DATASHEET - PKZM0-25-T

Part no. Catalog No.

EL-Nummer

(Norway)

No.

Motor-protective circuit-breaker, 3p, Ir=20-25A

PKZM0-25-T 278493 Alternate Catalog XTPT025BC1NL

4315198



Delivery program

Product range			PKZM0T transformer-protective circuit-breakers up to 25 A
Basic function			Transformer protection
			IE3 🗸
Notes			Also suitable for motors with efficiency class IE3.
Connection technique			Screw terminals
Contact sequence			
Rated uninterrupted current	lu	А	25
Setting range			
Overload releases	l _r	A	20 - 25
short-circuit release			
max.	I _{rm}	А	437
Phase-failure sensitivity			IEC/EN 60947-4-1, VDE 0660 Part 102
Notes For the protection of transformers with a high inrush current. Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.			

Technical data

General		
Standards		IEC/EN 60947, VDE 0660
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		90°
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		

Solid na ² x1 = 6 Flexible with ferrule to DIN 46228 na ² x1 = 6 Solid or stranded NG x1 = 0 Stripping length NG x1 = 0 Stripping length NG x1 = 0 Main cable NG x1 = 0 Control circuit cables NG x1 = 0 Main cable NG x1 = 0 Control circuit cables NG x1 = 0 Main cable NG x1 = 0 Control circuit cables NG x1 = 0 Main cable NG x1 = 0 Control circuit cables NG x1 = 0 Read inpulse withstand voltage NG x1 = 0 Overvalue category/Dollution degree NG x1 = 0 Read inpulse withstand voltage Que NG x2 = 0 Cortrol circuit cables (3 pole dio per stripping here with read wi	Screw terminals			
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Sipping lengthnm1Specified tightening torque for terminal screwsNm1.7Main conduction is tablesNm1.7Main conducting pathsVane00Overvolage category/pollution degreeVane00Rated impulse withstand voltageVane00Rated instrumeted current = rated operational currentVane00Rated sequencyVane0000Corrent beet loss (3 pole at operational current with the sequencyVane00Lifespan, electrical (Ac-3 at 400 V)Vane0000Lifespan, electrical (Ac-3 at 400 V)Vane0000Short-circuit ratingVane0000Not-circuit ratingVane0000Not-circuit ratingVane0000Not-circuit ratingVane0000Not-circuit ratingVane0000Not-circuit ratingVane0000Not-circuit ratingVane0000Not-circuit ratingVane0000Not-circuit ratingVane0000Not-circuit rating ratioVane0000Not-circuit rating ratioVane0000N	Flexible with ferrule to DIN 46228		mm ²	
Specified ignaminal screwsImage: screws </td <td>Solid or stranded</td> <td></td> <td>AWG</td> <td>18 - 10</td>	Solid or stranded		AWG	18 - 10
Main cableNm1Main cardiacting pathNm1Bated inculue cablesNm1Bated inculue with stand votageNmNmOwnoutage categony/pollution degreeNmNmRated operational votageNmNmRated operational votageNmNmRated frequencyNmNmRated frequencyNmNmRated frequencyNmNmRated frequencyNmNmLifespan, electrical LAC-3 at 400 VincNmNmLifespan, electrical frequencyNmNmShort-circuit ratingNmNmShort-circuit rating	Stripping length		mm	10
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Aniconducting paths Manage Value Machine Rated inpulse withstand voltage Jump Value 600 Devroltage category/pollution degree III IIII Rated orpational voltage Value Value 90 Rated orpational voltage Value Value 90 Rated orpational voltage IIIII Value 90 Rated frequency IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Main cable		Nm	1.7
Rated implue withstand voltageMap <th< td=""><td>Control circuit cables</td><td></td><td>Nm</td><td>1</td></th<>	Control circuit cables		Nm	1
Quevolage category/pollution degreeImage: state or per ation and undegreeVectorMailRated operation al outrentImage: state or per ation al outrentImage: state or per at	Main conducting paths			
Red operational voltageUnVAC9000000000000000000000000000000000000	Rated impulse withstand voltage	U _{imp}	V AC	6000
Redeuminerupted current = rated operational current μ_{B} μ_{B} A2Rede direquencyfK26Lifespan, mechanicalOperation μ_{B} μ_{B} 0Lifespan, electrical (AC-3 at 400 V)F μ_{B} μ_{B} 0Lifespan, electrical (AC-3 at 400 V)Peration μ_{B} μ_{B} 0Max, operating frequencyOperation μ_{B} μ_{B} 0Not-circuit rating μ_{B} μ_{B} μ_{B} μ_{B} 0Motor switching capacity μ_{B} μ_{B} μ_{B} μ_{B} 0Not-circuit rating μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} Temperature compensation μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} Temperature compensation residual error for T > 40 °C μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} Shurt-circuit release μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} Shurt-circuit release μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} μ_{B} Shurt-circuit release tolerance μ_{B} 	Overvoltage category/pollution degree			III/3
