Specifications







Eaton EP-501272

Eaton Moeller series xEffect - FRCdM Type AC, A, U, R RCCB, 63A, 4p, 300mA, Type G/F

General specifications	
PRODUCT NAME	Eaton Moeller series xEffect - FRCdM Type AC, A, U, R RCCB
CATALOG NUMBER	EP-501272
MODEL CODE	FRCDM-63/4/03-G/F
EAN	9010653039099
PRODUCT LENGTH/DEPTH	76 mm
PRODUCT HEIGHT	80 mm
PRODUCT WIDTH	70 mm
PRODUCT WEIGHT	0.32 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	CE

Additional information

	Additional equipment possible
FEATURES	Residual current circuit-breakers, digital Selective protection
FITTED WITH:	Interlocking device
FUNCTIONS	Short-time delayed tripping
SPECIAL FEATURES	As per inscription

Delivery program

AMPERAGE RATING	63 A
APPLICATION	xEffect - Switchgear for industrial and advanced commercial applications
FAULT CURRENT RATING	0.3 A
NUMBER OF POLES	Four-pole
RATED SHORT-CIRCUIT STRENGTH	10 kA
TRIPPING TIME	10 ms delayed Short time-delayed
TYPE	Residual current circuit-breakers, Digital, Type G/F (ÖVE E 8601)

Design verification as per IEC/EN 61439

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.

Design verification as per IEC/EN 61439 - technical data

AMBIENT OPERATING TEMPERATURE - MAX	60 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	8.5 W
HEAT DISSIPATION CAPACITY	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT	2.125 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	63 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT	0 W

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.

Technical data - electrical

ADMISSIBLE BACK-UP FUSE	63 A gG/gL
ADMISSIBLE BACK-UP FUSE OVERLOAD - MAX	63 A gG/gL
FREQUENCY RATING	50 Hz
LEAKAGE CURRENT TYPE	F
LIFESPAN, ELECTRICAL	4000 operations
POLLUTION DEGREE	2
RATED FAULT CURRENT - MIN	300 mA
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4 kV
RATED INSULATION VOLTAGE (UI)	440 V
RATED OPERATIONAL VOLTAGE (UE) - MAX	415 V
RATED RESIDUAL MAKING AND BREAKING CAPACITY	630 A
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	10 kA
SHORT-CIRCUIT RATING	63 A (max. admissible back-up fuse)
SURGE CURRENT CAPACITY	3 kA
VOLTAGE RATING - MAX	264 VAC
VOLTAGE RATING - MIN	196 VAC
VOLTAGE RATING (IEC/EN 60947-2)	240 V AC / 415 V AC

Technical Data - electrical - dry auxiliary contact

RATED SWITCHING CAPACITY (RESISTIVE LOAD) OF AUXILIARY CONTACT AT 240 V AC	0.25 A
RATED SWITCHING CAPACITY (RESISTIVE LOAD) OF AUXILIARY CONTACT AT 30 V DC	2 A
SWITCHING CAPACITY OF AUXILIARY CONTACT - MIN	10 µA, 10 mV DC
SWITCHING CURRENT OF AUXILIARY CONTACT - MAX	2 A
SWITCHING DUTY WITH RESISTIVE LOAD OF AUXILIARY CONTACT - MAX	60 W
SWITCHING VOLTAGE AT AC OF AUXILIARY CONTACT - MAX	240 V
SWITCHING VOLTAGE AT DC OF AUXILIARY CONTACT - MAX	220 V
TERMINAL CAPACITY OF AUXILIARY CONTACT	0.25 mm² - 1.5 mm²

Technical data - mechanical

BUILT-IN DEPTH	80 mm
BUILT-IN WIDTH (NUMBER OF UNITS)	70 mm (4 SU)
BUSBAR MATERIAL THICKNESS	0.8 mm - 2 mm
CLIMATIC PROOFING	25-55 °C / 90-95% relative humidity according to IEC 60068-2
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	35 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	10 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	35 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	1 mm²
CONTACT POSITION INDICATOR COLOR	Red / green
DEGREE OF PROTECTION	IP20 IP20, IP40 with suitable enclosure
FRAME	Standard front dimension: 45 mm
LIFESPAN, MECHANICAL	20000 operations
MOUNTING METHOD	DIN rail Quick attachment with 2 latch positions for DIN-rail IEC/EN 60715
MOUNTING POSITION	As required
PERMITTED STORAGE AND TRANSPORT TEMPERATURE - MAX	60 °C
PERMITTED STORAGE AND TRANSPORT TEMPERATURE - MIN	-35 °C
STATUS INDICATION	White / blue
TERMINAL CAPACITY (SOLID WIRE)	1.5 mm² - 35 mm²
TERMINAL CAPACITY (STRANDED CABLE)	16 mm² (2x)
TERMINAL PROTECTION	Finger and hand touch safe, DGUV VS3, EN 50274
TERMINALS (TOP AND BOTTOM)	Twin-purpose terminals
TIGHTENING TORQUE	2 Nm - 2.4 Nm
WIDTH IN NUMBER OF MODULAR SPACINGS	4

Resources

APPLICATION NOTES	eaton-rcd-application-guide-br019003en-en-us.pdf
BROCHURES	eaton-xeffect-digital-switchgear-brochure-br003004en-en-us.pdf
CATALOGUES	eaton-xeffect-industrial-switchgear-range-catalog-ca003002en-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-rccb-declaration-of-conformity-uk251418en.pdf eaton-rccb-declaration-of-conformity-eu250056en.pdf
INSTALLATION INSTRUCTIONS	IL019007ZU
INSTALLATION VIDEOS	xEffect Digital Switchgear
MCAD MODEL	eaton-residual-current-circuit-breakers-3d-models-frcdm-rccb-4p.stp

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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