




**Motor-protective circuit-breaker, 3p, Ir=8-32A, standard**

**Part no.** PKE32/XTU-32  
**Catalog No.** 121734  
**Alternate Catalog No.** XTPE032BCSNL  
**EL-Nummer (Norway)** 4355183

**Delivery program**

|   |             |   |   |
|---|-------------|---|---|
| Product range   |             |   | PKE motor protective circuit-breakers with electronic wide-range overload protection up to 32 A   |
| Basic function  |             |   | Motor protection<br>Motor protection for heavy starting duty  |
| Single unit/Complete unit                               |             |   | Complete device with standard knob  |
| Notes   |             |   | <br>Also suitable for motors with efficiency class IE3.<br>IE3-ready devices are identified by the logo on their packaging. |
| Setting range of overload releases                      | $I_r$       | A | 8 - 32  |
| Function  |             |   | With overload release   |
| Rated uninterrupted current = rated operational current | $I_u = I_e$ | A | 32  |

**Motor rating**

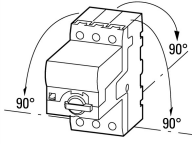
|                   |   |    |      |  |
|-------------------|---|----|------|--|
| AC-3              |   |    |      |  |
| 220 V 230 V 240 V | P | kW | 7.5  |  |
| 380 V 400 V 415 V | P | kW | 15   |  |
| 440 V             | P | kW | 15   |  |
| 500 V             | P | kW | 18.5 |  |
| 660 V 690 V       | P | kW | 30   |  |

| Motor output/rated motor current |       | Rated motor current |       |       |       |       |
|----------------------------------|-------|---------------------|-------|-------|-------|-------|
| Motor rating                     |       | AC-3                |       |       |       |       |
|                                  |       | 220 V               | 380 V | 440 V | 500 V | 660 V |
|                                  |       | 230 V               | 400 V |       |       | 690 V |
|                                  | 240 V | 415 V               |       |       |       |       |
| P                                | I     | I                   | I     | I     | I     | I     |
| kW                               | A     | A                   | A     | A     | A     | A     |
| 2.2                              | 8.7   | -                   | -     | -     | -     | -     |
| 3                                | 11.5  | -                   | -     | -     | -     | -     |
| 4                                | 14.8  | -                   | 8.5   | -     | -     | -     |
| 5.5                              | 19.6  | -                   | 11.3  | 10.2  | 9     | -     |
| 7.5                              | 26.4  | -                   | 15.2  | 13.8  | 12.1  | 8.8   |
| 11                               | -     | -                   | 21.7  | 19.8  | 17.4  | 12.6  |
| 15                               | -     | -                   | 29.3  | 26.6  | 23.4  | 17    |
| 18.5                             | -     | -                   | -     | -     | 28.9  | 20.9  |
| 22                               | -     | -                   | -     | -     | -     | 23.8  |
| 30                               | -     | -                   | -     | -     | -     | 32    |

**Technical data**

**General**

|                     |  |    |  |
|---------------------|--|----|--|
| Standards           |  |    | IEC/EN 60947, VDE 0660,UL, CSA   |
| 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)  |
| ein- oder mehrdrähtig   |  | AWG             | 14 - 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                         | $U_{imp}$   | V AC          | 6000   |
| Overvoltage category/pollution degree                   |             |               | III/3  |
| Rated operational voltage                               | $U_e$       | V AC          | 690  |
| Rated uninterrupted current = rated operational current | $I_u = I_e$ | A             | 32   |
| Rated frequency   | f           | Hz            | 40 - 60  |
| Current heat loss (3 pole at operating temperature)     |             | W             | 11.4   |
| Lifespan, mechanical                                    | Operations  | $\times 10^6$ | 0.05   |
| Lifespan, electrical (AC-3 at 400 V)                    |             |               |  |
| Lifespan, electrical                                    | Operations  | $\times 10^6$ | 0.05   |
| Max. operating frequency                                |             | Ops/h         | 60   |
| Motor switching capacity                                |             |               |  |
| AC-3 (up to 690V)                                       |             | A             | 32   |
| AC-4 cycle operation                                    |             |               |  |
| Minimum current flow times                              |             | ms            | 500 (Class 5)<br>700 (Class 10)<br>900 (Class 15)<br>1000 (Class 20)   |
| Minimum cut-out periods                                 |             | ms            | 500  |
| Note  |             | ms            | In AC-4 cycle operation, going below the minimum current flow time can cause overheating of the load (motor).<br>For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods. |