Retar frequency Frequency Hz Hz<	Rated operational voltage	U _e	V AC	690
Current har los 3 pole at operating temperature)New8.3Lifespan, electrical (AC-3 at 400 V)PerationsNew1Lifespan, electrical (AC-3 at 400 V)PerationsNew1Lifespan, electrical (AC-3 at 400 V)PerationsNew1Max. operating frequencyPerationsNew1Short-circuit ratingPerationsNew1DoNord-circuit ratingNew1Nord-circuit ratingNewNew1AC-3 (up 6 980V)New33Do-S (up to 250V)New11Temperature compensationNewNew1In EC/EN 60947, VDE 06600NewNew1Operating rangeNewSind-Circuit release1Short-circuit releaseNewSind-Circuit release1Short-circuit releaseNewNew1Nord-circuit releaseNewNew1New1Nord	Rated uninterrupted current = rated operational current	$I_u = I_e$	А	25
Lifespan, mechanical Operations At the span, electrical (AC-3 at 400 V) Operations At the span, electrical Operations Operations At the span, electrical At t	Rated frequency	f	Hz	40 - 60
Lifespan, electrical (AC-3 at 400 V) Volt	Current heat loss (3 pole at operating temperature)		W	6.83
Idespan, electrical Operations x 10 ⁶ Max.operating frequency Opsath Opsath Max.operating frequency Opsath Opsath Short-circuit rating Image: Constraint of the second of	Lifespan, mechanical	Operations	x 10 ⁶	0.1
Max. operating frequency Max. operating	Lifespan, electrical (AC-3 at 400 V)			
Short-circuit rating Image: Control of the section of the sectin of the section of the section of the section	Lifespan, electrical	Operations	x 10 ⁶	0.1
DCImage: Construct of the second	Max. operating frequency		Ops/h	40
Abstraction And Added end Motor switching capacity F - AC-3 (up to 690V) And 5 Dc-5 (up to 250V) And 2 (3 contacts in series) Trip blocks - - To 16 (LP K0 69047, VDE 0660 F - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 16 (LP K0 69047, VDE 0660 - - To 17 (LP K0 69047, VDE 0660 - - Solting range of overload releases - - Solting range of overload releases - - Solting range - -	Short-circuit rating			
Motor switching capacity Mode of the second se	DC			
AC-3 (up to 690V) A 5 DC-5 (up to 250V) A 5 (3 contacts in series) Trip blocks 5 5 Temperature compensation C 5 40 Operating range -25 55 5 Temperature compensation residual error for T > 40 °C 6.25 %/K 50.5 %/K Setting range of overload releases -25 55 5 short-circuit release 6.1 Sic device, fixed: 20 x lu Short-circuit release -20% 20%	Short-circuit rating		kA	40
Dc-5 (up to 250V) A 25 (3 contacts in series) Trip blocks Temperature compensation Image: Compensation <td>Motor switching capacity</td> <td></td> <td></td> <td></td>	Motor switching capacity			
Trip blocks Temperature compensation Image: Compensation to IEC/EN 60947, VDE 0660 Compensation Operating range Compensation residual error for T > 40 °C Temperature compensation residual error for T > 40 °C Compensation Setting range of overload releases Finder Fi	AC-3 (up to 690V)		А	25
Temperature compensation Mode to IEC/EN 60947, VDE 0660 c -5 40 Operating range cC -25 55 Temperature compensation residual error for T > 40 °C 25 55 Setting range of overload releases Fage 60 - 1 short-circuit release East certain ce	DC-5 (up to 250V)		А	25 (3 contacts in series)
to IEC/EN 60947, VDE 0660 60 540 5	Trip blocks			
Operating range Constraints 25 55 Temperature compensation residual error for T > 40 °C 6 .25 %/K Setting range of overload releases F and a sin character of a sin chara	Temperature compensation			
Temperature compensation residual error for T > 40 °C Image: A log of the temperature compensation residual error for T > 40 °C Image: A log of temperature compensation residual error for T > 40 °C Image: A log of temperature compensation residual error for T > 40 °C Image: A log of temperature compensation residual error for T > 40 °C Image: A log of temperature compensation residual error for T > 40 °C Image: A log of temperature compensation residual error for T > 40 °C Image: A log of temperature compensation error for = 4	to IEC/EN 60947, VDE 0660		°C	- 5 40
Setting range of overload releases Image: Algebra of the set of the s	Operating range		°C	- 25 55
short-circuit release tolerance Image: Construct of the short of t	Temperature compensation residual error for T > 40 $^{\circ}\mathrm{C}$			≦ 0.25 %/K
Short-circuit release tolerance ± 20%	Setting range of overload releases		x I _u	0.6 - 1
	short-circuit release			Basic device, fixed: 20 x I _u
Phase-failure sensitivity IEC/EN 60947-4-1, VDE 0660 Part 102	Short-circuit release tolerance			± 20%
	Phase-failure sensitivity			IEC/EN 60947-4-1, VDE 0660 Part 102

