024          |
|                                                                                     | Chrome metal  | 1 0                                                                               | C2SS1-30B-10 | 1SFA619200R3016 | 10      | 0.029          |
|                                                                                     |               | 0 1                                                                               | C2SS1-30B-01 | 1SFA619200R3046 | 10      | 0.029          |
|                                                                                     |               | 1 1                                                                               | C2SS1-30B-11 | 1SFA619200R3076 | 10      | 0.032          |
|                                                                                     |               | 2 0                                                                               | C2SS1-30B-20 | 1SFA619200R3026 | 10      | 0.032          |
|    | Black plastic | 1 0                                                                               | C2SS2-10B-10 | 1SFA619201R1016 | 10      | 0.02           |
|                                                                                     |               | 0 1                                                                               | C2SS2-10B-01 | 1SFA619201R1046 | 10      | 0.02           |
|                                                                                     |               | 1 1                                                                               | C2SS2-10B-11 | 1SFA619201R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0                                                                               | C2SS2-10B-20 | 1SFA619201R1026 | 10      | 0.024          |
|                                                                                     | Chrome metal  | 1 0                                                                               | C2SS2-30B-10 | 1SFA619201R3016 | 10      | 0.029          |
|                                                                                     |               | 0 1                                                                               | C2SS2-30B-01 | 1SFA619201R3046 | 10      | 0.029          |
|                                                                                     |               | 1 1                                                                               | C2SS2-30B-11 | 1SFA619201R3076 | 10      | 0.032          |
|                                                                                     |               | 2 0                                                                               | C2SS2-30B-20 | 1SFA619201R3026 | 10      | 0.032          |
|  | Black plastic | 1 0                                                                               | C2SS3-10B-10 | 1SFA619202R1016 | 10      | 0.02           |
|                                                                                     |               | 0 1                                                                               | C2SS3-10B-01 | 1SFA619202R1046 | 10      | 0.02           |
|                                                                                     |               | 1 1                                                                               | C2SS3-10B-11 | 1SFA619202R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0                                                                               | C2SS3-10B-20 | 1SFA619202R1026 | 10      | 0.024          |
|                                                                                     | Chrome metal  | 1 0                                                                               | C2SS3-30B-10 | 1SFA619202R3016 | 10      | 0.029          |
|                                                                                     |               | 1 1                                                                               | C2SS3-30B-11 | 1SFA619202R3076 | 10      | 0.032          |
|                                                                                     |               | 2 0                                                                               | C2SS3-30B-20 | 1SFA619202R3026 | 10      | 0.032          |
|                                                                                     |               | Long handle                                                                       |              |                 |         |                |
|  | Chrome metal  | 1 0                                                                               | C2SS5-30B-10 | 1SFA619204R3016 | 10      | 0.029          |
|                                                                                     |               | 1 1                                                                               | C2SS5-30B-11 | 1SFA619204R3076 | 10      | 0.032          |

#### Contacts actuated

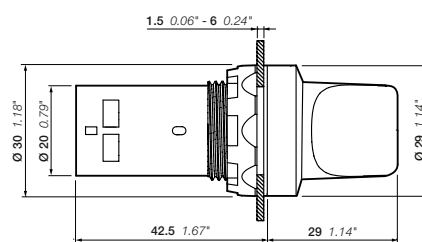
2-position selector switch  
Contacts included,



1 NO  
2 NO  
1 NC  
2 NC  
1 NO + 1 NC

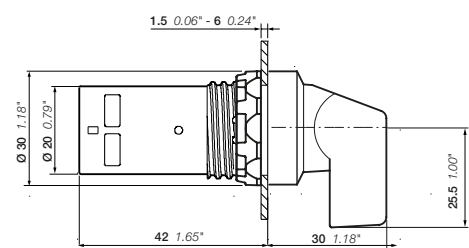
actuated in position C

| NC | NO | NC | NO |
|----|----|----|----|
| 11 | 13 | 21 | 23 |
| 12 | 14 | 22 | 24 |
| –  | 1  | –  | –  |
| –  | 1  | –  | 1  |
| 1  | –  | –  | –  |
| 1  | –  | 1  | –  |
| –  | 1  | 1  | –  |



C2SS, short handle

Dimensions (mm, inches)



C2SS, long handle

Compact range

Non-illuminated selector switches - 3-position



C3SS1-10B-11



C3SS2-30B-20

Contacts actuated

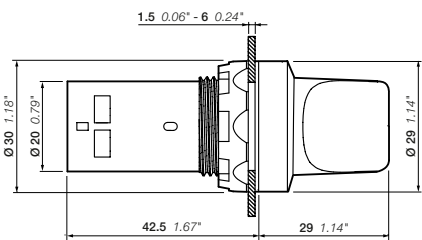
3-position selector switch  
Contacts included,

| actuated in position: |  | A  |    | C  |    |
|-----------------------|--|----|----|----|----|
|                       |  | NC | NO | NC | NO |
|                       |  | 21 | 23 | 11 | 13 |
|                       |  | 22 | 24 | 12 | 14 |
| 2 NO                  |  | -  | 1  | -  | 1  |
| 2 NC                  |  | 1  | -  | 1  | -  |
| 1 NO + 1 NC           |  | 1  | -  | -  | 1  |

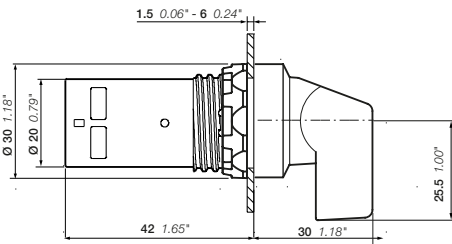
Description

Compact selector switches operators are delivered in black color.

| Operating principle                                                                 | Bezel         | Contacts | Type         | Order code      | Pkg qty | Weight (1 pce) |
|-------------------------------------------------------------------------------------|---------------|----------|--------------|-----------------|---------|----------------|
|    |               |          |              |                 |         | kg             |
| Short handle                                                                        |               |          |              |                 |         |                |
|    | Black plastic | 1 1      | C3SS1-10B-11 | 1SFA619210R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0      | C3SS1-10B-20 | 1SFA619210R1026 | 10      | 0.024          |
|                                                                                     | Chrome metal  | 1 1      | C3SS1-30B-11 | 1SFA619210R3076 | 10      | 0.032          |
|                                                                                     |               | 2 0      | C3SS1-30B-20 | 1SFA619210R3026 | 10      | 0.032          |
|    | Black plastic | 1 1      | C3SS2-10B-11 | 1SFA619211R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0      | C3SS2-10B-20 | 1SFA619211R1026 | 10      | 0.024          |
|                                                                                     | Chrome metal  | 1 1      | C3SS2-30B-11 | 1SFA619211R3076 | 10      | 0.032          |
|                                                                                     |               | 2 0      | C3SS2-30B-20 | 1SFA619211R3026 | 10      | 0.032          |
|    | Black plastic | 1 1      | C3SS3-10B-11 | 1SFA619212R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0      | C3SS3-10B-20 | 1SFA619212R1026 | 10      | 0.024          |
|                                                                                     | Chrome metal  | 1 1      | C3SS3-30B-11 | 1SFA619212R3076 | 10      | 0.032          |
|                                                                                     |               | 2 0      | C3SS3-30B-20 | 1SFA619212R3026 | 10      | 0.032          |
|   | Black plastic | 1 1      | C3SS7-10B-11 | 1SFA619216R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0      | C3SS7-10B-20 | 1SFA619216R1026 | 10      | 0.024          |
|                                                                                     | Chrome metal  | 2 0      | C3SS7-30B-20 | 1SFA619216R3026 | 10      | 0.032          |
| Long handle                                                                         |               |          |              |                 |         |                |
|  | Black plastic | 1 1      | C3SS4-10B-11 | 1SFA619213R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0      | C3SS4-10B-20 | 1SFA619213R1026 | 10      | 0.024          |
|  | Black plastic | 1 1      | C3SS5-10B-11 | 1SFA619214R1076 | 10      | 0.024          |
|                                                                                     |               | 2 0      | C3SS5-10B-20 | 1SFA619214R1026 | 10      | 0.024          |
|                                                                                     | Chrome metal  | 2 0      | C3SS5-30B-20 | 1SFA619214R3026 | 10      | 0.032          |



C3SS, short handle  
Dimensions (mm, inches)



C3SS, long handle

## Compact range

### Buzzers



CB1-600G

1SFC15157V0001



CB1-610R

1SFC15159V0001



CB1-610Y

1SFC15158V0001



CB1-620B

1SFC151160V0001

#### Illuminated

| Color | Light and sound output | Rated current | Luminance | Type | Order code | Pkg qty | Weight (1 pce) |
|-------|------------------------|---------------|-----------|------|------------|---------|----------------|
|       |                        | mA            | mcd       |      |            |         | kg             |

#### Rated voltage 24 V AC / DC

|        |            |    |     |          |                 |    |       |
|--------|------------|----|-----|----------|-----------------|----|-------|
| Green  | Continuous | 48 | 126 | CB1-600G | 1SFA619600R6002 | 10 | 0.021 |
| Red    | Pulsation  | 53 | 60  | CB1-610R | 1SFA619600R6101 | 10 | 0.021 |
| Yellow | Pulsation  | 53 | 60  | CB1-610Y | 1SFA619600R6103 | 10 | 0.021 |

#### Rated voltage 110 ... 130 V AC

|        |            |    |     |          |                 |    |       |
|--------|------------|----|-----|----------|-----------------|----|-------|
| Green  | Continuous | 55 | 126 | CB1-601G | 1SFA619600R6012 | 10 | 0.021 |
| Red    | Pulsation  | 70 | 60  | CB1-611R | 1SFA619600R6111 | 10 | 0.021 |
| Yellow | Pulsation  | 70 | 60  | CB1-611Y | 1SFA619600R6113 | 10 | 0.021 |

#### Rated voltage 110 ... 130 V DC

|        |            |    |     |          |                 |    |       |
|--------|------------|----|-----|----------|-----------------|----|-------|
| Green  | Continuous | 15 | 126 | CB1-602G | 1SFA619600R6022 | 10 | 0.021 |
| Red    | Pulsation  | 15 | 60  | CB1-612R | 1SFA619600R6121 | 10 | 0.021 |
| Yellow | Pulsation  | 15 | 60  | CB1-612Y | 1SFA619600R6123 | 10 | 0.021 |

#### Rated voltage 230 V AC

|        |            |    |     |          |                 |    |       |
|--------|------------|----|-----|----------|-----------------|----|-------|
| Green  | Continuous | 55 | 126 | CB1-603G | 1SFA619600R6032 | 10 | 0.021 |
| Red    | Pulsation  | 70 | 60  | CB1-613R | 1SFA619600R6131 | 10 | 0.021 |
| Yellow | Pulsation  | 70 | 60  | CB1-613Y | 1SFA619600R6133 | 10 | 0.021 |

#### Non-Illuminated

| Color | Sound output | Rated current | Luminance | Type | Order code | Pkg qty | Weight (1 pce) |
|-------|--------------|---------------|-----------|------|------------|---------|----------------|
|       |              | mA            | mcd       |      |            |         | kg             |

#### Rated voltage 24 V AC / DC

|       |            |    |   |          |                 |    |       |
|-------|------------|----|---|----------|-----------------|----|-------|
| Black | Continuous | 40 | - | CB1-620B | 1SFA619600R6206 | 10 | 0.021 |
|       | Pulsation  | 48 | - | CB1-630B | 1SFA619600R6306 | 10 | 0.021 |

#### Rated voltage 110 ... 130 V AC

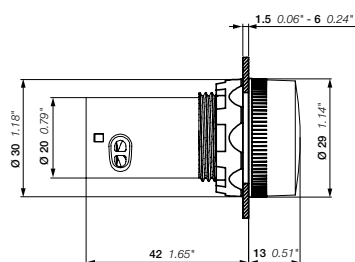
|       |            |    |   |          |                 |    |       |
|-------|------------|----|---|----------|-----------------|----|-------|
| Black | Continuous | 40 | - | CB1-621B | 1SFA619600R6216 | 10 | 0.021 |
|       | Pulsation  | 48 | - | CB1-631B | 1SFA619600R6316 | 10 | 0.021 |

#### Rated voltage 110 ... 130 V DC

|       |            |    |   |          |                 |    |       |
|-------|------------|----|---|----------|-----------------|----|-------|
| Black | Continuous | 15 | - | CB1-622B | 1SFA619600R6226 | 10 | 0.021 |
|       | Pulsation  | 15 | - | CB1-632B | 1SFA619600R6326 | 10 | 0.021 |

#### Rated voltage 230 V AC

|       |            |    |   |          |                 |    |       |
|-------|------------|----|---|----------|-----------------|----|-------|
| Black | Continuous | 40 | - | CB1-623B | 1SFA619600R6236 | 10 | 0.021 |
|       | Pulsation  | 40 | - | CB1-633B | 1SFA619600R6336 | 10 | 0.021 |



CB1

Dimensions (mm, inches)

## Compact range

### Accessories



KA1

1SFC151293F0001



KA1-8010

1SFC151379F0001



MA1-8052

1SFC151397V0001



KA1-8022/KA1-8021

1SFC151212V0001



SK616016-2

1SFC151487F0001



MA1-8153

1SFC151391V0001



CA1-8054

1SFC151287V0001

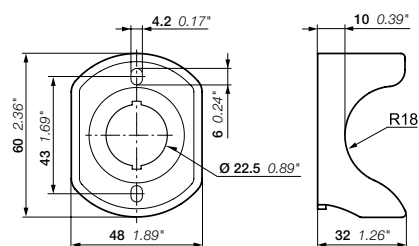


CA1-8053

1SFC151286V0001

| Description                                                                                   | Bezel / color           | Type     | Order code      | Pkg qty | Weight (1pce) kg |
|-----------------------------------------------------------------------------------------------|-------------------------|----------|-----------------|---------|------------------|
| <b>30 mm adaptors for 22 mm operator (1.5 - 4 mm panel thickness)</b>                         |                         |          |                 |         |                  |
| Emergency stop pushbuttons, MPM                                                               | Black plastic           | KA1-8027 | 1SFA616920R8027 | 1       | 0.007            |
|                                                                                               | Chrome metal            | KA1-8028 | 1SFA616920R8028 | 1       | 0.021            |
| Pushbuttons, selector switches, pilot lights, potentiometers, emergency stop pushbuttons, MPE | Black plastic           | KA1-8029 | 1SFA616920R8029 | 1       | 0.010            |
| Flush mounted pushbuttons                                                                     | Chrome metal            | KA1-8073 | 1SFA616920R8073 | 1       | 0.050            |
| Flush mounted selector switches                                                               | Chrome metal            | MA1-8074 | 1SFA611920R8074 | 1       | 0.050            |
| <b>Protective membrane, silicone</b>                                                          |                         |          |                 |         |                  |
| Flush pushbutton                                                                              |                         | MA1-8052 | 1SFA611920R8052 | 10      | 0.002            |
| Extended pushbutton                                                                           |                         | MA1-8002 | 1SFA611920R8002 | 10      | 0.002            |
| <b>Protective ring</b>                                                                        |                         |          |                 |         |                  |
| To prevent accidental operation. Cannot be used together with Legend plate holder             |                         |          |                 |         |                  |
| Flush and extended pushbuttons                                                                | Clear plastic           | -        | SK615512-1      | 10      | 0.002            |
| Flush pushbuttons                                                                             | Metal and black plastic | KA1-8010 | 1SFA616920R8010 | 10      | 0.008            |
| <b>Bezel</b>                                                                                  |                         |          |                 |         |                  |
| Pushbuttons                                                                                   | Black plastic           | KA1-8022 | 1SFA616920R8022 | 10      | 0.002            |
|                                                                                               | Chrome plastic          | KA1-8020 | 1SFA616920R8020 | 10      | 0.002            |
|                                                                                               | Chrome metal            | KA1-8021 | 1SFA616920R8021 | 10      | 0.015            |
| Selector switches                                                                             | Black plastic           | CA1-8077 | 1SFA619920R8077 | 10      | 0.002            |
|                                                                                               | Chrome metal            | CA1-8078 | 1SFA619920R8078 | 10      | 0.010            |
| <b>Square bezel</b>                                                                           |                         |          |                 |         |                  |
| Black plastic                                                                                 | -                       |          | SK616016-2      | 10      | 0.001            |
| <b>Lockable shroud</b>                                                                        |                         |          |                 |         |                  |
| Pushbuttons, selector switches                                                                | Plastic                 | MA1-8153 | 1SFA611920R8153 | 10      | 0.023            |
| Emergency stop 30 mm                                                                          | Metal                   | -        | SK615502-D      | 1       | 0.080            |
| <b>Touch guard</b>                                                                            |                         |          |                 |         |                  |
| Touch guard                                                                                   |                         | MA1-8152 | 1SFA611920R8152 | 10      | 0.023            |
| <b>Shroud with anti rotation tabs, slot for water drainage</b>                                |                         |          |                 |         |                  |
| Emergency stop, machine stop 40 mm                                                            | ● Yellow                | CA1-8053 | 1SFA619920R8053 | 10      | 0.016            |
|                                                                                               | ● Grey                  | CA1-8054 | 1SFA619920R8054 | 10      | 0.016            |
| <b>Lamp changing tool</b>                                                                     |                         |          |                 |         |                  |
| Lamp changing tool                                                                            |                         | KA1-8072 | 1SFA616920R8072 | 1       | 0.002            |

Note: Din-rail adaptor should be used with 2 contact blocks for rear mounting type MCB..B.



