DATASHEET - FBSMV-40/3/03-S/A



Residual-current circuit breaker trip block for FAZ, 40A, 3p, 300mA, type S/A



Part no.FBSMV-40/3/03-S/ACatalog No.170164Alternate CatalogFBSMV-40/3/03-S/ANo.No.

Similar to illustration

Delivery program

Basic function			Add-on residual current protection unit
Number of poles			3 pole
Application			Switchgear for industrial and advanced commercial applications
Rated current	I _n	А	40
Rated short-circuit strength	I _{cn}	kA	same as connected FAZ up to max. 10
Rated fault current	$I_{\Delta N}$	А	0.3
Туре			Type S/A
Tripping		s	selective switch off
Product range			FBSmV
Sensitivity			AC and pulsating DC current sensitive
Impulse withstand current			surge-proof 5 kA
Contact sequence			

Technical data

Electrical			
Rated frequency	f	Hz	50
Sensitivity			AC and pulsating DC current sensitive
Rated current	l _n	А	40
Mechanical			
Standard front dimension		mm	45
Device height		mm	90
Built-in width		mm	107.5 (3TE)
Mounting			Permanent screw connection with FAZ
Degree of Protection			IP20, IP40 with suitable enclosure
Terminals top and bottom			Lift terminals
Terminal protection			DGUV VS3, EN 50274
Thickness of busbar material		mm	0.8 - 2
Admissible ambient temperature range		°C	-25 - +40
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 _n	А	40
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	20
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 °C, the max, permissible continuous current decreases by 3% for

Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C

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 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)

