DATASHEET - PKZM0-2,5-T

Part no.

EL-Nummer

(Norway)

No.



Transformer-protective circuit-breaker, 3p, Ir=1.6-2.5A, screw connection



PKZM0-2,5-T Catalog No. 088913 Alternate Catalog XTPT2P5BC1NL

4315156

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	2.5
Setting range			
Overload releases	l _r	A	1.6 - 2.5
short-circuit release			
max.	I _{rm}	А	50
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	°C	- 40 - 80
Open	c	°C	-25 - +55
Enclosed	c	°C	- 25 - 40
Mounting position			90° 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	ļ	g	25
Altitude	r	m	Max. 2000
Terminal capacity main cable			

Solid solid <td< th=""><th>Scrow terminals</th><th></th><th></th><th></th></td<>	Scrow terminals			
Facilie with ferule to DN 4623 initial is a constrained in the constrate in the constrained in the constrained in the constra	Screw terminals			
resultresultresultresultresultSinciple lengthIIISubje lengthIIISubje lengthIIIMain cableIIIControl circuit cablesIIISubje vitik stand voltageIIIRated inpulse vitik stand voltageIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Solid		mm ²	
Stripping lengthImage: stripping lengthImage: stripping lengthImage: stripping lengthImage: stripping lengthSpecified tightening torque for terminal screwsNm1.7Main conducting pathsNm1.7Reted inpulse withstand voltageVange: stripping length000Oervoltage category/polition degreeVange: stripping length000Reted inpulse withstand voltageVange: stripping length000Reted inpulse withstand stripping lengthVange: stripping length000Rete inpulse withstand stripping lengthVange: stripping length000	Flexible with ferrule to DIN 46228		mm ²	
Specified igners Nem Image: Nem Production of the minical screws Nem Image: Nem Production of the minical screws Main cable Nem 1 1 1 Rated inputs withstand valage Nem V 00 1 1 Rated operational valage Nem V 00 1	Solid or stranded		AWG	18 - 10
Main cable Mm 1.7 Control circuit cables Mm 1.0 Control circuit cables Mm 0.0 Control circuit cables VAC 000 Control circuit cables VAC 000 Control cace case on yobolition degree VAC 000 Raced persional votage VAC 000 Raced persional votage VAC 0.0 Corrent heat loss (Spole at opersing temporature) VAC 1.0 Lifespan, electrical (AC 3 at 400 Y) VAC 0.0 Stort-circuit rating Pare Marce 0.0 Stort-circuit rating VAC 0.0 Stort-circuit rating VAC	Stripping length		mm	10
Control circuit cablesNmNmNmAction conducting pathsRated one stints and voltageVan600Rated operational currentVan0Rated presentional currentVan0Rate presentional currentVan0Rate presentional currentVan0Rate presentional currentVan0Rate presentional currentVan0<	Specified tightening torque for terminal screws			
Anic conducting paths Many Value Manual Section (Section (Sectin (Sectin (Section (Section (Sectin (Section (Sectin (Section (S	Main cable		Nm	1.7
Retainpulse withstand voltageMapMapMapMapMapMapMapRetad operational voltageJapVap </td <td>Control circuit cables</td> <td></td> <td>Nm</td> <td>1</td>	Control circuit cables		Nm	1
Devolution degreeImage: state operational voltageImage: state operational voltage <td>Main conducting paths</td> <td></td> <td></td> <td></td>	Main conducting paths			
Ret derational voltage Ue VAC 80 Reted uniterrupted current = rated operational current I=1e A 5 Reted frequency F H2 0 Current heat loss (3 pole at operating temperature) Verations ND 7 Lifespan, nechanical Operations ND 1 Lifespan, electrical (AC-3 at 400 V) Perations ND 1 Lifespan, electrical Operations ND 1 Max. operating frequency Operations ND 1 Short-circuit rating Perations ND 1 Motor switching capacity ND ND 1 AC-3 (up to 680V) ND ND 2 3 Torperature compensation ND ND 2 3 Torperature compensation ND ND 1 1 Torperature compensation residual error for T> 40 °C ND 2 5 Short-circuit release ND SO SO SO Short-circuit releases ND SO SO SO Short-circuit releases So SO SO SO Short-circuit release tolerance ND SO SO	Rated impulse withstand voltage	U _{imp}	V AC	6000
Red uninterupted current = rated operational current	Overvoltage category/pollution degree			III/3
Rated frequency Face Hz 0 0 Current heat loss (3 pole at operating temperature) W 47 Lifespan, mechanical Operations x 10% 1 Lifespan, electrical (AC-3 at 400 V) F - - Lifespan, electrical (AC-3 at 400 V) Nore x 10% 1 Max. operating frequency Operations x 10% 1 Short-circuit rating Nore 0ps/M 0 Notor switching capacity KA 0 - AC-3 (to 15 200V) A 25 - Toperating range Sourd-circuit nating Sourd-circuit nating Sourd-circuit nating - Motor switching capacity A 25 - - AC-3 (to 15 200V) Co 5 - - Toperature compensation Sourd-circuit rating - - - In Life/EN 60947, VDE 06600 Co - - - - In Life/EN 60947, VDE 06600 Co - - -	Rated operational voltage	Ue	V AC	690
Current han 26 gole at operating temperature)NetNetA1Lifespan, mechanicalOperationsx 10%1Lifespan, electrical (AC-3 at 400 V)Perationsx 10%1Lifespan, electricalOperationsx 10%1Max. operating frequencyOperationsNo0Short-circuit ratingOperationsNoDCNoNoNoMotor switching capacityNoNoMotor switching capacityNoNoDC-AC-3 (po 1690V)ACSi Contacts in series)Tor blocksNoSi Contacts in series)Timperature compensationNoSi Contacts in series)Tor blocksNoSi Contacts in series)Torperature compensation residual error for T > 40 °CNoSi Contacts in series)Torperature compensation residual error for T > 40 °CNoSi Contacts in series)Stiting range of overload releasesNoSi Contacts in series)Stiting range of overload releasesNo	Rated uninterrupted current = rated operational current	$I_u = I_e$	А	2.5
