# DATASHEET - FBHMV-80/2/03-A



Residual-current circuit breaker trip block for AZ, 80A, 2p, 300mA, type A



Powering Business Worldwide

FBHMV-80/2/03-A Part no. Catalog No. 170259

Alternate Catalog FBHMV-80/2/03-A

Similar to illustration

**Delivery program** 

Delivery program			
Basic function			Add-on residual current protection unit
Number of poles			2 pole
Application			Switchgear for industrial and advanced commercial applications
Rated current	In	Α	80
Rated short-circuit strength	I <sub>cn</sub>	kA	same as connected AZ
Rated fault current	$I_{\Delta N}$	Α	0.3
Туре			Type A
Tripping		s	non-delayed
Product range			FBHmV
Sensitivity			Pulse-current sensitive
Impulse withstand current			Partly surge-proof 250 A
Contact sequence			1 3/N 13 T 2' 4/N 14

### **Technical data**

### **Electrical**

Rated frequency	f	Hz	50
Sensitivity			Pulse-current sensitive
Rated current	In	Α	80
Rated impulse withstand voltage	$U_{\text{imp}}$	kV	4
lifespan			
Electrical	Operations		≧ 1500
Mechanical	Operations		≧ 10000
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		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

Fechnical data for design verification			
Rated operational current for specified heat dissipation	In	Α	80
Heat dissipation per pole, current-dependent	$P_{\text{vid}}$	W	0
Equipment heat dissipation, current-dependent	$P_{vid}$	W	4.7
Static heat dissipation, non-current-dependent	$P_{vs}$	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
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) / 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 Rated voltage V 240 Rated current A 80 Rated fault current Rated insulation voltage Ui Rated impulse withstand voltage Uimp  Mounting method Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible With interlocking device V 240  A 80  A 90	(ecl@ss10.0.1-27-14-22-01 [AAB906014])		
Rated current Rated fault current Rated insulation voltage Ui Rated impulse withstand voltage Uimp Ruthod Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible  A 80  80  80  80  80  80  80  80  80  80	Number of poles		2
Rated fault current Rated insulation voltage Ui Rated insulation voltage Uimp  KV 440  Mounting method Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw)  Surge current capacity Frequency Additional equipment possible  mA 300  V 440  A  4   DIN rail  No  No  No  No  Sobott-circuit brail No  Surge current capacity Frequency Additional equipment possible  mA 300  V 440  Add   40  DIN rail  A   0  Surge current capacity A  0  Surge current capacity Frequency Additional equipment possible	Rated voltage	V	240
Rated insulation voltage Ui Rated impulse withstand voltage Uimp  Mounting method Leakage current type A Selective protection Short-time delayed tripping Short-circuit breaking capacity (Icw) Surge current capacity Frequency Additional equipment possible  V 440  440  A  DIN rail  A  0  No  No  Short-circuit breaking capacity (Icw)  KA 0  50 Hz  Yes	Rated current	А	80
Rated impulse withstand voltage Uimp  kV 4  Mounting method  Leakage current type  Selective protection  Short-time delayed tripping  No  Short-circuit breaking capacity (Icw)  Surge current capacity  Frequency  Additional equipment possible  kV 4  DIN rail  A  0  A  0  Surge current type  kA 0  50  The Company of the C	Rated fault current	mA	300
Mounting method  Leakage current type  A  Selective protection  No  Short-time delayed tripping  No  Short-circuit breaking capacity (Icw)  Surge current capacity  KA  0.25  Frequency  Additional equipment possible  DIN rail  A  A  A  A  A  A  Po  Surge current type  AA  D  Surge current capacity  Frequency  Additional equipment possible	Rated insulation voltage Ui	V	440
Leakage current type  Selective protection  No  Short-time delayed tripping  No  Short-circuit breaking capacity (Icw)  Surge current capacity  KA  0.25  Frequency  Additional equipment possible  A  A  A  A  A  A  A  A  A  A  A  A  A	Rated impulse withstand voltage Uimp	kV	4
Selective protection No Short-time delayed tripping No Short-circuit breaking capacity (Icw) kA 0 Surge current capacity kA 0.25 Frequency 50 Hz Additional equipment possible Yes	Mounting method		DIN rail
Short-time delayed tripping  No Short-circuit breaking capacity (Icw)  KA  0 Surge current capacity  KA  0.25  Frequency  Frequency  Additional equipment possible  No  VA  VA  VA  VA  VA  VES	Leakage current type		A
Short-circuit breaking capacity (Icw) kA 0 Surge current capacity kA 0.25 Frequency 50 Hz Additional equipment possible Yes	Selective protection		No
Surge current capacity kA 0.25 Frequency 50 Hz Additional equipment possible Yes	Short-time delayed tripping		No
Frequency 50 Hz Additional equipment possible Yes	Short-circuit breaking capacity (Icw)	kA	0
Additional equipment possible  Yes	Surge current capacity	kA	0.25
	Frequency		50 Hz
With interlocking device Yes	Additional equipment possible		Yes
	With interlocking device		Yes
Degree of protection (IP)	Degree of protection (IP)		IP20
Width in number of modular spacings 5.5	Width in number of modular spacings		5.5
Built-in depth mm 70	Built-in depth	mm	70
Ambient temperature during operating °C -25 - 40	Ambient temperature during operating	°C	-25 - 40
Pollution degree 2	Pollution degree		2
Connectable conductor cross section multi-wired mm <sup>2</sup> 2.5 - 50	Connectable conductor cross section multi-wired	mm²	2.5 - 50
Connectable conductor cross section solid-core mm <sup>2</sup> 2.5 - 50	Connectable conductor cross section solid-core	mm²	2.5 - 50

# **Dimensions**

