DATASHEET - FAZ-D2/3-NA

Miniature circuit breaker (MCB), 2 A, 3p, characteristic: D



Part no. FAZ-D2/3-NA Catalog No. 102260 Alternate Catalog FAZ-D2/3-NA No. EL-Nummer 1691665 (Norway)



Similar to illustration

Delivery program

Basic function			Miniature circuit-breakers
Number of poles			3 pole
Tripping characteristic			D
Application			Switchgear for export to North America (UL-listed)
Rated current	I _n	А	2
Rated switching capacity acc. to IEC/EN 60947-2	l _{cu}	kA	15
Product range			FAZ-NA

Technical data

StadardsNoUse SafA222 No 5 6000000000000000000000000000000000000	Electrical			
Initial Section Initial Section Initial Section Initial Section Initial Section Initial Section Initial Section Initial Section Red voltage according to IEC/EN 60947-2 Initial Section Initial Section Initial Section Red voltage according to IEC/EN 60947-2 Initial Section Initial Section Initial Section Sectivity Class Initial Section Initial Section Initial Section Initial Section Ifespan Operations Initial Section Initial Section Section Redsolution functioning supply Initial Section Initial Section Section Section Reclosure height Initial Section Initial Section Section Section Mounting Initial Section Initial Section Section Initial Section Section Terminals top and bottom Initial Section Section Initial Section Section Section Initial Section Section Section Terminals top and bottom Initial Section Section Section Section Section Section Section Initial Section	Standards			
Image: constraint of LEC/EN 60947-2VDC0Retad voltage according to LEC/EN 60947-2VACVACRetad switching capacity acc. to IEC/EN 60947-2VACKASelectivity ClassVACKASelectivity ClassKAS. D. D. C. D. C.	Rated operational voltage	Ue	V	
Rated voltage according to EC/EN 60947-2 Vancols according to UL <		Ue	V AC	277/480 Y
Red voltage according to LL VA 800/277 Red switching capacity acc. to IEC/EN 60947-2 Icu KA 5 Characteristic Icu KA 5 Characteristic Icu KA 5 Selectivity Class S 5 5 Iffespan Operation Icu 2000 2000 Direction of incoming supply Terrupired according to the formation of the form			V DC	60
Rated switching capacity acc. to IEC/EN 60947-2 Icu KA 5 Characteristic F B, C, D B, C, D Selectivity Class 3 Characteristic 3 Iffespan Operations se required 3 Direction of incoming supply Operations se required 3 Machanical mm Second Secon	Rated voltage according to IEC/EN 60947-2	Un	V AC	415
Characteristic B C B C Selectivity Class B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C B C D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D D <td< td=""><td>Rated voltage according to UL</td><td>Un</td><td>V AC</td><td>480Y/277</td></td<>	Rated voltage according to UL	Un	V AC	480Y/277
Selectivity Class Selectity Class Selectity Class <	Rated switching capacity acc. to IEC/EN 60947-2	l _{cu}	kA	15
Ifespan Operations Image: Marcine of the second se	Characteristic			B, C, D
Lifespan Operations >20000 Direction of incoming supply as required Nechanical Image: Standard front dimension Image: Standard front dimension Exclosure height Image: Standard front dimension Image: Standard front dimension Mounting width per pole Image: Standard front dimension Image: Standard front dimension Mounting width per pole Image: Standard front dimension Image: Standard front dimension Mounting Image: Standard front dimension Image: Standard front dimension Mounting width per pole Image: Standard front dimension Image: Standard front dimension Mounting Image: Standard front dimension Image: Standard front dimension Image: Standard front dimension Mounting Image: Standard front dimension Image: Standard front dimension Image: Standard front dimension Terminals top and bottom Image: Standard front dimension Image: Standard front dimension Image: Standard front dimension Tightening torque of fixing screws Image: Standard front dimension Image: Standard front dimension Image: Standard front dimension Tightening torque of fixing screws Image: Standard front dimension Image: Standard front dimension Image: Standard front dimension <td>Selectivity Class</td> <td></td> <td></td> <td>3</td>	Selectivity Class			3
