DATASHEET - FAZ-D20/3

Miniature circuit breaker (MCB), 20 A, 3p, characteristic: D



Part no.	FAZ-D20/3
Catalog No.	278897
Alternate Catalog	FAZ-D20/3
No.	
EL-Nummer	1695233
(Norway)	

Similar to illustration

Delivery program

Basic function			Miniature circuit-breakers
Number of poles			3 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	l _{cu}	kA	15
Product range			FAZ

Technical data Electrical

Red operational wordsogeUnit of the second seco	Electrical			
Image: section of the section of th	Standards			
VDCØperpelonRed switching capacity act. to EC/EN 60947-2FuKA5Operational switching capacityKA55CharacteristicFuSSSMax. back-up fuseFuSSSSelectivity ClassFuSSSIfespanOperationOperationSSSDirection of incoming supplyOperationSSSSelectivity ClassFuSSSSuddraft fordifuensionFuSSSEnclosure heightFuSSSNotingi supplyFuSSSSuddraft fordifuensionFuSSSSuddraft fordifuensionFuSSSSuddraft fordifuensionFuSSSSuddraft fordifuensionFuSSSSuddraft fordifuensionFuSSSSuddraft fordifuensionFuSSSSuddraft fordifuenciFuSSSSuddraft fordifuenciFuSSSSuddraft fordifuenciFuSSSSuddraft fordifuenciFuSSSSuddraft fordifuenciFuSSSSuddraft fordifuenciFuSSSSuddraft fordifuenciFuSSSSuddraft fordifuenciFuSSS <td>Rated operational voltage</td> <td>Ue</td> <td>V</td> <td></td>	Rated operational voltage	Ue	V	
Red switching capacity acc. to EK/EN 60847-2I I I I I CharacteristicI <br< td=""><td></td><td>Ue</td><td>V AC</td><td>240/415</td></br<>		Ue	V AC	240/415
Operational switching capacity Ka 5 Characteristic 6,0,K,S,Z Max. back-up fuse 5 Selectivity Class 4 gL/g3 Lifespan Operational 1 Direction of incoming supply Fee 3 Max. back up fuse - - Selectivity Class - - Direction of incoming supply Fee - Machard fort dimension - - Belosure height - - - Mounting wordth per pole - - - Nouting - - - - Terminal protection - <			V DC	60 (per pole)
CharacteristicRefRefRefRefRefRefMax backup fuseMax backup fuseSelectivity ClassSelectivity ClassSelect	Rated switching capacity acc. to IEC/EN 60947-2	l _{cu}	kA	15
Max.back-up fuse A gl/g6 25 Selectivity Class A gl/g6 26 Lifespan Operations 70000 Direction of incoming supply as required Mechanical serequired Selectivity Class mm 50 Exclosure height mm 50 Mounting width per pole mm 75 Mounting Fore 1000/100000000000000000000000000000000	Operational switching capacity		kA	7.5
Selectivity Class A I	Characteristic			B, C, D, K, S, Z
Ifespan Image: Market State Stat	Max. back-up fuse		A gL/gG	125
Lifespan Operations > 1000 Direction of incoming supply as required Mechanical Mm 5 Standard front dimension Mm 5 Anothing width per pole Mm 5 Mounting Mm 15 Degree of Protection Mm 16/Life MonThat Protection Terminals top and bottom Mm 16/Life MonThat Protection Terminal capacities Mm 12/Life MonThat Protection	Selectivity Class			3
Direction of incoming supply Image: Provide a sequired Mechanical mm \$ Standard front dimension mm \$ Enclosure height mm \$ Mounting width per pole mm \$ Mounting Mm \$ Degree of Protection Mm \$ Terminals top and bottom Mm \$ Terminal capacities Mm \$ Terminal capacities Mm \$ Terminal capacities mm \$ Immini Capacities mm \$ Terminal capacities mm \$ Immini Capacities mm <td>lifespan</td> <td></td> <td></td> <td></td>	lifespan			
Mechanical mm 45 Standard front dimension mm Monting Mm Monting width per pole mm 7.5 Mounting Mm Monting Feed Portection Feed Por	Lifespan	Operations		> 10000
