



**Trip block, 0.3 - 1.2 A, Motor protection, Connection to SmartWire-DT: no,  
For use with: PKE12 basic device**



**Part no. PKE-XTU-1,2**  
**Catalog No. 121723**  
**Alternate Catalog No. XTPEXT1P2B**  
**EL-Nummer (Norway) 0004315135**

**Delivery program**

|                |  |  |   |
|----------------|--|--|---|
| Product range  |  |  | Accessories   |
| Accessories    |  |  | Trip blocks   |
| Basic function |  |  | Motor protection<br>Motor protection for heavy starting duty  |
|                |  |  |   |
| Notes          |  |  | Also suitable for motors with efficiency class IE3.<br>IE3-ready devices are identified by the logo on their packaging. |

**Setting range**

|   |             |   |                       |
|---|-------------|---|-----------------------|
| Overload releases                                       |             |   |                       |
|   |             |   |                       |
| Setting range of overload releases                      | $I_r$       | A | 0.3 - 1.2             |
|   |             |   |                       |
| Overload release, min.                                  | $I_r$       | A | 0.3                   |
| Overload release, max.                                  | $I_r$       | A | 1.2                   |
| Function  |             |   | With overload release |
| Rated uninterrupted current = rated operational current | $I_u = I_e$ | A | 1.2                   |

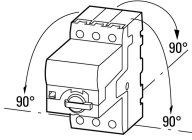
**Motor rating**

|                            |   |    |      |  |                    |
|----------------------------|---|----|------|--|--------------------|
| AC-3                       |   |    |      |  |                    |
| 220 V 230 V                | P | kW | 0.18 |  |                    |
| 380 V 400 V                | P | kW | 0.37 |  |                    |
| 440 V                      | P | kW | 0.37 |  |                    |
| 500 V                      | P | kW | 0.37 |  |                    |
| 660 V 690 V                | P | kW | 0.75 |  |                    |
| For use with               |   |    |      |  | PKE12 basic device |
| Connection to SmartWire-DT |   |    |      |  | no                 |

| P    | AC-3 | Rated motor current |       |       |       |       |
|------|------|---------------------|-------|-------|-------|-------|
|      |      | 220 V               | 380 V | 440 V | 500 V | 660 V |
|      |      | 230 V               | 400 V |       |       | 690 V |
|      |      | 240 V               | 415 V |       |       |       |
| kW   | A    | A                   | A     | A     | A     | A     |
| 0.06 | 0.37 | -                   | -     | -     | -     | -     |
| 0.09 | 0.54 | 0.31                | -     | -     | -     | -     |
| 0.12 | 0.72 | 0.41                | 0.37  | 0.33  | -     | -     |
| 0.18 | 1.04 | 0.6                 | 0.54  | 0.48  | 0.35  | -     |
| 0.25 | -    | 0.8                 | 0.76  | 0.7   | 0.5   | -     |
| 0.37 | -    | 1.1                 | 1.02  | 0.9   | 0.7   | -     |
| 0.55 | -    | -                   | -     | -     | 0.9   | -     |
| 0.75 | -    | -                   | -     | -     | 1.1   | -     |

**Technical data**

|                   |  |  |  |
|-------------------|--|--|--|
| Standards         |  |  | IEC/EN 60947, VDE 0660,UL, CSA         |
| Climatic proofing |  |  | Damp heat, constant, to IEC 60068-2-78 |

|   |    |  |  |
|---|----|--|--|
|   |    |  | 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  |

### Main conducting paths

|   |             |       |  |
|---|-------------|-------|--|
| Rated impulse withstand voltage                         | $U_{imp}$   | V AC  | 6000   |
| Overtoltage category/pollution degree                   |             |       | III/3  |
| Rated operational voltage                               | $U_e$       | V AC  | 690  |
| Rated uninterrupted current = rated operational current | $I_u = I_e$ | A     | 1.2  |
| Rated frequency   | f           | Hz    | 40 - 60  |
| Max. operating frequency                                |             | Ops/h | 60   |
| Motor switching capacity                                |             |       |  |
| AC-3 (up to 690V)                                       |             | A     | 1.2  |
| 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 | $x I_u$ |  | 0.25 - 1  |
| short-circuit release              |         |  | 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                           |

### Design verification as per IEC/EN 61439

|  |            |    |  |
|--|------------|----|--|
| Technical data for design verification                   |            |    |  |
| Rated operational current for specified heat dissipation | $I_n$      | A  | 1.2  |
| Heat dissipation per pole, current-dependent             | $P_{vid}$  | W  | 0.1  |
| Equipment heat dissipation, current-dependent            | $P_{vid}$  | W  | 0.3  |
| 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.                         |

