

Motor-protective circuit-breaker, 4 kW, 6.3 - 10 A, Feed-side screw terminals/output-side push-in terminals



Part no. PKZM0-10-SPI16
Catalog No. 199186
Alternate Catalog No. XTPRSPI16010BC1NL
EL-Nummer (Norway) 4312266

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	kW		2.2
380 V 400 V 415 V	P	kW		4
440 V	P	kW		4
500 V	P	kW		4
660 V 690 V	P	kW		7.5
Rated uninterrupted current	I_u	A		10
Setting range				
Overload releases	I_r	A		6.3 - 10
short-circuit release				
max.	I_{rm}	A		155
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		°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

Terminal capacity main cable			
Screw terminals			
Solid		mm ²	1 x (1 - 6) 2 x (1 - 6)
Flexible with ferrule to DIN 46228		mm ²	1 x (1 - 6) 2 x (1 - 6)
Solid or stranded		AWG	18 - 10
Stripping length		mm	10
Push-in terminals			
Solid		mm ²	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible		mm ²	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible with ferrules		mm ²	1 x (0,5 - 1,5) 2 x (0,5 - 1,5)
flexible with ultrasonic welded busbar end		mm ²	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
flexible with uninsulated wire end ferrule		mm ²	1 x (0,5 - 2,5) 2 x (0,5 - 2,5)
Solid or stranded		AWG	20 - 14
Stripping length		mm	10
Standard screwdriver			3.0 x 0.5
Specified tightening torque for terminal screws			
Main cable		Nm	1.7

Main conducting paths

Rated impulse withstand voltage	U _{imp}	V AC	6000
Overvoltage category/pollution degree			III/3
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current = rated operational current	I _u = I _e	A	10
Rated frequency	f	Hz	50/60
Current heat loss (3 pole at operating temperature)		W	6.48
Impedance per pole		mΩ	21
Lifespan, mechanical	Operations	x 10 ⁶	0.1
Lifespan, electrical (AC-3 at 400 V)			
Lifespan, electrical	Operations	x 10 ⁶	0.1
Max. operating frequency		Ops/h	40
Motor switching capacity			
AC-3 (up to 690V)		A	10

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 _u	0.6 - 1
short-circuit release			Basic device, fixed: 15.5 x I _u
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	3
230 V 240 V		HP	3
460 V 480 V		HP	7.5
575 V 600 V		HP	10
Single-phase			

230 V 240 V	HP	1.5
Short Circuit Current Rating, type E	SCCR	
240 V	kA	65
480 Y / 277 V	kA	65
600 Y / 347 V	kA	50
Accessories required		BK25/3-PKZ0-E
Short Circuit Current Rating, group protection	SCCR	
600 V High Fault		
SCCR (fuse)	kA	30
max. Fuse	A	600
SCCR (CB)	kA	30
max. CB	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	10 - 10
Adjustment range undelayed short-circuit release	A	155 - 155
With thermal protection		No
Phase failure sensitive		Yes
Switch off technique		Thermomagnetic
Rated operating voltage	V	690 - 690
Rated permanent current Iu	A	10
Rated operation power at AC-3, 230 V	kW	2.2
Rated operation power at AC-3, 400 V	kW	4
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	150
Degree of protection (IP)		IP20
Height	mm	93.5
Width	mm	45
Depth	mm	75.1

