DATASHEET - FAZ-D20/1

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



Part no. FAZ-D20/1 Catalog No. 278585 Alternate Catalog FAZ-D20/1 No. EL-Nummer 1695217 (Norway)



Similar to illustration

Delivery program

Dontor, program			
Basic function			Miniature circuit-breakers
Number of poles			1 pole
Tripping characteristic			D
Application			Switchgear for industrial and advanced commercial applications
Rated current	I _n	А	20
Rated switching capacity acc. to IEC/EN 60947-2	I _{cu}	kA	15
Product range			FAZ

Technical data

Electrical			
Standards			IEC/EN 60947-2 IEC/EN 60898
Rated operational voltage	U _e	V	
	U _e	V AC	240/415
		V DC	60 (per pole)
Rated switching capacity acc. to IEC/EN 60947-2	I _{cu}	kA	15
Operational switching capacity		kA	7.5
Characteristic			B, C, D, K, S, Z
Max. back-up fuse		A gL/gG	125
Selectivity Class			3
lifespan			
Lifespan	Operations		> 10000
Direction of incoming supply			as required
Mechanical			
Standard front dimension		mm	45
Enclosure height		mm	80
Mounting width per pole		mm	17.5
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
Terminal capacities		mm ²	
		mm ²	1 × 25
		mm ²	2 x 10
Thickness of busbar material		mm	0.8 2
Mounting position			As required

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	20
Heat dissipation per pole, current-dependent	P _{vid}	W	0

Equipment heat dissipation, current-dependent	P _{vid}	W	2
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-40
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])

Number of poles (total) I Number of poles (total) I Number of protected poles I Rated current I Rated voltage I Rated voltage Li V Rated insulation voltage Uimp I Rated short-circuit breaking capacity Icn EN 60898 at 230 V K Rated short-circuit breaking capacity Icn EN 60898 at 400 V I Rated short-circuit breaking capacity Icn EN 60897-2 at 230 V KA Rated short-circuit breaking capacity Icn EN 60897-2 at 230 V KA Rated short-circuit breaking capacity Icn EN 60897-2 at 230 V KA Rated short-circuit breaking capacity Icn EN 60897-2 at 230 V KA Rated short-circuit breaking capacity Icn EN 60897-2 at 200 V KA Yotage type KA Frequency KA Gurrent limiting class So 60 Sutable for flush-mounted installation K Sutable for flush-mounted installation K Gurrent Workthing N-mourtal K	(eci@ss10.0.1-27-14-19-01 [AAB905014])		
Number of protected poles Image:	Release characteristic		D
Rated current A A Rated current C C Rated voltage C C Rated insulation voltage Ui V 40 Rated insulation voltage Uimp KV 40 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 Icn EN 60898 at 400 V KA 10 Rated short-circuit breaking capacity Icn EN 60898 at 400 V KA 10 Rated short-circuit breaking capacity Icn EN 60898 at 400 V KA 10 Rated short-circuit breaking capacity Icn EN 60897-2 at 4200 V KA 10 Voltage type KA 10 10 Frequency KA 10 10 Current limiting class KA 10 10 Suitable for flush-mounted installation KA 10 10 Korter KA 10 10 10 Korter KA 10 10 10 Korter K 10 10 10 Korter	Number of poles (total)		1
Rated voltage V 20 Rated insulation voltage Ui V 400 Rated inpulse withstand voltage Uimp KV 40 Rated short-circuit breaking capacity Icn EN 60898 at 200 V KA 10 Rated short-circuit breaking capacity Icn EN 60898 at 400 V KA 10 Rated short-circuit breaking capacity Icn EN 60947-2 at 230 V KA 10 Voltage type KA 10 10 Voltage type KA 10 10 Frequency KA 10 10 Current limiting class KA 10 10 Suitable for flush-mounted installation KA 10 10 Kate Sold 10 10 10 Kate KA 10 10 10 10 Voltage type KA 10 10 10 10 10 Frequency KB KA 10 10 10 10 10 10 Suitable for flush-mounted installation KB KB KB 10 10 10 10 10 10	Number of protected poles		1
Rated insulation voltage Ui V 440 Rated inpulse 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 Icn EN 60898 at 400 V KA 15 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 15 Voltage type KA 10 Frequency KA 10 Current limiting class S 6 Suitable for flush-mounted installation KI 10 Suitable for flush-mounted installation KI 10	Rated current	А	20
Rated impulse withstand voltage Uimp KV 4 Rated short-circuit breaking capacity Icn EN 60898 at 230 V KA 0 Rated short-circuit breaking capacity Icn EN 60898 at 400 V KA 0 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 15 Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V KA 5 Voltage type KA 5 Frequency KA 5 Current limiting class SI 5 Suitable for flush-mounted installation KA 5 Kitable for flush-mounted installation KA 5 Kitable for flush-mounted installation KA 5	Rated voltage	V	230
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 KA 10 Frequency KA 10 Current limiting class 50 - 60 Suitable for flush-mounted installation KA 10 Kate Short-circuit shore with provide with the shore withe shore withe shore with the shore with the shore with the shore	Rated insulation voltage Ui	V	440
Rated short-circuit breaking capacity Icn EN 60898 at 400 VKA10Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 VKA15Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 VKA15Votage typeKAACFrequencyKZ50-60Current limiting classS3Suitable for flush-mounted installationMain and the form of the for	Rated impulse withstand voltage Uimp	kV	4
Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 5 Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 5 Voltage type KA 5 Frequency Hz 50-60 Current limiting class So 6 Suitable for flush-mounted installation Image: Solution of the stallation o	Rated short-circuit breaking capacity Icn EN 60898 at 230 V	kA	10
Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V KA 15 Voltage type AC AC Frequency Hz 50-60 Current limiting class Suitable for flush-mounted installation Main Sourcently switching N-neutral Image: Suitable for flush-mounted installation Main	Rated short-circuit breaking capacity Icn EN 60898 at 400 V	kA	10
Voltage type AC Frequency Hz 50 - 60 Current limiting class Solon 3 Suitable for flush-mounted installation Image: Solon No Concurrently switching N-neutral Image: Solon No	Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V	kA	15
Frequency Hz 50-60 Current limiting class Suitable for flush-mounted installation Main Sourcently switching N-neutral Main No	Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V	kA	15
Current limiting class 3 Suitable for flush-mounted installation No Concurrently switching N-neutral No	Voltage type		AC
Suitable for flush-mounted installation No Concurrently switching N-neutral No	Frequency	Hz	50 - 60
Concurrently switching N-neutral No	Current limiting class		3
	Suitable for flush-mounted installation		No
Over voltage category 3	Concurrently switching N-neutral		No
	Over voltage category		3

