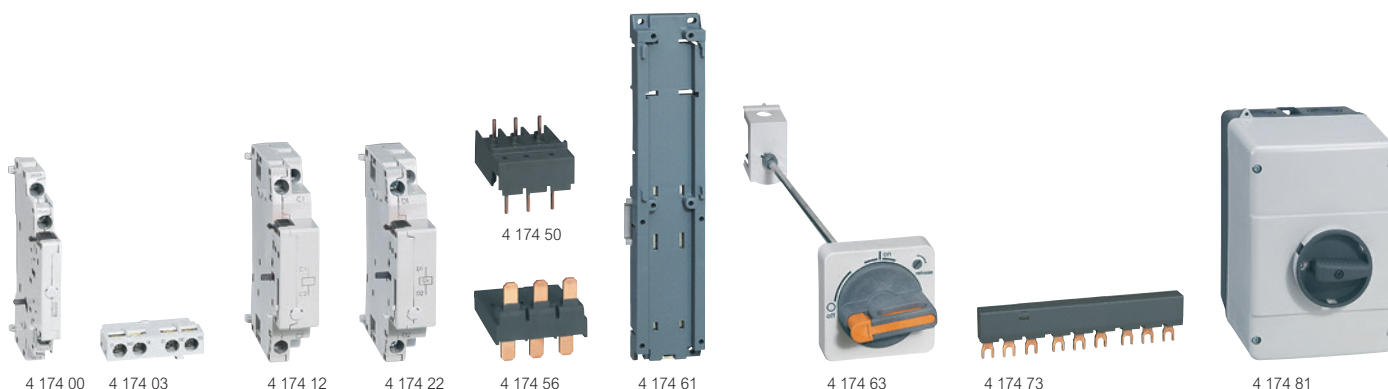


# MPCBs MPX<sup>3</sup>

## accessories







| Pack | Cat. Nos | Accessories  | Pack | Cat. Nos | Accessories   |
|------|----------|--|------|----------|---|
|      |          | <b>Auxiliary contacts</b>  |      |          | <b>Direct adaptator and mounting unit</b>   |
|      |          | 2-pole   |      |          | For mounting CTX <sup>3</sup> contactors under MPX <sup>3</sup> MPCBs                           |
|      |          | <b>Side mounting</b>   |      |          | <b>Direct adaptators</b>  |
|      |          | Mounting on the left side of MPCBs   |      |          | Used to connect MPX <sup>3</sup> directly with the contactor                                    |
|      |          | One module per MPCB  | 2    | 4 174 48 | For MPX <sup>3</sup> 32S with CTX <sup>3</sup> 22 AC (p. 176)                                   |
| 2    | 4 174 00 | 1 NO + 1 NC  | 2    | 4 174 49 | For MPX <sup>3</sup> 32S with CTX <sup>3</sup> 22 DC (p. 176)                                   |
| 2    | 4 174 01 | 2 NO   | 2    | 4 174 50 | For MPX <sup>3</sup> 32H/32MA with CTX <sup>3</sup> 22 AC (p. 176)                              |
| 2    | 4 174 02 | 2 NC   | 2    | 4 174 51 | For MPX <sup>3</sup> 32H/32MA with CTX <sup>3</sup> 22 DC (p. 176)                              |
|      |          | <b>Front mounting</b>  | 2    | 4 174 52 | For MPX <sup>3</sup> 32S with CTX <sup>3</sup> 40 AC (p. 176)                                   |
|      |          | One module per MPCB  | 2    | 4 174 53 | For MPX <sup>3</sup> 32S with CTX <sup>3</sup> 40 DC (p. 176)                                   |
| 10   | 4 174 03 | 1 NO + 1 NC  | 2    | 4 174 54 | For MPX <sup>3</sup> 32H/32MA with CTX <sup>3</sup> 40 AC (p. 176)                              |
| 10   | 4 174 04 | 2 NO   | 2    | 4 174 55 | For MPX <sup>3</sup> 32H/32MA with CTX <sup>3</sup> 40 DC (p. 176)                              |
| 10   | 4 174 05 | 2 NC   | 2    | 4 174 56 | For MPX <sup>3</sup> 63H with CTX <sup>3</sup> 65 AC with lug type terminals (p. 176)           |
|      |          | <b>Alarm contacts</b>  | 2    | 4 174 57 | For MPX <sup>3</sup> 63H with CTX <sup>3</sup> 65 DC with cage type terminals (p. 176)          |
|      |          | 1 NO + 1 NC  | 1    | 4 174 58 | For MPX <sup>3</sup> 100H with CTX <sup>3</sup> 100 AC with cage type terminals (p. 176)        |
|      |          | <b>Any trip alarm contact</b>  | 1    | 4 174 59 | For MPX <sup>3</sup> 100H with CTX <sup>3</sup> 100 DC with cage type terminals (p. 176)        |
|      |          | Operate in case of trip  |      |          | <b>Mounting unit</b>  |
|      |          | Mounting on the left side of MPCBs   |      |          | This device is used for joining together MPX <sup>3</sup> MPCBs and CTX <sup>3</sup> contactors |
|      |          | Set alarm contact first in case of using auxiliary contact together (MPX <sup>3</sup> 63H can not accept auxiliary contact and alarm contact together) |      |          | Screws not supplied   |
| 1    | 4 174 06 | For MPX <sup>3</sup> 32  | 1    | 4 174 60 | For MPX <sup>3</sup> 32S/32H/32MA   |
| 1    | 4 174 08 | For MPX <sup>3</sup> 63 and 100  | 1    | 4 174 61 | For MPX <sup>3</sup> 63H  |
|      |          | <b>Magnetic trip alarm contact</b>   | 1    | 4 174 62 | For MPX <sup>3</sup> 100H   |
|      |          | Operate in case of instantaneous trip  |      |          | <b>Rotary handle</b>  |
|      |          | Mounting on the left side of MPCBs   |      |          | Mounting on panel's door to control the MPX <sup>3</sup>  |
|      |          | Set alarm contact first in case of using auxiliary contact together  | 1    | 4 174 63 | For MPX <sup>3</sup> 32H and 32 MA  |
| 2    | 4 174 07 | 1 NO + 1 NC  | 1    | 4 174 64 | For MPX <sup>3</sup> 63H  |
|      |          | <b>Shunt release</b>   | 1    | 4 174 65 | For MPX <sup>3</sup> 100H   |
|      |          | Mounting on the right side of MPCBs  |      |          | <b>Phase busbar</b>   |
|      |          | One release per MPCB   |      |          | For parallel connection of MPX <sup>3</sup>   |
| 1    | 4 174 10 | 24 V - 50 Hz / 28 V - 60 Hz  |      |          | <b>For MPX<sup>3</sup> 32S, 32H and 32MA</b>  |
| 1    | 4 174 11 | 110 V - 50 Hz / 120 V - 60 Hz  | 10   | 4 174 71 | 2 devices - rated current 63 A  |
| 1    | 4 174 12 | 220-230 V - 50 Hz / 240-260 V - 60 Hz  | 10   | 4 174 73 | 3 devices - rated current 63 A  |
| 1    | 4 174 13 | 380-400 V - 50 Hz / 440-460 V - 60 Hz  | 10   | 4 174 75 | 4 devices - rated current 63 A  |
|      |          | <b>Undervoltage release</b>  | 10   | 4 174 76 | 5 devices - rated current 63 A  |
|      |          | Mounting on the right side of MPCBs  | 4    | 4 174 77 | Feeder for phase busbar - rated current 32 A  |
|      |          | One release per MPCB   |      |          | <b>For MPX<sup>3</sup> 63H</b>  |
|      |          | <b>Without auxiliary contact</b>   |      |          | Rated current 108 A   |
| 1    | 4 174 20 | 24 V - 50 Hz / 28 V - 60 Hz  | 4    | 4 174 72 | 2 devices   |
| 1    | 4 174 21 | 110 V - 50 Hz / 120 V - 60 Hz  | 4    | 4 174 74 | 3 devices   |
| 1    | 4 174 22 | 220-230 V - 50 Hz / 240-260 V - 60 Hz  |      |          | <b>Enclosures for MPX<sup>3</sup> 32H and 32MA</b>  |
| 1    | 4 174 23 | 380-400 V - 50 Hz / 440-460 V - 60 Hz  |      |          | IP 65 enclosure to use in dusty areas as well as in presence of corrosive gas or liquid         |
|      |          | <b>With 2 NO auxiliary contacts</b>  |      |          | Yellow/red rotary handle  |
| 1    | 4 174 30 | Can not attach to MPX <sup>3</sup> 32S   | 1    | 4 174 80 | With black rotary handle  |
| 1    | 4 174 31 | 24 V - 50 Hz / 28 V - 60 Hz  | 1    | 4 174 81 |   |
| 1    | 4 174 32 | 110 V - 50 Hz / 120 V - 60 Hz  |      |          |   |
| 1    | 4 174 33 | 220-230 V - 50 Hz / 240-260 V - 60 Hz  |      |          |   |
| 1    | 4 174 33 | 380-400 V - 50 Hz / 440-460 V - 60 Hz  |      |          |   |
|      |          | <b>Dial Cover</b>  |      |          |   |
|      |          | Sealable cover to protect the set value from the operation that is not intended  |      |          |   |
| 400  | 4 174 79 | For all types of MPX <sup>3</sup>  |      |          |   |


