




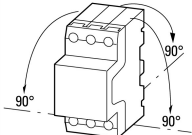
Motor-protective circuit-breaker, 9 kW, 16 - 20 A, Push in terminals, For use with motor starter combinations type MSC...

Part no. PKZM0-20-PI  
 Catalog No. 199160  
 Alternate Catalog No. XTPRPI020BC1NL  
 EL-Nummer (Norway) 4312296

### 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		5.5
380 V 400 V 415 V	P	kW		9
440 V	P	kW		11
500 V	P	kW		12.5
660 V 690 V	P	kW		15
Rated uninterrupted current	$I_u$	A		20
<b>Setting range</b>				
Overload releases	$I_r$	A		16 - 20
				
short-circuit release				
				
max.	$I_{rm}$	A		310
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 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) 2 x (1 - 6)
flexible		mm <sup>2</sup>	1 x (1 - 6) 2 x (1 - 6)
flexible with ferrules		mm <sup>2</sup>	1 x (1 - 6) 2 x (1 - 4)
flexible with ultrasonic welded busbar end		mm <sup>2</sup>	1 x (1 - 10) 2 x (1 - 6)
flexible with uninsulated wire end ferrule		mm <sup>2</sup>	1 x (1 - 10) 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	20
Rated frequency	f	Hz	50/60
Current heat loss (3 pole at operating temperature)		W	5.82
Impedance per pole		mΩ	5
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	20

### 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 208 V		HP	5
575 V 600 V		HP	15
Single-phase			
230 V 240 V		HP	3
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 8.0

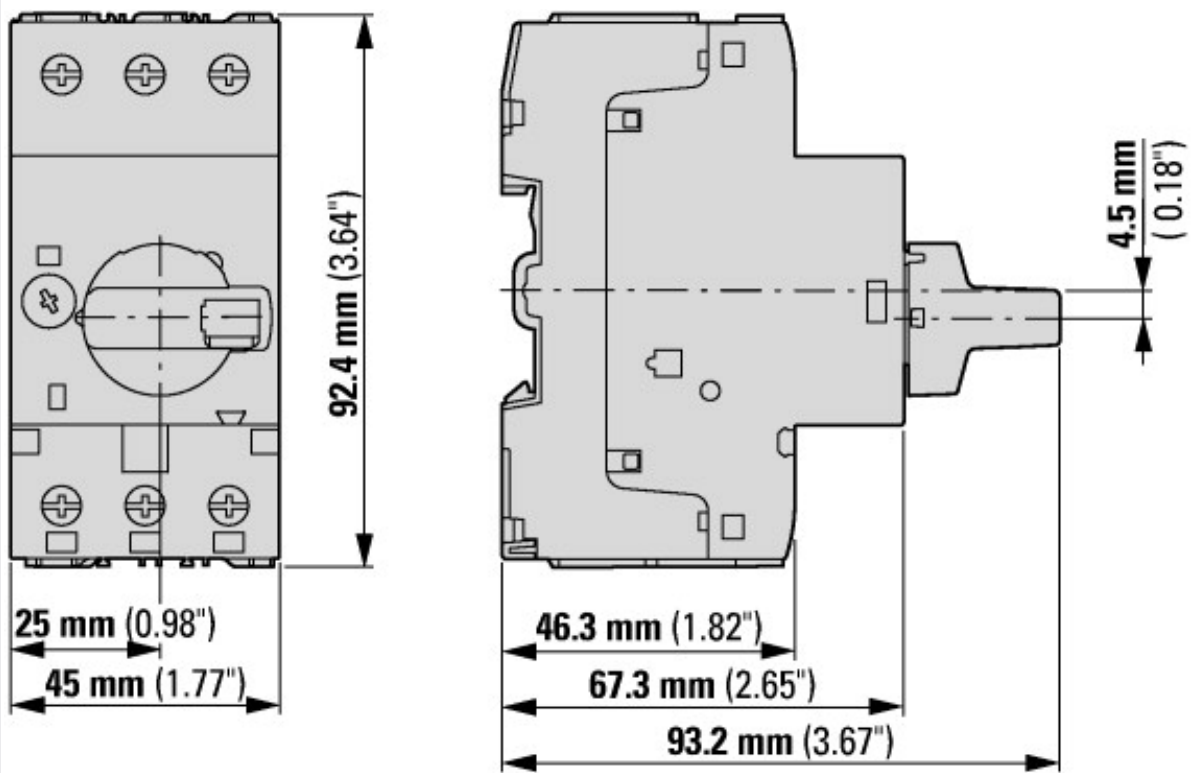
Low-voltage industrial components (EG000017) / Motor protection circuit-breaker (EC000074)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Motor protection circuit-breaker (ecl@ss10.0.1-27-37-04-01 [AGZ529016])		
Overload release current setting	A	20 - 20
Adjustment range undelayed short-circuit release	A	310 - 310
With thermal protection		No
Phase failure sensitive		Yes
Switch off technique		Thermomagnetic
Rated operating voltage	V	690 - 690
Rated permanent current Iu	A	20
Rated operation power at AC-3, 230 V	kW	5.5
Rated operation power at AC-3, 400 V	kW	9
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 Icu at 400 V, AC	kA	50
Degree of protection (IP)		IP20
Height	mm	109
Width	mm	45
Depth	mm	75