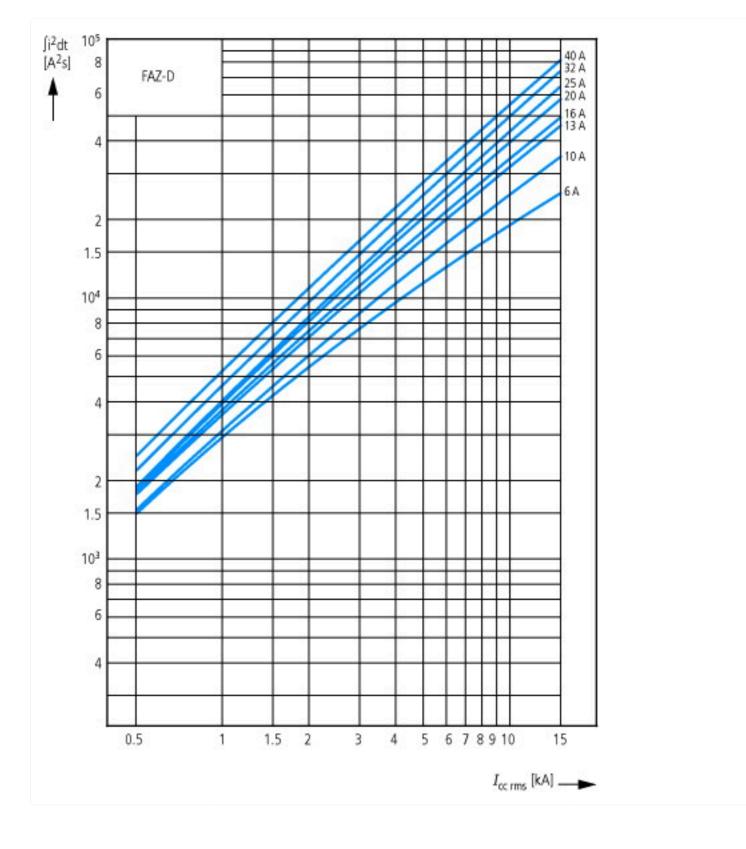
Pollution degree			2
Additional equipment possible			Yes
Width in number of modular spacings			1
Built-in depth	1	mm	70.5
Degree of protection (IP)			IP20
Ambient temperature during operating		°C	-25 - 75
Connectable conductor cross section multi-wired	1	mm²	1 - 25
Connectable conductor cross section solid-core	1	mm²	1 - 25

