
Pilot devices

Signal towers and signal beacons

	Ordering details
139	Signal towers and signal beacons
141	Accessories
143	technical data
144	Dimensions and drilling plans

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 element (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
Light element with integrated LED					
● 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
Light element for bulb Ba 15d, bulb not included					
● 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 -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
Bulbs for light element					
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
LED bulbs Ba 15d, 40mA					
● 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

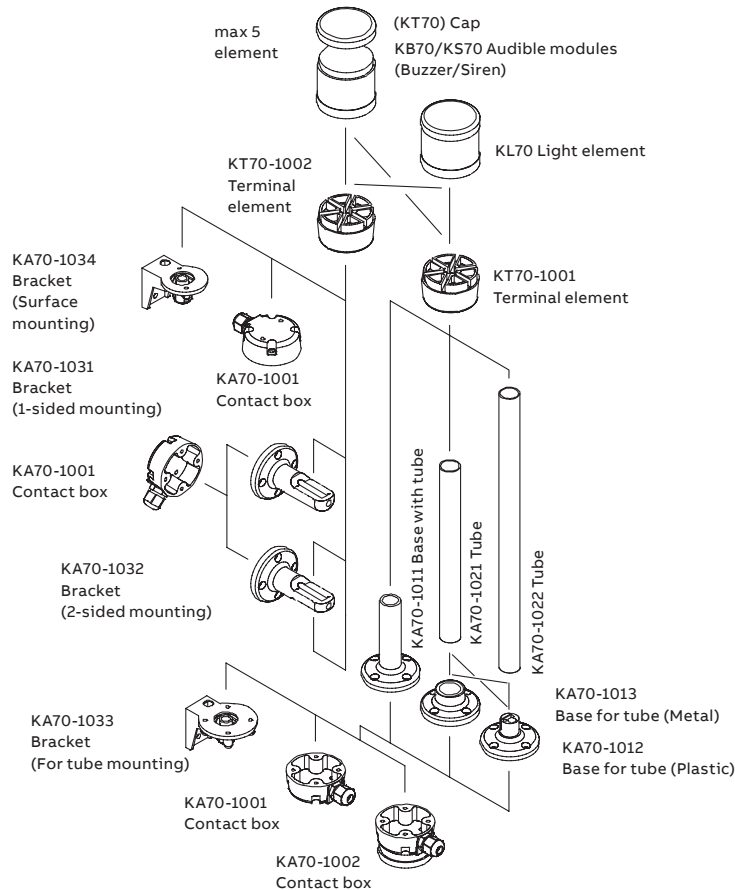
1SFC151511F0001



KA70-1034

1SFC151512F0001

Description	Type	Order code	Pkg qty	Weight (1pce) kg
Terminal elements				
For tube mounting, including cap	KT70-1001	1SFA616075R1001	1	0.150
For bracket or base, including cap	KT70-1002	1SFA616075R1002	1	0.150
Special parts				
Contact box				
Cable exit at side	KA70-1001	1SFA616077R1001	1	0.070
Magnetic base	KA70-1002	1SFA616077R1002	1	0.070
Base with tube				
D=25 mm L=110 mm	KA70-1011	1SFA616077R1011	1	0.060
Base for tube				
D=25 mm, plastic	KA70-1012	1SFA616077R1012	1	0.030
D=25 mm, metal	KA70-1013	1SFA616077R1013	1	0.320
Tube, anodized aluminum				
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
Bracket				
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

1SFC1513F0001



KASB-100

1SFC1514F0001

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

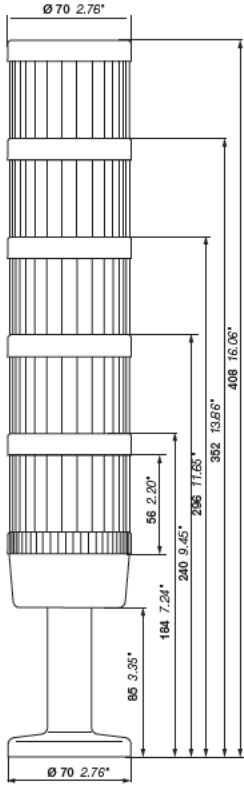
Signal towers K70			
Technical specifications			
Housing and accessories	Polyamide, high impact, black		
Dome	Polycarbonate, transparent		
Fixing	Base mounting, tube Ø 25mm, bracket mounting		
Socket	B 15 d, for bulb max. 7W		
Connection	Screw connection up to 2.5 mm ²		
Number of modules possible 1-sided 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	25mA	25mA
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	25mA	25mA
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 ²		
Degrees of protection	IP 65, UL type 5		
Electrical data			
Permanent light element			
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	20mA	35 mA
Starting current	< 0.5 A	< 0.5 A	< 0.5 A
Temperature			
Ambient temperature during operations	-20 to +50 °C		

