### DATASHEET - FAZ-C13/2-NA

Miniature circuit breaker (MCB), 13A, 2p, C-Char, AC



Part no. FAZ-C13/2-NA Catalog No. 102168 Alternate Catalog FAZ-C13/2-NA No. EL-Nummer 0001691597 (Norway)



Similar to illustration

#### **Delivery program**

Basic function			Miniature circuit-breakers
Number of poles			2 pole
Tripping characteristic			C
Application			Switchgear for export to North America (UL-listed)
Rated current	I <sub>n</sub>	А	13
Rated switching capacity acc. to IEC/EN 60947-2	I <sub>cu</sub>	kA	15
Product range			FAZ-NA

# Technical data

StandardsNoUse<	Electrical			
Image: space of the space of	Standards			
Image: second	Rated operational voltage	U <sub>e</sub>	V	
Rate voltage according to IEC/EN 60947-2         Name         Vace         40           Rate voltage according to UL         Un         Vace         400/277           Breaking capacity acc. to IEC/EN 60947-2         Leu         Kate         10(L489)           Breaking capacity according to UL         Kate         8(.0 L089)         8(.0 L089)           Characteristic         Kate         8(.0 L089)         8(.0 L089)           Selectivity Class         Kate         9(.0 L089)         8(.0 L089)           Idespan         Develope         9(.0 L089)         8(.0 L089)           Direction of incoming supply         Mate         9(.0 Mate         9(.0 Mate           Mathematical form dimension         Mate         9(.0 Mate         9(.0 Mate           Routing width per pole         Mate         9(.0 Mate         9(.0 Mate           Moutring         Math         Scienterial         9(.0 Mate         9(.0 Mate           Routing width per pole         Math         Scienterial         9(.0 Math         9(.0 Ma		U <sub>e</sub>	V AC	277/480 Y
Reta voltage according to ULNnVAC800/277Reta desixting agacity according to ULFacFAC10 (U489)CharacteristicFAC6 (D (U489)CharacteristicFAC6 (D (U489)Selectivity ClassFAC6 (D (U489)IfespanFAC5 (D (U489)IfespanFAC6 (D (U489)Incode of the polyFAC6 (D (U489)Incode of the polyFAC5 (D (U480)Incode of the polyFAC5 (			V DC	60
Area witching capacity acc. to EEC/EN 60947-2         Icuration         Area bit according to UL         Icuration         Area bit according to UL         Icuration         Icuration <thicuration< th=""> <thicuratin accord<="" td=""><td>Rated voltage according to IEC/EN 60947-2</td><td>Un</td><td>V AC</td><td>440</td></thicuratin></thicuration<>	Rated voltage according to IEC/EN 60947-2	Un	V AC	440
Breaking capcing to UL     In UL (ABB)       Characteristic     B, C, D       Selectivity Class     B, C, D       Lifespan     Operations       Lifespan     sequire d       Direction of incoming supply     Operations       Bracharical     sequire d       Enclosure height     mm       Rounting width per pole     mm       Nounting     Monthing       Degree of Protection     FILE       Terminal protection     Max       Terminal protection     Max       Tightening torque of fixing screws     Max	Rated voltage according to UL	Un	V AC	480Y/277
Characteristic       Image: Characteristic       B, C, D         Selectivity Class       F       B, C, D         Lifespan       F       B         Direction of incoming supply       F       Selectivity Class         Direction of incoming supply       F       Selectivity Class         Mechanical       F       Selectivity Class       Selectivity Class         Standard front dimension       F       Selectivity Class       Selectivity Class         Mounting width per pole       M       Selectivity Class       Selectivity Class         Standard front dimension       F       Selectivity Class       Selectivity Class         Selectivity Class       M       Selectivity Class       Selectivity Class         Mounting width per pole       M       Selectivity Class       Selectivity Class         Segree of Protection       F       Selectivity Class       Selectivity Class       Selectivity Class         Terminal protection       F       F       Selectivity Class       Selectivity C	Rated switching capacity acc. to IEC/EN 60947-2	I <sub>cu</sub>	kA	15
