
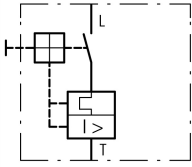




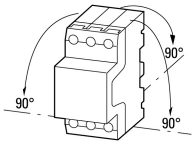
**Transformer-protective circuit-breaker, 3p, Ir=0.16-0.25A, screw connection**

**Part no.** PKZM0-0,25-T  
**Catalog No.** 088908  
**Alternate Catalog No.** XTPTP25BC1NL  
**EL-Nummer (Norway)** 4315152

**Delivery program**

|   |          |   |  |
|---|----------|---|--|
| Product range   |          |   | PKZM0...T transformer-protective circuit-breakers up to 25 A                       |
| Basic function  |          |   | Transformer protection   |
|   |          |   |  |
| Notes   |          |   | Also suitable for motors with efficiency class IE3.                                |
| Connection technique  |          |   | Screw terminals  |
| Contact sequence  |          |   |  |
| Rated uninterrupted current   | $I_u$    | A | 0.25   |
| <b>Setting range</b>  |          |   |  |
| Overload releases<br>  | $I_r$    | A | 0.16 - 0.25  |
| short-circuit release<br>  |          |   |  |
| max.  | $I_{rm}$ | A | 4.25   |
| Phase-failure sensitivity   |          |   | IEC/EN 60947-4-1, VDE 0660 Part 102  |
| <b>Notes</b> For the protection of transformers with a high inrush current.<br>Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height. |          |   |  |

**Technical data**

|   |  |    |  |
|---|--|----|--|
| <b>General</b>  |  |    |  |
| Standards   |  |    | IEC/EN 60947, VDE 0660   |
| Climatic proofing   |  |    | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30       |
| Ambient temperature   |  |    |  |
| Storage   |  | °C | - 40 - 80  |
| Open  |  | °C | -25 - +55  |
| Enclosed  |  | °C | - 25 - 40  |
| Mounting position   |  |    |  |
| Direction of incoming supply  |  |    | as required  |
| Degree of protection  |  |    |  |
| Device  |  |    | IP20   |
| Terminations  |  |    | IP00   |
| Protection against direct contact when actuated from front (EN 50274)     |  |    | Finger and back-of-hand proof  |
| Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27 |  | g  | 25   |
| Altitude  |  | m  | Max. 2000  |

|   |  |                 |                            |
|---|--|-----------------|----------------------------|
| Terminal capacity main cable                    |  |                 |                            |
| Screw terminals                                 |  |                 |                            |
| Solid   |  | mm <sup>2</sup> | 1 x (1 - 6)<br>2 x (1 - 6) |
| Flexible with ferrule to DIN 46228              |  | mm <sup>2</sup> | 1 x (1 - 6)<br>2 x (1 - 6) |
| Solid or stranded                               |  | AWG             | 18 - 10                    |
| Stripping length                                |  | mm              | 10                         |
| Specified tightening torque for terminal screws |  |                 |                            |
| Main cable                                      |  | Nm              | 1.7                        |
| Control circuit cables                          |  | Nm              | 1                          |

### Main conducting paths

|   |                                 |                   |                             |
|---|---------------------------------|-------------------|-----------------------------|
| Rated impulse withstand voltage                         | U <sub>imp</sub>                | V AC              | 6000                        |
| Overvoltage category/pollution degree                   |                                 |                   | III/3                       |
| Rated operational voltage                               | U <sub>e</sub>                  | V AC              | 690                         |
| Rated uninterrupted current = rated operational current | I <sub>u</sub> = I <sub>e</sub> | A                 | 0.25                        |
| Rated frequency   | f                               | Hz                | 40 - 60                     |
| Current heat loss (3 pole at operating temperature)     |                                 | W                 | 4.59                        |
| Lifespan, mechanical                                    | Operations                      | x 10 <sup>6</sup> | 0.1                         |
| Lifespan, electrical (AC-3 at 400 V)                    |                                 |                   |                             |
| Lifespan, electrical                                    | Operations                      | x 10 <sup>6</sup> | 0.1                         |
| Max. operating frequency                                |                                 | Ops/h             | 40                          |
| Short-circuit rating                                    |                                 |                   |                             |
| DC  |                                 |                   |                             |
| Short-circuit rating                                    |                                 | kA                | 60                          |
| Motor switching capacity                                |                                 |                   |                             |
| AC-3 (up to 690V)                                       |                                 | A                 | 0.25                        |
| DC-5 (up to 250V)                                       |                                 | A                 | 0.25 (3 contacts in series) |

