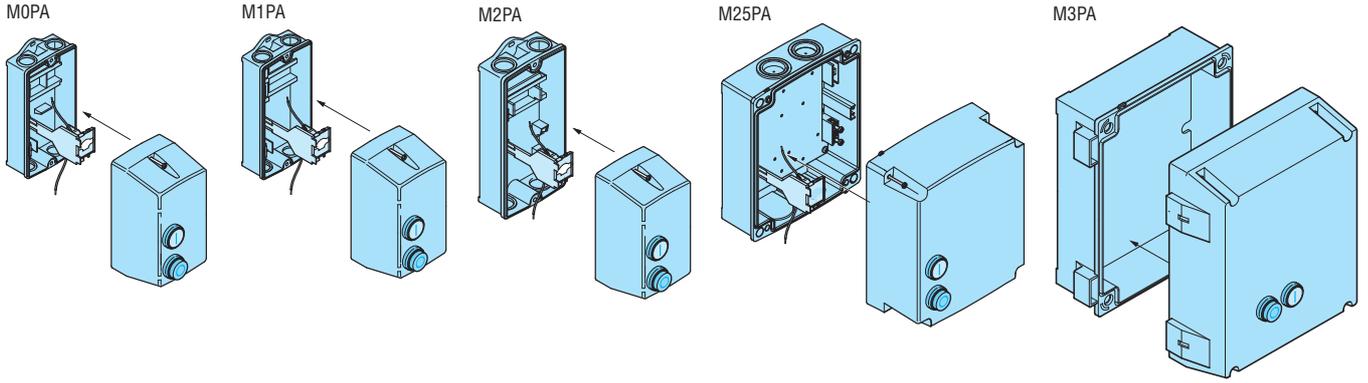
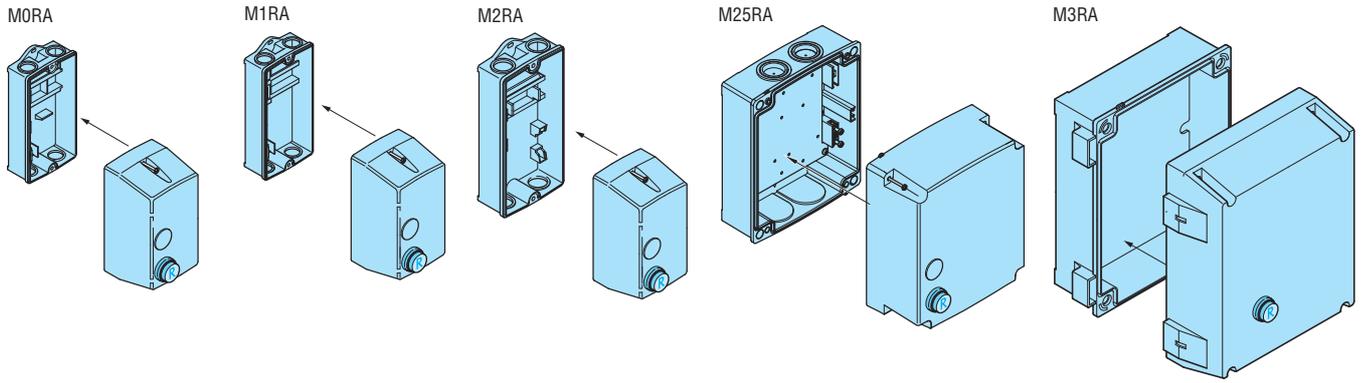


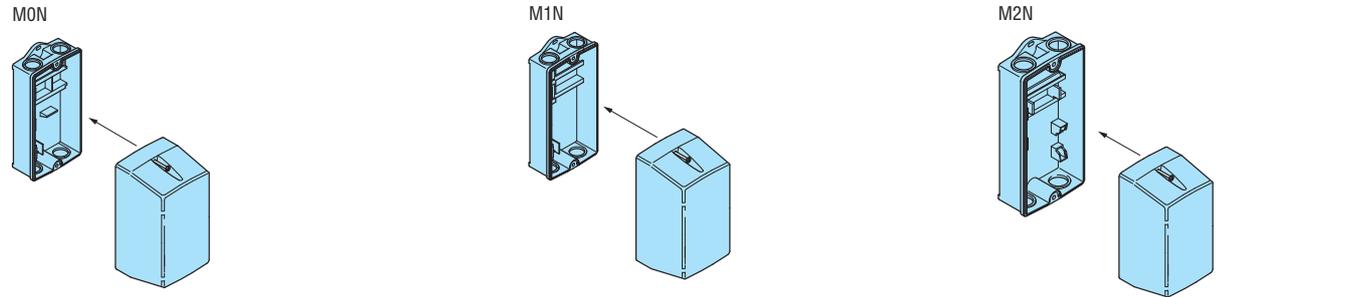
M...PA EMPTY ENCLOSURES



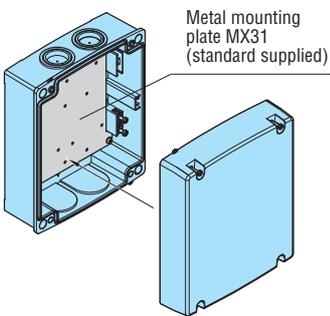
M...RA EMPTY ENCLOSURES



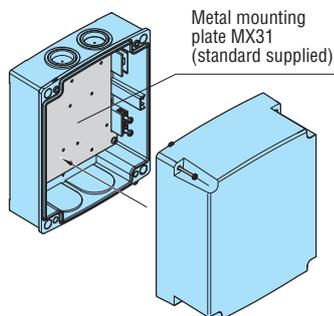
M...N EMPTY ENCLOSURES



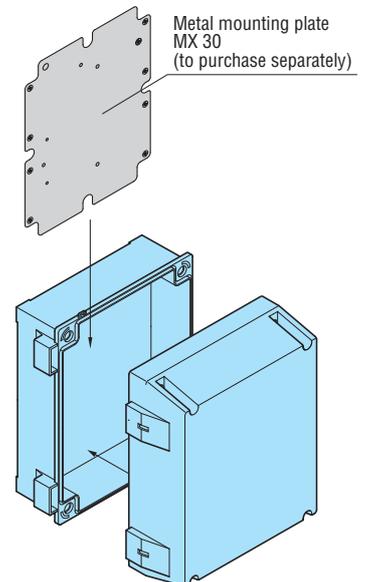
M24N



M25N



M3N



Electromechanical starters

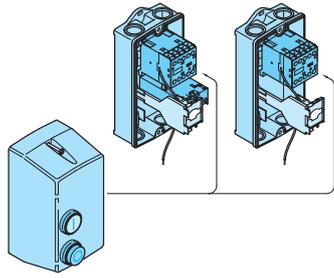
Direct-on-line starters - Full voltage across the line.

