## DATASHEET - FAZ-D13/3-NA

Miniature circuit breaker (MCB), 13 A, 3p, characteristic: D



Part no. FAZ-D13/3-NA Catalog No. 102268 Alternate Catalog FAZ-D13/3-NA No. EL-Nummer 1691673 (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	In	А	13
Rated switching capacity acc. to IEC/EN 60947-2	I <sub>cu</sub>	kA	15
Product range			FAZ-NA

# Technical data

StandardsNoBig<	Electrical			
Index     Vac     7/480 Y       7/480 Y     7/480 Y       800     7/480 Y       Red voltage according to EC/EN 60947-2     0     8/000       Red switching capacity acc. to EC/EN 60947-2     Vac     8/000       Red switching capacity acc. to EC/EN 60947-2     Lu     A       Selectivity Class     Lu     Selectivity Class     8/000       Ifespan     Operations     2/000     sequired       Direction funcoming supply     June     9/000     sequired       Reladswitching capacity acc. to EC/EN 6000     Sequired     Sequired     Sequired       Reladswitching capacity     Sequired     Sequired     Sequired       Ifespan     Sequired     Sequired     Sequired       Reladswitching supply     Sequired     Sequired     Sequired       Nadard fort dimension     Sequired     Sequired     Sequired       Reladswitching for time supple     Sequired     Sequired     Sequired       Manding witching for time supple     Sequired     Sequired     Sequired       Reladswitching for tim supple     Sequired <t< td=""><td>Standards</td><td></td><td></td><td></td></t<>	Standards			
Image: second	Rated operational voltage	Ue	V	
Rete voltage according to IEC/EN 60947-2     Vancols according to UL     <		Ue	V AC	277/480 Y
Rate dvatage according to LL     VA     Ref dvatage according to LL     VA     Ref dvatage according to LL       Rate dvatching capacity acc. to EC/EN 60947-2     Leu     A     S			V DC	60
Rated switching capacity acc. to IEC/EN 60947-2 Icure IC </td <td>Rated voltage according to IEC/EN 60947-2</td> <td>Un</td> <td>V AC</td> <td>415</td>	Rated voltage according to IEC/EN 60947-2	Un	V AC	415
Characteristic   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   C   B   C	Rated voltage according to UL	Un	V AC	480Y/277
Selectivity Class Image: Selectivity Class Selecti	Rated switching capacity acc. to IEC/EN 60947-2	I <sub>cu</sub>	kA	15
Idea pain Market Pain   Idea pain Operations   Lifespan Operations   Direction of incoming supply Image: required   Mechanical Image: required   Standard front dimension Image: required   Enclosure height Image: required   Mounting width per pole Image: required   Mounting Image: required   Degree of Protection Image: required   Terminals top and bottom Image: required   Terminal protection Image: required   Tightening torque of fixing screws Image: required	Characteristic			B, C, D
Lifespan Operations >2000   Direction of incoming supply is required   Mechanical Image: Standard front dimension is required   Standard front dimension Image: Standard front dimension is required   Rotosure 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 Image: Standard front dimension Image: Standard front dimension   Mounting Image: Standard front dimension Image: Standard front dimension   Mounting Image: Standard front dimension Image: Standard front dimension   Mounting store of Protection Image: Standard front dimension Image: Standard front dimension   Terminal protection Image: Standard front dimension Image: Standard front dimension   Tightening store of fixing screws Image: Standard front dimension Image: Standard front dimension   Standard front dimension Image: Standard front dimension Image: Standard front dimension   Standard front dimension Image: Standard front dimage: Standard front dimension Image: Standard front d	Selectivity Class			3
Direction of incoming supply   is required     Mechanical     Standard front dimension   mm     Enclosure height   mm     Mounting width per pole   mm     Mounting   ISC/EN 60715 top-hat rail     Degree of Protection   Image: Pole fixing screws     Terminal protection   Image: Pole fixing screws     Tightening torque of fixing screws   N/m     Nome of fixing screws   N/m	lifespan			
Mechanical       Standard front dimension     mm     45       Enclosure height     mm     105       Mounting width per pole     mm     17.7       Mounting     Fere of Protection     Fere of Protection     Fere of Protection       Terminals top and bottom     Fere of Fixing screws     Fere of Fixing screws     Fere of Fixing screws	Lifespan	Operations		> 20000
Standard front dimensionmm45Enclosure heightmm105Mounting width per polemm17.7MountingICP (No 60715 top-hat railDegree of ProtectionICO (No 1000)Terminals top and bottomICO (No 1000)Terminal protectionICO (No 1000)Tightening torque of fixing screwsICO (No 1000)Standard fixing screwsICO (No				as required
Enclosure height   mm   15     Mounting width per pole   mm   1.7     Mounting   EC/EN 60715 top-hat rail     Degree of Protection   Ford   Ford (when fitted)     Terminals top and bottom   Ford   Ford (when fitted)     Terminal protection   Ford (when fitted)   Ford (when fitted)     Tightening torque of fixing screws   Ford (when fitted)   Ford (when fitted)     State   Ford (when fitted)   Ford (when fitted)	Mechanical			
Mounting width per polemm1.7MountingEC/EN 60715 top-hat railDegree of ProtectionF20, IP40 (when fitted)Terminals top and bottomF40 F4Terminal protectionF40 F4Tightening torque of fixing screwsF40 F4Sight and screwsSight and Sight	Standard front dimension		mm	45
Mounting EC/EN 60715 top-hat rail   Degree of Protection IP20, IP40 (when fitted)   Terminals top and bottom Image: State Stat	Enclosure height		mm	105
Degree of ProtectionIP20, IP40 (when fitted)Terminals top and bottomTwin-purpose terminalsTerminal protectionTwin-purpose terminalsTightening torque of fixing screwsN/mMarket and the screw	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   VL: #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)	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)	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 <sub>n</sub>	А	13
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	6.1
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	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 l 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)

