



## Miniature circuit breaker (MCB), 20A, 1p, B-Char, AC

Part no. **FAZ-B20/1**  
 Catalog No. **278536**  
 Eaton Catalog No. **FAZ-B20/1**

Similar to illustration

## Delivery program

Basic function			Miniature circuit-breakers
Number of poles			1 pole
Tripping characteristic			B
Application			Switchgear for industrial and advanced commercial applications
Rated current	$I_n$	A	20
Rated switching capacity acc. to IEC/EN 60947-2		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		kA	15
Operational switching capacity		kA	7.5
Characteristic			B, C, D
Max. back-up fuse		A gL/gG	125
Selectivity Class			3
Lifespan	Operations		> 10000
Direction of incoming supply			as required

### Mechanical

Standard front dimension		mm	45
Enclosure height		mm	80
Terminal protection			Finger and back-of-hand proof to BGV A2
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 capacities		mm <sup>2</sup>	
		mm <sup>2</sup>	1 x 25
		mm <sup>2</sup>	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	$I_n$	A	20
Heat dissipation per pole, current-dependent	$P_{vid}$	W	0
Equipment heat dissipation, current-dependent	$P_{vid}$	W	3.2
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.		

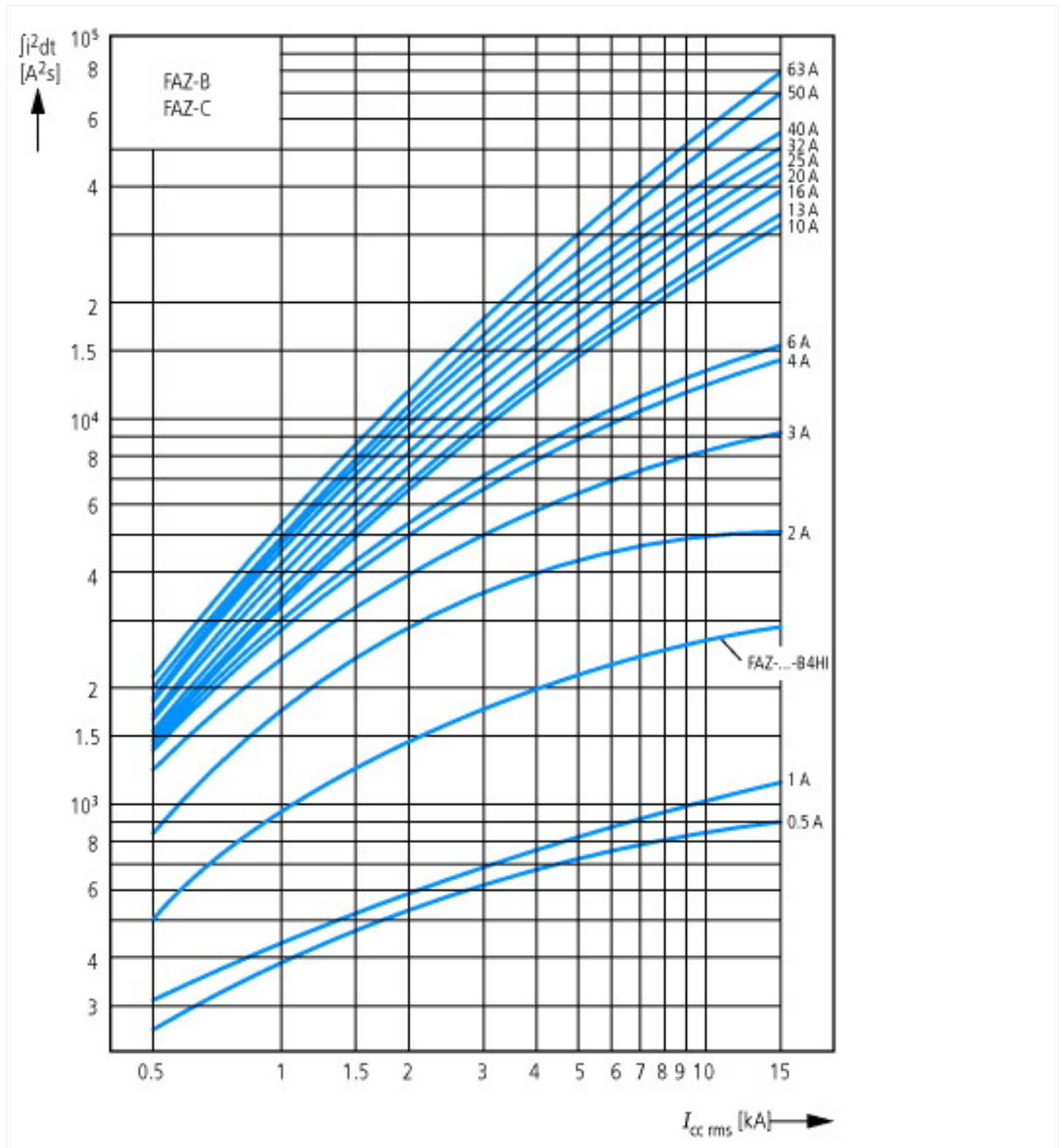
## Technical data ETIM 6.0

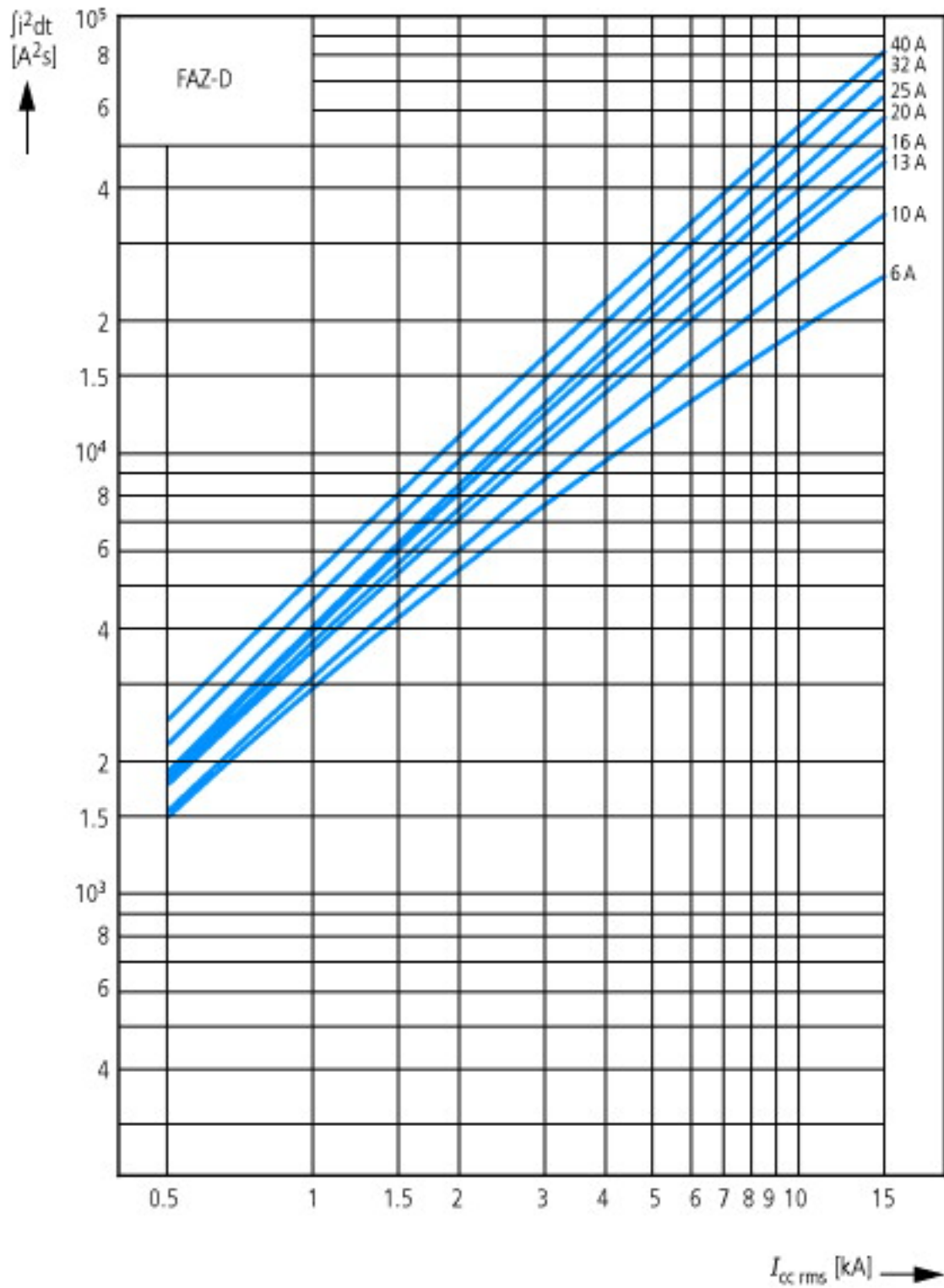
Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)		
Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss8.1-27-14-19-01 [AAB905011])		
Release characteristic		B
Number of poles (total)		1
Number of protected poles		1
Nominal rated current	A	20
Nominal rated voltage	V	230
Rated short-circuit breaking capacity I <sub>cn</sub> EN 60898 at 230 V	kA	10
Rated short-circuit breaking capacity I <sub>cn</sub> EN 60898 at 400 V	kA	10
Rated short-circuit breaking capacity I <sub>cu</sub> IEC 60947-2 at 230 V	kA	15
Rated short-circuit breaking capacity I <sub>cu</sub> IEC 60947-2 at 400 V	kA	15
Voltage type		AC
Current limiting class		3
Frequency	Hz	50 - 60
Concurrently switching N-neutral		No
Suitable for flush-mounted installation		No
Over voltage category		3
Pollution degree		2
Width in number of modular spacings		1
Built-in depth	mm	70.5
Additional equipment possible		Yes
Degree of protection (IP)		IP20