CA1

Dimensions (mm, inches)

## Compact range

### Accessories



CA1-8080

1SFC151276V0001



MA1-8015

1SFC151275V0001



MA1-8149

1SFC151004F0001



MA1-8019

1SFC151385V0001

| Description                          | Bezel / color | Type     | Order code      | Pkg<br>qty | Weight<br>(1pce)<br>kg |
|--------------------------------------|---------------|----------|-----------------|------------|------------------------|
| <b>DIN-rail adaptor</b>              |               |          |                 |            |                        |
| DIN-rail adaptor with 2 dummy block  |               | CA1-8080 | 1SFA619920R8080 | 1          | 0.028                  |
| <b>Mounting tools</b>                |               |          |                 |            |                        |
| For tightening the locking nut       |               |          |                 |            |                        |
| Plastic / Mounting tool manual       |               | MA1-8015 | 1SFA611920R8015 | 1          | 0.021                  |
| Metal / Mounting tool for power tool |               | MA1-8149 | 1SFA611920R8149 | 1          | 0.155                  |
| <b>Extra key</b>                     |               |          |                 |            |                        |
| Key code 455                         |               |          | SK616021-71     | 10         | 0.007                  |
| Key code 421                         |               |          | SK616021-72     | 10         | 0.007                  |
| Key code 3433-E                      |               |          | SK616021-73     | 10         | 0.007                  |
| <b>Locking nut</b>                   |               |          |                 |            |                        |
| Locking nut                          |               | MA1-8019 | 1SFA611920R8019 | 10         | 0.001                  |

## Compact range

### Technical data

#### Standards and approvals

|                    |                                                                                                                                                                        |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC / EN 60947-1   | Low Voltage switchgear and controlgear - Part 1: General rules                                                                                                         |
| IEC / EN 60947-5-1 | Low Voltage switchgear and controlgear - part 5-1: control circuit devices and switching elements - Electromechanical control circuit devices                          |
| IEC / EN 60947-5-5 | Low Voltage switchgear and controlgear - part 5-5: control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function |
| IEC / EN 60073     | Basic and safety principles for man-machine interface, marking and identification coding principles for indicators and actuators                                       |
| IEC / EN 60529     | Degrees of protection provided by enclosures (IP code)                                                                                                                 |
| EN 50013           | Low Voltage switchgear and controlgear for industrial use, terminal marking and distinctive number for particular control switches                                     |
| DIN 40050-9        | Road vehicles; degrees of protection (IP-code); protection against foreign objects; water and contact; electrical equipment                                            |
| UL 508             | Industrial control equipment                                                                                                                                           |
| CSA C22.2 No 14    | Industrial control equipment                                                                                                                                           |

#### Environmental data

##### Degrees of protection

| Operators         | IEC/EN DIN           | UL/CSA                    |
|-------------------|----------------------|---------------------------|
| Pushbutton        | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Selector switches | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Buzzer            | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Heavy duty        | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Pilot lights      | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Emergency stops   | IP66, IP67 and IP69K | Type 1, 3R, 4, 4X, 12, 13 |
| Terminals         | IP20                 | -                         |

##### Temperature

|                                      |               |
|--------------------------------------|---------------|
| Ambient temperature during operation | -25 to +70 °C |
| Storage temperature                  | -40 to +85 °C |

#### Technical data

##### Connecting capacity

##### Compact range M3.0 (pushbutton, selector switch, emergency stop)

|                                                                                   |                              |
|-----------------------------------------------------------------------------------|------------------------------|
|  | 1x 0.5...1.5 mm <sup>2</sup> |
|  | 2x 0.5...1.5 mm <sup>2</sup> |
|  | 1x 0.5...1.5 mm <sup>2</sup> |
|  | 2x 0.5...1.5 mm <sup>2</sup> |
|  | 1x 0.5...1.5 mm <sup>2</sup> |
|  | 2x 0.5...1.5 mm <sup>2</sup> |
|  | 1x 0.5...1.5 mm <sup>2</sup> |
|  | 2x 0.5...1.5 mm <sup>2</sup> |
|  | 1x 0.5...1.5 mm <sup>2</sup> |
|  | 2x 0.5...1.5 mm <sup>2</sup> |
|  | L < 5.9 mm                   |
|  | l > 3.0 mm                   |
| Stripping length                                                                  | 6.0 mm                       |

##### Compact range M3.5 (Pilot light)

|                                                                                     |                               |
|-------------------------------------------------------------------------------------|-------------------------------|
|    | 1x 0.75...2.5 mm <sup>2</sup> |
|    | 2x 0.75...2.5 mm <sup>2</sup> |
|    | 1x 0.75...2.5 mm <sup>2</sup> |
|    | 2x 0.75...2.5 mm <sup>2</sup> |
|    | 1x 0.75...2.5 mm <sup>2</sup> |
|   | 2x 0.75...2.5 mm <sup>2</sup> |
|  | 1x 0.75...2.5 mm <sup>2</sup> |
|  | 2x 0.75...2.5 mm <sup>2</sup> |
|  | 1x 0.75...2.5 mm <sup>2</sup> |
|  | 2x 0.75...2.5 mm <sup>2</sup> |
|  | L < 7.0 mm                    |
|  | l > 3.5 mm                    |
| Stripping length                                                                    | 8.0 mm                        |

##### Tightening torque

|                                             |                         |
|---------------------------------------------|-------------------------|
| Cable terminals M3                          | 0.8 Nm                  |
| Cable terminals M3.5                        | 0.9 Nm                  |
| Recommended screw-driver for cable terminal | Pozidriv 2              |
| Operators locking nut                       | Min. 2 Nm / Max. 2.3 Nm |

##### Short circuit protection

|                   |        |
|-------------------|--------|
| Max. fuse at 1 kA | gG 10A |
|-------------------|--------|

##### Mechanical life

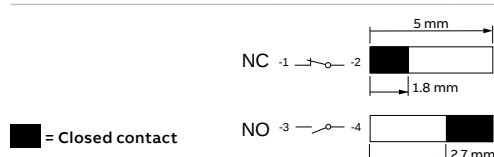
|                                            |                    |
|--------------------------------------------|--------------------|
| Pushbuttons, selector switches, heavy duty | 500 000 operations |
| Emergency stop pushbutton                  | 50 000 operations  |

##### LED products (Pilot lights, illuminated pushbuttons)

Service life for LED means number of service hours until the brightness has been reduced down 50%. Service life 50 000 h, operating at 25 °C, 40~70%rh (relative humidity)

|                          |                                                                               |
|--------------------------|-------------------------------------------------------------------------------|
| Color of white LED       | x = 0.31 Y = 0.32 means the position of color in the ICI chromaticity diagram |
| Voltage tolerance on LED | -30 to +10% voltage is acceptable without affecting the service life          |
| Voltage peaks on LED     | Voltage peaks up to 1000 V current peaks up to 500 mA during a few msec       |
| Glowing light            | All integrated LED have a function built in to cut leakage currents           |
| Rated frequency          | 50/60 Hz for AC supplied products                                             |

##### Make-and-break contacts



## Compact range

### Technical data

| Material                                                        |                                                                                                                                                                             |       |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| No ozone depleting substances in the products.                  |                                                                                                                                                                             |       |
| All front of panel plastic components are made of polycarbonate |                                                                                                                                                                             |       |
| PC polycarbonate                                                | High impact strength, good outdoor resistance.<br>Chemical resistance (see table below)                                                                                     |       |
| PSU polysulphone                                                | Can withstand high temperatures, acids, basic solutions, alkaline compounds, oils, alcohols                                                                                 |       |
| PA polyamide                                                    | Can withstand high temperatures, aliphatic, aromatic and chlorinated hydrocarbons, esters, ketone-aldehydes, alcohols and basic solutions                                   |       |
| PBT                                                             | Can withstand high temperature, aliphatic and aromatic hydrocarbons, acids, basic solutions, alcohols, grease and oils                                                      |       |
| Zinc                                                            | Good corrosion resistance in inland-, sea and industrial atmosphere                                                                                                         |       |
| Light-alloy                                                     | Good corrosion resistance in inland-, sea and industrial atmosphere                                                                                                         |       |
| Chemical resistance for polycarbonate                           |                                                                                                                                                                             |       |
| Chemical class                                                  | Effects                                                                                                                                                                     |       |
| Acids                                                           | No significant effect under most typical conditions of concentration and temperature                                                                                        |       |
| Alcohols and alkalis                                            | Generally compatible at low concentration and room temperature. Higher concentrations and elevated temperatures can result in etching and attack evidenced by decomposition |       |
| Aliphatic hydrocarbons                                          | Generally compatible                                                                                                                                                        |       |
| Amines                                                          | Surface crystallization and chemical attack                                                                                                                                 | Avoid |
| Aromatic hydrocarbons                                           | Partial solvents and severe stress cracking agents (i.e., xylene, toluene).                                                                                                 | Avoid |
| Detergents and cleaners                                         | Mild soap solutions are generally compatible. Strong alkaline materials should be avoided                                                                                   |       |
| Esters                                                          | Cause severe crystallization. Partial solvents.                                                                                                                             | Avoid |
| Greases and oils                                                | Pure petroleum types generally compatible. Many additives used with them are not                                                                                            |       |
| Halogenated, hydrocarbons                                       | Solvents.                                                                                                                                                                   | Avoid |
| Ketones                                                         | Cause severe crystallization and stress cracking. Partial solvents.                                                                                                         | Avoid |
| Silicone oil and greases                                        | Generally compatible up to 85 °C                                                                                                                                            |       |

Note: Specified degree of protection is for operator mounted on panel. If other items are mounted in between, please make sure that they are correctly sealed.

### Electrical data

#### Contacts

|                 |          |
|-----------------|----------|
| Rated frequency | 50-60 Hz |
|-----------------|----------|

#### Ratings as per IEC 60947-5-1

|                                                                        |       |
|------------------------------------------------------------------------|-------|
| Rated insulation voltage, $U_i$                                        | 300 V |
| Rated thermal current, $I_{th}$                                        | 5 A   |
| Rated operational current, $I_e$ at: 240 V Utilization category AC 15, | 1 A   |
| Rated operational current, $I_e$ at: 24 V utilisation category DC 13,  | 0.3 A |
| Rated operational current, $I_e$ at: 125 V                             | 0.2 A |
| Rated impulse withstand voltage $U_{imp}$                              | 6 kV  |
| Pollution degree                                                       | 3     |

#### Ratings as per UL, CSA, NEMA

|                                     | C300 AC | R300 DC |
|-------------------------------------|---------|---------|
| Rated insulation voltage            | 250 V   | 250 V   |
| Rated thermal current               | 2.5 A   | 1 A     |
| Rated operational current at: 120 V | 1.5 A   |         |
| at: 125 V                           |         | 0.22 A  |
| at: 240 V                           | 0.75 A  |         |
| at: 250 V                           |         | 0.11 A  |

#### Short circuit protection

|                   |        |
|-------------------|--------|
| Max. fuse at 1 kA | gG 10A |
|-------------------|--------|

#### Buzzer

##### Short circuit protection

|                   |        |
|-------------------|--------|
| Max. fuse at 1 kA | gG 10A |
|-------------------|--------|

#### Ratings as per IEC 60947-5-1

|                                           |              |
|-------------------------------------------|--------------|
| Rated insulation voltage, $U_i$           | 300 V        |
| Rated impulse withstand voltage $U_{imp}$ | 4 kV         |
| Rated frequency                           | 50-60 Hz     |
| Product service life                      | > 5000 hours |

#### Signal output

|                                               |                |
|-----------------------------------------------|----------------|
| Sound level                                   | ≥ 80 dB /10 cm |
| Audio frequency                               | 6.7 kHz        |
| Pulsating frequency of light and sound output | 2 Hz           |

## Compact range

### Technical data

#### Illuminated pushbuttons CP

| Color                                      | Current |      | Illuminance of flush cap |      | Illuminance of extended cap |      | Anti-inductive peak voltage | Main wavelength | Color temperature |
|--------------------------------------------|---------|------|--------------------------|------|-----------------------------|------|-----------------------------|-----------------|-------------------|
|                                            | mA      |      | lx                       |      | lx                          |      |                             |                 |                   |
|                                            | Min.    | Max. | Min.                     | Max. | Min.                        | Max. | V                           | Nm              | K                 |
| <b>Voltage range 24 V AC / DC</b>          |         |      |                          |      |                             |      |                             |                 |                   |
| ● Red                                      | 8.5     | 11.5 | 150                      | 600  | 120                         | 400  | 5                           | 620 ... 625     | –                 |
| ● Green                                    | 8.0     | 11.0 | 200                      | 800  | 150                         | 500  | 5                           | 515 ... 520     | –                 |
| ● Yellow                                   | 8.5     | 11.5 | 200                      | 800  | 120                         | 400  | 5                           | 585 ... 590     | –                 |
| ● Blue                                     | 8.5     | 10.5 | 200                      | 500  | 200                         | 400  | 5                           | 465 ... 470     | –                 |
| ○ Clear                                    | 8.5     | 10.5 | 620                      | 1000 | 360                         | 700  | 5                           | –               | 8000 ... 12000    |
| <b>Voltage range 110 ... 130 V AC / DC</b> |         |      |                          |      |                             |      |                             |                 |                   |
| ● Red                                      | 6.5     | 9.0  | 150                      | 600  | 100                         | 350  | 15                          | 620 ... 625     | –                 |
| ● Green                                    | 6.5     | 9.0  | 150                      | 600  | 100                         | 350  | 15                          | 515 ... 520     | –                 |
| ● Yellow                                   | 6.5     | 9.0  | 150                      | 600  | 100                         | 350  | 15                          | 585 ... 590     | –                 |
| ● Blue                                     | 6.5     | 9.0  | 200                      | 450  | 180                         | 300  | 15                          | 465 ... 470     | –                 |
| ○ Clear                                    | 6.5     | 9.0  | 520                      | 860  | 300                         | 600  | 15                          | –               | 8000 ... 12000    |
| <b>Voltage range 230 V AC / DC</b>         |         |      |                          |      |                             |      |                             |                 |                   |
| ● Red                                      | 4.0     | 6.0  | 150                      | 600  | 120                         | 400  | 15                          | 620 ... 625     | –                 |
| ● Green                                    | 4.0     | 6.0  | 150                      | 900  | 150                         | 500  | 15                          | 515 ... 520     | –                 |
| ● Yellow                                   | 4.0     | 6.0  | 150                      | 600  | 150                         | 500  | 15                          | 585 ... 590     | –                 |
| ● Blue                                     | 4.0     | 6.0  | 250                      | 500  | 250                         | 400  | 15                          | 465 ... 470     | –                 |
| ○ Clear                                    | 4.0     | 6.0  | 650                      | 1050 | 380                         | 720  | 15                          | –               | 8000 ... 12000    |

Note: The testing distance of illuminance is 2 mm between top lens and sensor surface. Clean test environment, supply voltage at 50 / 60 Hz with harmonized wave and without high frequency.