# MPCBs MPX<sup>3</sup>


## technical characteristics

### Terminals

|                         |             |                            | MPX <sup>3</sup> 32S  | MPX <sup>3</sup> 32H / 32 MA  | MPX <sup>3</sup> 63H  | MPX <sup>3</sup> 100H   |
|-------------------------|-------------|----------------------------|---|---|---|---|
| Conformity to standards |             |                            | IEC60947<br>UL508, UL508 Type E   |   |   |   |
| Approvals               |             |                            | CE, UL  |   |   |   |
| Terminal parts          |             |                            |  |  |  |  |
| Screwdriver             |             |                            |   |   |   |   |
| Single-core             | 1 conductor | (mm <sup>2</sup> ) / (AWG) | 1...10 / 18...8   | 1...10 / 18...8   | 0.75...35 / 18...2  | 2.5...70 / 12...2/0   |
|                         | 2 conductor | (mm <sup>2</sup> ) / (AWG) | 1...6 / 18...10   | 1...6 / 18...10   | 0.75...25 / 18...4  | 2.5...50 / 12...1/0   |
| Standard                | 1 conductor | (mm <sup>2</sup> ) / (AWG) | 1...6 / 18...10   | 1...6 / 18...10   | 0.75...35 / 18...2  | 2.5...70 / 12...2/0   |
|                         | 2 conductor | (mm <sup>2</sup> ) / (AWG) | 1...6 / 18...10   | 1...6 / 18...10   | 0.75...25 / 18...4  | 2.5...50 / 12...1/0   |
| Flexible                | 1 conductor | (mm <sup>2</sup> ) / (AWG) | 1...6 / 18...10   | 1...6 / 18...10   | 0.75...25 / 18...4  | 2.5...50 / 12...1/0   |
|                         | 2 conductor | (mm <sup>2</sup> ) / (AWG) | 0.75...4 / 18...10  | 0.75...4 / 18...10  | 0.75...16 / 18...6  | 2.5...35 / 10...2   |
| Tightening torque       |             | (Nm) / (lb-in)             | 0.8...2.5 / 7...22  | 0.8...2.5 / 7...22  | 3...4.5 / 26...39   | 4...6 / 35...53   |

