

Transformer-protective circuit-breaker, 3p, Ir=2.5-4A, screw connection



Powering Business Worldwide™

Part no.	PKZM0-4-T
Catalog No.	088914
Alternate Catalog No.	XTPT004BC1NL
EL-Nummer	4315157
(Norway)	

Delivery program

Product range	PKZM0...T transformer-protective circuit-breakers up to 25 A		
Basic function	Transformer protection		
Notes	Also suitable for motors with efficiency class IE3.		
Connection technique	Screw terminals		
Rated uninterrupted current	I _u	A	4
Setting range			
Overload releases	I _r	A	2.5 - 4
short-circuit release			
max.	I _{rm}	A	84
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			
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			
Specified tightening torque for terminal screws					
Main cable	Nm	1.7			
Control circuit cables	Nm	1			
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	4
Rated frequency	f	Hz	50/60
Current heat loss (3 pole at operating temperature)		W	4.88
Lifespan, mechanical	Operations	$\times 10^6$	0.1
Lifespan, electrical (AC-3 at 400 V)	Operations	$\times 10^6$	0.1
Lifespan, electrical	Operations	$\times 10^6$	0.1
Max. operating frequency		Ops/h	40
Short-circuit rating			
DC			
Short-circuit rating		kA	60
Motor switching capacity			
AC-3 (up to 690V)		A	4
DC-5 (up to 250V)		A	4 (3 contacts in series)

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		$\times I_u$	0.6 - 1
short-circuit release			Basic device, fixed: $20 \times I_u$
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	A	4
Heat dissipation per pole, current-dependent	P_{vid}	W	1.63
Equipment heat dissipation, current-dependent	P_{vid}	W	4.88
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 8.0

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 I_{p}	A	4
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity I_{cu} at 400 V, 50 Hz	kA	150
Overload release current setting	A	2.5 - 4
Adjustment range short-term delayed short-circuit release	A	0 - 0
Adjustment range undelayed short-circuit release	A	84 - 84
Integrated earth fault protection		No
Type of electrical connection of main circuit		Screw connection
Device construction		Built-in device fixed built-in technique
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 integrated 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