## Compact range

### Technical data

#### Pilot light CL2

| Color                                    | Current    |      | Illuminance |      | Anti-inductive<br>peak voltage | Main wavelength | Color<br>temperature |
|------------------------------------------|------------|------|-------------|------|--------------------------------|-----------------|----------------------|
|                                          | mA<br>Min. | Max. | lx<br>Min.  | Max. | V                              | Nm              | K                    |
| <b>Voltage range 6.3 V DC</b>            |            |      |             |      |                                |                 |                      |
| ● Red                                    | 13         | 16   | 45          | 250  | 2                              | 620 ... 625     | –                    |
| ● Green                                  | 9.5        | 12.5 | 114         | 245  | 2                              | 515 ... 520     | –                    |
| ● Yellow                                 | 13         | 16   | 65          | 210  | 2                              | 585 ... 590     | –                    |
| ● Blue                                   | 9.5        | 12.5 | 8           | 35   | 2                              | 465 ... 470     | –                    |
| ○ Clear                                  | 10         | 13   | 300         | 850  | 2                              | –               | 8000 ... 12000       |
| <b>Voltage range 12 V DC</b>             |            |      |             |      |                                |                 |                      |
| ● Red                                    | 14         | 16   | 100         | 280  | 2                              | 620 ... 625     | –                    |
| ● Green                                  | 12         | 14   | 165         | 310  | 2.5                            | 515 ... 520     | –                    |
| ● Yellow                                 | 13.5       | 16   | 85          | 230  | 2.5                            | 585 ... 590     | –                    |
| ● Blue                                   | 12         | 14   | 10          | 50   | 2.5                            | 465 ... 470     | –                    |
| ○ Clear                                  | 12.5       | 14.5 | 480         | 850  | 2.5                            | –               | 8000 ... 12000       |
| <b>Voltage range 24 V AC / DC</b>        |            |      |             |      |                                |                 |                      |
| ● Red                                    | 14         | 16   | 75          | 240  | 6                              | 620 ... 625     | –                    |
| ● Green                                  | 13.5       | 15   | 120         | 320  | 6                              | 515 ... 520     | –                    |
| ● Yellow                                 | 14         | 16   | 55          | 230  | 6                              | 585 ... 590     | –                    |
| ● Blue                                   | 13.5       | 15   | 8           | 30   | 6                              | 465 ... 470     | –                    |
| ○ Clear                                  | 13.5       | 15   | 450         | 700  | 6                              | –               | 8000 ... 12000       |
| <b>Voltage range 48 ... 60 V AC / DC</b> |            |      |             |      |                                |                 |                      |
| ● Red                                    | 14.5       | 16.5 | 75          | 200  | 7                              | 620 ... 625     | –                    |
| ● Green                                  | 14.5       | 16.5 | 140         | 340  | 7                              | 515 ... 520     | –                    |
| ● Yellow                                 | 14.5       | 16.5 | 55          | 330  | 7                              | 585 ... 590     | –                    |
| ● Blue                                   | 14.5       | 16.5 | 10          | 45   | 7                              | 465 ... 470     | –                    |
| ○ Clear                                  | 14.5       | 16.5 | 550         | 800  | 7                              | –               | 8000 ... 12000       |
| <b>Voltage range 110 ... 130 V AC</b>    |            |      |             |      |                                |                 |                      |
| ● Red                                    | 14.5       | 17   | 85          | 340  | 20                             | 620 ... 625     | –                    |
| ● Green                                  | 14.5       | 17   | 95          | 400  | 20                             | 515 ... 520     | –                    |
| ● Yellow                                 | 14.5       | 17   | 85          | 250  | 20                             | 585 ... 590     | –                    |
| ● Blue                                   | 14.5       | 17   | 8           | 30   | 20                             | 465 ... 470     | –                    |
| ○ Clear                                  | 14.5       | 17   | 400         | 700  | 20                             | –               | 8000 ... 12000       |
| <b>Voltage range 110 ... 130 V DC</b>    |            |      |             |      |                                |                 |                      |
| ● Red                                    | 7.5        | 9.5  | 40          | 110  | 20                             | 620 ... 625     | –                    |
| ● Green                                  | 7.5        | 9.5  | 80          | 250  | 20                             | 515 ... 520     | –                    |
| ● Yellow                                 | 7.5        | 9.5  | 45          | 165  | 20                             | 585 ... 590     | –                    |
| ● Blue                                   | 7.5        | 9.5  | 6           | 35   | 20                             | 465 ... 470     | –                    |
| ○ Clear                                  | 7.5        | 9.5  | 300         | 400  | 20                             | –               | 8000 ... 12000       |

Note: The testing distance of illuminance is 2 mm between top lens and sensor surface. Clean test environment, supply voltage at 50 / 60 Hz with harmonized wave and without high frequency.

## Compact range

### Technical data

#### Pilot light CL2

| Color                                                     | Current |      | Illuminance |      | Anti-inductive peak voltage | Main wavelength | Color temperature |
|-----------------------------------------------------------|---------|------|-------------|------|-----------------------------|-----------------|-------------------|
|                                                           | mA Min. | Max. | lx Min.     | Max. | V                           | Nm              | K                 |
| <b>Voltage range 220 V DC</b>                             |         |      |             |      |                             |                 |                   |
| ● Red                                                     | 5       | 6    | 15          | 85   | 20                          | 620 ... 625     | –                 |
| ● Green                                                   | 5       | 6    | 55          | 180  | 20                          | 515 ... 520     | –                 |
| ● Yellow                                                  | 5       | 6    | 15          | 115  | 20                          | 585 ... 590     | –                 |
| ● Blue                                                    | 5       | 6    | 5           | 35   | 20                          | 465 ... 470     | –                 |
| ○ Clear                                                   | 5       | 6    | 200         | 320  | 20                          | –               | 8000 ... 12000    |
| <b>Voltage range 230 V AC</b>                             |         |      |             |      |                             |                 |                   |
| ● Red                                                     | 14.5    | 17   | 85          | 340  | 30                          | 620 ... 625     | –                 |
| ● Green                                                   | 14.5    | 17   | 95          | 400  | 35                          | 515 ... 520     | –                 |
| ● Yellow                                                  | 14.5    | 17   | 85          | 235  | 35                          | 585 ... 590     | –                 |
| ● Blue                                                    | 14.5    | 17   | 8           | 30   | 35                          | 465 ... 470     | –                 |
| ○ Clear                                                   | 14.5    | 17   | 400         | 700  | 35                          | –               | 8000 ... 12000    |
| <b>Voltage range 380 ... 415 V AC</b>                     |         |      |             |      |                             |                 |                   |
| ● Red                                                     | 14.5    | 17   | 85          | 340  | 55                          | 620 ... 625     | –                 |
| ● Green                                                   | 14.5    | 17   | 95          | 400  | 65                          | 515 ... 520     | –                 |
| ● Yellow                                                  | 14.5    | 17   | 100         | 270  | 65                          | 585 ... 590     | –                 |
| ● Blue                                                    | 14.5    | 17   | 8           | 30   | 65                          | 465 ... 470     | –                 |
| ○ Clear                                                   | 14.5    | 17   | 400         | 700  | 65                          | –               | 8000 ... 12000    |
| <b>Voltage range 230 V AC high anti-inductive voltage</b> |         |      |             |      |                             |                 |                   |
| ● Red                                                     | 14.5    | 17   | 55          | 255  | 60                          | 620 ... 625     | –                 |
| ● Green                                                   | 14.5    | 17   | 60          | 265  | 80                          | 515 ... 520     | –                 |
| ● Yellow                                                  | 14.5    | 17   | 45          | 210  | 70                          | 585 ... 590     | –                 |
| ● Blue                                                    | 14.5    | 17   | 5           | 25   | 80                          | 465 ... 470     | –                 |
| ○ Clear                                                   | 14.5    | 17   | 280         | 490  | 80                          | –               | 8000 ... 12000    |

Note: The testing distance of illuminance is 2 mm between top lens and sensor surface. Clean test environment, supply voltage at 50 / 60 Hz with harmonized wave and without high frequency.

## Compact range

### Technical data

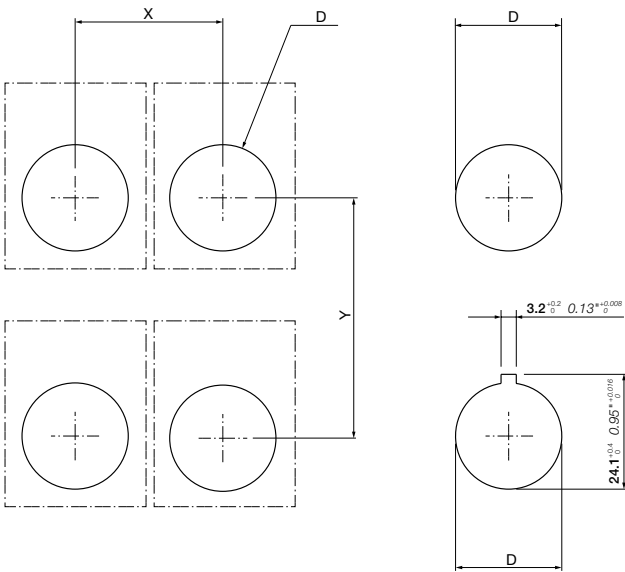
#### Buzzer CB

| Color                          |        | Light and sound output |    | Current |      | Illuminance |      | Sound press level |
|--------------------------------|--------|------------------------|----|---------|------|-------------|------|-------------------|
|                                |        |                        |    | mA Min. | Max. | lx Min.     | Max. | (dB/10cm)         |
| Voltage range 24 V AC / DC     |        |                        |    |         |      |             |      |                   |
| ●                              | Red    | Pulsation              | 63 | 75      | 150  | 450         | ≥90  |                   |
| ●                              | Yellow | Pulsation              | 63 | 75      | 70   | 300         | ≥90  |                   |
| ●                              | Green  | Continuous             | 43 | 53      | 150  | 600         | ≥90  |                   |
| ●                              | Black  | Pulsation              | 58 | 72      | –    | –           | ≥90  |                   |
| ●                              | Black  | Continuous             | 40 | 50      | –    | –           | ≥90  |                   |
| Voltage range 110 ... 30 V AC  |        |                        |    |         |      |             |      |                   |
| ●                              | Red    | Pulsation              | 71 | 81      | 70   | 300         | ≥90  |                   |
| ●                              | Yellow | Pulsation              | 72 | 87      | 150  | 450         | ≥90  |                   |
| ●                              | Green  | Continuous             | 50 | 60      | 150  | 600         | ≥90  |                   |
| ●                              | Black  | Pulsation              | 42 | 54      | –    | –           | ≥90  |                   |
| ●                              | Black  | Continuous             | 40 | 50      | –    | –           | ≥90  |                   |
| Voltage range 110 ... 130 V DC |        |                        |    |         |      |             |      |                   |
| ●                              | Red    | Pulsation              | 13 | 18      | 5    | 50          | ≥80  |                   |
| ●                              | Yellow | Pulsation              | 13 | 18      | 5    | 50          | ≥80  |                   |
| ●                              | Green  | Continuous             | 13 | 18      | 15   | 100         | ≥80  |                   |
| ●                              | Black  | Pulsation              | 13 | 18      | –    | –           | ≥80  |                   |
| ●                              | Black  | Continuous             | 13 | 18      | –    | –           | ≥80  |                   |
| Voltage range 230 V AC         |        |                        |    |         |      |             |      |                   |
| ●                              | Red    | Pulsation              | 70 | 84      | 150  | 450         | ≥90  |                   |
| ●                              | Yellow | Pulsation              | 72 | 82      | 70   | 300         | ≥90  |                   |
| ●                              | Green  | Continuous             | 50 | 62      | 350  | 900         | ≥90  |                   |
| ●                              | Black  | Pulsation              | 42 | 54      | –    | –           | ≥90  |                   |
| ●                              | Black  | Continuous             | 43 | 53      | –    | –           | ≥90  |                   |

Note: The testing distance of illuminance is 2 mm between top lens and sensor surface. Clean test environment, supply voltage at 50 / 60 Hz with harmonized wave and without high frequency.  
Fluctuation of rated voltage: -10% to +10%.

Compact range

Drilling plan



| Type            | Description                                                          | X        | Y        | D                                   |                                      | Panel thickness     |
|-----------------|----------------------------------------------------------------------|----------|----------|-------------------------------------|--------------------------------------|---------------------|
|                 |                                                                      |          |          | Ø mm                                | inch                                 |                     |
| CP, CL, CSS, CB | Pushbutton, Pilot light, Selector switch, Buzzer                     | 31 1.22" | 50 1.97" | Ø 22.3 <sup>+0.4</sup> <sub>0</sub> | 0.88" <sup>+0.016</sup> <sub>0</sub> | 1.5 0.06" - 6 0.24" |
| CP, CL, CSS, CB | Pushbutton, Pilot light, Selector switch, Buzzer (with legend plate) | 31 1.22" | 55 2.17" | Ø 22.3 <sup>+0.4</sup> <sub>0</sub> | 0.88" <sup>+0.016</sup> <sub>0</sub> | 1.5 0.06" - 6 0.24" |
| CPM, CP6, CE    | Mushroom pushbutton, Heavy duty pushbutton                           | 41 1.61" | 55 2.17" | Ø 22.3 <sup>+0.4</sup> <sub>0</sub> | 0.88" <sup>+0.016</sup> <sub>0</sub> | 1.5 0.06" - 6 0.24" |





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# Pilot devices

## Enclosures and assembled stations

### Ordering details

|     |                                                  |
|-----|--------------------------------------------------|
| 123 | Plastic enclosures for modular and compact range |
| 124 | Accessories for plastic enclosures               |
| 125 | LED blocks for rear mounting                     |
| 127 | Legend plate holders and inserts                 |
| 128 | Legend plate for plastic enclosures MEP and CEP  |
| 129 | Selector switches for vertical mounting          |
| 130 | Assembled stations                               |
| 131 | Assembled stations - Dimensions                  |

## Enclosures



### Plastic enclosure for modular and compact

This enclosure can fit both modular and compact operators with the unique possibility to mount up to 5 contact blocks assigned to one operator.

Degree of protection: IP66 UL/NEMA type 1, 3R, 4, 4X, 12, 13



### Compact plastic enclosure

The compact enclosure is one of the smallest on the market intended for compact operators.

Degree of protection: IP66, 67, 69K UL/NEMA type 1, 3R, 4, 4X, 12, 13



### Metal enclosure

Metal line is made in addition to our plastic lines when metal is required. Featuring a high protection degree and large installation space.

Degree of protection: IP66, 67, 69K

### Assembled stations

We can also offer some of the most common assembled stations as a standard in combination with both modular and compact range.

## Enclosures

Plastic enclosures for modular and compact range



### Description

When ordering complete enclosures:

- Select operators (modular or compact)
- For modular, select contact blocks and LED blocks for rear mounting (in accessories section)
- Per operator select between
  - One legend plate
  - One shroud (only for 1-seat)
  - One spacer
  - No accessory (only for compact range)
- Select cable gland

UL-listed applications: For end of line use only

According to the safety of machinery EN / ISO 13850 emergency stop pushbuttons should be mounted on yellow background

| Description                                                                        | Color                  | Holes for cable gland           | Type    | Order code      | Pkg qty | Weight (1 pce) kg |
|------------------------------------------------------------------------------------|------------------------|---------------------------------|---------|-----------------|---------|-------------------|
| <b>Plastic enclosures</b>                                                          |                        |                                 |         |                 |         |                   |
| Empty plastic enclosures with stainless steel screws for modular and compact range |                        |                                 |         |                 |         |                   |
| 1-seat                                                                             | Dark grey / light grey | M20 and Pg 13.5/ Pg16 and (M20) | MEP1-0  | 1SFA611811R1000 | 1       | 0.15              |
| 1-seat                                                                             | Yellow / light grey    | M20 and Pg 13.5/ Pg16 and (M20) | MEPY1-0 | 1SFA611821R1000 | 1       | 0.15              |
| 2-seat                                                                             | Dark grey / light grey | M20 and Pg 13.5/ Pg16 and (M20) | MEP2-0  | 1SFA611812R1000 | 1       | 0.17              |
| 3-seat                                                                             | Dark grey / light grey | M20 and Pg 13.5/ Pg16 and (M20) | MEP3-0  | 1SFA611813R1000 | 1       | 0.20              |
| 4-seat                                                                             | Dark grey / light grey | M25/Pg 16 and (M20)             | MEP4-0  | 1SFA611814R1000 | 1       | 0.23              |
| 6-seat                                                                             | Dark grey / light grey | M25/Pg 16 and (M20)             | MEP6-0  | 1SFA611816R1000 | 1       | 0.30              |

### Shrouds

To be mounted on MEP 1-seat enclosures or on panels

|        |          |                 |   |      |
|--------|----------|-----------------|---|------|
| Yellow | MA1-8053 | 1SFA611920R8053 | 1 | 0.02 |
| Grey   | MA1-8128 | 1SFA611920R8128 | 1 | 0.02 |

### Compact plastic enclosures

Empty enclosure for compact range

|        |                        |                                 |         |                 |   |       |
|--------|------------------------|---------------------------------|---------|-----------------|---|-------|
| 1-seat | Yellow / light grey    | M20 and Pg 13.5/ Pg16 and (M20) | CEPY1-0 | 1SFA619821R1000 | 1 | 0.072 |
| 1-seat | Dark grey / light grey | M20 and Pg 13.5/ Pg16 and (M20) | CEP1-0  | 1SFA619811R1000 | 1 | 0.072 |

### Shrouds

To be mounted on CEP-series of enclosures or on panel

|        |          |                 |   |       |
|--------|----------|-----------------|---|-------|
| Yellow | CA1-8053 | 1SFA619920R8053 | 1 | 0.016 |
| Grey   | CA1-8054 | 1SFA619920R8054 | 1 | 0.016 |

## Enclosures

### Accessories for plastic enclosures



MCB-10B

1SFC151378V0001



MCB-11B

1SFC151373V0001



MCB-02B

1SFC151374V0001



MCB-01BG

1SFC151375V0001



MA5-3001

MA5-300



MA1-8130

1SFC151394V0001



MA1-8129

1SFC151395V0001



MA1-8136

1SFC151393V0001

#### Description

To be used with MEP plastic enclosure or on DIN-rail

| Description | Contacts | Type | Order code | Pkg qty | Weight (1 pce) |
|-------------|----------|------|------------|---------|----------------|
|             |          |      |            |         | kg             |



#### Contact blocks for rear mounting

|                      |     |         |                 |    |       |
|----------------------|-----|---------|-----------------|----|-------|
| Single contact block | 1 0 | MCB-10B | 1SFA611610R2001 | 10 | 0.013 |
|                      | 0 1 | MCB-01B | 1SFA611610R2010 | 10 | 0.013 |
| Double contact block | 1 1 | MCB-11B | 1SFA611610R2011 | 10 | 0.026 |
|                      | 2 0 | MCB-20B | 1SFA611610R2002 | 10 | 0.026 |
|                      | 0 2 | MCB-02B | 1SFA611610R2020 | 10 | 0.026 |

#### Contact blocks with gold plated contacts

|                      |     |          |                 |    |       |
|----------------------|-----|----------|-----------------|----|-------|
| Single contact block | 1 0 | MCB-10BG | 1SFA611610R2101 | 10 | 0.013 |
|                      | 0 1 | MCB-01BG | 1SFA611610R2110 | 10 | 0.013 |

#### Cable glands

Grey plastic, threaded outer sleeve with sealing ring included. Nut not included.

|         |          |                 |    |       |
|---------|----------|-----------------|----|-------|
| M25     | MA5-3001 | 1SFA611925R3001 | 10 | 0.015 |
| M20     | MA5-3002 | 1SFA611925R3002 | 10 | 0.015 |
| PG 13.5 | MA5-3006 | 1SFA611925R3006 | 10 | 0.010 |
| PG 16   | MA5-3007 | 1SFA611925R3007 | 10 | 0.015 |

#### Nuts

Grey plastic, for cable glands above

|         |          |                 |    |       |
|---------|----------|-----------------|----|-------|
| M25     | MA5-3003 | 1SFA611925R3003 | 10 | 0.005 |
| M20     | MA5-3004 | 1SFA611925R3004 | 10 | 0.005 |
| PG 13.5 | MA5-3008 | 1SFA611925R3008 | 10 | 0.001 |
| PG 16   | MA5-3009 | 1SFA611925R3009 | 10 | 0.001 |

#### Sealing ring for operator hole

|                       |          |                 |     |       |
|-----------------------|----------|-----------------|-----|-------|
| For plastic enclosure | MA1-8150 | 1SFA611920H8150 | 100 | 0.001 |
|-----------------------|----------|-----------------|-----|-------|

#### Spacers

Needed when legend plates or shrouds are not used in plastic enclosures with rear mounted contact block. 1 mm thick.

