DATASHEET - FBHMV-125/4/1



Residual-current circuit breaker trip block for AZ, 125A, 4p, 1000mA, type AC $\,$



Part no. FBHMV-125/4/1 Catalog No. 170256 Alternate Catalog FBHMV-125/4/1

No.

110	livery	F 100 100	~~~	122
112	IIVEL	V 111		

Delivery program			
Basic function			Add-on residual current protection unit
Number of poles			4 pole
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	Α	125
Rated short-circuit strength	I _{cn}	kA	same as connected AZ
Rated fault current	$I_{\Delta N}$	Α	1
Туре			Type AC
Tripping		s	non-delayed
Product range			FBHmV
Sensitivity			AC current sensitive
Impulse withstand current			Partly surge-proof 250 A
Contact sequence			1' 3' 5' 7'/N 13 1 2' 4' 6' 8'/N 14

Technical data

Electrical

Rated frequency	f	Hz	50
Sensitivity			AC current sensitive
Rated current	In	Α	125
Rated impulse withstand voltage	U_{imp}	kV	4
lifespan			
Electrical	Operations		≧ 1000
Mechanical	Operations		≧ 8000
Mechanical			
Standard front dimension		mm	45

Device height		mm	90
Built-in width		mm	95 (5.5TE)
Mounting			screwed on

Mounting screwed onto AZ 2-, 3-, 4-pole; Z-BHASA

Degree of Protection IP40, IP54 (with moisture-proof enclosure)

Terminals top and bottom

Lift terminals

Terminal protection

DGUV VS3, EN 50274

Permissible storage and transport temperatures

°C -35 - +60

Climatic proofing 25-55°C/90-95% relative humidity according to IEC 60068-2

Design verification as per IEC/EN 61439

•			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	125
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	39.7
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	40

	Starting at 40 $^{\circ}\text{C}$, the max. permissible continuous current decreases by 3% for every 1 $^{\circ}\text{C}$
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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
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) / Residual current circuit breaker (RCCB) (EC000003)

Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB) (ecl@ss10.0.1-27-14-22-01 [AAB906014])