### Trip blocks

|   |  |                  |  |
|---|--|------------------|--|
| Temperature compensation                              |  |                  |  |
| to IEC/EN 60947, VDE 0660                             |  | °C               | - 5 ... 40                               |
| Operating range                                       |  | °C               | - 25 ... 55                              |
| Temperature compensation residual error for T > 40 °C |  |                  | ≅ 0.25 %/K                               |
| Setting range of overload releases                    |  | x I <sub>u</sub> | 0.6 - 1                                  |
| short-circuit release                                 |  |                  | Basic device, fixed: 20 x I <sub>u</sub> |
| Short-circuit release tolerance                       |  |                  | ± 20%                                    |
| Phase-failure sensitivity                             |  |                  | IEC/EN 60947-4-1, VDE 0660 Part 102      |

## Design verification as per IEC/EN 61439

|  |                   |    |  |
|--|-------------------|----|--|
| Technical data for design verification   |                   |    |  |
| Rated operational current for specified heat dissipation   | I <sub>n</sub>    | A  | 0.25   |
| Heat dissipation per pole, current-dependent   | P <sub>vid</sub>  | W  | 1.53   |
| Equipment heat dissipation, current-dependent  | P <sub>vid</sub>  | W  | 4.59   |
| Static heat dissipation, non-current-dependent   | P <sub>vs</sub>   | W  | 0  |
| Heat dissipation capacity  | P <sub>diss</sub> | W  | 0  |
| Operating ambient temperature min.   |                   | °C | -25  |
| Operating ambient temperature max.   |                   | °C | 55   |
| IEC/EN 61439 design verification   |                   |    |  |
| 10.2 Strength of materials and parts   |                   |    |  |
| 10.2.2 Corrosion resistance  |                   |    | Meets the product standard's requirements.                         |
| 10.2.3.1 Verification of thermal stability of enclosures   |                   |    | Meets the product standard's requirements.                         |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat   |                   |    | Meets the product standard's requirements.                         |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |                   |    | Meets the product standard's requirements.                         |
| 10.2.4 Resistance to ultra-violet (UV) radiation   |                   |    | Meets the product standard's requirements.                         |
| 10.2.5 Lifting   |                   |    | Does not apply, since the entire switchgear needs to be evaluated. |

|  |  |  |
|--|--|--|
| 10.2.6 Mechanical impact                                 |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.7 Inscriptions                                      |  | Meets the product standard's requirements.   |
| 10.3 Degree of protection of ASSEMBLIES                  |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.4 Clearances and creepage distances                   |  | Meets the product standard's requirements.   |
| 10.5 Protection against electric shock                   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.6 Incorporation of switching devices and components   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.7 Internal electrical circuits and connections        |  | Is the panel builder's responsibility.   |
| 10.8 Connections for external conductors                 |  | Is the panel builder's responsibility.   |
| 10.9 Insulation properties                               |  |  |
| 10.9.2 Power-frequency electric strength                 |  | Is the panel builder's responsibility.   |
| 10.9.3 Impulse withstand voltage                         |  | Is the panel builder's responsibility.   |
| 10.9.4 Testing of enclosures made of insulating material |  | Is the panel builder's responsibility.   |
| 10.10 Temperature rise                                   |  | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating                               |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.12 Electromagnetic compatibility                      |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.13 Mechanical function                                |  | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