Direction of incoming supply as required Direction of incoming supply as required Mechanical mm 45 Standard front dimension mm 105 Enclosure height mm 17.7 Mounting EC/EN 60715 top-hat rail EC/EN 60715 top-hat rail Degree of Protection mm 120, IP40 (when fitted) Terminals top and bottom mm Finger and back-of-hand proof to BGV A2 Terminal protection mm Finger and back-of-hand (25 LA Nm (21 Lb-in)) Tightening torque of fixing screws N/m N/m (28 Lb-in)	lifespan			
Mechanical Standard front dimension mm 45 Enclosure height mm 105 Mounting width per pole mm 17.7 Mounting IEC/EN 60715 top-hat rail IEC/EN 60715 top-hat rail Degree of Protection IEC/EN 60715 top-hat rail IEC/EN 60715 top-hat rail Terminals top and bottom IEC/EN 60715 top-hat rail IEC/EN 60715 top-hat rail Terminal protection IEC/EN 60715 top-hat rail IEC/EN 60715 top-hat rail Terminal protection IEC/EN 60715 top-hat rail IEC/EN 60715 top-hat rail Tightening torque of fixing screws Mm Mm Image and back-of-hand proof to BGV A2 Tightening torque of fixing screws Mm Image and back-of-hand proof to BGV A2 Image and back-of-hand proof to BGV A2	Lifespan	Operations		> 20000
Standard front dimensionmm45Enclosure heightmm105Mounting width per polemm17.7MountingIEC/EN 60715 top-hat railDegree of ProtectionIEC/EN 60715 top-hat railTerminals top and bottomTwin-purpose terminalsTerminal protectionTwin-purpose terminalsTerminal protectionImage: Add Add Add Add Add Add Add Add Add Ad	Direction of incoming supply			as required
Enclosure heightmm105Mounting width per polemm17.7MountingIC/EN 60715 top-hat railDegree of ProtectionICOP20, IP40 (when fitted)Terminals top and bottomICOICOTerminal protectionICOICOTightening torque of fixing screwsICON/mManage of fixing screwsN/mmax.24 UL: #18-12 AWG: 2.8 Nm (25 Ib-in) #6 AWG: 4 Nm (36 Ib-in)	Mechanical			
Mounting width per polemm17.7MountingEC/EN 60715 top-hat railDegree of ProtectionIEO/2 IP40 (when fitted)Terminals top and bottomIEOTerminal protectionIEOTerminal protectionIEOTightening torque of fixing screwsIEON/mmax. 2.4UL: #18-12 AWG: 2.4 Nm (21 lb-in) #10-8 AWG: 2.8 Nm (25 lb-in)	Standard front dimension		mm	45
Mounting IEC/EN 60715 top-hat rail Degree of Protection IEC/EN 60715 top-hat rail Terminals top and bottom IEC/EN 60715 top-hat rail Terminal protection IEC/EN 60715 top-hat rail Terminal protection IEC/EN 60715 top-hat rail Tightening torque of fixing screws IEC/EN 60715 top-hat rail Image: Screws Image: Screws	Enclosure height		mm	105
Degree of Protection IP20, IP40 (when fitted) Terminals top and bottom IP20, IP40 (when fitted) Terminal protection Image: Team of the team of team of the team of tea	Mounting width per pole		mm	17.7
Terminals top and bottom Twin-purpose terminals Terminal protection Finger and back-of-hand proof to BGV A2 Tightening torque of fixing screws N/m max. 2.4 UL: #18-12 AWG: 2.4 Nm (21 lb-in) #10-8 AWG: 4 Nm (36 lb-in)	Mounting			IEC/EN 60715 top-hat rail
Terminal protection Finger and back-of-hand proof to BGV A2 Tightening torque of fixing screws N/m max. 2.4 UL: #18-12 AWG: 2.4 Nm (21 lb-in) #10-8 AWG: 2.8 Nm (25 lb-in) #6 AWG: 4 Nm (36 lb-in)	Degree of Protection			IP20, IP40 (when fitted)
Tightening torque of fixing screws N/m max. 2.4 UL: #18-12 AWG: 2.4 Nm (21 lb-in) #10-8 AWG: 2.8 Nm (25 lb-in) #6 AWG: 4 Nm (36 lb-in)	Terminals top and bottom			Twin-purpose terminals
UL: #18-12 AWG: 2.4 Nm (21 lb-in) #10-8 AWG: 2.8 Nm (25 lb-in) #6 AWG: 4 Nm (36 lb-in)	Terminal protection			Finger and back-of-hand proof to BGV A2
Mounting position As required	Tightening torque of fixing screws		N/m	UL: #18-12 AWG: 2.4 Nm (21 lb-in) #10-8 AWG: 2.8 Nm (25 lb-in)
	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	А	2
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	3.1
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0

