

Leadership in fusible circuit protection



EATON

Powering Business Worldwide

Eaton is the leading source of fusible circuit protection solutions in the global marketplace. Eaton's Bussmann series products are approved for use around the world and meet agency requirements and international standards: IEC, VDE, DIN, UL, CSA, BS and others.

The headquarter for Eaton's Bussmann series product line is located in Burton-on-the-Wolds, Leicestershire (UK) and is part of Eaton's Industrial Control and Protection EMEA division.

Eaton manufactures over 50,000 Bussmann series part numbers, covering extensive fusible circuit protection solutions for a wide range of applications: residential, industrial, motor protection, power conversion and distribution.

Eaton has been a leading exponent in the design, development and manufacture of fuse links and their associated accessories for more than 100 years and has supplied fuse links to more than 90 countries worldwide.

Eaton's team of specialist Engineers and Field Applications Engineers plays a leading role in international standardisation of fuse links offering comprehensive advice on selection and applications.

With a continual commitment to meet our customers' needs with innovative high quality products with ISO 9001 'approval systems', Eaton is the supplier of choice for circuit protection solutions.

Eaton offers a wide range of Bussmann series fuse rails and switch disconnectors.

Their compact dimensions and enhanced safety make them suitable for varied applications. They are available up to 1600 A in horizontal and up to 630 A in vertical format, suitable for mounting NH fuselinks. They comply to IEC 60947-1 & IEC 60947-3.

The vertical fuse switch disconnectors (EBV00 - EBV3) are available in 3 pole versions, and depending on application, are rated from 160 A to 630 A; size 4 1250 A available on request. Versatility of the product is enhanced by having the option to reverse - top/bottom cable terminal connection. The body of the switch is made of V0 flame retardant materials. IP30 degree of protection is provided against any contact from the front. The contacts are silver plated offering low watt loss. Current transformers and ammeters are available as accessories.

The vertical fuse rails (EBF000-EBF3) are available in 3 pole version with variations in output clamps and rated at 160, 250, 400 and 630 A.

A comprehensive range of NH fuse bases suitable for industrial application up to 690 V a.c..

Typical Applications for the vertical fuse switch disconnectors and rails :

- Transformer substations
- Distribution boards
- Feeder pillars
- Cable distribution cabinets

The horizontal fuse switch disconnectors offers a comprehensive choice of ratings and sizes (EBH000 – 100 A to 630 A) with direct connection to aluminium and copper cables and wide range of cable terminations. Installation can be via a mounting plate or directly onto a busbar system with hooked clamps. The body of the switch is made of V0 flame retardant materials. The contacts are silver plated offering low watt loss.

Typical Applications :

- Motor Control Centres
- Distribution Boards
- Cable Distribution cabinets

Table of contents

EBF Vertical fuse rail	5 - 18
EBH Horizontal fuse switch disconnecter	19 - 52
EBV Vertical fuse switch disconnecter	53 - 73
NH DIN Fuse links overview	74 - 75
Index	76 - 77



EBF

Vertical fuse rail

- Self extinguishing thermoplastics with flame retardant
- Touch protection IP20 with fuse links shrouds

EBF Introduction	6
EBF Technical data	7
EBF Catalogue numbers structure	7
EBF00 100 mm busbar system	8-9
EBF00 185 mm busbar system	10
EBF2 185 mm busbar system	11-12
EBF3 185 mm busbar system	11 and 13
EBF2 and 3 with lateral busbar terminal	14
Outline drawings	15-16
Accessories	17-18

General information

Eaton's Bussmann series NH vertical fuse rails are specifically designed to be used with NH fuse links. All energised metal parts are fully protected against accidental contact. They are intended for direct installation on horizontal or vertical busbar systems.

Applications

EBF Vertical fuse rails are designed for the distribution of electricity and protection against short circuits and overloads in three phase systems with maximum operating voltage of 690 V a.c. They are intended for direct installation on horizontal or vertical busbar system. Due to their modern and compact design installing is easy and saves space in substations and distribution boards.

The EBF vertical fuse rails are designed to suit various market requirements and comply to IEC 60269-1 and 60269-2.

Sizes

EBF vertical fuse rails are available in following sizes:

- 00 (160 A)
- 2 (400 A)
- 3 (630 A)

Construction

Plastic parts of EBF vertical fuse rails are made of fibre glass strengthened, thermoplastic polyamides.

Silver plated contacts provide low power loss.

All energised metal parts are fully protected against accidental touch.

Removal of the fuse link provides clearly noticeable, large isolating gap in the circuit.

Flexibility to terminate circular or sector-shaped busbar conductors for V or 2V terminals. Conductors with lugs can be terminated with screw terminals.

Touch protection IP 20 with fuse link shrouds for sizes 2 and 3 fuse rails.

Mounting

Sizes 00, 2 and 3 are designed for installation on 185 mm busbar system.

EBF00/100 mm fuse rails are designed for installation on 100 mm busbar system installation. They can be installed on 185 mm busbar system by using an adaptor.

Fuse rails width

- size 00 – 50 mm
- size 2, 3 - 100 mm,

Operating conditions

- To be installed in a room free of any dust, aggressive or explosive gases
- Altitude up to 2000 meters above sea level
- Outdoor – in cabinets with protection degree > IP 34
- Ambient temperature from -25 °C to +55 °C – but in case of use of disconnectors in temperature from +41 °C to +45 °C current value I_{th} should be reduced by 5 percent and within temperature range of +46 °C to +55 °C current value I_{th} should be reduced by 10 percent
- Relative humidity of the air should not be higher than 50 percent at temperature of +40 °C

Technical data

Description	EBF00 / 100 mm	EBF00 / 185 mm	EBF2	EBF3
Size	00	00	2	3
Rated thermal current $I_{th}=I_n$	160 A	160 A	400 A	630 A
Rated voltage U_n	690 V a.c.	690 V a.c.	690 V a.c.	690 V a.c.
Rated insulation voltage U_i	1000 V a.c.	1000 V a.c.	1000 V a.c.	1000 V a.c.
Rated frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Rated power dissipation	12 W	12 W	45 W	60 W
Rated short-circuit withstand current	100 kA	100 kA	100 kA	100 kA
Mechanical durability (number of cycles)	100	100	100	100
Weight (without terminals)	0,75 kg	2 kg	4,50 kg	5 kg
IP degree of protection (IP)	00	00	20*	20*
Compatible NH Fuse link body size	00	00	1, 2	3

* with fuse link shrouds

Catalogue number structure

Vertical fuse switch disconnecter	NH Fuse link size	Mounting type	Poles	Terminal clamps details	Lateral busbar terminal
EBF	00	2 = 100 mm busbar system	30 = Three-pole	M1 = Screw terminals with M10 Screws	-L = Left side
	2			S8 = Screw terminals with M8 Screws	- R = Right side
	3	3 = 185 mm busbar system		V0 = V-terminals without V-clamps V1 = V-terminals with V-clamps W1 = 2-V Terminals with double V-clamps	

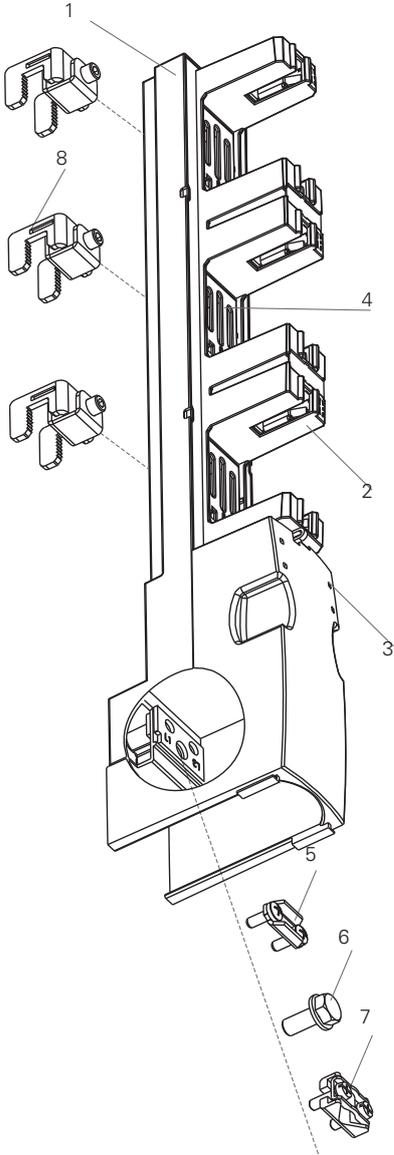
Example: EBF00330S8

Catalogue number **EBF00330S8** represents a vertical fuse rail, suitable for NH Fuse links size **00**, for 185 mm busbar system **3**, with 3 poles **30**, with screw terminals and M8 screws **S8**.

Ordering code information	Type designation
Product type	EBF
NH Fuse links size	00
Mounting type	3
Number of poles	30
Terminal clamps	S8
Complete part numbers	EBF 00 3 30 S8

EBF00 Vertical fuse rails, 100 mm busbar system

For 100 mm busbar system



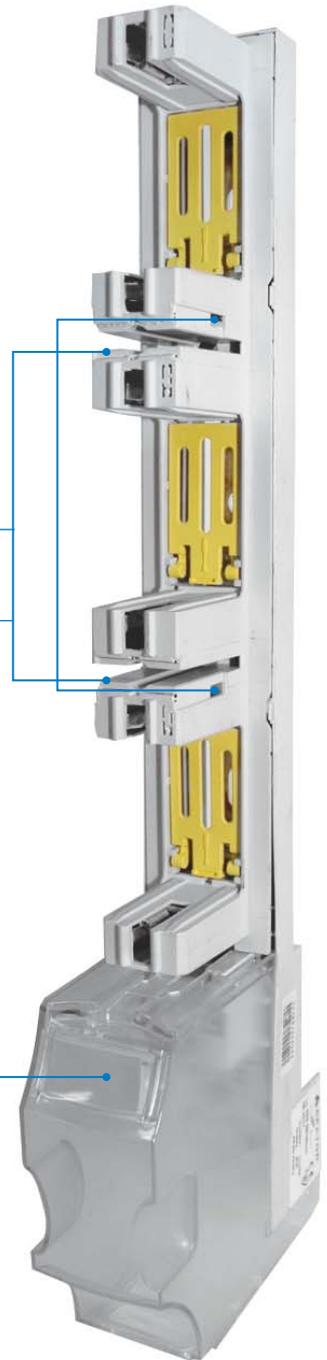
Description

- 1 - Main base
- 2 - protective contact cover
- 3 - Terminal shroud
- 4 - Busbar terminals access covers
- 5 - S-bridge clamp
- 6 - M8 screw
- 7 - V-shape clamp for sector-shaped conductor
- 8 - Hooked clamp

Insulating busbar barrier location

Clip-on label

Terminal shroud label



EBF00/100 mm
EBF00/100 mm-V

EBF00 Vertical fuse rail, size 00, 160 A, 690 V a.c., 100 mm busbar system

EBF00 Technical data

EBF00/100 mm	
Size	00
Rated thermal current $I_{th}=I_n$	160 A
Rated voltage U_n	690 V a.c.
Rated insulation voltage U_i	1000 V a.c.
Rated frequency	50-60 Hz
Rated power dissipation	12 W
Rated short-circuit withstand current	100 kA
Mechanical durability (number of cycles)	100
IP degree of protection (IP)	00
Compatible NH Fuse link body size	00
Accessories see page 17	



EBF00 / 100 mm

EBF00 - Catalogue numbers

100 mm Busbar system		Weight
EBF00230S8	Cable terminals: bridge terminals with bridge clamps (S) 4-70 mm ² , screw terminals with M8 screws	1,0 kg
EBF00230V1	Cable terminals: V-terminals with V-clamps 25-120SW	1,1 kg
EBF00230V0	Cable terminals: V-terminals, without V-clamps	1,0 kg

EBF00 - Terminal clamps details

Description	S-bridge clamp 2 x M5 x 25	M8 screw*	V- clamp 25-120 SW	HM 10-120																
Outline drawing																				
Cross-section of conductors	4 - 70 mm ²	Conductor with lug terminal max 185 mm ²	<table border="0"> <tr> <td>re ●</td> <td>16 mm² - 95 mm²</td> </tr> <tr> <td>se ◐</td> <td>25 mm² - 120 mm²</td> </tr> <tr> <td>rm ◉</td> <td>16 mm² - 95 mm²</td> </tr> <tr> <td>sm ◐</td> <td>25 mm² - 120 mm²</td> </tr> </table>	re ●	16 mm ² - 95 mm ²	se ◐	25 mm ² - 120 mm ²	rm ◉	16 mm ² - 95 mm ²	sm ◐	25 mm ² - 120 mm ²	<table border="0"> <tr> <td>re ●</td> <td>10 mm² - 70 mm²</td> </tr> <tr> <td>se ◐</td> <td>25 mm² - 120 mm²</td> </tr> <tr> <td>rm ◉</td> <td>10 mm² - 70 mm²</td> </tr> <tr> <td>sm ◐</td> <td>25 mm² - 95 mm²</td> </tr> </table>	re ●	10 mm ² - 70 mm ²	se ◐	25 mm ² - 120 mm ²	rm ◉	10 mm ² - 70 mm ²	sm ◐	25 mm ² - 95 mm ²
re ●	16 mm ² - 95 mm ²																			
se ◐	25 mm ² - 120 mm ²																			
rm ◉	16 mm ² - 95 mm ²																			
sm ◐	25 mm ² - 120 mm ²																			
re ●	10 mm ² - 70 mm ²																			
se ◐	25 mm ² - 120 mm ²																			
rm ◉	10 mm ² - 70 mm ²																			
sm ◐	25 mm ² - 95 mm ²																			
Tightening torque	3 Nm**	12 Nm**	20 Nm**	15 Nm**																

For stranded conductors using cable ferrules is recommended

*) Busbar of maximum width of 20 mm and maximum thickness of 5 mm can be fixed to M-type screw terminals.

**) Using torque wrench is recommended

***) Fuse switch disconnectors with V-terminals are equipped with steel V-clamp HM 10-120 on request

Recommend using Eaton V-terminals only. Minimum tightening torque (M8 screw) for screws fixing fuse switch disconnector to busbar system –12 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 21 Nm

EBF00 Vertical fuse rail, size 00, 160 A, 690 V a.c., 185 mm busbar system

EBF00 - Technical data

Description	EBF00
Size	00
Rated thermal current $I_{th}=I_n$	160 A
Rated voltage U_n	690 V a.c.
Rated insulation voltage U_i	1000 V a.c.
Rated frequency	50-60 Hz
Rated power dissipation	12 W
Rated short-circuit withstand current	100 kA
Mechanical durability (number of cycles)	100
IP degree of protection (IP)	00
Compatible NH fuse link body size	00
Accessories see page 17	

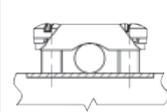
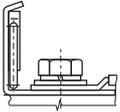
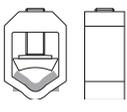


EBF00 / 185 mm

EBF00 - Catalogue numbers

185 mm busbar system		Weight
EBF00330S8	Cable terminals: bridge terminals with bridge clamps (S) 4-70 mm ² , screw terminals with M8 screws	2 kg
EBF00330V1	Cable terminals: V-terminals with V-clamps 25-120SW	2.1 kg
EBF00330V0	Cable terminals: V-terminals, without V-clamps	2 kg

EBF00 - Terminal clamps details

Description	EBF00			
Clamp	S-bridge clamp 2 x M5 x 25	M8 screw*	V- clamp 25-120 SW	HM 10-120
				 ***
Outline drawing				
Cross-section of conductors	4 - 70 mm ²	Conductor with lug terminal max 185 mm ²	re ● 16 mm ² - 95 mm ² se ◐ 25 mm ² - 120 mm ² rm ◐ 16 mm ² - 95 mm ² sm ◐ 25 mm ² - 120 mm ²	re ● 10 mm ² - 70 mm ² se ◐ 25 mm ² - 120 mm ² rm ◐ 10 mm ² - 70 mm ² sm ◐ 25 mm ² - 95 mm ²
Tightening torque	3 Nm**	12 Nm**	20 Nm**	15 Nm**

For stranded conductors using cable ferrules is recommended

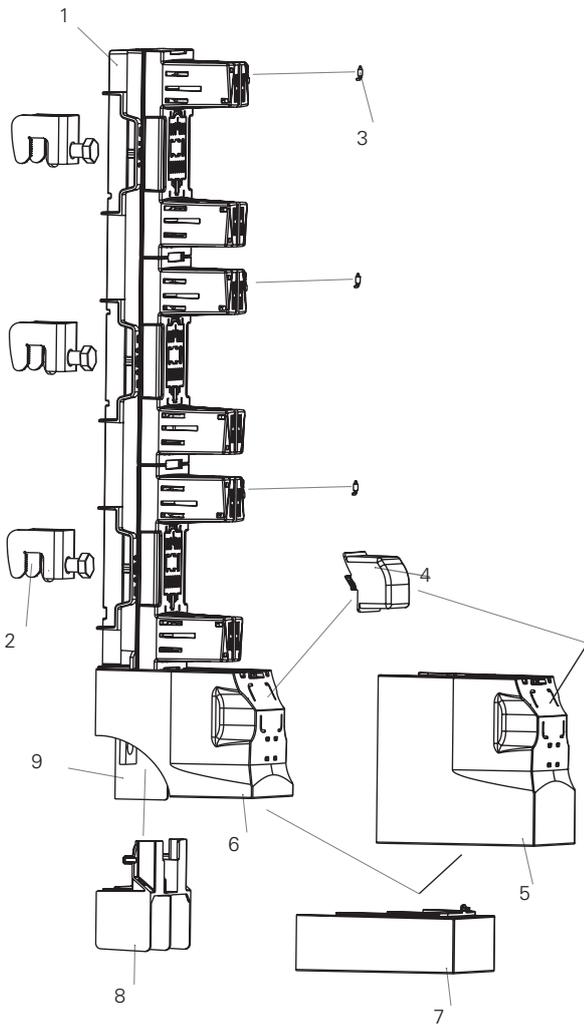
*) Busbar of maximum width of 20 mm and maximum thickness of 5 mm can be fixed to M-type screw terminals.

***) Using torque wrench is recommended

***) Fuse switch disconnectors with V-terminals are equipped with steel V-clamp HM 10-120 on request

Recommend using Eaton V-terminals only. Minimum tightening torque (M8 screw) for screws fixing fuse switch disconnector to busbar system -12 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 21 Nm

Vertical fuse rail, EBF2 size 2, 400 A and EBF3 size 3, 630 A, 690 V a.c., 185 mm busbar system



Description

- 1 - Main base
- 2 - Hooked clamp – for installation on busbar system
- 3 - Terminal shroud for fuse switch disconnecter with double V-clamps (2 x 240 mm²)
- 4 - Terminal shroud (long)
- 5 - Terminal shroud (short)
- 6 - Bottom adjusting shroud
- 7 - Cable terminal protective cover
- 8 - Protective busbar barrier

Option of fuse link state indication by neon indicator tube

Labels on busbar terminals access covers

Clip-on label

Terminal shroud label



EBF2
EBF3

EBF2 Vertical fuse rail, size 2, 400 A, 690 V a.c., 185 mm busbar system

Fuse rail designed for operation with NH1 and NH2 fuse links

EBF2 - Technical data

Parameters	EBF2
Size	2
Rated thermal current $I_{th}=I_n$	400 A
Rated voltage U_n	690 V a.c.
Rated insulation voltage U_i	1000 V a.c.
Rated frequency	50-60 Hz
Rated power dissipation	45 W
Rated short-circuit withstand current	100 kA
Mechanical durability (number of cycles)	100
IP degree of protection (IP)	20*
Compatible NH Fuse link body size	1,2
Accessories see page 18	

* With fuse link shrouds



EBF2



EBF2
with fuse link shrouds

EBF2 - Catalogue numbers

185 mm busbar system		Weight
EBF2330V1	Cable terminals: V-terminals with V-clamps (35-240 mm ²)	3,2 kg
EBF2330M1	Cable terminals: screw terminals with pressed nuts M10 (M10 screw)	3,1 kg
EBF2330W1	Cable terminals: 2V-terminals with double V-clamps (2 x 50- 240 mm ²)	3,8 kg

EBF2 - Terminal clamps details

Description	EBF2 V-clamps	EBF2 Double V-clamps	EBF2 M10 screw
Clamp	V-clamp 35-300SW-B	V-clamp HS 2/35-240-C	M10 screw (pressed nut)*
Outline drawing			
Cross-section of conductors	V-clamp for direct fixing of conductor with busbar end with cross-section of:		
	35 - 185 mm ²	35 - 240 mm ²	35 - 185 mm ² 35 - 240 mm ²
Tightening torque	30 Nm		40 Nm
			32 Nm

*For stranded conductors using cable ferrules is recommended

Busbar of maximum width of 40 mm and maximum thickness of 8 mm can be fixed to M-type screw terminals when protective busbar barrier between phases is installed.

Recommend using Eaton V-terminals only. Minimum tightening torque (M12 screw) for screws fixing fuse switch disconnecter to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm

EBF3 Vertical fuse rail, size 3, 630 A, 690 V a.c., 185 mm Busbar system

EBF3 - Technical data

Parameters	EBF3
Size	3
Rated thermal current $I_{th}=I_n$	630 A
Rated voltage U_n	690 V a.c.
Rated insulation voltage U_i	1000 V a.c.
Rated frequency	50-60 Hz
Rated power dissipation	60 W
Rated short-circuit withstand current	100 kA
Mechanical durability (number of cycles)	100
IP degree of protection (IP)	20*
Compatible NH Fuse link body size	3
Accessories see page 18	

*With fuse link shrouds



EBF3



EBF3
with fuse link shrouds

EBF3 - Catalogue numbers

185 mm busbar system		Weight
EBF3330V1	Cable terminals: V-terminals with V-clamps (70-300 SW)	4,0 kg
EBF3330M1	Cable terminals: screw terminals with pressed nuts M10 (M10 screw)	4,1 kg
EBF3330W1	Cable terminals: 2V-terminals with double V-clamps (2 x 50- 240 mm ²)	4,8 kg

EBF3 - Terminal clamps details

Description	EBF3 V-clamps	EBF3 Double V-clamps	EBF3 M10 screw
Clamp	V-clamp 35-300SW-B	V-clamp HS 2/35-240-C	M10 screw (pressed nut)*
Outline drawing			
Cross-section of conductors	V-clamp for direct fixing of conductor with busbar end with cross-section of:		
	35 - 185 mm ²	35 - 240 mm ²	35 - 185 mm ²
	35 - 240 mm ²	35 - 300 mm ²	35 - 240 mm ²
Tightening torque	30 Nm	40 Nm	56 Nm

*For stranded conductors using cable ferrules is recommended

Busbar of maximum width of 40 mm and maximum thickness of 8 mm can be fixed to M-type screw terminals when protective busbar barrier between phases is installed.