Standard front dimension mm 4 Enclosure height mm 80 Mounting width per pole mm 15.5 Mounting EC/EN 60715 top-hat rail 100.1140 (when fitted) Degree of Protection FM 120.1440 (when fitted) Terminals top and bottom FM FM FM Terminal capacities FM FM FM Terminal capacities FM FM FM Internet width of the fitted) FM FM FM Terminal capacities FM FM FM FM FM Terminal capacities FM FM <t< td=""><td>Direction of incoming supply</td><td></td><td></td><td>as required</td></t<>	Direction of incoming supply			as required
Enclosure height mm 80 Mounting width per pole mm 1.5 Mounting EC/EN 60715 top-hat rail EC/EN 60715 top-hat rail Degree of Protection FM 1.2 Terminal stop and bottom FM FM Terminal capacities Mm imm Terminal capacities Mm imm <	Mechanical			
Mounting width per pole nm 1.5 Mounting IC/EN 60715 top-hat rail Degree of Protection F02, IP40 (when fitted) Terminals top and bottom Mm 100, IP40 (when fitted) Terminal protection Mm Image: Minipup Sector Terminal capacities Mm Image: Minipup Sector Indextor Mm2 Image: Minipup Sector Indextor Mm2 Image: Minipup Sector Thickness of busbar material Mm Sector Minipup Sector Mm2 Image: Minipup Sector Terminal capacities Mm2 Image: Minipup Sector Indextor Minipup Sector Minipup Sector Indextor Minipup Sector Minipup Sector Indextor Minipup Sector Minipup Sector	Standard front dimension		mm	45
Mounting Image: Ima			mm	80
Degree of Protection P20, IP40 (when fitted) Terminals top and bottom Twin-purpose terminals Terminal protection Twin-purpose terminals Terminal capacities mm ² Immersion 1x 25 Terminal capacities mm ² Terminal capacities mm ² Terminal capacities mm ² Immersion 1x 25 Terminal capacities mm ² Terminal capacities mm ² Immersion mm ² Terminal capacities mm ² Immersion mm ² Terminal capacities mm ² Immersion mm ² Terminal capacities mm ²	Mounting width per pole		mm	17.5
Terminals top and bottom Image: Sector S	Mounting			IEC/EN 60715 top-hat rail
Terminal protectionImage: Singer and back-of-hand proof to BGV A2Terminal capacitiesmm²Image: Singer and back-of-hand proof to BGV A2mm²Image: Singer and back-of-hand proof to BGV A2singer and back-of-hand proof to BGV A2Image: Singer and back-of-hand proof to BGV A2mm²Image: Singer and back-of-hand proof to BGV A2singer and back-of-hand proof to BGV A2Image: Singer and back-of-hand proof to BGV A2mm²Image: Singer and back-of-hand proof to BGV A2singer and back-of-hand proof to BGV A2Image: Singer and back-of-hand proof to BGV A2mm²Image: Singer and back-of-hand proof to BGV A2singer and back-of-hand proof to BGV A2Image: Singer and back-of-hand proof to BGV A2mm²Image: Singer and back-of-hand proof to BGV A2singer and back-of-hand proof to BGV A2Image: Singer and Back-of-hand proof to BGV A2mm²Image: Singer and Back-of-hand proof to BGV A2singer and back-of-hand proof to BGV A2Image: Singer and Back-of-hand proof to BGV A2mm²Image: Singer and Back-of-hand proof to BGV A2mm²Image: Singer and Back-of-hand proof to BGV A2mm²I	Degree of Protection			IP20, IP40 (when fitted)
Terminal capacities mm ² Imm ²	Terminals top and bottom			Twin-purpose terminals
Image: market in the second se	Terminal protection			Finger and back-of-hand proof to BGV A2
Image:	Terminal capacities		mm ²	
Thickness of busbar material mm 0.8 2			mm ²	1 x 25
			mm ²	2 x 10
Mounting position As required	Thickness of busbar material		mm	0.8 2
	Mounting position			As required

