

**Motor-protective circuit-breaker, 15 kW, 25 - 32 A, Push in terminals, For use with motor starter combinations type MSC...**



**Part no.** PKZM0-32-PI  
**Catalog No.** 199162  
**Alternate Catalog No.** XTPRPI032BC1NL

## Delivery program

|                             |          |    |                                                     |
|-----------------------------|----------|----|-----------------------------------------------------|
| Product range               |          |    | PKZM0 motor protective circuit-breakers up to 32 A  |
| Basic function              |          |    | Motor protection                                    |
| For use with                |          |    | motor starter combinations type MSC...              |
|                             |          |    |                                                     |
| Notes                       |          |    | Also suitable for motors with efficiency class IE3. |
| Connection technique        |          |    | Push in terminals                                   |
| <b>Max. motor rating</b>    |          |    |                                                     |
| 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 | 22                                                  |
| 660 V 690 V                 | P        | kW | 30                                                  |
| Rated uninterrupted current | $I_u$    | A  | 32                                                  |
| <b>Setting range</b>        |          |    |                                                     |
| Overload releases           | $I_r$    | A  | 25 - 32                                             |
|                             |          |    |                                                     |
| short-circuit release       |          |    |                                                     |
|                             |          |    |                                                     |
| max.                        | $I_{rm}$ | A  | 496                                                 |
| Phase-failure sensitivity   |          |    | IEC/EN 60947-4-1, VDE 0660 Part 102                 |

## Technical data

|                                                                           |  |    |                                                                                |
|---------------------------------------------------------------------------|--|----|--------------------------------------------------------------------------------|
| <b>General</b>                                                            |  |    |                                                                                |
| 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                                                              |  |    | IP20                                                                           |
| 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               |  |                 |                             |
| Push-in terminals                          |  |                 |                             |
| Solid                                      |  | mm <sup>2</sup> | 1 x (1 - 6)<br>2 x (1 - 6)  |
| flexible                                   |  | mm <sup>2</sup> | 1 x (1 - 6)<br>2 x (1 - 6)  |
| flexible with ferrules                     |  | mm <sup>2</sup> | 1 x (1 - 6)<br>2 x (1 - 4)  |
| flexible with ultrasonic welded busbar end |  | mm <sup>2</sup> | 1 x (1 - 10)<br>2 x (1 - 6) |
| flexible with uninsulated wire end ferrule |  | mm <sup>2</sup> | 1 x (1 - 10)<br>2 x (1 - 6) |
| Solid or stranded                          |  | AWG             | 18 - 8                      |
| Stripping length                           |  | mm              | 12                          |
| Standard screwdriver                       |  |                 | 3.0 x 0.5                   |

### 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                 | 32      |
| Rated frequency                                         | f                               | Hz                | 40 - 60 |
| Current heat loss (3 pole at operating temperature)     |                                 | W                 | 9.56    |
| Impedance per pole                                      |                                 | mΩ                | 3       |
| 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      |
| Motor switching capacity                                |                                 |                   |         |
| AC-3 (up to 690V)                                       |                                 | A                 | 32      |

### 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: 15.5 x I <sub>u</sub> |
| Short-circuit release tolerance                       |  |                  | ± 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   | 7.5           |
| 230 V<br>240 V                                 |  | HP   | 10            |
| 460 V<br>480 V                                 |  | HP   | 20            |
| 575 V<br>600 V                                 |  | HP   | 25            |
| Short Circuit Current Rating, type E           |  | SCCR |               |
| 240 V                                          |  | kA   | 18            |
| 480 Y / 277 V                                  |  | kA   | 18            |
| Accessories required                           |  |      | LSA-PKZ0-E-PI |
| Short Circuit Current Rating, group protection |  | SCCR |               |
| 600 V High Fault                               |  |      |               |
| SCCR (fuse)                                    |  | kA   | 10            |
| max. Fuse                                      |  | A    | 150           |

|                     |    |     |
|---------------------|----|-----|
| SCCR (CB)           | kA | 10  |
| max. CB             | A  | 125 |
| SCCR with CL (fuse) | A  | 18  |
| max. Fuse (with CL) | A  | 600 |
| SCCR with CL (CB)   | kA | 18  |
| max. CB (with CL)   | A  | 600 |