Recommend using Eaton V-terminals only. Minimum tightening torque (M12 screw) for screws fixing fuse switch disconnecter to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm

EBF2 and EBF3 Fuse rail, 185 mm busbar system, with lateral busbar terminal*

EBF Fuse rail with lateral busbar terminal technical data

Parameters	EBF2	EBF3
Size	2	3
Rated thermal current $I_{th}=I_n$	400 A	630 A
Rated voltage U_n	690 V a.c.	690 V a.c.
Rated insulation voltage U_i	1000 V a.c.	1000 V a.c.
Rated frequency	50-60 Hz	50-60 Hz
Rated power dissipation	45 W	60 W
Rated short-circuit withstand current	100 kA	100 kA
Mechanical durability (Number of cycles)	100	100
IP degree of protection (IP)	20*	20*
Compatible NH Fuse link body size	2	3
Accessories see page 18		

*With fuse link covers



EBF2 with lateral busbar terminal - Right

EBF3 with lateral busbar terminal - Left

EBF2 and 3 - Catalogue numbers

185 mm busbar system		Weight
EBF2330-L	Size 2 Lateral busbar terminal - left side	2,2 kg
EBF2330-R	Size 2 Lateral busbar terminal - right side	2,2 kg
EBF3330-L	Size 3 Lateral busbar terminal - left side	3 kg
EBF3330-R	Size 3 Lateral busbar terminal - right side	3 kg

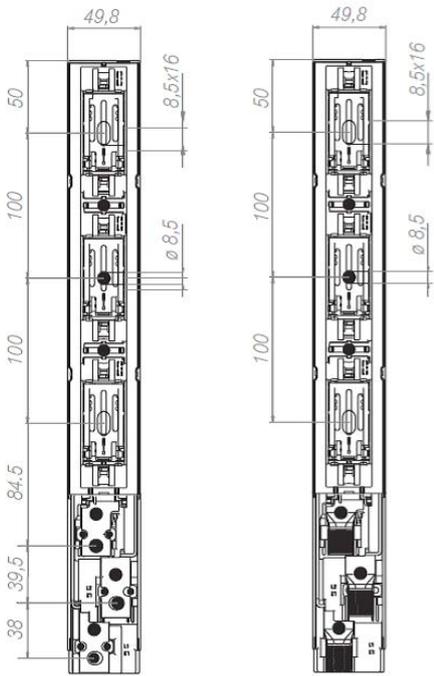
EBF (with lateral busbar terminal) - Terminal clamps details

Description	Outline drawing	EBF2 Left side	EBF2 Right side	EBF3 Left side	EBF3 Right side
Clamp		M12 screw	M12 screw	M12 screw	M12 screw
Cable terminal		Left side	Right side	Left side	Right side
Tightening torque		56 Nm	56 Nm	56 Nm	56 Nm

*Available upon request. Please contact Eaton's application engineering department for further details: buletechnical@eaton.com

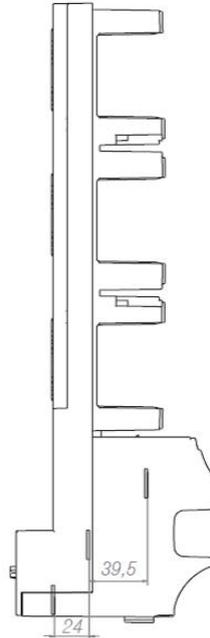
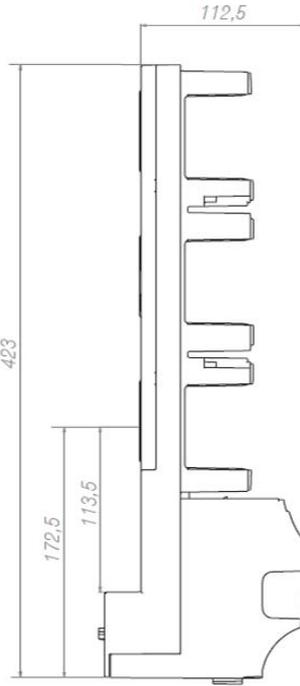
EBF Vertical fuse rails - Outline drawings (mm)

EBF00 / 100 mm busbar system

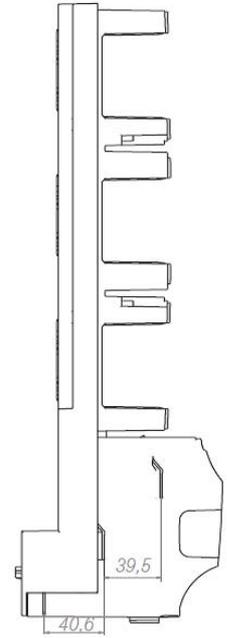


M8 Screws

V-Terminals

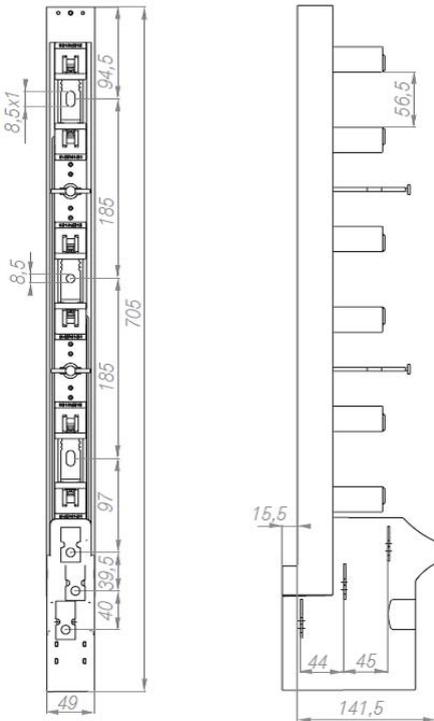


M8 Screws
side view

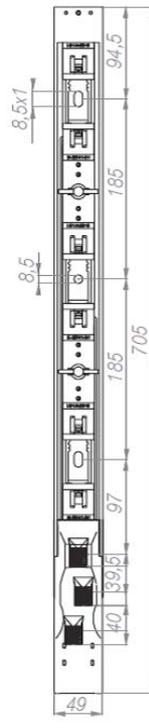


V-Terminals
side view

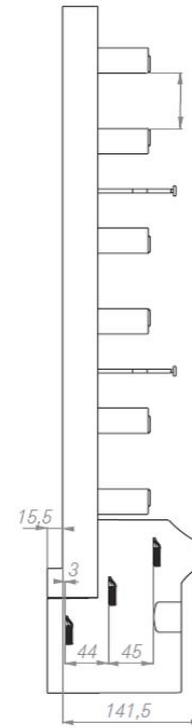
EBF00 / 185 mm busbar system



M8 Screws



V-Terminals



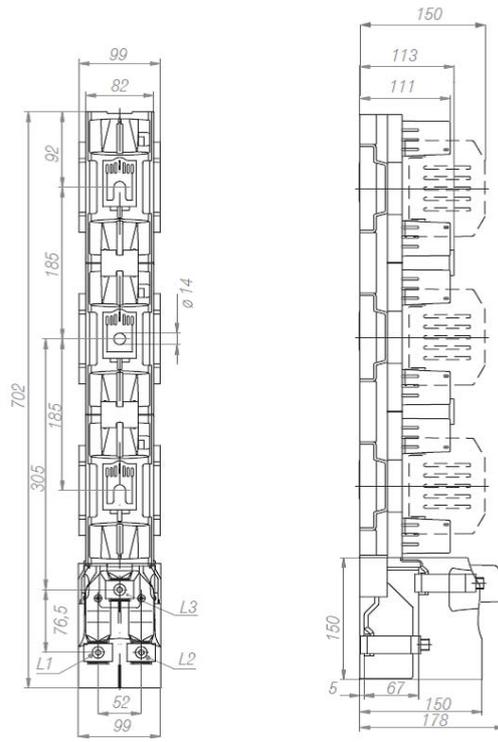
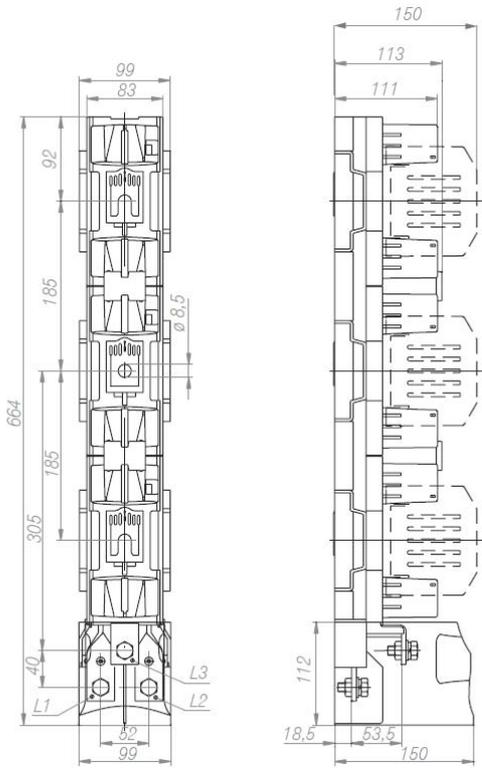
EBF Vertical fuse rails - Outline drawings (mm)

EBF2 and 3

EBF2 and 3

EBF2 and 3 With terminals 2V (2 x 240 mm²)

EBF



EBF Vertical fuse rail - Accessories

EBF00, EBF00 / 100 mm		EBF00 / 100 mm	
EBFVA1 - M8 Terminal screw		EBFVA10 - Terminal shroud/adjusting shroud	
M8 terminal screw, for connection of conductors with lug terminal (set - 3pcs)		Terminal shroud/adjusting shroud	
EBFVA2 - Busbar shroud		EBFVA11 - Single adaptor	
Busbar shroud (polycarbonate) for busbar system 185 mm, Width 50 mm, length 562 mm, thickness 3 mm		Single adaptor 100/185 enabling to install EBF 00/100 mm on busbar system 185 mm	
EBFVA3 - Hooked clamps		EBFVA12 - Double adaptor	
Hooked clamps for installation of EBF on busbar system without drilled holes. (set - 3 pcs.)		Double adaptor 100/185 enabling to install two EBF 00/100mm units on busbar system 185 mm	
EBFVA4 - Isolating pin		EBFVA13 - Insulating busbar barrier	
Isolating pin for fixing the 50 mm busbar shroud, M8 (set - 2 pcs.)		Insulating busbar barrier for EBF 00/100 mm	
EBFVA6 - S-Bridge clamp		EBF00	
S-Bridge clamp - fixed with 2 x M5 screw - for connection of conductors with cross-section 4 mm ² up to 70 mm ² (set - 3 pcs.)		EBFVA14 - Double distance adaptor	
EBFVA7 - V-shape clamp		Double distance adaptor 185/185. Designed for two EBF 00 units. It adjusts front line of EBV 00 to that of EBV 1, 2, 3 (set - 3 pcs.)	
V-shape clamp - S-bridge clamp + V-shape saddle - for connection of sector-shaped conductors with cross-section 1.5 up to 70 mm ² (stranded) or 95 mm ² (solid) (1 set - 3 pcs.)		EBFVA15 - Single distance adaptor	
EBFVA8 - Universal earthing device		Single distance adaptor 185/185. It adjusts front line of EBF 00 to that of EBV 1, 2, 3 (set - 3 pcs.)	
Universal earthing device for EBF00, 2, 3		EBFVA16 - Terminal shroud	
EBFVA9 - V-clamp		Terminal shroud	
V-clamp HM-10-120. For connection of conductor with cross-section:			
10 - 70 mm ² ● 10 - 70 mm ² ◉			
25 - 120 mm ² ◆ 25 - 95 mm ² ◈			

EBF Vertical fuse rail - Accessories

EBF

EBF2, EBF3

Terminal screw

For connection of conductors with lug terminal (1 set - 3pcs)



EBFVA17 - M10 terminal screw for EBF2

EBFVA18 - M12 terminal screw for EBF3

EBFVA19 - V-clamp

V-clamp. For connection of conductor with cross-section:



35 - 120 mm² 35 - 150 mm²

35 - 240 mm² 35 - 300 mm²

EBFVA20 - V-clamp

V-clamp. For connection of conductor with cross-section:



35 - 185 mm² 35 - 240 mm²

35 - 240 mm² 35 - 300 mm²

EBFVA21 - Double V-clamp

Double V-clamp. For connection of two conductors with cross-section:



35 - 185 mm² 35 - 240 mm²

35 - 240 mm² 35 - 300 mm²

EBFVA22 - V-terminal lug

V-terminal lug for V-clamp for connection of conductors with cross-section 35 mm² up to 240 mm²



EBFVA23 - V-clamp HS

V-clamp HS (steel) for connection of two conductors with cross-section



35 - 135 mm² 35 - 240 mm²

35 - 240 mm² 35 - 300 mm²

EBFVA24 - Hooked clamps

Hooked clamps for installation of EBF, 2, 3 on busbar system without drilled holes (set - 3 pcs.)



EBF2, EBF3

EBFVA25 - Busbar shroud

Busbar shroud (polycarbonate) for busbar system 185 mm, Width 100 mm, length 707 mm, thickness 2 mm



EBFVA26 - Isolating pin

Isolating pin for fixing the 100mm busbar shroud, M12 (set - 2 pcs.)



EBFVA27 - Terminal shroud

Terminal shroud



EBFVA28 - Extended terminal shroud

Extended terminal shroud. For use with terminal shroud EBFVA27



EBFVA29 - Terminal protective cover

Terminal protective cover



EBFVA31 - Fuse link shroud

Fuse link shroud



EBFVA8 - Universal earthing device

Universal earthing device for EBV 00, 2, 3





EBH

Horizontal fuse switch disconnectors

Designed for distribution of electricity and protection of electrical equipment against short-circuits and overloads with industrial fuse links.

EBH Introduction	20
EBH Technical data	21
EBH Catalogue numbers structure	22
EBH000	23-24
EBH000 Compact size 000	25-27
EBH00 Mounting plate installation	28-29
EBH00 60 mm busbar system	30-32
EBH00 Features and benefits	33-34
EBH1	35-37
EBH2	38-39
EBH3	40
Fuse switch disconnecter electronic fuse monitoring module	41
Outline drawings	42-51
Accessories	52

Applications

EBH Horizontal fuse switch disconnectors are designed for distribution of electricity and protection of electrical equipment against short-circuits and overloads with industrial fuse links. They are conforming to IEC 60947-1 and IEC 60947-3 standards. They are intended for installation in low voltage distribution boards, cable and metering cabinets.

Sizes

EBH Horizontal fuse switch disconnectors are available in the following sizes:

- 000 (160 A)
- 00 (160 A)
- 1 (250 A)
- 2 (400 A)
- 3 (630 A)

Construction

Thermoplastic parts of EBH Horizontal fuse switch disconnectors are made of fibre glass strengthened polyamide with halogen free flame retardant added and have the highest possible flammability class – V0.

EBH Horizontal fuse switch disconnectors consist of following parts:

- Three pole main base with spring-loaded contacts designed for connection of circular or sector-shaped conductors; conductors with lug terminals or busbar
- Removable cover with fuse links,

Arc chutes with steel deionization plates over top contacts,

Silver plated contacts providing low power loss.

The making and breaking operations has to be done with adequate force since these are manually operated switches

Flexibility to terminate circular or sector-shaped busbar conductors for V-clamps or double V-clamps terminals. Conductors with lugs can be terminated with screw terminals

Voltage test can be performed through test holes in fuse link cover

Monitoring of the fuse link status possible with electronic module

Mounting

On mounting plate

- EBH00 , EBH1 , EBH2 , EBH3

On double DIN-Rail

- EBH00

On busbar systems:

- 60 mm busbar system
- EBH00, EBH1, EBH2 – installation on busbar system with hooked clamps
- 100 mm busbar system
- EBH2, EBH1 – installation on busbar system with hooked clamps

Operating conditions

- To be installed in a room free of any dust, aggressive or explosive gases
- Altitude up to 2000 meters above sea level
- Outdoor – in cabinets with protection degree > IP 34
- Ambient temperature from -25 °C to +55 °C
- Relative humidity of the air should not be higher than 50 percent at temperature of +40°

Technical data

	EBH000					EBH00			EBH1		EBH1 Busbar system installation			EBH2			EBH3	
Rated thermal current $I_{th}^{1)}$	160 A					160 A			250 A		250 A			400 A			630 A	
Rated voltage U_n	690 V a.c.					690 V a.c.			690 V a.c.		690 V a.c.			690 V a.c.			690 V a.c.	
Utilisation category	AC-23B	AC-22B	AC-22B	AC-21B	DC-21B	AC-23B	DC-21B	DC-22B	AC-23B	DC-22B	AC-23B	AC-22B	DC-22B ²⁾	AC-23B	DC-21B	DC-22B	AC-22B	DC-21B
Rated switching current I_e	100 A	100 A	160 A	160 A	160 A	160 A	160 A	160 A	250 A	250 A	250 A	250 A	250 A	400 A	400 A	400 A	630 A	630 A
Rated switching voltage U_e	400 V a.c.	690 V a.c.	400 V a.c.	690 V a.c.	250 V a.c.	690 V a.c.	440 V a.c.	250 V a.c.	690 V a.c.	250 V a.c.	400 V a.c.	690 V a.c.	250 V a.c.	690 V a.c.	440 V a.c.	220 V a.c.	690 V a.c.	250 V a.c.
Rated short circuit making current	100 kA (400 and 690 V a.c.)					15 kA (400 & 690 V a.c.)	80 kA (690 V a.c.)	20 kA (400 & 690 V a.c.)	80 kA (690 V a.c.)	25 kA (400 V & 690 V a.c.)	80 kA (690 V a.c.)	25 kA (400 & 690 V a.c.)	100 kA (400 V a.c.)	80 kA (690 V a.c.)	15 kA (400 & 690 V a.c.)	20 kA (400 & 690 V a.c.)	100 kA (400 V a.c.)	100 kA (400 & 690 V a.c.)
Rated short circuit withstand current	25 kA (400 and 690 V a.c.)					15 kA (400 & 690 V a.c.)	80 kA (690 V a.c.)	20 kA (400 & 690 V a.c.)	80 kA (690 V a.c.)	25 kA (400 & 690 V a.c.)	80 kA (690 V a.c.)	25 kA (400 & 690 V a.c.)	100 kA (400 V a.c.)	80 kA (690 V a.c.)	100 kA (400 V a.c.)	25 kA (400 & 690 V a.c.)	25 kA (400 & 690 V a.c.)	25 kA (400 & 690 V a.c.)
Rated insulation voltage U_i	1000 V					1000 V			1000 V		1000 V			1000 V			1000 V	
Rated power dissipation	12 W					12 W			32 W		32 W			45 W			60 W	
Rated impulse withstand voltage U_{imp}	8 kV					8 kV			8 kV	8 kV	8 kV			12 kV			12 kV	
Rated frequency	50-60 Hz					50-60 Hz	-	-	50-60 Hz	-	50-60 Hz	-	-	50-60 Hz	-	-	50-60 Hz	-
Mechanical durability (number of cycles)	2000					1600			1600		1600			1000			1000	
Electrical durability (number of cycles)	300					200			200		200			200			200	
IP degree of protection (IP)	20					20			30		30			20			20	
Weight	~0.6 / ~0.9 kg					~0.7 / ~0.9 kg			~2 kg		~2.5 kg			~3 / ~4.5 kg			~5 / ~5.9 kg	
Compatible NH Fuse link body size	000					00			1		1			2			3	

¹⁾ I_{th} - thermal current of fuse switch disconnector without external enclosure, installed outdoors (In case of the installation of fuse switch disconnectors in enclosures then load factor should be considered)

²⁾ for 60 mm busbar system

EBH2 switch disconnector with solid links can be used for 400 A

- Rated short-time withstand current 1s $I_{cw} = 13$ kA
- Rated short-circuit making capacity $I_{cm} = 8$ kA

Catalogue number structure

Horizontal fuse switch disconnecter	NH Fuse link size	Mounting type	Poles	Switching type	Connection type	Terminal clamps details	Installation
EBH	000	0 = Mounting plate installation	3 = 3-pole	S = Each phase switching separately	B = Bottom cable terminal connection with lug terminals	F = Busbar ends	-D = installation on DIN-Rail
	00	1 = 60 mm busbar system		T = Simultaneous 3 phase switching	T = Top cable terminal connection with lug terminals	M2 = Screw terminals with M12 screws	L = Lengthened terminal shrouds
	1		2 = 100 mm busbar system		M8 = Screw terminals with M8 screws	- E, -TE, -BE Electronic fuse monitoring module, see details page 41	
	2				M1 = Conductors with lug terminals with M10 screws		
3					MV = Screw terminals / V-clamps		
						S5 = S-Bridge clamps with M5 screws	
						S8 = Screw terminals with M8 Screws	
						SV = S-bridge clamps / V-clamps	
						V1 = V-shape clamps	
						VS= V clamps / S-bridge clamps	
						VM = V clamps / Screw terminals	
						W1 = Double V-Clamps	

Miscellaneous parts: EBC000: Compact fuse switch disconnecter size 000 see details pages 25-27

Example: EBH0003TS5

Catalogue number **EBH0003TS5** represents a horizontal fuse switch disconnecter, suitable for NH Fuse link size **00**, mounting plate installation **0**, 3-pole **3**, simultaneous 3 phase switching **T**, with S-bridge clamps, M5 screws **S5**.

Ordering code information	Type designation
Product type	EBH
NH Fuse link size	00
Mounting type	0
Number of poles	3
Simultaneous or separate switching	T
Terminal clamps	S5
Complete part numbers	EBH 00 0 3 T S5

EBH000 Horizontal fuse switch disconnectors, size 000, 160 A and 690 V a.c.

EBH000 - Technical data

Parameters	EBH000			
Rated thermal current $I_{th}=I_n$	100/160 A			
Rated voltage U_n	690 V a.c.			
Utilisation category	AC-23B	AC-22B	AC-21B	DC-21B
Rated switching voltage U_e	400 V a.c.	400 V a.c.	690 V a.c.	250 V a.c.
Rated switching current I_e	100 A	100 A	100 A	160 A
Rated short circuit making current	25 kA			
Rated short circuit withstand current	100 kA			
Rated insulation voltage U_i	1000 V			
Rated impulse withstand voltage U_{imp}	8 kV			
Rated power dissipation	12 W			
Rated frequency	50-60 Hz			-
Mechanical durability (number of cycles)	2000			
Electrical durability (number of cycles)	300			
IP degree of protection (IP)	IP 20			
Compatible NH Fuse link body size	000			
Accessories see page 52				



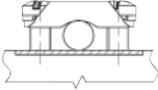
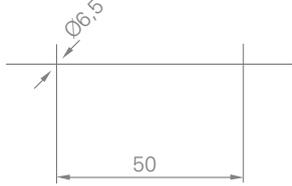
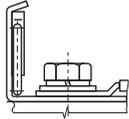
EBH000
for installation on mounting plate

EBH000 - Catalogue numbers

Installation on mounting plate		Cable terminal
EBH00003TS5	For connection of round conductors	S-bridge clamps
EBH00003TS5-D	For connection of round conductors, possible installation on DIN-Rail	S-bridge clamps
EBH00003TM8	For connection of round conductors with lug terminals	M8 screws
EBH00003TM8-D	For connection of round conductors with lug terminals, possible installation on DIN-Rail	M8 screws
EBH00003TS5L	For connection of round conductors, lengthened terminal shrouds	S-bridge clamps
EBH00003TM8L	For connection of round conductors with lug terminals, lengthened terminal shrouds	M8 screws
60 mm busbar system		Cable terminal
EBH00013TBS5	Cable terminal – bottom, for connection of round conductors	S-bridge clamps
EBH00013TTS5	Cable terminal – top, for connection of round conductors	S-bridge clamps
EBH00013TBM8	Cable terminal – bottom, for connection of conductors with lug terminals	M8 screws
EBH00013TTM8	Cable terminal – top, for connection of conductors with lug terminals	M8 screws

EBH000, Horizontal fuse switch disconnectors, size 000, 160 A and 690 V a.c.

