

Specifications



Eaton 199155

Eaton Moeller® series PKZM0 Motor-protective circuit-breaker, 1.5 kW, 2.5 - 4 A, Push in terminals

General specifications

PRODUCT NAME	Eaton Moeller® series PKZM0 Motor-protective circuit-breaker
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CATALOG NUMBER	199155
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MODEL CODE	PKZM0-4-PI
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EAN	4015081972395
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PRODUCT LENGTH/DEPTH	75 mm
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PRODUCT HEIGHT	109 mm
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PRODUCT WIDTH	45 mm
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PRODUCT WEIGHT	0.337 kg
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CERTIFICATIONS	IEC/EN 60947 VDE 0660 UL CSA IEC/EN 60947-4-1 UL 60947-4-1 CSA-C22.2 No. 60947-4-1-14 CE UL File No.: E36332 UL Category Control No.: NLRV CSA File No.: 165628 CSA Class No.: 3211-05
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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

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

Design verification

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)

4 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

Electrical rating

RATED FREQUENCY - MAX

60 Hz

RATED FREQUENCY - MIN

50 Hz

RATED OPERATIONAL CURRENT (IE)

4 A

RATED OPERATIONAL POWER AT AC-3E, 220/230 V, 50 HZ

0.75 kW

RATED OPERATIONAL POWER AT AC-3E, 380/400 V, 50 HZ

1.5 kW

RATED OPERATIONAL POWER AT AC-3E, 440 V, 50 HZ

1.5 kW

RATED OPERATIONAL POWER AT AC-3E, 500 V, 50 HZ

2.2 kW

RATED OPERATIONAL POWER AT AC-3E, 690 V, 50 HZ

3 kW

RATED OPERATIONAL VOLTAGE (UE) - MAX

690 V

RATED OPERATIONAL VOLTAGE (UE) - MIN

690 V

RATED UNINTERRUPTED CURRENT (IU)

4 A

	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	5.33 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	1.8 W

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

General information	
CONNECTION	Push in terminals
DEGREE OF PROTECTION	IP20
LIFESPAN, ELECTRICAL	100,000 operations
LIFESPAN, MECHANICAL	100,000 Operations
MOUNTING METHOD	DIN rail (top hat rail) mounting optional
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	25 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
SUITABLE FOR	Also motors with efficiency class IE3 Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA)
TEMPERATURE COMPENSATION	≤ 0.25 %/K, residual error for T > 40° -5 - 40 °C to IEC/EN 60947, VDE 0660 -25 - 55 °C, Operating range
USED WITH	Motor starter combinations type MSC...

Motor rating

**ASSIGNED MOTOR
POWER AT 115/120 V, 60
HZ, 1-PHASE** 0.125 HP

**ASSIGNED MOTOR
POWER AT 200/208 V, 60
HZ, 3-PHASE** 0.75 HP

**ASSIGNED MOTOR
POWER AT 230/240 V, 60
HZ, 1-PHASE** 0.33 HP

**ASSIGNED MOTOR
POWER AT 230/240 V, 60
HZ, 3-PHASE** 0.75 HP

**ASSIGNED MOTOR
POWER AT 460/480 V, 60
HZ, 3-PHASE** 2 HP

**ASSIGNED MOTOR
POWER AT 575/600 V, 60
HZ, 3-PHASE** 3 HP

Short-circuit rating

**RATED SHORT-CIRCUIT
BREAKING CAPACITY ICS
AT 400 V AC** 150 kA

**RATED SHORT-CIRCUIT
BREAKING CAPACITY ICS
AT 440 V AC** 150 kA

**RATED SHORT-CIRCUIT
BREAKING CAPACITY ICS
AT 500 V AC** 150 kA

**RATED SHORT-CIRCUIT
BREAKING CAPACITY ICS
AT 690 V AC** 3 kA

**RATED SHORT-CIRCUIT
BREAKING CAPACITY ICU
AT 400 V AC** 150 kA

**RATED SHORT-CIRCUIT
BREAKING CAPACITY ICU
AT 440 V AC** 150 kA

**RATED SHORT-CIRCUIT
BREAKING CAPACITY ICU
AT 500 V AC** 150 kA

RATED SHORT-CIRCUIT 3 kA

BREAKING CAPACITY ICU AT 690 V AC

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)

SHORT-CIRCUIT RELEASE

Basic device fixed 15.5 x lu
± 20% tolerance
62 A, I_{rm}

Switching capacity

SWITCHING CAPACITY 4 A, AC-3 up to 690 V

Terminal capacities

STRIPPING LENGTH (MAIN CABLE)

12 mm

TERMINAL CAPACITY (FLEXIBLE WITH UNISOLATED FERRULE)

1 x (1 - 6) mm²
2 x (1 - 6) mm²

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)

1 x (1 - 6) mm², Push-in
terminals, ferrule to DIN
46228-1
2 x (1 - 6) mm², Push-in
terminals, ferrule to DIN
46228-1
1 x (1 - 6) mm², Push-in
terminals, ferrule to DIN
46228-4
2 x (1 - 4) mm², Push-in
terminals, ferrule to DIN
46228-4

TERMINAL CAPACITY (FLEXIBLE)

1 x (1 - 6) mm², Push-in
terminals
2 x (1 - 6) mm², Push-in
terminals
1 x (1 - 6) mm²
2 x (1 - 6) mm²

TERMINAL CAPACITY (FLEXIBLE WITH ULTRASONIC WELDED CABLE END)

1 x (1 - 10) mm²
2 x (1 - 6) mm²

TERMINAL CAPACITY (SOLID)

1 x (1 - 6) mm², Push-in
terminals
2 x (1 - 6) mm², Push-in
terminals
1 x (1 - 6) mm²
2 x (1 - 6) mm²

Trip blocks

OVERLOAD RELEASE CURRENT SETTING - MAX	4 A
OVERLOAD RELEASE CURRENT SETTING - MIN	2.5 A
TRIPPING CHARACTERISTIC	Overload trigger: tripping class 10 A

Resources

BROCHURES	eaton-push-in-technology-product-overview-brochure-br034012-en-us.pdf eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf
CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-motor-protective-circuit-breaker-declaration-of-conformity-eu250687en.pdf eaton-motor-protective-circuit-breaker-declaration-of-conformity-uk251170en.pdf
DRAWINGS	eaton-manual-motor-starters-pkzm-pkzm0-dimensions.eps eaton-manual-motor-starters-pkz-dimensions-002.eps eaton-manual-motor-starters-pkz-dimensions.eps
ECAD MODEL	ETN.199155.edz
INSTALLATION INSTRUCTIONS	IL122024ZU
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	eaton-motor-protective-circuit-breakers-mcad-3d-models-pkzm0-pi.stp eaton-breakers-mcad-drawings-schutzschalter-bis-32a-pi.dwg
SALES NOTES	eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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