Rated voltage V 415 Rated current A 125 Rated fault current mA 1000 Rated insulation voltage Ui V 440 Rated impulse withstand voltage Uimp kV 4 Mounting method Leakage current type AC No Selective protection No No Short-time delayed tripping KA 0 Short-circuit breaking capacity (lcw) KA 0 Surge current capacity KA 0.25 Frequency Ves 50 Hz Additional equipment possible Yes With interlocking device Yes With in terporation (IP) IP20 IP20 Width in number of modular spacings IP20 IP20 Mother temperature during operating "C 25 - 40 Pollution degree 25 - 40 25 - 40 Connectable conductor cross section multi-wired mm² 25 - 50	(ecl@ss10.0.1-27-14-22-01 [AAB906014])		
Rated current A 125 Rated fault current mA 1000 Rated insulation voltage Ui V 440 Rated impulse withstand voltage Uimp kV 4 Mounting method Leakage current type AC Selective protection No No Short-time delayed tripping No No Short-circuit breaking capacity (lcw) kA 0 Surge current capacity kA 0.25 Frequency 50 Hz Additional equipment possible Yes With interlocking device Yes Degree of protection (IP) IP20 Width in number of modular spacings 5.5 Built-in depth mm 70 Ambient temperature during operating °C -25 - 40 Pollution degree 2 -25 - 40 Connectable conductor cross section multi-wired mm² 2.5 - 50	Number of poles		4
Rated fault current mA 1000 Rated insulation voltage Ui V 440 Rated impulse withstand voltage Uimp kV 4 Mounting method DIN rail Leakage current type AC No Selective protection No No Short-time delayed tripping KA 0 Short-circuit breaking capacity (Icw) KA 0.25 Surge current capacity KA 0.25 Frequency KA 0.25 Additional equipment possible Yes Yes With interlocking device Yes Percentage of protection (IP) IP20 Width in number of modular spacings Feet 5.5 Built-in depth 70 Ambient temperature during operating °C -25 - 40 -25 - 40 Pollution degree 2 -25 - 50 Connectable conductor cross section multi-wired mm² 25 - 50	Rated voltage	V	415
Rated insulation voltage Ui Rated impulse withstand voltage Uimp Mounting method Leakage current type Selective protection Selective protection Short-time delayed tripping Short-circuit breaking capacity (lcw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired V 4 AC AC No No Short-circuit breaking capacity (lcw) kA 0 25 WE 90 1P20 1P20 Connectable conductor cross section multi-wired Nm 70 Connectable conductor cross section multi-wired Nm² 25-50	Rated current	А	125
Rated impulse withstand voltage Uimp Mounting method Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired With interlocking degree Connectable conductor cross section multi-wired With interlocking degree Connectable conductor cross section multi-wired With interlocking degree Rate AC No No No Selective yes Ves Yes Yes IP20 IP20	Rated fault current	mA	1000
Mounting method Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (lcw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Mo DIN rail AC No No No No Surge Current capacity KA 0.25 50 Hz Ves Ves Ves Ves Ves UP20 Solution 1P20 Width in number of modular spacings Built-in depth Ambient temperature during operating "C" -25 - 40 Cnnectable conductor cross section multi-wired mm² 2.5 - 50	Rated insulation voltage Ui	V	440
Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired AC No No No AC No No E No No No No No No E No No	Rated impulse withstand voltage Uimp	kV	4
Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired No No No No No No No No No E No	Mounting method		DIN rail
Short-time delayed tripping Short-circuit breaking capacity (lcw) Surge current capacity Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired No No No 1 1 1 1 1 1 1 1 1 1 1 1 1	Leakage current type		AC
Short-circuit breaking capacity (Icw) Surge current capacity KA 0.25 Frequency Additional equipment possible With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth mm 70 Ambient temperature during operating Connectable conductor cross section multi-wired KA 0.25 50 Hz Yes Yes Yes 1P20 70 25-40 25-50	Selective protection		No
Surge current capacity kA 0.25 Frequency 50 Hz Additional equipment possible With interlocking device Ves Degree of protection (IP) Width in number of modular spacings Built-in depth mm 70 Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired kA 0.25 Yes Yes Yes 120 25-50	Short-time delayed tripping		No
Frequency Additional equipment possible Yes With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired 50 Hz Yes Yes Yes Yes Yes Degree of protection (IP) Polo Polo Polo Polo Polo Polo Polo Po	Short-circuit breaking capacity (Icw)	kA	0
Additional equipment possible With interlocking device Ves Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired Yes Yes Yes Yes Yes 1P20 70 70 25 - 40 20 Connectable conductor cross section multi-wired mm² 2.5 - 50	Surge current capacity	kA	0.25
With interlocking device Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Connectable conductor cross section multi-wired Yes IP20 5.5 5.5 2.5 4.0 2.5 - 50	Frequency		50 Hz
Degree of protection (IP) Width in number of modular spacings Built-in depth Ambient temperature during operating Pollution degree Connectable conductor cross section multi-wired IP20 IP20 5.5 Connectable conductor cross section multi-wired IP20 Connectable conductor cross section multi-wired	Additional equipment possible		Yes
Width in number of modular spacings 5.5 Built-in depth mm 70 Ambient temperature during operating °C -25 - 40 Pollution degree 2 Connectable conductor cross section multi-wired mm² 2.5 - 50	With interlocking device		Yes
Built-in depth mm 70 Ambient temperature during operating °C -25 - 40 Pollution degree 2 Connectable conductor cross section multi-wired mm² 2.5 - 50	Degree of protection (IP)		IP20
Ambient temperature during operating °C -25 - 40 Pollution degree 2 Connectable conductor cross section multi-wired mm² 2.5 - 50	Width in number of modular spacings		5.5
Pollution degree 2 Connectable conductor cross section multi-wired mm² 2.5 - 50	Built-in depth	mm	70
Connectable conductor cross section multi-wired mm ² 2.5 - 50	Ambient temperature during operating	°C	-25 - 40
	Pollution degree		2
Connectable conductor cross section solid-core mm ² 2.5 - 50	Connectable conductor cross section multi-wired	mm²	2.5 - 50
	Connectable conductor cross section solid-core	mm²	2.5 - 50

Dimensions