EBH000 - Terminal clamps details

Description	Clamp	Drawing of clamp	Cross-section of conductors	Cu busbar	Tightening torque	Dimensions and spacing of holes for installation of EBH000 on mounting plate
EBH000	S-bridge clamp 2 x M5 x 16		Cu/Al conductor 1,5 - 35 mm ²	maximum busbar width 15 mm	3 Nm*	
	M8 x 16 screw		conductor with lug terminal up to 70 mm ²	maximum busbar width 15 mm	10 Nm*	

For stranded conductors using cable ferrules is recommended
*Using of torque wrench is recommended



EBH000
for mounting on DIN-Rail



EBH000 for installation on mounting plate
with double terminal shrouds



EBH000
for installation on mounting plate
with single terminal shrouds



EBH000 for installation on 60 mm busbar system

Compact EBC000 Horizontal fuse switch disconnectors 125 A, 690 V a.c. for mounting on plate and on double DIN-Rail and for installation on 60 mm busbar system*

Compact dimensions - consume half the space

Protective covers provide touch protection

Built-in hooked clamps provide fast installation on busbar system

Top/bottom cable terminal

EBC000 - Technical data

Description	EBC000			
Rated thermal current I_{th}	125 A			
Rated voltage U_n	690 V a.c.			
Utilisation category	AC-21B**	AC-22B***	AC-23B	DC-22B
Rated switching voltage U_e	690 V a.c.	690 V a.c.	400 V a.c.	250 V a.c.
Rated switching current I_e	125 A	125 A	125 A	100 A
Rated short circuit making current	50*/35** kA (690 V a.c.)			20 kA
	50 kA (500 V a.c.)			(400, 500 & 690 V a.c.)
	80 kA (400 V a.c.)			
Rated short circuit withstand current	80 kA (400, 500 & 690 V a.c.)			20 kA (400, 500 & 690 V a.c.)
Rated insulation voltage U_i	1000 V			
Rated impulse withstand voltage U_{imp}	6 kV			
Rated power dissipation	9 W			
Rated frequency	50-60 Hz			
Mechanical durability (number of cycles)	1600			
Electrical durability (number of cycles)	200			
IP degree of protection	IP 30			
Compatible NH Fuse link body size	000			

*- EBH 000 , ***- EBH 000 -S



EBC000

EBC000 - Catalogue numbers

Installation on mounting plate		Cable terminal
EBC00003TF	For connection of round conductors	Frame clamps
Installation on double DIN-Rail		Cable terminal
EBC0003TF-D125	Double DIN-Rail with spacing of 125 mm	Frame clamps
EBC0003TF-D150	Double DIN-Rail with spacing of 150 mm	Frame clamps
60 mm busbar system		Cable terminal
EBC00013TTF	Cable terminal-top, for connection of conductors with busbar ends	Frame clamps
EBC00013TBF	Cable terminal-bottom, for connection of conductors with busbar ends	Frame clamps

EBC000 - Terminal clamps details

Description	Cable terminal	Drawing of clamp	Cross-section of conductors	Tightening torque
EBC000	Frame clamps		2,5 - 50 mm ²	6 Nm 3 Nm****

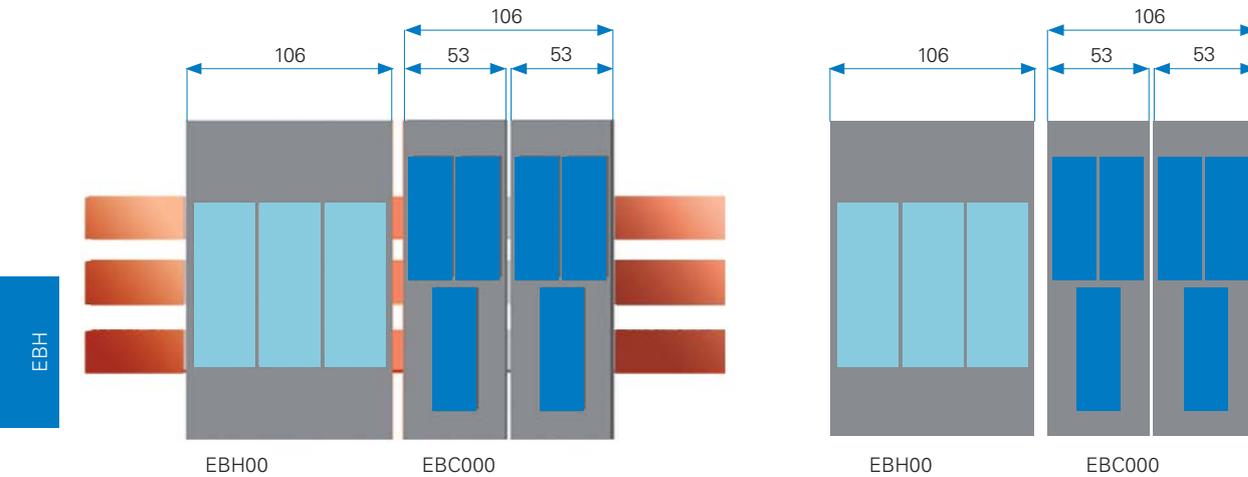
For stranded conductors using cable ferrules is recommended

****Using of torque wrench is recommended

* EBC Available upon request. Please contact Eaton's application engineering department for further details: buletechnical@eaton.com

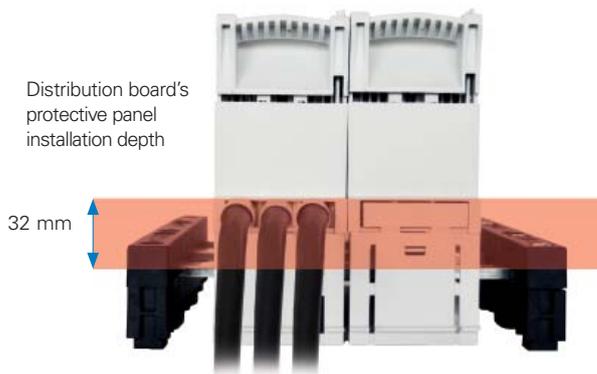
Save space in the switchboard with EBC000*

EBC000 -S (EBC000) width dimensions is equal to half the width of EBH00 -S (EBH00), so we can install more disconnectors (keeping a certain width of the switchboard) to protect individual circuits in the switchboard.

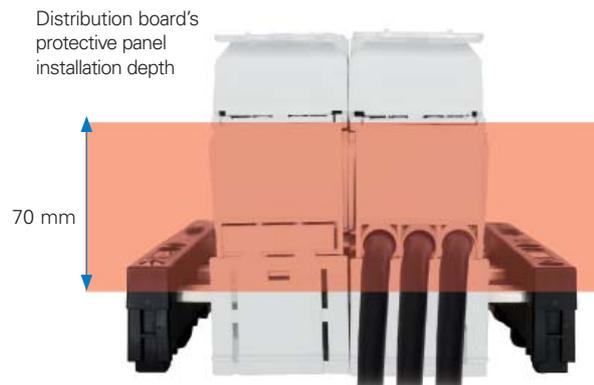


Fuse switch disconnectors EBC000 are designed for installation of distribution board's protective panels at two depths: covering system at 70 mm depth: covering system at 32 mm and 70 mm depth

Covering system at 32 mm depth



Covering system at 70 mm depth



Fuse switch disconnectors EBC000 are manufactured in two versions depending on type of cable terminal

- With bottom cable terminal
- With top cable terminal



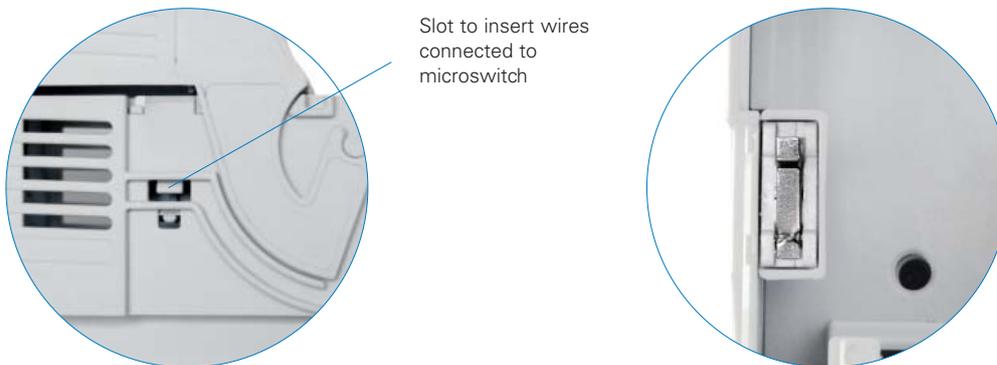
*EBC Available upon request. Please contact Eaton's application engineering department for further details: buletechnical@eaton.com

Compact EBC000 Horizontal fuse switch disconnecter - Installation details*

Fuse switch disconnecter EBC000 suitable for busbar systems has a special cavity.



It is possible to install microswitch indicating position open/close fuse switch disconnectors.



Fuse switch disconnecter EBC000 for mounting on double DIN-Rail



EBC000 mounting on plate

*EBC Available upon request. Please contact Eaton's application engineering department for further details: buletechnical@eaton.com

EBH00 Horizontal fuse switch disconnectors, size 00, 160 A, 690 V a.c.

EBH00 - Technical data

Description	EBH00		
Rated thermal current I_n	160 A		
Rated voltage U_n	690 V a.c.		
Utilisation category	AC-23B	DC-22B	DC-21B
Rated switching voltage U_e	690 V a.c.	250 V a.c.	440 V a.c.
Rated switching current I_e	160 A	160 A	160 A
Rated short circuit making current	690 V a.c.	80 kA (690 V a.c.)	20 kA (400 & 690 V a.c.)
	400 V a.c.	100 kA (400 V a.c.)	
Rated short circuit withstand current	690 V a.c.	80 kA (690 V a.c.)	20 kA (400 & 690 V a.c.)
	400 V a.c.	100 kA (400 V a.c.)	
Rated insulation voltage U_i	1000 V		
Rated impulse withstand voltage U_{imp}	8 kA		
Rated power dissipation	12 W		
Rated frequency	50-60 Hz	-	
Mechanical durability (number of cycles)	1600		
Electrical durability (number of cycles)	200		
IP degree of protection	IP 20		
Compatible NH Fuse link body size	00		
Accessories see page 52			



EBH00

EBH00 - Catalogue numbers

Installation on mounting plate		Cable terminal
EBH0003TS5	For connection of round conductors	S-bridge clamps
EBH0003TM8	For connection of conductors with lug terminals	M8 screws
EBH0003TV1	For connection of sector-shaped conductors	V-shape clamps
EBH0003TS5L	For connection of round conductors, lengthened terminal shrouds	S-bridge clamps
EBH0003TM8L	For connection of conductors with lug terminals, lengthened terminal shrouds	M8 screws
EBH0003TV1L	For connection of sector-shaped conductors, lengthened terminal shrouds	V-shape clamps

Double DIN-Rail options available, please contact buletechnical@eaton.com for further details-

EBH00 Horizontal fuse switch disconnectors, size 00, 160 A, 690 V a.c.

EBH00 - Terminal clamps details

Description	Clamp	Drawing of clamps	Cross-section of conductors	Cu Busbar	Tightening torque	Dimensions and spacing of holes for installation of EBH 00 on mounting plate
EBH00	S-bridge clamp 2 x M5 x 16		Cu/Al conductor 4 - 50 mm ²	Maximum busbar width 20 mm	3 Nm*	
	M8 x 16 screw		conductor with lug terminal up to 70 mm ²	Maximum busbar width 20 mm	10 Nm*	
	V-shape clamp 2 x M5 x 20	<ul style="list-style-type: none"> 4 mm² - 70 mm² 4 mm² - 95 mm² 1,5 mm² - 2,5 mm² 	Maximum busbar width 20 mm	3 Nm*		

For stranded conductors using cable ferrules is recommended
 *Using of torque wrench is recommended



EBH00



Fuse switch disconnector EBH00 with additional terminal shrouds



Fuse switch disconnector EBH00 for mounting on double DIN-Rail*

*please contact buletechnical@eaton.com for further details.

EBH00 Horizontal fuse switch disconnectors, size 00, 160 A, 690 V a.c., 60 mm busbar system

System of protective covers provides touch protection

Possible installation of distribution board's protective panel at depth of 32 mm or 70 mm

Built-in hooked clamps provide fast installation onto busbar system

Top/bottom cable terminal

EBH00 - Technical data

Description	EBH0013T		
Rated thermal current I_{th}	160 A		
Rated voltage U_n	690 V a.c.		
Utilisation category	AC-23B	AC-22B	DC-22B
Rated switching voltage U_e	400 V a.c.	690 V a.c.	250 V a.c.
Rated switching current I_e	160 A	160 A	160 A
Rated short circuit making current	100 kA	20 kA	
Rated short circuit withstand current	100 kA	20 kA	
Rated insulation voltage U_i	1000 V a.c.		
Rated impulse withstand voltage U_{imp}	8 kV		
Rated power dissipation	12 W		
Rated frequency	50-60 Hz	-	
Mechanical durability (Number of cycles)	1600		
Electrical durability (Number of cycles)	200		
IP degree of protection	IP 20		
Compatible NH Fuse link body size	00		
Accessories see page 52			



EBH00
60 mm busbar system

EBH00 - Catalogue numbers

60 mm busbar system installation		Cable terminal
EBH0013TBM8	Cable terminal – top, for connection of conductors with lug terminals	M8 screws
EBH0013TTM8	Cable terminal – bottom, for connection of conductors with lug terminals	M8 screws
EBH0013TBF	Cable terminal-top, for connection of conductors with busbar ends	Frame clamps
EBH0013TTF	Cable terminal-bottom, for connection of conductors with busbar ends	Frame clamps

EBH00 - Terminal clamps details

Description	Clamp	Drawing of clamp	Cross-section of conductors	Cu busbar	Tightening torque
EBH00-M8	M8 x 16 screw		Conductor with lug terminal up to 70 mm ²	Maximum busbar width 20 mm	10 Nm*
EBH00-F	Frame clamps		4 - 95 mm ²	-	6 Nm* 3 Nm*

For stranded conductors using cable ferrules is recommended

*Using of torque wrench is recommended

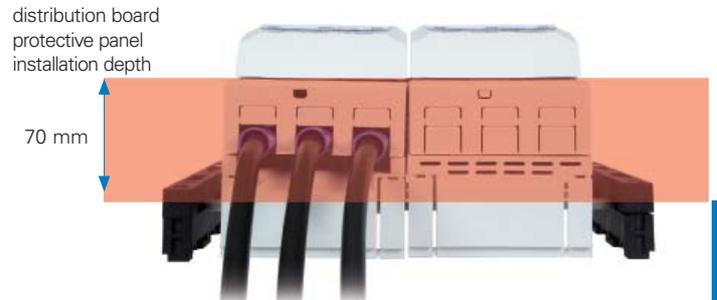
EBH00 Horizontal fuse switch disconnectors, Installation details

Fuse switch disconnectors EBH00 busbar mount type are designed for installation of distribution board's protective panels at two depths: covering system at 32 mm and 70 mm depth

Covering system at 32 mm depth



Covering system at 70 mm depth



Fuse switch disconnectors EBH00 are manufactured in two versions depending on type of cable terminal:

- EBH00 with bottom cable terminal
- EBH00 with top cable terminal



With cables connected to the bottom cable terminal EBH00

Fuse switch disconnector EBH00 suitable for busbar system has special cavity in its main base



EBH00 Fuse switch disconnectors - Installation details

Cable terminals:

M8 screw terminal EBH00

EBH



Frame clamp EBH00



It is possible to install microswitch indicating position of fuse switch disconnectors EBH00



Slot to insert wires
connected to
microswitch



EBH00 - Features and benefits

New features of cable terminals

- Connection of one or two sector-shaped conductors with cross-section up to 120 mm²
- Connection of two round conductors with busbar ends and cross-section up to 70 mm²

Space saving

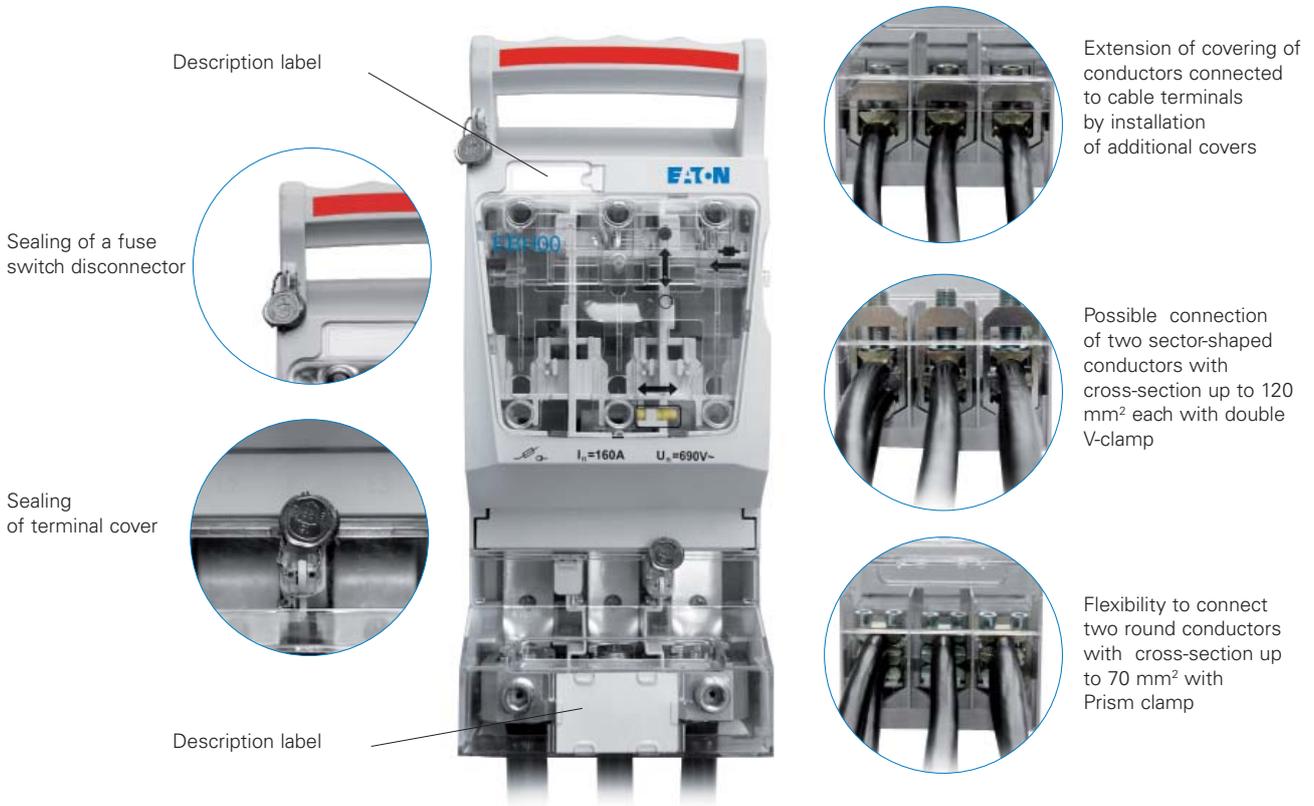
- Possible reduction of external width of cable distribution cabinet to width of a fuse switch disconnecter

Efficient current circuit

- No screw or riveted connection between contact and cable terminal (uniform design of current circuit ensures lower power loss and operating temperature)

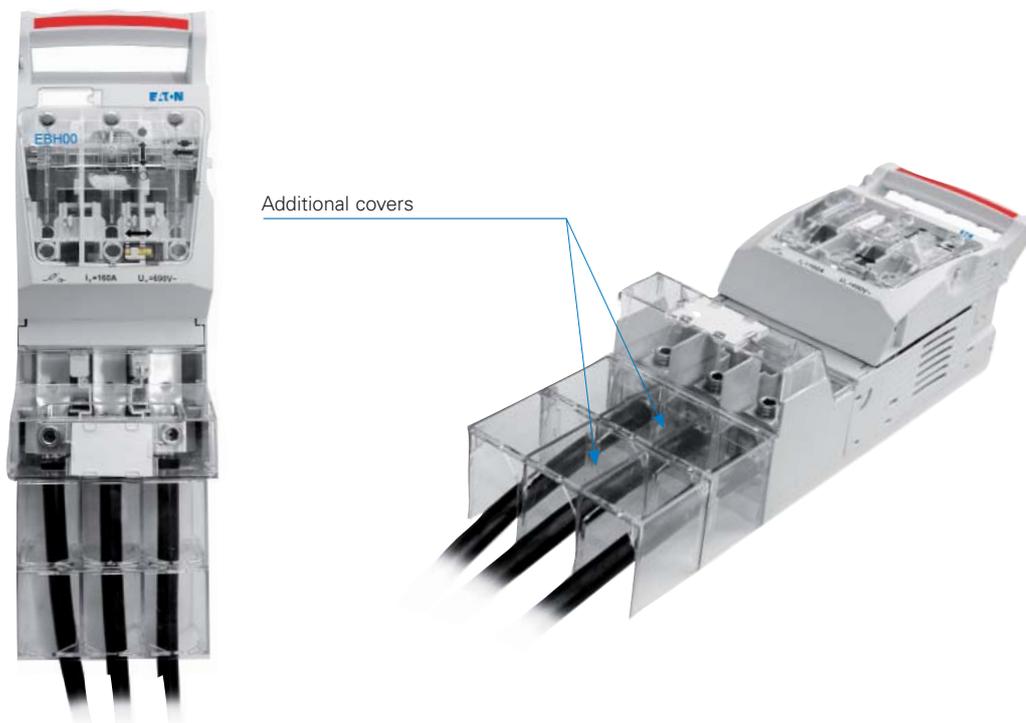
Safety

- Fuse cover and cable terminal cover sealing
- Extension of covering of conductors connected to cable terminals by installation of additional covers



EBH00 - Extended covering of conductors connected to cable terminal

For extension of covering of conductors connected to cable terminals, for example: to fully cover cables in cable distribution cabinet, any required number of additional covers could be installed. Cover length - 50 mm.



EBH00 with V-clamp for connection of sector-shaped conductors with cross-section up to 120 mm²

EBH1 Horizontal fuse switch disconnectors, size 1, 250 A, 690 V a.c.

EBH1 - Technical data

Description	EBH103 Mounting plate installation		EBH113 and EBH123 60 mm and 100 mm busbar system		
Rated thermal current $I_{th}=I_n$	250 A		250 A		
Rated voltage U_n	690 V		690 V		
Utilisation category	AC-23B	DC-22B	AC-23B	AC-22B	DC-22B*
Rated switching voltage U_e	690 V a.c.	250 V a.c.	400 V a.c.	690 V a.c.	250* V a.c.
Rated switching current I_e	250 A	250 A	250 A		
Rated short circuit making current	80 kA (690 V a.c.)	25 kA (400 & 690 V a.c.)	80 kA (690 V a.c.)	25* kA (400 & 690 V a.c.)	
Rated short circuit withstand current	100 kA (400 V a.c.)		100 kA (400 V a.c.)		
Rated insulation voltage U_i	1000 V		1000 V		
Rated impulse withstand voltage U_{imp}	8 kV		8 kV		
Rated power dissipation	32 W		32W		
Rated frequency	50-60 Hz	-	50-60 Hz	-	
Mechanical durability (Number of cycles)	1600		1600		
Electrical durability (Number of cycles)	200		200		
IP degree of protection (IP)	30		30		
Compatible NH Fuse link body size	1		1		
Accessories see page 52					

* For 60 mm busbar system



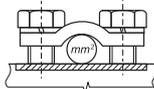
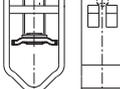
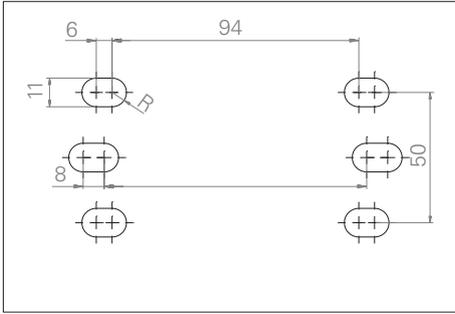
EBH1
for installation
on mounting plate

EBH1 - Catalogue numbers

Installation on mounting plate		Cable terminals
EBH103TS8	For connection of round conductors	S-bridge clamps
EBH103TM1	For connection of conductors with lug terminals	Screws
EBH103TV1	For connection of sector-shaped conductors	V-clamps
EBH103TVS	For connection of round conductors, top terminals - V-terminals, bottom terminals - S-bridge terminals	V-clamps / S-bridge clamps
EBH103TVM	For connection of round conductors, top terminals - V-terminals, bottom terminals - screw terminals	V-clamps / screws
EBH103TSV	For connection of round conductors, top terminals - S-bridge terminals, bottom terminals - V-terminals	S-bridge clamps / V-clamps
EBH103TMV	For connection of round conductors, top terminals - screw terminals, bottom terminals - V-terminals	screw terminals / V-clamps
60 mm busbar system		Cable terminals
EBH113TTS8	Top cable terminals, for connection of round conductors	S-bridge clamps
EBH113TBS8	Bottom cable terminals, for connection of round conductors	S-bridge clamps
EBH113TBM1	Bottom cable terminals, for connection of conductors with lug terminals	Screws
EBH113TTV1	Top cable terminals, for connection of sector-shaped conductors	V-clamps
EBH113TBV1	Bottom cable terminals, for connection of sector-shaped conductors	V-clamps
100 mm busbar system		Cable terminals
EBH123TTS8	Top cable terminals, for connection of round conductors	S-bridge clamps
EBH123TBS8	Bottom cable terminals, for connection of round conductors	S-bridge clamps
EBH123TTM1	Top cable terminals, for connection of conductors with lug terminals	Screws
EBH123TBM1	Bottom cable terminals, for connection of conductors with lug terminals	Screws
EBH123TTV1	Top cable terminals, for connection of sector-shaped conductors	V-clamps
EBH123TBV1	Bottom cable terminals, for connection of sector-shaped conductors	V-clamps

EBH1 Horizontal fuse switch disconnectors, size 1, 250 A, 690 V a.c.