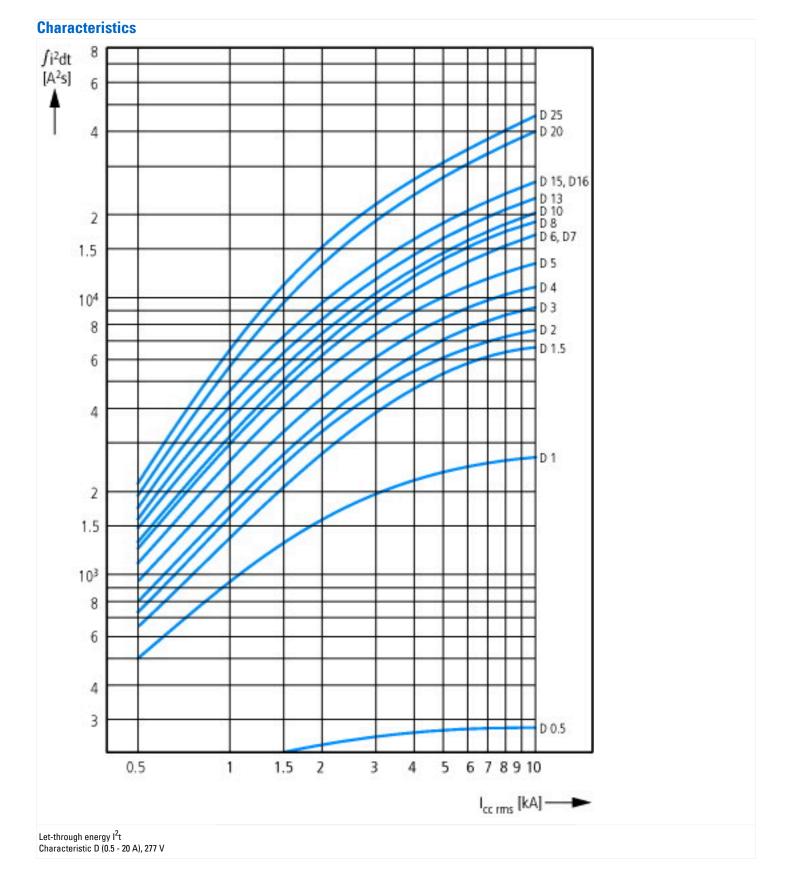
Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss10.0.1-27-14-19-01 [AAB905014])

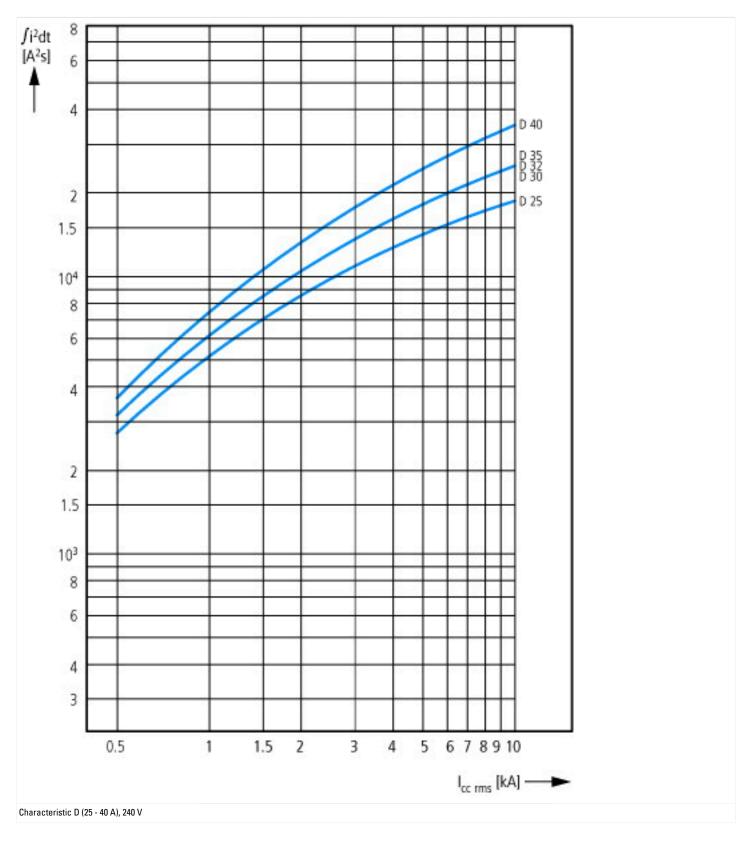
Release characteristic		D
Number of poles (total)		3
Number of protected poles		3
Rated current	А	13
Rated voltage	V	415
Rated insulation voltage Ui	V	440
Rated impulse withstand voltage Uimp	kV	4
Rated short-circuit breaking capacity Icn EN 60898 at 230 V	kA	0
Rated short-circuit breaking capacity Icn 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