### Trip blocks

|                                    |  |              |   |
|------------------------------------|--|--------------|---|
| Temperature compensation           |  |              |   |
| to IEC/EN 60947, VDE 0660          |  | °C           | - 5 ... 40  |
| Operating range                    |  | °C           | - 25 ... 55   |
| Setting range of overload releases |  | $\times I_u$ | 0.25 - 1  |
| short-circuit release              |  |              | Basic device, fixed: $15.5 \times I_u$<br>Trip block, fixed: $15.5 \times I_r$<br>delayed approx. 60 ms |
| Short-circuit release tolerance    |  |              | $\pm 20\%$  |
| Phase-failure sensitivity          |  |              | IEC/EN 60947-4-1, VDE 0660 Part 102   |

### Rating data for approved types

|                      |  |  |  |
|----------------------|--|--|--|
| Switching capacity   |  |  |  |
| Maximum motor rating |  |  |  |
| Three-phase          |  |  |  |

|  |      |             |
|--|------|-------------|
| 200 V<br>208 V                                 | HP   | 5           |
| 230 V<br>240 V                                 | HP   | 7.5         |
| 460 V<br>480 V                                 | HP   | 15          |
| 575 V<br>600 V                                 | HP   | 20          |
| Single-phase                                   |      |             |
| 115 V<br>120 V                                 | HP   | 1.5         |
| 230 V<br>240 V                                 | HP   | 3           |
| General use                                    | A    | 32          |
| Short Circuit Current Rating, group protection | SCCR |             |
| 600 V High Fault                               |      |             |
| SCCR (fuse)                                    | kA   | 100         |
| max. Fuse                                      | A    | 100 Class J |

## Design verification as per IEC/EN 61439

|  |            |    |  |
|--|------------|----|--|
| Technical data for design verification   |            |    |  |
| Rated operational current for specified heat dissipation   | $I_n$      | A  | 32   |
| Heat dissipation per pole, current-dependent   | $P_{vid}$  | W  | 3.8  |
| Equipment heat dissipation, current-dependent  | $P_{vid}$  | W  | 11.4   |
| Static heat dissipation, non-current-dependent   | $P_{vs}$   | W  | 0  |
| Heat dissipation capacity  | $P_{diss}$ | 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) / Motor protection circuit-breaker (EC000074)

