DATASHEET - PKZM0-10-T

Part no. Catalog No.

EL-Nummer

(Norway)

No.



Transformer-protective circuit-breaker, 3p, Ir=6.3-10A, screw connection



PKZM0-10-T 088916 Alternate Catalog XTPT010BC1NL

4315159

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	l _u	А	10
Setting range			
Overload releases	l _r	A	6.3 - 10
short-circuit release			
max.	I _{rm}	А	224
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		IE	C/EN 60947, VDE 0660
Climatic proofing			amp heat, constant, to IEC 60068-2-78 amp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Storage	°C	- 4	40 - 80
Open	°C	-2	5 - +55
Enclosed	°C	- 2	25 - 40
Mounting position			
Direction of incoming supply		as	s required
Degree of protection			
Device		IP	20
Terminations		IP	00
Protection against direct contact when actuated from front (EN 50274)		Fi	nger and back-of-hand proof
Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27	g	25	j
Altitude	m	М	lax. 2000
Terminal capacity main cable			

Solid nm 1,1,0,0 Fieldbowth funde to DIN 46226 nm 2,x1,0,0 Solid or stranded Awe Rev Solid or stranded Awe Rev Stripping Nm 1,000000000000000000000000000000000000	Screw terminals			
Image: State in the randed code in the random codd codd code in the random code in the random code in th			2	1 x (1 6)
Note of a strandedNote of a land strandIndependenceSing langthIndependenceSing langthIndependenceSpecified tightening torque for terminal screwsIndependenceName and the constraint of th	Solia		mm ²	
Supping lengthnm1Specified tightening torque for terminal screwsNm1/2Mine conductNm1/2Control cicuit cablesNm1/2Mine conductNm1/2Rated impulse withstand voltageVan9/2Control cicuit cablesVan9/2Control cicuit cablesVan9/2Rated impulse withstand voltageVan9/2Control cicuit cablesVan9/2Rated impulse withstand voltageVan9/2Rated impulse withstand voltageVan9/2Control cicuit cablesVan9/2Rated informeroped current aread operational currentVan9/2Rated frequencyVan9/29/2Lifespan, mechanicalVan9/29/2Lifespan, electrical LAC-3 at 400 VVan9/21/2Lifespan, electrical LAC-3 at 400 VVan9/21/2Lifespan, electrical fact at 400 VVan9/21/2Lifespan, electrical LAC-3 at 400 VVan1/21/2Lifespan, electrical LAC-3 at 400 VVan1/21/2Lifespan, electrical fact at 400 VVan1/21/2Lifespan, electrical LAC-3 at 400 VVan1/21/2Lifespan, electrical fact at 400 VVan1/21/2Lifespan, electrical fact at 400 VVan1/21/2Lifespan (Lag tables)Van1/21/21/2Lifespan (Lag tables)Van1/21/	Flexible with ferrule to DIN 46228		mm ²	
Spacified ignue for terminal screws Image: scale s	Solid or stranded		AWG	18 - 10
Main caleNm1Monto circuit cablesNm1Control circuit cablesNm1Main conducting pathNmNmRated impulse withstand voltageVm00Overoltage category/pollution degreeVmNmRated operation voltageVmNmRated operation voltageVmNmRated operation voltageVmNmRated frequencyVmNmCorrent bact loss (2 pole at operating temperature)VmNmLifespan, electrical (AC-3 at 400 V)VmNmLifespan, electrical (AC-3 at 400 V)VmNmShort-circuit ratingVmNmShort-circuit ratingNmNmDcNmNmShort-circuit ratingNmNmDcNmNmShort-circuit ratingNmNmDc-1 (stop 5690V)XmNmDc-1 (stop 5690V)XmNmDc-1 (stop 5690V)XmNmDc-1 (stop 5690V)XmNmDc-1 (stop 5690V)XmNmDc-1 (stop 5690V)XmNmDc-1 (stop 5600M)XmNmDreparation residual error for T> 40 °CSmTimperature compensation residual error for T> 40 °CSmNormality residual error for T> 40 °CSmShort-circuit releasesSmNormality residual error for T> 40 °CSmShort-circuit releasesSmNormality residual error for T> 40 °CSm	Stripping length		mm	10
Control circuit cablesNmAdminicationAtter conducting pathsValue600Norworkage category/pollution degreeValue600Nated operational vorbageValue600Rated operational vorbageValue600Rated operational currentI_aligaARated forquencyI_aligaA10Current heat loss (3 pole at operating temperature)I_aligaALifespan, mechnicalOperationNot620Lifespan, electrical (AC-3 at 400 V)I_aligaNot10Lifespan, electrical (AC-3 at 400 V)I_aligaNot10Stort-circuit ratingOperationNot1010DetermineI_aligaNot1010Stort-circuit ratingI_aliga101010DetermineI_aligaNot1010DetermineI_aligaNot1010DetermineI_aligaNot1010DetermineI_aligaNot1010DetermineI_aligaNot1010DetermineI_aligaNot1010DetermineI_aligaNot1010DetermineI_aliga101010DetermineI_aliga101010DetermineI_aliga101010DetermineI_aliga101010DetermineI_aliga101010De	Specified tightening torque for terminal screws			
Anitoconducting paths Mage Value Mode Mod	Main cable		Nm	1.7
Rated inpulse withsind voltage Ump (N/2) VAC (N/2) 600 Overvoltage category/pollution degree III/3 III/3 Rated operational voltage Ue VAC 690 Rated operational voltage Ue VAC 690 Rated uninterrupted current = rated operational current Ja Ie A 10 Rated frequency f H2 0 0 Current heat loss (3 pole at operating temperature) VW 629 0 Lifespan, nechnical Operation ND 0 0 Lifespan, electrical (AC-3 at 400 V) VM 0 0 0 Max. operating frequency Operation ND 0 0 0 Short-circuit rating VM 0 <t< td=""><td>Control circuit cables</td><td></td><td>Nm</td><td>1</td></t<>	Control circuit cables		Nm	1