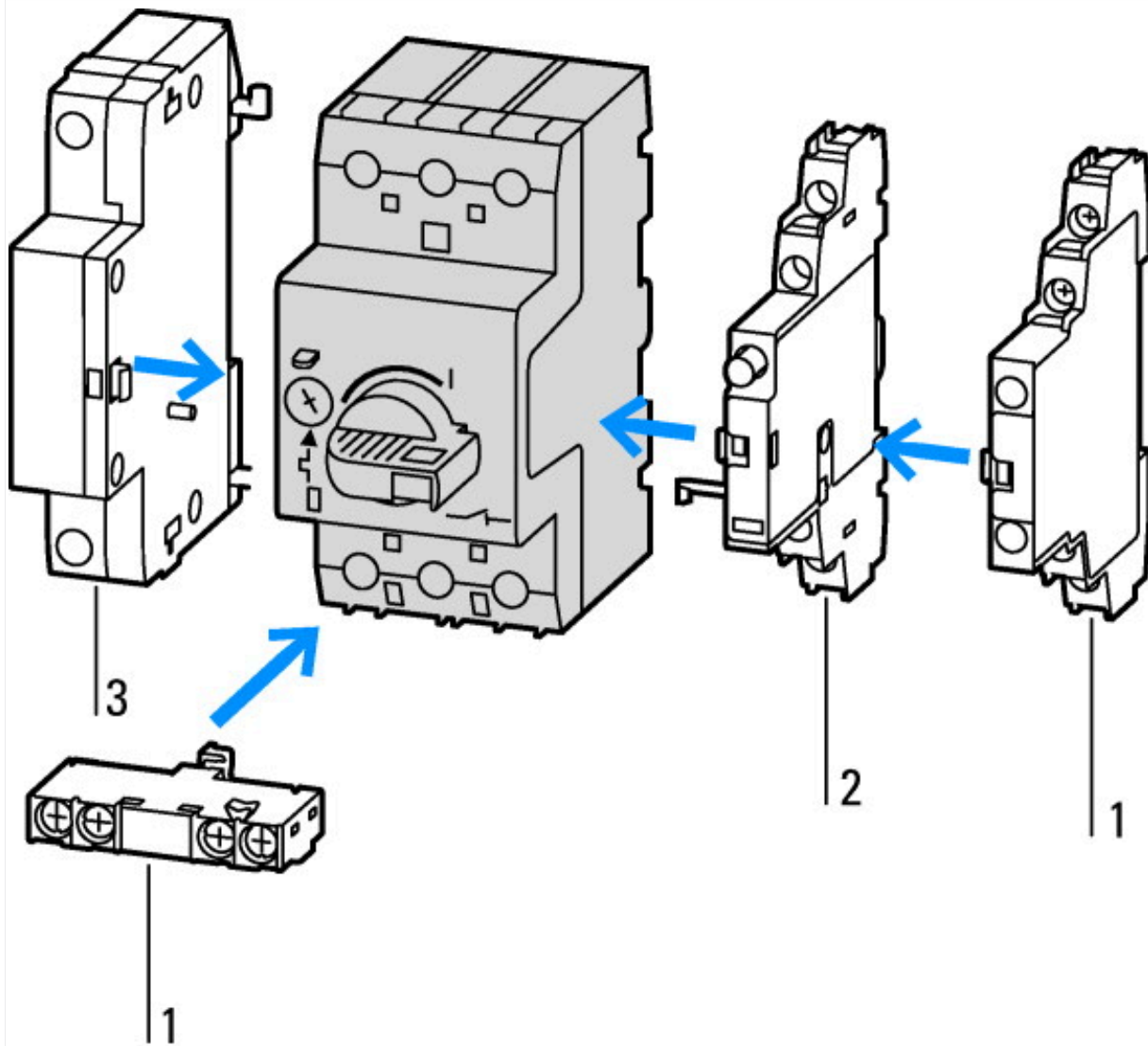
## Technical data ETIM 7.0

|   |    |                  |
|---|----|------------------|
| Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)   |    |                  |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013]) |    |                  |
| Rated permanent current I <sub>u</sub>  | A  | 0.25             |
| Rated voltage   | V  | 690 - 690        |
| Rated short-circuit breaking capacity I <sub>cu</sub> at 400 V, 50 Hz   | kA | 150              |
| Overload release current setting  | A  | 0.25 - 0.25      |
| Adjustment range short-term delayed short-circuit release   | A  | 0 - 0            |
| Adjustment range undelayed short-circuit release  | A  | 4.25 - 4.25      |
| Integrated earth fault protection   |    | No               |
| Type of electrical connection of main circuit   |    | Screw connection |
| Device construction   |    | Other            |
| Suitable for DIN rail (top hat rail) mounting   |    | Yes              |
| DIN rail (top hat rail) mounting optional   |    | Yes              |
| Number of auxiliary contacts as normally closed contact   |    | 0                |
| Number of auxiliary contacts as normally open contact   |    | 0                |
| Number of auxiliary contacts as change-over contact   |    | 0                |
| With switched-off indicator   |    | Yes              |
| With under voltage release  |    | No               |
| Number of poles   |    | 3                |
| Position of connection for main current circuit   |    | Other            |
| Type of control element   |    | Turn button      |
| Complete device with protection unit  |    | Yes              |
| Motor drive integrated  |    | No               |
| Motor drive optional  |    | No               |
| Degree of protection (IP)   |    | IP20             |