Design verification as per IEC/EN 61439

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Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	А	20
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	6.1

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])

Release characteristic		D
Number of poles (total)		3
Number of protected poles		3
Rated current	А	20
Rated voltage	۷	400
Rated insulation voltage Ui	V	440
Rated impulse 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 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		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		3
Built-in depth	mm	70.5
Degree of protection (IP)		IP20
Ambient temperature during operating	°C	-25 - 75
Connectable conductor cross section multi-wired	mm²	1 - 25
Connectable conductor cross section solid-core	mm ²	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	480Y/277 VAC
Degree of Protection	IEC: IP20; UL/CSA Type: -

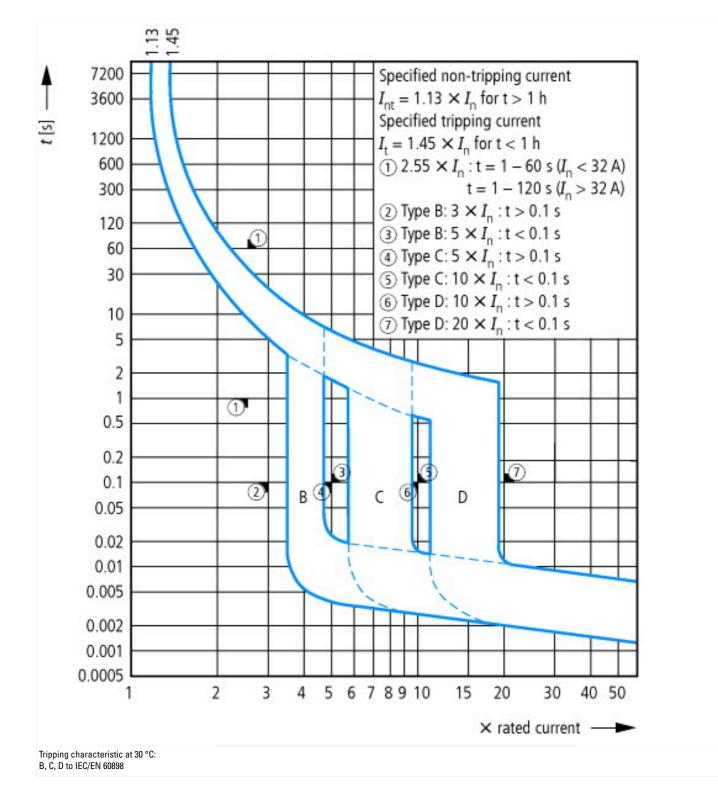
Characteristics



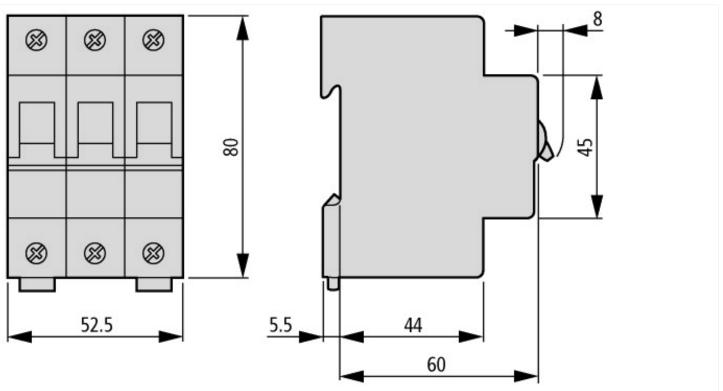








Dimensions



Additional product information (links)

Temperature dependency, derating

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