Overolatige category/pollution degreeImage: state operational worksingImage: sta	Main conducting paths			
Rated operational vortage Ue VAC 660 Bated uninterrupted current = rated operational current I= Ie A 0 0 Bated frequency F Hz 0 0 0 0 Current heat loss (3 pole at operating temperature) Vec 52 0	Rated impulse withstand voltage	U _{imp}	V AC	6000
Rated uninterrupted current = rated operational current μ_{B} A 0 Rated frequencyf K 0 Current heat loss (3 pole at operating temperature) V 2 Lifespan, mechanicalOperation N_{B} 0 Lifespan, electrical (AC-3 at 400 V) V V V Lifespan, electricalOperation N_{B} 0 Max. operating frequencyOperation N_{B} 0 Short-circuit rating V V V Motor switching capacity V V V D^{C} V V V $N = 0$ $V = 0$ V V $N = 0$ $V = 0$ V V $V = 0$ $V = 0$	Overvoltage category/pollution degree			III/3
Rated frequency Face Hz Hz 0	Rated operational voltage	U _e	V AC	690
Current heat loss (3 pole at operating temperature) Image: span, mechanical Span at operating temperature)	Rated uninterrupted current = rated operational current	$I_u = I_e$	А	10
Idespan, mechanical Operations x top Idespan, electrical (AC-3 at 400 V) Lifespan, electrical (AC-3 at 400 V) Operations x top Idespan, electrical Operations x top Lifespan, electrical Operations x top Idespan, electrical Operations X top Max. operating frequency Operations X top Idespan, electrical Operations Idespan, electrical	Rated frequency	f	Hz	40 - 60
Lifespan, electrical (AC-3 at 400 V) Lifespan, electrical Lifespan, elec	Current heat loss (3 pole at operating temperature)		W	6.29
Lifespan, electrical Operations x 10 ⁶ Max. operating frequency Opshol Opshol Short-circuit rating Dpshol Import of the second	Lifespan, mechanical	Operations	x 10 ⁶	0.1
Max. operating frequency Max. Max. operating frequency Ops/n Ops/n Short-circuit rating Ops/n	Lifespan, electrical (AC-3 at 400 V)			
Short-circuit rating Image: state stat	Lifespan, electrical	Operations	x 10 ⁶	0.1
DCImage: Constraint of the second	Max. operating frequency		Ops/h	40
Short-circuit rating KA 6 Motor switching capacity F - AC-3 (up to 690V) A 0 DC-5 (up to 250V) A 10 (3 contacts in series) Trip bocks - - To FC/EN 60947, VDE 0660 A 0 Operating range - - Tomperature compensation residual error for T > 40 °C - - Setting range of overload releases - - short-circuit release - - - short-circuit release tolerance - - -	Short-circuit rating			
Ac-3 (up to 690V) A 1 AC-3 (up to 690V) A 0 (3 contacts in series) DC-5 (up to 250V) A 0 (3 contacts in series) Frip Jocks	DC			
AC-3 (up to 690V) A 0 DC-5 (up to 250V) A 0 (3 contacts in series) Trip blocks - - To EC/EN 60947, VDE 0660 C - - Operating range CC - - - Tomperature compensation residual error for T > 40 °C CC -	Short-circuit rating		kA	60
DC-5 (up to 250V) A 10 (3 contacts in series) Frip blocks Frip blocks Temperature compensation 6 6 to IEC/EN 60947, VDE 0660 6 6 6 Operating range °C 540 55 Temperature compensation residual error for T > 40 °C 6.25 %/K 50.5 %/K Setting range of overload releases Finge fixed: 20 × lu 8iot device, fixed: 20 × lu short-circuit release 6.1 20%	Motor switching capacity			
Trip blocks Temperature compensation Image: Compensation compensation to IEC/EN 60947, VDE 0660 °C 5 40 Operating range °C 25 55 Temperature compensation residual error for T > 40 °C Setting range of overload releases Setting range of overload releases short-circuit release Setting range 0.6 - 1 Short-circuit release Setting range Setting range of overload releases	AC-3 (up to 690V)		А	10
Temperature compensation Image: Compensa	DC-5 (up to 250V)		А	10 (3 contacts in series)
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 lup 06 - 1 short-circuit release E aci device, fixed: 20 x lup Short-circuit release tolerance Z mode 20%	Trip blocks			
Operating range °C 25 55 Temperature compensation residual error for T > 40 °C ≤ 0.25 %/K Setting range of overload releases < A J J J J J J J J J J J J J J J J J J	Temperature compensation			
Temperature compensation residual error for T > 40 °C \$ 0.5 %/K Setting range of overload releases \$ 1.0 % short-circuit release \$ 0.6 - 1 Short-circuit release tolerance \$ 20%	to IEC/EN 60947, VDE 0660		°C	- 5 40
Setting range of overload releases Image: Alge of a state	Operating range		°C	- 25 55
short-circuit release Basic device, fixed: 20 x l _u Short-circuit release tolerance 20%	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 l _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	А	10
Heat dissipation per pole, current-dependent	P _{vid}	W	2.1
Equipment heat dissipation, current-dependent	P _{vid}	W	6.29
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)