## Design verification as per IEC/EN 61439

|                                        |    |     |
|----------------------------------------|----|-----|
| Technical data for design verification |    |     |
| Operating ambient temperature min.     | °C | -25 |
| Operating ambient temperature max.     | °C | 55  |

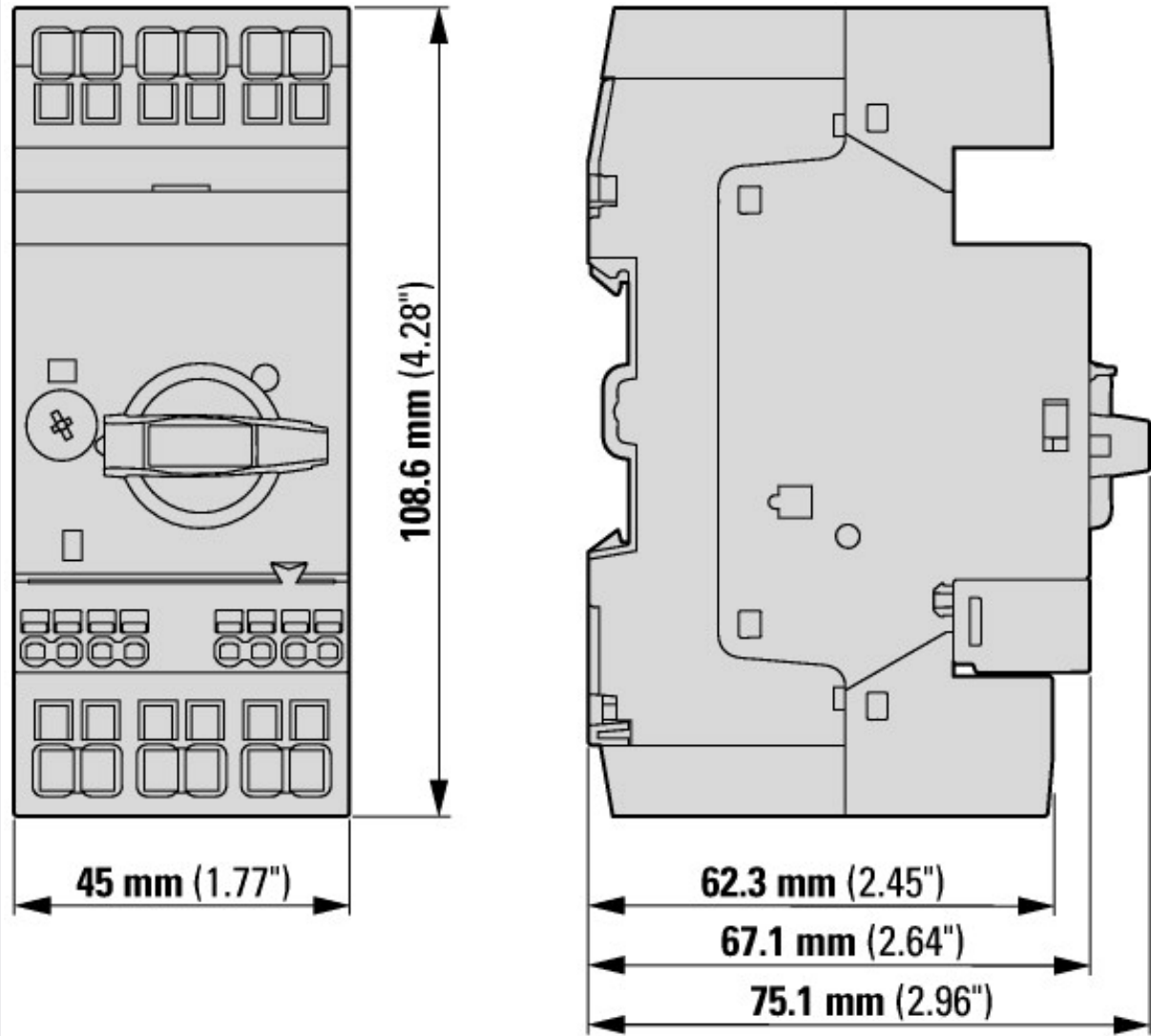
## Technical data ETIM 7.0

|                                                                                                                                                                                                       |    |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------------|
| 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  | 25 - 32                                  |
| Adjustment range undelayed short-circuit release                                                                                                                                                      | A  | 496 - 496                                |
| With thermal protection                                                                                                                                                                               |    | Yes                                      |
| Phase failure sensitive                                                                                                                                                                               |    | Yes                                      |
| Switch off technique                                                                                                                                                                                  |    | Thermomagnetic                           |
| 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                                                                                                                                                         |    | Spring clamp 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 | 50                                       |
| Degree of protection (IP)                                                                                                                                                                             |    | IP20                                     |
| Height                                                                                                                                                                                                | mm | 109                                      |
| Width                                                                                                                                                                                                 | mm | 45                                       |
| Depth                                                                                                                                                                                                 | mm | 75                                       |

