



**Miniature circuit breaker (MCB), 20A, 3pole+N, type D characteristic, 6 kA**

**Part no. FAZ6-D20/3N**  
**Catalog No. 177414**

Similar to illustration

### Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	20
Equipment heat dissipation, current-dependent	$P_{vid}$	W	6.2
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
10.2.2.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.2.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.2.3 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) (ec@ss10.0.1-27-14-19-01 [AAB905014])			
Release characteristic			D
Number of poles (total)			4
Number of protected poles			3
Rated current		A	20
Rated voltage		V	400
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	6
Rated short-circuit breaking capacity $I_{cn}$ EN 60898 at 400 V		kA	6
Rated short-circuit breaking capacity $I_{cu}$ IEC 60947-2 at 230 V		kA	10

Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V	kA	10
Voltage type		AC
Frequency	Hz	50 - 60
Current limiting class		3
Suitable for flush-mounted installation		No
Concurrently switching N-neutral		Yes
Over voltage category		3
Pollution degree		2
Additional equipment possible		Yes
Width in number of modular spacings		4
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 <sup>2</sup>	1 - 25
Connectable conductor cross section solid-core	mm <sup>2</sup>	1 - 25

## Additional product information (links)

Temperature dependency, derating	<a href="https://www.eaton.com/content/dam/eaton/technicaldocumentation/technical-data-tables/Derating table FAZ6.pdf">https://www.eaton.com/content/dam/eaton/technicaldocumentation/technical-data-tables/Derating table FAZ6.pdf</a>
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