Non reversing three phase

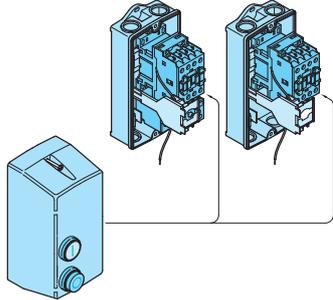
4

M...P... STARTERS, ENCLOSED

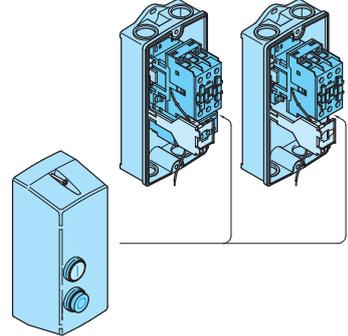
M0 P009 12... M0 P009 10...
M0 P012 12... M0 P012 10...



M1 P009 12... M1 P009 10...
M1 P018 12... M1 P018 10...

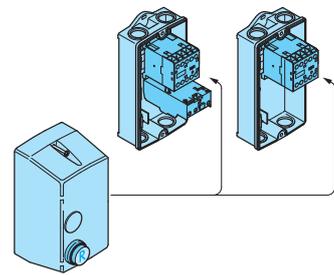


M2 P025 12... M2 P025 10...
M2 P032 12... M2 P032 10...

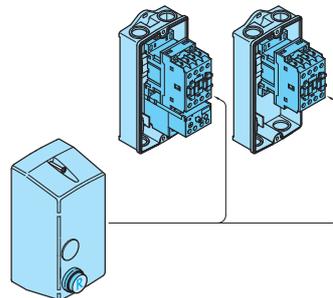


M...R... STARTERS, ENCLOSED

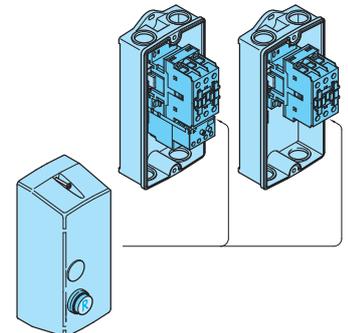
M0 R009 12... M0 R009 10...
M0 R012 12... M0 R012 10...



M1 R009 12... M1 R009 10...
M1 R018 12... M1 R018 10...

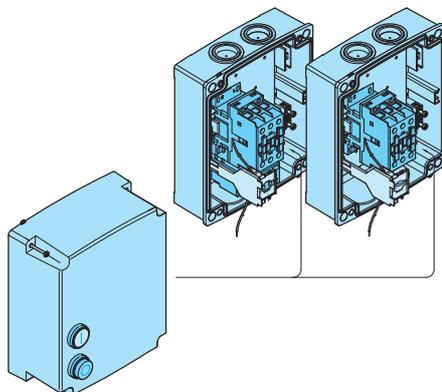


M2 R025 12... M2 R025 10...
M2 R032 12... M2 R032 10...

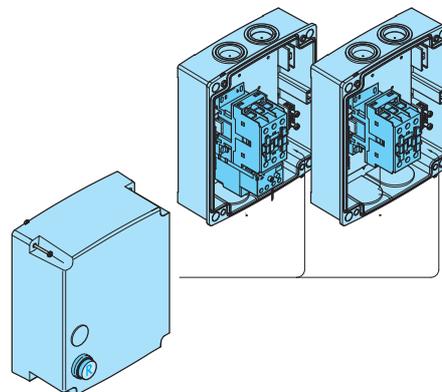


M25... STARTERS, ENCLOSED

M25 P03812... M25 P03810...



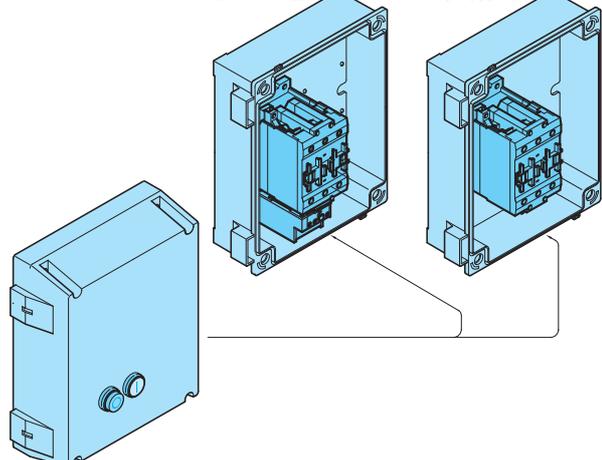
M25 R03812... M25 R03810...



M3... STARTERS, ENCLOSED

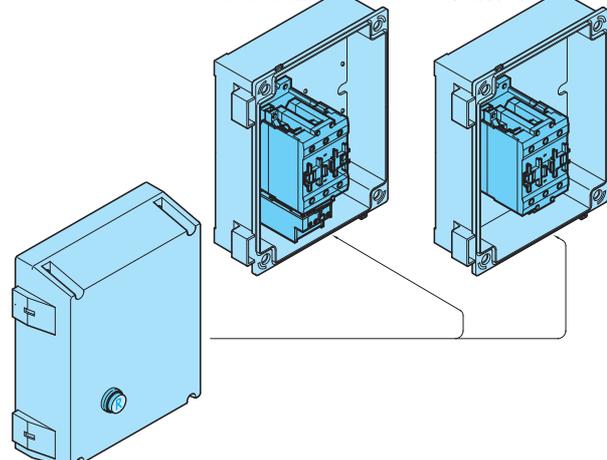
M3 P050 12... to
M3 P095 12...

M3 P050 10... to
M3 P095 10...



M3 R050 12... to
M3 R095 12...

M3 R050 10... to
M3 R095 10...



Maximum combinations for M0... and M1... starters in enclosure

For the fitting of add-on blocks and electronic relays in the starters, consult our Customer Service; see contact details on inside front cover.

The enclosure cover can be equipped with various types of actuators and pilot lights, per following details:

1) Upper position 1

The cover must be drilled in this position, with a 22.5mm hole, by the user and LPL... or 8 LP2T IL...P pilot light can be fitted.

To fit the LPL... (not type 8 LP2T IL...P) pilot light head, the mounting base, type MX 20P for M0 enclosure or type MX 21P for M1 enclosure, must also be purchased. The LED element is snapped onto this mounting base.

No adapter or base is needed for 8 LP2T IL...P and 8 LP2T Z...

2) Middle position 2

Based on the enclosure type, in this position, the user finds either the Start button or threaded plug. Various PLatinum actuators can be fitted in this position, such as flush or extended buttons, selectors or pilot lights, as illustrated below.

To fit the actuators (not required for 8 LP2T IL...P pilot lights), the mounting base, type MX 20 for M0 enclosure, or type MX 21P for M1 enclosure, must also be purchased. The contact or LED elements are snapped onto this mounting base.