### Auxiliaries

|   |             |                            | Auxiliary contacts for front mounting |    | Auxiliary contacts for left side mounting   |    | Alarm switch for left side mounting |  |
|---|-------------|----------------------------|---------------------------------------|----|---|----|-------------------------------------|--|
| Rated thermal current / Ith at 40 °C ambient temperature        | (A)         |                            | 5                                     |    | 10  |    | 10                                  |  |
|   | (A)         |                            | 3                                     |    | 6   |    | 6                                   |  |
| Contact class coordination according to NEMA (UL/CSA-Standards) | AC          |                            | A600                                  |    | A600  |    | A600                                |  |
|   | DC          |                            | Q300                                  |    | Q300  |    | Q300                                |  |
| Back-up fuses gG, gL  |             | (A)                        | 16                                    |    | 16  |    | 16                                  |  |
| Rated supply current  |             |                            |                                       |    |   |    |                                     |  |
| AC-15   | (V)         | -                          | 240                                   | 24 | 240   | 24 | 240                                 |  |
|   | (A)         | -                          | 3                                     | 6  | 4   | 6  | 4                                   |  |
| DC-13   | (V)         | 24                         | 220                                   | 24 | 220   | 24 | 220                                 |  |
|   | (A)         | 1                          | 0.1                                   | 2  | 0.25  | 2  | 0.25                                |  |
| Weight (g)  |             |                            | 18                                    |    | 30  |    | 40                                  |  |
| Terminal parts  |             |                            |                                       |    |  |    |                                     |  |
| Screwdriver   |             |                            |                                       |    | Pozi driv size 2  |    |                                     |  |
| Single-core   | 1 conductor | (mm <sup>2</sup> ) / (AWG) | 0.5...2.5 / 20...14                   |    | 0.5...2.5 / 20...14   |    |                                     |  |
|   | 2 conductor | (mm <sup>2</sup> ) / (AWG) | -                                     |    | 0.5...2.5 / 20...14   |    |                                     |  |
| Standard  | 1 conductor | (mm <sup>2</sup> ) / (AWG) | 0.5...4 / 20...10                     |    | 0.5...4 / 20...10   |    |                                     |  |
|   | 2 conductor | (mm <sup>2</sup> ) / (AWG) | 0.75...2.5 / 18...14                  |    | 0.75...2.5 / 18...14  |    |                                     |  |
| Tightening torque   |             | (Nm) / (lb-in)             | 0.8...1.2 / 7...10                    |    | 0.8...1.2 / 7...10  |    |                                     |  |

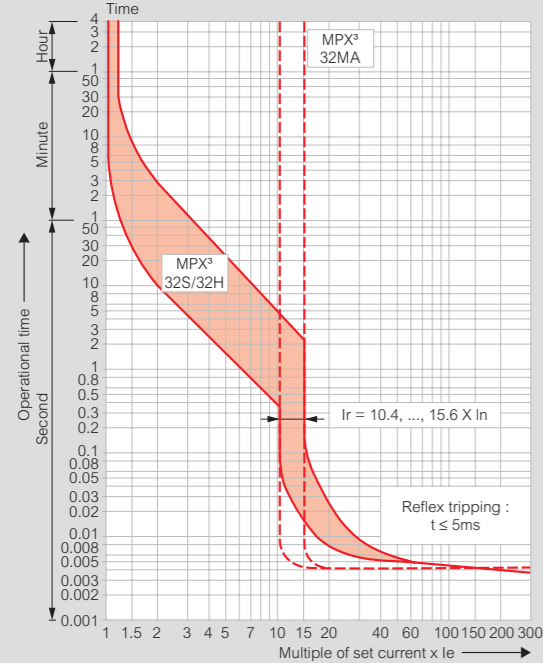
|                       |             |                            | Undervoltage release for right side mounting   | Undervoltage release with 2 auxiliary contacts for right side mounting | Shunt release for right side mounting |
|-----------------------|-------------|----------------------------|--|--|---------------------------------------|
| Actuating voltage     | Pull-in     |                            | 0.7...1.1 x Us   | 0.85...1.1 x Us  | 0.85...1.1 x Us                       |
|                       | Drop-out    |                            |  | 0.7...0.35 x Us  | 0.7...0.35 x Us                       |
| Rated control voltage | min:        |                            | 24 V 50 Hz / 28 V 60 Hz  | 24 V 50 Hz / 28 V 60 Hz  | 24 V 50 Hz / 28 V 60 Hz               |
|                       | max:        |                            | 415-440 V 50 Hz / 460-480 V 60 Hz  | 415-440 V 50 Hz / 460-480 V 60 Hz                                      | 415-440 V 50 Hz / 460-480 V 60 Hz     |
| Coil rating           | Pull-in     |                            | 8.5 VA, 6 W  | 8.5 VA, 6 W  | 8.5 VA, 6 W                           |
|                       | Hold        |                            | 3 VA, 12 W   | 3 VA, 12 W   | 3 VA, 12 W                            |
| Opening time (ms)     |             |                            | -  | 20   | 20                                    |
| Weight (g)            |             |                            | 18   | 30   | 40                                    |
| Terminal parts        |             |                            |  |  |                                       |
| Screwdriver           |             |                            | Pozi driv size 2   |  |                                       |
| Single-core           | 1 conductor | (mm <sup>2</sup> ) / (AWG) | 0.5...2.5 / 20...14  |  |                                       |
|                       | 2 conductor | (mm <sup>2</sup> ) / (AWG) | 0.5...2.5 / 20...14  |  |                                       |
| Standard              | 1 conductor | (mm <sup>2</sup> ) / (AWG) | 0.5...4 / 20...10  |  |                                       |
|                       | 2 conductor | (mm <sup>2</sup> ) / (AWG) | 0.75...2.5 / 18...14   |  |                                       |
| Tightening torque     |             | (Nm) / (lb-in)             | 0.8...1.2 / 7...10   |  |                                       |