Lifespan, mechanical Operations x toP Lifespan, electrical (AC-3 at 400 V) Operations x toP Lifespan, electrical Operations x toP Max. operating frequency Max. Dps/h Most. operating frequency Max. Operations Short-circuit rating Max. Dps/h Motor switching capacity KA Operations AC-3 (up to 690V) A 2.5 DC-5 A 2.5 (a contracts in series) Toperature compensation KA Sourd-circuit in series) Toperature compensation residual error for T > 40 °C 5	Rated frequency	f	Hz	40 - 60
Lifespan, electrical (AC-3 at 400 V) Vertains Image: Additional state of the st	Current heat loss (3 pole at operating temperature)		W	4.71
Idespan, electrical Operations x 10 ⁶ Max. operating frequency Ops/h 0 Max. operating frequency Ops/h 0 Short-circuit rating Image: Construct Table Image: Construct Table DC Image: Construct Table Image: Construct Table Motor switching capacity Image: Construct Table Image: Construct Table AC-3 (up to 690V) A 2.5 (actracts in series) To De four to 250V) A 2.5 (actracts in series) To De four to 250V) A 2.5 (actracts in series) To De four to 250V) A 2.5 (actracts in series) To De four to 250V, DE 0660 Construct in series) Sint-Grout Table To De four to 250V, DE 0660 Construct in series) Sint-Grout Table To De four to 250V, DE 0660 Construct in series) Sint-Grout Table To De four to 250V, DE 0660 Construct in series) Sint-Grout Table Storing range of overload releases Construct in series) Sint-Grout Table Storing range of overload releases Construct Table Sint Grout Table Short-circuit release To Four Table Construct Table Sint Grout Table	Lifespan, mechanical	Operations	x 10 ⁶	0.1
Max. operating frequency Max. operating	Lifespan, electrical (AC-3 at 400 V)			
Short-circuit rating Image: Content of the second of t	Lifespan, electrical	Operations	x 10 ⁶	0.1
DCImage: Constraint of the second	Max. operating frequency		Ops/h	40
Short-circuit rating KA 60 Motor switching capacity F 60 AC-3 (up to 690V) F 5 DC-5 (up to 250V) A 2.5 Trip blocks 5 5 To 1EC/EN 60947, VDE 0660 F 5 Operating range C 5 Temperature compensation residual error for T > 40 °C 5 5 Setting range of overload releases S 25 %/K Short-circuit release G 6 Short-circuit release tolerance S 20%	Short-circuit rating			
Motor switching capacity Mode of the second se	DC			
AC-3 (up to 690V)A2.5DC-5 (up to 250V)A2.5 (3 contacts in series)Trip blocksTemperature compensation	Short-circuit rating		kA	60
DC-5 (up to 250V) A 25 (3 contacts in series) Tip blocks Temperature compensation Image: Colspan="2">Image: Colspan="2" Setting range of overload releases Image: Colspan="2" Soft-Colspan="2" Soft-Colspa="2" Soft-Colspan="2" So	Motor switching capacity			
Trip blocks Temperature compensation Image: Compensation to IEC/EN 60947, VDE 0660 Compensation Operating range Compensation Temperature compensation residual error for T > 40 °C Compensation Setting range of overload releases Y and the set of error for T > 40 °C Short-circuit release Image: Compensation residual error for T > 40 °C Short-circuit release Y and the set of error for T > 40 °C Short-circuit release Y and the set of error for T > 40 °C	AC-3 (up to 690V)		А	2.5
Temperature compensation Image: Compensation Image: Compensation residual error for T > 40 °C -5 40 Operating range °C -5 55 Temperature compensation residual error for T > 40 °C 25 55 Setting range of overload releases Famperature compensation residual error for T > 40 °C Short-circuit release Famperature compensation residual error for T > 40 °C Setting range of overload releases Famperature compensation residual error for T > 40 °C Short-circuit release Famperature compensation residual error for T > 40 °C Short-circuit release Famperature compensation residual error for T > 40 °C Short-circuit release Famperature compensation residual error for T > 40 °C Short-circuit release Famperature compensation residual error for T > 40 °C Short-circuit release tolerance Famperature compensation residual error for T > 40 °C Short-circuit release tolerance Famperature compensation residual error for T > 40 °C	DC-5 (up to 250V)		А	2.5 (3 contacts in series)
to IEC/EN 60947, VDE 0660 Operating range Temperature compensation residual error for T > 40 °C Setting range of overload releases Setting range of overload releases Short-circuit release Short-circuit release tolerance	Trip blocks			
Operating range °C 25 55 Temperature compensation residual error for T > 40 °C ≤ 0.25 %/K Setting range of overload releases Y lug 0.6 - 1 short-circuit release Basic device, fixed: 20 × lu Short-circuit release tolerance 20%	Temperature compensation			
Temperature compensation residual error for T > 40 °C ≤ 0.25 %/K Setting range of overload releases × I _u 6 - 1 short-circuit release Basic device, fixed: 20 × I _u Short-circuit release tolerance 20%	to IEC/EN 60947, VDE 0660		°C	- 5 40
Setting range of overload releases x Iu 0.6 - 1 short-circuit release Basic device, fixed: 20 x Iu Short-circuit release tolerance x Iu 20%	Operating range		°C	- 25 55
short-circuit release tolerance Image: Construct of the section of	Temperature compensation residual error for $T > 40\ ^\circ\text{C}$			≦ 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	In	А	2.5
Heat dissipation per pole, current-dependent	P _{vid}	W	1.57
Equipment heat dissipation, current-dependent	P _{vid}	W	4.71
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)