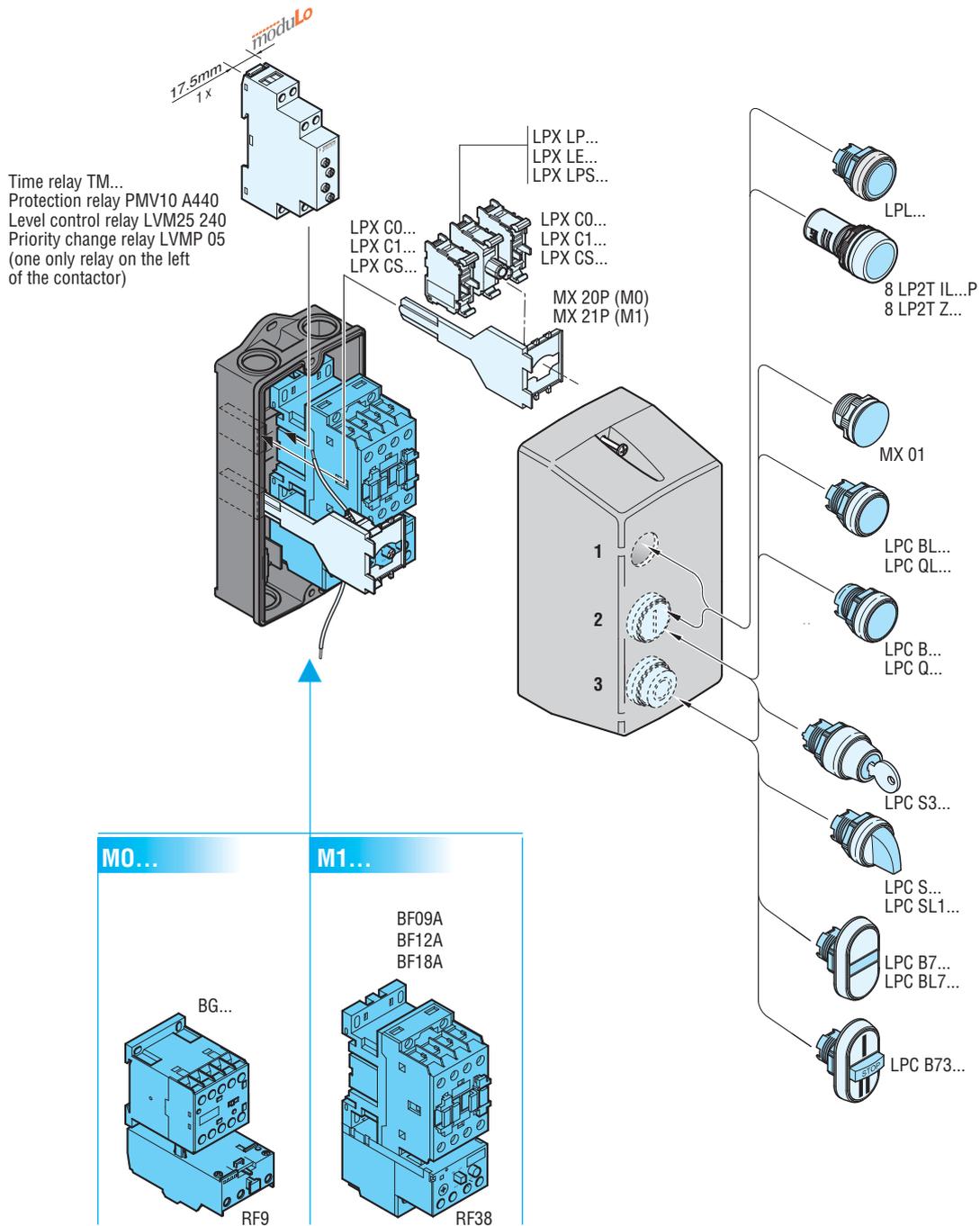
No adapter or base is needed for 8 LP2T IL...P and 8 LP2T Z...

3) Lower position 3

The STOP/RESET button is mounted in this position, except for the enclosure without buttons.

This button activates the thermal overload relay via a mechanical actuator.

In eventual applications without thermal overload relay, this button can be removed and the hole closed up by the threaded plug MX 01.



Maximum combinations for M2... starters in enclosure

For the fitting of add-on blocks and electronic relays in the starters, consult our Customer Service; see contact details on inside front cover.

The enclosure covers can be equipped with various types of actuators and pilot lights, per following details:

1) Upper position 1

The cover must be drilled in this position with a 22.5mm hole by the user; LPL... or 8 LP2T IL...P pilot light can be fitted.

To fit the LPL... pilot light, the mounting base type MX 21P must also be purchased. The LED element is snapped onto this mounting base.

No adapter or base is needed for 8 LP2T IL...P and 8 LP2T Z...

2) Middle position 2

Based on the enclosure type, in this position, the user finds either the Start button or threaded plug.

Various **PLatinum** actuators can be fitted in this position, such as flush or extended buttons, selectors or pilot lights, as illustrated in the side figure.

To fit the actuators (not required for 8 LP2T IL...P pilot light), the mounting base type MX 21P must also be purchased.

The contact or LED elements are snapped onto this mounting base.

No adapter or base is needed for 8 LP2T IL...P and 8 LP2T Z...

3) Lower position 3

The STOP/RESET button is mounted in this position, except for the enclosure without buttons.

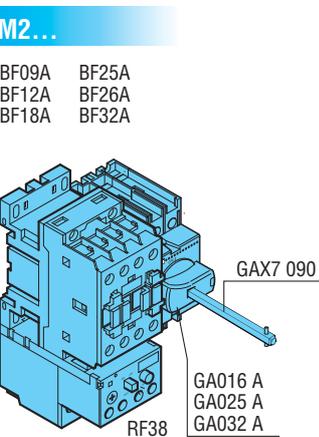
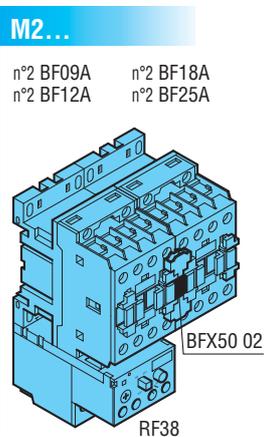
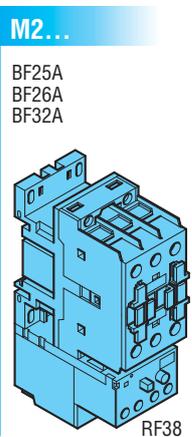
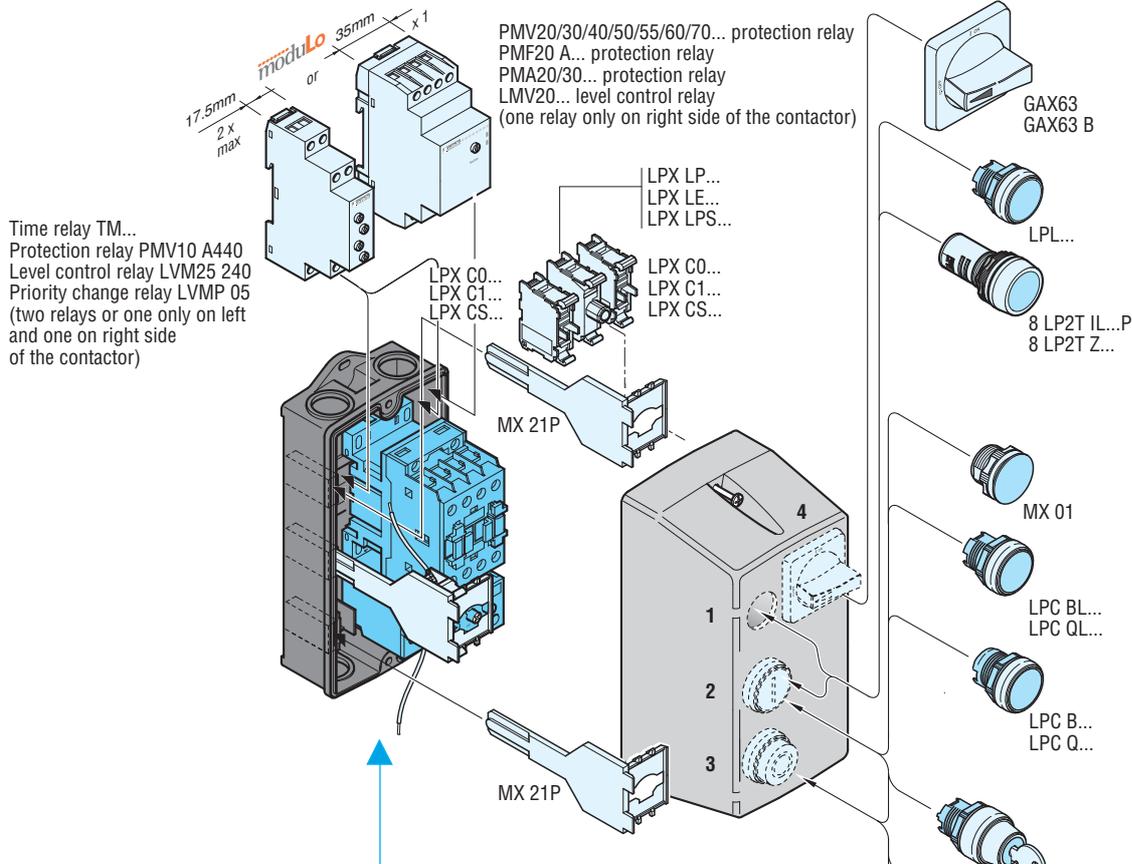
This button activates the thermal overload relay via a mechanical actuator. In eventual applications without thermal overload relay, this button can be removed and the hole closed up by the threaded plug MX 01.

