Transformer-protective circuit-breaker, 3p, Ir=0.25-0.4A, screw connection



Part no. PKZM0-0,4-T

088909

EL Number

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General specifications	
Product name	Eaton Moeller® series PKZM0 Transformer-protective circuit-breaker
Part no.	PKZM0-0,4-T
EAN	4015080889090
Product Length/Depth	76 millimetre
Product height	93 millimetre
Product width	45 millimetre
Product weight	0.249 kilogram
Certifications	VDE 0660 IEC/EN 60947
Product Tradename	PKZM0
Product Type	Transformer-protective circuit-breaker
Product Sub Type	None
Catalog Notes	IE3-ready devices are identified by the logo on their packaging.
Features & Functions	
Actuator type	Turn button
Features	Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102) Complete device with protection unit
Fitted with:	Switched-off indicator
Functions	Transformer protection For the protection of transformers with a high inrush current
Number of poles	Three-pole
General information	
Connection	Screw terminals
Degree of protection	IP20 Terminals: IP00
Lifespan, electrical	100,000 operations
Lifespan, mechanical	100,000 Operations
Mounting position	Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.
Operating frequency	40 Operations/h
Overvoltage category	III
Pollution degree	3
Product category	Transformer protective circuit breaker
Protection	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
Rated impulse withstand voltage (Uimp)	6000 V AC
Shock resistance	25 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
Suitable for	DIN rail (top hat rail) mounting Also motors with efficiency class IE3
Temperature compensation	-5 - 40 °C to IEC/EN 60947, VDE 0660 -25 - 55 °C, Operating range ≤ 0.25 %/K, residual error for T > 40°
Climatic environmental conditions	
Altitude	Max. 2000 m
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	55 °C
Ambient operating temperature (enclosed) - min	25 °C
Ambient operating temperature (enclosed) - max	40 °C
Ambient storage temperature - min	40 °C
Ambient storage temperature - max	3° 08

Climatic proofing	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
Terminal capacities	
Terminal capacity (flexible with ferrule)	1 x (1 - 6) mm², ferrule to DIN 46228
	2 x (1 - 6) mm², ferrule to DIN 46228
Terminal capacity (solid)	1 x (1 - 6) mm ² 2 x (1 - 6) mm ²
Terminal capacity (solid/stranded AWG)	18 - 10
Stripping length (main cable)	10 mm
Tightening torque	1 Nm, Screw terminals, Control circuit cables
	1.7 Nm, Screw terminals, Main cable
Electrical rating	
Rated frequency - min	50 Hz
Rated frequency - max	60 Hz
Rated operational current (Ie)	0.4 A
Rated operational voltage (Ue) - min	690 V
Rated operational voltage (Ue) - max	690 V
Rated uninterrupted current (lu)	0.4 A
Short-circuit rating	45014
Rated short-circuit breaking capacity Icu at 400 V AC	150 kA
Rated short-circuit breaking capacity Ics at 400 V AC	150 kA
Rated short-circuit breaking capacity Icu at 440 V AC	150 kA
Rated short-circuit breaking capacity los at 440 V AC	150 kA
Rated short-circuit breaking capacity Icu at 500 V AC	150 kA
Rated short-circuit breaking capacity los at 500 V AC	150 kA 150 kA
Rated short-circuit breaking capacity Icu at 690 V AC	150 KA
Rated short-circuit breaking capacity Ics at 690 V AC Short-circuit current	60 kA DC, up to 250 V DC, Main conducting paths
Short-circuit release	± 20% tolerance, Trip blocks
Short-chicultielease	Basic device, fixed 20 x lu, Trip Blocks 6.8 A, Irm, Setting range max.
Switching capacity	
Switching capacity	0.4 A (3 contacts in series), DC-5 up to 250V 0.4 A, AC-3 up to 690 V
Contacts	
Number of auxiliary contacts (change-over contacts)	0
Number of auxiliary contacts (normally closed contacts)	0
Number of auxiliary contacts (normally open contacts)	0
Trip blocks	
Overload release current setting - min	0.25 A
Overload release current setting - max	0.4 A
Design verification	
Equipment heat dissipation, current-dependent Pvid	4.76 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	1.59 W
Rated operational current for specified heat dissipation (In)	0.4 A
Static heat dissipation, non-current-dependent Pvs	0 W
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.9.2 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 9.0

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@ss13-27-37-04-09 [AJZ716018])