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	Α	25
Heat dissipation per pole, current-dependent	P _{vid}	W	2.28
Equipment heat dissipation, current-dependent	P _{vid}	W	6.83
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.

10.2.7 Inscriptions	Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES	Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances	Meets the product standard's requirements.
10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
10.8 Connections for external conductors	Is the panel builder's responsibility.
10.9 Insulation properties	
10.9.2 Power-frequency electric strength	Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material	Is the panel builder's responsibility.
10.10 Temperature rise	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

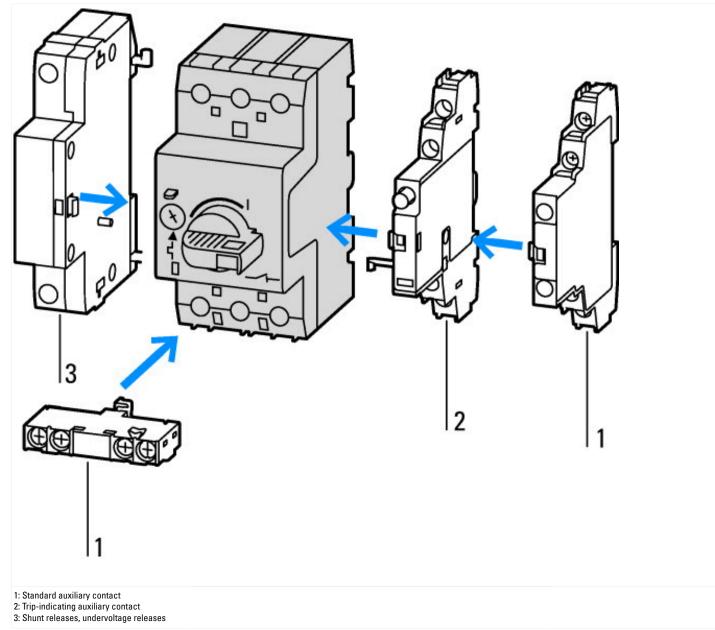
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