Various **PLatinum** actuators can be fitted in this position, such as flush or extended buttons, selectors or pilot lights, as illustrated in the drawing below. To fit the actuators (not required for 8 LP2T IL...P pilot light), the mounting base type MX 21P must also be purchased. The contact or LED elements are snapped onto this mounting base.

No adapter or base is needed for 8 LP2T IL...P and 8 LP2T Z...

4) Upper position 4

The cover must be drilled in this position with a 22.5mm hole by the user whenever an external handle is needed for a switch disconnecter fitted in the enclosure.



Maximum combinations for starters in M24N enclosure

In addition to a direct-on-line, full voltage across the line, starter or reversing contactor assembly, various other electromechanical devices can be fitted. The cover of the M24N enclosure can be used across the entire surface to mount pushbuttons, measuring instruments, switch disconnectors GA016A...GA032A type. No contact blocks or other additional accessories can be mounted on the contactor face of AC BF series; they can only be fitted on the contactor side since the cover is shallow.

Eventually pushbuttons, selector switches and/or other control accessories of the **PLatinum** series can be used and contact or LED elements can be mounted directly inside on the cover with the LPX AU120 mounting adapter; refer to section 7.

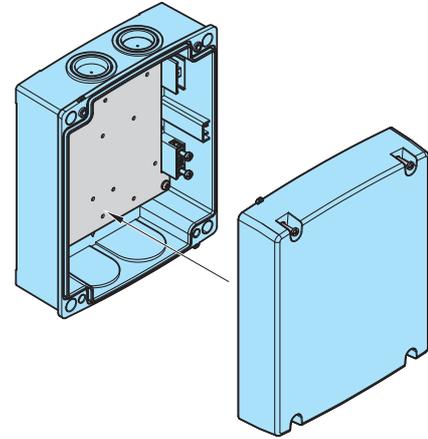
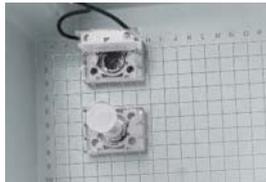
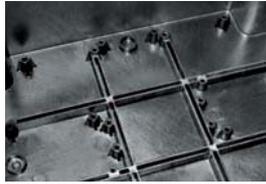
MX 31 internal metal mounting plate is standard-supplied.

The wall fixing holes and the cover closing captive **screws** are positioned **outwards** with respect to the sealing gasket. This guarantees the protection degree of the enclosure against infiltrations liquid (IEC IPX5 / UL Type 4X).

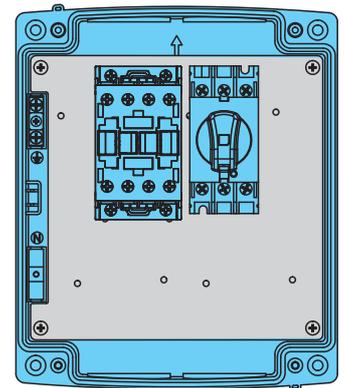
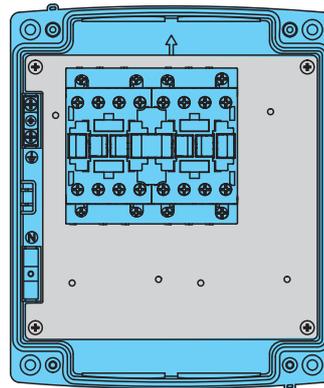
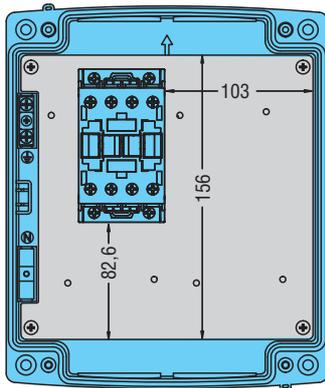
The base has **ribbing** which facilitates the fixing of DIN rails, metal mounting plates and electronic printed boards.

Grid references, marked by letters and numbers, are engraved on the interior surface of the cover. This grid allows to quickly identify the exact drilling points where pushbuttons, handles or pilot lights will be mounted.

A **safety sealing** system keeps the cover and base together to avoid inopportune opening and tampering.