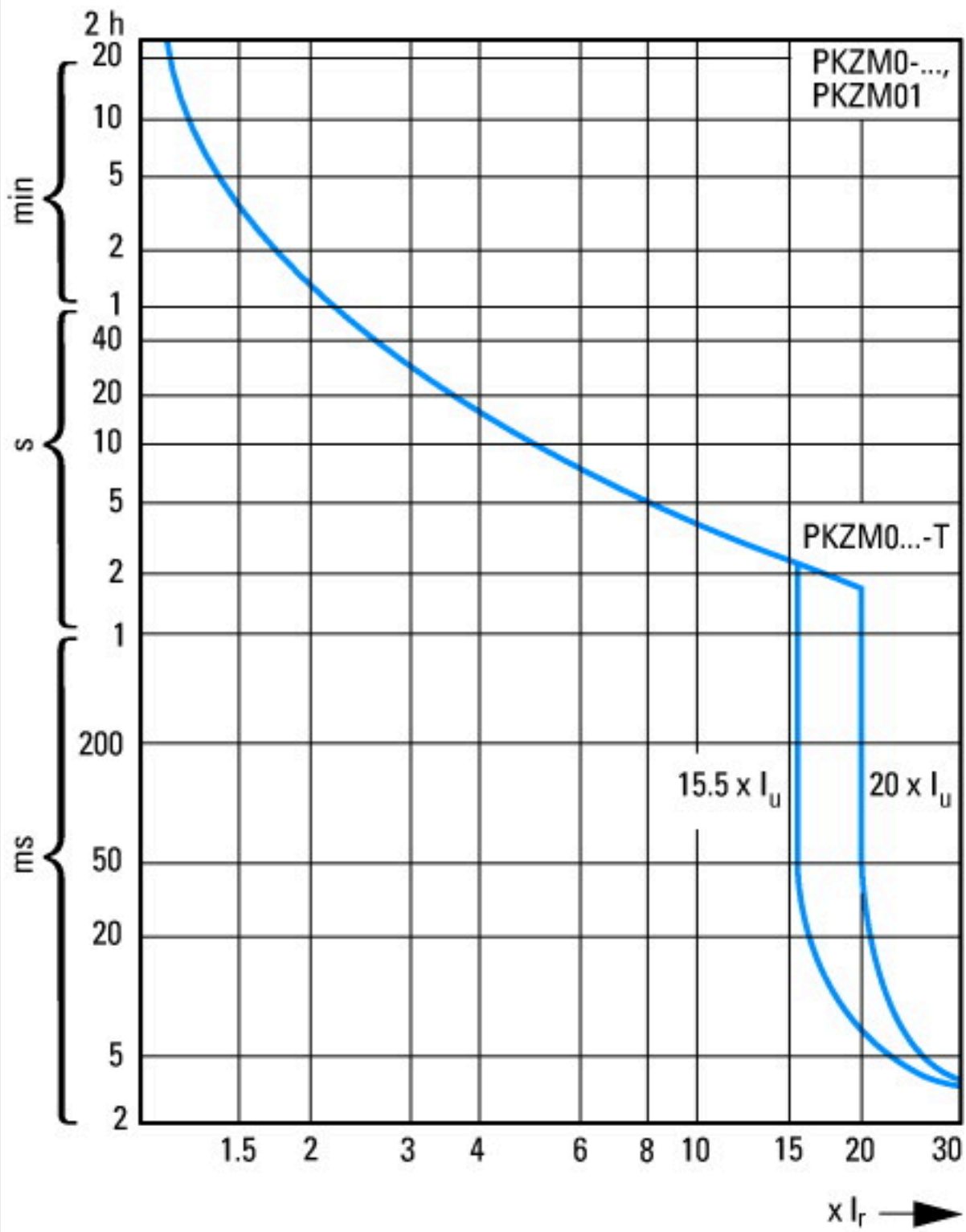
## Approvals

|                                      |  |    |
|--------------------------------------|--|----|
| Specially designed for North America |  | No |
|--------------------------------------|--|----|