Rated voltage Rated short-circuit breaking capacity Icu at 400 V, 50 Hz Overload release current setting Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit release Adjustment range und	protection (ecl@ss13-27-37-04-09 [AJZ716018])		
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz Overload release current setting ADJustment range short-term delayed short-circuit release ADJustment range undelayed short-circuit release ADJUSTMENT renge undelayed short-ci	Rated permanent current lu	Α	0.4
Overload release current setting A 0.25 - 0.4 Adjustment range short-term delayed short-circuit release A 0 - 0 Adjustment range undelayed short-circuit release A 6.8 - 6.8 Power loss W 4.76 Device construction Built-in device fixed built-in technique Integrated earth fault protection No Type of electrical connection of main circuit Screw connection Suitable for DIN rail (top hat rail) mounting Yes Number of auxiliary contacts as normally closed contact 0 Number of auxiliary contacts as normally open contact 0 With switched-off indicator Yes With integrated under voltage release No Number of poles 3 Position of connection for main current circuit Cher Type of control element Turn button Complete device with protection unit Yes Motor drive integrated No Motor drive integrated No Motor drive integrated No Motor drive integrated No Motor drive integrated No </td <td>Rated voltage</td> <td>V</td> <td>690 - 690</td>	Rated voltage	V	690 - 690
Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit release A 6.8-6.8 WW 4.76 Built-in device fixed built-in technique Built-in device fixed built-in technique Adjustment range undelayed short-circuit some construction Available for DIN rail (top hat rail) mounting Built range de earth fault protection Yes Built range device onnection Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built range device onnection Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Available for DIN rail (top hat rail) mounting Yes Built-in device fixed built-in technique Av	Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	150
Adjustment range undelayed short-circuit release Power loss W 4.76 Device construction Device construction Integrated earth fault protection Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact With switched-off indicator With integrated under voltage release With integrated under voltage release Nounber of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive integrated Motor drive optional	Overload release current setting	Α	0.25 - 0.4
Power loss Device construction Device construction Integrated earth fault protection Integrated earth fault protection Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Vift switched-off indicator Vift integrated under voltage release No Number of poles Position of connection for main current circuit Complete device with protection unit Motor drive integrated Motor drive integrated Motor drive optional	Adjustment range short-term delayed short-circuit release	Α	0 - 0
Device construction Integrated earth fault protection No Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Ves With switched-off indicator With switched-off indicator With integrated under voltage release With integrated under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive integrated Motor drive optional	Adjustment range undelayed short-circuit release	Α	6.8 - 6.8
Integrated earth fault protection Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting SUIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Vith switched-off indicator Vith switched-off indicator Vith integrated under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Ves Motor drive integrated Motor drive optional	Power loss	W	4.76
Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact No With switched-off indicator With integrated under voltage release No No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Device construction		Built-in device fixed built-in technique
Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Vith switched-off indicator Ves With integrated under voltage release No Number of poles Spesition of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional No	Integrated earth fault protection		No
DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact With switched-off indicator With integrated under voltage release With integrated under voltage release No Number of poles 3 Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional Yes Yes Yes No No No No No No No No No N	Type of electrical connection of main circuit		Screw connection
Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Noth integrated under voltage release Nother Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional Outher Nother N	Suitable for DIN rail (top hat rail) mounting		Yes
Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact With switched-off indicator With integrated under voltage release With integrated under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Wotor drive integrated No Motor drive optional No One One One One One One One On	DIN rail (top hat rail) mounting optional		Yes
Number of auxiliary contacts as change-over contact With switched-off indicator With integrated under voltage release With integrated under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional O O O O O O O O O O O O O	Number of auxiliary contacts as normally closed contact		0
With switched-off indicator With integrated under voltage release With integrated under voltage release No Number of poles Solution of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional Yes Yes No No No	Number of auxiliary contacts as normally open contact		0
With integrated under voltage release No Number of poles 3 Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional No	Number of auxiliary contacts as change-over contact		0
Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional Salaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	With switched-off indicator		Yes
Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional Other Turn button Yes No No	With integrated under voltage release		No
Type of control element Complete device with protection unit Motor drive optional Turn button Yes No No	Number of poles		3
Complete device with protection unit Yes Motor drive optional You No	Position of connection for main current circuit		Other
Motor drive integrated No Motor drive optional No	Type of control element		Turn button
Motor drive optional No	Complete device with protection unit		Yes
	Motor drive integrated		No
Degree of protection (IP) IP20	Motor drive optional		No
	Degree of protection (IP)		IP20