## Eaton 199181

Eaton Moeller® series Motor-protective circuit-breaker; 0.25 kW, 0.63 - 1 A, Feed-side screw terminals/output-side push-in terminals

PRODUCT NAME	Eaton Moeller® series PKZM0 Motor-protective circuit-breaker
CATALOG NUMBER	199181
PRODUCT LENGTH/DEPTH	75 mm
PRODUCT HEIGHT	94 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.249 kg
CERTIFICATIONS	IEC/EN 60947 VDE 0660 UL File No.: E36332 IEC/EN 60947-4-1 CSA File No.: 165628 UL Category Control No.: NLRV UL CSA-C22.2 No. 60947-4-1- 14 CSA Class No.: 3211-05 CSA UL 60947-4-1 CE



FEATURES  Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)  The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.  10.11 SHORT-CIRCUIT RATING  10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  10.2.5 LIFTING  Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 1029)  The panel builder is responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  10.2.7 INSCRIPTIONS  Meets the product standard's requirements.		
10.10 TEMPERATURE RISE  10.11 SHORT-CIRCUIT RATING  10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSURANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  10.2.6 MECHANICAL IMPACT  10.2.7 INSCRIPTIONS  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear needs to be evaluated.  Meets the product  Standard's requirements.  Meets the product  Standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product  Meets the product  Standard's requirements.	FEATURES	(according to IEC/EN 60947-4-1, VDE 0660 Part
responsibility. The specifications for the switchgear must be observed.  10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF ENCLOSURES  10.2.3.2 VERIFICATION OF INSULATING MATERIALS TO NORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.3.3 RESIST. OF INSULATION  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  10.2.6 MECHANICAL Meets the product standard's requirements.  In a 2 TINSCRIPTIONS  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  Is the panel builder's responsibility. The specifications for the switchgear must be observed.  In the device meets the requirements, provided the information in the instruction leaflet (IL) is observed.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product	10.10 TEMPERATURE RISE	responsible for the temperature rise calculation. Eaton will provide heat dissipation
10.12 ELECTROMAGNETIC COMPATIBILITY  10.13 MECHANICAL FUNCTION  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  10.2.6 MECHANICAL IMPACT  10.2 7 INSCRIPTIONS  The device meets the requirements the requirements, provided the information in the instruction leaflet (IL) is observed.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product  Meets the product standard's requirements.		responsibility. The specifications for the switchgear must be
10.13 MECHANICAL FUNCTION  requirements, provided the information in the instruction leaflet (IL) is observed.  10.2.2 CORROSION RESISTANCE  10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  Meets the product standard's requirements.  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product		responsibility. The specifications for the switchgear must be
RESISTANCEstandard's requirements.10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURESMeets the product standard's requirements.10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEATMeets the product standard's requirements.10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTSMeets the product standard's requirements.10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATIONMeets the product standard's requirements.10.2.5 LIFTINGDoes not apply, since the entire switchgear needs to be evaluated.10.2.6 MECHANICAL IMPACTDoes not apply, since the entire switchgear needs to be evaluated.10.2.7 INSCRIPTIONSMeets the product		requirements, provided the information in the instruction leaflet (IL) is
THERMAL STABILITY OF ENCLOSURES  10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  10.2.5 LIFTING  Meets the product standard's requirements.  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.		•
RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT  10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  Does not apply, since the entire switchgear needs to be evaluated.  10.2.6 MECHANICAL IMPACT  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Meets the product standard's requirements.  Meets the product standard's requirements.	THERMAL STABILITY OF	•
INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS  10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION  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.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Meets the product standard's requirements.	RESISTANCE OF INSULATING MATERIALS	•
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	INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT.	
10.2.5 LIFTING  entire switchgear needs to be evaluated.  10.2.6 MECHANICAL Does not apply, since the entire switchgear needs to be evaluated.  10.2.7 INSCRIPTIONS  Meets the product	ULTRA-VIOLET (UV)	•
IMPACT entire switchgear needs to be evaluated.  10.2.7 INSCRIPTIONS  Meets the product	10.2.5 LIFTING	entire switchgear needs to
10 / / INISCRIPTIONS		entire switchgear needs to
	10.2.7 INSCRIPTIONS	
	10.2.7 H45CKH 110145	standard's requirements.