Selectivity Class     Note that is a selectivity Class     Note that is a selectivity Class       Selectivity Class     Perform (Sepan)     Perform (Sepan)     > 20000       Lifespan     Operations     > 20000     as required       Direction of incoming supply     as required     Methanical       Mechanical     mm     15       Enclosure height     mm     17.7       Mounting     IEC/EN 60715 top-hat rail     IEC/EN 60715 top-hat rail       Derestion     mm     IEC/EN 60715 top-hat rail       Terminal stop and bottom     min     Finger and back-of-hand proof to BGV A2       Terminal protection     Min     Sender AWS: 2.4 Nm (25 Ib-in)       Tightening torque of fixing screws     N/m     Rax 2.4 Li: #18-12 AWS: 2.4 Nm (25 Ib-in) #6 AWS: 2.4 Nm (25 Ib-in)	Breaking capacity according to UL		kA	10 (UL489)
Inspan         Mark         <	Characteristic			B, C, D
Lifespan         Operations         > 2000           Direction of incoming supply         as required           Mechanical         sequired           Standard front dimension         Image: Sequired Sequeration Sequerati	Selectivity Class			3
Direction of incoming supply         Image         Image <th< td=""><td>lifespan</td><td></td><td></td><td></td></th<>	lifespan			
Mechanical           Standard front dimension         mm         4           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 polemm17.7MountingICE/EN 60715 top-hat railDegree of ProtectionICE/EN 60715 top-hat railTerminals top and bottomICE/EN 60715 top-hat railTerminal protectionICE/EN 60715 top-hat railTightening torque of fixing screwsICE/EN 60715 top-hat railStandard ScrewsICE/EN 60715 top-hat rail </td <td>Direction of incoming supply</td> <td></td> <td></td> <td>as required</td>	Direction of incoming supply			as required
Enclosure height       mm       15         Mounting width per pole       mm       17.7         Mounting       EC/EN 60715 top-hat rail       120.140 (when fitted)         Degree of Protection       Ferminals top and bottom       Ferminal protection       120.140 (when fitted)         Terminal protection       Ferminal protection       Ferminal protection       Finer and back-of-hand proof to BGV A2         Tightening torque of fixing screws       N/m       Max.2.4 Li: 18-12 AWG: 2.8 Nm (25 1b-in) #0.8 AWG: 2.8 Nm (25 1b-in)       Max.2.4 Mite (25 1b-in)	Mechanical			
Mounting width per polemm7.7MountingFeet BookEC/EN 60715 top-hat railDegree of ProtectionFeet BookP00 (When fitted)Terminals top and bottomFeet BookFinger and back-of-hand proof to BGV A2Terminal protectionFeet BookSinger and back-of-hand proof to BGV A2Tightening torque of fixing screwsSinger and back-of-hand proof to BGV A2	Standard front dimension		mm	45
MountingImage: Book of the second	Enclosure height		mm	105
Degree of Protection       P20, IP40 (when fitted)         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         Winner Support of Sup	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     M/m       Will     Minish       Will     Minish       #18-12 AWG: 2.4 Nm (21 lb-in)       #10-8 AWG: 2.4 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