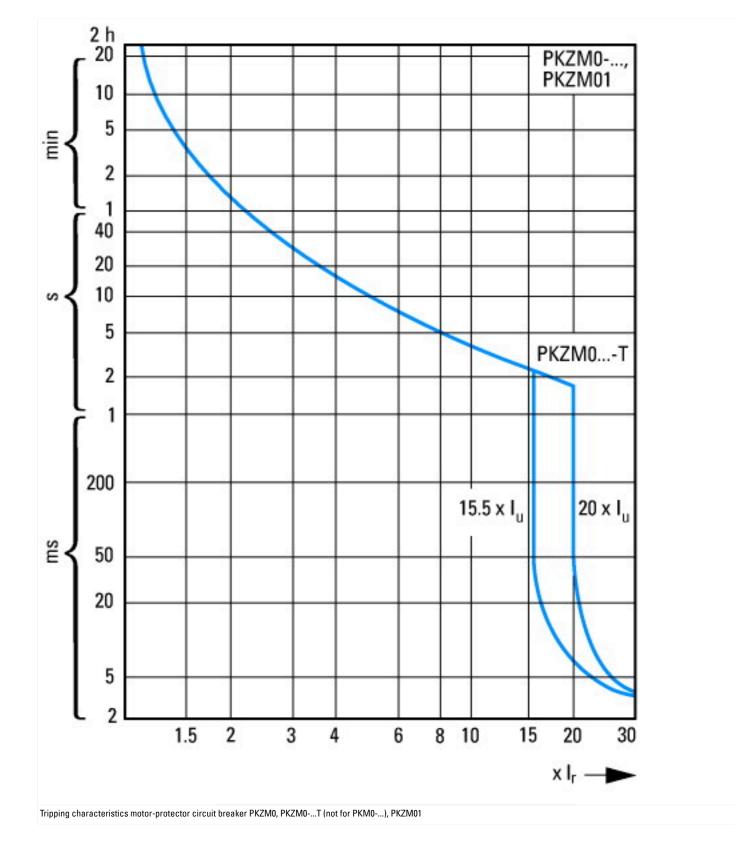
Rated permanent current lu	А	25
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	50
Overload release current setting	A	25 - 25
Adjustment range short-term delayed short-circuit release	A	0 - 0
Adjustment range undelayed short-circuit release	A	420 - 420
Integrated earth fault protection		No
Type of electrical connection of main circuit		Screw connection
Device construction		Other
Suitable for DIN rail (top hat rail) mounting		Yes
DIN rail (top hat rail) mounting optional		Yes
Number of auxiliary contacts as normally closed contact		0
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as change-over contact		0
With switched-off indicator		Yes
With under voltage release		No
Number of poles		3
Position of connection for main current circuit		Other
Type of control element		Turn button
Complete device with protection unit		Yes
Motor drive integrated		No
Motor drive optional		No
Degree of protection (IP)		IP20