## Approvals

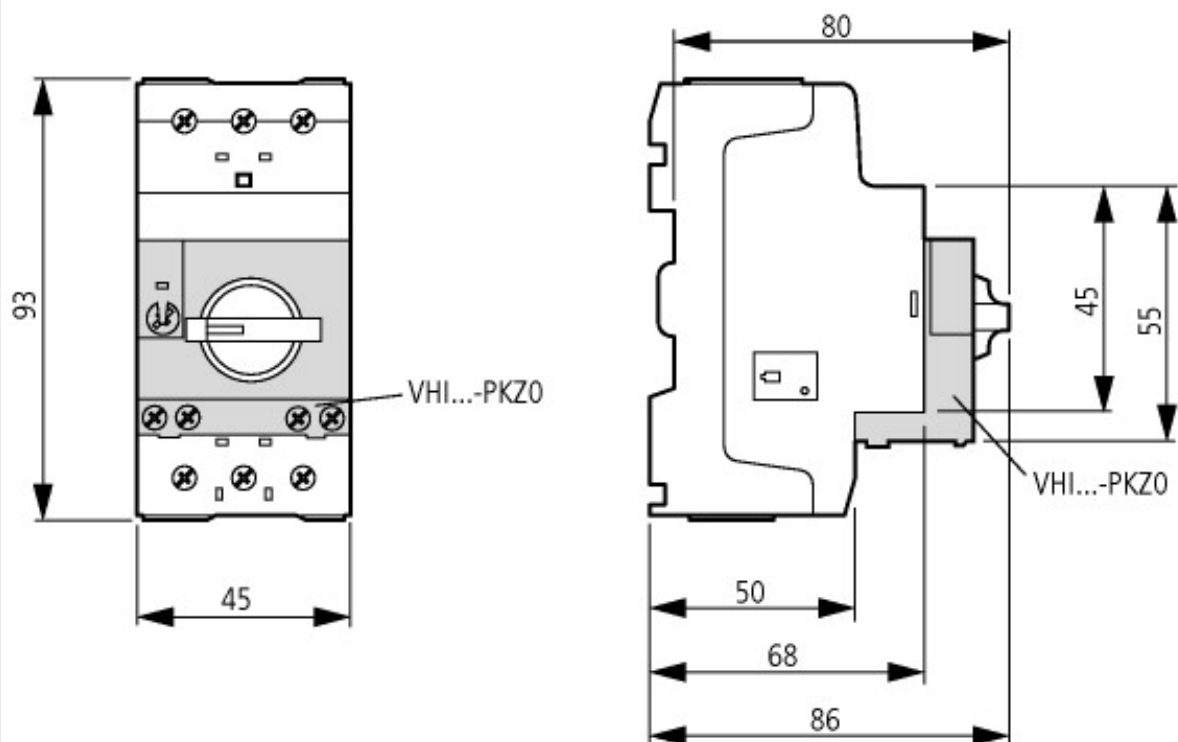
Product Standards		IEC/EN 60947-4-1; UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CE marking
UL File No.		E36332
UL Category Control No.		NLRV
CSA File No.		165628
CSA Class No.		3211-05
North America Certification		UL listed, CSA certified
Specially designed for North America		No
Suitable for		Branch 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)
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Motor-protective circuit-breakers with lockable rotary handles  
PKZM0-...+AK-PKZ0



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

### Additional product information (links)

Schaltvermögen	<a href="https://de.ecat.eaton.com/flip-cat/?edition=MOTCONT1_DE#page_3/44">https://de.ecat.eaton.com/flip-cat/?edition=MOTCONT1_DE#page_3/44</a>
Motor starters and "Special Purpose Ratings" for the North American market	<a href="http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf">http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf</a>
Busbar Component Adapters for modern Industrial control panels	<a href="http://www.moeller.net/binary/ver_techpapers/ver960en.pdf">http://www.moeller.net/binary/ver_techpapers/ver960en.pdf</a>