MPCBs MPX<sup>3</sup>

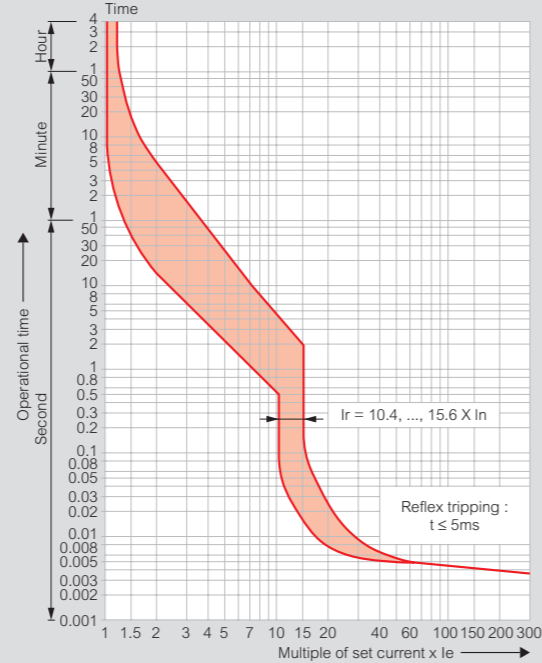
curves

Tripping curves

MPX<sup>3</sup> 32S / 32H / 32MA



MPX<sup>3</sup> 63H / 100H



1) Thermal release trip current :

The adjustable inverse bimetal trip reliability protects motors against overloads. The curve shows the mean operating current at an ambient temperature of 20 °C starting from cold. Careful testing and setting ensures effective motor protection even in the case of single-phasing.

2) Current setting I<sub>e</sub> :

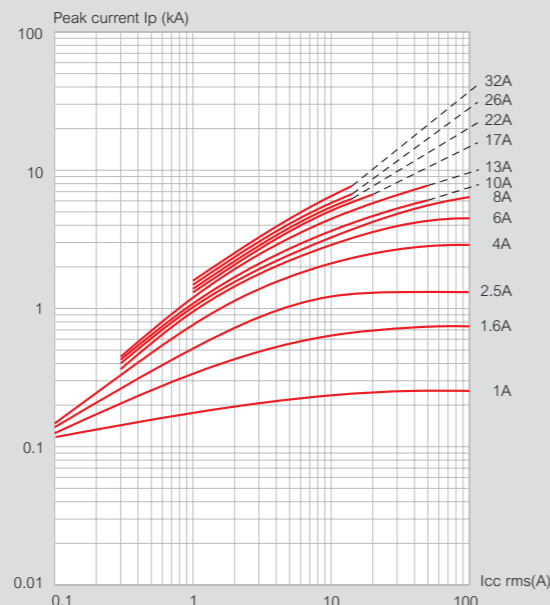
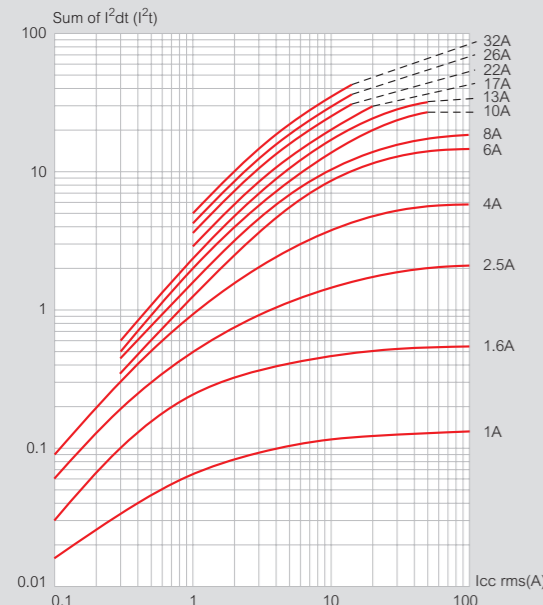
The overload trip corresponds to a thermal overload relay in a motor starter conforming to IEC 947-4-1. If a different value is prescribed (e.g. reduced I<sub>e</sub> for cooling medium having a temperature higher than 40 °C or a place of installation higher than 2000m above sea level), the setting current is equal to the reduced rated current I<sub>e</sub> of the motor, as per manufacturer specifications. When the MCPB is used outside the standard air temperature range (-5°C to +40°C) the thermal release needs to be calibrated by one point: one point lower from -20°C to -5°C and one point higher from +40°C to +60°C.

3) Magnetic release trip current :

The instantaneous magnetic trip has a fixed operating current setting. This corresponds to 13 times the maximum value of setting range, at a lower setting it is correspondingly higher.

