

# Specifications

Photo is representative

## Eaton 222394

Eaton Moeller® series PKZM4 Motor-protective circuit-breaker, Ir= 50 - 58 A, Screw terminals, Terminations: IP00 PKZM4-58

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller® series PKZM4 Motor-protective circuit-breaker
<b>CATALOG NUMBER</b>	222394
<b>MODEL CODE</b>	PKZM4-58
<b>EAN</b>	4015082223946
<b>PRODUCT LENGTH/DEPTH</b>	160 mm
<b>PRODUCT HEIGHT</b>	140 mm
<b>PRODUCT WIDTH</b>	55 mm
<b>PRODUCT WEIGHT</b>	1.136 kg
<b>CERTIFICATIONS</b>	CSA Class No.: 3211-05 IEC/EN 60947-4-1 CSA File No.: 165628 CSA-C22.2 No. 60947-4-1-14 UL Category Control No.: NLRV VDE 0660 CE CSA IEC/EN 60947 UL File No.: E36332 UL UL 60947-4-1
<b>GLOBAL CATALOG</b>	222394
<b>PRODUCT TYPE</b>	Motor-protective circuit-breaker



Powering Business Worldwide

## Product specifications

<b>FEATURES</b>	Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF</b>	Does not apply, since the entire switchgear needs to

## Resources

<b>BROCHURES</b>	<a href="#">eaton-push-in-technology-product-overview-brochure-br034012-en-us.pdf</a> <a href="#">eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf</a>
<b>CATALOGS</b>	<a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a> Product Range Catalog Switching and protecting motors
<b>CHARACTERISTIC CURVE</b>	<a href="#">eaton-manual-motor-starters-characteristic-pkzm4-characteristic-curve-002.eps</a> <a href="#">eaton-manual-motor-starters-tripping-characteristic-pkzm4-characteristic-curve-003.eps</a> <a href="#">eaton-manual-motor-starters-characteristic-pkzm4-characteristic-curve.eps</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">eaton-motor-protective-circuit-breaker-declaration-of-conformity-eu250685en.pdf</a> <a href="#">eaton-motor-protective-circuit-breaker-declaration-of-conformity-uk251168en.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-manual-motor-starters-pkzm4-dimensions.eps</a> <a href="#">eaton-manual-motor-starters-pkzm4-characteristic-curve-002-de.eps</a> <a href="#">eaton-manual-motor-starters-circuit-breaker-pkzm4-dimensions.eps</a> <a href="#">eaton-general-ie-ready-dilm-contactor-standards.eps</a>

<b>ASSEMBLIES</b>	be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>OPERATING FREQUENCY</b>	40 Operations/h
<b>POLLUTION DEGREE</b>	3
<b>LIFESPAN, MECHANICAL</b>	30,000 Operations (Main conducting paths)
<b>CLIMATIC PROOFING</b>	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
<b>ACTUATOR TYPE</b>	Turn button
<b>TRIPPING CHARACTERISTIC</b>	Overload trigger: tripping class 10 A
<b>ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MAX</b>	899 A
<b>ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MIN</b>	899 A
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	55 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C

	<a href="#">eaton-manual-motor-starters-pkzm4-3d-drawing.eps</a>
	<a href="#">eaton-manual-motor-starters-mounting-3d-drawing-002.eps</a>
	<a href="#">eaton-manual-motor-starters-circuit-breaker-pkzm4-3d-drawing.eps</a>
<b>ECAD MODEL</b>	<a href="#">ETN.222394.edz</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">eaton-motors-starters-pkzm4-motor-protective-circuit-breaker-instruction-leaflet-il03407012z.pdf</a>
<b>INSTALLATION VIDEOS</b>	<a href="#">WIN-WIN with push-in technology</a>
<b>MANUALS AND USER GUIDES</b>	<a href="#">eaton-motor-protective-circuit-breaker-pkzm4-overload-monitoring-exe-manual-mn03402002z-de-de-en-us.pdf</a>
<b>MCAD MODEL</b>	<a href="#">DA-CD-pkzm4</a> <a href="#">DA-CS-pkzm4</a>
<b>SALES NOTES</b>	<a href="#">eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf</a>
<b>SPECIFICATIONS AND DATASHEETS</b>	<a href="#">Eaton Specification Sheet - 222394</a>
<b>WIRING DIAGRAMS</b>	<a href="#">eaton-manual-motor-starters-starter-nzm-mccb-wiring-diagram.eps</a> <a href="#">eaton-manual-motor-starters-transformer-pkzm0-wiring-diagram.eps</a>