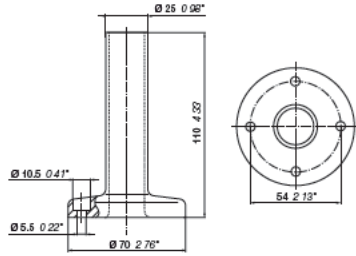
Signal towers and signal beacons

Dimensions and drilling plans

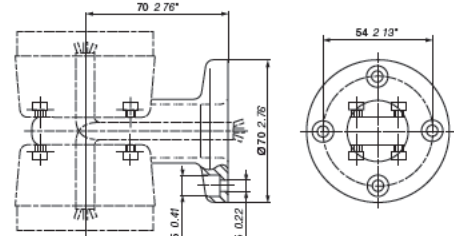
Signal towers K70



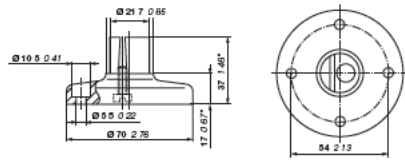
Base with integrated tube



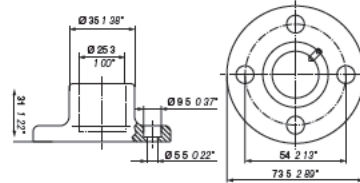
Bracket 2-sided mounting



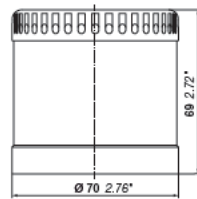
Base for tube, plastic



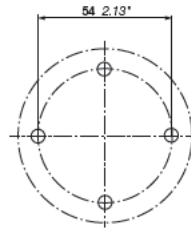
Base for tube, metal



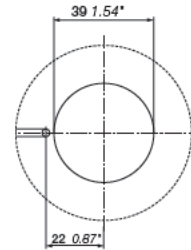
Audible module



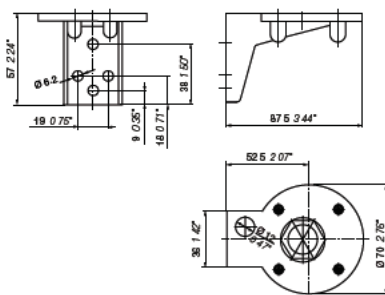
Drilling plan for signal towers K70



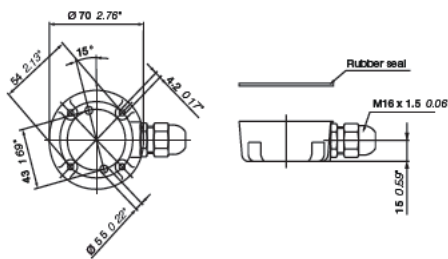
Drilling plan for signal beacons KSB



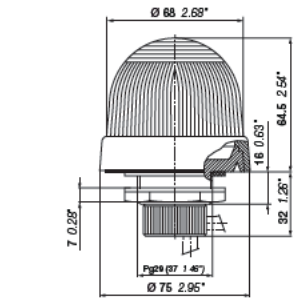
Bracket for tube mounting



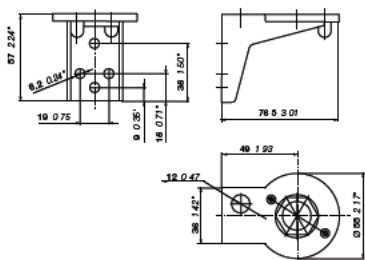
Contact box for cable exit at side



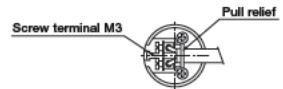
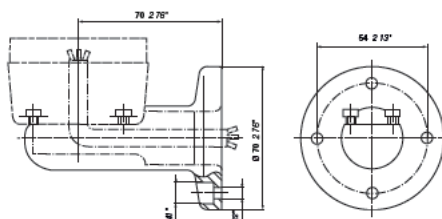
Signal beacons KSB



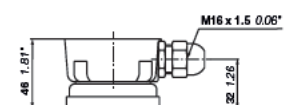
Bracket for surface mounting



Bracket 1-sided mounting



Contact box with magnetic base



Color selection

General technical data

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	Danger	Emergency	Faulty
●	Yellow	Warning/caution	Abnormal	Abnormal
●	Green	Safe	Normal	Normal
●	Blue	Mandatory significance		
●●●	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.

Degrees of protection

General technical data

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	Protection of persons
	Against ingress of foreign bodies	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	



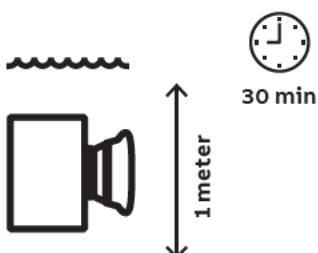
Note the type of enclosure or cubicle in which the equipment must be installed prevails with respect to the degree of protection

(*) According to DIN 400 50-9

Water tests

IP67

The product is submerged



IP69K