EBH1 - Terminal clamps details

Description	EBH1	EBH1 M10 screw	EBH 1 V-clamps
Clamp	S-bridge clamp 2xM8x30	M10x25 screw	V-clamp HS 35-300-C
Picture of a clamp			
Drawing of a clamp			
Cross-section of conductors	Cu/Al conductor 35 - 120 mm ²	Conductor with lug terminal up to 120 mm ²	V-clamp for direct fixing of conductor with busbar end with cross-section of: 35 - 185 mm ²  35 - 240 mm ²  35 - 240 mm ²  35 - 300 mm ² 
Cu busbar	maximum busbar width 35 mm		
Tightening torque	10 Nm*	20 Nm*	40 Nm*
Dimensions and spacing of holes for installation of EBH1 on mounting plate			

For stranded conductors using cable ferrules is recommended
*Using of torque wrench is recommended

EBH1 Horizontal fuse switch disconnectors, size 1 installation details



EBH1
for installation on mounting plate



EBH1
for installation on busbar system



EBH1
for installation on mounting plate,
with double terminal shrouds



EBH1
for installation on mounting plate, picture of fuse switch
disconnecter without fuse links cover and terminal
shrouds, top cable terminal - M screws, bottom cable
terminal - V-clamps, (EBH1 bottom cable terminal - M
screws, top cable terminal - V-clamps)

EBH2 Horizontal fuse switch disconnecter, size 2, 400 A, 690 V a.c.

EBH2 - Technical data

Description	EBH2		
Rated thermal current I_{th}	400 A		
Rated voltage U_n	690 V a.c.		
Utilisation category	AC-23B	DC-21B	DC-22B
Rated switching voltage U_e	690 V a.c.	440 V a.c.	220 V a.c.
Rated switching current I_e	400 A	400 A	400 A
Rated short circuit making current	690 V a.c.	80 kA	15 kA
	400 V a.c.	100 kA	20 kA
Rated short circuit withstand current	690 V a.c.	80 kA	15 kA
	400 V a.c.	100 kA	20 kA
Rated insulation voltage U_i	1000 V a.c.		
Rated impulse withstand voltage U_{imp}	12 kV		
Rated power dissipation	45 W		
Rated frequency	50-60 Hz	-	
Mechanical durability (Number of cycles)	100		
Electrical durability (Number of cycles)	200		
IP degree of protection	IP20		
Compatible NH Fuse link body size	2		
Accessories see page 52			



EBH2
for installation on mounting plate

EBH2 - Catalogue numbers

Installation on mounting plate		Cable terminals
EBH203TS8	For connection of round conductors	S-bridge clamps
EBH203TM1	For connection of sector-shaped conductors	V-clamps
EBH203TV1	For connection of sector-shaped conductors	Double V- clamps
EBH203TW1	For connection of conductors with lug terminals	M10 screws
60 mm busbar system		Cable terminals
EBH213TBM1	Bottom cable terminals, for connection of conductors with lug terminals	M10 screws
EBH213TTM1	Top cable terminals, for connection of conductors with lug terminals	M10 screws
EBH213TBV1	Bottom cable terminals, for connection of sector-shaped conductors	V-clamps
EBH213TTV1	Top cable terminals, for connection of sector-shaped conductors	V-clamps
EBH213TBW1	Bottom cable terminals, for connection of sector-shaped conductors	Double V- clamps
EBH213TTW1	Top cable terminals, for connection of sector-shaped conductors	Double V- clamps
100 mm busbar system		Cable terminals
EBH223TBM1	Bottom cable terminals, for connection of conductors with lug terminals	M10 screws
EBH223TTM1	Top cable terminals, for connection of conductors with lug terminals	M10 screws
EBH223TBV1	Bottom cable terminals, for connection of sector-shaped conductors	V-clamps
EBH223TTV1	Top cable terminals, for connection of sector-shaped conductors	V-clamps
EBH223TBW1	Bottom cable terminals, for connection of sector-shaped conductors	Double V-clamps
EBH223TTW1	Top cable terminals, for connection of sector-shaped conductors	Double V-clamps

EBH2 Horizontal fuse switch disconnecter, size 2, 400 A, 690 V a.c.

EBH2 - Terminal clamps details

Description	Clamp	Drawing of clamps	Cross-section of conductors	Cu busbar	Tightening torque	Dimensions and spacing of holes for installation of EBH 2 on mounting plate
EBH 2	S-bridge clamp 2 x M8 x 30		Cu/Al conductor 50-185 mm ²	Maximum busbar width 35 mm	10 Nm*	
	M10 x 30 screw		conductor with lug terminal up to 240 mm ²		20 Nm*	
	V- clamp 35-300SW-B		V-clamp for direct fixing of conductor with busbar end with cross-section: 35 - 185 mm ² 35 - 240 mm ² 35 - 240 mm ² 35 - 300 mm ²		30 Nm*	
	Double V- clamp HS2/ 35-240-C		V-clamp for direct fixing of conductor with busbar end with cross-section: 35 - 185 mm ² 35 - 240 mm ² 35 - 240 mm ² 35 - 300 mm ²		40 Nm*	

For stranded conductors using cable ferrules is recommended
*using of torque wrench is recommended



EBH2
for installation on mounting plate,
cable terminals: V-clamps



EBH2
for installation on mounting plate,
cable terminals: double V-clamps



EBH2*
(top cable terminal: M10 screws)
EBH2 -SD* (bottom cable terminal:
M10 screws) for installation on busbar
systems



EBH2 (top cable terminal: double V-clamp
EBH2 (bottom cable terminal: double V-clamp) for
installation on busbar systems



EBH2 (top cable terminal: V-clamp)
EBH2 (bottom cable terminal: V-clamp) for installation on
busbar systems

EBH3 Horizontal fuse switch disconnecter, size 3, 630 A, 690 V a.c.

EBH3 - Technical data

Description	EBH 3
Rated thermal current $I_{th}=I_n$	630 A
Rated voltage U_n	690 V a.c.
Utilisation category	AC-22B DC-21B
Rated switching voltage U_e	690 V a.c. 250 V a.c.
Rated switching current I_e	630 A 630 A
Rated short circuit making current	25 kA
Rated short circuit withstand current	100 kA
Rated insulation voltage U_i	1000 V a.c.
Rated impulse withstand voltage U_{imp}	12 kV
Rated power dissipation	60 W
Rated frequency	50-60 Hz
Mechanical durability (Number of cycles)	1000
Electrical durability (Number of cycles)	200
IP degree of protection	IP 20
Compatible NH Fuse link body size	3
Accessories see page 52	



EBH3
for installation on mounting plate

EBH3 - Catalogue numbers

Installation on mounting plate		Cable terminal
EBH303TS8	For connection of round conductors	S-bridge clamps
EBH303TM2	For connection of conductors with lug terminals	M12 screws
60 mm busbar system		Cable terminal
EBH313TM2	For installation on 60 mm busbar system, top/bottom cable terminal	M12 screws

EBH3 - Terminal clamps details

Version	Clamp	Drawing of clamp	Cross-section of conductors	Cu busbar	Tightening torque	Dimensions and spacing of holes for installation of EBH 3 on mounting plate
EBH 3	S-bridge clamp 2 x M8 x 35		Cu/Al conductor 50 - 185 mm ²	Maximum busbar width 35 mm	10 Nm*	
	M12 x 30 screw		conductor with lug terminal up to 240 mm ²		20 Nm*	

For stranded conductors using cable ferrules is recommended
*using of torque wrench is recommended

Horizontal fuse switch disconnector electronic fuse monitoring module*

L1, L2, L3 diodes are on - all three phases are supplied, all fuse links are operational.

————> Relay contacts: [21..22] - closed; [13..14] - opened

L1, L2, L3 diodes are flashing - all three phases are supplied, fuse links operated

————> Relay contacts: [21..22] - opened; [13..14] - closed

L1, L2, L3 diodes are off - two or more phases are not supplied or fuse links are removed.

————> Relay contacts: [21..22] - opened; [13..14] - closed

Parameters

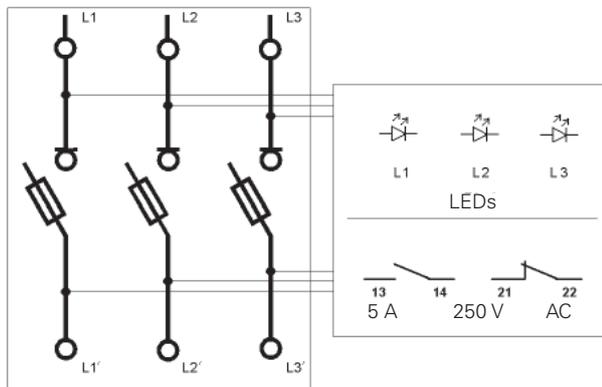
Operating voltage AC - 400 - 690 V, 40 - 60 Hz;

Relay parameters 5 A , 250 V~

CAUTION! Use only with fuse links with non-isolated gripping lugs!



EBH00-X
with electronic fuse monitoring module



Fuse switch disconnector

Electronic fuse monitoring module

disconnector contact position during normal operation

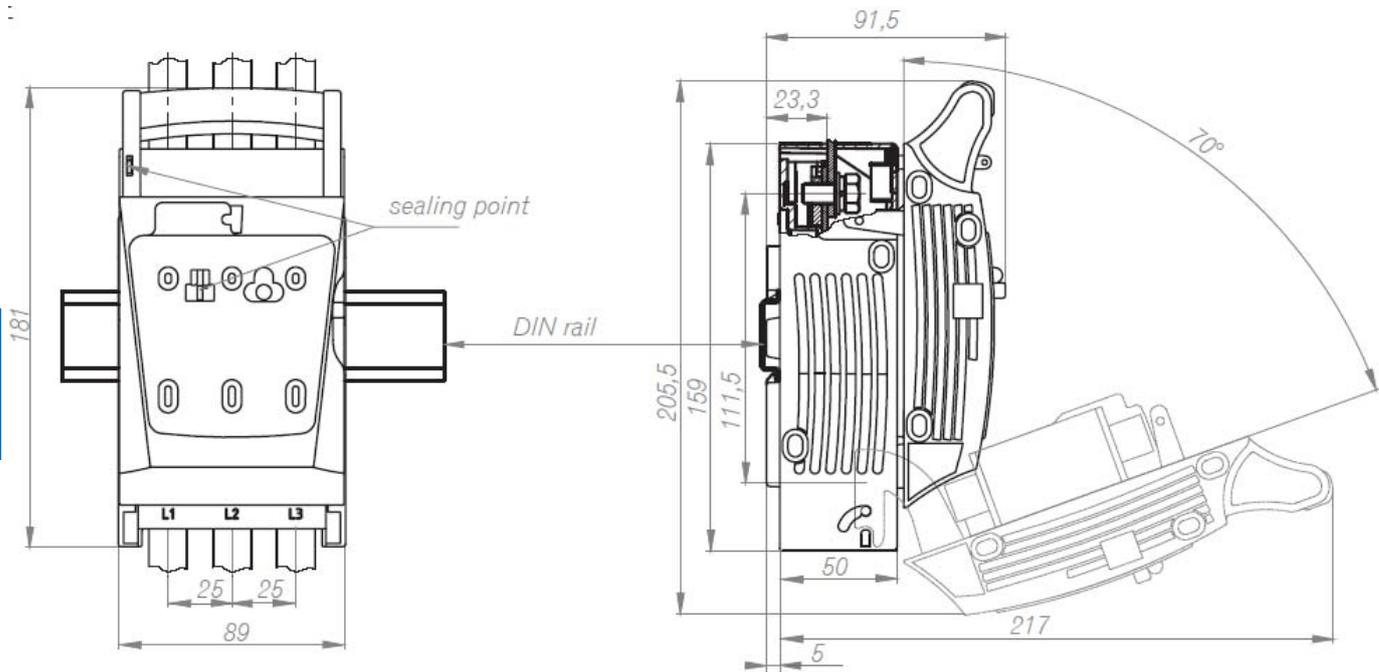
Electronic fuse monitoring module, cable terminal - S-bridge clamps installation details

Catalogue number	Description
EBH0003TS5-TE	For installation on mounting plate, power supply connected to top cable terminals
EBH0003TS5-BE	For installation on mounting plate, power supply connected to top bottom terminals
EBH0013TTS5-E	For installation on 60 mm busbar system, top cable terminals
EBH0013TBS5-E	For installation on 60 mm busbar system, bottom cable terminals
EBH103TS8-TE	For installation on mounting plate, power supply connected to top cable terminals
EBH103TS8-BE	For installation on mounting plate, power supply connected to top bottom terminals
EBH113TTS8-E	For installation on 60 mm busbar system, top cable terminals
EBH113TBS8-E	For installation on 60 mm busbar system, bottom cable terminals
EBH123TTS8-E	For installation on 100 mm busbar system, top cable terminals
EBH123TBS8-E	For installation on 100 mm busbar system, bottom cable terminals
EBH203TS8-TE	For installation on mounting plate, power supply connected to top cable terminals
EBH203TS8-BE	For installation on mounting plate, power supply connected to top bottom terminals
EBH213TTS8-E	For installation on 60 mm busbar system, top cable terminals
EBH213TBS8-E	For installation on 60 mm busbar system, bottom cable terminals
EBH223TTS8-E	For installation on 100 mm busbar system, top cable terminals
EBH223TBS8-E	For installation on 100 mm busbar system, bottom cable terminals

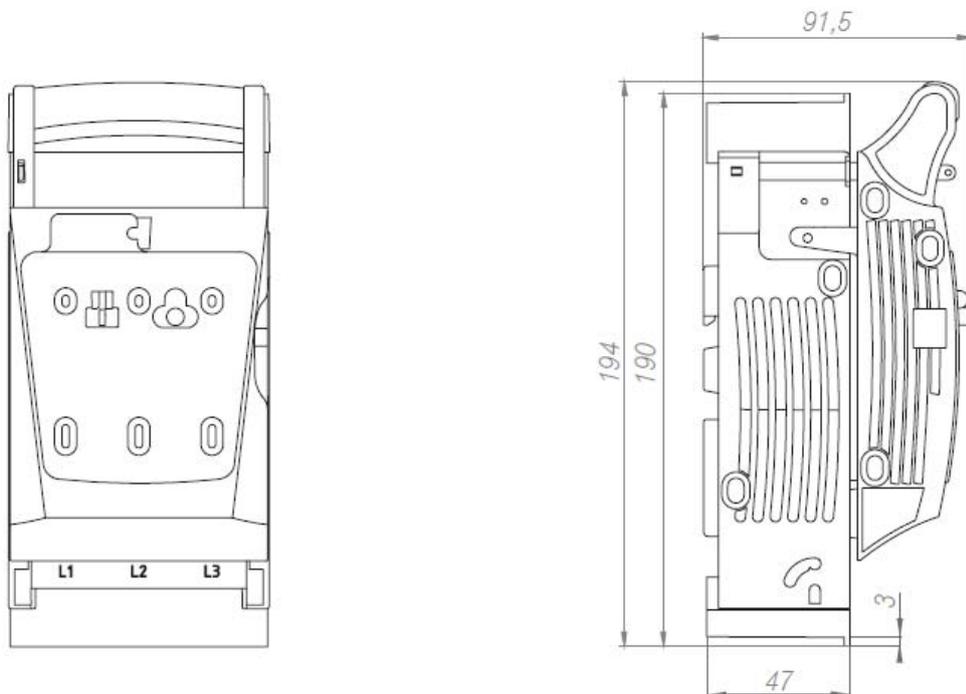
* Available upon request. Please contact Eaton's application engineering department for further details: buletechnical@eaton.com

EBH Horizontal Fuse switch disconnecter - Outline drawings (mm)

EBH000 Mounting plate installation, S-Bridge clamps and M Screws

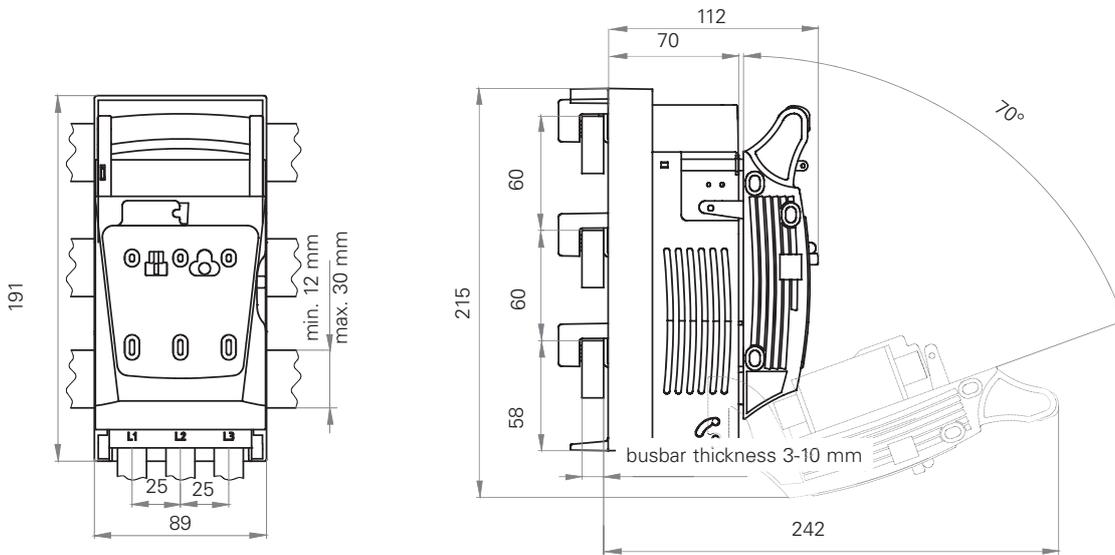


EBH000 Mounting plate installation, S-Bridge clamps and M Screws with lengthened terminal shrouds

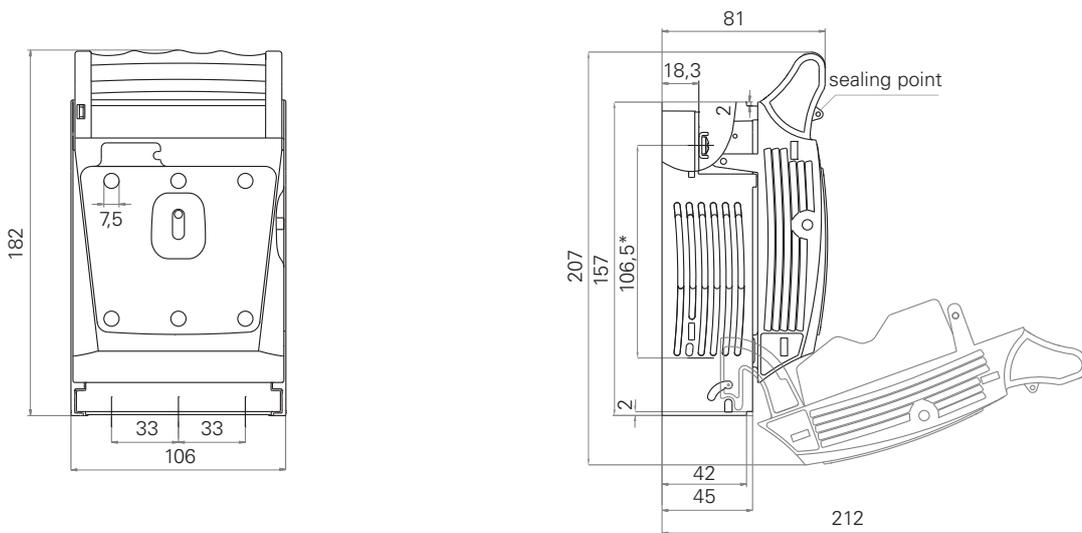


EBH Horizontal fuse switch disconnecter - Outline drawings (mm)

EBH000 - 60 mm busbar system busbar installation



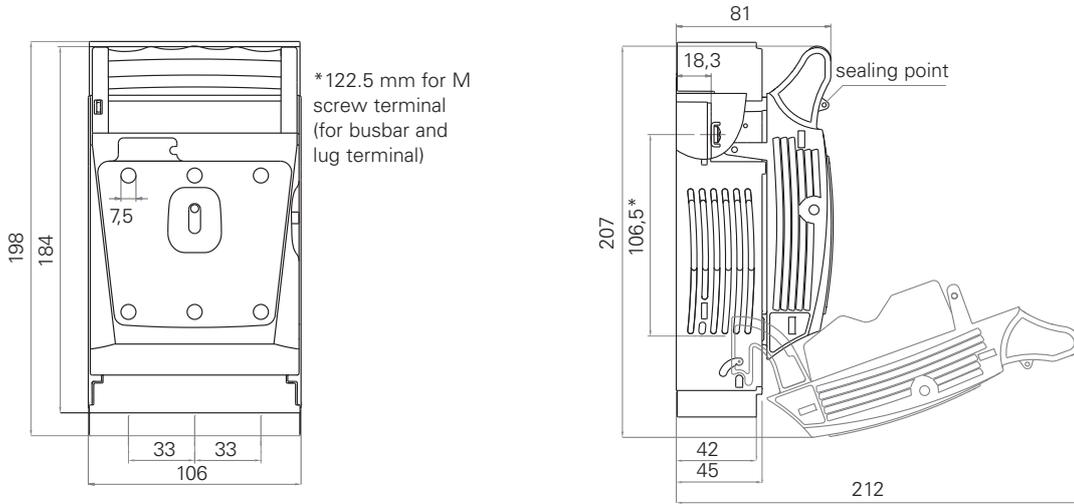
EBH00 Mounting plate installation



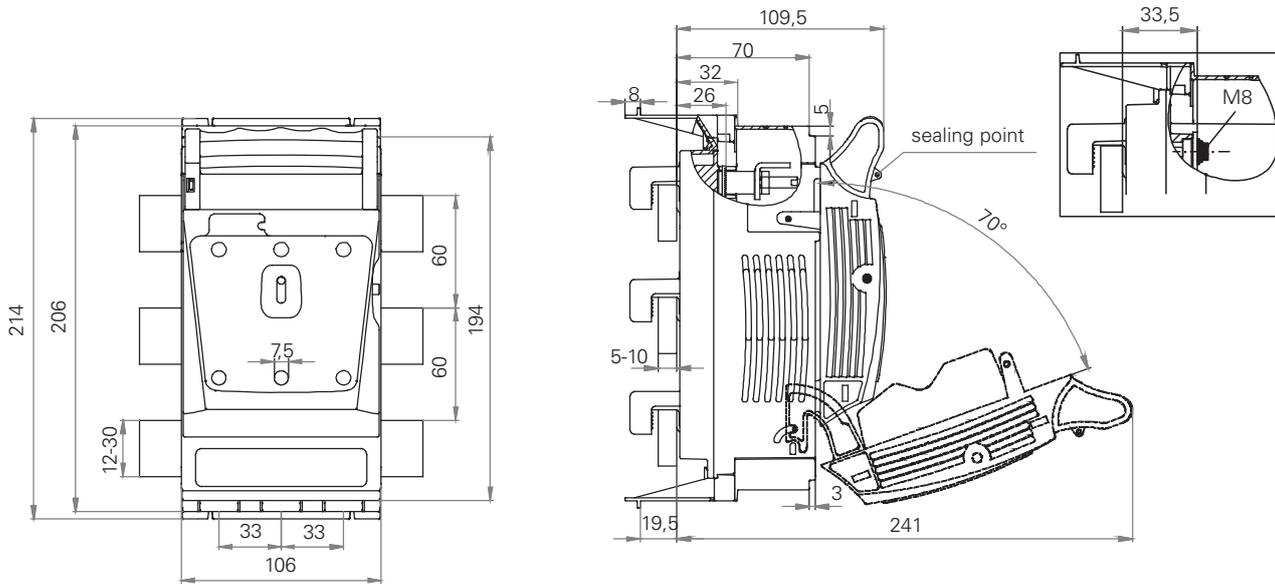
*122.5 mm for M screw terminal (for busbar and lug terminal)