ledeastb.0.1-27-14-22-01 [AAB906014] Number of poles Rated outage Rated outage Rated outage Career of the set of the				
Aread voltage V 15 Rated voltage 0 0 Rated voltage Uiron mA 00 Rated insulation voltage Uiron V 40 Rated insulation voltage Uiron KV 40 Mounting method V 10 Leakage current type V 40 Selective protection V 10 Short-tircuit breaking capacity (Lew) KA 0 Suge current capacity (Lew) KA 0 Suge current capacity (Lew) KA 0 Suge current possible KA 0 Muit interlocking device Fequency Selective protection (IP) With interlocking device Fequency Fequency Built-in depth Mont 10 Muit in number of modular spacings Imm 0 Built-in depth Fequency 2 Anbient temperature during operating Imm 0 Built-in depth Imm 0 Anbient temperature during operating Imm 0	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 current Amembed of the second of the sec	Number of poles		3	
Rated MA Max Bated fault current mA 30 Rated insulation voltage Uimp 40 Bated insulation voltage Uimp MA Mounting method KV 4 Leakage current type DIN rail Selective protection KA Feadomouting comparison Short-tircuit breaking capacity (Icw) KA 0 Surge current capacity KA 0 Streage of protection (IP) KA 5 With in number of modular spacings Man 10 Built-in depth Man 10 Ambient temperature during operating C 6 Pollution degree C 5 6 Rated fault current C 5 6 Subject for protection (IP) Man 10 10 Rubient temperature during operating Man 7 10 Rubient temperature during operating C 5 6 Pollution degree C 5 6 10 Rubient temperature during operating C 5 6 10 10 </td <td>Rated voltage</td> <td>V</td> <td>415</td>	Rated voltage	V	415	
Rated insultation voltage Uimp V 40 Rated insulse withstand voltage Uimp KV 40 Mounting method KV 101 rail Leakage current type IN rail 101 rail Selective protection KV 40 Short-time delayed tripping KV 40 Short-time delayed tripping KA 101 rail Stort-circuit breaking capacity (Icw) KA 0 Surge current capacity KA 50 Frequency KA 50 Additional equipment possible SI SI With interdocking device Feed SI Built-in depth Mom 120 Muintin number of modular spacings Mom 50 Built-in depth Mom 50 Anbient temperature during operating C SI Pollution degree SI SI Pollution degree	Rated current	А	40	
Rated impulse withstand voltage Uimp KV A Mounting method DIN rail Leakage current type A A Selective protection G KV K Short-time delayed tripping G KA No Short-circuit breaking capacity (Icw) KA G Sole Surge current capacity KA Sole Sole Frequency KA Sole Sole Additional equipment possible Sole Sole Sole Uith interlocking device Sole Sole Sole Sole Built-in depth C Sole	Rated fault current	mA	300	
Mounting method Mounting method IN rail Leakage current type A A Selective protection Ves No Short-time delayed tripping No No Short-time delayed tripping Make B Short-time delayed tripping Make B Stort-circuit breaking capacity (low) KA B Stort-circuit breaking capacity (low) KA B Additional equipment possible S S Kith interlocking device Yes S Built-in depth mm F Anbient temperature during operating mm S Pollution degree C S Pollution degree mm S	Rated insulation voltage Ui	V	440	
Leakage current type Selective protection Short-time delayed tripping Short-circuit breaking capacity (lcw) Short-circuit breaking capacity (lcw) Suge current capacity (l	Rated impulse withstand voltage Uimp	kV	4	
Additional equipment possible Main Main Bogree of protection (IP) Image:	Mounting method		DIN rail	
Short-time delayed tripping Image: Constraint of the second sec	Leakage current type		Α	
Short-circuit breaking capacity (lcw) KA 0 Surge current capacity KA 5 Frequency 50 Hz 50 Hz Additional equipment possible Yes 100 Hz Degree of protection (IP) 100 Hz 100 Hz With in number of modular spacings 100 Hz 100 Hz Built-in depth mm 70 Additional equipment possible 25 40 Pollution degree mm 20 Hz 20 Hz Pollution degree mm 100 Hz 100 Hz Pollution degree <td< td=""><td>Selective protection</td><td></td><td>Yes</td></td<>	Selective protection		Yes	
Surge current capacity KA 5 Frequency 50 Hz Additional equipment possible Yes With interlocking device Yes Degree of protection (IP) Image: Section with interlocking device With in number of modular spacings Image: Section with interlocking device Anditional equipment possible Image: Section with interlocking device Polytic in number of modular spacings Image: Section with interlocking device Polytic in depth Image: Section with interlocking device Ambient temperature during operating Image: Section with interlocking device Pollution degree Image: Section with interlocking device Image: Section with interlocking device Image: Section with interlocking device	Short-time delayed tripping		No	
Frequency 50 Hz Additional equipment possible 50 Hz With interlocking device 50 Hz Degree of protection (IP) 6 With in number of modular spacings 6 Built-in depth mm Ambient temperature during operating 6 Pollution degree 6 Quitter of modular space 6 Mither temperature during operating 6 Pollution degree 6 Manieret temperature during operating 6 Pollution degree 6 Manieret temperature during operating 6 Pollution degree 6 Manieret temperature during operating 6 Pollution degree 7 Pollution degree 7	Short-circuit breaking capacity (Icw)	kA	0	
Additional equipment possible Yes With interlocking device Yes Degree of protection (IP) Image: Comparison of modular spacings Width in number of modular spacings Image: Comparison of modular spacings Built-in depth Image: Comparison of modular spacings Anbient temperature during operating Image: Comparison of modular space of protection nulti-wired Pollution degree Image: Comparison of modular space of protection nulti-wired	Surge current capacity	kA	5	
With interlocking deviceMesDegree of protection (IP)MesWidth in number of modular spacingsMesBuilt-in depthMesAmbient temperature during operatingMesPollution degreeMesConnectable conductor cross section multi-wiredMes <td>Frequency</td> <td></td> <td>50 Hz</td>	Frequency		50 Hz	
Degree of protection (IP) IP20 Width in number of modular spacings Image: Constraint of modular spacings Built-in depth Image: Constraint of modular spacings Ambient temperature during operating Image: Constraint of modular spacings Pollution degree Image: Constraint of modular spacings Rest: Constraint of modular spacings Image: Constraint of modular spacings Image: Constraint of modular spacings Image: Constraint of modular spacings Image: Constraint of modular spacings Image: Constraint of modular spacings	Additional equipment possible		Yes	
Width in number of modular spacings Midth in numer of modular spacings Midth in numer of mod	With interlocking device		Yes	
Built-in depth mm 70 Ambient temperature during operating °C °L Pollution degree °C 2 Connectable conductor cross section multi-wired Mm ² 075 - 35	Degree of protection (IP)		IP20	
Ambient temperature during operating °C -25 - 40 Pollution degree 2 Connectable conductor cross section multi-wired mm² 0.75 - 35	Width in number of modular spacings		6	
Pollution degree 2 Connectable conductor cross section multi-wired mm² 0.75 - 35	Built-in depth	mm	70	
Connectable conductor cross section multi-wired mm ² 0.75 - 35	Ambient temperature during operating	°C	-25 - 40	
	Pollution degree		2	
Connectable conductor cross section solid-core mm ² 0.75 - 35	Connectable conductor cross section multi-wired	mm²	0.75 - 35	
	Connectable conductor cross section solid-core	mm²	0.75 - 35	