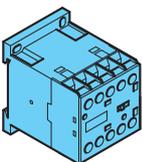


Available space for fitting other electrical or electronic devices



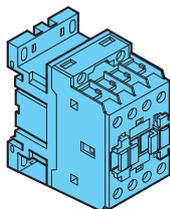
M24N

BG06
BG09
BG12
without overload



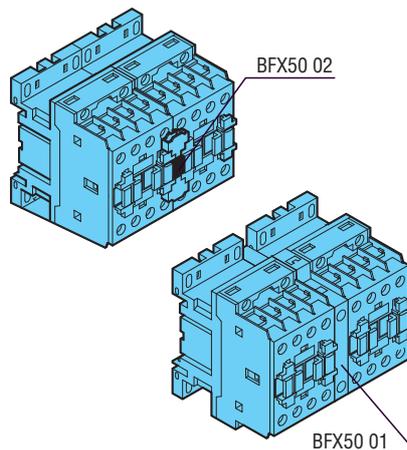
M24N

BF09A...BF25A
without overload



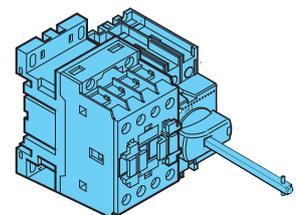
M24N

BGR... - BGT... - BGC... without overload
n° 2 BF09A n° 2 BF12A
n° 2 BF18A n° 2 BF25A
All without overload
BFA...42 without overload



M24N

BF09A BF12A
BF18A BF25A
with GA016A...GA032A



4

Maximum combinations for starters in M25... enclosure

In addition to a direct-on-line, full voltage across the line, starter or reversing contactor assembly, various other electromechanical devices can be fitted. The cover of the M25 enclosure can be used across the entire surface to mount pushbuttons, measuring instruments, switch disconnectors GA016A...GA040A type. Possible contact blocks or other additional accessories can be mounted on the contactor face of AC or DC BF series or on the contactor side since the cover is deep. Eventually pushbuttons, selector switches and/or other control accessories of the **PLatinum** series can be used and contact or LED elements can be mounted directly inside on the cover with the LPX AU120 mounting adapter; refer to section 7.

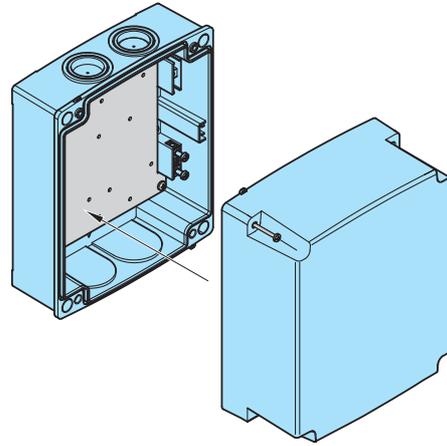
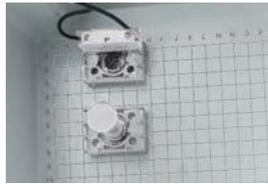
MX 31 internal metal mounting plate is standard-supplied.

The wall fixing holes and the cover closing captive **screws** are positioned **outwards** with respect to the sealing gasket. This guarantees the protection degree of the enclosure against liquid infiltrations (IEC IPX5 / UL Type 4X).

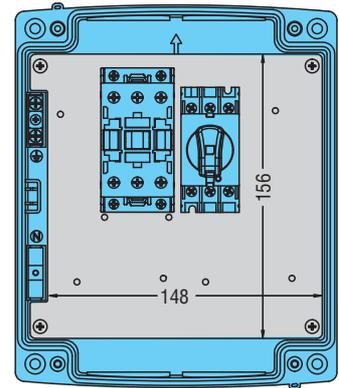
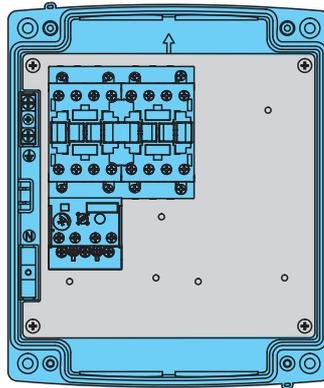
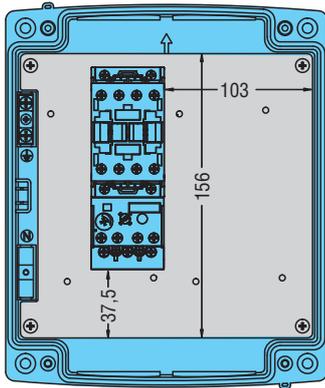
The base has **ribbing** which facilitates the fixing of DIN rails, metal mounting plates and electronic printed boards.

Grid references, marked by letters and numbers, are engraved on the interior surface of the cover. This grid allows to quickly identify the exact drilling points where pushbuttons, handles or pilot lights will be mounted.

A **safety sealing** system keeps the cover and base together to avoid inopportune opening and tampering.

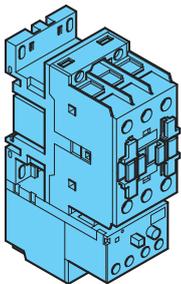


Available space for fitting other electrical or electronic devices



M25...038...

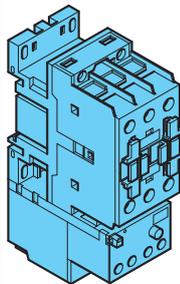
BF38
with or without
overload



RF38...

M25...

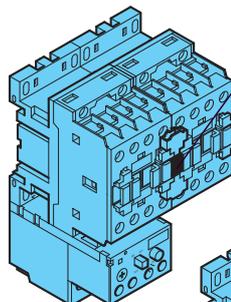
BF26 - BF32
with or without
overload



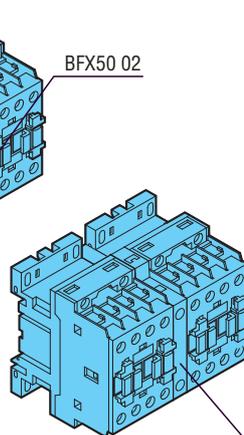
RF38...

M25...

BGR... - BGT... - BGC with or without overload RF9
n° 2 BF26 - n° 2 BF32 - n° 2 BF38 with or without
overload RF38
BFA...42 with or without overload RF38



RF38...

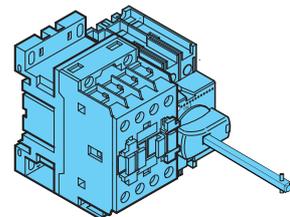


BF50 02

BF09A...BF38A with
BF50 01

M25...

BF09 BF12 BF18
BF26 BF32 BF38
with GA016A...GA040A

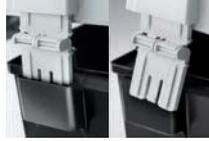


Maximum combinations for starters in M3... enclosure

In addition to a direct-on-line, full voltage across the line, starter or reversing contactor assembly, star-delta starters can be installed as illustrated at the lower right as well as various other electromechanical devices. The cover of the M3 enclosure can be used across the entire surface to mount pushbuttons, measuring instruments or switch disconnectors GA016A...GA125A, etc.

MX 30 internal metal mounting plate is standard supplied with M3P... and M3R... types; not included with the M3N, it can be purchased separately.

With the specifically designed **hinges**, the cover remains attached to the base, fully open, while the wiring work is being carried out. By applying **slight pressure** on the hinges, the cover can be released from the base.



The cover closing captive **screws** and the wall fixing holes are positioned **outwards** with respect to the sealing gasket. This guarantees the protection degree of the enclosure against liquids infiltrations (IEC IPX5 / UL Type 4X).



A **safety sealing** system keeps the cover and base together to avoid inopportune opening and tampering.