EBH Horizontal fuse switch disconnecter - Outline drawings (mm)

EBH00 Mounting plate installation with lengthened terminal shroud

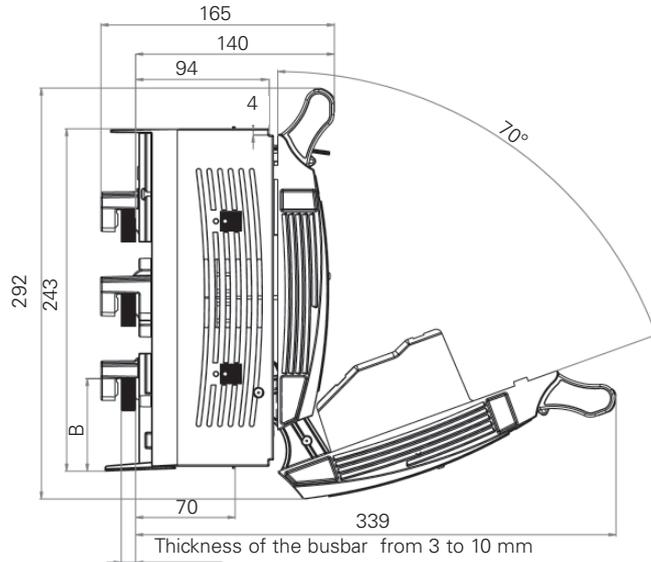
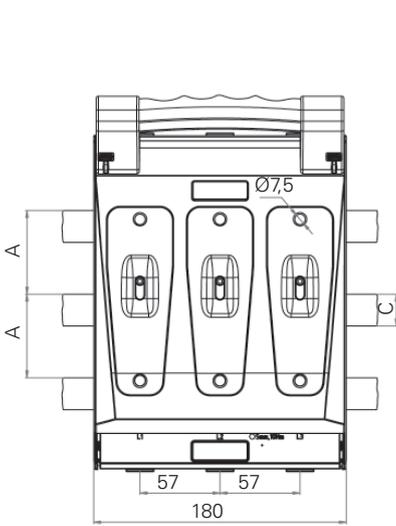


EBH003T Installation on 60 mm busbar



EBH Horizontal fuse switch disconnecter - Outline drawings (mm)

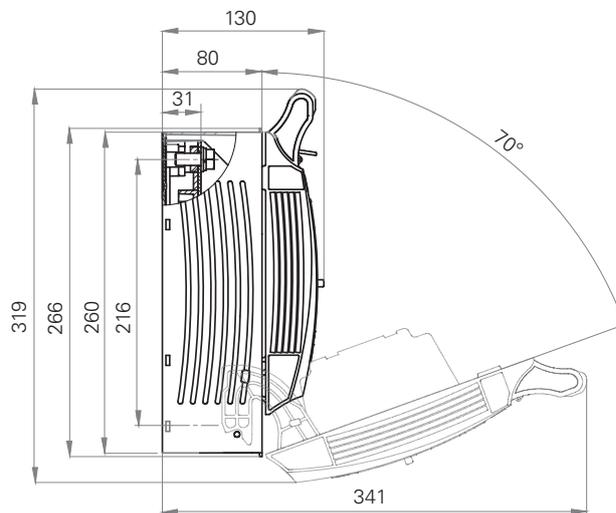
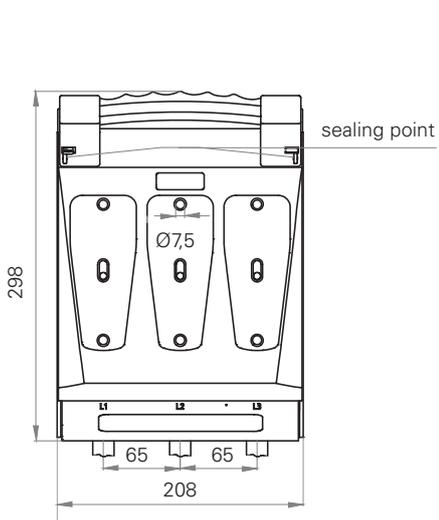
EBH1 60 mm and 100 mm busbar installation



A	B	C
60 mm	66 mm	max. 30 mm
100 mm	27 - 66 mm	max. 60 mm

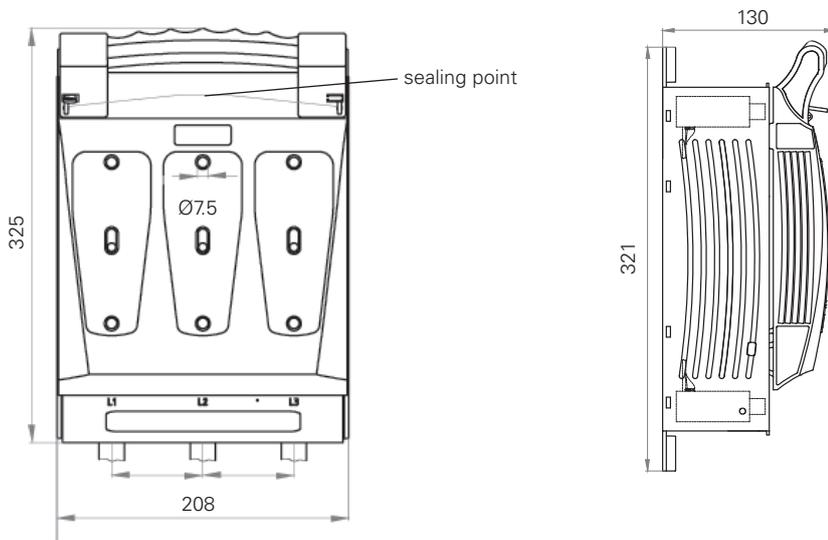
M,S,V types of clamps

EBH2 Mounting plate installation S-Bridge clamps and M Screws

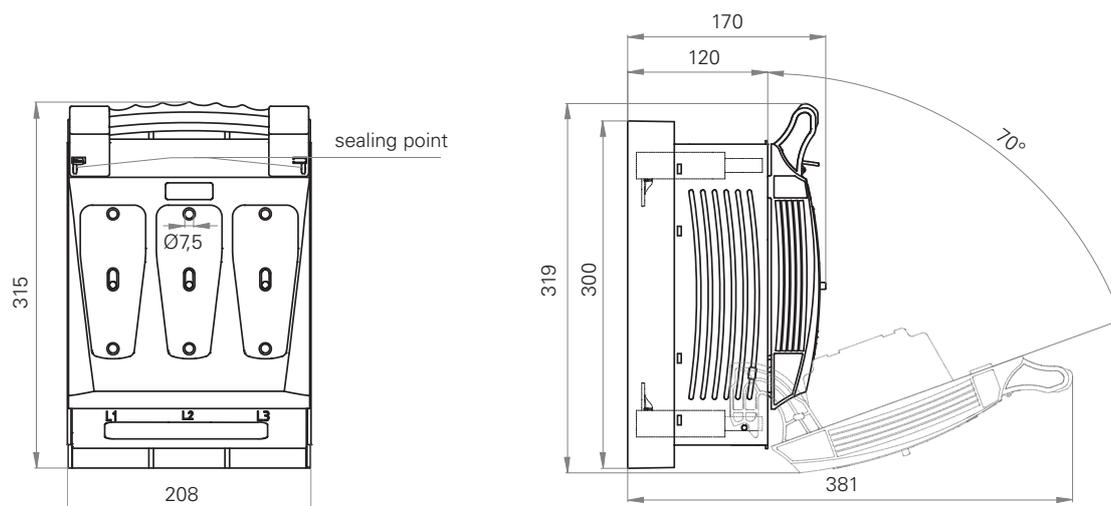


EBH Horizontal fuse switch disconnecter - Outline drawings (mm)

EBH2 Mounting plate installation , V-clamps

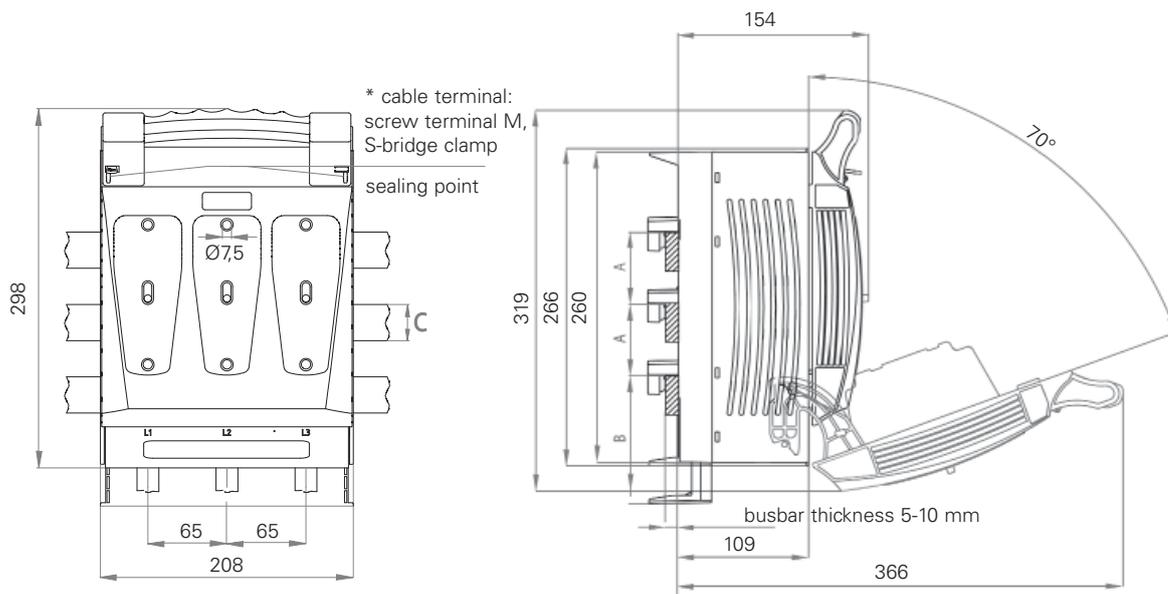


EBH2 Mounting plate installation, double V-clamps

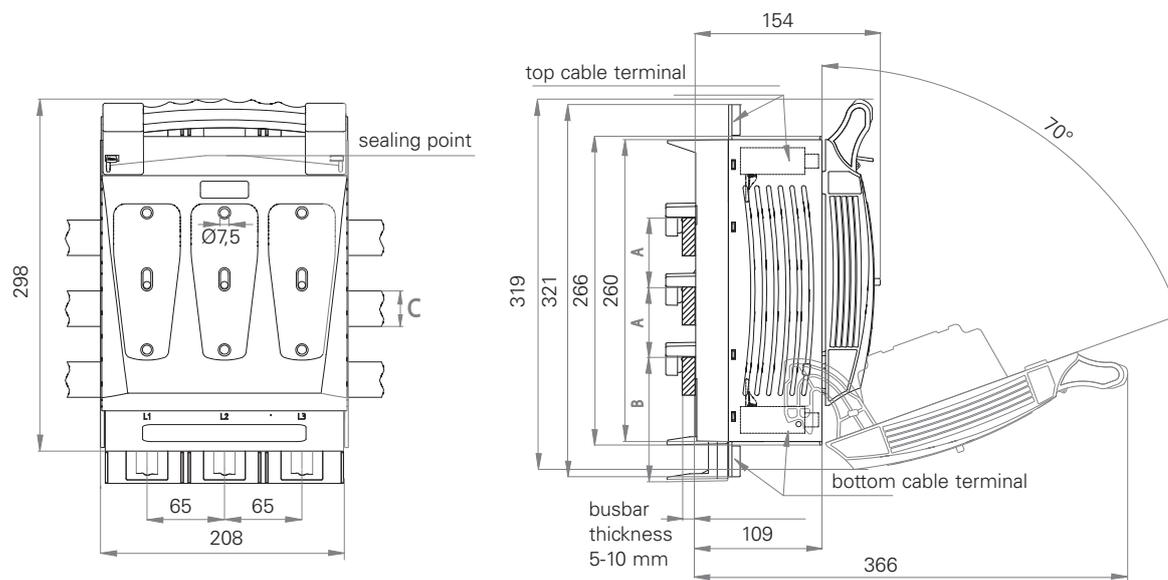


EBH Horizontal fuse switch disconnecter - Outline drawings (mm)

EBH2 Installation on 60 mm and 100 mm busbar, M Screws



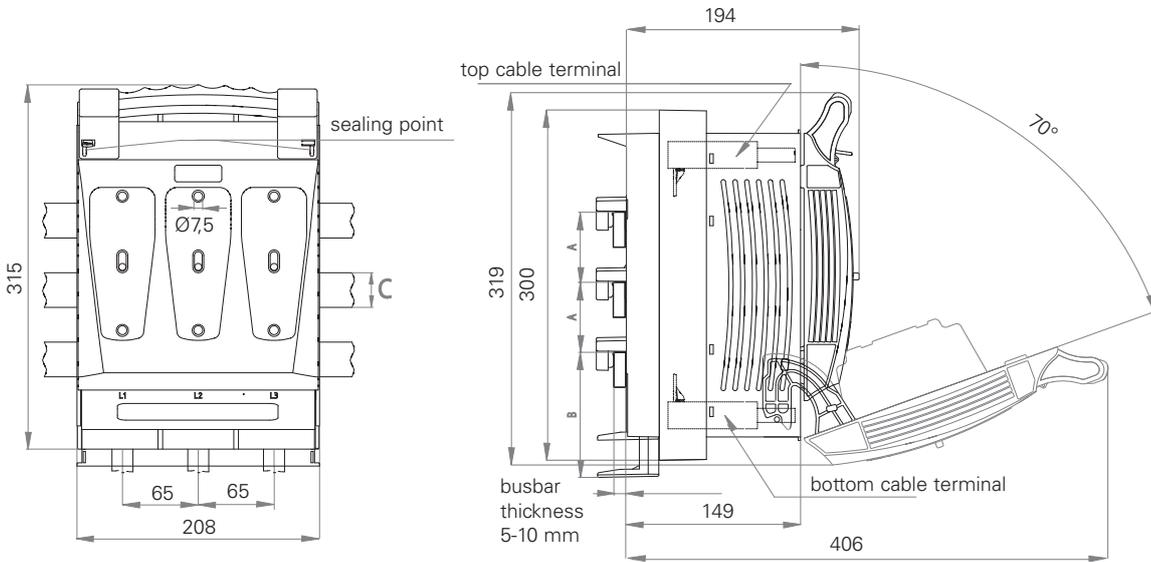
EBH2 Installation on 60 mm and 100 mm busbar, V-clamps



A	B	C
60 mm	75 mm	max. 30 mm
100 mm	35 - 67 mm	max. 60 mm

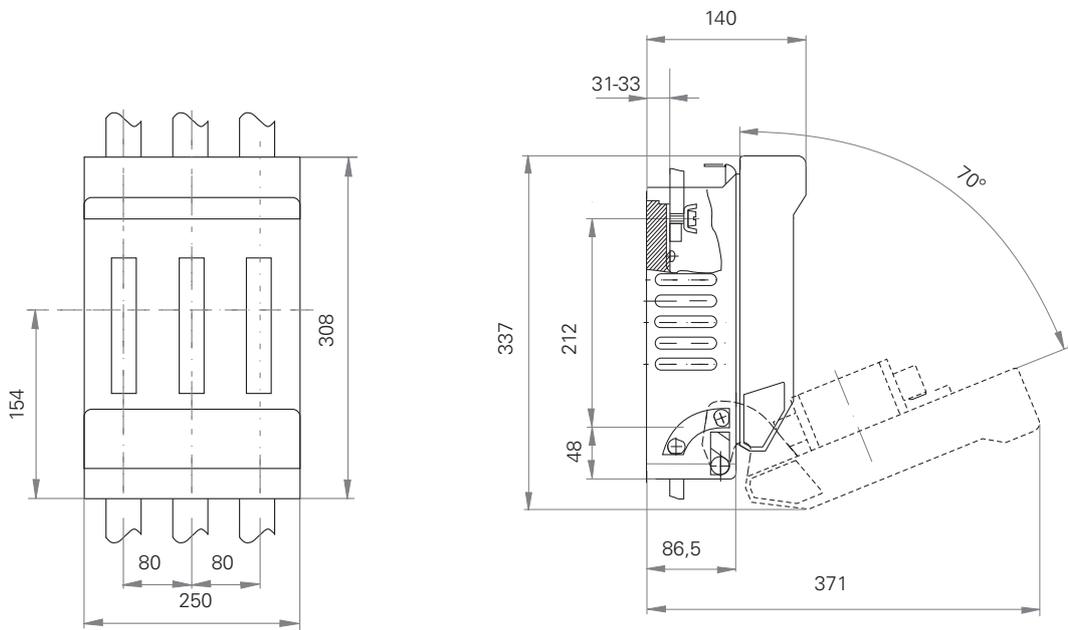
EBH Horizontal fuse switch disconnecter - Outline drawings (mm)

EBH2 Installation on 60 mm and 100 mm busbar, double V-clamps



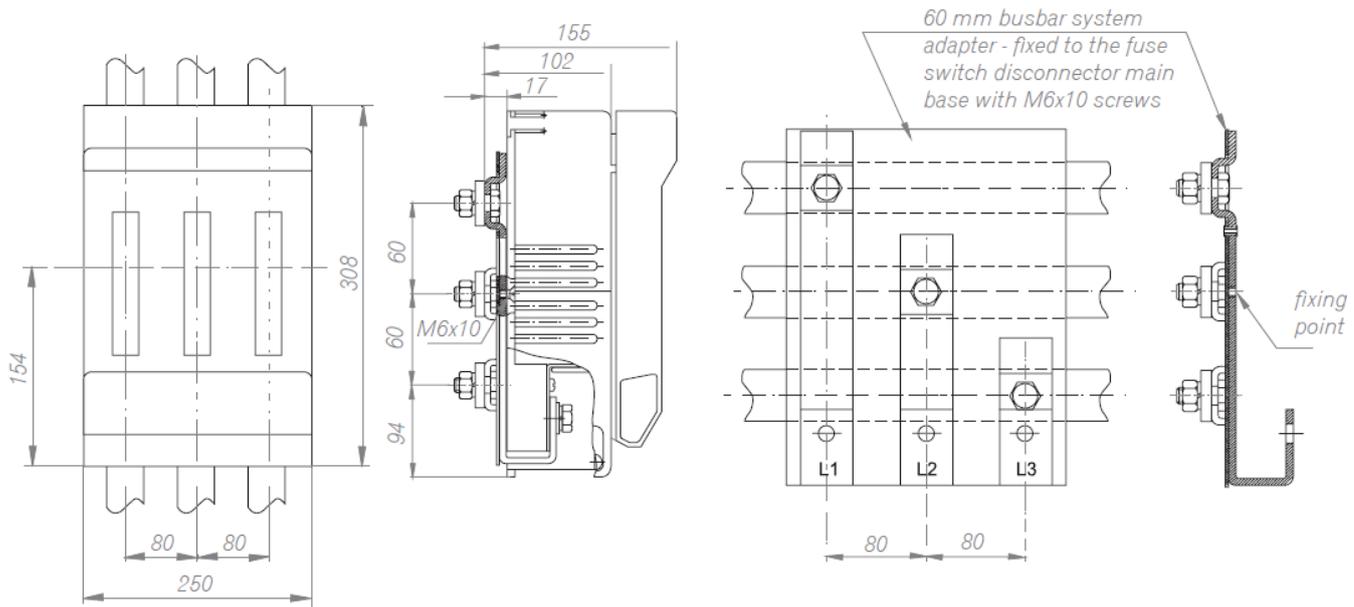
A	B	C
60 mm	75 mm	max. 30 mm
100 mm	35 - 67 mm	max. 60 mm

EBH3 Mounting plate installation, S bridge and M Screws



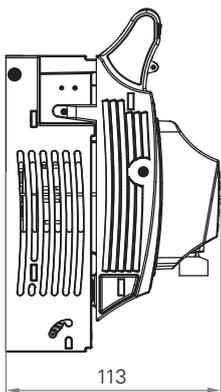
EBH Horizontal fuse switch disconnecter - Outline drawings (mm)

EBH3 60 mm busbar installation, M Screws

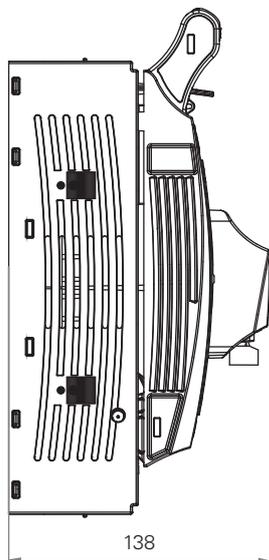


EBH with electronic modules width - mm

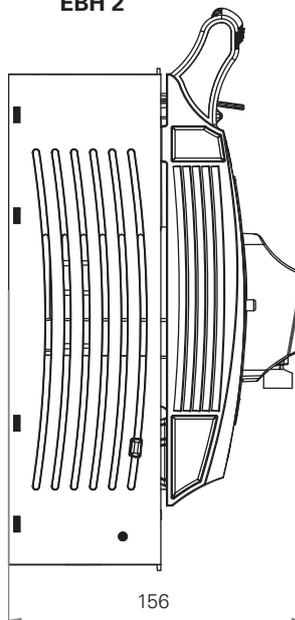
EBH 00



EBH 1



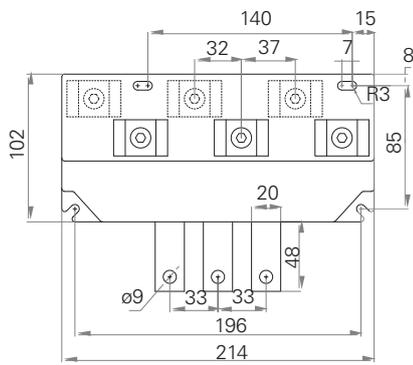
EBH 2



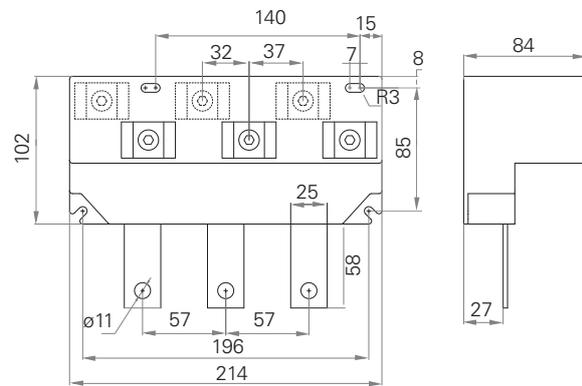
EBH Horizontal fuse switch disconnecter - Outline drawings (mm)

Terminal adaptors

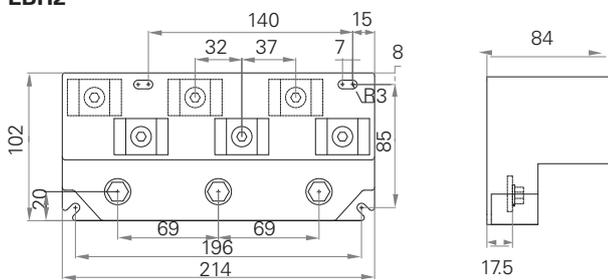
EBH 00



EBH1



EBH2



EBH

EBH Horizontal fuse switch disconnecter - Accessories

EBH000

EBHA1 - Feeding bridge

Feeding bridge EBH 000 25-95 mm² (1 set - 3 pcs.) for connection of conductor of cross-section

25 - 70 mm²  25 - 95 mm² 



EBHA2 - Auxiliary contacts

Auxiliary contacts (microswitch)
AC-15 U_e 230 V~ I_e 2,5 A
DC-13 U_e 230 V~ I_e 0,3 A



EBHA3 - Additional terminal shroud

Additional terminal shroud „O“ extends shroud length of 25 mm



EBH00

EBHA4 - Feeding bridge

Feeding bridge clamp EBH 00 25 - 95 mm² (1 set - 3 pcs.) for connection of conductor of cross-section

25 - 70 mm²  25 - 95 mm² 



EBHA5 - Clamp

Clamp for EBH 00
2 x 25 mm² 1 x 16 mm²



EBHA6 - Clamp

Clamp for EBH 00 4 x 10 mm²



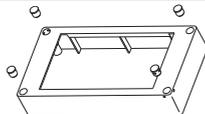
EBHA7 - Auxiliary contacts (microswitch)

Auxiliary contacts (microswitch)
AC-15 U_e 230 V~ I_e 2,5 A
DC-13 U_e 230 V~ I_e 0,3 A



EBHA8 - Full cover (matt)

Full cover matt



EBHA9 - Terminal adaptor

Terminal adaptor + 3 x clamp + terminal shroud



EBH 1

EBHA10 - Terminal adaptor

Terminal adaptor EBH1
3 x V-clamp + terminal shroud



EBH 1 and EBH2

EBHA11 - Auxiliary contacts microswitch

Auxiliary contacts microswitch
AC-15 U_e 230 V ~ I_e = 2.5 A
DC-13 U_e 230 V ~ I_e = 0.3 A



EBH2

EBHA12 - Terminal adaptor

Terminal adaptor EBH2
3 x V-Clamp + terminal shroud



EBH3

EBHA13 - Auxiliary contacts

Auxiliary contacts (microswitch)
AC-15 U_e 110/230/400 V~ I_e = 1 A
DC-13 U_e 48/110/220 V~ I_e = 0.5 A
screw terminals
conductors cross-section:
– solid – 1 x 0.5 = 1 mm²
– stranded – 1 x 0.5 = 0.75 mm²





EBV

Vertical fuse switch disconnecter

- Fibre glass strengthened, self extinguishing thermoplastics of V0 flammability class
- Double clearance between open contacts
- Arc chutes with deionisation plates over every contact
- Reversible - top/bottom cable terminal connection
- Wide range of accessories

EBV Introduction	54-55
EBV Technical data	55
EBV Catalogue numbers structure	56
EBV00 100 mm busbar system	57-58
EBV00 185 mm busbar system	59-60
EBV2 185 mm busbar system	61-62
EBV3 185 mm busbar system	61 and 63
EBV2 and EBV 3 Fuse disconnecter with lateral busbar terminal	64
EBV with electronic fuse monitoring module	65-66
Outline drawings	67-71
Accessories	72-73

Applications

EBV vertical fuse switch disconnectors are designed for distribution of electricity and protection against short circuits and overloads in three phase. They are designed to be used with NH fuse links and are meant for direct installation on horizontal or vertical busbar systems.