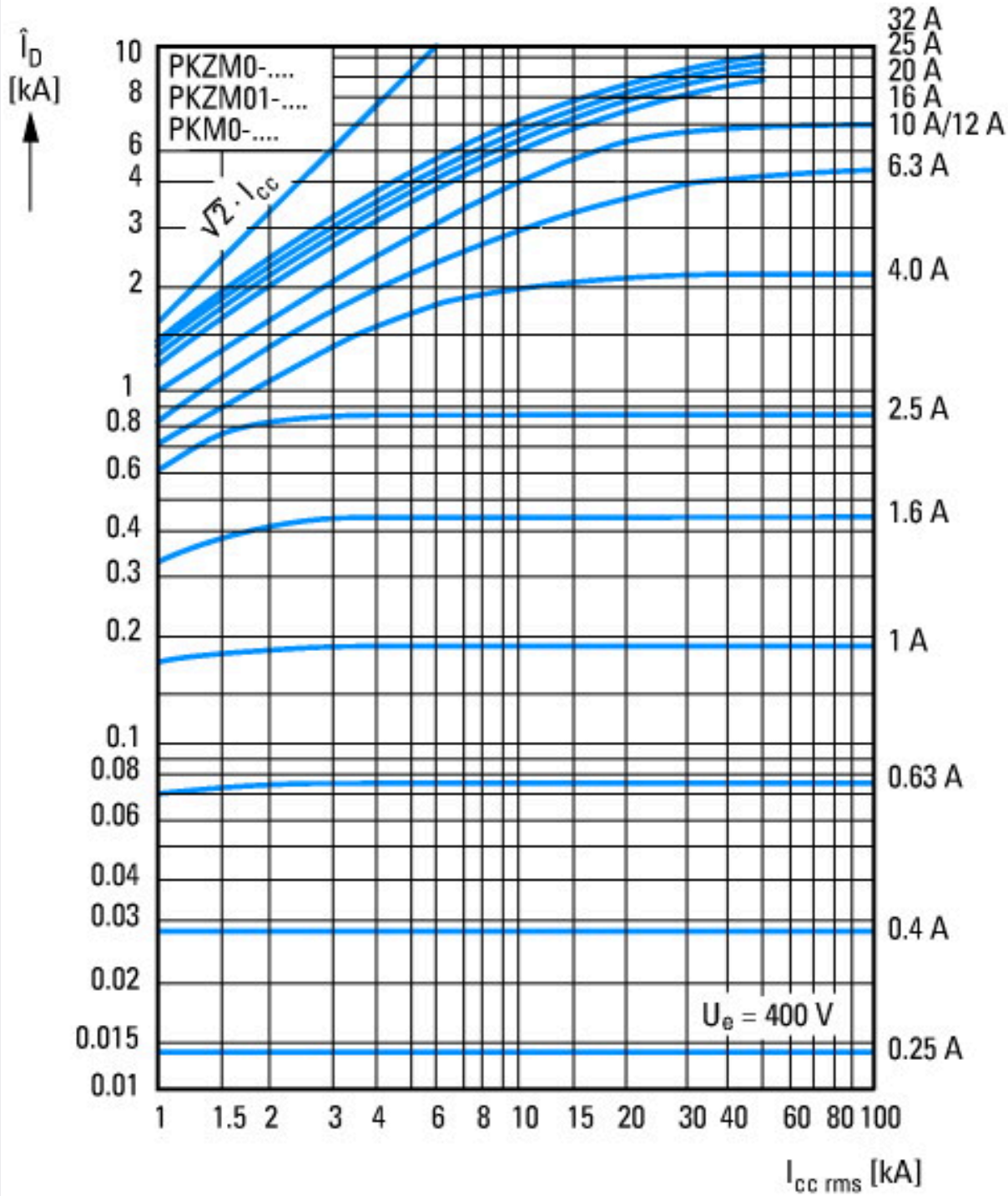
## Characteristics



- 1: Standard auxiliary contact
- 2: Trip-indicating auxiliary contact
- 3: Shunt releases, undervoltage releases



Tripping characteristics motor-protector circuit breaker PKZM0, PKZM0...T (not for PKM0-...), PKZM01



