



Miniature circuit breaker (MCB), 20 A, 1p, characteristic: C

Part no. FAZ-C20/1-NA
Catalog No. 102091
Alternate Catalog No. FAZ-C20/1-NA
EL-Nummer (Norway) 1691580

Similar to illustration

Delivery program

Basic function			Miniature circuit-breakers
Number of poles			1 pole
Tripping characteristic			C
Application			Switchgear for export to North America (UL-listed)
Rated current	I_n	A	20
Rated switching capacity acc. to IEC/EN 60947-2	I_{cu}	kA	15
Product range			FAZ-NA

Technical data

Electrical

Standards			UL 489, CSA C22.2 No. 5 IEC 60947-2
Rated operational voltage	U_e	V	
	U_e	V AC	277/480 Y
		V DC	60
Rated voltage according to IEC/EN 60947-2	U_n	V AC	254
Rated voltage according to UL	U_n	V AC	277
Rated switching capacity acc. to IEC/EN 60947-2	I_{cu}	kA	15
Breaking capacity according to UL		kA	14 (UL489)
Characteristic			B, C, D
Selectivity Class			3
lifespan			
Lifespan	Operations		> 20000
Direction of incoming supply			as required

Mechanical

Standard front dimension		mm	45
Enclosure height		mm	105
Mounting width per pole		mm	17.7
Mounting			IEC/EN 60715 top-hat rail
Degree of Protection			IP20, IP40 (when fitted)
Terminals top and bottom			Twin-purpose terminals
Terminal protection			Finger and back-of-hand proof to BGV A2
Tightening torque of fixing screws		N/m	max. 2.4 UL: #18-12 AWG: 2.4 Nm (21 lb-in) #10-8 AWG: 2.8 Nm (25 lb-in) #6 AWG: 4 Nm (36 lb-in)
Mounting position			As required

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	20

Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	2.9
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

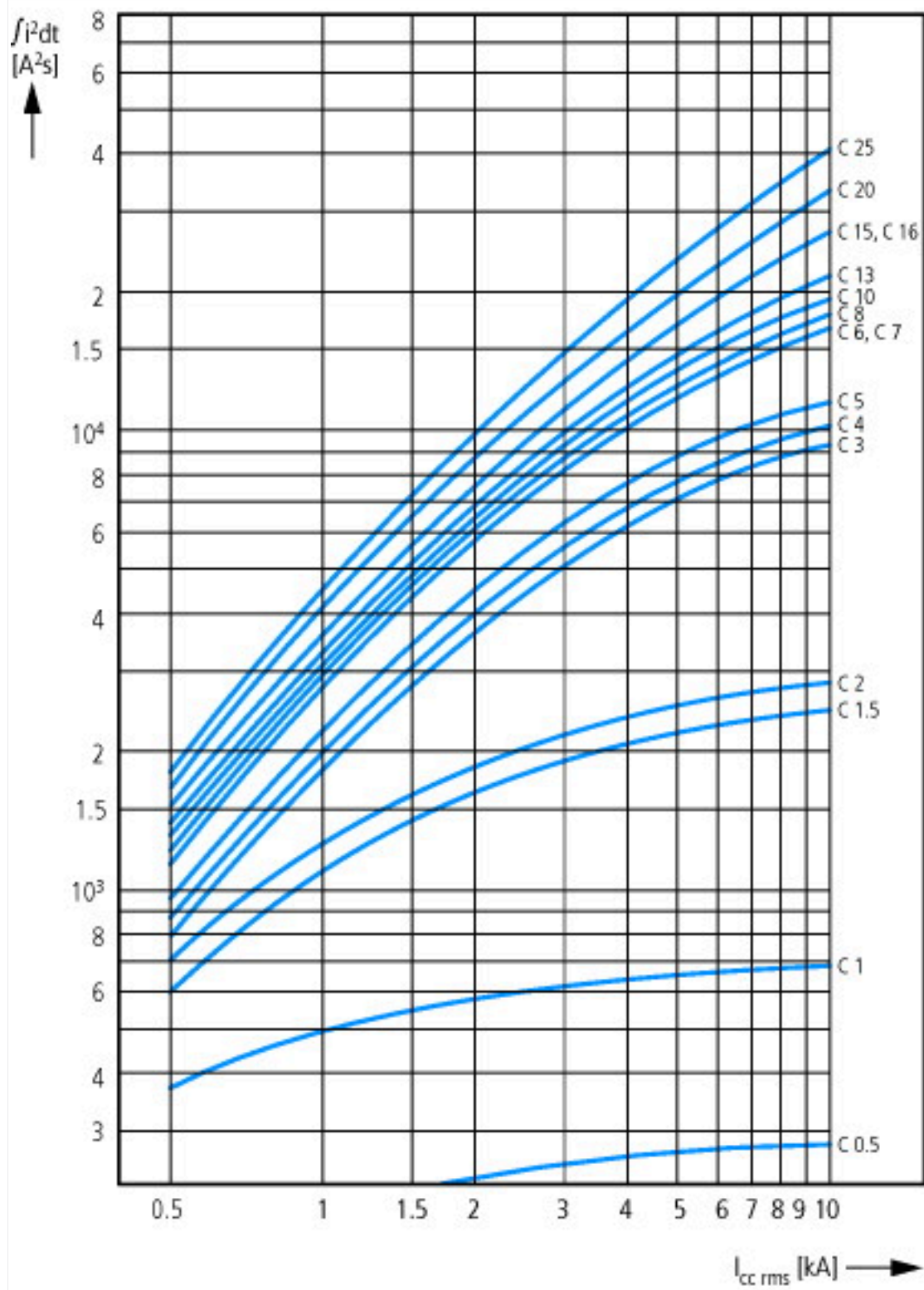
Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)			
Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ec1@ss10.0.1-27-14-19-01 [AAB905014])			
Release characteristic			C
Number of poles (total)			1
Number of protected poles			1
Rated current	A		20
Rated voltage	V		240
Rated insulation voltage U _i	V		440
Rated impulse withstand voltage U _{imp}	kV		4
Rated short-circuit breaking capacity I _{cn} EN 60898 at 230 V	kA		0
Rated short-circuit breaking capacity I _{cn} EN 60898 at 400 V	kA		0
Rated short-circuit breaking capacity I _{cu} IEC 60947-2 at 230 V	kA		15
Rated short-circuit breaking capacity I _{cu} 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			1
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

Approvals

Product Standards			IEC/EN 60947-2; EN 45545-2; IEC 61373; UL 489; CSA-C22.2 No. 5-09; CE marking
UL File No.			E235139
UL Category Control No.			DIVQ
CSA File No.			204453
CSA Class No.			1432-01
North America Certification			UL listed, CSA certified
Specially designed for North America			Yes, suitable as BCPD
Suitable for			Feeder circuits, branch circuits
Current Limiting Circuit-Breaker			Yes
Max. Voltage Rating			≤ 32 A
Degree of Protection			IEC: IP20, UL/CSA Type: -

Characteristics



Let-through energy i^2t
 Characteristic C (0.5 - 20 A), 277 V



Characteristic C (25 - 40 A), 240 V

Additional product information (links)

Temperature dependency, derating

<https://www.eaton.com/content/dam/eaton/technicaldocumentation/technical-data-tables/Derating table FAZ-NA-RT.pdf>