DATASHEET - FAZ-D4/2-NA

Part no. Catalog No.

EL-Nummer

(Norway)

No.

Alternate Catalog

Miniature circuit breaker (MCB), 4 A, 2p, characteristic: D

FAZ-D4/2-NA

FAZ-D4/2-NA

102182

1691647



Similar to illustration

Delivery program

Basic function			Miniature circuit-breakers
Number of poles			2 pole
Tripping characteristic			D
Application			Switchgear for export to North America (UL-listed)
Rated current	In	А	4
Rated switching capacity acc. to IEC/EN 60947-2	I _{cu}	kA	15
Product range			FAZ-NA

Technical data

Rated operational voltage U IC 60947-2 Rated operational voltage U V Image: Image	Electrical			
u v VAC 7/480 Y 7/480 Y 0 0 Rated voltage according to EC/EN 60947-2 Un VAC 40/277 Rated voltage according to IEC/EN 60947-2 Un VAC 80/277 Solectivity Class Lu KAC 5.0 Solectivity Class Sole Sole Sole Ifrespan Operations Sole Sole Sole Nethenical Sole Sole Sole Sole Reclassivithing capacity acc. to IEC/EN 60947-2 Sole	Standards			
Vice ProblemVice ProblemProblemRede voltage according to LEC/EN 60947-2VaVaVaAred switching capacity acc. to EC/EN 60947-2VaKa5CharacteristicVaKa6, 0Selectivity ClassicVaManual Manual Manu	Rated operational voltage	Ue	V	
Rate voltage according to IEC/EN 60947-2 Un VAC Mache voltage according to UL Un Mache voltage according to UL Mache voltage		Ue	V AC	277/480 Y
Arite of UL Un VAC 480//277 Rated voltage accity acc. to IEC/EN 60947-2 Icu KA 15 Characteristic B.C.D B.C.D B.C.D Selectivity Class B.C.D B.C.D B.C.D Iffespan Operations B.C.D B.C.D Direction of incoming suply B.C.D B.C.D B.C.D Mechanical Selectivity Class B.C.D B.C.D Direction of incoming suply B.C.D B.C.D B.C.D Mouting width per pole M Selectivity Class B.C.D Mounting width per pole M M Selectivity Class Degree of Protection FEG// B0715 top-hat rail FEG// B0715 top-hat rail Terminal protection FEG// B0715 top-hat rail FEG// B0715 top-hat rail Terminal protection FEG// B0715 top-hat rail FEG// B0715 top-hat rail Terminal protection FEG// B0715 top-hat rail FEG// B0716 top-hat rail Terminal protection FEG// B0715 top-hat rail FEG// B0716 top-hat rail Terminal protection FEG/			V DC	60
Rated switching capacity acc. to IEC/EN 60947-2 Icu KA 15 Characteristic B, C, D 5 Selectivity Class G 5 Lifespan Operation - - Direction of incoming supply Operation - - Mechanical - - - Eclosure height Monting M 15 Noutring width per pole M 15 Degree of Protection ICU ICU ICU Terminal protection - M 15 Tightning screws - M 15 Tightning screws - M 15	Rated voltage according to IEC/EN 60947-2	Un	V AC	415
Characteristic BC, D Selectivity Class BC, D Selectivity Class Selectivity Class Lifespan Operations > 2000 Direction of incoming supply Perate serequired Direction of incoming supply Perate serequired Mechanical Total Selectivity Class Selectivity Class Standard front dimension Monting Selectivity Class	Rated voltage according to UL	Un	V AC	480Y/277
Selectivity Class Addition of the second secon	Rated switching capacity acc. to IEC/EN 60947-2	l _{cu}	kA	15
Ifespan Operations >20000 Direction of incoming supply as required Mechanical strequired Standard front dimension mm 5 Enclosure height 05 mm Mounting width per pole mm 17.7 Mounting For Enclosure height For Enclosure height Degree of Protection For Enclosure height For Enclosure height Terminals top and bottom For Enclosure height For Enclosure height Terminals tor que of fixing screws For Enclosure height For Enclosure height Tightening torque of fixing screws For Enclosure height For Enclosure height	Characteristic			B, C, D
Lifespan Operations >2000 Direction of incoming supply as required Mechanical Image: Standard front dimension s required Standard front dimension mm 5 Enclosure height mm 105 Mounting width per pole mm 17.7 Mounting EC/EN 60715 to-hat rail EC/EN 60715 to-hat rail Terminal stop and bottom Image: Stop and back-of-hand proof to BGV A2 Figer and back-of-hand proof to BGV A2 Tightening torque of fixing screws N/m max. 24 Lise 34 Nm (21 lb-in) Standard for the screws N/m Standard Screws Standard Screws	Selectivity Class			3
Direction of incoming supply Methanical Mechanical mm 45 Standard front dimension mm 105 Enclosure height mm 1.7 Mounting width per pole Methanical 162/FM 60715 top-hat rail Degree of Protection Mounting 120, IP40 (when fitted) Terminals top and bottom Mounting width per pole IP20, IP40 (when fitted) Terminal protection mm fmgr and back-of-hand proof to BGV A2 Tightening torque of fixing screws Min mmx 2.4 UL: #18-12 AWG: 2.4 Nm (25 Ib-in) #0.4WG: 4 Nm (36 Ib-in)	lifespan			
Mechanical Magnetic and a stream of the stream	Lifespan	Operations		> 20000
Standard front dimensionImm5Enclosure heightmm105Mounting width per polemm17.7MountingEC/EN 60715 top-hat railDegree of ProtectionPO2, IP40 (when fitted)Terminals top and bottomFOEFoe poleTerminal protectionFoe poleFoe poleTerminal protectionFoe poleFoe poleTightening torque of fixing screwsStandard foe poleStandard foe poleTightening torque of fixing screwsStandard foe poleStan	Direction of incoming supply			as required
Enclosure height mm 15 Mounting width per pole mm 17.7 Mounting IEC/EN 60715 top-hat rail IEC/EN 60715 top-hat rail Degree of Protection Imm IEC/EN 60715 top-hat rail Terminals top and bottom Imm Imm Imm Terminal protection Imm Imm Imm Tightening torque of fixing screws Imm Imm Imm N/m Imm Imm Imm Imm N/m Imm Imm Imm Imm Imm Imm Imm Imm Imm	Mechanical			
Mounting width per polemm17.7MountingIEC/EN 60715 top-hat railDegree of ProtectionIEC/EN 60715 top-hat railTerminals top and bottomIEC/EN 60715 top-hat railTerminal protectionIEC/EN 60715 top-hat railTightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof to BGV A2Tightening torque of fixing screwsIEC/EN 60715 top-hat proof top-	Standard front dimension		mm	45
Mounting Image: Book of Protection IEC/EN 60715 top-hat rail Degree of Protection Image: Book of Protection IP20, IP40 (when fitted) Terminals top and bottom Image: Book of Protection Twin-purpose terminals Terminal protection Image: Book of Protection Finger and back-of-hand proof to BGV A2 Tightening torque of fixing screws Image: Book of Protection Maxe: 2.4 UL: #18-12 AWG: 2.8 Nm (25 Ib-in) #0-8 AWG: 2.8 Nm (25 Ib-in)	Enclosure height		mm	105
Degree of Protection IP20, 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 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)	Mounting width per pole		mm	17.7
Terminals top and bottom Image: Comparison of the second	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	In	А	4
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	2.9
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
C/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 b observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must b 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)