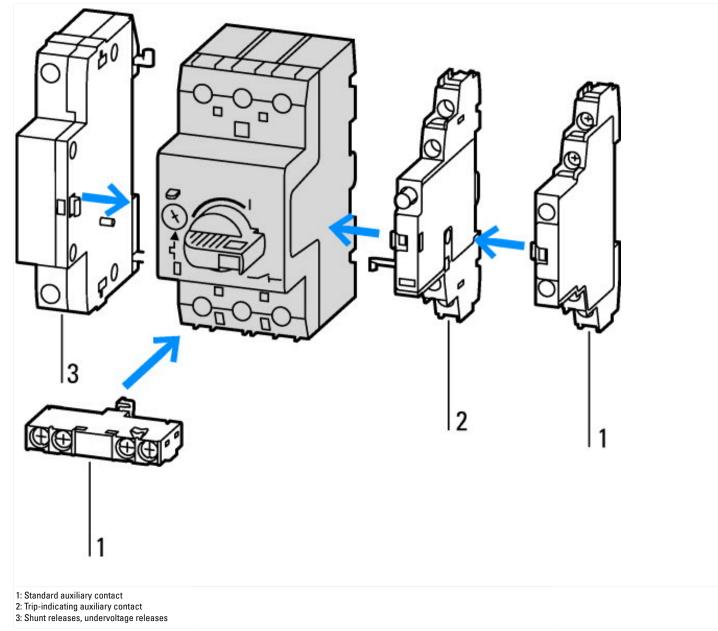
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