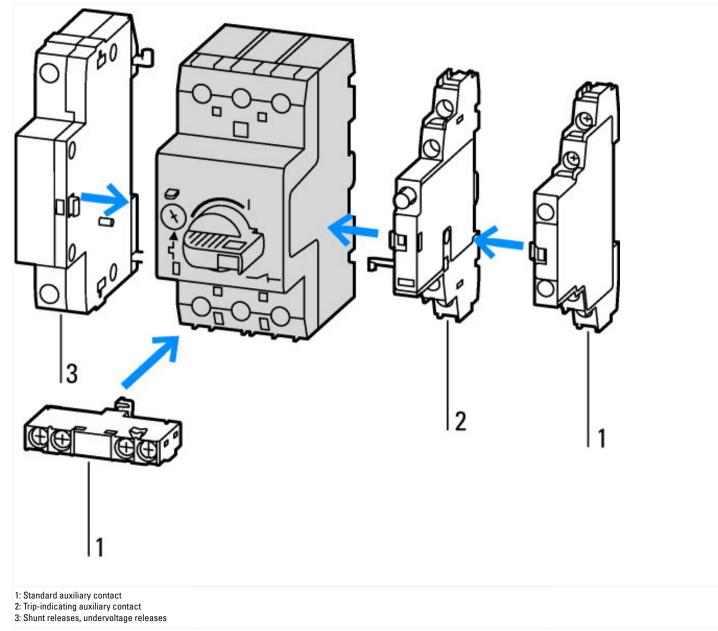
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