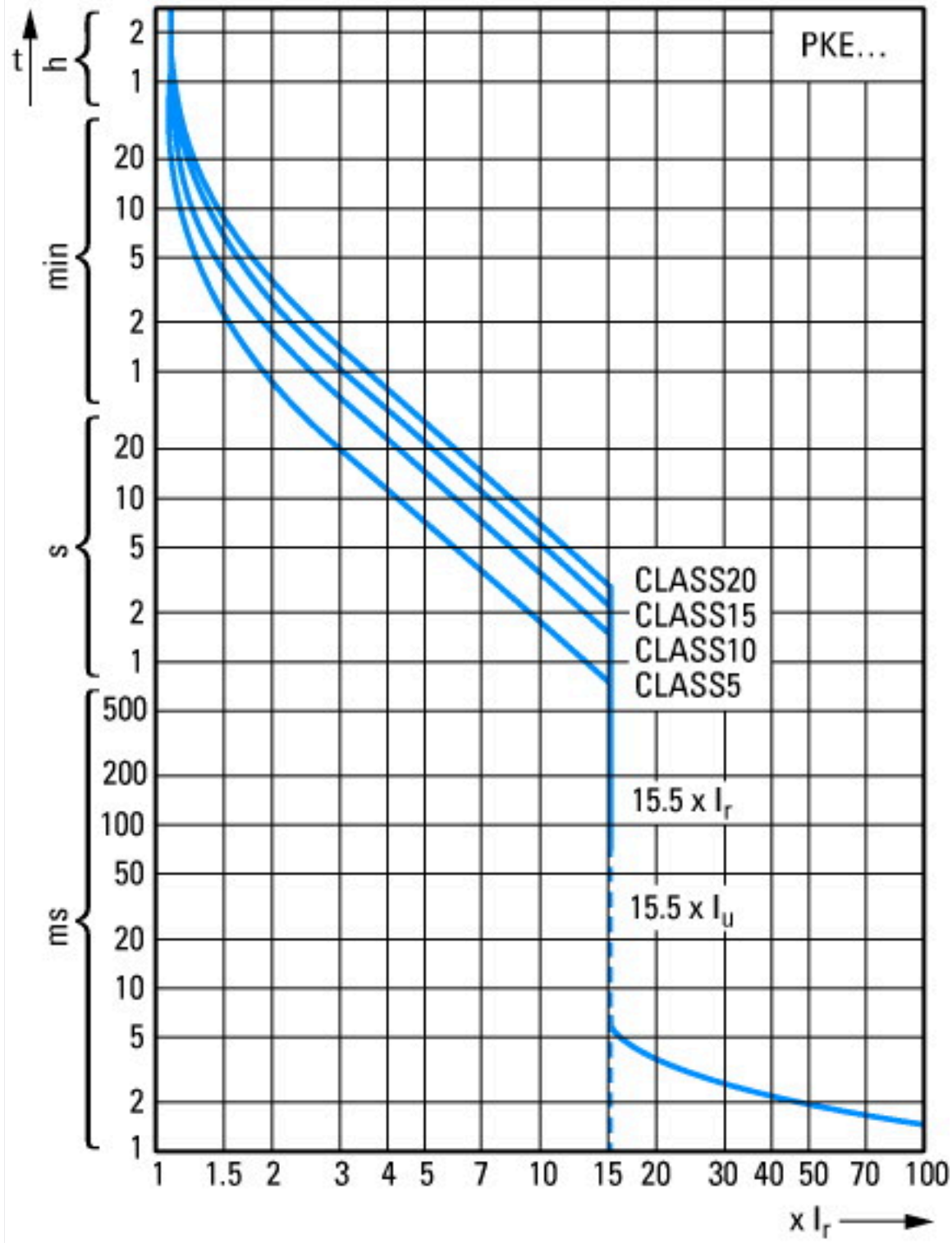
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Motor protection circuit-breaker (ecl@ss10.0.1-27-37-04-01 [AGZ529016])

|  |    |  |
|--|----|--|
| Overload release current setting                                   | A  | 8 - 32                                   |
| Adjustment range undelayed short-circuit release                   | A  | 496 - 496                                |
| With thermal protection  |    | Yes                                      |
| Phase failure sensitive  |    | Yes                                      |
| Switch off technique   |    | Electronic                               |
| Rated operating voltage  | V  | 690 - 690                                |
| Rated permanent current I <sub>u</sub>                             | A  | 32                                       |
| Rated operation power at AC-3, 230 V                               | kW | 7.5                                      |
| Rated operation power at AC-3, 400 V                               | kW | 15                                       |
| Type of electrical connection of main circuit                      |    | Screw connection                         |
| Type of control element  |    | Turn button                              |
| Device construction  |    | Built-in device fixed built-in technique |
| With integrated auxiliary switch                                   |    | No                                       |
| With integrated under voltage release                              |    | No                                       |
| Number of poles  |    | 3  |
| Rated short-circuit breaking capacity I <sub>cu</sub> at 400 V, AC | kA | 100                                      |
| Degree of protection (IP)  |    | IP20                                     |
| Height   | mm | 102.5                                    |
| Width  | mm | 45                                       |
| Depth  | mm | 102.5                                    |