<b></b>			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	13
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	4.7

Static heat dissipation, non-current-dependent	$P_{\nu s}$	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
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**

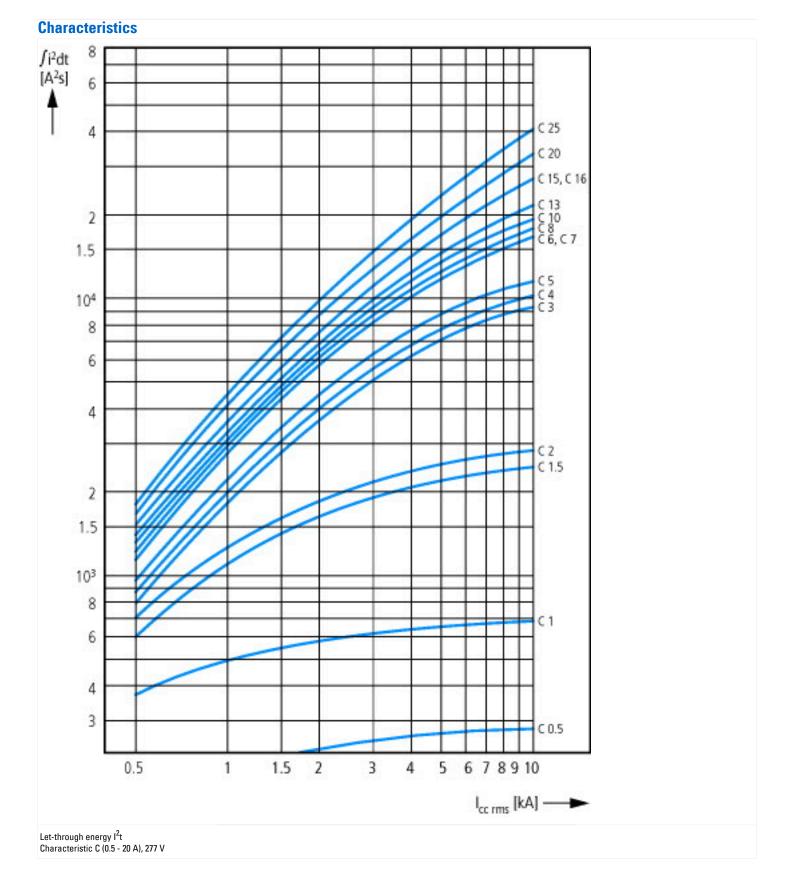
Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)

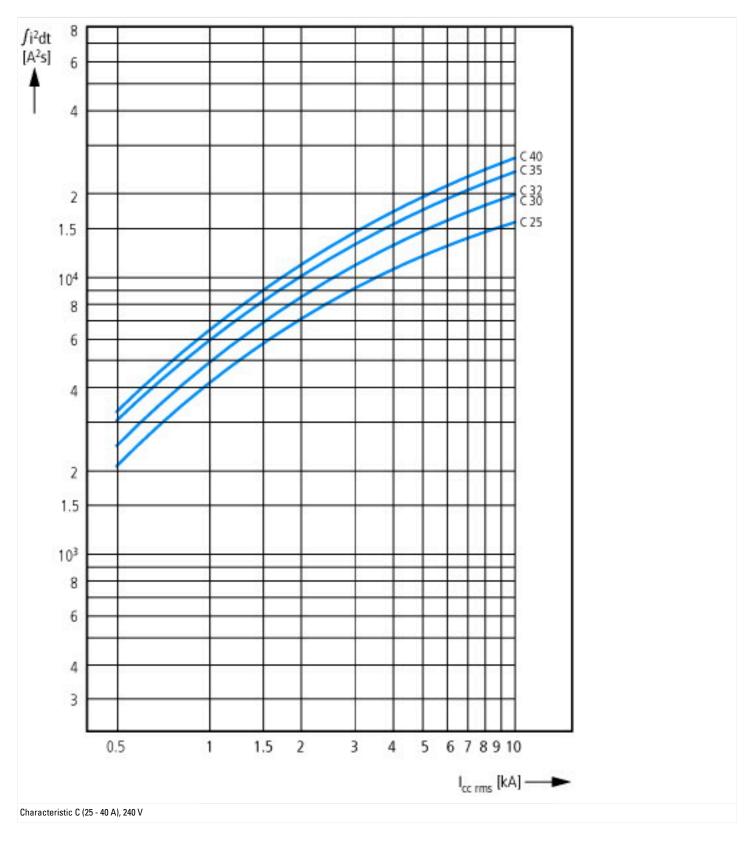
Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss10.0.1-27-14-19-01 [AAB905014])

Release characteristic		C
Number of poles (total)		2
Number of protected poles		2
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		2
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

Approvals	
Product Standards	IEC/EN 60947-2; 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