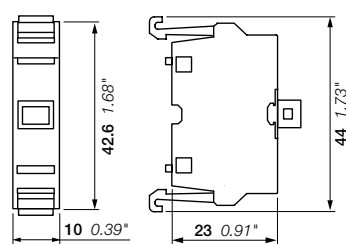
|                           |          |                 |    |       |
|---------------------------|----------|-----------------|----|-------|
| Spacer                    | -        | SK615516-1      | 10 | 0.002 |
| Spacer for modular MPMP/T | KA1-8045 | 1SFA616920R8045 | 10 | 0.004 |
| Spacer with rotation stop | MA1-8160 | 1SFA611920R8160 | 10 | 0.003 |

#### Blanking plugs

|            |          |                 |    |       |
|------------|----------|-----------------|----|-------|
| Grey       | MA1-8129 | 1SFA611920R8129 | 10 | 0.005 |
| Black      | MA1-8130 | 1SFA611920R8130 | 10 | 0.005 |
| Light grey | MA1-8136 | 1SFA611920R8136 | 10 | 0.005 |

#### Adaptor

|           |          |                 |    |       |
|-----------|----------|-----------------|----|-------|
| PG 16/M20 | MA5-3010 | 1SFA611925R3010 | 10 | 0.010 |
|-----------|----------|-----------------|----|-------|



MCB

Dimensions (mm, inches)

## Enclosures

### LED blocks for rear mounting



MLBL-00BW

#### Description

To be used in MEP plastic enclosure or on DIN-rail

| Color                                     | Rated current<br>mA | Wave-length<br>nm | Lumi-nance<br>mcd | Type      | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|-------------------------------------------|---------------------|-------------------|-------------------|-----------|-----------------|------------|-------------------------|
| <b>Rated voltage 12 V DC (1)</b>          |                     |                   |                   |           |                 |            |                         |
| ● Red                                     | 12.0                | 620               | 320               | MLBL-00BR | 1SFA611621R2001 | 10         | 0.012                   |
| ● Green                                   | 9.3                 | 520               | 1500              | MLBL-00BG | 1SFA611621R2002 | 10         | 0.012                   |
| ● Yellow                                  | 12.0                | 588               | 380               | MLBL-00BY | 1SFA611621R2003 | 10         | 0.012                   |
| ● Blue                                    | 9.5                 | 468               | 450               | MLBL-00BL | 1SFA611621R2004 | 10         | 0.012                   |
| ○ White                                   | 9.3                 | (2)               | 600               | MLBL-00BW | 1SFA611621R2005 | 10         | 0.012                   |
| <b>Rated voltage 24 V AC / DC (1)</b>     |                     |                   |                   |           |                 |            |                         |
| ● Red                                     | 9.9                 | 620               | 250               | MLBL-01BR | 1SFA611621R2011 | 10         | 0.012                   |
| ● Green                                   | 9.2                 | 520               | 1500              | MLBL-01BG | 1SFA611621R2012 | 10         | 0.012                   |
| ● Yellow                                  | 9.9                 | 588               | 250               | MLBL-01BY | 1SFA611621R2013 | 10         | 0.012                   |
| ● Blue                                    | 9.3                 | 468               | 450               | MLBL-01BL | 1SFA611621R2014 | 10         | 0.012                   |
| ○ White                                   | 9.2                 | (2)               | 600               | MLBL-01BW | 1SFA611621R2015 | 10         | 0.012                   |
| <b>Rated voltage 48 V AC / DC (1)</b>     |                     |                   |                   |           |                 |            |                         |
| ● Red                                     | 10.0                | 620               | 260               | MLBL-02BR | 1SFA611621R2021 | 10         | 0.012                   |
| ● Green                                   | 9.7                 | 520               | 1500              | MLBL-02BG | 1SFA611621R2022 | 10         | 0.012                   |
| ● Yellow                                  | 10.0                | 588               | 300               | MLBL-02BY | 1SFA611621R2023 | 10         | 0.012                   |
| ● Blue                                    | 9.7                 | 468               | 450               | MLBL-02BL | 1SFA611621R2024 | 10         | 0.012                   |
| ○ White                                   | 9.7                 | (2)               | 600               | MLBL-02BW | 1SFA611621R2025 | 10         | 0.012                   |
| <b>Rated voltage 60 V AC / DC (1)</b>     |                     |                   |                   |           |                 |            |                         |
| ● Red                                     | 13.0                | 620               | 350               | MLBL-03BR | 1SFA611621R2031 | 10         | 0.012                   |
| ● Green                                   | 12.7                | 520               | 2000              | MLBL-03BG | 1SFA611621R2032 | 10         | 0.012                   |
| ● Yellow                                  | 13.0                | 588               | 400               | MLBL-03BY | 1SFA611621R2033 | 10         | 0.012                   |
| ● Blue                                    | 12.7                | 468               | 550               | MLBL-03BL | 1SFA611621R2034 | 10         | 0.012                   |
| ○ White                                   | 12.7                | (2)               | 750               | MLBL-03BW | 1SFA611621R2035 | 10         | 0.012                   |
| <b>Rated voltage 110 ... 130 V AC</b>     |                     |                   |                   |           |                 |            |                         |
| ● Red                                     | 8.6                 | 620               | 200               | MLBL-04BR | 1SFA611621R2041 | 10         | 0.012                   |
| ● Green                                   | 8.5                 | 520               | 1200              | MLBL-04BG | 1SFA611621R2042 | 10         | 0.012                   |
| ● Yellow                                  | 8.6                 | 588               | 250               | MLBL-04BY | 1SFA611621R2043 | 10         | 0.012                   |
| ● Blue                                    | 7.0                 | 468               | 400               | MLBL-04BL | 1SFA611621R2044 | 10         | 0.012                   |
| ○ White                                   | 7.0                 | (2)               | 500               | MLBL-04BW | 1SFA611621R2045 | 10         | 0.012                   |
| <b>Rated voltage 110 ... 130 V DC (1)</b> |                     |                   |                   |           |                 |            |                         |
| ● Red                                     | 9.9                 | 620               | 250               | MLBL-05BR | 1SFA611621R2051 | 10         | 0.012                   |
| ● Green                                   | 9.8                 | 520               | 1500              | MLBL-05BG | 1SFA611621R2052 | 10         | 0.012                   |
| ● Yellow                                  | 9.9                 | 588               | 300               | MLBL-05BY | 1SFA611621R2053 | 10         | 0.012                   |
| ● Blue                                    | 9.8                 | 468               | 450               | MLBL-05BL | 1SFA611621R2054 | 10         | 0.012                   |
| ○ White                                   | 9.8                 | (2)               | 600               | MLBL-05BW | 1SFA611621R2055 | 10         | 0.012                   |
| <b>Rated voltage 220 V DC (1)</b>         |                     |                   |                   |           |                 |            |                         |
| ● Red                                     | 8.0                 | 620               | 180               | MLBL-06BR | 1SFA611621R2061 | 10         | 0.012                   |
| ● Green                                   | 8.0                 | 520               | 110               | MLBL-06BG | 1SFA611621R2062 | 10         | 0.012                   |
| ● Yellow                                  | 8.0                 | 588               | 200               | MLBL-06BY | 1SFA611621R2063 | 10         | 0.012                   |
| ● Blue                                    | 8.0                 | 468               | 450               | MLBL-06BL | 1SFA611621R2064 | 10         | 0.012                   |
| ○ White                                   | 8.0                 | (2)               | 600               | MLBL-06BW | 1SFA611621R2065 | 10         | 0.012                   |

Note:

(1) Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.

(2) X=0.31, Y=0.32 according to the ICI Chromaticity diagram.

For technical data, please refer to modular range section.

Enclosures

LED blocks for rear mounting



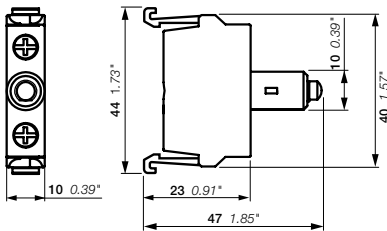
MLBL-07BW

Description

To be used in MEP plastic enclosure or on DIN-rail

| Color                  | Rated current<br>mA | Wave-length<br>nm | Lumi-nance<br>mcd | Type      | Order code      | Pkg<br>qty | Weight<br>(1 pce)<br>kg |
|------------------------|---------------------|-------------------|-------------------|-----------|-----------------|------------|-------------------------|
| Rated voltage 230 V AC |                     |                   |                   |           |                 |            |                         |
| ● Red                  | 9.5                 | 620               | 250               | MLBL-07BR | 1SFA611621R2071 | 10         | 0.012                   |
| ● Green                | 9.4                 | 520               | 1500              | MLBL-07BG | 1SFA611621R2072 | 10         | 0.012                   |
| ● Yellow               | 9.5                 | 588               | 300               | MLBL-07BY | 1SFA611621R2073 | 10         | 0.012                   |
| ● Blue                 | 8.2                 | 468               | 450               | MLBL-07BL | 1SFA611621R2074 | 10         | 0.012                   |
| ○ White                | 8.2                 | (2)               | 600               | MLBL-07BW | 1SFA611621R2075 | 10         | 0.012                   |
| Rated voltage 380 V AC |                     |                   |                   |           |                 |            |                         |
| ● Red                  | 10.2                | 620               | 250               | MLBL-08BR | 1SFA611621R2081 | 10         | 0.012                   |
| ● Green                | 10.2                | 520               | 1500              | MLBL-08BG | 1SFA611621R2082 | 10         | 0.012                   |
| ● Yellow               | 10.2                | 582               | 300               | MLBL-08BY | 1SFA611621R2083 | 10         | 0.012                   |
| ● Blue                 | 9.1                 | 468               | 450               | MLBL-08BL | 1SFA611621R2084 | 10         | 0.012                   |
| ○ White                | 9.1                 | (2)               | 600               | MLBL-08BW | 1SFA611621R2085 | 10         | 0.012                   |
| Rated voltage 415 V AC |                     |                   |                   |           |                 |            |                         |
| ● Red                  | 11.2                | 620               | 280               | MLBL-09BR | 1SFA611621R2091 | 10         | 0.012                   |
| ● Green                | 11.2                | 520               | 1800              | MLBL-09BG | 1SFA611621R2092 | 10         | 0.012                   |
| ● Yellow               | 11.2                | 588               | 350               | MLBL-09BY | 1SFA611621R2093 | 10         | 0.012                   |
| ● Blue                 | 9.9                 | 468               | 500               | MLBL-09BL | 1SFA611621R2094 | 10         | 0.012                   |
| ○ White                | 9.9                 | (2)               | 650               | MLBL-09BW | 1SFA611621R2095 | 10         | 0.012                   |

Note:  
(1) Care should be taken for DC supply where + and - must be correctly connected. This is marked X1 (+) and X2 (-) on the product.  
(2) X=0.31, Y=0.32 according to the ICI Chromaticity diagram.  
For technical data, please refer to modular range section.



MLBL

Dimensions (mm, inches)

## Enclosures

### Legend plate holders and inserts



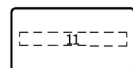
MA6-1060

1SFC151400V0001

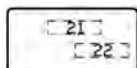


MA6-1061

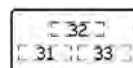
1SFC151380V0001



1-position insert



2-position insert



3-position insert

#### Description

For Ø 22 mm operator, can be used with MEP plastic enclosures, laser marked with text or symbols. Inserts are made of plastic and aluminium laminate.

| Description                | Type     | Order code      | Pkg qty | Weight (1pce) kg |
|----------------------------|----------|-----------------|---------|------------------|
| <b>Legend plate holder</b> |          |                 |         |                  |
| Grey plastic               | MA6-1060 | 1SFA611930R1060 | 10      | 0.002            |

#### Insert

|                        |          |                 |    |       |
|------------------------|----------|-----------------|----|-------|
| Without text or symbol | MA6-1061 | 1SFA611930R1061 | 10 | 0.001 |
|------------------------|----------|-----------------|----|-------|

#### 1-position inserts

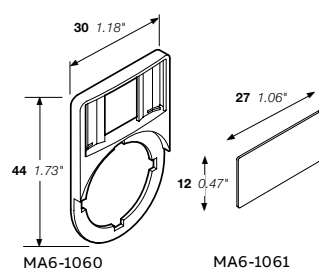
|         |          |                 |    |       |
|---------|----------|-----------------|----|-------|
| O       | MA6-1062 | 1SFA611930R1062 | 10 | 0.001 |
| I       | MA6-1063 | 1SFA611930R1063 | 10 | 0.001 |
| II      | MA6-1064 | 1SFA611930R1064 | 10 | 0.001 |
| →       | MA6-1065 | 1SFA611930R1065 | 10 | 0.001 |
| →       | MA6-1130 | 1SFA611930R1130 | 10 | 0.001 |
| → →     | MA6-1131 | 1SFA611930R1131 | 10 | 0.001 |
| Close   | MA6-1132 | 1SFA611930R1132 | 10 | 0.001 |
| Open    | MA6-1133 | 1SFA611930R1133 | 10 | 0.001 |
| On      | MA6-1134 | 1SFA611930R1134 | 10 | 0.001 |
| Off     | MA6-1135 | 1SFA611930R1135 | 10 | 0.001 |
| Fast    | MA6-1136 | 1SFA611930R1136 | 10 | 0.001 |
| Slow    | MA6-1137 | 1SFA611930R1137 | 10 | 0.001 |
| Down    | MA6-1138 | 1SFA611930R1138 | 10 | 0.001 |
| Up      | MA6-1139 | 1SFA611930R1139 | 10 | 0.001 |
| Start   | MA6-1140 | 1SFA611930R1140 | 10 | 0.001 |
| Stop    | MA6-1141 | 1SFA611930R1141 | 10 | 0.001 |
| Forward | MA6-1152 | 1SFA611930R1152 | 10 | 0.001 |
| Reverse | MA6-1153 | 1SFA611930R1153 | 10 | 0.001 |

#### 2-position inserts for selector switches

| Pos.21 | Pos.22 |          |                 |    |       |
|--------|--------|----------|-----------------|----|-------|
| O      | I      | MA6-1170 | 1SFA611930R1170 | 10 | 0.001 |
| I      | II     | MA6-1171 | 1SFA611930R1171 | 10 | 0.001 |
| →      | → →    | MA6-1172 | 1SFA611930R1172 | 10 | 0.001 |
| Off    | On     | MA6-1173 | 1SFA611930R1173 | 10 | 0.001 |
| Stop   | Start  | MA6-1174 | 1SFA611930R1174 | 10 | 0.001 |
| Low    | High   | MA6-1175 | 1SFA611930R1175 | 10 | 0.001 |
| Slow   | Fast   | MA6-1176 | 1SFA611930R1176 | 10 | 0.001 |
| Close  | Open   | MA6-1177 | 1SFA611930R1177 | 10 | 0.001 |
| Jog    | Run    | MA6-1178 | 1SFA611930R1178 | 10 | 0.001 |
| Hand   | Auto   | MA6-1179 | 1SFA611930R1179 | 10 | 0.001 |