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

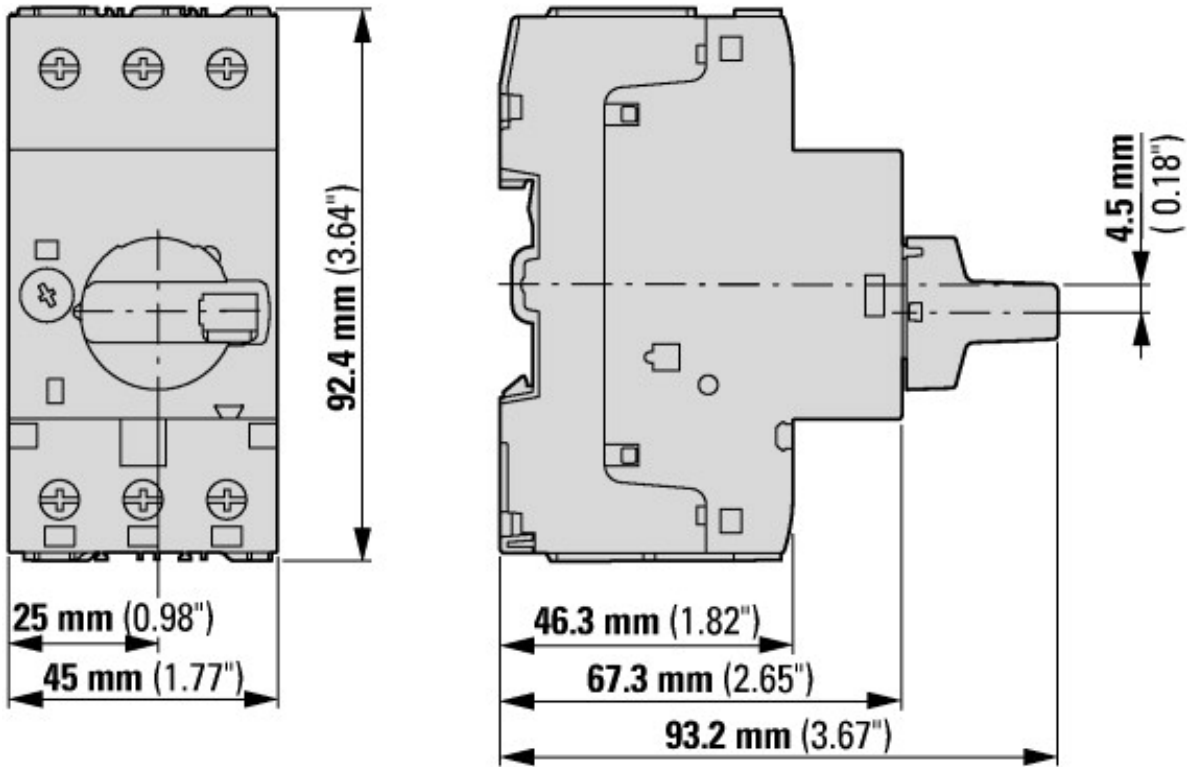
Dimensions

Motor-protective circuit-breaker with standard auxiliary contact

PKZM0-...(+NHI-E-...-PKZ0)

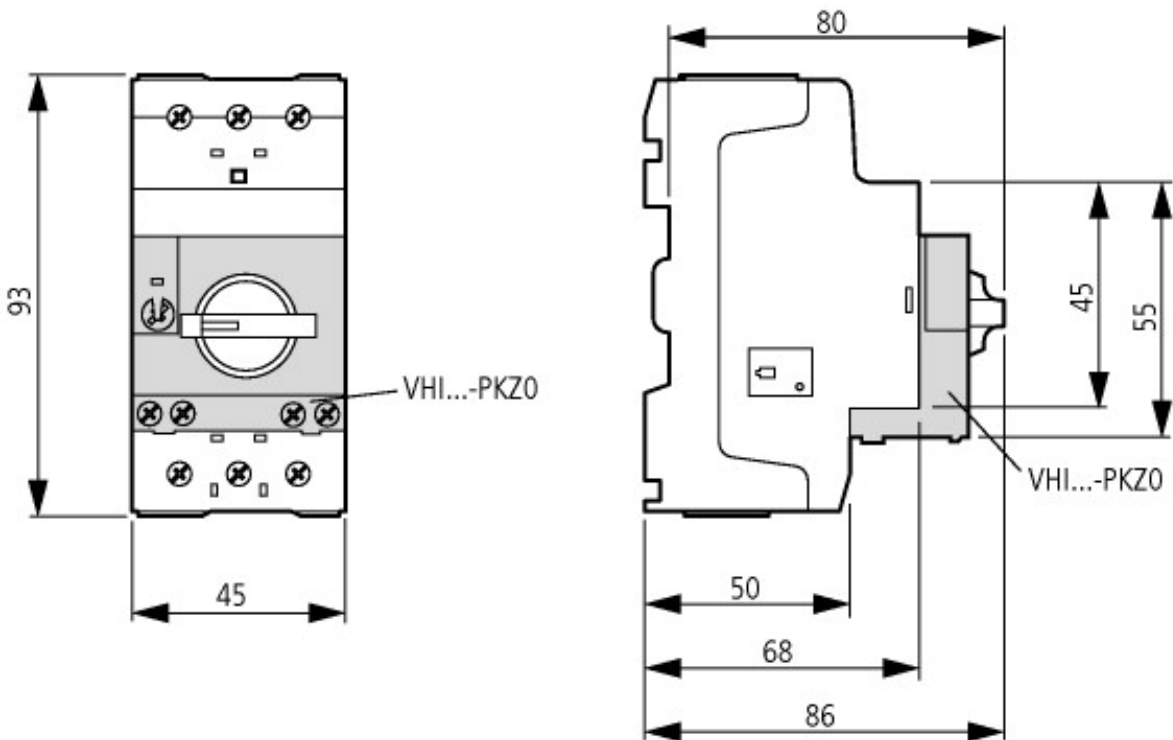
PKZM0-...-T(+NHI-E-...-PKZ0)

PKM0-...(+NHI-E-...-PKZ0)



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

https://de.ecat.eaton.com/flip-cat/?edition=MOTCONT1_DE#page_3/44

Motor starters and "Special Purpose Ratings" for the North American market

http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf

Busbar Component Adapters for modern Industrial control panels

http://www.moeller.net/binary/ver_techpapers/ver960en.pdf