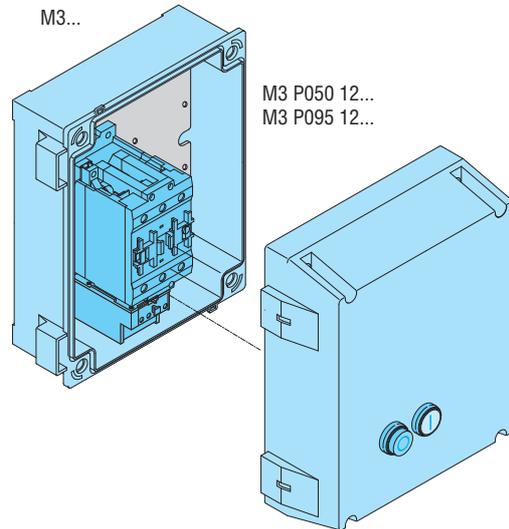
Grid references, marked by letters and numbers, are engraved on the interior surface of the cover. This grid allows to quickly identify the exact drilling points where pushbuttons, handle or pilot lights will be mounted.



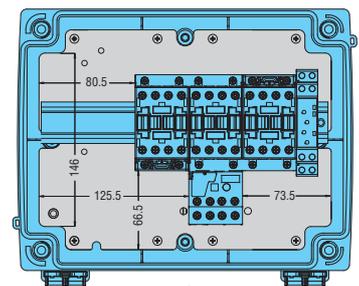
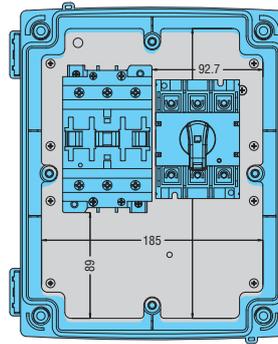
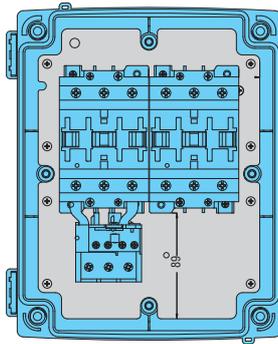
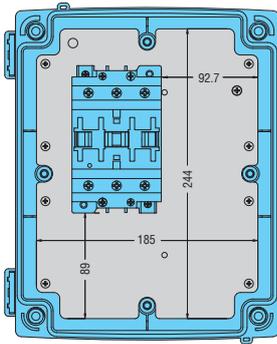
A properly predrilled metal mounting plate (MX 30 standard supplied except for M3N) permits to quickly and precisely fix equipment in place.



The base has **ribbing** which facilitates the fixing of DIN rails, metal mounting plates and electronic printed boards.

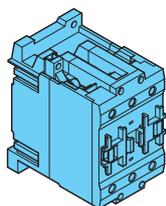


Available space for fitting other electrical or electronic devices



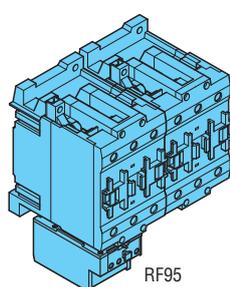
M3...

n° 1 BF50 n° 1 BF95
n° 1 BF65 n° 1 BF110
n° 1 BF80



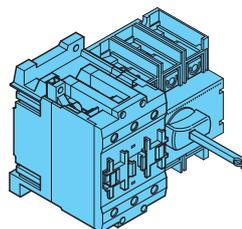
M3...

n° 2 BF50 n° 2 BF65 n° 2 BF95
n° 2 BF80 n° 2 BF110



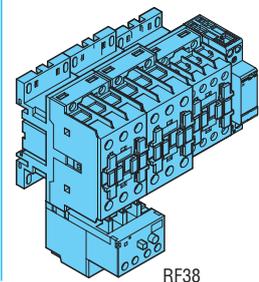
M3...

n° 1 BF50 n° 1 BF65 n° 1 BF95 + n° 1 GA...
n° 1 BF80 n° 1 BF110



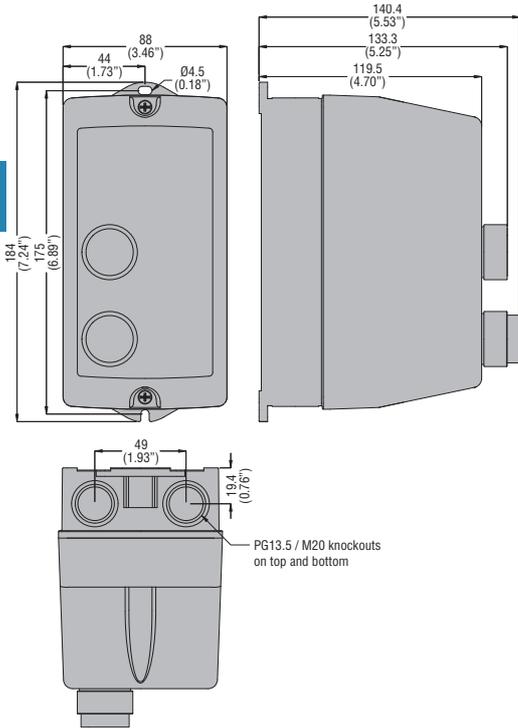
M3P...70

Star-delta combinations with t/o relay RF38, TM ST timer and contactors: BF09A BF12A BF18A BF25A BF26A BF38A