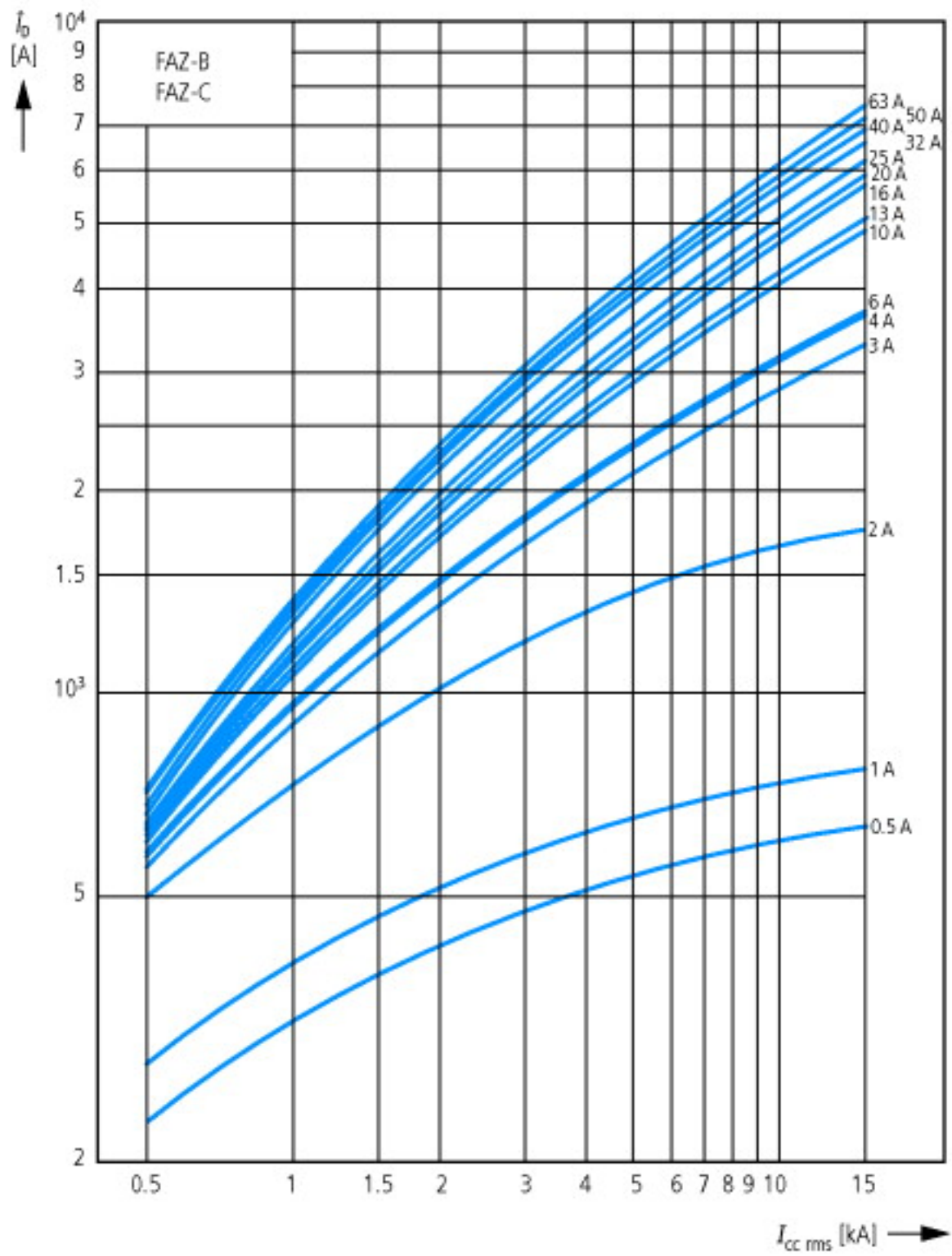
## Approvals

Product Standards	IEC/EN 60947-2; IEC/EN 60898; 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







Let-through current  $i_p$   
According to IEC/EN 60898







Tripping characteristic at 30 °C:  
 B, C, D to IEC/EN 60898

## Dimensions



## Additional product information (links)

AWA1220-1755 Circuit-breaker

AWA1220-1755 Circuit-breaker

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/17550701.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/17550701.pdf)