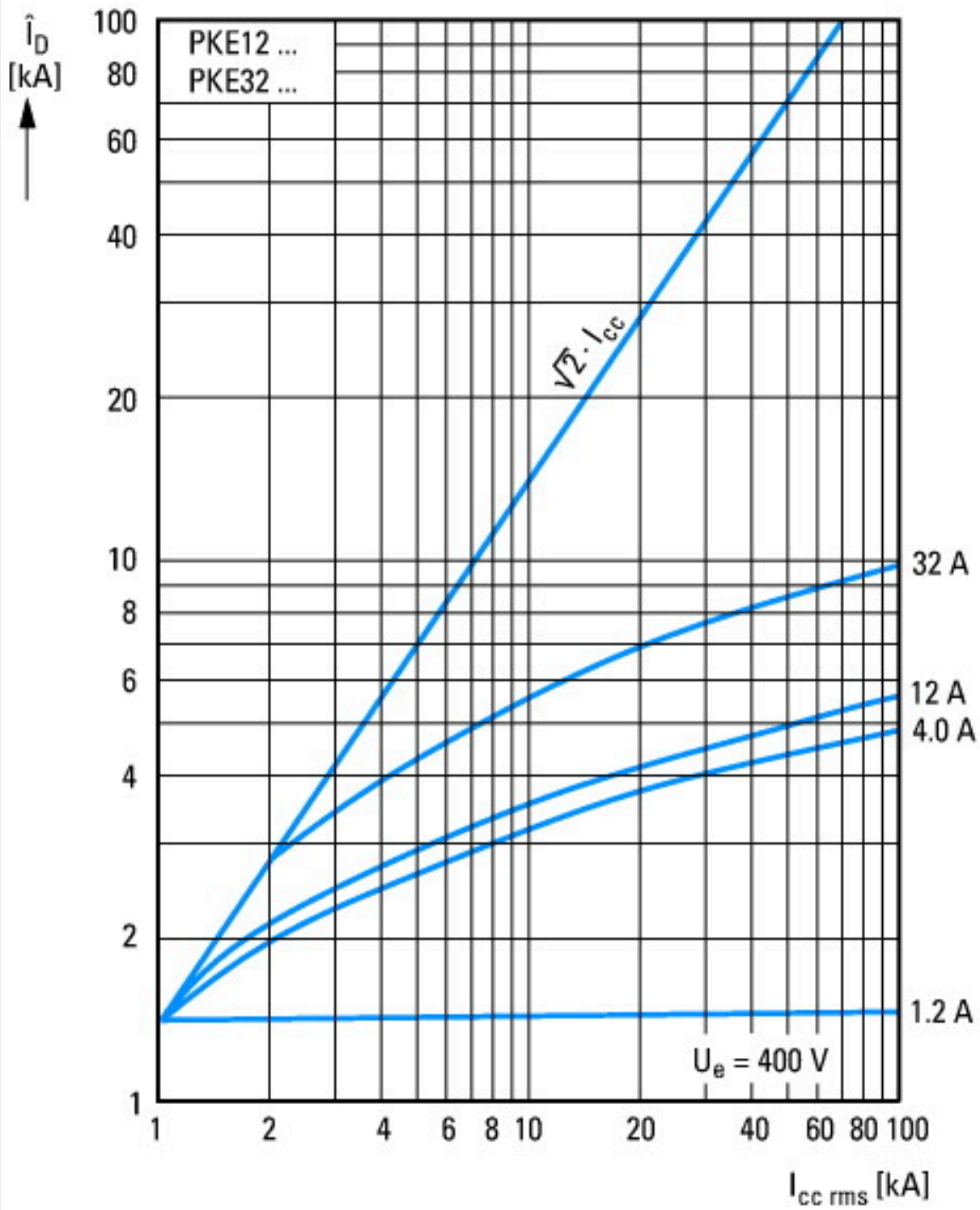
## Approvals

|                                      |  |  |
|--------------------------------------|--|--|
| Product Standards                    |  | IEC/EN 60947-4-1; UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CE marking |
| UL File No.                          |  | E36332   |
| UL Category Control No.              |  | NLRV   |
| CSA File No.                         |  | 165628   |
| CSA Class No.                        |  | 3211-05  |
| North America Certification          |  | UL listed, CSA certified   |
| Specially designed for North America |  | No   |