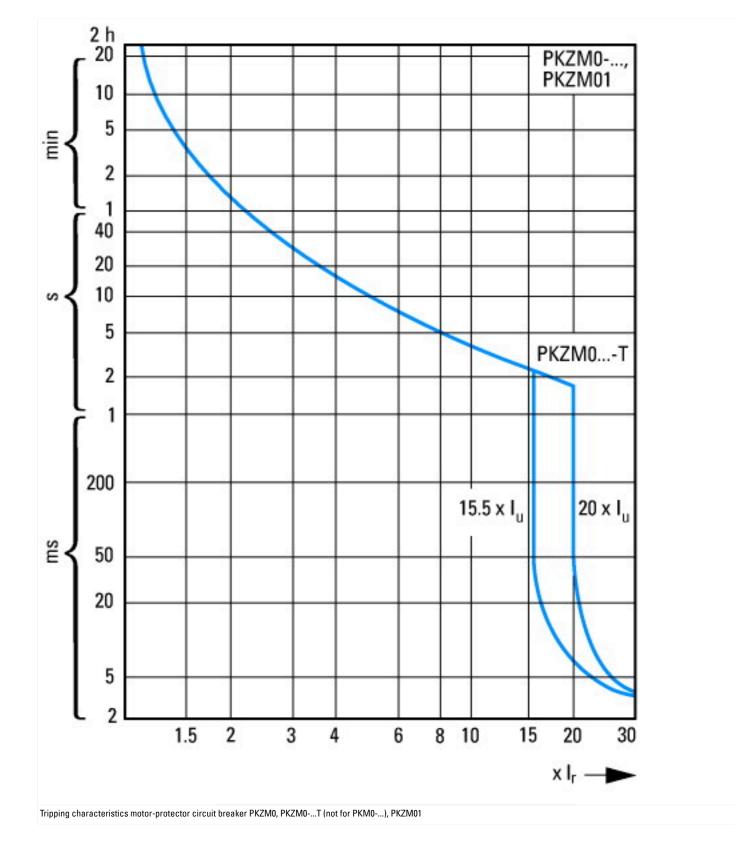
Rated permanent current lu	А	10
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	150
Overload release current setting	А	10 - 10
Adjustment range short-term delayed short-circuit release	А	0 - 0
Adjustment range undelayed short-circuit release	А	224 - 224
Integrated 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