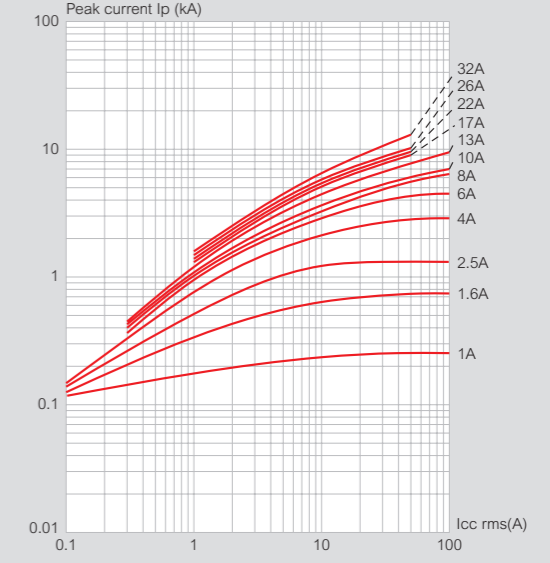
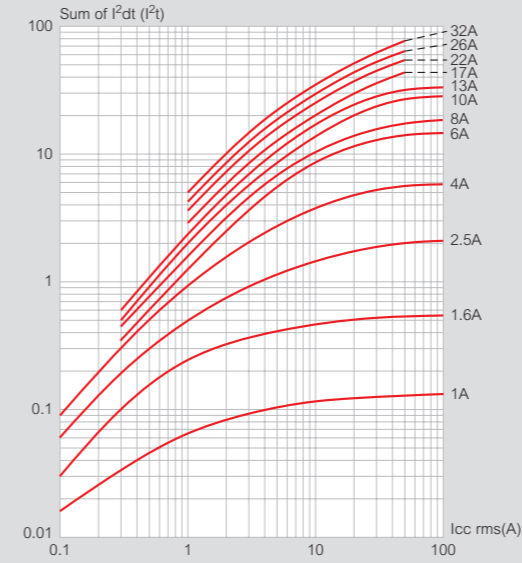
Thermal limit in kA<sup>2</sup>s in the magnetic operating zone (U<sub>e</sub>=415V)

MPX<sup>3</sup> 32S

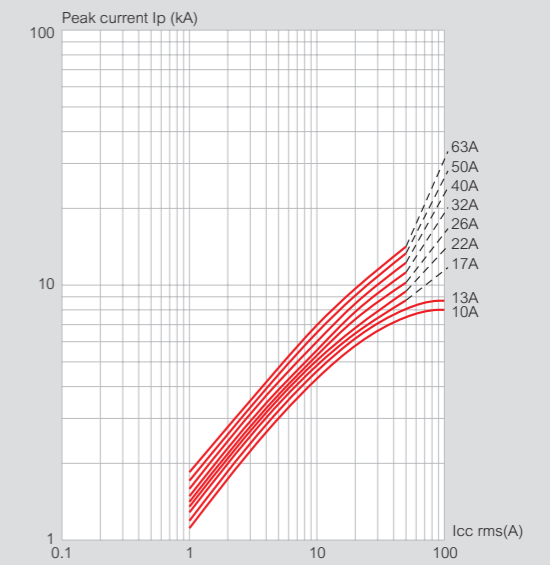
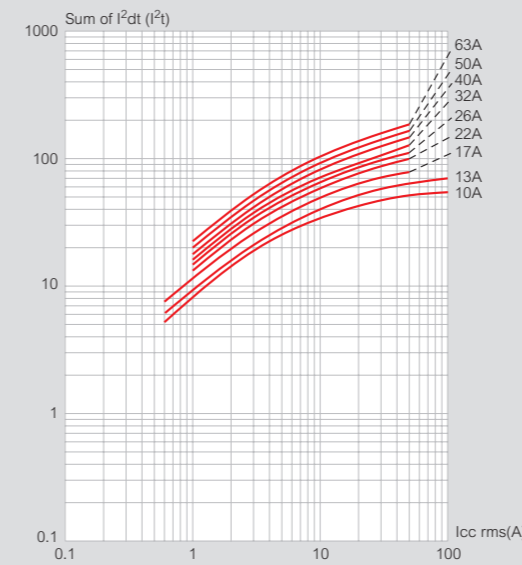


Thermal limit in kA<sup>2</sup>s in the magnetic operating zone (U<sub>e</sub>=415V) (continued)

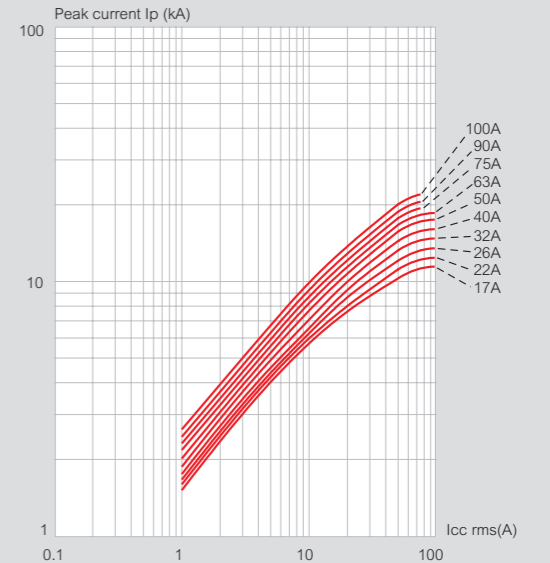
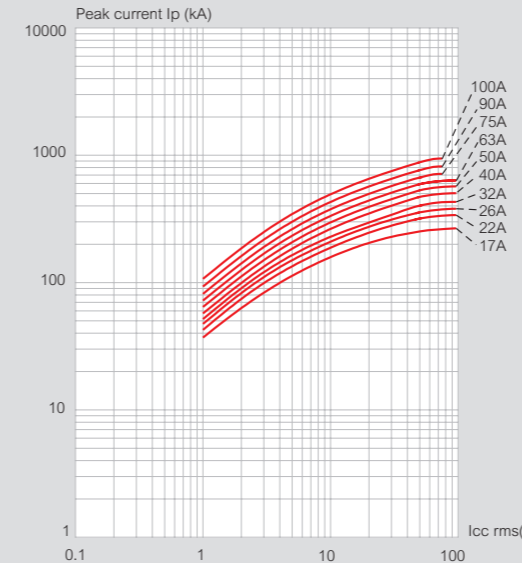
MPX<sup>3</sup> 32H / 32MA