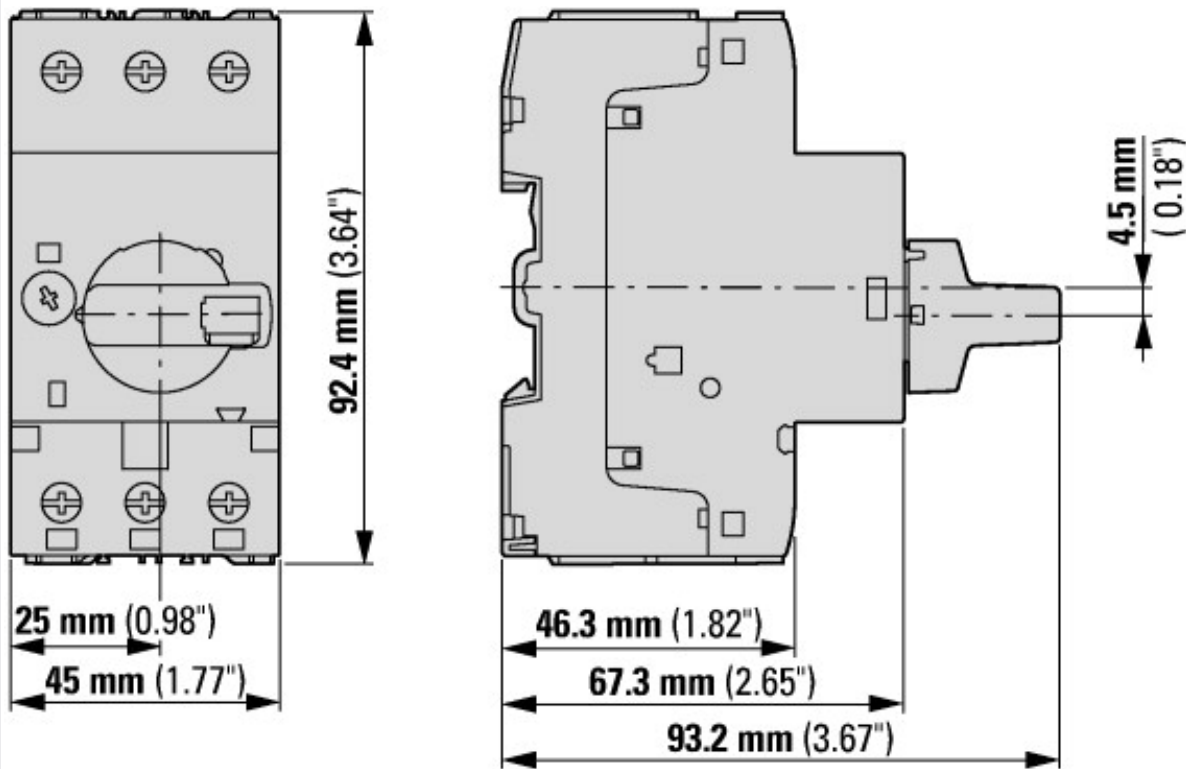
## Approvals

|                                      |  |                                                                                                   |
|--------------------------------------|--|---------------------------------------------------------------------------------------------------|