DECLARATIONS OF CONFORMITY	eaton-motor-protective- circuit-breaker- declaration-of-conformity- uk251170en.pdf
MCAD MODEL	pkzm0_s16_pi.stp pkzm0_s16_pi.dwg
	<u>IL03407011Z.pdf</u>
	eaton-manual-motor- starters-pkzm-pkzm0- dimensions-002.eps

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	ls the panel builder's responsibility.
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	Is the panel builder's responsibility.
10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH	ls the panel builder's responsibility.
10.9.3 IMPULSE WITHSTAND VOLTAGE	ls the panel builder's responsibility.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	ls the panel builder's responsibility.
OPERATING FREQUENCY	40 Operations/h
POLLUTION DEGREE	40 Operations/h
POLLUTION DEGREE	3 DIN rail (top hat rail)
POLLUTION DEGREE  MOUNTING METHOD	DIN rail (top hat rail) mounting optional  Damp heat, constant, to IEC 60068-2-78  Damp heat, cyclic, to IEC
POLLUTION DEGREE  MOUNTING METHOD  CLIMATIC PROOFING	DIN rail (top hat rail) mounting optional  Damp heat, constant, to IEC 60068-2-78  Damp heat, cyclic, to IEC 60068-2-30
POLLUTION DEGREE  MOUNTING METHOD  CLIMATIC PROOFING  ACTUATOR TYPE  TRIPPING	DIN rail (top hat rail) mounting optional  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30  Turn button  Overload trigger: tripping
POLLUTION DEGREE  MOUNTING METHOD  CLIMATIC PROOFING  ACTUATOR TYPE  TRIPPING CHARACTERISTIC  ADJUSTMENT RANGE SHORT-TERM DELAYED SHORT-CIRCUIT RELEASE	DIN rail (top hat rail) mounting optional  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30  Turn button  Overload trigger: tripping class 10 A
POLLUTION DEGREE  MOUNTING METHOD  CLIMATIC PROOFING  ACTUATOR TYPE  TRIPPING CHARACTERISTIC  ADJUSTMENT RANGE SHORT-TERM DELAYED SHORT-CIRCUIT RELEASE - MAX  ADJUSTMENT RANGE SHORT-TERM DELAYED SHORT-TERM DELAYED SHORT-CIRCUIT RELEASE	DIN rail (top hat rail) mounting optional  Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30  Turn button  Overload trigger: tripping class 10 A  0 A

AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID	5.33 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT PVID	1.8 W
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
ALTITUDE	Max. 2000 m
DEVICE CONSTRUCTION	Built-in device fixed built- in technique
CONNECTION	Push-in terminals on output side Screw terminals on feed side
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw-/spring clamp connection
MOUNTING POSITION	Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.
LIFESPAN, MECHANICAL	100,000 Operations
OVERVOLTAGE CATEGORY	III
DEGREE OF PROTECTION	IP20 Terminals: IP00
NUMBER OF POLES	Three-pole
LIFESPAN, ELECTRICAL	100,000 operations
SHOCK RESISTANCE	25 g, Mechanical, according to IEC/EN 60068-2-27, Half-