MPX<sup>3</sup> 63H



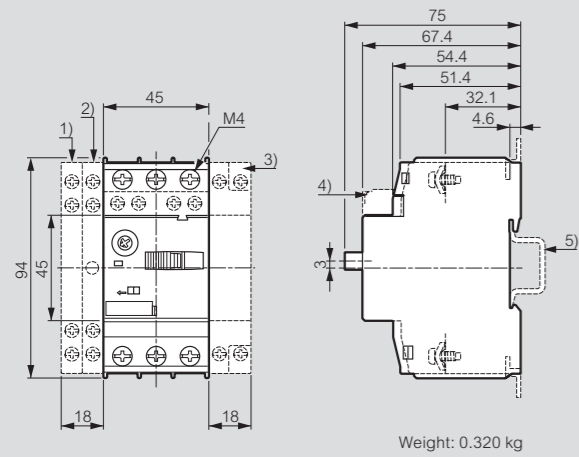
MPX<sup>3</sup> 100H



MPCBs MPX<sup>3</sup>

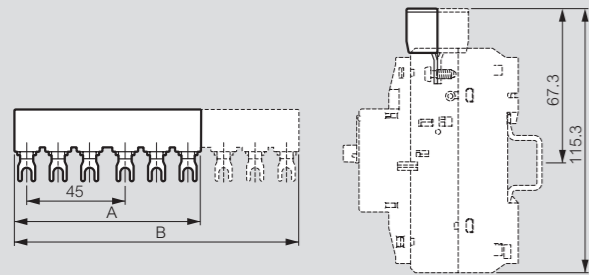
dimensions

MPX<sup>3</sup> 32S



Weight: 0.320 kg

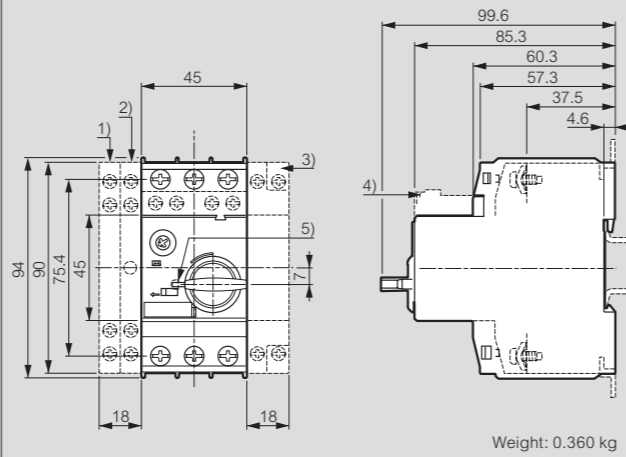
- 1) Side auxiliary contact
- 2) Side magnetic trip alarm contact
- 3) Side shunt release or Side undervoltage release
- 4) Front auxiliary contact
- 5) 35 mm standard mounting rail acc. to EN 50 022



| Cat.No   | Numbers of MPX <sup>3</sup> | A <sup>(1)</sup> (mm) | B (mm) |
|----------|-----------------------------|-----------------------|--------|
| 4 174 71 | 2                           | 85                    | -      |
| 4 174 73 | 3                           | -                     | 130    |
| 4 174 75 | 4                           | -                     | 175    |
| 4 174 76 | 5                           | -                     | 220    |

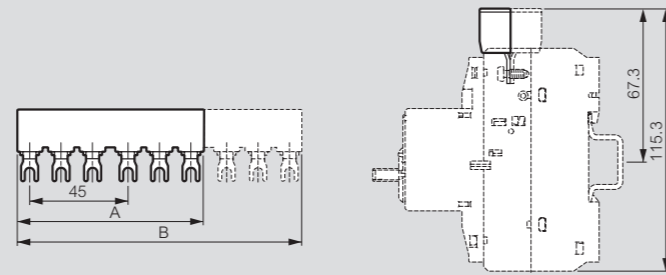
(1) Only for Cat.No 4 174 71

MPX<sup>3</sup> 32H / 32MA



Weight: 0.360 kg

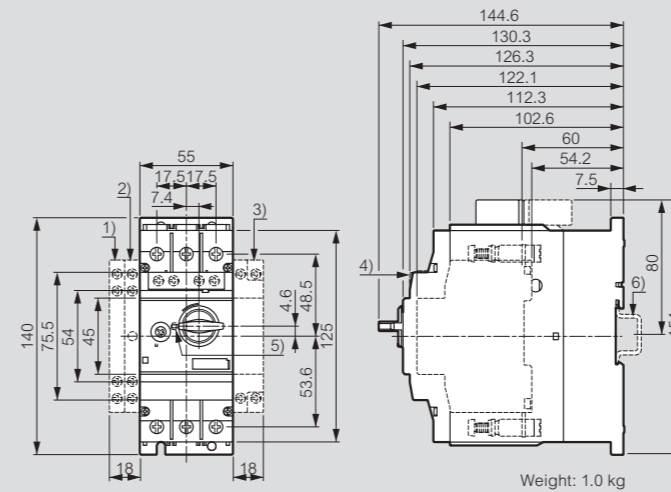
- 1) Side auxiliary contact
- 2) Side magnetic trip alarm contact
- 3) Side shunt release or Side undervoltage release
- 4) Front auxiliary contact
- 5) Handle lock in OFF position (Ø 5 mm)
- 6) 35 mm standard mounting rail acc. to EN 50 022



| Cat.No   | Numbers of MPX <sup>3</sup> | A <sup>(1)</sup> (mm) | B (mm) |
|----------|-----------------------------|-----------------------|--------|
| 4 174 71 | 2                           | 85                    | -      |
| 4 174 73 | 3                           | -                     | 130    |
| 4 174 75 | 4                           | -                     | 175    |
| 4 174 76 | 5                           | -                     | 220    |

