

# Miniature circuit breaker (MCB), 20A, 2 p, type B characteristic, DC

Powering Business Worldwide\*

Part no. FAZ-B20/2-DC Catalog No. 176082

Similar to illustration

# **Delivery program**

Basic function			Miniature circuit-breakers
Number of poles			2 pole
Tripping characteristic			В
Application			Switchgear for DC applications
Rated current	In	Α	20
Rated switching capacity acc. to IEC/EN 60947-2		kA	10
Product range			FAZ-DC

# **Technical data**

#### **Electrical**

10
----

### **Design verification as per IEC/EN 61439**

Design verification as per IEC/EN 61439			
Fechnical data for design verification			
Rated operational current for specified heat dissipation	In	Α	20
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	6.6
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature max.		°C	-40
Operating ambient temperature max.		°C	75
			linear, per +1 °C, results in a 0.5% reduction of current carrying capacity
C/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 6.0**

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@ss8.1-27-14-19-01 [AAB905011])

Release characteristic Romber of poles (total) Number of poles (total) Number of protected poles Number of protection (IP)	[AAB905011])			
Number of protected poles         2           Nominal rated current         4         2           Nominal rated voltage         V         500           Rated short-circuit breaking capacity Icn EN 60898 at 230 V         kA         0           Rated short-circuit breaking capacity Icu EN 60898 at 400 V         kA         10           Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V         kA         10           Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V         kA         10           Voltage type         DC         3           Current limiting class         3         3           Frequency         No         No           Concurrently switching N-neutral         No         No           Suitable for flush-mounted installation         No         3           Over voltage category         No         3           Pollution degree         2         2           Width in number of modular spacings         No         2           Built-in depth         No         2           Auditional equipment possible         Mn         70.5	Release characteristic		В	
Nominal rated current Nominal rated voltage Nominal rated voltage Rated short-circuit breaking capacity Icn EN 60898 at 230 V Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 200 V Voltage type Current limiting class Frequency Current limiting class Frequency Concurrently switching N-neutral Suitable for flush-mounted installation Over voltage category Pollution degree Width in number of modular spacings Built-in depth A D A D B D C D D D D D D D D D D D D D D D D	Number of poles (total)		2	
Nominal rated voltage Rated short-circuit breaking capacity Icn EN 60898 at 230 V Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Voltage type Current limiting class Frequency Concurrently switching N-neutral Suitable for flush-mounted installation Over voltage category Pollution degree Width in number of modular spacings Built-in depth Additional equipment possible	Number of protected poles		2	
Rated short-circuit breaking capacity Icn EN 60898 at 230 V Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icn IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icn IEC 60947-2 at 400 V Voltage type Current limiting class Frequency Currently switching N-neutral Suitable for flush-mounted installation Over voltage category Pollution degree Width in number of modular spacings Built-in depth Additional equipment possible	Nominal rated current	А	20	
Rated short-circuit breaking capacity Icn EN 60898 at 400 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Voltage type Current limiting class Frequency Concurrently switching N-neutral Concurrently switching N-neutral Suitable for flush-mounted installation Over voltage category Pollution degree Width in number of modular spacings Built-in depth Additional equipment possible	Nominal rated voltage	V	500	
Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 10  Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V kA 10  Voltage type DC  Current limiting class 3 3  Frequency Suitable for flush-mounted installation No  Over voltage category No  Pollution degree Voltage category 2  Width in number of modular spacings Suitable for flush-mounted prossible No  Additional equipment possible No  Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V kA 10  DC  AC CORCURSTANCE NO  DC  AC CORCURSTANCE NO  AC CORCURSTANCE NO  NO  AC CORCURSTANCE NO  NO  AC CORCURSTANCE NO  AC CORCURSTANCE NO  NO  AC CORCURSTANCE NO  NO  AC CORCURSTANCE NO  AC CORCURSTANCE NO  NO  AC CORCURST	Rated short-circuit breaking capacity Icn EN 60898 at 230 V	kA	0	
Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V Voltage type  Current limiting class  Frequency Concurrently switching N-neutral Suitable for flush-mounted installation Over voltage category Pollution degree Width in number of modular spacings Built-in depth Additional equipment possible	Rated short-circuit breaking capacity Icn EN 60898 at 400 V	kA	0	
Voltage type Current limiting class Frequency Concurrently switching N-neutral Suitable for flush-mounted installation Over voltage category Pollution degree Width in number of modular spacings Built-in depth Additional equipment possible	Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V	kA	A 10	
Current limiting class  Frequency Concurrently switching N-neutral  No Concurrently switching N-neutral Concurrently switching N-neu	Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V	kA	A 10	
Frequency Concurrently switching N-neutral Suitable for flush-mounted installation Over voltage category Pollution degree Width in number of modular spacings Built-in depth Additional equipment possible  Possible  Possible Possi	Voltage type		DC	
Concurrently switching N-neutral  Suitable for flush-mounted installation  Over voltage category  Pollution degree  Width in number of modular spacings  Built-in depth  Additional equipment possible  No  2  2  Yes	Current limiting class		3	
Suitable for flush-mounted installation Over voltage category Pollution degree Width in number of modular spacings Built-in depth Additional equipment possible  No  2  2  4  7  7  7  7  7  8  8  8  8  8  8  8  8	Frequency	Hz	z 50 -	60
Over voltage category3Pollution degree2Width in number of modular spacings2Built-in depthmm70.5Additional equipment possibleYes	Concurrently switching N-neutral		No	
Pollution degree 2 Width in number of modular spacings 2 Built-in depth mm 70.5 Additional equipment possible 2  Yes	Suitable for flush-mounted installation		No	
Width in number of modular spacings 2 Built-in depth mm 70.5 Additional equipment possible Yes	Over voltage category		3	
Built-in depth mm 70.5 Additional equipment possible ves	Pollution degree		2	
Additional equipment possible  Yes	Width in number of modular spacings		2	
	Built-in depth	mr	m 70.5	i
Degree of protection (IP) IP20	Additional equipment possible		Yes	
	Degree of protection (IP)		IP20	0