#### 3-position inserts for selector switches

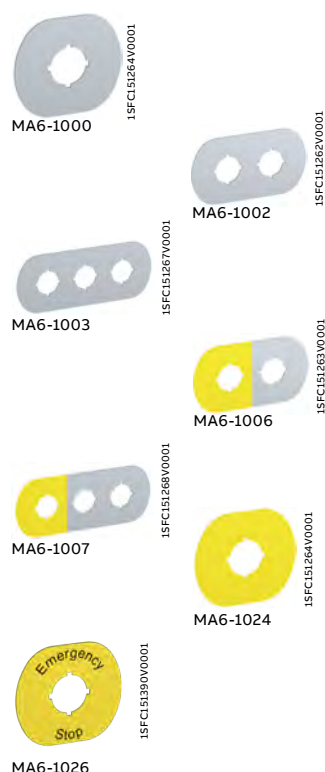
| Pos.31 | Pos.32 | Pos.33 |          |                 |    |       |
|--------|--------|--------|----------|-----------------|----|-------|
| ←      | O      | →      | MA6-1190 | 1SFA611930R1190 | 10 | 0.001 |
| →      | O      | → →    | MA6-1191 | 1SFA611930R1191 | 10 | 0.001 |
| I      | O      | II     | MA6-1192 | 1SFA611930R1192 | 10 | 0.001 |
| Hand   | O      | Auto   | MA6-1193 | 1SFA611930R1193 | 10 | 0.001 |
| Slow   | Off    | Fast   | MA6-1194 | 1SFA611930R1194 | 10 | 0.001 |



Dimensions (mm, inches)

## Enclosures

### Legend plates for plastic enclosures MEP and CEP



#### Legend plates for MEP plastic enclosures

For Ø 22 mm operator, plastic and aluminum laminate with adhesive back. Combine the emergency stop with the yellow legend plates without text to conform with safety of machinery standard EN/ISO 13850.

| Description                          | Text symbol  | Type     | Order code      | Pkg qty | Weight (1pce) kg |
|--------------------------------------|--------------|----------|-----------------|---------|------------------|
| <b>Aluminum and plastic laminate</b> |              |          |                 |         |                  |
| 1-seat                               | without text | MA6-1000 | 1SFA611930R1000 | 10      | 0.004            |
| 2-seat                               | without text | MA6-1002 | 1SFA611930R1002 | 10      | 0.006            |
| 3-seat                               | without text | MA6-1003 | 1SFA611930R1003 | 10      | 0.008            |
| 4-seat                               | without text | MA6-1004 | 1SFA611930R1004 | 10      | 0.010            |
| 6-seat                               | without text | MA6-1005 | 1SFA611930R1005 | 10      | 0.012            |
| 1-seat                               | O            | MA6-1012 | 1SFA611930R1012 | 10      | 0.004            |
| 1-seat                               | I            | MA6-1013 | 1SFA611930R1013 | 10      | 0.004            |
| 2-seat                               | O I          | MA6-1014 | 1SFA611930R1014 | 10      | 0.006            |
| 3-seat                               | O II         | MA6-1015 | 1SFA611930R1015 | 10      | 0.008            |
| 3-seat                               | I O II       | MA6-1016 | 1SFA611930R1016 | 10      | 0.008            |

#### Pos. 1 yellow plastic and aluminium laminate

|        |              |          |                 |    |       |
|--------|--------------|----------|-----------------|----|-------|
| 2-seat | without text | MA6-1006 | 1SFA611930R1006 | 10 | 0.006 |
| 3-seat | without text | MA6-1007 | 1SFA611930R1007 | 10 | 0.008 |
| 4-seat | without text | MA6-1008 | 1SFA611930R1008 | 10 | 0.010 |
| 6-seat | without text | MA6-1009 | 1SFA611930R1009 | 10 | 0.012 |

#### Emergency stop legend plates for 1-seat enclosures

For horizontally mounted enclosures. Yellow plastic laminate. 66 x 59 mm.

|                 |          |                 |    |       |
|-----------------|----------|-----------------|----|-------|
| Without text    | MA6-1024 | 1SFA611930R1024 | 10 | 0.004 |
| Nöd Stopp       | MA6-1025 | 1SFA611930R1025 | 10 | 0.004 |
| Emergency stop  | MA6-1026 | 1SFA611930R1026 | 10 | 0.004 |
| Not Aus         | MA6-1027 | 1SFA611930R1027 | 10 | 0.004 |
| ARRET D'URGENCE | MA6-1028 | 1SFA611930R1028 | 10 | 0.004 |
| Hätäseis        | MA6-1029 | 1SFA611930R1029 | 10 | 0.004 |

For vertically mounted enclosures. Yellow plastic laminate. 59 x 66 mm.

|                 |          |                 |    |       |
|-----------------|----------|-----------------|----|-------|
| Nöd Stopp       | MA6-1100 | 1SFA611930R1100 | 10 | 0.004 |
| Emergency stop  | MA6-1101 | 1SFA611930R1101 | 10 | 0.004 |
| Not Aus         | MA6-1102 | 1SFA611930R1102 | 10 | 0.004 |
| ARRET D'URGENCE | MA6-1103 | 1SFA611930R1103 | 10 | 0.004 |
| Hätäseis        | MA6-1104 | 1SFA611930R1104 | 10 | 0.004 |

#### Legend plates for CEP plastic enclosures

For Ø 22 mm operator

| Description                                 | Text symbol | Type     | Order code      | Pkg qty | Weight (1pce) kg |
|---------------------------------------------|-------------|----------|-----------------|---------|------------------|
| <b>Emergency stop legend plates</b>         |             |          |                 |         |                  |
| Black text on yellow aluminum plate Ø 59 mm |             |          |                 |         |                  |
| Without text                                |             | CA6-1024 | 1SFA619930R1024 | 10      | 0.004            |
| Emergency stop                              |             | CA6-1026 | 1SFA619930R1026 | 10      | 0.004            |
| Not Aus                                     |             | CA6-1027 | 1SFA619930R1027 | 10      | 0.004            |

Enclosures

Selector switches for vertical mounting



Description

When ordering complete vertically mounted enclosures:

- Select selector switches for vertical mounting
- Select contact blocks and LED blocks for rear mounting.

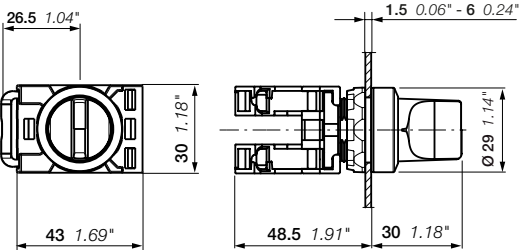
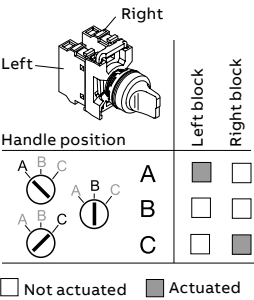
Per operator select between:

- One legend plate for vertical enclosures
- One spacer

Select cable gland.

| Description                       | Color   | Type       | Order code      | Pkg qty | Weight (1pce) kg |
|-----------------------------------|---------|------------|-----------------|---------|------------------|
| <b>2-position selector switch</b> |         |            |                 |         |                  |
| Short handle, non-illuminated     |         |            |                 |         |                  |
|                                   | ● Black | M2SSV1-10B | 1SFA611220R1006 | 10      | 0.015            |
|                                   | ● Black | M2SSV2-10B | 1SFA611221R1006 | 10      | 0.015            |
|                                   | ● Black | M2SSV3-10B | 1SFA611222R1006 | 10      | 0.015            |
| <b>3-position selector switch</b> |         |            |                 |         |                  |
| Short handle, non-illuminated     |         |            |                 |         |                  |
|                                   | ● Black | M3SSV1-10B | 1SFA611230R1006 | 10      | 0.015            |
|                                   | ● Black | M3SSV2-10B | 1SFA611231R1006 | 10      | 0.015            |
|                                   | ● Black | M3SSV3-10B | 1SFA611232R1006 | 10      | 0.015            |

Contacts actuated



M2SSV, M3SSV  
Dimensions (mm, inches)

## Enclosures

### Assembled stations



MEPY1-1042

1SFC151415V0001



CEPY1-2001

1SFC151387V0001



MEP2-1001

1SFC151273V0001

#### Description

Assembled enclosures with emergency stop pushbuttons, yellow / light grey color designed according to the Safety of machinery standard EN/ISO 13850 for emergency stops.

| Release method | Contacts | Type | Order code | Pkg qty | Weight (1 pce) |
|----------------|----------|------|------------|---------|----------------|
|                |          |      |            |         | kg             |



#### 1-seat plastic enclosures with 40 mm modular emergency stop pushbuttons

Yellow / light grey color

|                                                          |     |            |                 |   |       |
|----------------------------------------------------------|-----|------------|-----------------|---|-------|
| Twist release                                            | 0 2 | MEPY1-1042 | 1SFA611821R1042 | 1 | 0.240 |
| Twist release                                            | 1 2 | MEPY1-1041 | 1SFA611821R1041 | 1 | 0.250 |
| Pull release                                             | 0 2 | MEPY1-1035 | 1SFA611821R1035 | 1 | 0.466 |
| Twist release with plastic legend plate "Emergency stop" | 0 2 | MEPY1-1040 | 1SFA611821R1040 | 1 | 0.240 |

#### 1-seat plastic enclosures with 40 mm compact emergency stop pushbuttons

Yellow / light grey color

|                              |     |            |                 |   |       |
|------------------------------|-----|------------|-----------------|---|-------|
| Twist release                | 0 2 | CEPY1-1001 | 1SFA619821R1001 | 1 | 0.108 |
| Pull release                 | 0 2 | CEPY1-1002 | 1SFA619821R1002 | 1 | 0.108 |
| Key release                  | 1 1 | CEPY1-1006 | 1SFA619821R1006 | 1 | 0.105 |
| Twist release, yellow shroud | 0 2 | CEPY1-2001 | 1SFA619821R2001 | 1 | 0.124 |
| Pull release, yellow shroud  | 0 2 | CEPY1-2002 | 1SFA619821R2002 | 1 | 0.124 |

#### 1-seat plastic enclosures with 40 mm compact machine stop pushbuttons

Dark grey / light grey color

|                            |     |           |                 |   |       |
|----------------------------|-----|-----------|-----------------|---|-------|
| Twist release              | 1 1 | CEP1-1001 | 1SFA619811R1001 | 1 | 0.108 |
| Pull release               | 1 1 | CEP1-1002 | 1SFA619811R1002 | 1 | 0.108 |
| Twist release, grey shroud | 1 1 | CEP1-2001 | 1SFA619811R2001 | 1 | 0.124 |
| Pull release, grey shroud  | 1 1 | CEP1-2002 | 1SFA619811R2002 | 1 | 0.124 |

#### 2-seat plastic enclosure with modular pushbuttons

Dark grey / light grey

Two flush pushbuttons, momentary, black bezel

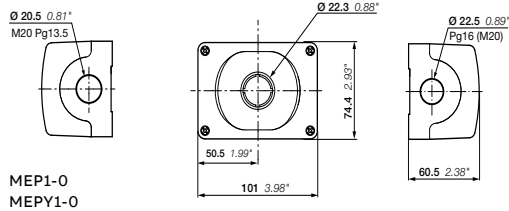
|       |      |           |                 |   |       |
|-------|------|-----------|-----------------|---|-------|
| Green | Red  | MEP2-1001 | 1SFA611812R1001 | 1 | 0.220 |
| 1 NO  | 1 NC |           |                 |   |       |
| I     | O    |           |                 |   |       |

## Enclosures

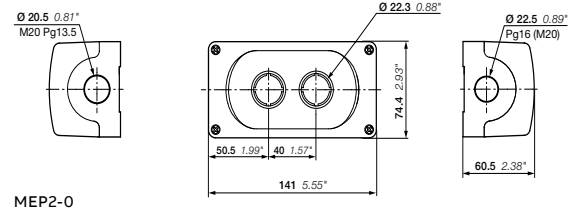
### Dimensions

#### MEP plastic enclosures

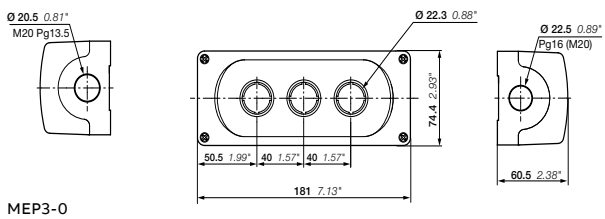
##### 1-seat



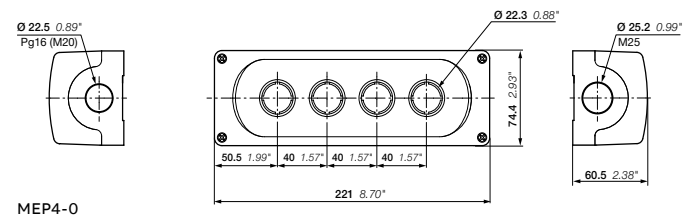
##### 2 seats



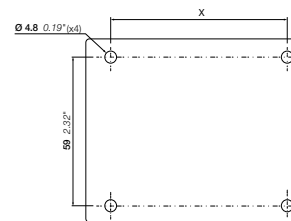
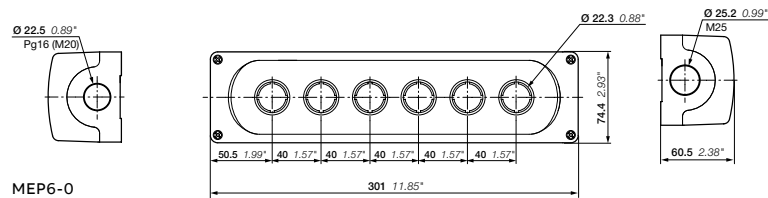
##### 3-seats



##### 4-seats



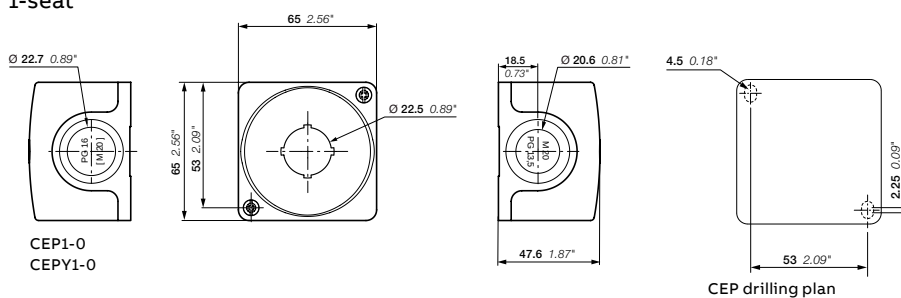
##### 6-seats



| Type    | X               |
|---------|-----------------|
| 1-seat  | 72 mm / 2.83"   |
| 2-seats | 112 mm / 4.41"  |
| 3-seats | 152 mm / 5.98"  |
| 4-seats | 192 mm / 7.56"  |
| 6-seats | 272 mm / 10.71" |

#### CEP plastic enclosure for compact range

##### 1-seat





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## Legend plates and text caps

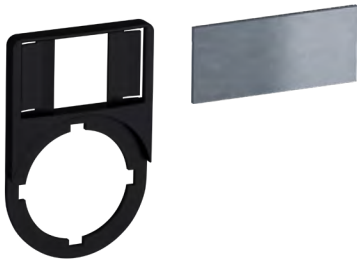
### Ordering details

|     |                                                        |
|-----|--------------------------------------------------------|
| 135 | Legend plate holder with inserts                       |
| 136 | Legend plates for emergency stop                       |
| 137 | Legend plates for panels                               |
| 138 | Text caps for illuminated pushbuttons and pilot lights |

## Legend plates and text caps

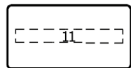


ABB offers a wide range of alternatives to label our products. Choose between marked aluminium legend plates, insert holders with a wide range of marked inserts or texts caps to mount under the lens of the pilot device.

