



199181  
PKZM0-1-SPI16

Overview

Specifications

Resources



Delivery program

Technical data

Design verification as  
per IEC/EN 61439

Technical data ETIM8.0

Approvals

Dimensions

## DELIVERY PROGRAM

Product range  
PKZM0 motor protective circuit-breakers up to 32  
A

Basic function  
Motor protection



Notes  
Also suitable for motors with efficiency class IE3.

Connection technique  
Feed-side screw terminals/output-side push-in  
terminals

### Max. motor rating

AC-3  
220 V 230 V 240 V [P]

0.12 kW

AC-3  
380 V 400 V 415 V [P]  
0.25 kW

AC-3  
440 V [P]  
0.25 kW

AC-3  
500 V [P]  
0.37 kW

AC-3  
660 V 690 V [P]  
0.55 kW

Rated uninterrupted current [ $I_u$ ]  
1 A

## Setting range

Overload releases  [ $I_r$ ]  
0.63 - 1 A

short-circuit release  [ $I_m$ ]  
max. [ $I_m$ ]  
15.5 A

Phase-failure sensitivity  
IEC/EN 60947-4-1, VDE 0660 Part 102

## TECHNICAL DATA

### General

Standards  
IEC/EN 60947, VDE 0660, UL, CSA

Climatic proofing  
Damp heat, constant, to IEC 60068-2-78

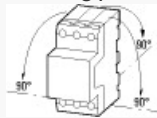
Damp heat, cyclic, to IEC 60068-2-30

Ambient temperature  
Storage  
- 40 - 80 °C

Ambient temperature  
Open  
-25 - +55 °C

Ambient temperature  
Enclosed  
- 25 - 40 °C

Mounting position



Direction of incoming supply  
as required

Degree of protection  
Device  
IP20

Degree of protection  
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  
25 g

Altitude  
Max. 2000 m

Terminal capacity main cable  
Screw terminals  
Solid  
1 x (1 - 6)  
2 x (1 - 6) mm<sup>2</sup>

Terminal capacity main cable  
Screw terminals  
Flexible with ferrule to DIN 46228  
1 x (1 - 6)  
2 x (1 - 6) mm<sup>2</sup>

Terminal capacity main cable  
Screw terminals  
Solid or stranded  
18 - 10 AWG

Terminal capacity main cable  
Screw terminals  
Stripping length  
10 mm

Terminal capacity main cable  
Push-in terminals  
Solid  
1 x (0,5 - 2,5)  
2 x (0,5 - 2,5) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
flexible  
1 x (0,5 - 2,5)  
2 x (0,5 - 2,5) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
flexible with ferrules  
1 x (0,5 - 1,5)  
2 x (0,5 - 1,5) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
flexible with ultrasonic welded busbar end  
1 x (0,5 - 2,5)  
2 x (0,5 - 2,5) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
flexible with uninsulated wire end ferrule  
1 x (0,5 - 2,5)  
2 x (0,5 - 2,5) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
Solid or stranded  
20 - 14 AWG

Terminal capacity main cable

Push-in terminals  
Stripping length  
10 mm

Terminal capacity main cable  
Push-in terminals  
Standard screw driver  
3.0 x 0.5

Specified tightening torque for terminal screws  
Main cable  
1.7 Nm

## Main conducting paths

Rated impulse withstand voltage [ $U_{imp}$ ]  
6000 V AC

Overvoltage category/pollution degree  
III/3

Rated operational voltage [ $U_e$ ]  
690 V AC

Rated uninterrupted current = rated operational  
current [ $I_u = I_e$ ]  
1 A

Rated frequency [f]  
40 - 60 Hz

Current heat loss (3 pole at operating temperature)  
5.33 W

Impedance per pole  
1700 m $\Omega$

Lifespan, mechanical [Operations]  
0.1 x 10<sup>6</sup>

Lifespan, electrical (AC-3 at 400 V)  
Lifespan, electrical [Operations]  
0.1 x 10<sup>6</sup>

Max. operating frequency

40 Ops/h

Motor switching capacity  
AC-3 (up to 690V)  
1 A

### Trip blocks

Temperature compensation  
to IEC/EN 60947, VDE 0660  
- 5...40 °C

Temperature compensation  
Operating range  
- 25...55 °C

Temperature compensation residual error for  $T > 40\text{ °C}$   
 $\square 0.25\text{ \%/K}$

Setting range of overload releases  
 $0.6 - 1 \times I_n$

short-circuit release  
Basic device, fixed:  $15.5 \times I_n$

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  
208 V  
Hinweis: Motorleistung in diesem Bereich nach  
Bemessungsstrom berechnen. Angegebene Werte  
nach NEC Table 430-150 HP

Switching capacity  
Maximum motor rating  
Three-phase  
230 V

240 V

Hinweis: Motorleistung in diesem Bereich nach  
Bemessungsstrom berechnen. Angegebene Werte  
nach NEC Table 430-150 HP

Switching capacity

Maximum motor rating

Three-phase

460 V

480 V

Hinweis: Motorleistung in diesem Bereich nach  
Bemessungsstrom berechnen. Angegebene Werte  
nach NEC Table 430-150 HP

Switching capacity

Maximum motor rating

Three-phase

575 V

600 V

Hinweis: Motorleistung in diesem Bereich nach  
Bemessungsstrom berechnen. Angegebene Werte  
nach NEC Table 430-150 HP

Short Circuit Current Rating, type E

240 V

65 kA

Short Circuit Current Rating, type E

480 Y / 277 V

65 kA

Short Circuit Current Rating, type E

600 Y / 347 V

50 kA

Short Circuit Current Rating, type E

Accessories required

BK25/3-PKZ0-E

Short Circuit Current Rating, group protection

600 V High Fault

SCCR (fuse)

50 kA

Short Circuit Current Rating, group protection

600 V High Fault

max. Fuse

600 A

Short Circuit Current Rating, group protection

600 V High Fault

SCCR (CB)

50 kA

Short Circuit Current Rating, group protection  
600 V High Fault  
max. CB  
600 A

## DESIGN VERIFICATION AS PER IEC/EN 61439

Operating ambient temperature min.  
-25 °C

Operating ambient temperature max.  
+55 °C

## TECHNICAL DATA ETIM 8.0

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 (ec1@ss10.0.1-27-37-04-01 [AGZ529016])

Overload release current setting  
0.63 - 1 A

Adjustment range undelayed short-circuit release  
15.5 - 15.5 A

With thermal protection  
Yes

Phase failure sensitive  
Yes

Switch off technique  
Thermomagnetic

Rated operating voltage  
690 - 690 V

Rated permanent current  $I_n$   
1 A

Rated operation power at AC-3, 230 V  
0.12 kW

Rated operation power at AC-3, 400 V  
0.25 kW

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  $I_{cu}$  at 400 V,  
AC  
150 kA

Degree of protection (IP)  
IP20

Height  
94 mm

Width  
45 mm

Depth  
75 mm

# 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

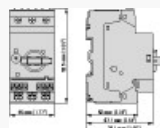
CSA Class No.  
3211-05

North America Certification  
UL listed, CSA certified

Specially designed for North America  
No

Suitable for  
Branch circuit: Manual type E if used with terminal,  
or suitable for group installations

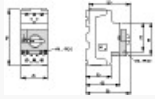
# DIMENSIONS



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



Motor-protective circuit-breakers with lockable  
rotary handles  
PKZMD-...+AK-PKZO



Motor-protective circuit-breakers with early-make  
auxiliary contacts  
PKZMD-...+VH-...-PKZO