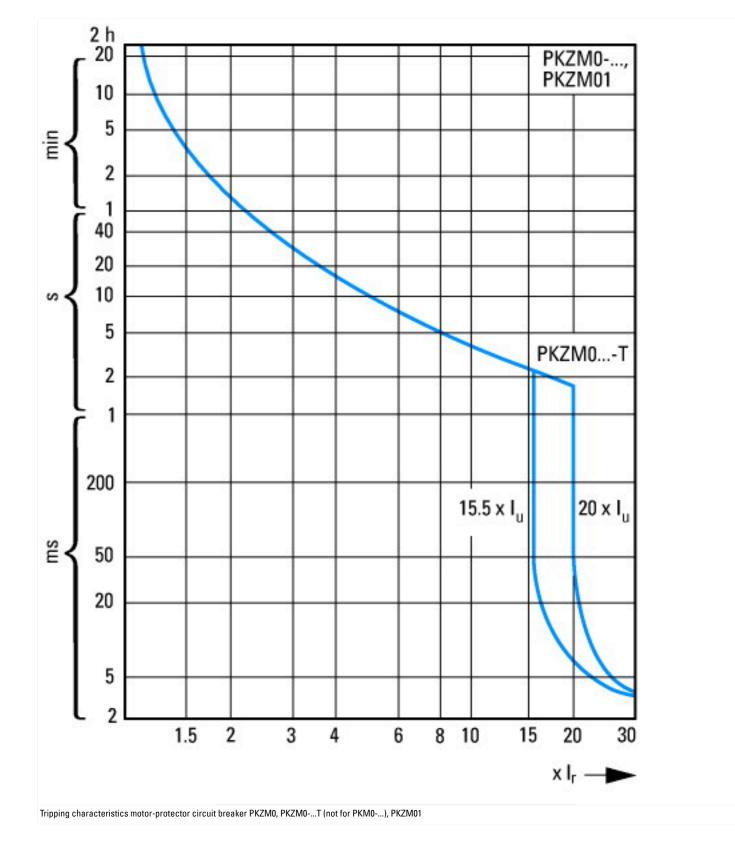
Rated permanent current lu		A	2.5
Rated voltage	,	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	1	kA	150
Overload release current setting		A	2.5 - 2.5
Adjustment range short-term delayed short-circuit release		A	0 - 0
Adjustment range undelayed short-circuit release		A	50 - 50
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