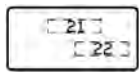


## Legend plates and text caps

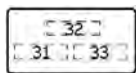
### Legend plate holder with inserts



1-position insert



2-position insert



3-position insert

#### Description

For Ø 22 mm operators installed in panel, laser marked with text or symbols.  
Inserts made of plastic and aluminium laminate.

| Description | Type | Order code | Pkg qty | Weight (1pce) kg |
|-------------|------|------------|---------|------------------|
|-------------|------|------------|---------|------------------|

#### Legend plate holder

|               |          |                 |     |       |
|---------------|----------|-----------------|-----|-------|
| Black plastic | KA1-8120 | 1SFA616920R8120 | 100 | 0.002 |
|---------------|----------|-----------------|-----|-------|

#### Insert

|                        |          |                 |     |       |
|------------------------|----------|-----------------|-----|-------|
| Without text or symbol | KA1-8121 | 1SFA616920R8121 | 100 | 0.001 |
|------------------------|----------|-----------------|-----|-------|

#### 1-position inserts

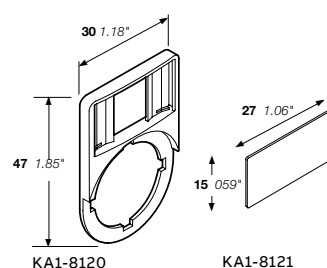
|       |          |                 |    |       |
|-------|----------|-----------------|----|-------|
| O     | MA6-1032 | 1SFA611930R1032 | 10 | 0.001 |
| I     | MA6-1033 | 1SFA611930R1033 | 10 | 0.001 |
| →     | MA6-1034 | 1SFA611930R1034 | 10 | 0.001 |
| → →   | MA6-1035 | 1SFA611930R1035 | 10 | 0.001 |
| Close | MA6-1036 | 1SFA611930R1036 | 10 | 0.001 |
| Open  | MA6-1037 | 1SFA611930R1037 | 10 | 0.001 |
| On    | MA6-1038 | 1SFA611930R1038 | 10 | 0.001 |
| Off   | MA6-1039 | 1SFA611930R1039 | 10 | 0.001 |
| Fast  | MA6-1040 | 1SFA611930R1040 | 10 | 0.001 |
| Slow  | MA6-1041 | 1SFA611930R1041 | 10 | 0.001 |
| Down  | MA6-1042 | 1SFA611930R1042 | 10 | 0.001 |
| Up    | MA6-1043 | 1SFA611930R1043 | 10 | 0.001 |
| Start | MA6-1044 | 1SFA611930R1044 | 10 | 0.001 |
| Stop  | MA6-1045 | 1SFA611930R1045 | 10 | 0.001 |
| Reset | MA6-1047 | 1SFA611930R1047 | 10 | 0.001 |
| Run   | MA6-1054 | 1SFA611930R1054 | 10 | 0.001 |
| Fault | MA6-1058 | 1SFA611930R1058 | 10 | 0.001 |
| Trip  | MA6-1118 | 1SFA611930R1118 | 10 | 0.001 |
|       | MA6-1210 | 1SFA611930R1210 | 10 | 0.001 |

#### 2-position inserts for selector switches

| Pos. 21 | Pos. 22 |          |                 |    |       |
|---------|---------|----------|-----------------|----|-------|
| O       | I       | MA6-1070 | 1SFA611930R1070 | 10 | 0.001 |
| I       | II      | MA6-1071 | 1SFA611930R1071 | 10 | 0.001 |
| Off     | On      | MA6-1073 | 1SFA611930R1073 | 10 | 0.001 |
| Stop    | Start   | MA6-1074 | 1SFA611930R1074 | 10 | 0.001 |
| Low     | High    | MA6-1075 | 1SFA611930R1075 | 10 | 0.001 |
| Slow    | Fast    | MA6-1076 | 1SFA611930R1076 | 10 | 0.001 |
| Close   | Open    | MA6-1077 | 1SFA611930R1077 | 10 | 0.001 |
| Hand    | Auto    | MA6-1079 | 1SFA611930R1079 | 10 | 0.001 |

#### 3-position inserts for selector switches

| Pos.31 | Pos.32 | Pos.33 |          |                 |          |
|--------|--------|--------|----------|-----------------|----------|
| ←      | O      | →      | MA6-1080 | 1SFA611930R1080 | 10 0.001 |
| I      | O      | II     | MA6-1082 | 1SFA611930R1082 | 10 0.001 |
| Hand   | O      | Auto   | MA6-1083 | 1SFA611930R1083 | 10 0.001 |
| Slow   | Off    | Fast   | MA6-1084 | 1SFA611930R1084 | 10 0.001 |
| Man    |        | Auto   | MA6-1085 | 1SFA611930R1085 | 10 0.001 |
| Man    | Off    | Auto   | MA6-1086 | 1SFA611930R1086 | 10 0.001 |
| O      |        | I      | MA6-1087 | 1SFA611930R1087 | 10 0.001 |



## Legend plates and text caps

### Legend plates for emergency stop



1SFC151388V0001



SK615546-2

1SFC151386V0001

#### Description

For Ø 22 mm operators installed in panel. Combine the emergency stops with the yellow legend plates and black text to conform with the Safety machinery standard EN/ISO 13850.

Legend plates made of laminate have adhesive back.

| Description                                       | Type       | Order code      | Pkg qty | Weight (1pce) kg |
|---------------------------------------------------|------------|-----------------|---------|------------------|
| <b>Plastic Ø 70mm</b>                             |            |                 |         |                  |
| Without text                                      | KTC15-1038 | 1SFA616915R1038 | 10      | 0.003            |
| Emergency stop                                    | KTC15-1005 | 1SFA616915R1005 | 10      | 0.003            |
| Not Aus                                           | KTC15-6005 | 1SFA616915R6005 | 10      | 0.003            |
| <b>Aluminium Ø 70 mm</b>                          |            |                 |         |                  |
| Without text                                      | –          | SK615546-8      | 10      | 0.010            |
| Nöd Stopp                                         | –          | SK615546-1      | 10      | 0.010            |
| Emergency stop                                    | –          | SK615546-2      | 10      | 0.010            |
| Not Aus                                           | –          | SK615546-3      | 10      | 0.010            |
| ARRET D'URGENCE                                   | –          | SK615546-4      | 10      | 0.010            |
| HÄTÄSEIS                                          | –          | SK615546-5      | 10      | 0.010            |
| PARADA DE EMERGENCIA                              | –          | SK615546-6      | 10      | 0.010            |
| Emergency stop NOT AUS ARRET D'URGENCE            | –          | SK615546-13     | 10      | 0.010            |
| Noodstop                                          | –          | SK615546-15     | 10      | 0.010            |
| <b>Aluminum laminate rectangular 59 x 39.5 mm</b> |            |                 |         |                  |
| Without text                                      | MA6-1010   | 1SFA611930R1010 | 10      | 0.005            |
| Nöd stopp                                         | MA6-1017   | 1SFA611930R1017 | 10      | 0.005            |
| Not haus                                          | MA6-1018   | 1SFA611930R1018 | 10      | 0.005            |
| Emergency stop                                    | MA6-1019   | 1SFA611930R1019 | 10      | 0.005            |
| ARRET D'URGENCE                                   | MA6-1020   | 1SFA611930R1020 | 10      | 0.005            |
| Hätäseis                                          | MA6-1021   | 1SFA611930R1021 | 10      | 0.005            |
| PARADA DE EMERGENCIA                              | MA6-1022   | 1SFA611930R1022 | 10      | 0.005            |
| <b>Plastic laminate rectangular 59 x 39.5 mm</b>  |            |                 |         |                  |
| Without text                                      | MA6-1011   | 1SFA611930R1011 | 10      | 0.002            |
| Emergency stop                                    | MA6-1023   | 1SFA611930R1023 | 10      | 0.002            |

## Legend plates and text caps

### Legend plates for panels



MA16-1001

1SFC151382V0001



SK615552-14

SK615552-14



SK615550-6

SK615550-61



SK615552-25

SK615552-25



SK615550-81

SK615550-81



SK615562-82

SK615562-82

#### Description

For Ø 22 mm operators, made of silver-grey aluminium.

| Type | Order code | Pkg qty | Weight (1pce) kg |
|------|------------|---------|------------------|
|------|------------|---------|------------------|

#### Without text

|                           |           |                 |    |       |
|---------------------------|-----------|-----------------|----|-------|
| Legend plate height 39 mm | MA16-1000 | 1SFA611940R1000 | 10 | 0.002 |
| Legend plate height 44 mm | MA16-1001 | 1SFA611940R1001 | 10 | 0.002 |

#### 1-position engraved for selector switches and pushbuttons

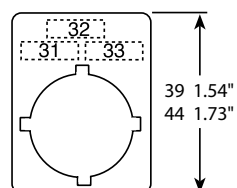
Legend plate height 39 mm

|                |   |             |    |       |
|----------------|---|-------------|----|-------|
| O              | – | SK615550-61 | 10 | 0.002 |
| I              | – | SK615550-62 | 10 | 0.002 |
| →              | – | SK615562-12 | 10 | 0.002 |
| Close          | – | SK615552-13 | 10 | 0.002 |
| Down           | – | SK615552-14 | 10 | 0.002 |
| Emergency stop | – | SK615552-15 | 10 | 0.002 |
| Fast           | – | SK615552-16 | 10 | 0.002 |
| Forward        | – | SK615552-17 | 10 | 0.002 |
| In             | – | SK615550-29 | 10 | 0.002 |
| Off            | – | SK615552-21 | 10 | 0.002 |
| On             | – | SK615552-22 | 10 | 0.002 |
| Open           | – | SK615552-23 | 10 | 0.002 |
| Raise          | – | SK615552-25 | 10 | 0.002 |
| Reset          | – | SK615552-27 | 10 | 0.002 |
| Reverse        | – | SK615552-28 | 10 | 0.002 |
| Run            | – | SK615552-29 | 10 | 0.002 |
| Slow           | – | SK615552-30 | 10 | 0.002 |
| Start          | – | SK615550-44 | 10 | 0.002 |
| Stop           | – | SK615552-31 | 10 | 0.002 |
| Up             | – | SK615552-32 | 10 | 0.002 |

#### 3-position engraved for selector switches

Legend plate height 39 mm

| Pos.31 | Pos.32 | Pos.33 |   |             |          |
|--------|--------|--------|---|-------------|----------|
| I      | O      | II     | – | SK615550-81 | 10 0.002 |
| ←      | O      | →      | – | SK615562-82 | 10 0.002 |
| Hand   | O      | Auto   | – | SK615550-80 | 10 0.002 |



3-position engraved

Dimensions (mm, inches)

## Legend plates and text caps

Text caps for illuminated pushbuttons and pilot lights



### Description

To be mounted under the lens of illuminated pushbutton or pilot light to add symbol or text.

Choose only white text caps with illuminated products due to high opacity of the colored text caps.

Choose colored text caps in combination with clear lens.

| Text/symbol                  | Color   | Type      | Order code      | Pkg qty | Weight (1pce) kg |
|------------------------------|---------|-----------|-----------------|---------|------------------|
| <b>For flush pushbuttons</b> |         |           |                 |         |                  |
| Without text                 | ○ White | KTC1-9000 | 1SFA616901R9000 | 10      | 0.001            |
| START                        | ○ White | KTC6-1042 | 1SFA616906R1042 | 10      | 0.001            |
| R                            | ○ White | KTC1-9009 | 1SFA616901R9009 | 10      | 0.001            |
| On                           | ○ White | KTC1-1020 | 1SFA616901R1020 | 10      | 0.001            |
| ON                           | ○ White | KTC1-1039 | 1SFA616901R1039 | 10      | 0.001            |
|                              | ● Green | KTC6-1039 | 1SFA616906R1039 | 10      | 0.001            |
|                              | ● Black | KTC8-1039 | 1SFA616908R1039 | 10      | 0.001            |
| Off                          | ○ White | KTC1-1019 | 1SFA616901R1019 | 10      | 0.001            |
| Stop                         | ○ White | KTC1-1031 | 1SFA616901R1031 | 10      | 0.001            |
| STOP                         | ● Red   | KTC4-1047 | 1SFA616904R1047 | 10      | 0.001            |
| Reset                        | ○ White | KTC1-1025 | 1SFA616901R1025 | 10      | 0.001            |
| O                            | ○ White | KTC1-9004 | 1SFA616901R9004 | 10      | 0.001            |
|                              | ● Red   | KTC4-9004 | 1SFA616904R9004 | 10      | 0.001            |
|                              | ● Black | KTC8-9004 | 1SFA616908R9004 | 10      | 0.001            |
| I                            | ○ White | KTC1-9002 | 1SFA616901R9002 | 10      | 0.001            |
|                              | ● Green | KTC6-9002 | 1SFA616906R9002 | 10      | 0.001            |
|                              | ● Black | KTC8-9002 | 1SFA616908R9002 | 10      | 0.001            |
| II                           | ○ White | KTC1-9003 | 1SFA616901R9003 | 10      | 0.001            |
|                              | ● Black | KTC8-9003 | 1SFA616908R9003 | 10      | 0.001            |
| III                          | ○ White | KTC1-9028 | 1SFA616901R9028 | 10      | 0.001            |
| +                            | ● Black | KTC8-9011 | 1SFA616908R9011 | 10      | 0.001            |
| -                            | ● Black | KTC8-9012 | 1SFA616908R9012 | 10      | 0.001            |
| ↑                            | ○ White | KTC1-9005 | 1SFA616901R9005 | 10      | 0.001            |
|                              | ● Black | KTC8-9005 | 1SFA616908R9005 | 10      | 0.001            |
| ↔                            | ● Black | KTC8-9015 | 1SFA616908R9015 | 10      | 0.001            |
| ↔                            | ○ White | KTC1-9016 | 1SFA616901R9016 | 10      | 0.001            |
|                              | ● Black | KTC8-9016 | 1SFA616908R9016 | 10      | 0.001            |
| →                            | ○ White | KTC1-9006 | 1SFA616901R9006 | 10      | 0.001            |
|                              | ● Black | KTC8-9018 | 1SFA616908R9018 | 10      | 0.001            |
| ⊕                            | ○ White | KTC1-9020 | 1SFA616901R9020 | 10      | 0.001            |
| ⊖                            | ○ White | KTC1-9026 | 1SFA616901R9026 | 10      | 0.001            |
|                              | ● Black | KTC8-9026 | 1SFA616908R9026 | 10      | 0.001            |

### For extended pushbuttons

|              |         |           |                 |    |       |
|--------------|---------|-----------|-----------------|----|-------|
| Without text | ○ White | KTC2-9000 | 1SFA616902R9000 | 10 | 0.001 |
| On           | ○ White | KTC2-1020 | 1SFA616902R1020 | 10 | 0.001 |
| Off          | ● Red   | KTC5-1040 | 1SFA616905R1040 | 10 | 0.001 |
| Stop         | ○ White | KTC2-1031 | 1SFA616902R1031 | 10 | 0.001 |
| STOP         | ● Red   | KTC5-1047 | 1SFA616905R1047 | 10 | 0.001 |
| Reset        | ○ White | KTC2-1025 | 1SFA616902R1025 | 10 | 0.001 |
| O            | ● Red   | KTC5-9004 | 1SFA616905R9004 | 10 | 0.001 |
| I            | ○ White | KTC2-9002 | 1SFA616902R9002 | 10 | 0.001 |
| II           | ○ White | KTC2-9003 | 1SFA616902R9003 | 10 | 0.001 |
| III          | ○ White | KTC2-9028 | 1SFA616902R9028 | 10 | 0.001 |
| ↑            | ○ White | KTC2-9005 | 1SFA616902R9005 | 10 | 0.001 |
| ↔            | ○ White | KTC2-9015 | 1SFA616902R9015 | 10 | 0.001 |
| ↔            | ○ White | KTC2-9016 | 1SFA616902R9016 | 10 | 0.001 |
| →            | ○ White | KTC2-9006 | 1SFA616902R9006 | 10 | 0.001 |

### For pilot lights

|              |         |           |                 |    |       |
|--------------|---------|-----------|-----------------|----|-------|
| Without text | ○ White | KTC3-9000 | 1SFA616903R9000 | 10 | 0.001 |
| On           | ○ White | KTC3-1020 | 1SFA616903R1020 | 10 | 0.001 |
| ON           | ○ White | KTC3-1039 | 1SFA616903R1039 | 10 | 0.001 |
| Off          | ○ White | KTC3-1019 | 1SFA616903R1019 | 10 | 0.001 |
| I            | ○ White | KTC3-9002 | 1SFA616903R9002 | 10 | 0.001 |





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## Pilot devices

### Signal towers and signal beacons

#### Ordering details

|     |                                                         |
|-----|---------------------------------------------------------|
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| 144 | Signal towers - Bulbs and audible modules               |
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## Signal towers and signal beacons



### Signal towers

- Fast mounting of signal elements using bayonet fixing
- Easy changing of bulbs for each module without tools
- Flexibility of signal element combination
- Up to 5 elements possible/up to 10 elements with bracket for 2-sided mounting
- High protection rating optical and audible signal elements with IP54
- LED elements for long life

### Signal beacons

- High protection rating IP65
- Cap consists of high impact polycarbonate (up to 20 J)
- Bulb change via inside of control box

### Simple fitting with quick fix system

Each signal tower module is equipped with a bayonet fixing with integral contact system. The modules are fastened together by aligning the corresponding white marks then with a gentle twist they are locked into place (see the figures).

### Signal towers and beacons

- Permanent light
- Blinking light
- Flashing light
- Audible
- LED permanent light
- LED blinking light
- LED rotating light

## Signal towers and signal beacons

### Signal towers - Light elements



KL70-401B

1SFC151507P0001



KL70-401Y

1SFC151508P0001



KA4-102...