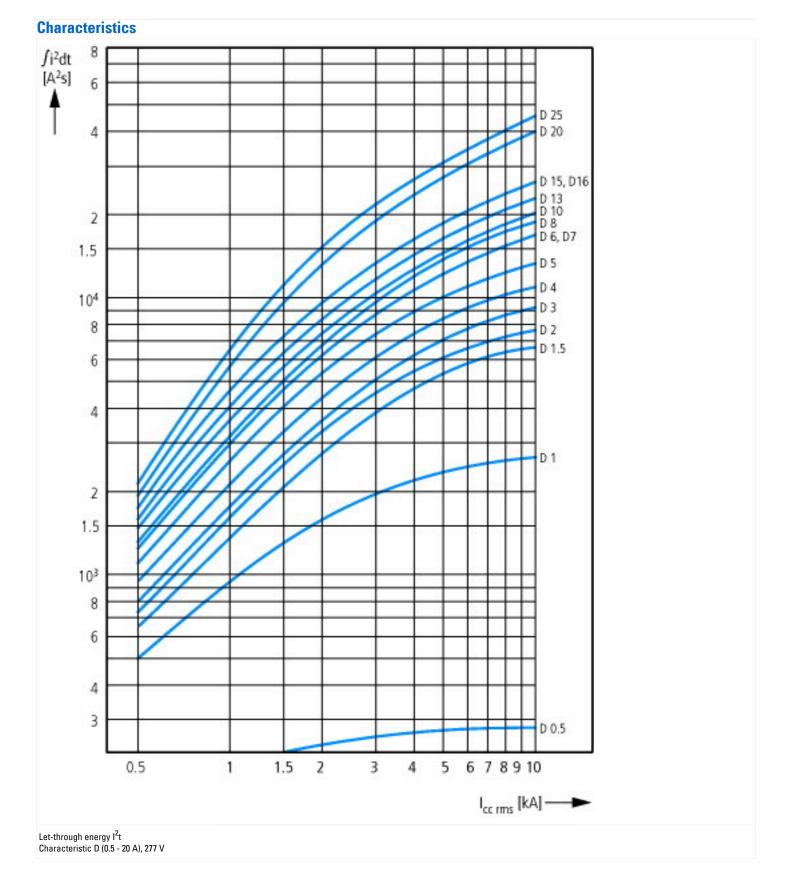
Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss10.0.1-27-14-19-01 [AAB905014])