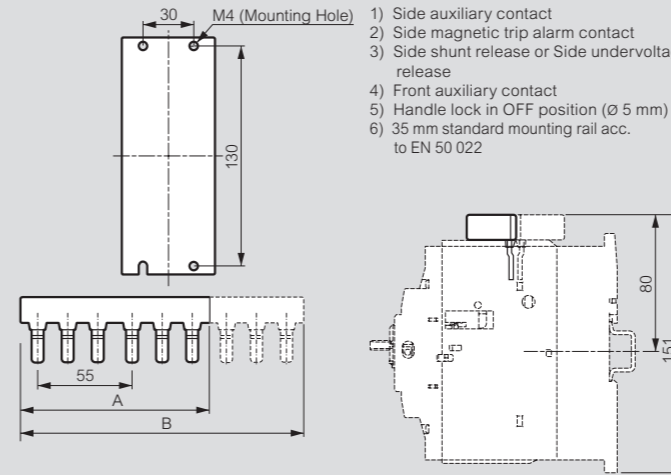
(1) Only for Cat.No 4 174 71

MPX<sup>3</sup> 63H



Weight: 1.0 kg

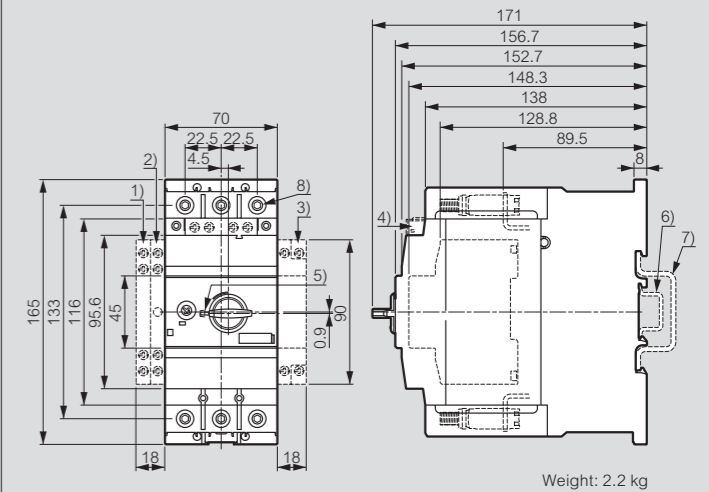
- 1) Side auxiliary contact
- 2) Side magnetic trip alarm contact
- 3) Side shunt release or Side undervoltage release
- 4) Front auxiliary contact
- 5) Handle lock in OFF position (Ø 5 mm)
- 6) 35 mm standard mounting rail acc. to EN 50 022



| Cat.No   | Numbers of MPX <sup>3</sup> | A <sup>(1)</sup> (mm) | B (mm) |
|----------|-----------------------------|-----------------------|--------|
| 4 174 72 | 2                           | 110                   | -      |
| 4 174 74 | 3                           | -                     | 165    |

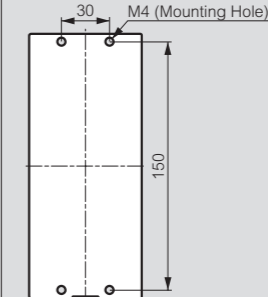
(1) Only for Cat.No 4 174 72

MPX<sup>3</sup> 100H



Weight: 2.2 kg

- 1) Side auxiliary contact
- 2) Side magnetic trip alarm contact
- 3) Side shunt release or Side undervoltage release
- 4) Front auxiliary contact
- 5) Handle lock in OFF position (Ø 5 mm)
- 6) 35 mm standard mounting rail acc. to EN 50 022
- 7) 75 mm standard mounting rail acc. to EN 50 023
- 8) 4 mm hexagon socket screw

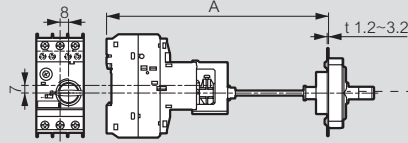


# MPCBs MPX<sup>3</sup>

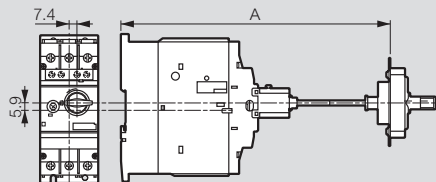
## dimensions (continued)

### External Handle

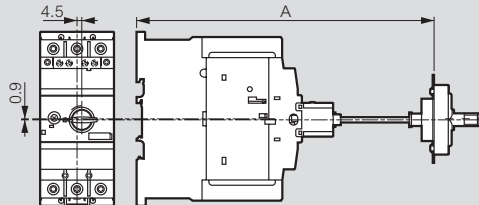
MPX<sup>3</sup> 32H / 32MA - Cat.No 4 174 63



