Specifications



Eaton 216378

Eaton Moeller® series M22 Contact element, Break contact, Front, Screw terminals, Front fixing, 1 NC, 24 V 3 A, 220 V 230 V 240 V 6 A

General specifications	
PRODUCT NAME	Eaton Moeller® series M22 contact element
CATALOG NUMBER	216378
MODEL CODE	M22-K01
EAN	4015082163785
PRODUCT LENGTH/DEPTH	38 mm
PRODUCT HEIGHT	10 mm
PRODUCT WIDTH	32 mm
PRODUCT WEIGHT	0.01 kg
COMPLIANCES	CE Marked
CERTIFICATIONS	CSA Std. C22.2 No. 14-05 IEC 60947-5 CSA Std. C22.2 No. 94-91 UL 508 EN 60947-5 VDE CSA-C22.2 No. 94-91 IEC IEC 60947-5-1 CSA CSA Class No.: 3211-03 CSA-C22.2 No. 14-05 CSA File No.: 012528 UL UL Category Control No.: NKCR UL File No.: E29184 CE IEC/EN 60947-5 UL/CSA

Actuator

ACTUATING FORCE - MAX	5 N
KNOB TRAVEL	5.7 mm

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MAX	85 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	-25 °C
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Communication

CONNECTION TO SMARTWIRE-DT	No

Contacts

CONTROL CIRCUIT RELIABILITY	1 failure per 5,000,000 switching operations (statistically determined, at 5 V DC/1 mA) 1 failure per 10,000,000 switching operations (Statistically determined, at 24 V DC/5 mA)
FORCE FOR POSITIVE OPENING - MIN	15 N
NUMBER OF CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)	1
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	0

Design verification

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.

Electrical rating

CONVENTIONAL THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)	4 A
RATED INSULATION VOLTAGE (UI)	500 V
RATED OPERATIONAL CURRENT (IE)	5 A – 600 V AC 1 A - 250 V DC
RATED OPERATIONAL CURRENT (IE) AT AC-15, 115 V	6 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V	6 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V	4 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 500 V	2 A
RATED OPERATIONAL CURRENT (IE) AT DC-13, 110 V	0.6 A
RATED OPERATIONAL CURRENT (IE) AT DC-13, 220 V, 230 V	0.3 A
RATED OPERATIONAL CURRENT (IE) AT DC-13, 24 V	3 A
RATED OPERATIONAL CURRENT (IE) AT DC-13, 42 V	1.7 A
RATED OPERATIONAL CURRENT (IE) AT DC-13, 500 V	0.1 A
RATED OPERATIONAL CURRENT (IE) AT DC-13, 60 V	1.2 A
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	500 V
RATED OPERATIONAL VOLTAGE (UE) AT DC - MAX	220 V

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	0 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.11 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	6 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W

Features & functions

ELECTRIC CONNECTION TYPE	Screw connection

General information

DEGREE OF PROTECTION	IP20
LIFESPAN, ELECTRICAL	1,200,000 Operations (at 12 V, DC-13, 2.8 A) 1,600,000 Operations (at 230 V, 0.5 A) 700,000 Operations (at 230 V, AC-15, 3 A) 1,000,000 Operations (at 230 V, AC-15, 1 A)
LIFESPAN, MECHANICAL	5,000,000 Operations
MODEL	Top mounting and integrable
OPERATING FREQUENCY	3600 Operations/h
OPERATING TORQUE	0.8 Nm
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PRODUCT CATEGORY	Accessories
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
TYPE	Auxiliary contact
USED WITH	Can be used with NZM3, 4 circuit-breaker: up to three standard auxiliary contacts can be clipped into the circuit-breaker. Can be used with NZM4 circuit-breaker: up to two standard auxiliary contacts can be clipped into the circuit-breaker.

	Can be used with NZM1, 2, 3 circuit-breaker: a trip-indicating auxiliary contact can be clipped into the circuit-breaker. Can be used with NZM2 size circuit-breaker: a standard auxiliary contact can be clipped into the circuit-breaker. Can be used with NZM1 circuit-breaker: a standard auxiliary contact can be clipped into the circuit-breaker.

Mounting details

CONNECTION TYPE	Front fixing Single contact
MOUNTING METHOD	Front fastening

Short-circuit rating

RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	1 kA
SHORT-CIRCUIT PROTECTION	PKZM0-10/FAZ-B6/1, Contacts, Max. short-circuit protective device, Fuseless
SHORT-CIRCUIT PROTECTION RATING	Max. 10 A gG/gL, Fuse, Contacts Max. 10 A gG/gL, Fuse, Auxiliary contacts

Terminal capacities

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	0.5 - 1.5 mm²
TERMINAL CAPACITY (SOLID)	0.75 - 2.5 mm²
TERMINAL CAPACITY (SOLID/FLEXIBLE WITH FERRULE)	2 x (0,5 - 0,75) mm² 1 x (0,75 - 2,5) mm²
TERMINAL CAPACITY (STRANDED)	0.5 - 2.5 mm²

Resources

CATALOGUES	eaton-pushbuttons-signal-towers-sensors-assortment-overview-catalog-ca047003en-en-us.pdf
CONTROL TRAVEL DIAGRAM	eaton-operating-diagram-m22-contact-element-contact-travel-diagram-008.eps
DECLARATIONS OF CONFORMITY	eaton-contact-element-declaration-of-conformity-uk260062en.pdf eaton-assembled-contact-element-and-mounting-adapter-declaration-of-conformity-eu260061en.pdf
DRAWINGS	eaton-circuit-breaker-release-nzm-mccb-dimensions.eps eaton-operating-actuation-m22-led-element-dimensions.eps eaton-operating-contact-m22-contact-element-3d-drawing-004.eps eaton-operating-devices-adapter-flow-diagram-003.eps
ECAD MODEL	ETN.216378.edz
INSTALLATION INSTRUCTIONS	IL04716002Z

MCAD MODEL	eaton-cont-blocks-mcad-drawings-kontakt-schraube-front.dwg DA-CS-kontaktelement_schraube_front
PEP ECO-PASSPORT	eaton-contact-blocks-pep-eato-00317-v0101-en.pdf eaton-operating-devices-rmq-titan-m22-il047018zu.pdf
WIRING DIAGRAMS	eaton-operating-contact-m22-contact-element-wiring-diagram-003.eps eaton-circuit-breaker-contact-m22-contact-element-wiring-diagram-008.eps eaton-circuit-breaker-contact-m22-contact-element-wiring-diagram.eps

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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