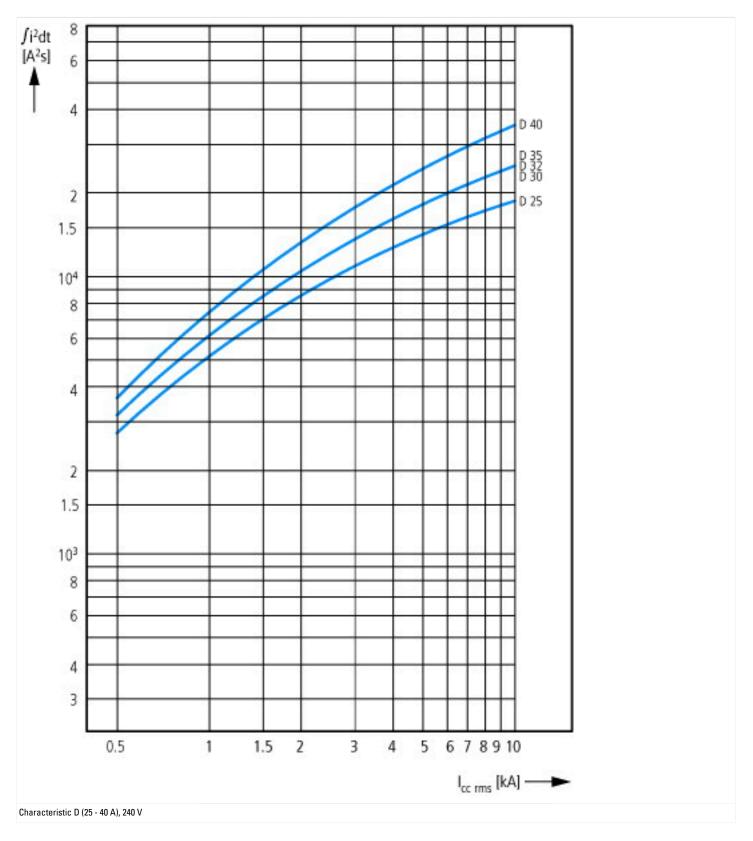
Release characteristic		D
Number of poles (total)		2
Number of protected poles		2
Rated current	А	4
Rated voltage	v	415
Rated insulation voltage Ui	V	440
Rated impulse withstand voltage Uimp	kV	4
Rated short-circuit breaking capacity Icn EN 60898 at 230 V	kA	0
Rated short-circuit breaking capacity Icn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

Approvals

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