1SFC151509P0001

#### Description

When ordering:

- Select up to 5 light elements
- Select up to 10 elements if bracket for 2-sided mounting is used
- Select up to 2 audible elements if bracket for 2-sided mounting is used (optional)
- Select bulb (optional)
- Select terminal element for preferred mounting type
- Select accessories for preferred mounting type.

| Color                                                   | Rated voltage      | Type            | Order code                | Pkg qty | Weight (1pce) kg |
|---------------------------------------------------------|--------------------|-----------------|---------------------------|---------|------------------|
| <b>Light element with integrated LED</b>                |                    |                 |                           |         |                  |
| ● Red                                                   | 24 V AC/DC         | Permanent light | KL70-305R 1SFA616070R3051 | 1       | 0.100            |
| ● Green                                                 | 24 V AC/DC         | Permanent light | KL70-305G 1SFA616070R3052 | 1       | 0.100            |
| ● Yellow                                                | 24 V AC/DC         | Permanent light | KL70-305Y 1SFA616070R3053 | 1       | 0.100            |
| ● Blue                                                  | 24 V AC/DC         | Permanent light | KL70-305L 1SFA616070R3054 | 1       | 0.100            |
| ○ Clear                                                 | 24 V AC/DC         | Permanent light | KL70-305C 1SFA616070R3058 | 1       | 0.100            |
| ● Red                                                   | 24 V AC/DC         | Blinking light  | KL70-306R 1SFA616070R3061 | 1       | 0.100            |
| ● Green                                                 | 24 V AC/DC         | Blinking light  | KL70-306G 1SFA616070R3062 | 1       | 0.100            |
| ● Yellow                                                | 24 V AC/DC         | Blinking light  | KL70-306Y 1SFA616070R3063 | 1       | 0.100            |
| ● Blue                                                  | 24 V AC/DC         | Blinking light  | KL70-306L 1SFA616070R3064 | 1       | 0.100            |
| ○ Clear                                                 | 24 V AC/DC         | Blinking light  | KL70-306C 1SFA616070R3068 | 1       | 0.100            |
| ● Red                                                   | 24 V AC/DC         | Rotating light  | KL70-307R 1SFA616070R3071 | 1       | 0.100            |
| ● Green                                                 | 24 V AC/DC         | Rotating light  | KL70-307G 1SFA616070R3072 | 1       | 0.100            |
| ● Yellow                                                | 24 V AC/DC         | Rotating light  | KL70-307Y 1SFA616070R3073 | 1       | 0.100            |
| ● Blue                                                  | 24 V AC/DC         | Rotating light  | KL70-307L 1SFA616070R3074 | 1       | 0.100            |
| ○ Clear                                                 | 24 V AC/DC         | Rotating light  | KL70-307C 1SFA616070R3078 | 1       | 0.100            |
| ● Red                                                   | 115 V AC           | Blinking light  | KL70-342R 1SFA616070R3421 | 1       | 0.100            |
| ● Green                                                 | 115 V AC           | Blinking light  | KL70-342G 1SFA616070R3422 | 1       | 0.100            |
| ● Yellow                                                | 115 V AC           | Blinking light  | KL70-342Y 1SFA616070R3423 | 1       | 0.100            |
| ● Blue                                                  | 115 V AC           | Blinking light  | KL70-342L 1SFA616070R3424 | 1       | 0.100            |
| ○ Clear                                                 | 115 V AC           | Blinking light  | KL70-342C 1SFA616070R3428 | 1       | 0.100            |
| ● Red                                                   | 230 V AC           | Blinking light  | KL70-352R 1SFA616070R3521 | 1       | 0.100            |
| ● Green                                                 | 230 V AC           | Blinking light  | KL70-352G 1SFA616070R3522 | 1       | 0.100            |
| ● Yellow                                                | 230 V AC           | Blinking light  | KL70-352Y 1SFA616070R3523 | 1       | 0.100            |
| ● Blue                                                  | 230 V AC           | Blinking light  | KL70-352L 1SFA616070R3524 | 1       | 0.100            |
| ○ Clear                                                 | 230 V AC           | Blinking light  | KL70-352C 1SFA616070R3528 | 1       | 0.100            |
| <b>Light element for bulb Ba 15d, bulb not included</b> |                    |                 |                           |         |                  |
| ● Red                                                   | 12 ... 230 V AC/DC | Permanent light | KL70-401R 1SFA616070R4011 | 1       | 0.090            |
| ● Green                                                 | 12 ... 230 V AC/DC | Permanent light | KL70-401G 1SFA616070R4012 | 1       | 0.090            |
| ● Yellow                                                | 12 ... 230 V AC/DC | Permanent light | KL70-401Y 1SFA616070R4013 | 1       | 0.090            |
| ● Blue                                                  | 12 ... 230 V AC/DC | Permanent light | KL70-401L 1SFA616070R4014 | 1       | 0.090            |
| ○ Clear                                                 | 12 ... 230 V AC/DC | Permanent light | KL70-401C 1SFA616070R4018 | 1       | 0.090            |

## Signal towers and signal beacons

### Signal towers - Bulbs and audible modules



KL70-401B

1SFC151507P0001



KL70-401Y

1SFC151508F0001



KA4-102...

1SFC151509F0001

#### Description

When ordering:

- Select up to 5 light elements
- Select up to 10 elements if bracket for 2-sided mounting is used
- Select up to 2 audible element (optional)
- Select bulb (optional)
- Select terminal element for preferred mounting type
- Select accessories for preferred mounting type.

| Description                             | Rated voltage    | Type     | Order code      | Pkg qty | Weight (1pce) kg |
|-----------------------------------------|------------------|----------|-----------------|---------|------------------|
| <b>Bulbs for light element</b>          |                  |          |                 |         |                  |
| Bulb Ba 15d, 42 mm max 7 W              |                  |          |                 |         |                  |
| For permanent or blinking light element | 24 V AC/DC, 5 W  | KA4-1028 | 1SFA616923R1028 | 10      | 0.009            |
| For permanent or blinking light element | 115 V AC/DC, 5 W | KA4-1118 | 1SFA616923R1118 | 10      | 0.009            |
| For permanent or blinking light element | 230 V AC/DC, 5 W | KA4-1148 | 1SFA616923R1148 | 10      | 0.009            |
| <b>LED bulbs Ba 15d, 40mA</b>           |                  |          |                 |         |                  |
| ● Red                                   | 24 V AC/DC       | KA4-1021 | 1SFA616924R1021 | 1       | 0.009            |
| ● Green                                 | 24 V AC/DC       | KA4-1022 | 1SFA616924R1022 | 1       | 0.009            |
| ● Yellow                                | 24 V AC/DC       | KA4-1023 | 1SFA616924R1023 | 1       | 0.009            |
| ● Blue                                  | 24 V AC/DC       | KA4-1024 | 1SFA616924R1024 | 1       | 0.009            |
| ○ Clear                                 | 24 V AC/DC       | KA4-1025 | 1SFA616924R1025 | 1       | 0.009            |

#### Audible modules

##### Buzzer element

Adjustable tone, 85 dB

|                              |            |           |                 |   |       |
|------------------------------|------------|-----------|-----------------|---|-------|
| Continuous or pulsating tone | 230 V AC   | KB70-1201 | 1SFA616071R1201 | 1 | 0.120 |
| Continuous or pulsating tone | 24 V AC/DC | KB70-3001 | 1SFA616071R3001 | 1 | 0.110 |
| Continuous or pulsating tone | 115 V AC   | KB70-3101 | 1SFA616071R3101 | 1 | 0.110 |

##### Siren element

|                                                                  |            |           |                 |   |       |
|------------------------------------------------------------------|------------|-----------|-----------------|---|-------|
| Multi function 8 diff. Tones adjustable volume adjustable 100 dB | 115 V AC   | KS70-1104 | 1SFA616073R1104 | 1 | 0.130 |
| Multi function 8 diff. Tones adjustable volume adjustable 100 dB | 230 V AC   | KS70-1204 | 1SFA616073R1204 | 1 | 0.120 |
| Multi function 7 diff. Tones adjustable volume adjustable 100 dB | 24 V DC    | KS70-2004 | 1SFA616073R2004 | 1 | 0.120 |
| Multi function 8 diff. Tones adjustable volume adjustable 100 dB | 24 V AC/DC | KS70-3004 | 1SFA616073R3004 | 1 | 0.120 |
| Continuous tone alternating 108 dB                               | 24 V DC    | KS70-2002 | 1SFA616073R2002 | 1 | 0.150 |

## Signal towers and signal beacons

### Accessories



KT70-1001

1SFC151510F0001



KA70-1001

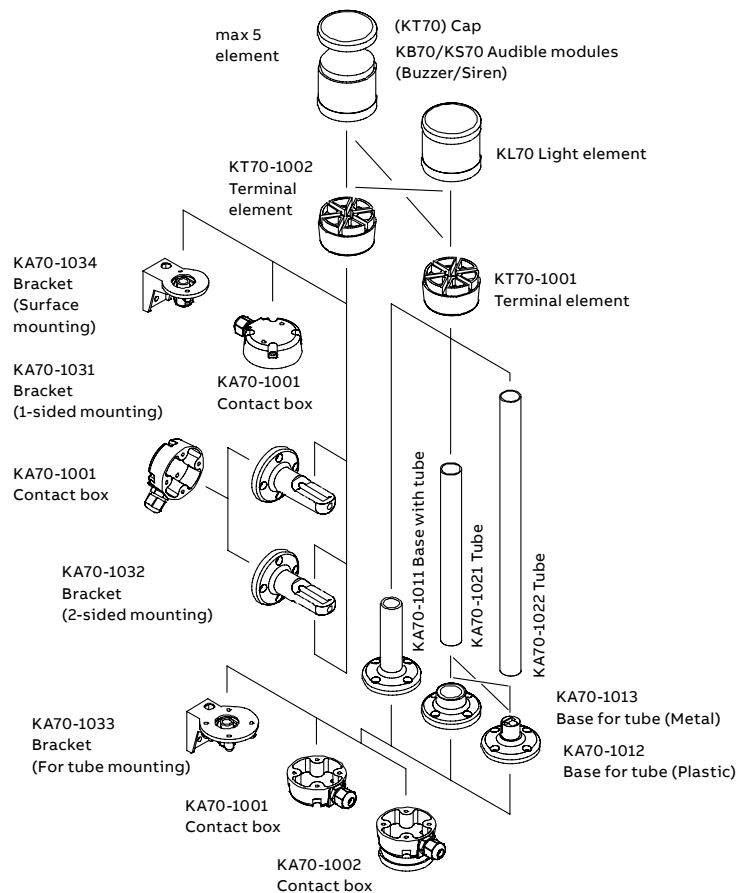
1SFC151511F0001



KA70-1034

1SFC151512F0001

| Description                        | Type      | Order code      | Pkg qty | Weight (1pce) kg |
|------------------------------------|-----------|-----------------|---------|------------------|
| <b>Terminal elements</b>           |           |                 |         |                  |
| For tube mounting, including cap   | KT70-1001 | 1SFA616075R1001 | 1       | 0.150            |
| For bracket or base, including cap | KT70-1002 | 1SFA616075R1002 | 1       | 0.150            |
| <b>Special parts</b>               |           |                 |         |                  |
| <b>Contact box</b>                 |           |                 |         |                  |
| Cable exit at side                 | KA70-1001 | 1SFA616077R1001 | 1       | 0.070            |
| Magnetic base                      | KA70-1002 | 1SFA616077R1002 | 1       | 0.070            |
| <b>Base with tube</b>              |           |                 |         |                  |
| D=25 mm L=110 mm                   | KA70-1011 | 1SFA616077R1011 | 1       | 0.060            |
| <b>Base for tube</b>               |           |                 |         |                  |
| D=25 mm, plastic                   | KA70-1012 | 1SFA616077R1012 | 1       | 0.030            |
| D=25 mm, metal                     | KA70-1013 | 1SFA616077R1013 | 1       | 0.320            |
| <b>Tube, anodized aluminum</b>     |           |                 |         |                  |
| D=25 mm L=250 mm                   | KA70-1021 | 1SFA616077R1021 | 1       | 0.080            |
| D=25 mm L=400 mm                   | KA70-1022 | 1SFA616077R1022 | 1       | 0.120            |
| D=25 mm L=800 mm                   | KA70-1023 | 1SFA616077R1023 | 1       | 0.240            |
| <b>Bracket</b>                     |           |                 |         |                  |
| 1-sided mounting, max. 5 elements  | KA70-1031 | 1SFA616077R1031 | 1       | 0.070            |
| 2-sided mounting, max. 10 elements | KA70-1032 | 1SFA616077R1032 | 1       | 0.070            |
| For tube mounting                  | KA70-1033 | 1SFA616077R1033 | 1       | 0.070            |
| For surface mounting               | KA70-1034 | 1SFA616077R1034 | 1       | 0.070            |



## Signal towers and signal beacons

### Signal beacons



KSB-401G

1SFC151513F0001



KASB-100

1SFC151514F0001

#### Description

For panel mounting with hole diameter 37 mm, with optional anti-twist device.

| Color | Rated voltage | Type | Order code | Pkg qty | Weight (1pce) kg |
|-------|---------------|------|------------|---------|------------------|
|-------|---------------|------|------------|---------|------------------|

#### Integrated LED

|          |            |                 |          |                 |   |       |
|----------|------------|-----------------|----------|-----------------|---|-------|
| ● Red    | 24 V AC/DC | Permanent light | KSB-305R | 1SFA616080R3051 | 1 | 0.140 |
| ● Green  | 24 V AC/DC | Permanent light | KSB-305G | 1SFA616080R3052 | 1 | 0.140 |
| ● Yellow | 24 V AC/DC | Permanent light | KSB-305Y | 1SFA616080R3053 | 1 | 0.140 |
| ● Red    | 24 V AC/DC | Blinking light  | KSB-306R | 1SFA616080R3061 | 1 | 0.140 |
| ● Green  | 24 V AC/DC | Blinking light  | KSB-306G | 1SFA616080R3062 | 1 | 0.140 |
| ● Yellow | 24 V AC/DC | Blinking light  | KSB-306Y | 1SFA616080R3063 | 1 | 0.140 |
| ● Red    | 24 V AC/DC | Rotating light  | KSB-307R | 1SFA616080R3071 | 1 | 0.140 |
| ● Green  | 24 V AC/DC | Rotating light  | KSB-307G | 1SFA616080R3072 | 1 | 0.140 |
| ● Yellow | 24 V AC/DC | Rotating light  | KSB-307Y | 1SFA616080R3073 | 1 | 0.140 |
| ● Red    | 115 V AC   | Permanent light | KSB-115R | 1SFA616080R1151 | 1 | 0.140 |
| ● Green  | 115 V AC   | Permanent light | KSB-115G | 1SFA616080R1152 | 1 | 0.140 |
| ● Yellow | 115 V AC   | Permanent light | KSB-115Y | 1SFA616080R1153 | 1 | 0.140 |

#### Integrated xenon tube

|          |          |                |          |                 |   |       |
|----------|----------|----------------|----------|-----------------|---|-------|
| ● Red    | 24 V DC  | Flashing light | KSB-203R | 1SFA616080R2031 | 1 | 0.140 |
| ● Green  | 24 V DC  | Flashing light | KSB-203G | 1SFA616080R2032 | 1 | 0.140 |
| ● Yellow | 24 V DC  | Flashing light | KSB-203Y | 1SFA616080R2033 | 1 | 0.140 |
| ● Blue   | 24 V DC  | Flashing light | KSB-203L | 1SFA616080R2034 | 1 | 0.140 |
| ○ Clear  | 24 V DC  | Flashing light | KSB-203C | 1SFA616080R2038 | 1 | 0.140 |
| ● Red    | 115 V AC | Flashing light | KSB-113R | 1SFA616080R1131 | 1 | 0.140 |
| ● Green  | 115 V AC | Flashing light | KSB-113G | 1SFA616080R1132 | 1 | 0.140 |
| ● Yellow | 115 V AC | Flashing light | KSB-113Y | 1SFA616080R1133 | 1 | 0.140 |
| ● Blue   | 115 V AC | Flashing light | KSB-113L | 1SFA616080R1134 | 1 | 0.140 |
| ○ Clear  | 115 V AC | Flashing light | KSB-113C | 1SFA616080R1138 | 1 | 0.140 |
| ● Red    | 230 V AC | Flashing light | KSB-123R | 1SFA616080R1231 | 1 | 0.140 |
| ● Green  | 230 V AC | Flashing light | KSB-123G | 1SFA616080R1232 | 1 | 0.140 |
| ● Yellow | 230 V AC | Flashing light | KSB-123Y | 1SFA616080R1233 | 1 | 0.140 |
| ● Blue   | 230 V AC | Flashing light | KSB-123L | 1SFA616080R1234 | 1 | 0.140 |
| ○ Clear  | 230 V AC | Flashing light | KSB-123C | 1SFA616080R1238 | 1 | 0.140 |