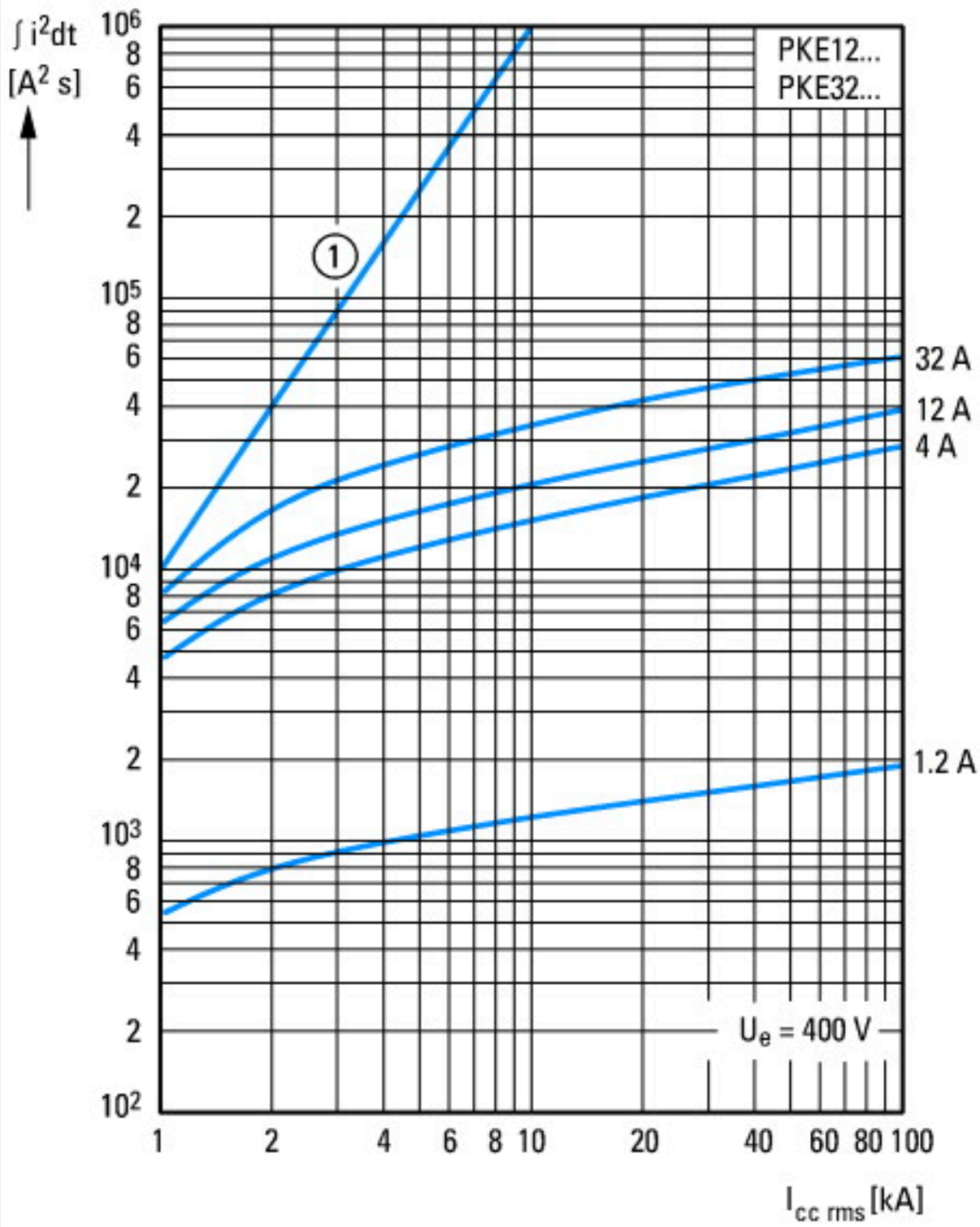
# Characteristics



Tripping characteristics

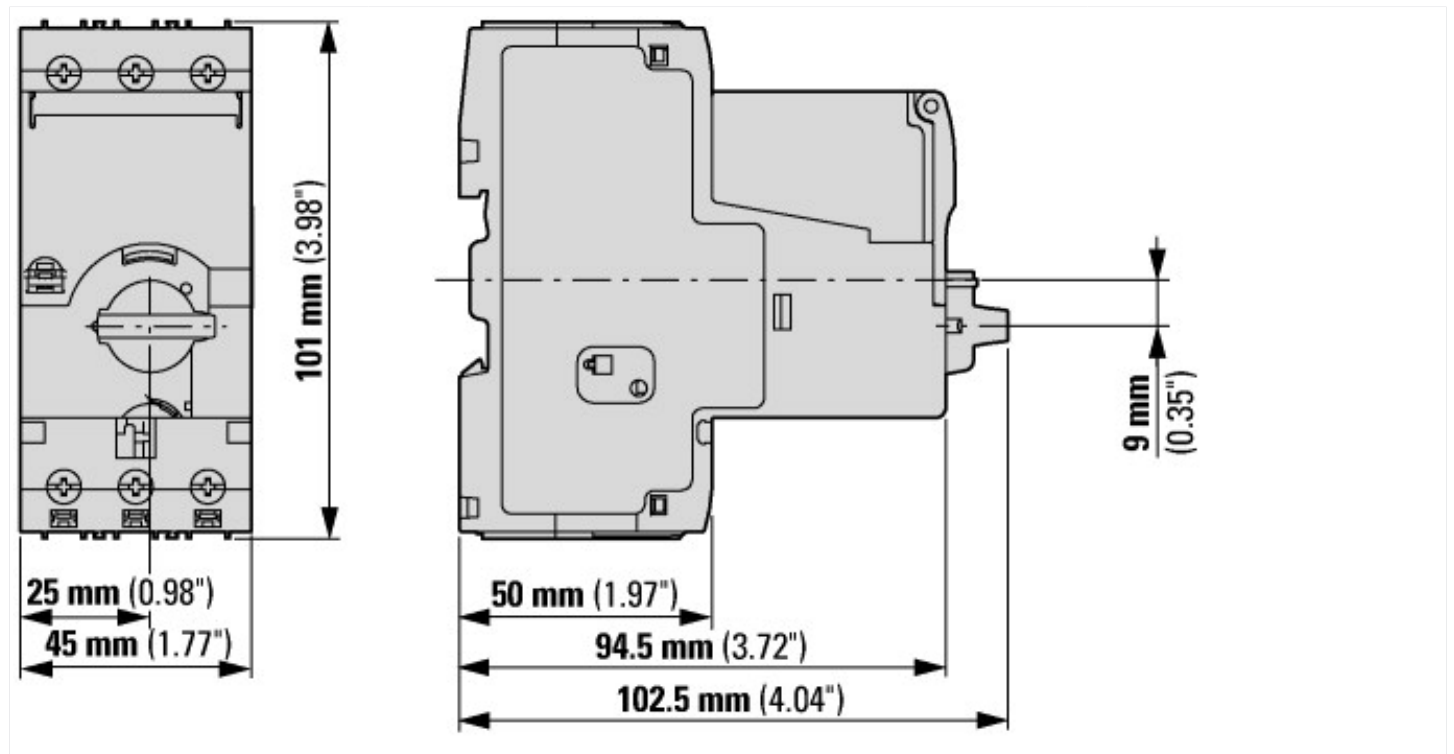


Let-through current



① 1 half-cycle  
Let-through energy

## Dimensions



## Assets (links)

### Declaration of CE Conformity

00002851

### Instruction Leaflets

IL03402019Z2018\_03

### Manuals

MN03402004Z\_DE\_EN (German)

MN03402004Z\_DE\_EN (English)