### DATASHEET - FBHMV-125/4/1



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



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

#### **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	А	125
Rated short-circuit strength	I <sub>cn</sub>	kA	same as connected AZ
Rated fault current	$I_{\Delta N}$	А	1
Туре			Туре АС
Tripping		s	non-delayed
Product range			FBHmV
Sensitivity			AC current sensitive
Impulse withstand current			Partly surge-proof 250 A
Contact sequence			

# **Technical data**

Electrical			
Types conform to			IEC/EN 60947-2
Rated frequency	f	Hz	50
Sensitivity			AC current sensitive
Rated current	In	Α	125
Rated impulse withstand voltage	U <sub>imp</sub>	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 onto AZ 2-, 3-, 4-pole; Z-BHASA
Degree of Protection			IP20, IP40 with suitable 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	I <sub>n</sub>	А	125
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	39.7
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	40
		Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C
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) / 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])

Number of poles     I     I       Rated voltage     V     IS       Rated current     IS     IS       Rated fault current     MA     IOU       Rated insulation voltage Ui     V     IA       Rated insulation voltage Uimp     V     IN       Mouting method     V     IN       Leakage current type     IN     IN       Solective protection     IN     No       Short-time delayed tripping     V     No       Store current type     KA     IN       Suge current capacity (Icw)     KA     IN       Additional equipment possible     IM     IS       Additional equipment possible     IM     IS	
Rated current     A     125       Rated fault current     MA     1000       Rated insulation voltage Ui     V     400       Rated insulation voltage Uinp     KV     400       Mounting method     KV     400       Leakage current type     MO     MOUNDERCONSTRUCTION       Selective protection     MO     MOUNDERCONSTRUCTION       Short-time delayed tripping     MA     MOUNDERCONSTRUCTION       Surge current capacity (Icw)     KA     0       Surge current possible     MA     Selective protection       Surge current capacity (Icw)     KA     0       Surge current capacity (Icw)     KA     Selective protection       Surge current capacity (Icw)     KA     Selective protective p	
Rated fault current     mA     000       Rated insulation voltage Ui     V     440       Rated inpulse withstand voltage Uimp     KV     4       Mounting method     KV     4       Leakage current type     IN rail     C       Selective protection     Mounting method     No       Short-time delayed tripping     Mounting method     No       Stort-circuit breaking capacity (Icw)     KA     0       Surge current capacity     KA     0       Frequency     KA     0       Additional equipment possible     KA     So Hz       With interlocking device     KI     Yes	
Rated insulation voltage Uinp     V     440       Rated insulation voltage Uinp     KV     40       Mounting method     KV     40       Mounting method     IN rail     IN rail       Leakage current type     Mo     Mounting method       Selective protection     Mounting method     No       Short-time delayed tripping     Mounting method     No       Short-circuit breaking capacity (Icw)     KA     0       Surge current capacity     KA     0.25       Frequency     So Hz     Sold       Additional equipment possible     Y     Y       With interlocking device     Y     Y	
Rated impulse withstand voltage Uimp     KV     4       Mounting method     IN rail       Leakage current type     IN rail       Selective protection     IM     KV       Short-time delayed tripping     IM     KA       Short-circuit breaking capacity (Icw)     IM     IM       Frequency     IM     IM       Additional equipment possible     IM     IM       With interlocking device     IM     IM	
Mounting method     DIN rail       Leakage current type     AC       Selective protection     No       Short-time delayed tripping     No       Short-circuit breaking capacity (Icw)     KA       Surge current capacity     KA       Frequency     So Hz       Additional equipment possible     Yes	
Leakage current typeACSelective protectionNoShort-time delayed trippingNoShort-circuit breaking capacity (Icw)KASurge current capacityKAFrequencySoAdditional equipment possibleSoWith interlocking deviceSo	
Selective protection   No     Short-time delayed tripping   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	
Short-time delayed tripping   No     Short-circuit breaking capacity (Icw)   KA   0     Surge current capacity   KA   0.25     Frequency   Sold   Sold     Additional equipment possible   Yes   Yes	
Short-circuit breaking capacity (Icw)kA0Surge current capacitykA0.25Frequency50 HzAdditional equipment possibleYesWith interlocking deviceYes	
Surge current capacity   kA   0.25     Frequency   50 Hz     Additional equipment possible   Yes     With interlocking device   Yes	
Frequency   50 Hz     Additional equipment possible   Yes     With interlocking device   10 Yes	
Additional equipment possible   Yes     With interlocking device   Yes	
With interlocking device Yes	
Degree of protection (IP)	
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   mm <sup>2</sup> 2.5 - 50	

#### **Dimensions**