EBV fuse switch disconnectors conform to IEC 60947-1- and IEC 60947-3 standards. EBV fuse switch disconnectors are designed for applications which require reliability and safety like low voltage distribution boards installed in transformer substations, industrial low voltage distribution boards and cable cabinets.

Removal of fuse links is simple and safe. Once the fuse links are removed, there is a large isolating distance clearly visible. Mounting and cable termination is simple and can be accomplished by one person only using insulated equipment.

EBV fuse switch disconnectors are designed to perform the following functions:

- Protection,
- Energy distribution,
- Earthing,
- Switching,
- Touch protection.

Sizes

EBV fuse switch disconnectors are designed for installation onto 185 mm busbar system. They are available in following sizes (according to rated current):

- 00 (160 A)
- 2 (400 A)
- 3 (630 A and 1250 A upon request)

EBV size 00 are manufactured in two versions depending on busbar system:

- **EBV00/100mm** fuse switch disconnector (160 A) for installation on 100 mm busbar system. Installation on 185 mm busbar system is possible by using an adaptor.
- **EBV00** fuse switch disconnector (160 A) for installation on 185 mm busbar system.

Construction

EBV fuse switch disconnectors are manufactured in two versions:

- One-pole switching (separately each pole)
- Three-pole switching (three poles simultaneously)

They are manually operated, consequently making and breaking is dependant on the speed of operation.

Main base of fuse switch disconnector EBV is made of halogen free, fibre glass strengthened, self extinguishing, thermoset polyester of V0 flammability class. Other plastic parts of fuse switch disconnectors EBV are made of halogen free fibre glass strengthened, thermoplastic polyamides.

Silver plated contacts provide low power loss. Depending on clamp type, EBV fuse switch disconnectors enable user to connect circular or sector-shaped conductors with busbar ends or conductors with lug terminals. Arc chute with deionization plates are installed over each contact ensuring better arc extinction and exhaust of arc plasma. Protection degree of IP30 from the front is provided.

Additional accessories enable to install EBV fuse switch disconnectors of different sizes on common busbar systems. All sizes of EBV fuse switch disconnectors are provided complete with clamps (i.e. screws, V-terminals, 2V-terminals) and shrouds for cable terminals.

The making and breaking operations has to be done with adequate force since these are manually operated switches

Parallel moving, double contact system.

Fuse switch disconnectors width: 50, 100 and 200 mm.

Suitable for top cable terminal connection.

Flexibility to terminate circular or sector-shaped busbar conductors for V or 2V terminals. Conductors with lugs can be terminated with screw terminals.

Voltage test can be performed through test holes leading to blade contacts.

Operating conditions

- To be installed in a room free of any dust, aggressive or explosive gases
- Altitude up to 2000 meters above sea level
- Outdoor – in cabinets with protection degree > IP 34
- Ambient temperature from -25°C to +55°C
- Relative humidity of the air should not be higher than 50 percent at temperature of +40°C

Technical data

Description	Rated voltage	EBV00 100 mm	EBV00	EBV2	EBV3	EBV3-1250
Rated thermal current $I_{th}=I_n$ with fuse links	-	160 A	160 A	400 A	630 A	-
Rated thermal current I_{th} with solid links		-	-	600 A	750 A	1250 A
Rated voltage U_n		690 V a.c.	690 V a.c.	690 V a.c.	690 V a.c.	400 V a.c.
Utilisation category	690 V a.c.	AC-22B	AC-22B	AC-22B	AC-21B	-
	500 V a.c.	-	-	-	AC-22B	-
	400 V a.c.	AC-23B	AC-23B	AC-23B	AC-23B	AC-22B
Rated switching current I_e	-	160 A	160 A	400 A	630 A	1250 A
Rated short-circuit making current	690 V a.c.	25 kA	80 kA	100 kA	80 kA	-
	500 V a.c.	25 kA	-	100 kA	100 kA	-
	400 V a.c.	25 kA	100 kA	100 kA	100 kA	-
Rated short-circuit withstand current	690 V a.c.	100 kA	80 kA	100 kA	80 kA	-
	500 V a.c.	100 kA	-	100 kA	100 kA	-
	400 V a.c.	100 kA	100 kA	100 kA	100 kA	-
Rated insulation voltage U_i	-	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp}		8 kV	12 kV	12 kV	12 kV	12 kV
Rated short time withstand current I_{cw}		-	-	12 ¹⁾ /15 ²⁾ kA	14 ¹⁾ /16 ²⁾ kA	15/20 ³⁾ kA
Rated frequency		50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Mechanical durability (Number of cycles)		1600	1600	1000	1000	600
Electrical durability (Number of cycles)		200	200	200	200	100
IP degree of protection (IP)		30	20	30	30	30
Compatible NH Fuse links body size		00	00	1, 2	3	solid links

¹⁾ For disconnectors 1-phase disconnected

²⁾ For disconnectors 3-phase disconnected

³⁾ With mechanical lock

Catalogue numbers structure

Vertical fuse switch disconnecter	NH Fuse link size	Mounting type	Poles	Switching type	Terminal clamps details	Electronic module or Lateral busbar
EBV	00	11 = 185 mm busbar with heightened rails	1 = one-pole	S = Each phase switching separately	M1 = Screw terminals with pressed nuts	-E = Electronic fuse monitoring module
	2	23 = 100 mm busbar system	3 = three-pole	T = Simultaneous 3 phase switching	M2 = Screw terminals with pressed nuts M12	-L = Lateral busbar terminal - Left side
	3				S8 = Screw terminals with M8 Screws	-R = Lateral busbar terminal - Right side
		33 = 185 mm busbar system			V0 = V-terminals without V-clamps	
					V1 = V-terminals with V-clamps	
					W0 = 2-V Terminals without double V-clamps	
					W1 = 2-V Terminals with double V-clamps	

Miscellaneous part: EBV3-12150-3-2M-L and EBV3-1250-3-3M-R see details page 64

Example: EBV233SV1

Catalogue number **EBV233SV1** represents a vertical fuse switch disconnecter, for NH Fuse link size **2**, suitable for 185 mm busbar system **33**, each phase switching separately **S**, with V-terminals and V-clamps **V1**.

Ordering code information	Type designation
Product type	EBV
NH Fuse link size	2
Mounting type	3
Number of poles	3
Simultaneous or separate switching	S
Terminal clamps	V1
Complete part numbers	EBV 2 3 3 S V1

EBV00 Vertical fuse switch disconnecter, size 00, 160 A, 690 V, 100 mm busbar system

For installation on 100 mm busbar system
Fuse switch disconnecter's width 50 mm
Three pole switching - all phases simultaneously



EBV 00/100 mm

EBV00 Vertical fuse switch disconnecter, size 00, 160 A, 690 V, 100 mm busbar system

EBV00 / 100 mm busbar system - Technical data

Description	EBV00 / 100 mm
Rated thermal current $I_{th}=I_n$	160 A
Rated voltage U_n	690 V a.c.
Utilisation category	AC-22B AC-23B
Rated switching voltage U_e	690 V a.c. 400 V a.c.
Rated switching current I_e	160 A
Rated short circuit making current	25 kA
Rated short circuit withstand current	100 kA
Rated insulation voltage U_i	1000 V
Rated impulse withstand voltage U_{imp}	8 kV
Rated frequency	50-60 Hz
Mechanical durability (number of cycles)	1600
Electrical durability (number of cycles)	200
IP degree of protection (IP)	30
Compatible NH Fuse link body size	00
Accessories see page 72	



EBV00 - Catalogue numbers

100 mm busbar system		Weight
Three pole switching - all phases simultaneously (for installation on 100 mm busbar system)		
EBV0023TS8	cable terminals: bridge terminals with bridge clamps (S) 4-70 mm ² , screw terminals with M8 screws	1,3 kg
EBV0023TV1	cable terminals: V-terminals with V-clamps 25-120 SW	1,5 kg
EBV0023TV0	cable terminals: V-terminals, without V-clamps	1,3 kg

EBV00 Terminal clamps details

Description	S-bridge clamp 2 x M5 x 25	M8 screw*	V-clamp 25-120 SW	HM 10-120
Clamp				***
Outline drawing				
Cross-section of conductors	4 - 70 mm ²	Conductor with lug terminal max 185 mm ²	re ● 16 mm ² - 95 mm ² se ● 25 mm ² - 120 mm ² rm ● 16 mm ² - 95 mm ² sm ● 25 mm ² - 120 mm ²	re ● 10 mm ² - 70 mm ² se ● 20 mm ² - 120 mm ² rm ● 10 mm ² - 70 mm ² sm ● 25 mm ² - 95 mm ²
Tightening torque	3 Nm**	12 Nm**	20 Nm**	15 Nm**

For stranded conductors using cable ferrules is recommended

*) Busbars of maximum width of 20 mm and maximum thickness of 5 mm can be fixed to M type screw terminals.

***) using torque wrench is recommended

***) fuse switch disconnectors with V-terminals are equipped with steel V-clamp HM 10-120 on request

Recommend using Eaton V-terminals only. Minimum tightening torque (M8 screw) for screws fixing fuse switch disconnecter to busbar system -12 Nm, recommended tightening torque for screws and nuts with property class 8.8 - 21 Nm

EBV00 Vertical fuse switch disconnecter, size 00, 160 A, 690 V, 185 mm busbar system

For installation on 185 mm busbar system

Fuse switch disconnecter's width 50 mm

Three pole switching - all phases simultaneously - two-hand operation
or one pole switching - each phase independently

EBV00 / 185 mm busbar system - Technical data

Description	EBV00 / 185 mm
Rated thermal current $I_{th}=I_n$	160 A
Rated voltage U_n	690 V a.c.
Utilisation category	AC-22B AC-23B
Rated switching voltage U_g	690 V 400 V
Rated switching current I_g	160 A
Rated short circuit making current	80 kA (690 V a.c.)
	100 kA (400 V a.c.)
Rated short circuit withstand current	80 kA (690 V a.c.)
	100 kA (400 V a.c.)
Rated insulation voltage U_i	1000 V a.c.
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	50-60 Hz
Mechanical durability (Number of cycles)	1600
Electrical durability (Number of cycles)	200
IP degree of protection (IP)	20
Compatible NH Fuse Link body size	00
Accessories see page 72	



EBV 00-S



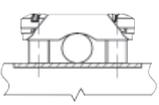
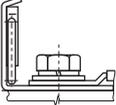
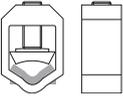
EBV 00-T

EBV00 - Catalogue numbers

185 mm busbar system		Weight
Three-pole switching - each phase independently		
EBV0033SS8	Cable terminals: bridge terminals with bridge clamps (S) 4-70 mm ² , screw terminals with M8 screws	2,6 kg
EBV0033SV1	Cable terminals: V-terminals with V-clamps 25-120 SW	2,7 kg
EBV0033SV0	Cable terminals: V-terminals, without V-clamps	2,6 kg
Three-pole switching - all phases simultaneously		
EBV0033TS8	Cable terminals: bridge terminals with bridge clamps (S) 4-70 mm ² , screw terminals with M8 screws	2,7 kg
EBV0033TV1	Cable terminals: V-terminals with V-clamps 25-120 SW	2,8 kg
EBV0033TV0	Cable terminals: V-terminals, without V-clamps	2,7 kg
EBV 00 with heightened rails adjusted to front line and terminal cover of EBV 2, 3		
One-pole switching - each phase independently		
EBV0011SS8	Cable terminals: bridge terminals with bridge clamps (S) 4-70 mm ² , screw terminals with M8 screws	2,7 kg
EBV0011SV1	Cable terminals: V-terminals with V-clamps 25-120SW	2,8 kg
EBV0011SV0	Cable terminals: V-terminals, without V-clamps	2,7 kg
One-pole switching - all phases simultaneously		
EBV0011TS8	Cable terminals: bridge terminals with bridge clamps (S) 4-70 mm ² screw terminals with M8 screws	2,8 kg
EBV0011TV1	Cable terminals: V-terminals with V-clamps 25-120 SW	2,9 kg
EBV0011TV0	Cable terminals: V-terminals, without V-clamps	2,8 kg

EBV00 Vertical fuse switch disconnecter, size 00, 160 A, 690 V, 185 mm busbar system

EBV00 / 185 mm busbar system - Terminal clamps details

Description				
Clamp	S-bridge clamp 2 x M5 x 25	M8 screw*	V-clamp 25-120 SW	HM 10-120
				 ***
Outline drawing				
Cross-section of conductors	4 - 70 mm ²	Conductor with lug terminal max 185 mm ²	re ● 16 mm ² - 95 mm ² se ◆ 25 mm ² - 120 mm ²	re ● 10 mm ² - 70 mm ² se ◆ 25 mm ² - 120 mm ²
			rm ⊗ 16 mm ² - 95 mm ² sm ⊗ 25 mm ² - 120 mm ²	rm ⊗ 10 mm ² - 70 mm ² sm ⊗ 25 mm ² - 95 mm ²
Tightening torque	3 Nm**	12 Nm**	20 Nm**	15 Nm**

For stranded conductors using cable ferrules is recommended

*) Busbar of maximum width of 20 mm and maximum thickness of 5 mm can be fixed to M-type screw terminals

**) Using torque wrench is recommended

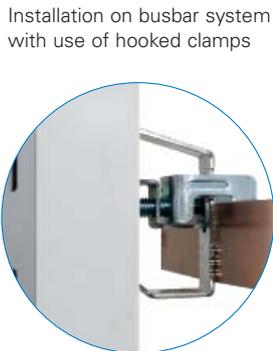
**) Fuse switch disconnectors with V-terminals are equipped with steel V-clamp HM 10-120 on request

Recommend using Eaton V-terminals only. Minimum tightening torque (M8 screw) for screws fixing fuse switch disconnecter to busbar system – 12 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 21 Nm

EBV



EBV 00 version with heightened rails, adjusted to front line and terminal cover of EBV 1, 2, 3 without using adaptor



Installation on busbar system with use of hooked clamps



Or screws

Fuse switch disconnecter with cable terminals at the top

Parking position



EBV00-S



EBV00-T



EBV00-T



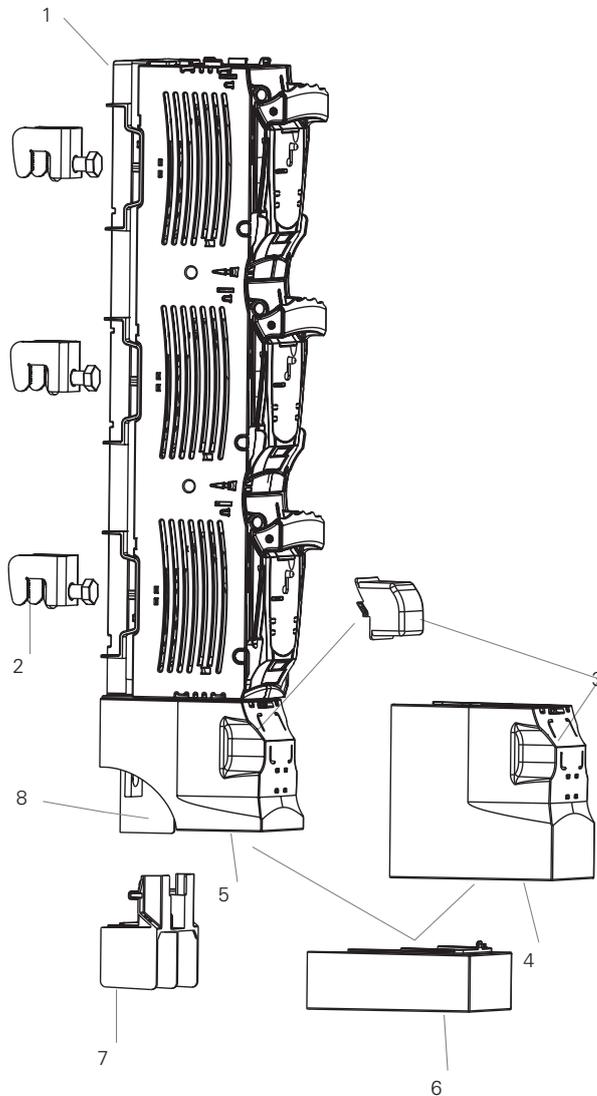
EBV00-S

Vertical fuse switch disconnecter, EBV2 size 2, 400 A and EBV3 size 3 630 A, 690 V a.c. 185 mm busbar system

For installation on 185 mm busbar system

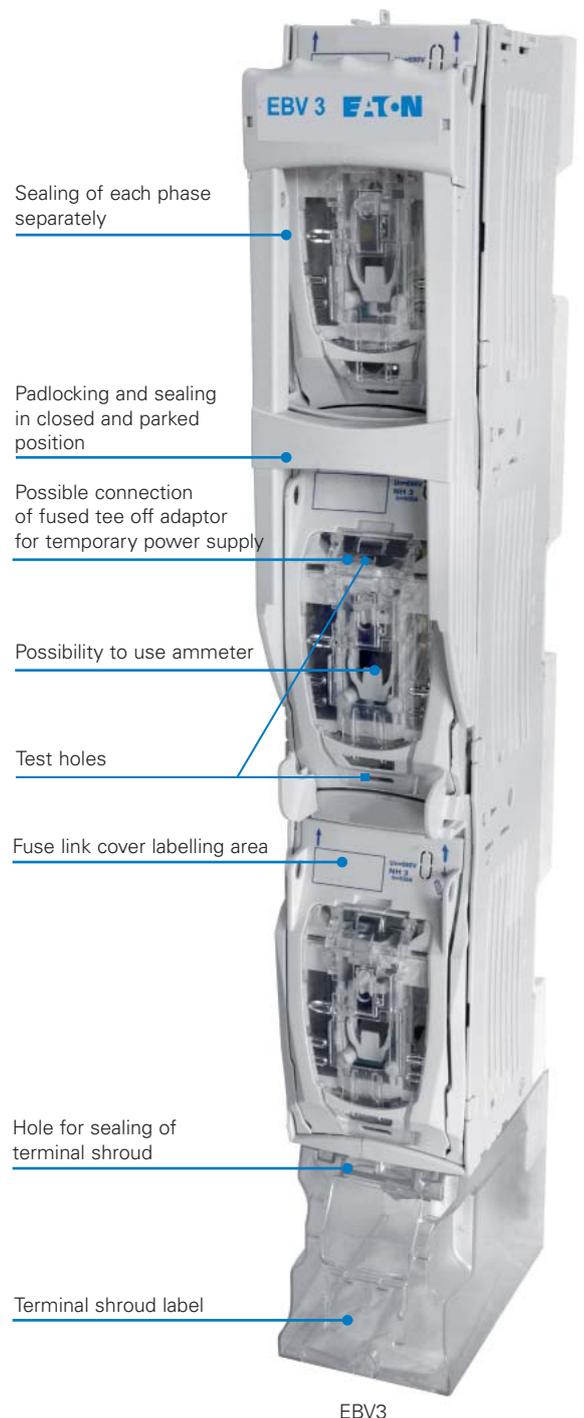
Fuse switch disconnecter's width 100 mm

Three pole switching - all phases simultaneously or one pole switching - each phase independently



Description

- 1 - Main base
- 2 - Hooked clamp – for installation on busbar system
- 3 - Terminal shroud for fuse switch disconnecter with double V-clamps (2 x 240 mm²)
- 4 - Terminal shroud (long)
- 5 - Terminal shroud (short)
- 6 - Bottom adjusting shroud
- 7 - Cable terminal protective cover
- 8 - protective busbar barrier



EBV3

EBV2 Vertical fuse switch disconnecter, size 2, 400 A, 690 V, 185 mm busbar system

Designed for operation with NH1 and NH2 fuse links

EBV2 / 185 mm busbar system - Technical data

Description	EBV2 / 185 mm
Rated thermal current $I_n=I_n$ with fuse links	400 A
Rated thermal current I_n with solid links	600 A
Rated voltage U_n	690 V a.c.
Utilisation category	AC-22B AC-23B
Rated switching voltage U_p	690 V a.c. 400 V a.c.
Rated switching current I_p	400 A
Rated short circuit making current	100 kA
Rated short circuit withstand current	100 kA
Rated insulation voltage U_i	1000 V a.c.
Rated impulse withstand voltage U_{imp}	12 kV
Rated short time withstand current I_{cw}	12 ¹ /15 ² kA
Rated frequency	50-60 Hz
Mechanical durability (number of cycles)	1000
Electrical durability (number of cycles)	200
IP degree of protection (IP)	30
Compatible NH Fuse link body size	1, 2
Accessories see page 73	

¹⁾ for disconnectors 1-phase disconnected

²⁾ for disconnectors 3-phase disconnected



EBV233S

EBV233T

EBV2 - Catalogue numbers

185 mm busbar system		Weight
Three-pole switching - each phase independently		
EBV233SV1	Cable terminals: V-terminals with V-clamps 240 mm ²	5,8 kg
EBV233SM1	Cable terminals: screw terminals with pressed nuts M10	5,7 kg
EBV233SW1	Cable terminals: 2V-terminals with double V-clamps 240 mm ²	6,4 kg
EBV233SV0	Cable terminals: V-terminals without V-clamps	5,5 kg
EBV233SW0	Cable terminals: 2V-terminals without double V-clamps	6,9 kg
Three-pole switching - all phases simultaneously		
EBV233TV1	Cable terminals: V-terminals with V-clamps 240 mm ²	5,8 kg
EBV233TM1	Cable terminals: screw terminals with pressed nuts M10	5,7 kg
EBV233TW1	Cable terminals: 2V-terminals with double V-clamps 240 mm ²	6,4 kg
EBV233TV0	Cable terminals: V-terminals without V-clamps	5,5 kg
EBV233TW0	Cable terminals: 2V-terminals without double V-clamps	5,9 kg

EBV2 - Terminal clamps details

Description	EBV 2 V-Clamps (400 A)		EBV 2 Double V-Clamps		EBV 2 with M10 screw	
Clamp	V-clamp		V-clamp HS		M10 screw (pressed nut)*	
Outline drawing						
Cross-section of conductors	V-clamp for direct fixing of conductor with busbar end with crosssection of:					
	35 - 185 mm ²	35 - 240 mm ²	35 - 185 mm ²	35 - 240 mm ²		
	35 - 240 mm ²	35 - 300 mm ²	35 - 240 mm ²	35 - 300 mm ²		
Tightening torque	30 Nm		40 Nm		32 Nm	

For stranded conductors using cable ferrules is recommended

*) Busbars of maximum width of 40 mm and maximum thickness of 8 mm can be fixed to M type screw terminals when protective busbar barrier between phases is installed.