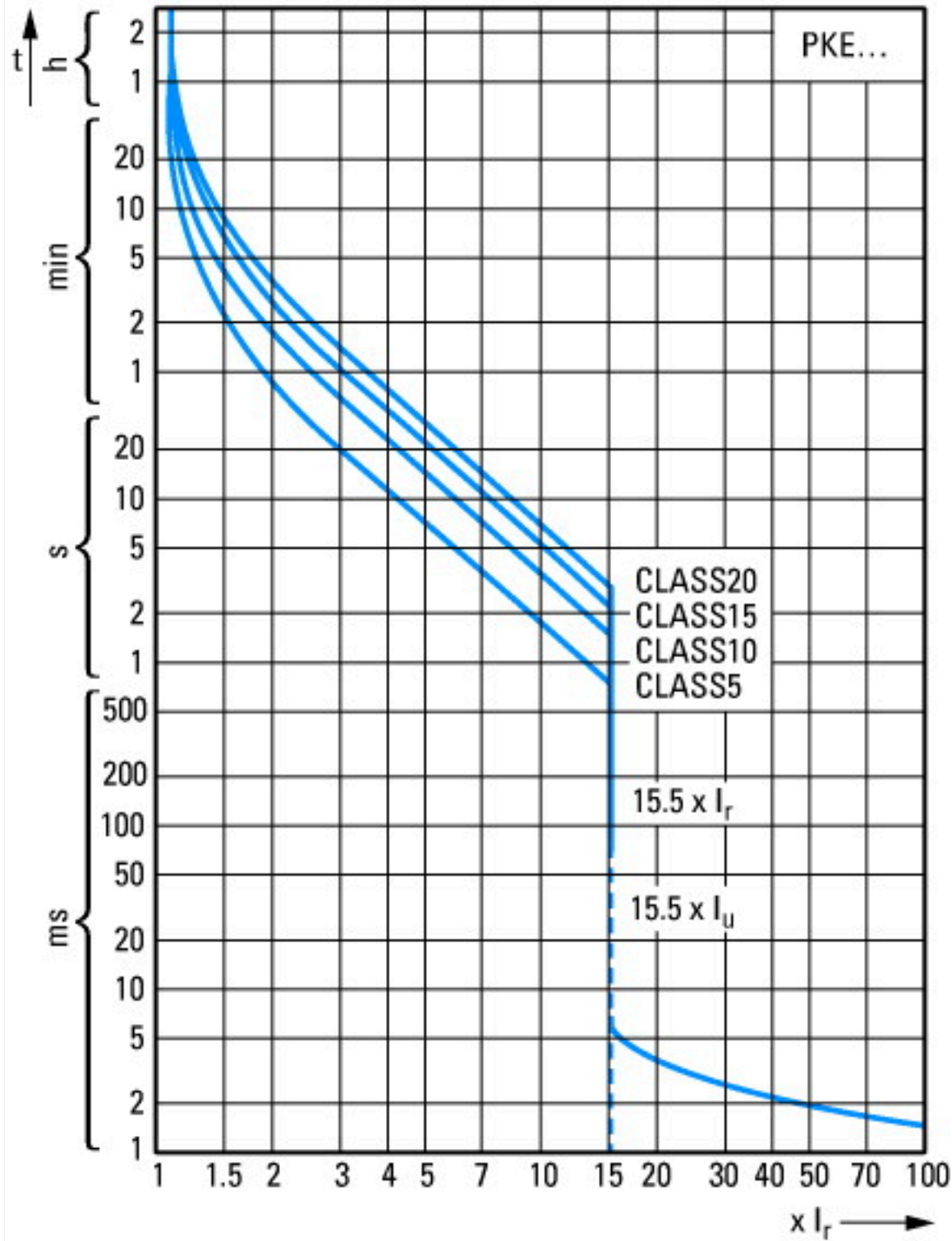
## Technical data ETIM 7.0

|   |   |                    |
|---|---|--------------------|
| Low-voltage industrial components (EG000017) / Tripping bloc for power circuit-breaker (EC000617)   |   |                    |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Releasing block for circuit breakers (ecl@ss10.0.1-27-37-04-10 [AKF008013]) |   |                    |
| Overload release current setting  | A | 0.3 - 1.2          |
| Initial value of the undelayed short-circuit release - setting range  | A | 4.65               |
| End value adjustment range undelayed short-circuit release  | A | 18.6               |
| Rated permanent current I <sub>u</sub>  | A | 1.2                |
| Voltage type for actuating  |   | Self powered       |
| Rated control supply voltage U <sub>s</sub> at AC 50HZ  | V | 0 - 0              |
| Rated control supply voltage U <sub>s</sub> at AC 60HZ  | V | 0 - 0              |
| Rated control supply voltage U <sub>s</sub> at DC   | V | 0 - 0              |
| Number of poles   |   | 3                  |
| Short-circuit release function  |   | Delayed            |
| With ground fault protection function   |   | No                 |
| Type of motor protection  |   | Electronic release |

## Approvals

|                                      |  |   |
|--------------------------------------|--|---|
| Product Standards                    |  | UL 508; CSA-C22.2 No. 14-10; IEC60947-4-1; 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

## Additional product information (links)

### IL034011ZU Trip block for solid-state motor-protective circuit-breaker PKE12, PKE32

IL034011ZU Trip block for solid-state motor-protective circuit-breaker PKE12, PKE32

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL034011ZU2018\\_03.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL034011ZU2018_03.pdf)

### MN03402004Z PKE12, PKE32 and PKE65 motor-protective circuit-breakers; overload monitoring of Ex e motors

MN03402004Z PKE12, PKE32 and PKE65 motor-protective circuit-breakers; overload monitoring of Ex e motors - Deutsch / English

[ftp://ftp.moeller.net/DOCUMENTATION/AWB\\_MANUALS/MN03402004Z\\_DE\\_EN.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03402004Z_DE_EN.pdf)

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