<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE</b>	10 HP
<b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b>	40 HP
<b>ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE</b>	50 HP
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	28.2 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	9.4 W
<b>INTERNAL RESISTANCE</b>	2 mΩ
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	6000 V AC
<b>ALTITUDE</b>	Max. 2000 m
<b>DEVICE CONSTRUCTION</b>	Built-in device fixed built-in technique
<b>EXPLOSION SAFETY CATEGORY FOR DUST</b>	ATEX dust-ex-protection, PTB 10, ATEX 3012, Ex II(2) G
<b>CONNECTION</b>	Screw terminals
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>MOUNTING POSITION</b>	Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.
<b>OVERVOLTAGE CATEGORY</b>	III
<b>DEGREE OF PROTECTION</b>	IP20 Terminals: IP00
<b>NUMBER OF POLES</b>	Three-pole
<b>LIFESPAN, ELECTRICAL</b>	30,000 operations (at 400V, AC-3)
<b>SHOCK RESISTANCE</b>	15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
<b>FUNCTIONS</b>	Motor protection Phase failure sensitive
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	14 - 2

<b>SWITCHING CAPACITY</b>	58 A (3 contacts in series), DC-5 up to 250V 58 A, AC-3 up to 690 V
<b>OVERLOAD RELEASE CURRENT SETTING - MAX</b>	58 A
<b>OVERLOAD RELEASE CURRENT SETTING - MIN</b>	50 A
<b>RATED FREQUENCY - MAX</b>	60 Hz
<b>RATED FREQUENCY - MIN</b>	50 Hz
<b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>	690 V
<b>RATED OPERATIONAL VOLTAGE (UE) - MIN</b>	690 V
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	58 A
<b>RATED OPERATIONAL POWER AT AC-3E, 220/230 V, 50 HZ</b>	17 kW
<b>RATED OPERATIONAL POWER AT AC-3E, 380/400 V, 50 HZ</b>	30 kW
<b>RATED UNINTERRUPTED CURRENT (IU)</b>	58 A
<b>STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT PVS</b>	0 W
<b>STRIPPING LENGTH (MAIN CABLE)</b>	14 mm
<b>PRODUCT CATEGORY</b>	Motor protective circuit breaker
<b>PROTECTION</b>	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
<b>RATED OPERATIONAL POWER AT AC-3E, 440 V, 50 HZ</b>	37 kW
<b>RATED OPERATIONAL POWER AT AC-3E, 500 V, 50 HZ</b>	37 kW
<b>RATED OPERATIONAL POWER AT AC-3E, 690 V, 50 HZ</b>	55 kW
<b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 400 V AC</b>	50 kA
<b>SUITABLE FOR</b>	Also motors with efficiency class IE3

	Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA)
<b>SHORT-CIRCUIT RELEASE</b>	Basic device fixed 15.5 x lu ± 20% tolerance 899 A, I <sub>rm</sub>
<b>TERMINAL CAPACITY (SOLID)</b>	1 x (0.75 - 16) mm <sup>2</sup> , Main cables 2 x (0.75 - 16) mm <sup>2</sup>
<b>RATED OPERATIONAL CURRENT (IE)</b>	58 A
<b>TEMPERATURE COMPENSATION</b>	-25 - 55 °C, Operating range -5 - 40 °C to IEC/EN 60947, VDE 0660 ≤ 0.25 %/K, residual error for T > 40°
<b>SHORT-CIRCUIT CURRENT</b>	60 kA DC, up to 250 V DC, Main conducting paths
<b>SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)</b>	600 A, 600 V High Fault, max. Fuse, SCCR (UL/CSA) 42 kA, 600 V High Fault, 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)
<b>SHORT-CIRCUIT CURRENT RATING (TYPE E)</b>	Accessories required BK50/3-PKZ4-E 50 kA, 480 Y/277 V, SCCR (UL/CSA) 50 kA, 240 V, SCCR (UL/CSA)
<b>TIGHTENING TORQUE</b>	3.3 Nm, Screw terminals, Main cable
<b>SWITCH OFF TECHNIQUE</b>	Thermomagnetic
<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	1 x (0.75 - 35) mm <sup>2</sup> , Main cables 2 x (0.75 - 25) mm <sup>2</sup> , Main cables
<b>POWER LOSS</b>	28.2 W

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**

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