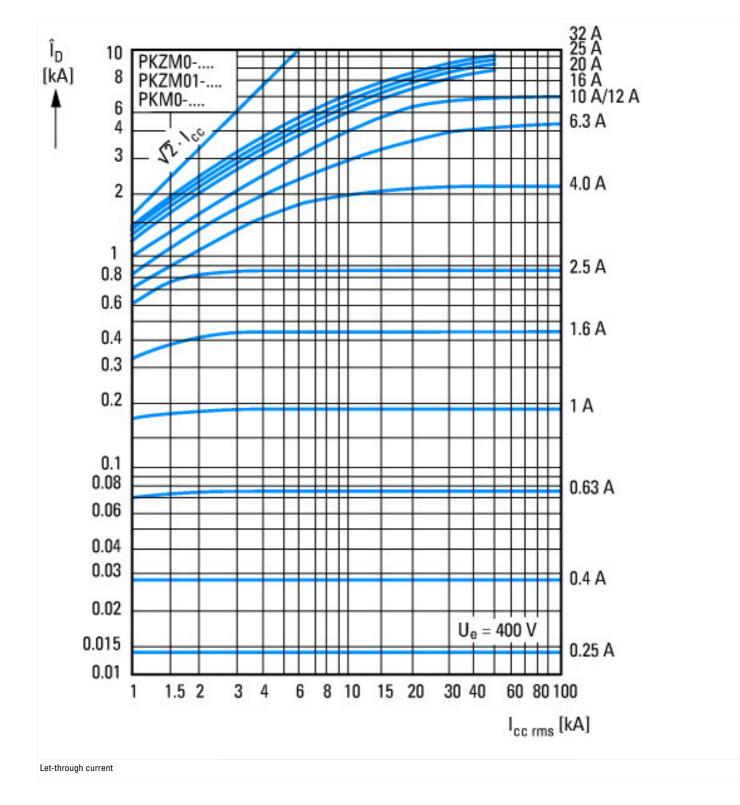
Approvals

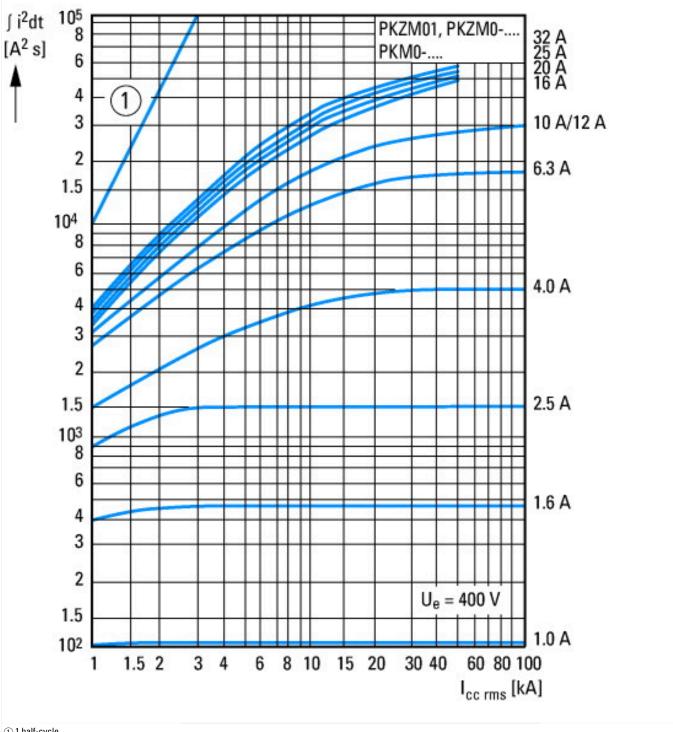
Specially designed for North America	No	
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Characteristics



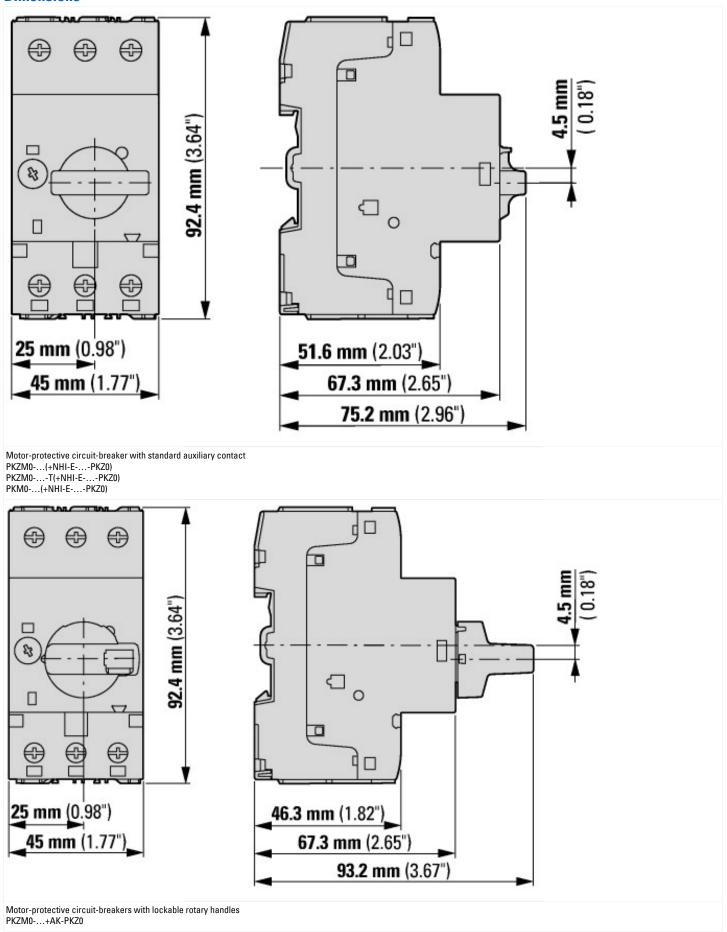


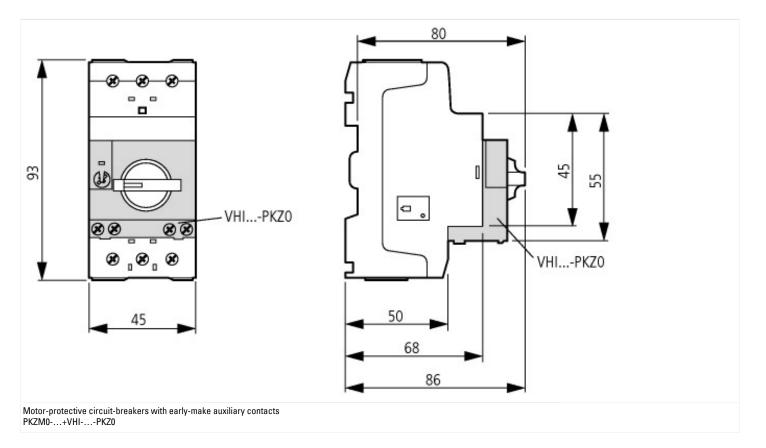




① 1 half-cycle Let-through energy

Dimensions





Additional product information (links)

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