Recommend using Eaton V-terminals only. Minimum tightening torque (M12 screw) for screws fixing fuse switch disconnecter to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm

EBV3 Vertical fuse switch disconnecter, size 3, 630 A, 690 V, 185 mm busbar system

EBV3 / 185 mm busbar system - Technical data

Description	EBV3 / 185 mm		
Rated thermal current $I_{th}=I_n$ with fuse links	630 A		
Rated thermal current I_{th} with solid links	750 A		
Rated voltage U_n	690 V a.c.		
Utilisation category	AC-22B	AC-23B	AC-21B
Rated switching voltage U_e	500 V a.c.	400 V a.c.	690 V a.c.
Rated switching current I_e	630 A		
Rated short circuit making current	80 kA (690 V a.c.)		
	100 kA (500 V a.c.)		
Rated short circuit withstand current	100 kA		
Rated insulation voltage U_i	1000 V a.c.		
Rated impulse withstand voltage U_{imp}	12 kV		
Rated short time withstand current I_{sw}	12 ¹⁾ /15 ²⁾ kA		
Rated frequency	50-60 Hz		
Mechanical durability (Number of cycles)	1000		
Electrical durability (Number of cycles)	200		
IP degree of protection	30 IP		
Compatible NH Fuse link body size	3		
Accessories see page 73			

¹⁾ for disconnectors 1-phase disconnected

²⁾ for disconnectors 3-phase disconnected



EBV333S

EBV333T

EBV3 - Catalogue numbers

185 mm busbar system		Weight
Three-pole switching - each phase independently		
EBV333SV1	Cable terminals: V-terminals with V-clamps 240 mm ²	6,6 kg
EBV333SM2	Cable terminals: screw terminals with pressed nuts M12	6,5 kg
EBV333SW1	Cable terminals: 2V-terminals with double V-clamps 240 mm ²	7,2 kg
EBV333SV0	Cable terminals: V-terminals without V-clamps	6,3 kg
EBV333SW0	Cable terminals: 2V-terminals without double V-clamps	6,7 kg
Three pole switching - all phases simultaneously		
EBV333TV1	Cable terminals: V-terminals with V-clamps 240 mm ²	6,6 kg
EBV333TM2	Cable terminals: screw terminals with pressed nuts M12	6,5 kg
EBV333TW1	Cable terminals: 2V-terminals with double V-clamps 240 mm ²	7,2 kg
EBV333TV0	Cable terminals: V-terminals without V-clamps	6,3 kg
EBV333TW0	Cable terminals: 2V-terminals without double V-clamps	6,7 kg

EBV3 - Terminal clamps details

Description	EBV 3 V-clamps	EBV 3 Double V-Clamps	EBV 3 M12 Screws	
Clamp	V-clamp 35-300SW-B	V-clamp HS 2/35 240-C	M12 screw (pressed nut)	
Outline drawing				
Cross section of conductors	V-clamp for direct fixing of conductor with busbar end with cross section of:			
	35 - 185 mm ²	35 - 240 mm ²	35 - 185 mm ²	35-240 mm ²
	35 - 240 mm ²	35 - 300 mm ²	35 - 240 mm ²	35 - 300 mm ²
Tightening torque	30 Nm	40Nm	56 Nm	

For stranded conductors using cable ferrules is recommended

*) Busbars of maximum width of 40 mm and maximum thickness of 8 mm can be fixed to M type screw terminals when protective busbar barrier between phases is installed.

Recommend using Eaton V-terminals only. Minimum tightening torque (M12 screw) for screws fixing fuse switch disconnecter to busbar system – 32 Nm, recommended tightening torque for screws and nuts with property class 8.8 – 56 Nm

EBV2 and EBV3 Fuse switch disconnecter with lateral busbar terminal*

EBV2 and EBV3 - Technical data

Description	EBV2	EBV3
Rated thermal current $I_{th}=I_n$	400 A	630 A
Rated voltage U_n	690 V a.c.	690 V a.c.
Utilisation category	AC-22B	AC-22B
Rated switching voltage U_e	690 V a.c.	500 V a.c.
Rated switching current I_e	400 A	630 A
Rated short circuit making current	100 kA	100 kA
Rated short circuit withstand current	100 kA	100 kA
Rated insulation voltage U_i	1000 V a.c.	1000 V a.c.
Rated impulse withstand voltage U_{imp}	12 kV	12 kV
Rated frequency	50-60 Hz	50-60 Hz
Mechanical durability (number of cycles)	1000	1000
Electrical durability (number of cycles)	200	200
IP degree of protection (IP)	30	30
Compatible NH Fuse link body size	2	3
Accessories see page 73		



Lateral busbar terminals

EBV2 and EBV3 - Catalogue numbers

185 mm busbar system		Weight
Fuse switch disconnectors EBV2 - 400A		
Three-pole switching - each phase independently		
EBV233SM2-L	Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - left side	5,1 kg
EBV233SM2-R	Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - right side	5,1 kg
Three-pole switching - all phases simultaneously		
EBV233TM2-L	Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - left side	5,1 kg
EBV233TM2-R	Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - right side	5,1 kg
Fuse switch disconnectors EBV3 - 630 A		
Three-pole switching - each phase independently		
EBV333SM2-L	Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - left side	5,9 kg
EBV333SM2-R	Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - right side	5,9 kg
Three pole switching - all phases simultaneously		
EBV333TM2-L	Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - left side	5,9 kg
EBV333TM2-R	Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - right side	5,9 kg
Fuse switch disconnectors EBV3 - 1250 A		
Three pole switching - all phases simultaneously		
EBV3-1250-3-2M-L	Switch-disconnector 1250 A , equipped with solid-links 1250 A Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - left side	7 kg
EBV3-1250-3-3M-R	Switch-disconnector 1250 A , equipped with solid-links 1250 A Cable terminals: screw terminals with pressed nuts M12, lateral busbar terminal - right side	7 kg

EBV2 and EBV3 with lateral busbar terminals terminal clamps details

Description	EBV 2-x-NL (400 A)	EBV 2-x-NR (400 A)	EBV 3-x-NL (630 A)	EBV 3-x-NR (630 A)
Clamp	M12 screw	M12 screw	M12 screw	M12 screw
Outline drawing				
Lateral busbar terminal	Left side	Right side	Left side	Right side
Tightening torque	56 Nm	56 Nm	56 Nm	56 Nm

*EBV 2 and 3 with lateral busbar terminal available upon request. Please contact Eaton's application engineering department for further details: buletechnical@eaton.com

EBV with electronic fuse monitoring module

Electronic fuse monitoring module

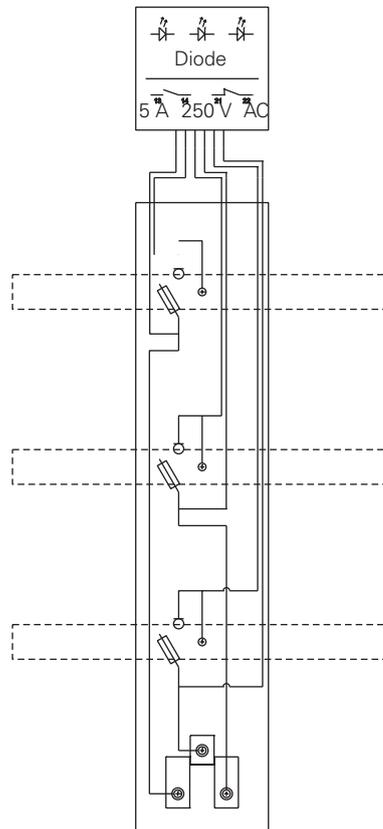
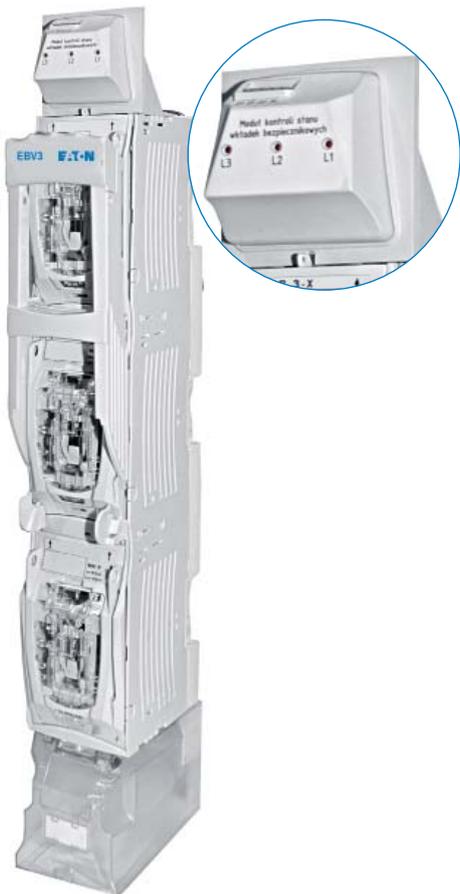
Fuse switch disconnecter can be equipped with electronic fuse monitoring module. Fuse link status (operational, operated, loss of voltage) is indicated by light-emitting diodes and status of relay contacts.

Principle of operation

- L1, L2, L3 diodes are on - all three phases are supplied, all fuse links are operational. Relay contacts: [21..22] - closed; [13..14] - opened
- L1, L2, L3 diodes are flashing - all three phases are supplied, fuse links operated. Relay contacts: [21..22] - opened; [13..14] - closed
- L1, L2, L3 diodes are off - two or more phases are not supplied or fuse links are removed. Relay contacts: [21..22] - opened; [13..14] - closed

Nominal parameters

- Operating voltage AC - 400 - 690 V, 40-60 Hz;
- Relay parameters 5 A , 250 V~



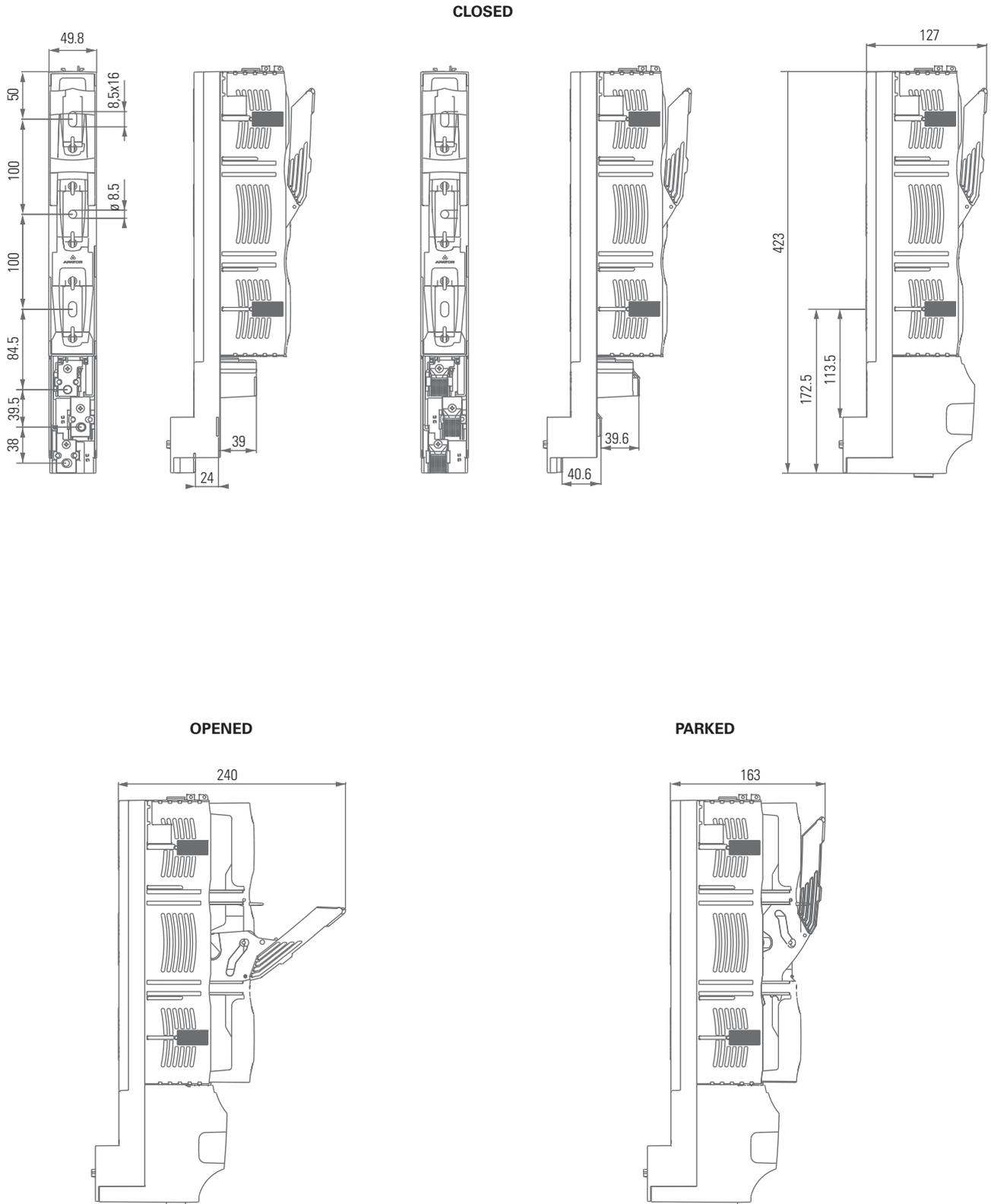
EBV with electronic fuse monitoring module

Catalogue numbers

Catalogue number	Description	Weight
Fuse switch disconnectors EBV2 - 400 A		
For installation on 185 mm busbar system, one pole switching - each phase independently		
EBV233SV1-E	Cable terminals: V-terminals with V-clamps 240 mm ²	5,9 kg
EBV233SM1-E	Cable terminals: screw terminals with pressed nuts M10	5,8 kg
EBV233SW1-E	Cable terminals: 2V-terminals with double V-clamps 240 mm ²	6,5 kg
EBV233SV0-E	Cable terminals: V-terminals without V-clamps	5,6 kg
EBV233SW0-E	Cable terminals: 2V-terminals without double V-clamps	6,0 kg
For installation on 185 mm busbar system, three pole switching - all phases simultaneously		
EBV233TV1-E	Cable terminals: V-terminals with V-clamps 240 mm ²	5,9 kg
EBV233TM1-E	Cable terminals: screw terminals with pressed nuts M10	5,8 kg
EBV233TW1-E	Cable terminals: 2V-terminals with double V-clamps 240 mm ²	6,5 kg
EBV233TV0-E	Cable terminals: V-terminals without V-clamps	5,6 kg
EBV233TW0-E	Cable terminals: 2V-terminals without double V-clamps	6,0 kg
Fuse switch disconnectors EBV3 - 630 A		
For installation on 185 mm busbar system, one pole switching - each phase independently		
EBV333SV1-E	Cable terminals: V-terminals with V-clamps 240 mm ²	6,7 kg
EBV333SM2-E	Cable terminals: screw terminals with pressed nuts M12	6,6 kg
EBV333SW1-E	Cable terminals: 2V-terminals with double V-clamps 240 mm ²	7,3 kg
EBV333SV0-E	Cable terminals: V-terminals without V-clamps	6,4 kg
EBV333SW0-E	Cable terminals: 2V-terminals without double V-clamps	6,8 kg
For installation on 185 mm busbar system, three pole switching - all phases simultaneously		
EBV333TV1-E	Cable terminals: V-terminals with V-clamps 240 mm ²	6,7 kg
EBV333TM2-E	Cable terminals: screw terminals with pressed nuts M12	6,6 kg
EBV333TW1-E	Cable terminals: 2V-terminals with double V-clamps 240 mm ²	7,3 kg
EBV333TV0-E	Cable terminals: V-terminals without V-clamps	6,4 kg
EBV333TW0-E	Cable terminals: 2V-terminals without double V-clamps	6,8 kg

EBV Vertical fuse switch disconnectors - Outline drawings (mm)

EBV00 / 100 mm , EBV00-1 , EBV00-3

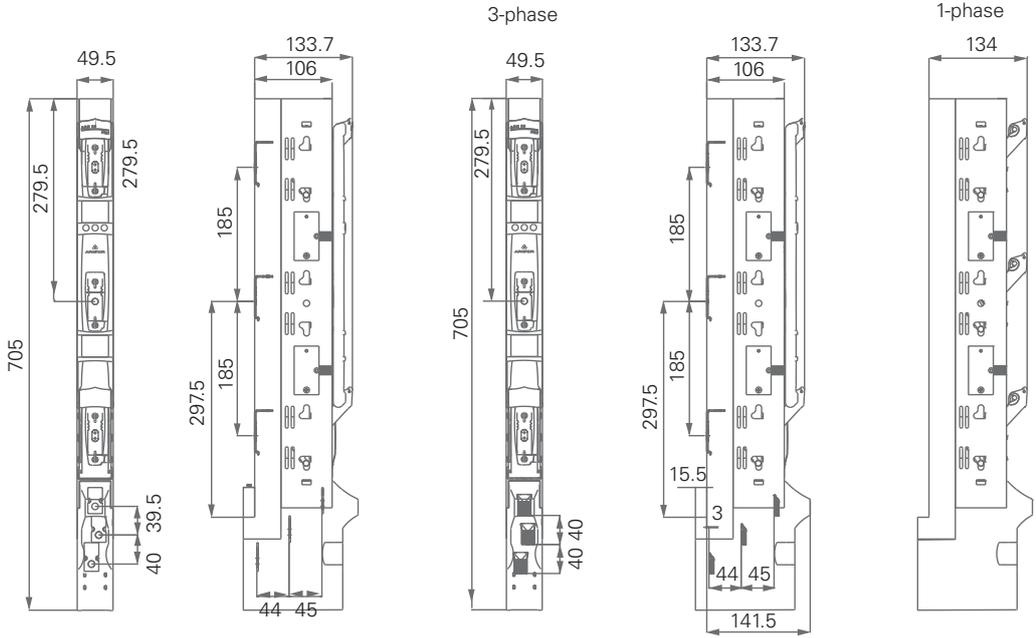


EBV

EBV Vertical fuse switch disconnectors - Outline drawings (mm)

EBV00/100 mm , EBV00-1 , EBV00-3 Closed 3-phase

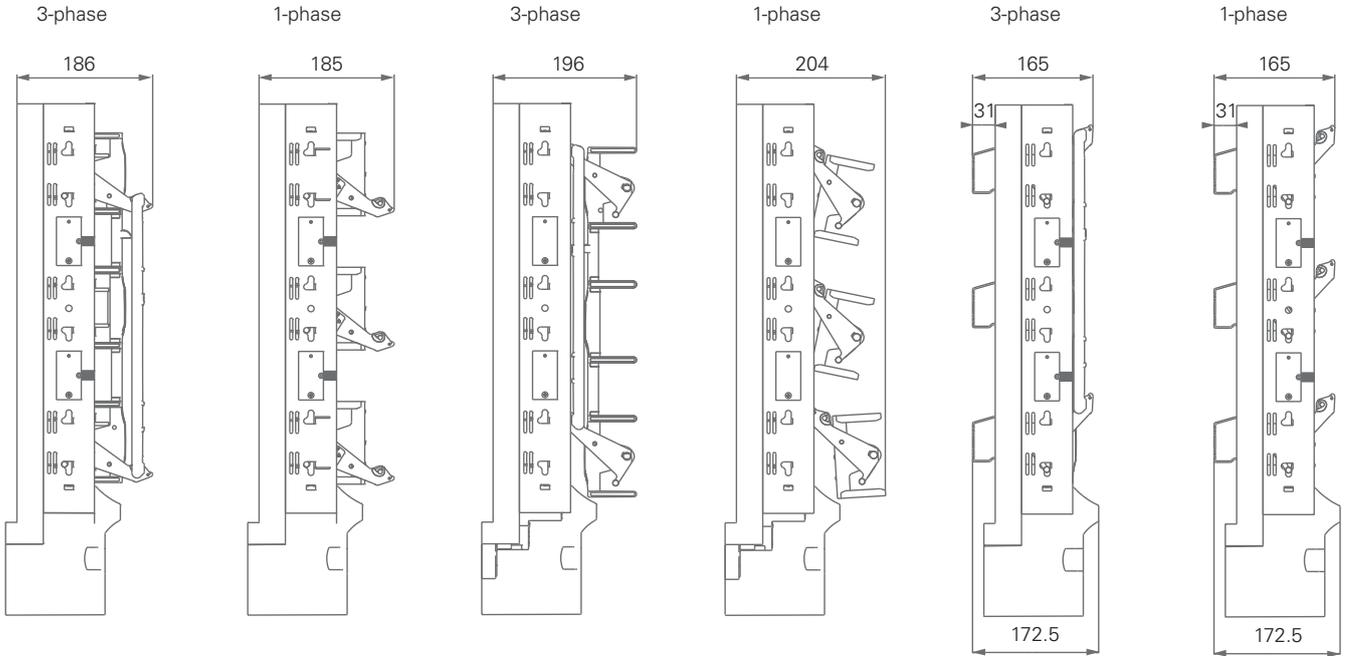
CLOSED



OPENED

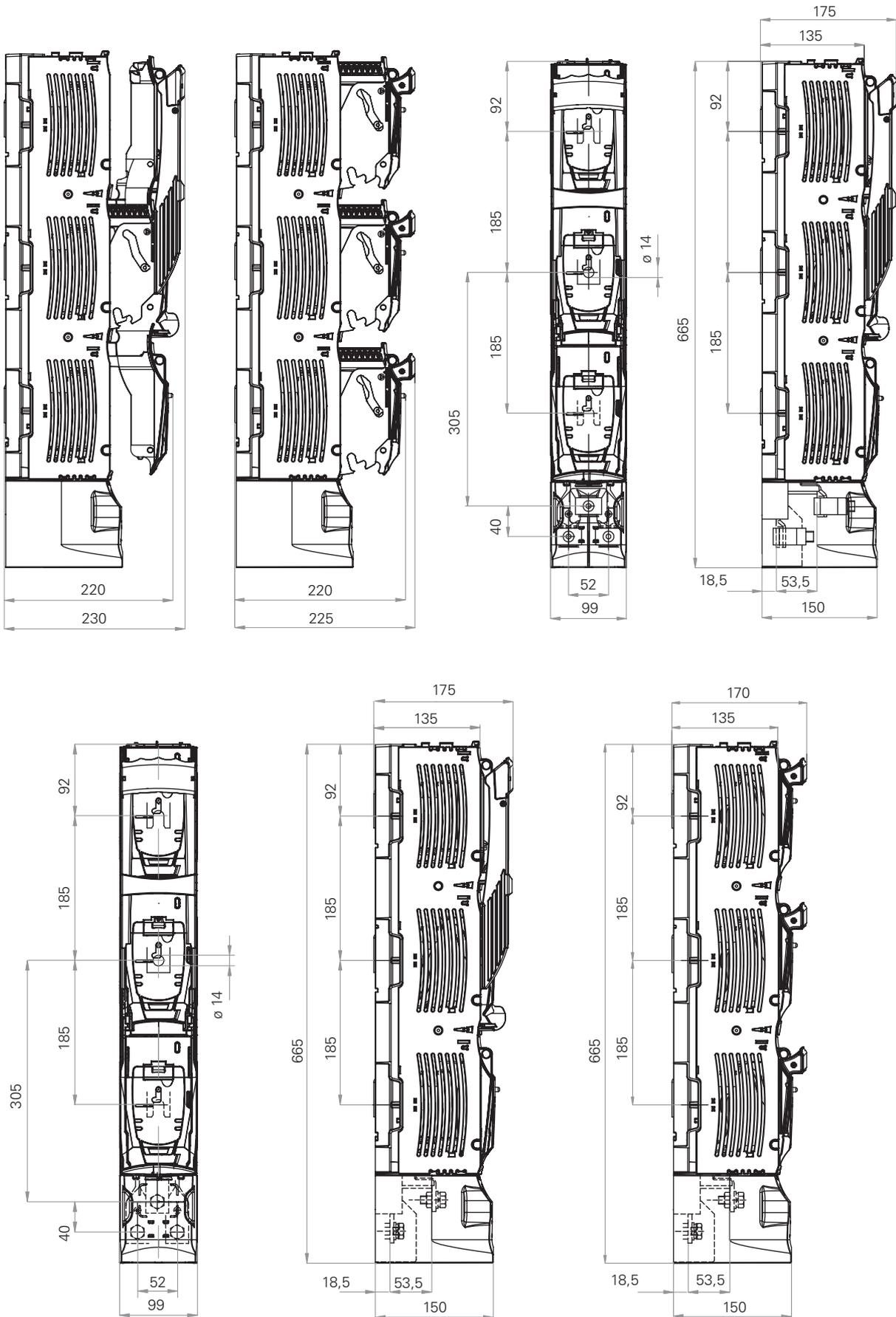
PARKED

EBV WITH HEIGHTENED RAILS



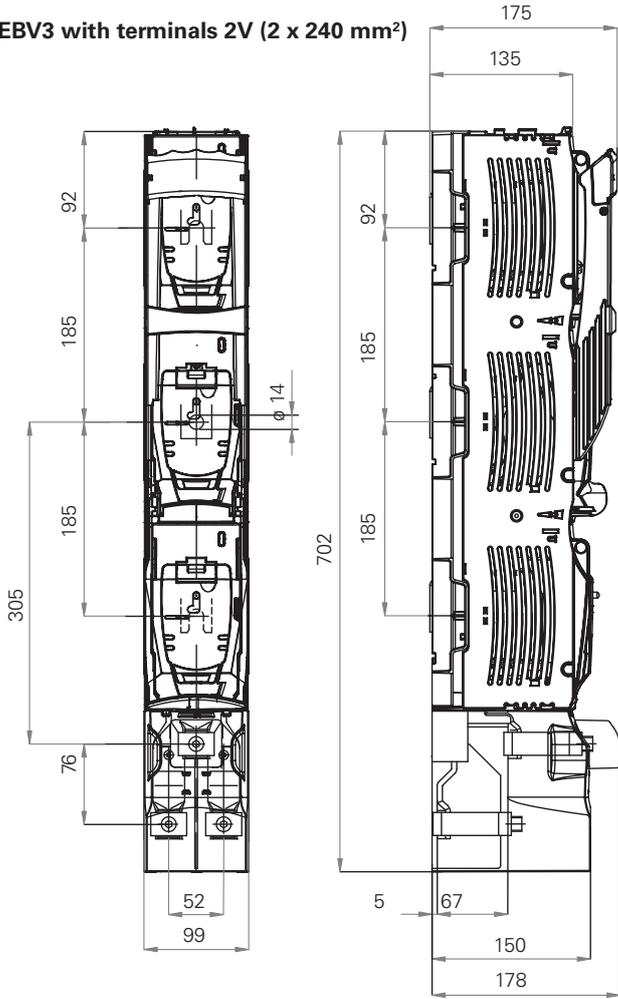
EBV Vertical fuse switch disconnectors - Outline drawings (mm)