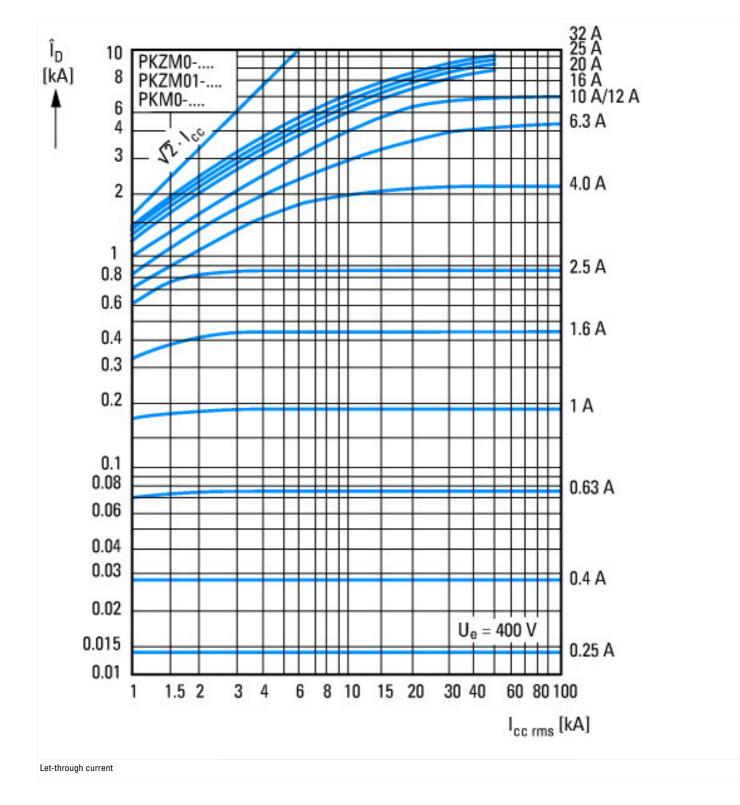
Approvals

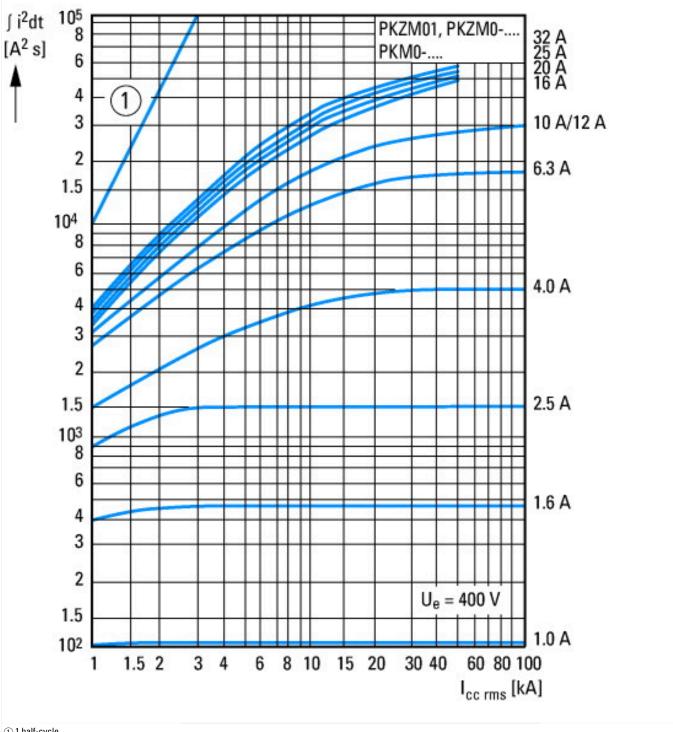
Specially designed for North America	No	
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Characteristics



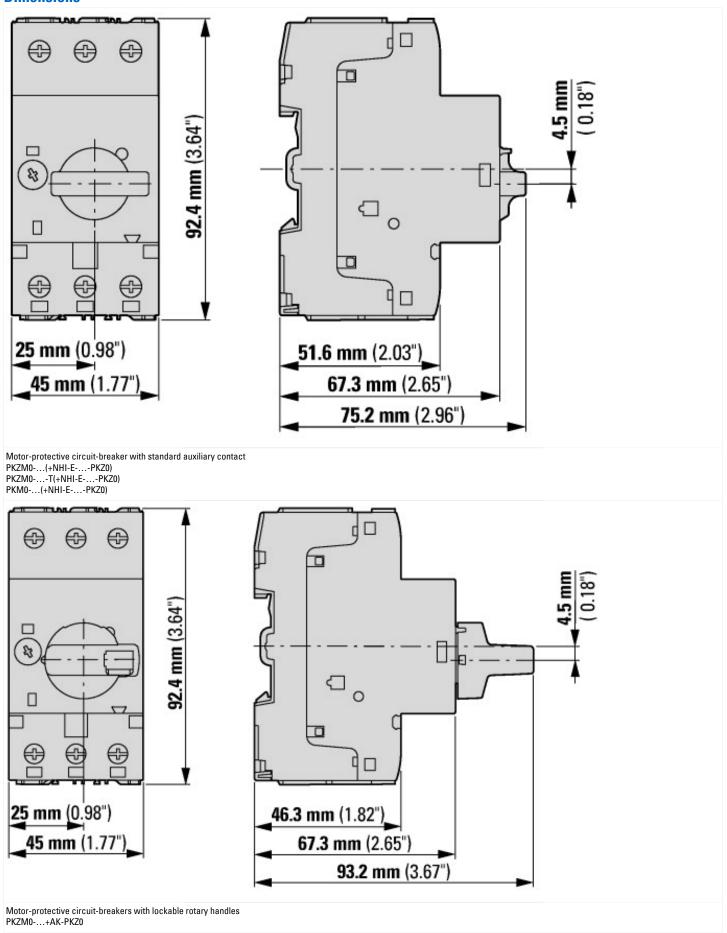


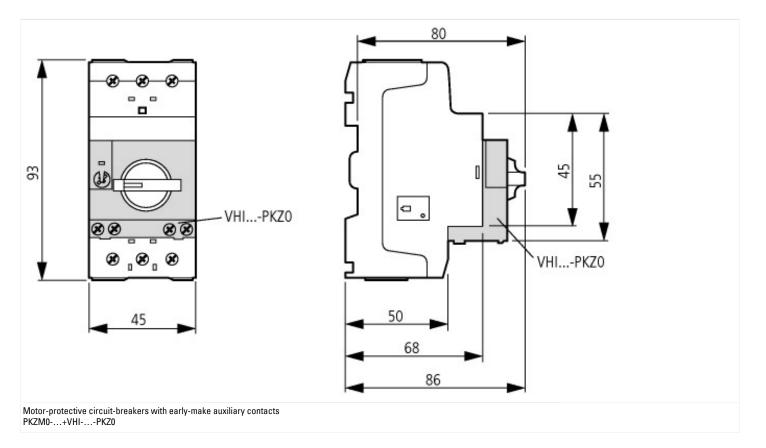




① 1 half-cycle Let-through energy

Dimensions





Additional product information (links)

A second s	
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