Specifications



Photo is representative



Eaton 222355

Eaton Moeller® series PKZM4 Motor-protective circuit-breaker, Ir= 40 - 50 A, Screw terminals, Terminations: IP00 PKZM4-50

General specifications	
PRODUCT NAME	Eaton Moeller® series PKZM4 Motor-protective circuit-breaker
CATALOG NUMBER	222355
MODEL CODE	PKZM4-50
EAN	4015082223557
PRODUCT LENGTH/DEPTH	160 mm
PRODUCT HEIGHT	140 mm
PRODUCT WIDTH	55 mm
PRODUCT WEIGHT	1.136 kg
CERTIFICATIONS	UL Category Control No.: NLRV IEC/EN 60947-4-1 CSA IEC/EN 60947 CE CSA Class No.: 3211-05 CSA File No.: 165628 VDE 0660 CSA-C22.2 No. 60947-4-1-14 UL 60947-4-1 UL UL File No.: E36332

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Climatic environmental conditions

ALTITUDE	Max. 2000 m
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Design verification

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	50 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
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.
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.
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	24.6 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	8.2 W

Electrical rating

RATED FREQUENCY - MAX	60 Hz
RATED FREQUENCY - MIN	50 Hz
RATED OPERATIONAL CURRENT (IE)	50 A
RATED OPERATIONAL POWER AT AC-3E, 220/230 V, 50 HZ	14 kW
RATED OPERATIONAL POWER AT AC-3E, 380/400 V, 50 HZ	25 kW
RATED OPERATIONAL POWER AT AC-3E, 440 V, 50 HZ	30 kW
RATED OPERATIONAL POWER AT AC-3E, 500 V, 50 HZ	30 kW
RATED OPERATIONAL POWER AT AC-3E, 690 V, 50 HZ	45 kW
RATED OPERATIONAL VOLTAGE (UE) - MAX	690 V
RATED OPERATIONAL VOLTAGE (UE) - MIN	690 V
RATED UNINTERRUPTED CURRENT (IU)	50 A

Features & functions

ACTUATOR TYPE	Turn button
FEATURES	Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)
FUNCTIONS	Phase failure sensitive Motor protection
NUMBER OF POLES	Three-pole

General information

CONNECTION	Screw terminals
DEGREE OF PROTECTION	Terminals: IP00 IP20
EXPLOSION SAFETY CATEGORY FOR DUST	ATEX dust-ex-protection, PTB 10, ATEX 3012, Ex II(2) G
LIFESPAN, ELECTRICAL	30,000 operations (at 400V, AC-3)
LIFESPAN, MECHANICAL	30,000 Operations (Main conducting paths)
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	Motor 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	15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
SUITABLE FOR	Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA) Also motors with efficiency class IE3
TEMPERATURE COMPENSATION	-25 - 55 °C, Operating range ≤ 0.25 %/K, residual error for T > 40° -5 - 40 °C to IEC/EN 60947, VDE 0660

Motor rating

ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	15 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	30 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	40 HP

Short-circuit rating

RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 400 V AC	50 kA
SHORT-CIRCUIT CURRENT	60 kA DC, up to 250 V DC, Main conducting paths
SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)	42 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) 600 A, 600 V High Fault, max. Fuse, SCCR (UL/CSA) 42 kA, 600 V High Fault, CB, SCCR (UL/CSA) 600 A, 600 V High Fault, max. CB, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (TYPE E)	Accessories required BK50/3-PKZ4-E 50 kA, 480 Y/277 V, SCCR (UL/CSA) 50 kA, 240 V, SCCR (UL/CSA)
SHORT-CIRCUIT RELEASE	Basic device fixed 15.5 x Iu ± 20% tolerance 775 A, Irm

Switching capacity

SWITCHING CAPACITY	50 A (3 contacts in series), DC-5 up to 250V 50 A, AC-3 up to 690 V

Terminal capacities

STRIPPING LENGTH (MAIN CABLE)	14 mm
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (0.75 - 35) mm², Main cables 2 x (0.75 - 25) mm², Main cables
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 16) mm², Main cables 2 x (0.75 - 16) mm²
TERMINAL CAPACITY (SOLID/STRANDED AWG)	14 - 2
TIGHTENING TORQUE	3.3 Nm, Screw terminals, Main cable

Trip blocks

OVERLOAD RELEASE CURRENT SETTING - MAX	50 A
OVERLOAD RELEASE CURRENT SETTING - MIN	40 A
TRIPPING CHARACTERISTIC	Overload trigger: tripping class 10 A

Resources	
BROCHURES	eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf eaton-push-in-technology-product-overview-brochure-br034012-en-us.pdf
CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
CHARACTERISTIC CURVE	eaton-manual-motor-starters-tripping-characteristic-pkzm4-characteristic-curve-002.eps eaton-manual-motor-starters-characteristic-pkzm4-characteristic-curve-002.eps eaton-manual-motor-starters-characteristic-pkzm4-characteristic-curve.eps
DECLARATIONS OF CONFORMITY	eaton-motor-protective-circuit-breaker-declaration-of-conformity-uk251168en.pdf eaton-mtr-protective-cb-declaration-of-conformity-eu260100en.pdf
DRAWINGS	eaton-manual-motor-starters-pkzm4-characteristic-curve-002-de.eps eaton-manual-motor-starters-pkzm4-dimensions.eps eaton-manual-motor-starters-circuit-breaker-pkzm4-dimensions.eps eaton-manual-motor-starters-mounting-3d-drawing-002.eps eaton-manual-motor-starters-pkzm4-3d-drawing.eps eaton-manual-motor-starters-circuit-breaker-pkzm4-3d-drawing.eps

	eaton-general-ie-ready-dilm-contactor-standards.eps
ECAD MODEL	ETN.222355.edz
INSTALLATION INSTRUCTIONS	eaton-motors-starters-pkzm4-il03407012z.pdf
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MANUALS AND USER GUIDES	eaton-motor-protective-circuit-breaker-pkzm4-overload-monitoring-exe-manual-mn03402002z-de-de-en-us.pdf
MCAD MODEL	DA-CS-pkzm4 eaton-breakers-mcad-drawings-pkzm4.dwg
SALES NOTES	eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf
WIRING DIAGRAMS	eaton-manual-motor-starters-starter-nzm-mccb-wiring-diagram.eps eaton-manual-motor-starters-transformer-pkzm0-wiring-diagram.eps

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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