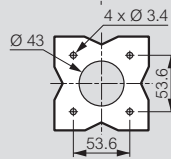
MPX<sup>3</sup> 63H - Cat.No 4 174 64



MPX<sup>3</sup> 100H - Cat.No 4 174 65

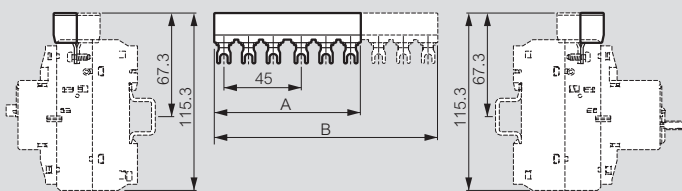


| Cat.Nos  | A (mm)                   | MMS Type                    |
|----------|--------------------------|-----------------------------|
| 4 174 63 | min: 148.6               | MPX <sup>3</sup> 32H / 32MA |
|          | max: 410.6 (Shaft 315mm) |                             |
| 4 174 64 | min: 193.6               | MPX <sup>3</sup> 63H        |
|          | max: 455.6 (Shaft 315mm) |                             |
| 4 174 65 | min: 220                 | MPX <sup>3</sup> 100H       |
|          | max: 482 (Shaft 315mm)   |                             |

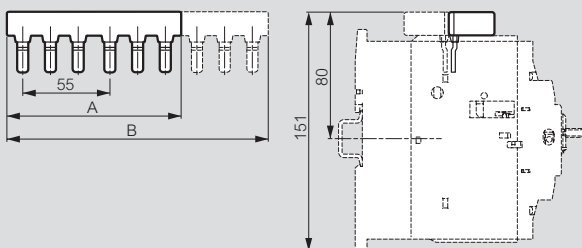


### Phase Bus

Cat.Nos 4 174 71/73/75/76



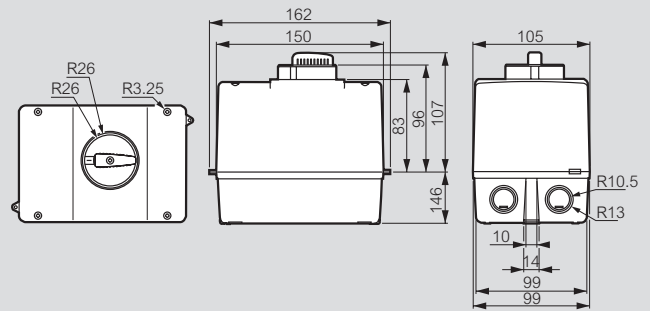
Cat.Nos 4 174 72/74



| Cat.Nos  | Number of MPX <sup>3</sup> | A (mm) | B (mm) |
|----------|----------------------------|--------|--------|
| 4 174 71 | 2                          | 85     | -      |
| 4 174 72 | 3                          | -      | 130    |
| 4 174 73 | 2                          | 110    | -      |
| 4 174 74 | 3                          | -      | 165    |
| 4 174 75 | 4                          | -      | 175    |
| 4 174 76 | 5                          | -      | 220    |

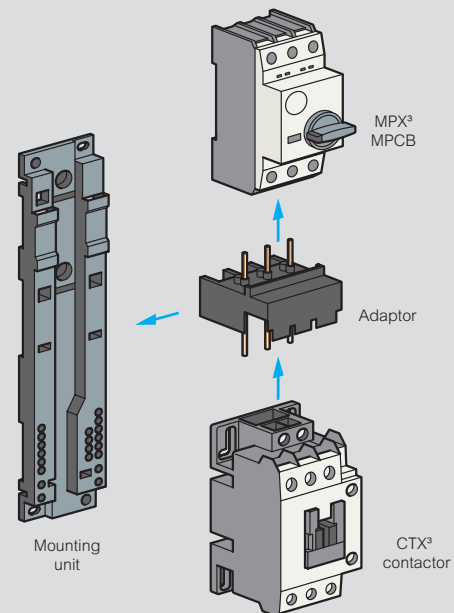
### Enclosure

Cat.Nos 4 174 80/81



### Mounting units - installation principle

Cat.Nos 4 174 60/61/62



| MPX <sup>3</sup> MPCB   | CTX <sup>3</sup> contactor | Adaptor  | Mounting unit |
|-------------------------|----------------------------|----------|---------------|
| MPX <sup>3</sup> 32S    | CTX <sup>3</sup> mini ~    | 4 174 40 | 4 174 60      |
|                         | CTX <sup>3</sup> mini =    | 4 174 41 |               |
|                         | CTX <sup>3</sup> 22 ~      | 4 174 48 |               |
|                         | CTX <sup>3</sup> 22 =      | 4 174 49 |               |
|                         | CTX <sup>3</sup> 40 ~      | 4 174 52 |               |
| MPX <sup>3</sup> 32H/MA | CTX <sup>3</sup> 40 =      | 4 174 53 |               |
|                         | CTX <sup>3</sup> mini ~    | 4 174 42 |               |
|                         | CTX <sup>3</sup> mini =    | 4 174 43 |               |
|                         | CTX <sup>3</sup> 22 ~      | 4 174 50 |               |
|                         | CTX <sup>3</sup> 22 =      | 4 174 51 |               |
| MPX <sup>3</sup> 63H    | CTX <sup>3</sup> 40 ~      | 4 174 54 |               |
|                         | CTX <sup>3</sup> 40 =      | 4 174 55 |               |
|                         | CTX <sup>3</sup> 65 ~      | 4 174 56 |               |
| MPX <sup>3</sup> 100H   | CTX <sup>3</sup> 65 =      | 4 174 57 |               |
|                         | CTX <sup>3</sup> 100 ~     | 4 174 58 | 4 174 62      |
|                         | CTX <sup>3</sup> 100 =     | 4 174 59 |               |