



Powering Business Worldwide



199162

PKZM0-32-PI



Overview



Specifications



Resources



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## 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

**Max. motor rating**

AC-3  
220 V 230 V 240 V [F]  
7.5 kW

AC-3  
380 V 400 V 415 V [F]  
15 kW

AC-3  
440 V [F]  
15 kW

AC-3  
500 V [F]  
22 kW

AC-3  
660 V 690 V [F]  
30 kW

Rated uninterrupted current [ $I_u$ ]  
32 A

## Setting range

Overload releases  [ $I_r$ ]  
25 - 32 A

short-circuit release  [ $I_m$ ]  
max. [ $I_m$ ]  
496 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  
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  
25 g

Altitude  
Max. 2000 m

Terminal capacity main cable  
Push-in terminals  
Solid  
1 x (1 - 6)

2 x (1 - 6) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
flexible  
1 x (1 - 6)  
2 x (1 - 6) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
flexible with ferrules  
1 x (1 - 6)  
2 x (1 - 4) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
flexible with ultrasonic welded busbar end  
1 x (1 - 10)  
2 x (1 - 6) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
flexible with uninsulated wire end ferrule  
1 x (1 - 10)  
2 x (1 - 6) mm<sup>2</sup>

Terminal capacity main cable  
Push-in terminals  
Solid or stranded  
18 - 8 AWG

Terminal capacity main cable  
Push-in terminals  
Stripping length  
12 mm

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

## 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 [ $I_u = I_e$ ]  
32 A

Rated frequency [ $f$ ]  
40 - 60 Hz

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

Impedance per pole  
3 m $\Omega$

Lifespan, mechanical [Operations]  
 $0.1 \times 10^6$

Lifespan, electrical (AC-3 at 400 V)  
Lifespan, electrical [Operations]  
 $0.1 \times 10^6$

Max. operating frequency  
40 Ops/h

Mbtor switching capacity  
AC-3 (up to 690V)  
32 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  $T > 40$  °C  
 $\square 0.25 \text{ \%}/K$

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

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  
7.5 HP

Switching capacity  
Maximum motor rating  
Three-phase  
230 V  
240 V  
10 HP

Switching capacity  
Maximum motor rating  
Three-phase  
460 V  
480 V  
20 HP

Switching capacity  
Maximum motor rating  
Three-phase  
575 V  
600 V  
25 HP

Short Circuit Current Rating, type E  
240 V  
18 kA

Short Circuit Current Rating, type E  
480 Y / 277 V  
18 kA

Short Circuit Current Rating, type E  
Accessories required  
LSA-PKZ0-E-PI

Short Circuit Current Rating, group protection  
600 V High Fault  
SCCR (fuse)  
10 kA

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

Short Circuit Current Rating, group protection  
600 V High Fault  
SCCR (CB)  
10 kA

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

Short Circuit Current Rating, group protection  
600 V High Fault  
SCCR with CL (fuse)  
18 A

Short Circuit Current Rating, group protection  
600 V High Fault  
max. Fuse (with CL)  
600 A

Short Circuit Current Rating, group protection  
600 V High Fault  
SCCR with CL (CB)  
18 kA

Short Circuit Current Rating, group protection  
600 V High Fault  
max. CB (with CL)  
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 (ecl@ss10.0.1-27-37-04-01 [AGZ529016])

Overload release current setting  
25 - 32 A

Adjustment range undelayed short-circuit release  
496 - 496 A

With thermal protection  
Yes

Phase failure sensitive  
Yes

Switch off technique  
Thermomagnetic

Rated operating voltage  
690 - 690 V

Rated permanent current I<sub>u</sub>  
32 A

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

Rated operation power at AC-3, 400 V  
15 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  
50 kA

Degree of protection (IP)  
IP20

Height  
109 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 Line  
Side Adapter, or suitable for group installations

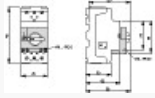
## DIMENSIONS



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



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



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