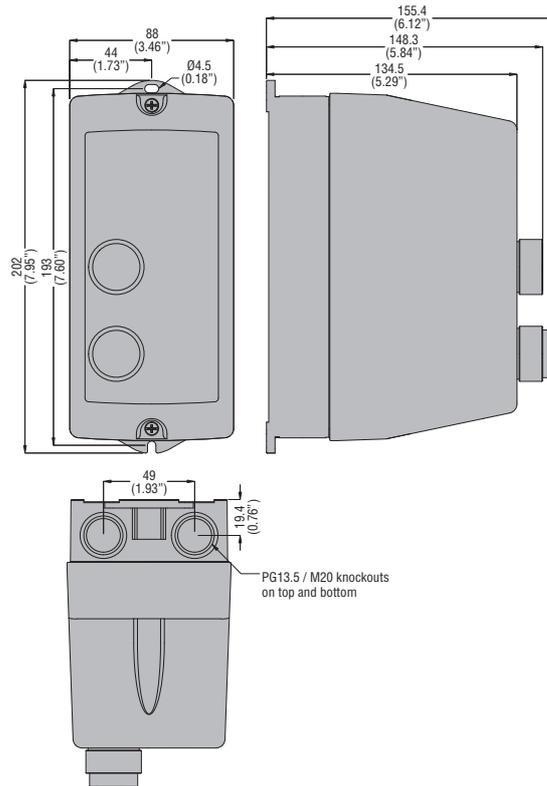


DIRECT-ON-LINE STARTERS - EMPTY ENCLOSURES

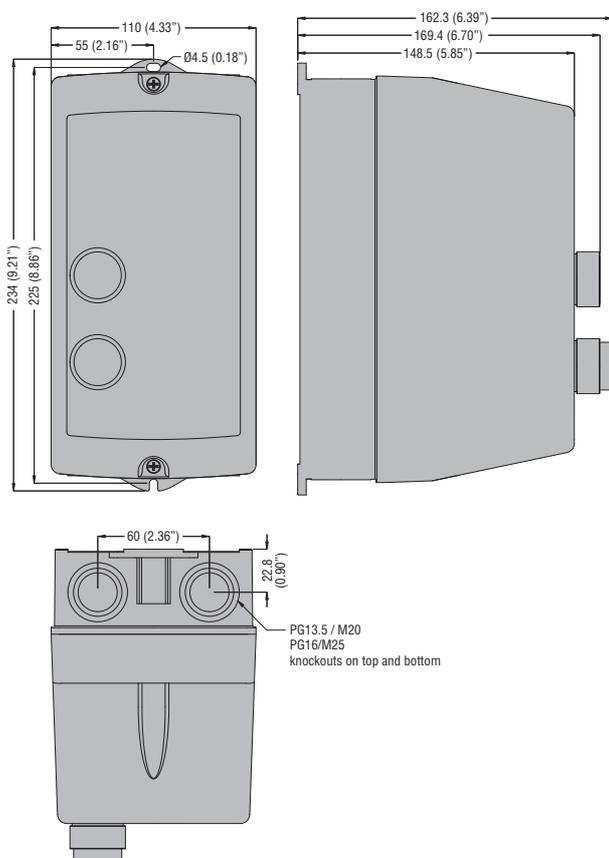
M0



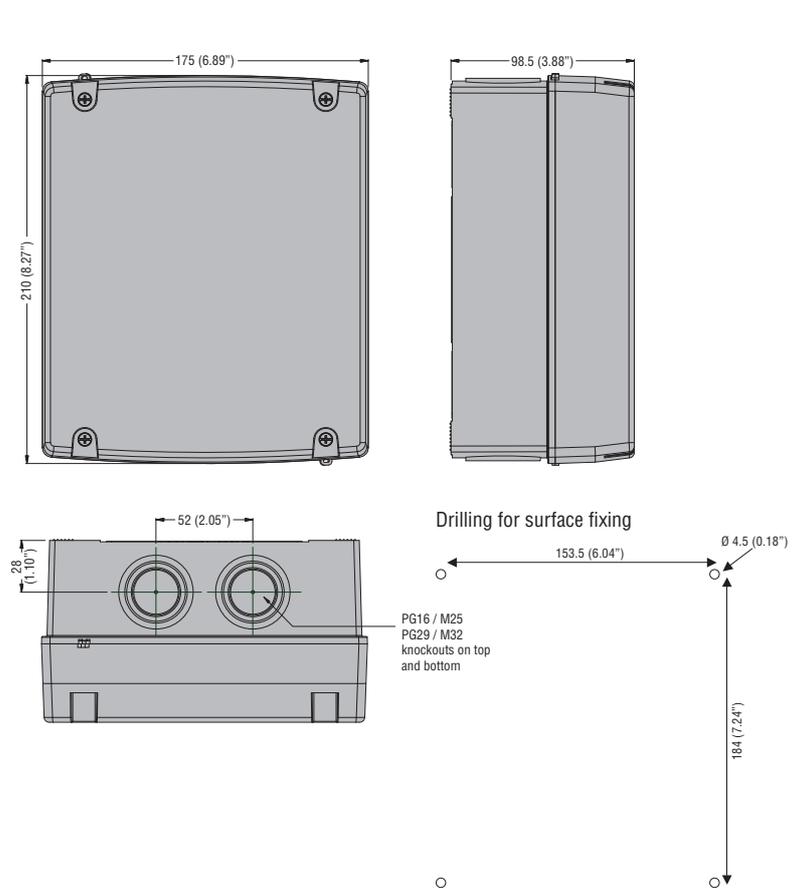
M1



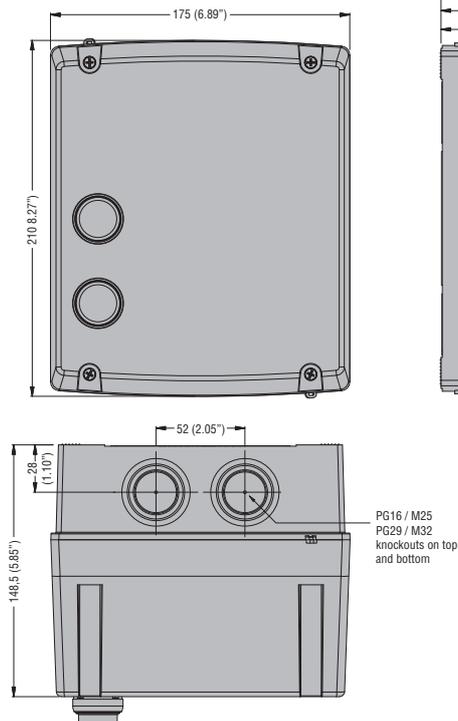
M2



M24N

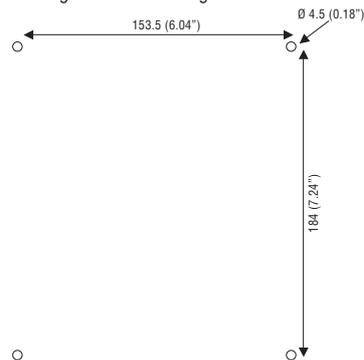


M25

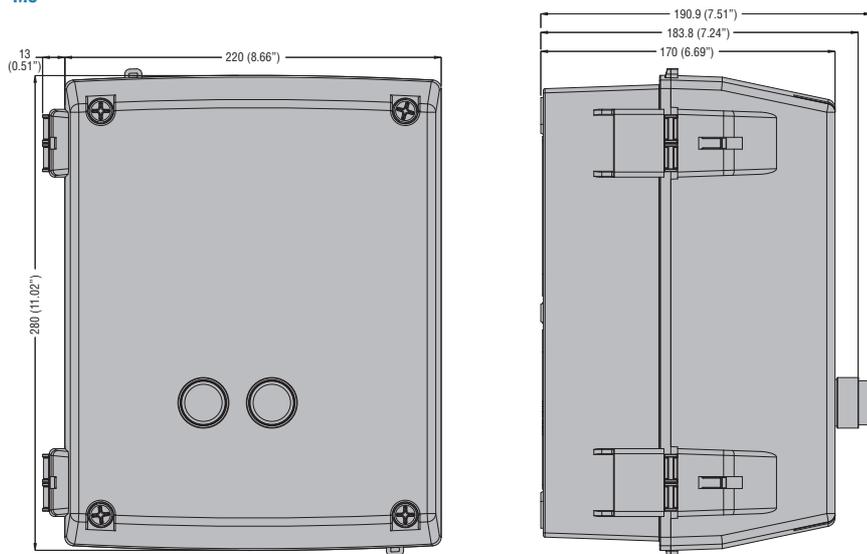


PG16 / M25
PG29 / M32
Knockouts on top
and bottom

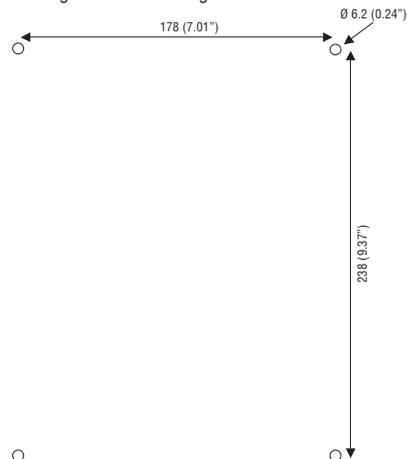
Drilling for surface fixing



M3

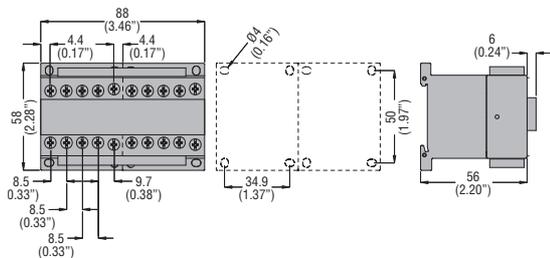


Drilling for surface fixing

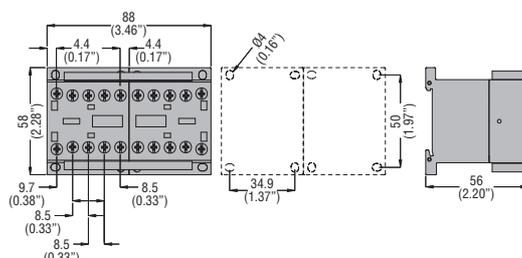


REVERSING CONTACTOR ASSEMBLIES

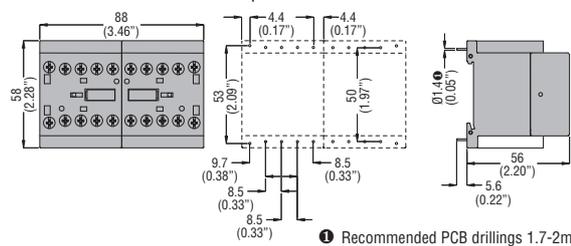
BGR... with external interlock



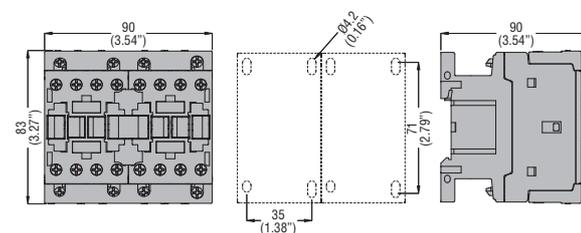
BGT... with internal interlock



BGTP... with rear PCB solder pins and internal interlock



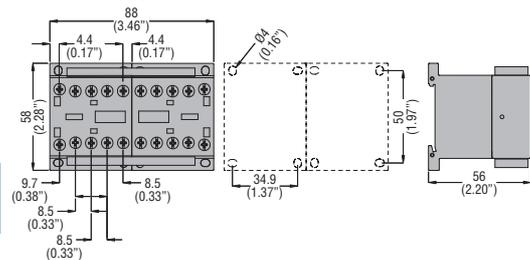
BFA...42 with external interlock



Recommended PCB drillings 1.7-2mm (0.07-0.08").

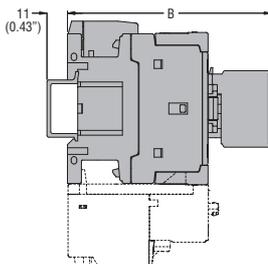
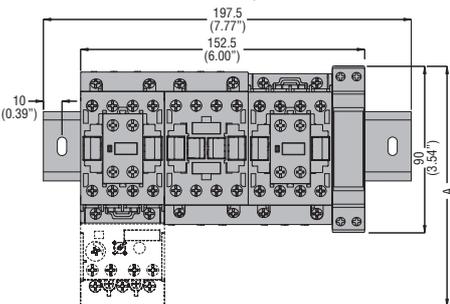
CHANGEOVER CONTACTOR ASSEMBLIES