	sinusoidal shock 10 ms
FUNCTIONS	Phase failure sensitive Motor protection
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 10, screw terminals 20 - 14, Push-in terminals
SWITCHING CAPACITY	1 A, AC-3 up to 690 V
NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
OVERLOAD RELEASE CURRENT SETTING - MAX	1 A
OVERLOAD RELEASE CURRENT SETTING - MIN	0.63 A
RATED FREQUENCY - MAX	60 Hz
RATED FREQUENCY - MIN	50 Hz
RATED OPERATIONAL VOLTAGE (UE) - MAX	690 V
RATED OPERATIONAL VOLTAGE (UE) - MIN	690 V
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	1 A
RATED OPERATIONAL POWER AT AC-3E, 220/230 V, 50 HZ	0.12 kW
RATED OPERATIONAL POWER AT AC-3E, 380/400 V, 50 HZ	0.25 kW
RATED UNINTERRUPTED CURRENT (IU)	1 A
STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT PVS	0 W
STRIPPING LENGTH (MAIN CABLE)	10 mm
PRODUCT CATEGORY	Motor protective circuit breaker
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when

	actuated from front (EN 50274)
RATED OPERATIONAL	
POWER AT AC-3E, 440 V, 50 HZ	0.25 kW
RATED OPERATIONAL POWER AT AC-3E, 500 V,	0.37 kW
50 HZ	
RATED OPERATIONAL POWER AT AC-3E, 690 V, 50 HZ	0.55 kW
	1 x (1 - 6) mm², Screw
	terminals
TERMINAL CAPACITY	2 x (1 - 6) mm <sup>2</sup> , Screw
(FLEXIBLE WITH	terminals
UNISOLATED FERRULE)	1 x (1 - 2.5) mm², Push-in terminals
	2 x (1 - 2.5) mm², Push-in
	terminals
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 ICS AT 440 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 500 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 500 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 690 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 690 V AC	150 kA
TERMINAL CAPACITY (FLEXIBLE WITH ULTRASONIC WELDED CABLE END)	1 x (1 - 6) mm², Screw terminals 2 x (1 - 6) mm², Screw terminals 1 x (1 - 2.5) mm², Push-in terminals 2 x (1 - 2.5) mm², Push-in terminals

SUITABLE FOR	Also motors with efficiency class IE3 Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA)
SHORT-CIRCUIT RELEASE	Basic device fixed 15.5 x lu ± 20% tolerance 15.5 A, Irm
TERMINAL CAPACITY (SOLID)	$1 \times (1 - 6) \text{ mm}^2$ , Screw terminals $2 \times (1 - 6) \text{ mm}^2$ , Screw terminals $1 \times (1 - 2.5) \text{ mm}^2$ , Push-in terminals $2 \times (1 - 2.5) \text{ mm}^2$ , Push-in terminals
RATED OPERATIONAL CURRENT (IE)	1 A
TEMPERATURE COMPENSATION	≤ 0.25 %/K, residual error for T > 40° -25 - 55 °C, Operating range -5 - 40 °C to IEC/EN 60947, VDE 0660
SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)	50 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) with 600 A, 600 V High Fault, Fuse, SCCR (UL/CSA) 50 kA, 600 V High Fault, CB, SCCR (UL/CSA) with 600 A, 600 V High Fault, CB, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (TYPE E)	50 kA, 600 Y/347 V, SCCR (UL/CSA) 65 kA, 240 V, SCCR (UL/CSA) 65 kA, 480 Y/277 V, SCCR (UL/CSA) Accessories required BK25/3-PKZ0-E
TIGHTENING TORQUE	1.7 Nm, Screw terminals, Main cable
SWITCH OFF TECHNIQUE	Thermomagnetic
TERMINAL CAPACITY (FLEXIBLE)	1 x (1 - 6) mm <sup>2</sup> , Screw terminals 2 x (1 - 6) mm <sup>2</sup> , Screw terminals 1 x (1 - 2.5) mm <sup>2</sup> , Push-in terminals 2 x (1 - 2.5) mm <sup>2</sup> , Push-in

	terminals
POWER LOSS	5.33 W

## **PROJECT NAME:**

**PROJECT NUMBER:** 

**PREPARED BY:** 



Eaton House 30 Pembroke Road Dublin 4, Eaton.com





information.



latest product and support

Follow us on social media to get the