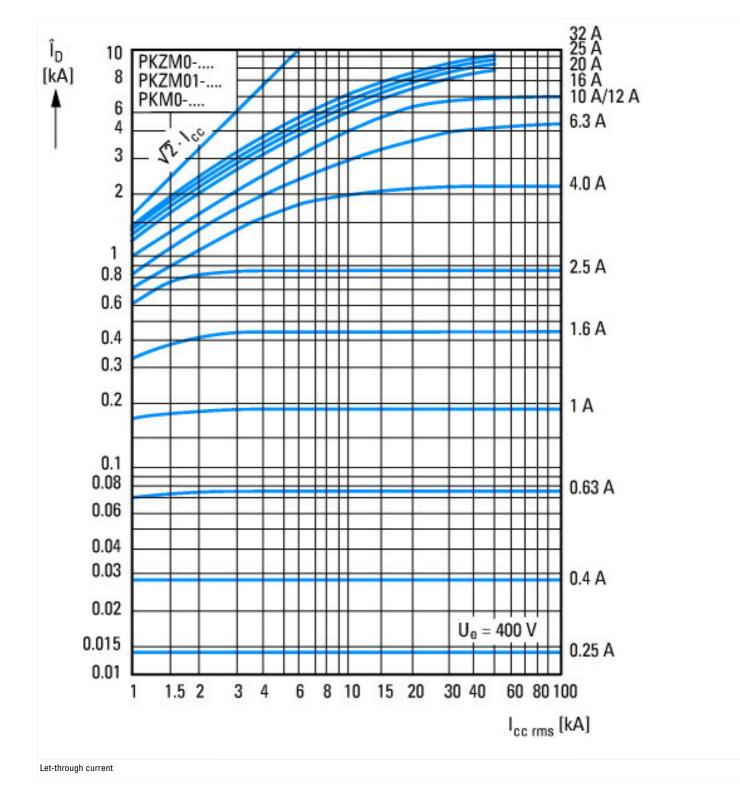
Approvals

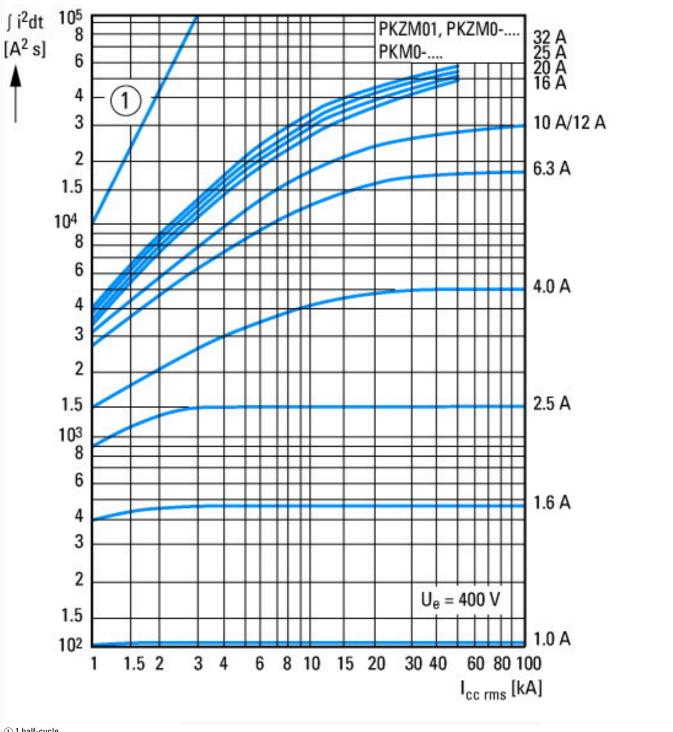
Specially designed for North America	No	
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Characteristics









① 1 half-cycle Let-through energy

Dimensions