BGC09 T4... with internal interlock



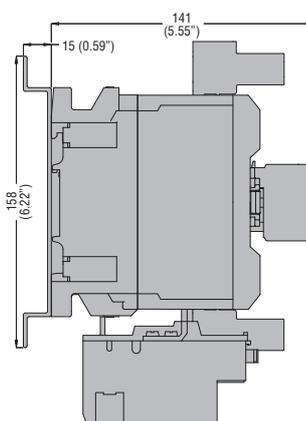
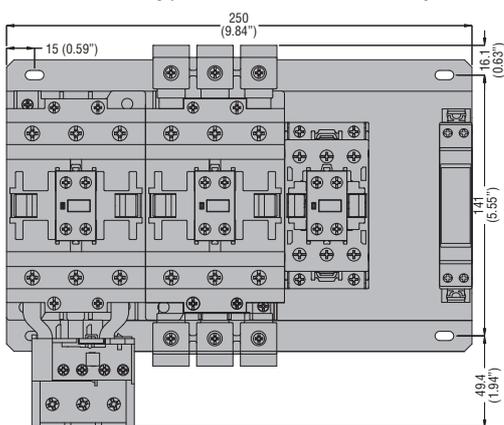
STAR-DELTA STARTERS OPEN FRAME

BFA... 70... on 35mm DIN rail, without thermal overload relay

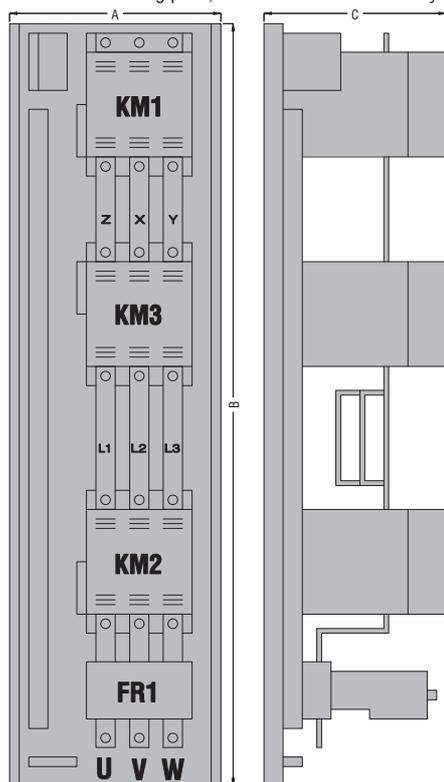


STARTER TYPE	A	B
BFA009 70	130.5 (5.14")	109.5 (4.31")
BFA012 70	130.5 (5.14")	109.5 (4.31")
BFA018 70	130.5 (5.14")	109.5 (4.31")
BFA025 70	130.5 (5.14")	109.5 (4.31")
BFA026 70	135 (5.14")	119 (4.68")
BFA032 70	135 (5.14")	119 (4.68")
BFA038 70	135 (5.14")	119 (4.68")

DYF... on mounting plate, with thermal overload relay



NYF... on mounting plate, with thermal overload relay



STARTER TYPE	A	B	C
NYF115	340 (13.38")	870 (34.25")	195 (7.68")
NYF145	340 (13.38")	870 (34.25")	195 (7.68")
NYF180	340 (13.38")	870 (34.25")	195 (7.68")
NYF250	440 (17.32")	1000 (39.37")	235 (9.25")
NYF310	440 (17.32")	1000 (39.37")	235 (9.25")
NYF400	440 (17.32")	1000 (39.37")	235 (9.25")

Electromechanical starters

Dimensions [mm (in)]

STAR-DELTA STARTERS IN ENCLOSURE - EMPTY ENCLOSURE FOR STAR-DELTA STARTERS
M3P...70 - M3 PA70