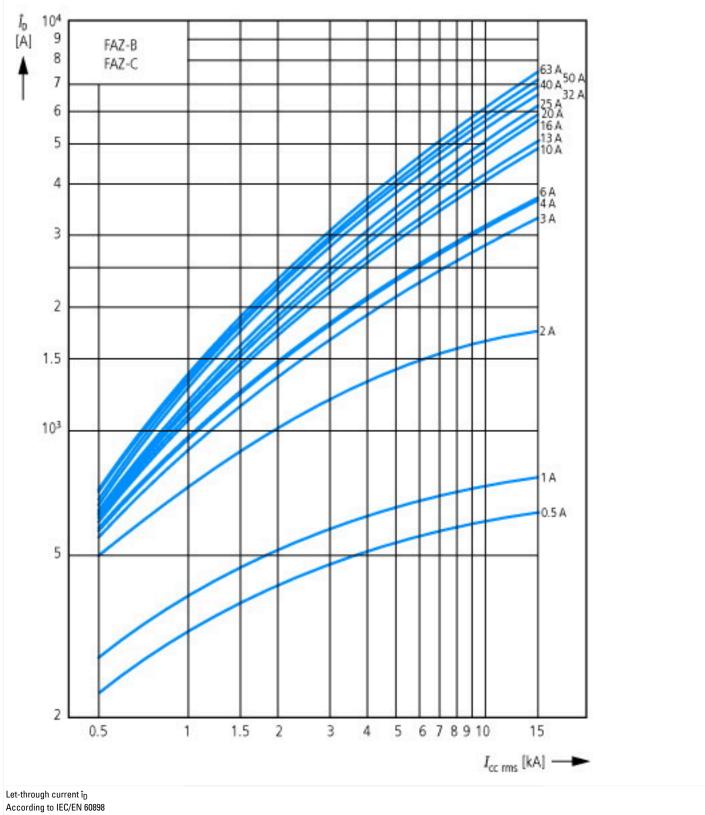
Approvals

Product Standards	IEC/EN 60947-2; IEC/EN 60898; EN 45545-2; IEC 61373; UL 1077; CSA-C22.2 No. 235; CE marking
UL File No.	E177451
UL Category Control No.	QVNU2, QVNU8
CSA File No.	204453
CSA Class No.	3215-30
North America Certification	UL recognized, CSA certified
Conditions of Acceptability	Supplementary Protector only
Suitable for	Branch Circuits; not as BCPD
Current Limiting Circuit-Breaker	No
Max. Voltage Rating	277 VAC; 48 VDC
Degree of Protection	IEC: IP20; UL/CSA Type: -

Characteristics



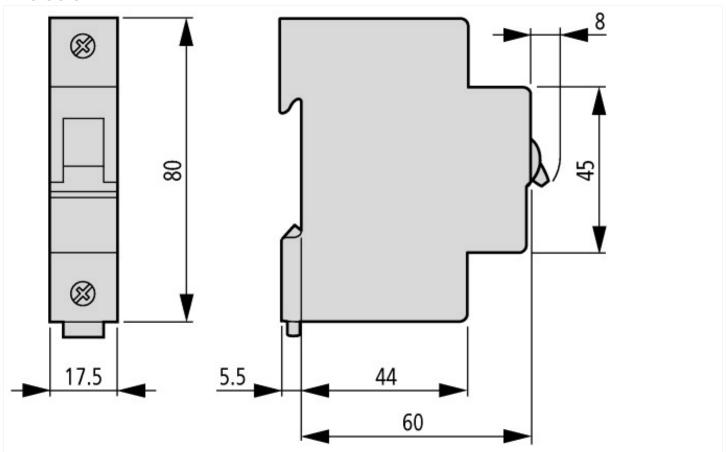








Dimensions



Additional product information (links)

Temperature dependency, derating

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