DATASHEET - MMCM-D1/3

Miniature circuit breaker (MCB), 1 A, 3p, characteristic: D

Part no. mMCM-D1/3
Catalog No. 139126

Powering Business Worldwide™

Delivery program

Basic function			Miniature circuit-breakers
Number of poles			3 pole
Tripping characteristic			D
Application			Switchgear for residential and commercial applications
Rated current	I_n	A	1
Rated switching capacity according to IEC/EN 60898-1	I_{cn}	kA	10
Product range			mMCM

Technical data

Electrical

Rated switching capacity according to IEC/EN 60898-1	I_{cn}	kA	10
Rated insulation voltage	U_i	V	440
Rated impulse withstand voltage	U_{imp}	kV	4
lifespan			
Electrical	Operations		≧ 10000
Mechanical	Operations		≧ 20000

References

Auxiliary switch for subsequent installation			ZP-IHK 286052
Tripping signal contact for subsequent installation			ZP-NHK 248437
Remote control and automatic switching device			Z-FW/LP 248296
Switching interlock			Z-IS/SPE-1TE 274418

Mechanical

Standard front dimension		mm	45
Device height		mm	80
Mounting			Quick attachment with 3 latch positions for top-hat rail IEC/EN 60715
Degree of Protection			IP20
Terminals top and bottom			Open mouthed/lift terminals
Terminal protection			BGV A3, ÖVE-EN 6
Thickness of busbar material		mm	0.8 - 2

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	1
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	2.4
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	75
			linear, per +1 °C, results in a 0.5% reduction of current carrying capacity
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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.
10.9 Insulation properties			
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.
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.

Technical data ETIM 7.0

Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)

Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss10.0.1-27-14-19-01 [AAB905014])

Release characteristic			D
Number of poles (total)			3
Number of protected poles			3
Rated current		A	1
Rated voltage		V	400
Rated insulation voltage Ui		V	440
Rated impulse withstand voltage Uimp		kV	4
Rated short-circuit breaking capacity Icn EN 60898 at 230 V		kA	10
Rated short-circuit breaking capacity Icn EN 60898 at 400 V		kA	10
Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V		kA	15
Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V		kA	15
Voltage type			AC
Frequency		Hz	50 - 60
Current limiting class			3
Suitable for flush-mounted installation			No
Concurrently switching N-neutral			No
Over voltage category			3
Pollution degree			2
Additional equipment possible			Yes
Width in number of modular spacings			3
Built-in depth		mm	70.5
Degree of protection (IP)			IP20
Ambient temperature during operating		°C	-25 - 75
Connectable conductor cross section multi-wired		mm^2	1 - 25
Connectable conductor cross section solid-core		mm^2	1 - 25