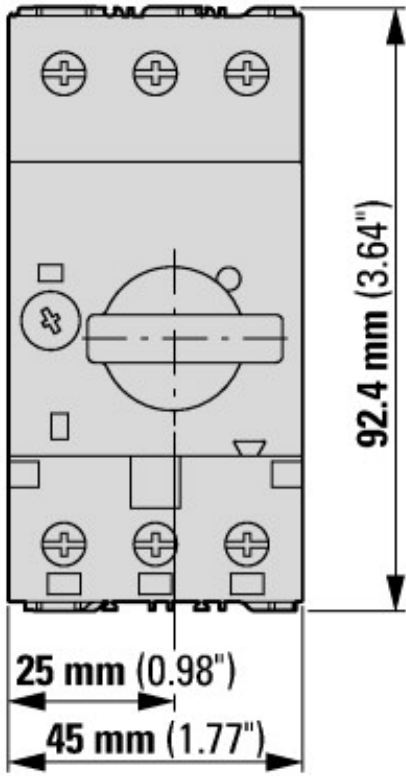
Let-through current



① 1 half-cycle  
 Let-through energy



## Dimensions

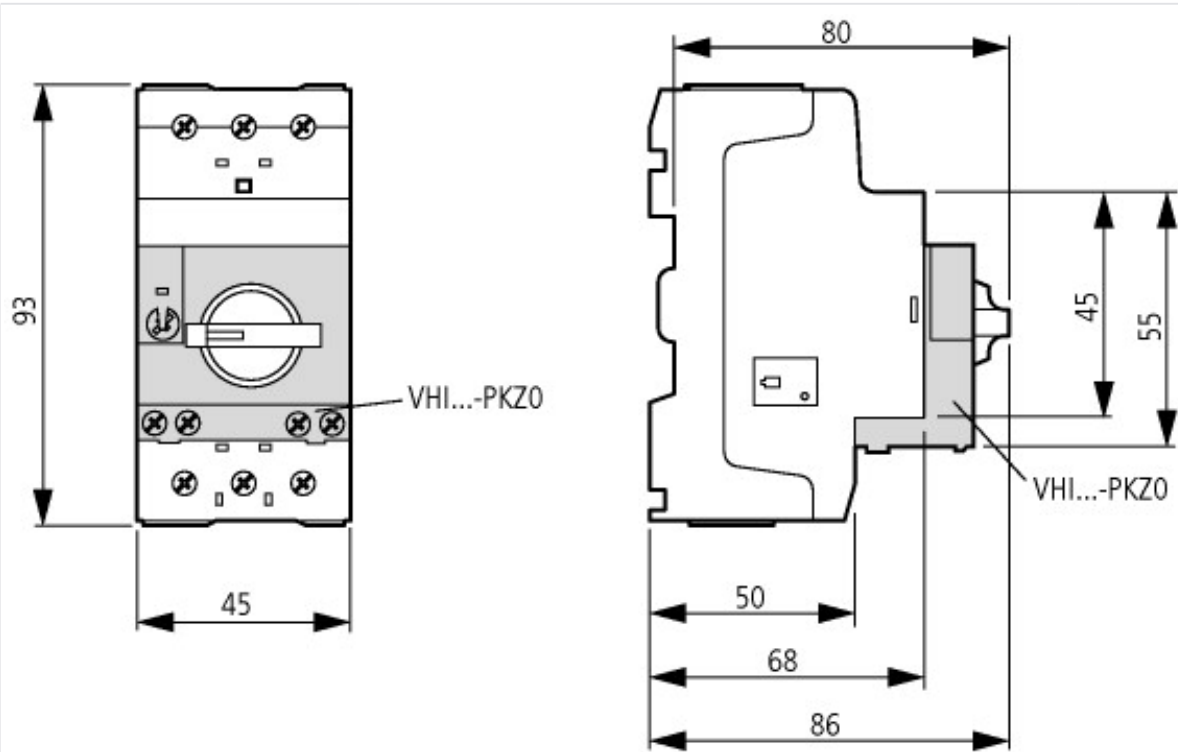


Motor-protective circuit-breaker with standard auxiliary contact  
 PKZM0-...(+NHI-E-...-PKZ0)  
 PKZM0-...-T(+NHI-E-...-PKZ0)  
 PKM0-...(+NHI-E-...-PKZ0)



Motor-protective circuit-breakers with lockable rotary handles  
 PKZM0-...+AK-PKZ0





Motor-protective circuit-breakers with early-make auxiliary contacts  
PKZM0-...+VHI-...-PKZ0

### Additional product information (links)

|  |   |
|--|---|
| Schaltvermögen   | <a href="https://de.ecat.eaton.com/flip-cat/?edition=MOTCONT1_DE#page_3/44">https://de.ecat.eaton.com/flip-cat/?edition=MOTCONT1_DE#page_3/44</a>   |
| Motor starters and "Special Purpose Ratings" for the North American market | <a href="http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf">http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf</a> |
| Busbar Component Adapters for modern Industrial control panels             | <a href="http://www.moeller.net/binary/ver_techpapers/ver960en.pdf">http://www.moeller.net/binary/ver_techpapers/ver960en.pdf</a>   |