Operating ambient temperature min.	°C	-25
Operating ambient temperature max.	°C	75
		linear, per +1 °C, results in a 0.5% reduction of current carrying capacity
EC/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 observed.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility. The specifications for the switchgear must 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)

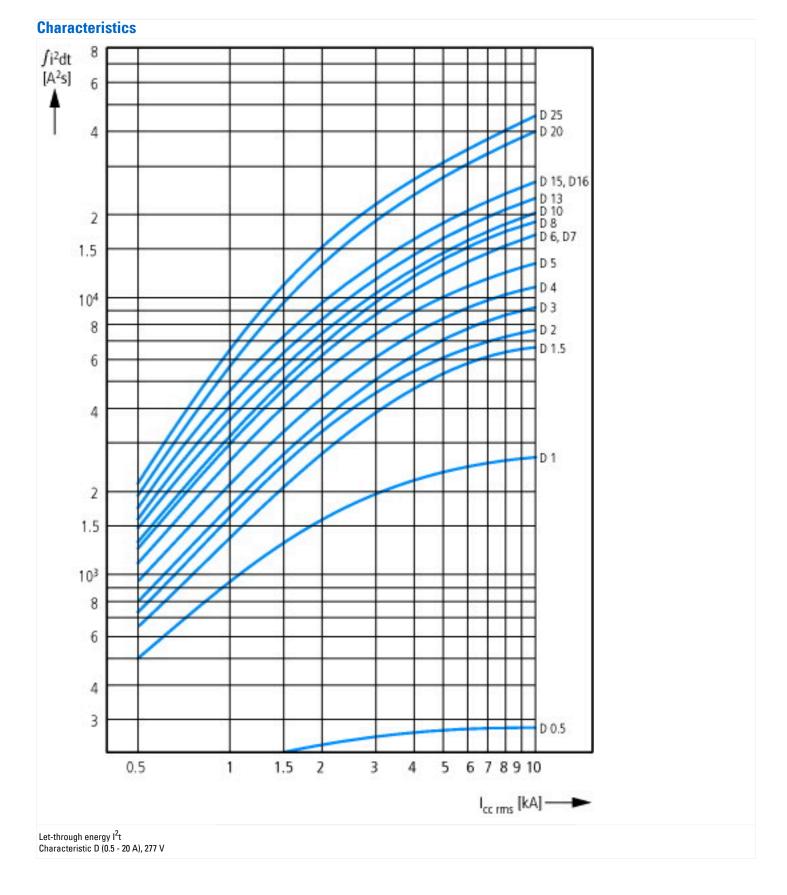
Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss10.0.1-27-14-19-01 [AAB905014])

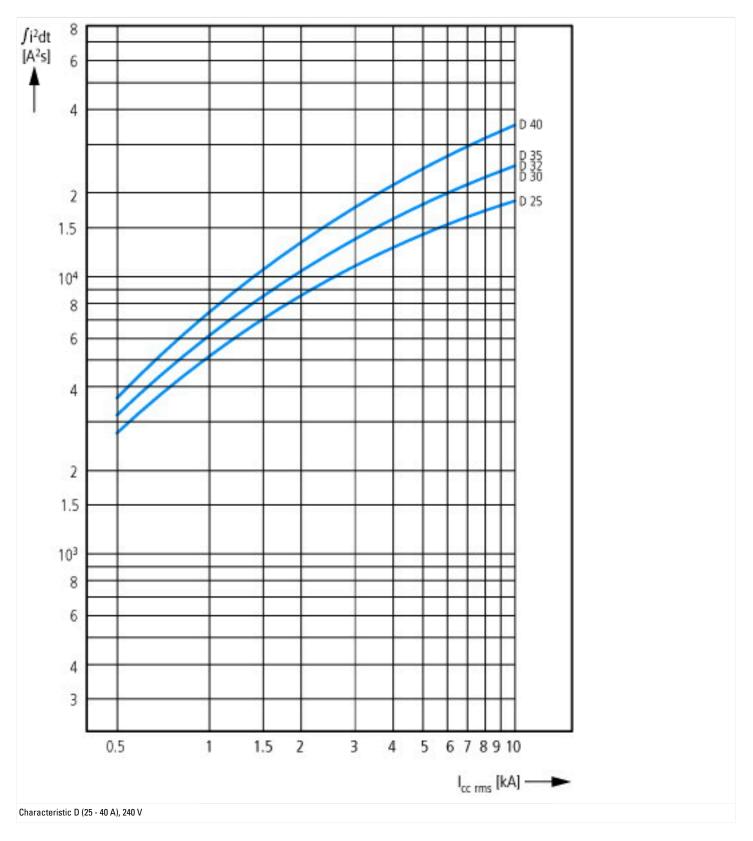
Release characteristic		D
Number of poles (total)		3
Number of protected poles		3
Rated current	А	2
Rated voltage	V	415
Rated insulation voltage Ui	V	440
Rated impulse withstand voltage Uimp	kV	4
Rated short-circuit breaking capacity Icn EN 60898 at 230 V	kA	0
Rated short-circuit breaking capacity Icn 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 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	mm²	1 - 25

Approvals

- pp: or die	
Product Standards	IEC/EN 60947-2; EN 45545-2; IEC 61373; UL 489; CSA-C22.2 No. 5-09; CE marking
UL File No.	E235139
UL Category Control No.	DIVQ
CSA File No.	204453
CSA Class No.	1432-01
North America Certification	UL listed, CSA certified
Specially designed for North America	Yes, suitable as BCPD
Suitable for	Feeder circuits, branch circuits
Current Limiting Circuit-Breaker	Yes
Max. Voltage Rating	< 32 A
Degree of Protection	IEC: IP20, UL/CSA Type: -





Additional product information (links)

Temperature dependency, derating

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