#### For bulb Ba 15d, bulb not included

|          |                    |                 |          |                 |   |       |
|----------|--------------------|-----------------|----------|-----------------|---|-------|
| ● Red    | 12 ... 240 V AC/DC | Permanent light | KSB-401R | 1SFA616080R4011 | 1 | 0.130 |
| ● Green  | 12 ... 240 V AC/DC | Permanent light | KSB-401G | 1SFA616080R4012 | 1 | 0.130 |
| ● Yellow | 12 ... 240 V AC/DC | Permanent light | KSB-401Y | 1SFA616080R4013 | 1 | 0.130 |
| ● Blue   | 12 ... 240 V AC/DC | Permanent light | KSB-401L | 1SFA616080R4014 | 1 | 0.130 |
| ○ Clear  | 12 ... 240 V AC/DC | Permanent light | KSB-401C | 1SFA616080R4018 | 1 | 0.130 |

#### Bulbs for light element

Bulb Ba 15d, 42 mm

max 10 W for permanent light

|                                 |          |                 |    |       |
|---------------------------------|----------|-----------------|----|-------|
| 12 V AC/DC, 7 W                 | KA3-1018 | 1SFA616922R1018 | 10 | 0.011 |
| 24 V AC/DC, 7 W                 | KA3-1028 | 1SFA616922R1028 | 10 | 0.011 |
| 115 V AC/DC, 7 W                | KA3-1118 | 1SFA616922R1118 | 10 | 0.011 |
| 220 ... 260 V AC/DC, 7 ... 10 W | KA3-1148 | 1SFA616922R1148 | 10 | 0.011 |

#### Special parts

|                   |           |                 |   |       |
|-------------------|-----------|-----------------|---|-------|
| Anti-twist device | KASB-1000 | 1SFA616087R1000 | 1 | 0.005 |
|-------------------|-----------|-----------------|---|-------|

## Signal towers and signal beacons

### Technical data

#### Signal towers K70

##### Technical specifications

|                                            |                                              |
|--------------------------------------------|----------------------------------------------|
| Housing and accessories                    | Polyamide, high impact, black                |
| Dome                                       | Polycarbonate, transparent                   |
| Fixing                                     | Base mounting, tube Ø 25mm, bracket mounting |
| Socket                                     | B 15 d, for bulb max. 7W                     |
| Connection                                 | Screw connection up to 2.5 mm <sup>2</sup>   |
| Number of modules possible 1-sided bracket | max. 5                                       |
| Number of modules possible 2-sided bracket | max. 10                                      |

##### Degrees of protection

|                  |       |           |
|------------------|-------|-----------|
| Light elements   | IP 54 | UL type 5 |
| Audible elements | IP 54 | UL type 5 |

##### Electrical data

|                             |                   |
|-----------------------------|-------------------|
| Permanent light element     | 12 ... 240 V      |
| Bulb socket B 15 d, max 7 W | Bulb not included |

##### Flashing light element 24 V DC 115 V AC 230 V AC

|                          |                   |       |       |
|--------------------------|-------------------|-------|-------|
| Flash frequency          | 1 Hz              | 1 Hz  | 1 Hz  |
| Flash energy             | 2 Ws              | 2 Ws  | 2 Ws  |
| Life duration            | 4 million flashes |       |       |
| Current consumption      | 125 mA            | 22 mA | 15 mA |
| Reduced for AS-Interface | 80 mA             | 80 mA | 80 mA |
| Starting current         | < 0.5 A at 24 V   |       |       |

##### LED permanent light element

|                     |                 |          |          |
|---------------------|-----------------|----------|----------|
|                     | 24 V AC/DC      | 115 V AC | 230 V AC |
| Life duration       | 100 000 hours   |          |          |
| Current consumption | 45 mA           | 25 mA    | 25 mA    |
| Starting current    | < 0.5 A at 24 V |          |          |

##### LED blinking light element 24 V AC/DC 115 V AC 230 V AC

|                     |                 |        |        |
|---------------------|-----------------|--------|--------|
| Life duration       | 100 000 hours   |        |        |
| Current consumption | 25 mA           | 25 mA  | 25 mA  |
| Starting current    | < 0.5 A at 24 V |        |        |
| Blink frequency     | ~ 1 Hz          | ~ 1 Hz | ~ 1 Hz |

##### LED rotation light element

|                     |                 |
|---------------------|-----------------|
|                     | 24 V AC/DC      |
| Life duration       | 50 000 hours    |
| Current consumption | 40 mA           |
| Starting current    | < 0.5 A at 24 V |
| Rotation frequency  | ~ 120 r.p.m.    |

##### Temperature

|                                       |               |
|---------------------------------------|---------------|
| Ambient temperature during operations | -20 to +50 °C |
|---------------------------------------|---------------|

#### Signal beacons KSB

##### Technical specifications

|                         |                                                            |
|-------------------------|------------------------------------------------------------|
| Housing and accessories | PC/ABS-blend, high impact, black                           |
| Dome                    | Polycarbonate, transparent                                 |
| Fixing                  | Installation mounting for Ø 37mm, (PG 29)                  |
| Bulb socket             | B 15 d, for bulb max. 10W                                  |
| Bulb change             | Via rear access with bayonet mechanism (Bulb not included) |
| Connection              | Screw connection max 2.5 mm <sup>2</sup>                   |
| Degrees of protection   | IP 65, UL type 5                                           |

##### Electrical data

|                                |                   |
|--------------------------------|-------------------|
| <b>Permanent light element</b> |                   |
| Operating voltage              | max. 250 V        |
| Life duration                  | 100 000 hours     |
| Bulb socket B 15 d, max 10 W   | Bulb not included |

##### LED version: Permanent light 24 V AC/DC

|                        |               |
|------------------------|---------------|
| Life duration          | 100 000 hours |
| Current consumption    | 45 mA         |
| Blinking light element | 24 V, AC/DC   |
| Life duration          | 100 000 hours |
| Current consumption    | 25 mA         |

##### Rotation light element 24 V AC/DC

|                     |               |
|---------------------|---------------|
| Life duration       | 100 000 hours |
| Current consumption | 70 mA         |
| Starting current    | < 0.5 A       |

##### Flashing light element

|                     |                   |          |          |
|---------------------|-------------------|----------|----------|
| Operating voltage   | 24 V AC/DC        | 115 V AC | 230 V AC |
| Flash frequency     | 1 Hz              | 1 Hz     | 1 Hz     |
| Flash energy        | 2 Ws              | 2 Ws     | 2 Ws     |
| Life duration       | 4 million flashes |          |          |
| Current consumption | 125 mA            | 20 mA    | 35 mA    |
| Starting current    | < 0.5 A           | < 0.5 A  | < 0.5 A  |

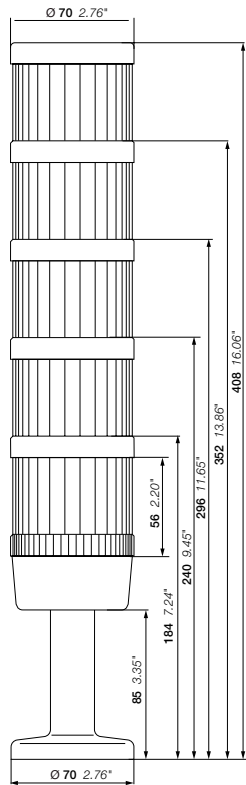
##### Temperature

|                                       |               |
|---------------------------------------|---------------|
| Ambient temperature during operations | -20 to +50 °C |
|---------------------------------------|---------------|

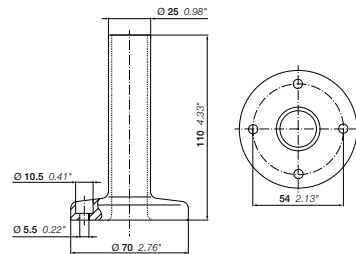
## Signal towers and signal beacons

### Dimensions and drilling plans

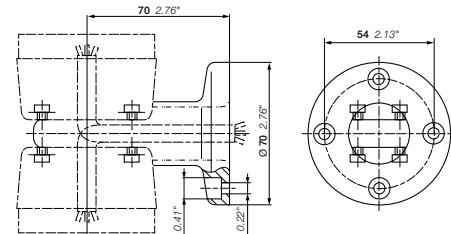
Signal towers K70



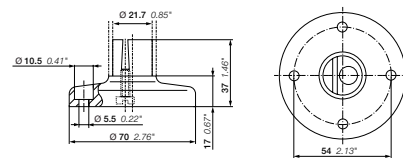
Base with integrated tube



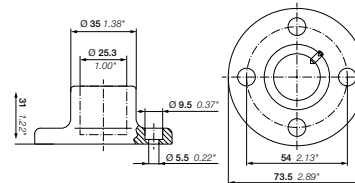
Bracket 2-sided mounting



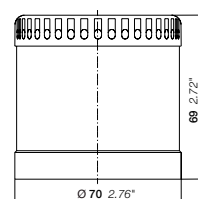
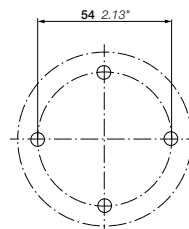
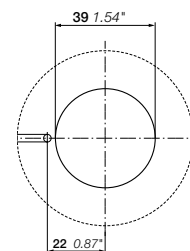
Base for tube, plastic



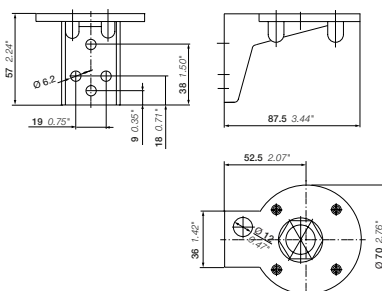
Base for tube, metal



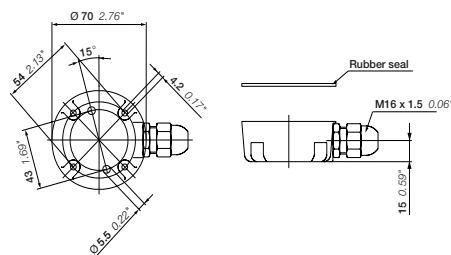
Audible module

Drilling plan for  
signal towers K70Drilling plan for  
signal beacons KSB

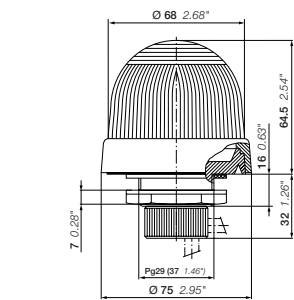
Bracket for tube mounting



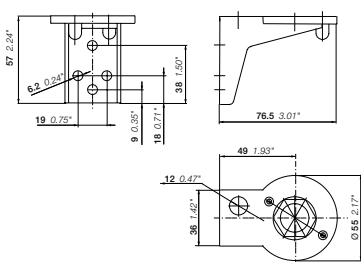
Contact box for cable exit at side



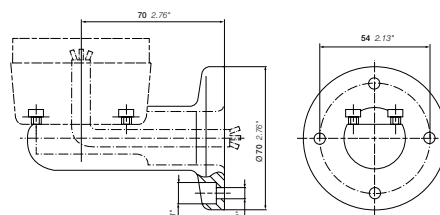
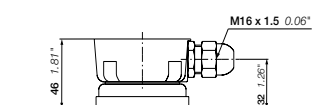
Signal beacons KSB



Bracket for surface mounting



Bracket 1-sided mounting

Contact box  
with magnetic base



## General technical data

### Color selection

#### Color selection according to IEC 60073

IEC 60073 specifies coding principles for indicators and actuators and gives recommendation regarding the use of colors. An excerpt from the standard is given below. For detailed information, see the standard.

| Meaning of colors – General principles |                    |                                  |                      |                    |
|----------------------------------------|--------------------|----------------------------------|----------------------|--------------------|
| Color                                  |                    | Safety of persons or environment | Condition of process | State of equipment |
| ● Red                                  | Red                | Danger                           | Emergency            | Faulty             |
| ● Yellow                               | Yellow             | Warning/caution                  | Abnormal             | Abnormal           |
| ● Green                                | Green              | Safe                             | Normal               | Normal             |
| ● Blue                                 | Blue               | Mandatory significance           |                      |                    |
| ○ ● White, grey, black                 | White, grey, black | No specific meaning assigned     |                      |                    |

#### Non-illuminated actuators

##### Emergency Actuators

EMERGENCY STOP / OFF actuators shall be identified by the color RED.

#### STOP / OFF actuators

WHITE, GREY and BLACK are the preferred colors for STOP / OFF actuators, with the main preference being for BLACK. RED is also permitted. GREEN shall not be used.

#### START / ON actuators

WHITE, GREY and BLACK are the preferred colors for START / ON actuators, which cause the closing of switching devices and the equipment to start, with the main preference being for WHITE. GREEN is also permitted. RED shall not be used.

#### Use of WHITE and BLACK for specific meanings

Where the colors WHITE and BLACK are used to distinguish between START / ON and STOP / OFF actuators, then the color WHITE shall be used for START / ON actuators and the color BLACK shall be used for STOP / OFF actuators.

#### The same actuators serving for START / STOP or ON / OFF

WHITE, GREY and BLACK are the preferred colors for actuators which, when actuated several times, act alternately as a START / ON and STOP / OFF actuator.

The colors YELLOW and GREEN shall not be used. The color RED shall be used only in cases where the same actuator, other than a pushbutton, is used for both EMERGENCY STOP / OFF and normal operation.

WHITE, GREY and BLACK are preferred colors for actuators which cause a movement while they are actuated and stop the movement when they are released (such as inching or jogging actuators). GREEN is also permitted. RED shall not be used.

#### RESET actuators

RESET Actuators (used, for example, with protective relays) shall be BLUE, WHITE, GREY or BLACK, except RESET actuators which also act as STOP / OFF actuators. The color of such STOP / OFF actuators shall be in accordance with STOP / OFF actuators above.

## General technical data

### Degrees of protection

In an installation, the degree of protection required for electrical equipment depends on the environmental characteristics.

The degree of protection, ensured by the enclosure of equipment or by the cubicle containing the equipment is expressed by the IP code which gives the level of protection against access to hazardous parts, the ingress of foreign bodies and/or the ingress of water, in compliance with IEC 60529, IEC 60947-1. Besides the IP symbol, the complete code has two figures followed (optionally) by two additional letters. A short description of the elements used in IP coding is given below.

| First figure  | Specifications for installation protection        |                                                                  |
|---------------|---------------------------------------------------|------------------------------------------------------------------|
|               | Against ingress of foreign bodies                 | Protection of persons<br>Against access to hazardous parts with: |
| IP 0          | No protection                                     | No protection                                                    |
| 1             | Diameter > 50 mm                                  | Back of hand                                                     |
| 2             | Diameter > 12.5 mm                                | Finger                                                           |
| 3             | Diameter > 2.5 mm                                 | Tool                                                             |
| 4             | Diameter > 1 mm                                   | Wire                                                             |
| 5             | Limited protection against dust                   | Wire                                                             |
| 6             | Total protection against dust                     | Wire                                                             |
| Second figure | Against entrance of water having a harmful effect |                                                                  |
| 0             | No protection                                     |                                                                  |
| 1             | Vertical dripping                                 |                                                                  |
| 2             | Dripping at a vertical angle of < 15°             |                                                                  |
| 3             | Rain at a vertical angle of < 60°                 |                                                                  |
| 4             | Splashing                                         |                                                                  |
| 5             | Low pressure water jet                            |                                                                  |
| 6             | Powerful water jets                               |                                                                  |
| 7             | Temporary immersion                               |                                                                  |
| 8             | Permanent immersion                               |                                                                  |
| 9K*           | High pressure, high temperature washdown          |                                                                  |

Note: the type of enclosure or cubicle in which the equipment must be installed prevails with respect to the degree of protection.

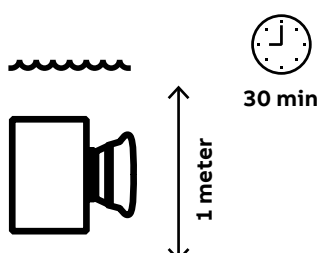
(\*) According to DIN 400 50-9.



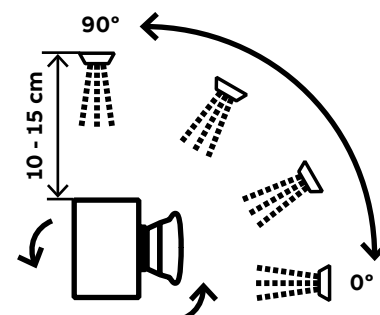
## Water tests

### IP67

The product is submerged



### IP69K



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Order code classification

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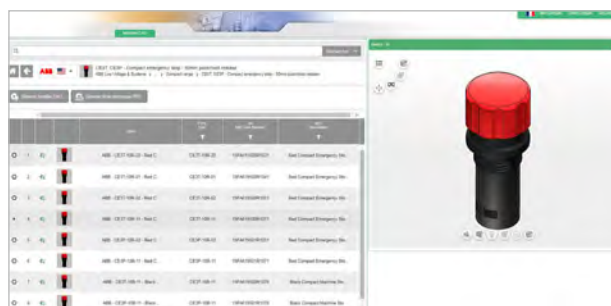


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