| 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                                                                                                |
| Suitable for                         |  | Branch circuit: Manual type E if used with Line Side Adapter, or suitable for group installations |

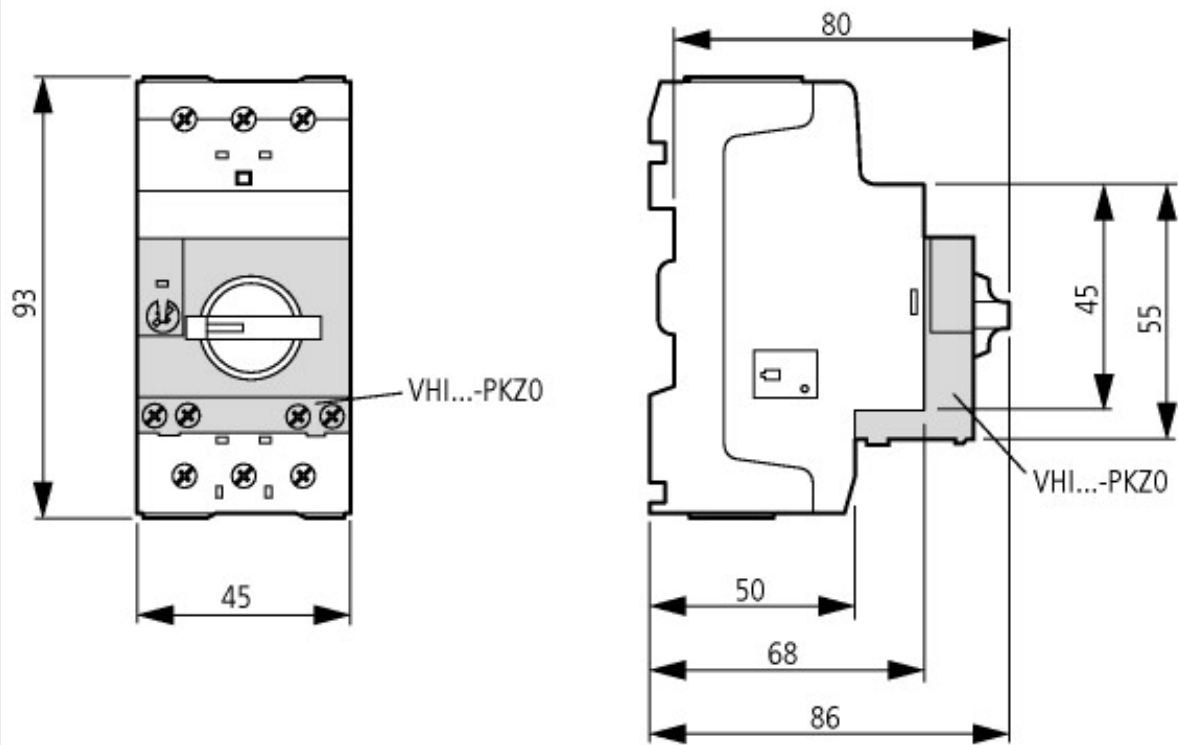
Dimensions



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



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