EBV2 and EBV3

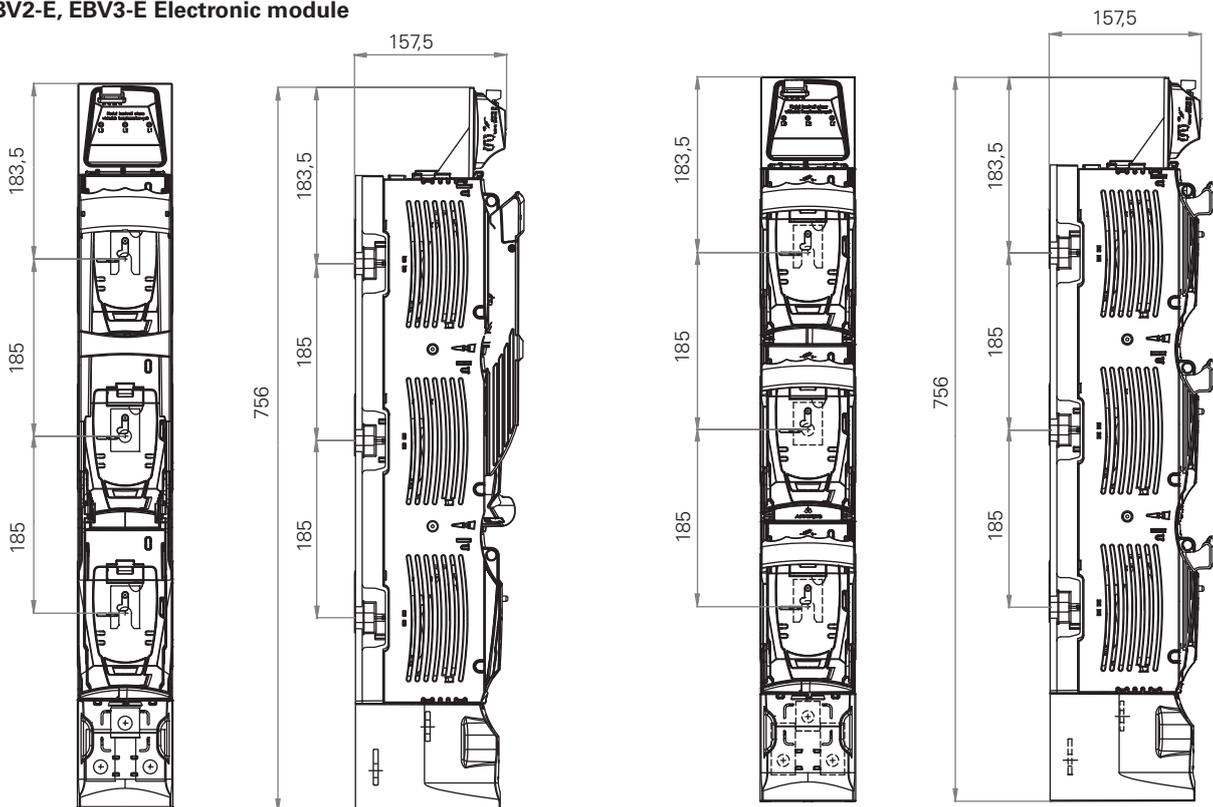


EBV Vertical fuse switch disconnectors - Outline drawings (mm)

EBV3 with terminals 2V (2 x 240 mm²)

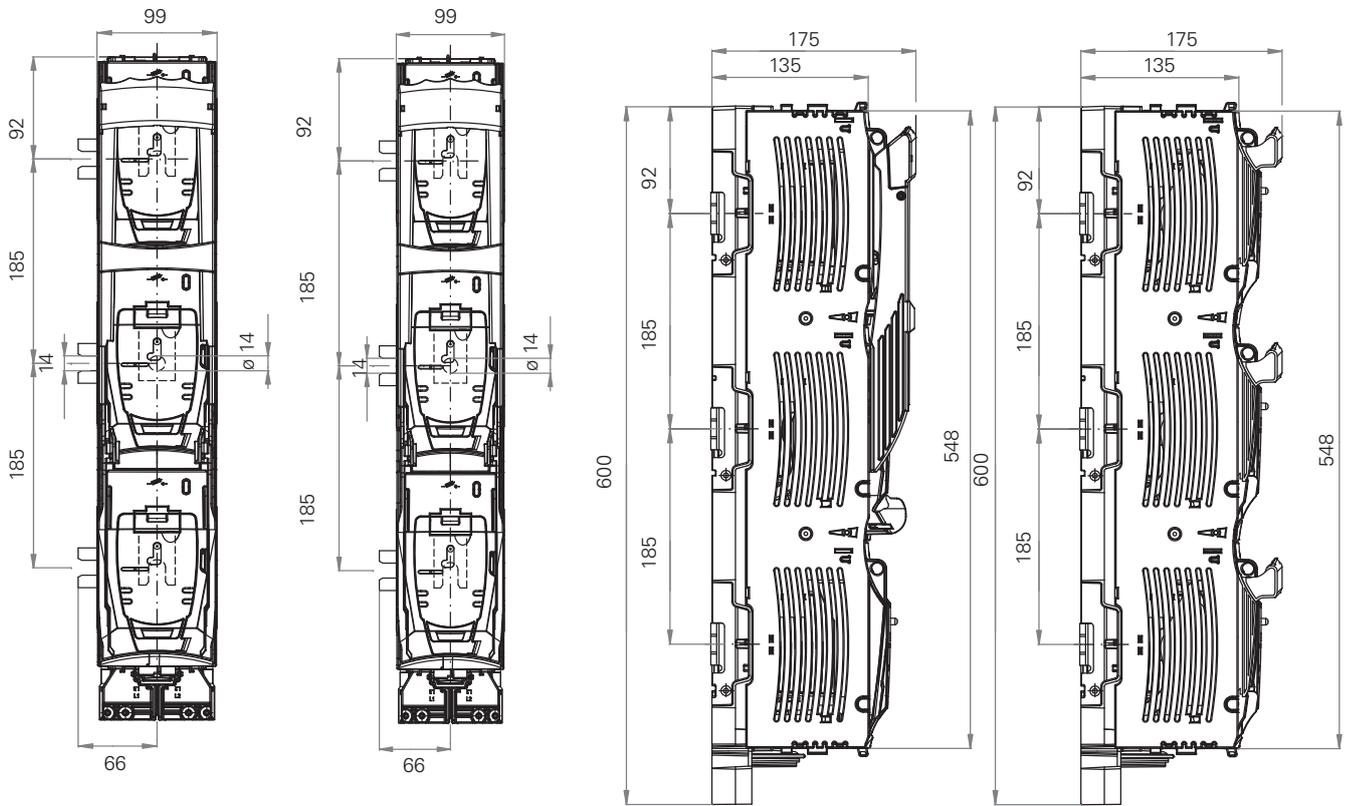


EBV2-E, EBV3-E Electronic module



EBV Vertical fuse switch disconnectors - Outline drawings (mm)

EBV2 , EBV3 with lateral busbar terminal



EBV

EBV Vertical fuse switch disconnectors - Accessories

EBV00, EBV00 / 100 mm

EBFVA1 - M8 Terminal screw

M8 terminal screw, for connection of conductors with lug terminal (set - 3 pcs.)



EBFVA2 - Busbar shroud

Busbar shroud (polycarbonate) for busbar system 185 mm, Width 50 mm, length 562 mm, thickness 3 mm



EBFVA4 - Isolating pin

Isolating pin for fixing the 50 mm busbar shroud, M8 (set - 2 pcs.)



EBFVA6 - S-Bridge clamp

S-Bridge clamp – fixed with 2 x M5 screw - for connection of conductors with cross-section 4 mm² up to 70 mm² (set - 3 pcs.)



EBFVA7 - V-shape clamp

V-shape clamp – S-bridge clamp + V-shape saddle - for connection of sector-shaped conductors with cross-section 1,5 up to 70 mm² (stranded) or 95 mm² (solid) (set - 3 pcs.)



EBFVA8 - Universal earthing device

Universal earthing device for EBV 00, 2, 3



EBFVA32 - V-Clamp 25-120 SW

V-clamp 25-120 SW. For connection of conductor with cross-section:

16 - 95 mm² ● 16 - 95 mm² ◻
25 - 120 mm² ◆ 25 - 120 mm² ◻



EBFVA9 - V-clamp HM-10-120

V-clamp HM-10-120. For connection of conductor with cross-section:

10 - 70 mm² ● 10 - 70 mm² ◻
25 - 120 mm² ◆ 25 - 95 mm² ◻



EBFVA3 - Hooked clamps

Hooked clamps for installation of EBV on busbar system without drilled holes. (set - 3 pcs.)



EBV00 / 100 mm

EBFVA33 - Micro switch

Micro switch for fuse link cover position monitoring (0-1) of EBV 00/100mm



EBFVA34 - Support angle

Support angle for installation of busbar shroud



EBV00 / 100 mm

EBFVA35 - Labelling area

Labelling area



EBFVA10 - Terminal shroud/adjusting shroud

Terminal shroud/adjusting shroud. When fixed top and bottom of EBV 00/100 mm it adjusts its length and height to that of EBV 2, 3 enclosure



EBFVA36 - Extended terminal shroud/adjusting shroud

Extended terminal shroud/adjusting shroud. Together with two shrouds it adjusts the length and height of EBV 00/100 mm to that of EBV 1, 2, 3 with terminal shroud



EBFVA37 - Extended terminal shroud/adjusting shroud

Extended terminal shroud/adjusting shroud. When fixed to shroud it adjusts the length and height of EBV 00/100 mm to that of EBV 2, 3 with label holder 53-945826-011.



EBFVA11 - Single adaptor

Single adaptor 100/185 enabling to install EBV 00/100 mm on busbar system 185 mm



EBFVA12 - Double adaptor

Double adaptor 100/185 enabling to install two EBV 00/100 mm units on busbar system 185 mm



EBV00

EBFVA15 - Single distance adaptor

Single distance adaptor 185/185. It adjusts front line of EBV 00 to that of EBV 2,3 (set - 3 pcs.)



EBFVA14 - Double distance adaptor

Double distance adaptor 185/185. Designed for two EBV 00 units. It adjusts front line of EBV 00 to that of EBV 2,3 (set - 3 pcs.)



EBFVA16 - Terminal shroud

Terminal shroud



EBFVA38 - Hooked clamps

Hooked clamps for installation of EBV with heightened rails on busbar system without drilled holes. (set - 3 pcs.)



EBV Vertical fuse switch disconnectors - Accessories

EBV2 , EBV3 , EBV630 kVA , EBV1250		EBV2 , EBV3 , EBV630 kVA , EBV1250	
Terminal screw		EBFVA25 - Busbar shroud	
For connection of conductors with lug terminal (1 set- 3pcs)		Busbar shroud (polycarbonate) for busbar system 185 mm, width 100 mm, length 562 mm, thickness 3 mm	
EBFVA17 - M10 terminal screw for EBV1 and EBV2		EBFVA26 - Isolating pin	
EBFVA18 - M12 terminal screw for EBV3		Isolating pin for fixing the 50 mm busbar shroud, M12 (1 set – 2 pcs.)	
EBFVA19 - V-clamp		EBFVA27 - Terminal shroud	
V-clamp. For connection of conductor with cross-section:		Terminal shroud	
35 - 120 mm ²  35 - 150 mm ² 		EBFVA28 - Extended terminal shroud	
35 - 240 mm ²  35 - 300 mm ² 		Extended terminal shroud, for use with terminal shroud below	
EBFVA20 - V-clamp		EBFVA29 - Terminal protective cover	
V-clamp. For connection of conductor with cross-section:		Terminal protective cover	
35 - 185 mm ²  35 - 240 mm ² 		EBFVA8 - Universal earthing device	
35 - 240 mm ²  35 - 300 mm ² 		Universal earthing device for EBV 00, 2, 3	
EBFVA21 - Double V-clamp		EBFVA39 - Label holder	
Double V-clamp. For connection of two conductors with cross-section:		Label holder	
35 - 185 mm ²  35 - 240 mm ² 			
35 - 240 mm ²  35 - 300 mm ² 			
EBFVA23 - V-clamp HS			
V-clamp HS (steel) for connection of two conductors with cross-section			
35 - 185 mm ²  35 - 240 mm ² 			
35 - 240 mm ²  35 - 300 mm ² 			
EBFVA24 - Hooked clamps			
Hooked clamps for installation of EBV 2, 3 on busbar system without drilled holes (1 set - 3 pcs.)			

NH DIN Fuse links overview

Description

A square bodied range of NH DIN industrial fuse links for a wide variety of applications.

Features and benefits

- Comprehensive portfolio: Standard metal gripping lugs and insulated metal gripping lugs versions are available
- Reliability: Dual indication for more reliable fault finding.
- Safety: Lead and cadmium free – they are RoHS and REACH compliant (not dangerous or hazardous for the environment).
- Energy efficient solutions: Class leading watts loss – helping to improve network efficiencies.

Standards

IEC 60269-1 and 2, VDE 0636, DIN 43620 and CE.



Low voltage — NH DIN Industrial fuse links gG

	400 Volts gG	500 Volts gG	690 Volts gG
			
Catalogue numbers with conducting metal gripping lugs	(amp)NHG(size)B-400	(amp)NHG(size)B	(amp)NHG(size)B-690
Catalogue numbers with insulated metal gripping lugs	(amp)NHG(size)BI-400	(amp)NHG(size)BI	(amp)NHG(size)BI-690
Fuse link body size	000 to 3	000 to 4	000 to 4
Rated voltage	400 V a.c.	500 V a.c.	690 V a.c.
Rated current	2 to 630 A	2 to 1250 A	2 to 800 A
Operating Class	gG	gG	gG
Breaking capacity	120 kA AC		
Fuse bases	Single pole SD -D DIN-Rail mounted and SD-S Screw mounting or TD-D DIN-Rail mounted (data sheet 10163)		
Fuse switches	Fuse switch disconnectors vertical EBV and horizontal EBH (data sheets 10292 and 10293)		
Fuse rail	Fuse rail vertical EBF (data sheet 10240)		
Standards	IEC 60269-1 and 2, VDE 0636, DIN 43620 and CE		
Applications	Alternative energy, utilities, industrial and motor applications		

Data sheets: 400V gG: 720099, 500V gG 10164, 690V gG 720109, 500 and 690V aM: 10165

Low voltage — NH DIN Industrial fuse links aM

500/690 Volts aM



Catalogue numbers with conducting metal gripping lugs	500 Volts: (amp)NHM(size)B 690 Volts: (amp)NHM(size)B-690
Catalogue numbers with insulated metal gripping lugs	N/A
Fuse link body size	000 to 3
Rated voltage	500 and 690 V a.c.
Rated current	6 to 500 A
Operating Class	aM
Breaking capacity	120 kA AC
Fuse bases	Single pole SD -D DIN-Rail mounted and SD-S Screw mounting or TD-D DIN-Rail mounted (data sheet 10163)
Fuse switches	Fuse switch disconnectors vertical EBV and horizontal EBH (data sheets 10292 and 10293)
Fuse rail	Fuse rail vertical EBF (data sheet 10240)
Standards	IEC 60269-1 and 2, VDE 0636, DIN 43620 and CE
Applications	Alternative energy, utilities, industrial and motor applications

Low voltage — NH DIN Industrial fuse links range overview

Voltage (V a.c.)	Class	Size	Amps																																	
			2	4	6	10	16	20	25	32	35	40	50	63	80	100	125	160	200	224	250	300	315	355	400	425	450	500	630	800	1000	1250				
400	gG	000	2	4	6	10	16	20	25	32	35	40	50	63	80	100																				
		00																125	160																	
		01										35	40	50	63	80	100	125	160																	
		1																		200	224	250														
		02										35	40	50	63	80	100	125	160	200	224	250														
		2																								315	355	400					630			
		03																					250			315	355	400								
		3																															500	630		
500	gG	000	2	4	6	10	16	20	25	32	35	40	50	63	80	100																				
		00												50	63	80	100	125	160																	
		0		6	10	16	20	25	32	35	40	50	63	80	100	125	160																			
		01		6	10	16	20	25	32	35	40	50	63	80	100	125	160																			
		1												50	63	80	100	125	160	200	224	250			315	355										
		02										35	40	50	63	80	100	125	160	200	224	250														
		2																					250	300	315	355	400	425	450	500						
		03																					250			315	355	400								
3																								315	355	400	425	450	500	630	800					
4																															500	630	800	1000	1250	
690	gG	000	2	4	6	10	16	20	25	32	35	40	50	63																						
		00												50	63	80	100	125	160																	
		1												50	63	80	100	125	160	200	224	250														
		2																				200	224	250		315										
		3																						250		315	355	400	425		500					
4																																630	800			
500 and 690	aM	000		6	10	16	20	25	32	35	40	50																								
		00												63	80	100																				
		1												50	63	80	100	125	160																	
		2																																		
3																																				

: Part available, for example Size 00 400 V is available in 125 and 160A

Data sheets: 400V gG: 720099, 500V gG 10164, 690V gG 720109, 500 and 690V aM: 10165

Catalogue number	Page
EBC00013TBF	25
EBC00013TTF	25
EBC0003TF-D125	25
EBC0003TF-D150	25
EBC00003TF	25
EBF00230S8	9
EBF00230V0	9
EBF00230V1	9
EBF00330S8	10
EBF00330V0	10
EBF00330V1	10
EBF2330-L	14
EBF2330M1	12
EBF2330-R	14
EBF2330V1	12
EBF2330W1	12
EBF3330-L	14
EBF3330M1	13
EBF3330-R	14
EBF3330V1	13
EBF3330W1	13
EBFVA1	17 and 72
EBFVA10	17 and 72
EBFVA11	17 and 72
EBFVA12	17 and 72
EBFVA13	17
EBFVA14	17 and 72
EBFVA15	17
EBFVA16	17 and 72
EBFVA17	18 and 73
EBFVA18	18 and 73
EBFVA19	18 and 73
EBFVA2	17 and 72
EBFVA20	18 and 73
EBFVA21	18 and 73
EBFVA22	18
EBFVA23	18 and 73
EBFVA24	18 and 73
EBFVA25	18 and 73
EBFVA26	18 and 73
EBFVA27	18 and 73
EBFVA28	18 and 73
EBFVA29	18 and 73
EBFVA3	17 and 72
EBFVA31	18
EBFVA32	72
EBFVA33	72
EBFVA34	72
EBFVA35	72

Catalogue number	Page
EBFVA36	72
EBFVA37	72
EBFVA38	72
EBFVA39	73
EBFVA4	17 and 72
EBFVA6	17 and 72
EBFVA7	17 and 72
EBFVA8	17, 18 and 72
EBFVA9	17 and 72
EBH00013TBM8	23
EBH00013TBS5	23
EBH00013TTM8	23
EBH00013TTS5	23
EBH00003TM8	23
EBH00003TM8-D	23
EBH00003TM8L	23
EBH00003TS5	23
EBH00003TS5-D	23
EBH00003TS5L	23
EBH0013TBF	30
EBH0013TBM8	30
EBH0013TBS5-E	41
EBH0013TTF	30
EBH0013TTM8	30
EBH0013TTS5-E	41
EBH0003TM8	28
EBH0003TM8L	28
EBH0003TS5	28
EBH0003TS5-BE	41
EBH0003TS5L	28
EBH0003TS5-TE	41
EBH0003TV1	28
EBH113TBM1	35
EBH113TBS8	35
EBH113TBS8-E	41
EBH113TBV1	35
EBH113TTS8	35
EBH113TTS8-E	41
EBH113TTV1	35
EBH123TBM1	35
EBH123TBS8	35
EBH123TBS8-E	41
EBH123TBV1	35
EBH123TTM1	35
EBH123TTS8	35
EBH123TTS8-E	41
EBH123TTV1	35
EBH103TM1	35
EBH103TMV	35

Catalogue number	Page
EBH103TS8	35
EBH103TS8-BE	41
EBH103TS8-TE	41
EBH103TSV	35
EBH103TV1	35
EBH103TVM	35
EBH103TVS	35
EBH213TBM1	38
EBH213TBS8-E	41
EBH213TBV1	38
EBH213TBW1	38
EBH213TTM1	38
EBH213TTS8-E	41
EBH213TTV1	38
EBH213TTW1	38
EBH223TBM1	38
EBH223TBS8-E	41
EBH223TBV1	38
EBH223TBW1	38
EBH223TTM1	38
EBH223TTS8-E	41
EBH223TTV1	38
EBH223TTW1	38
EBH203TM1	38
EBH203TS8	38
EBH203TS8-BE	41
EBH203TS8-TE	41
EBH203TV1	38
EBH203TW1	38
EBH313TM2	40
EBH303TM2	40
EBH303TS8	40
EBHA1	52
EBHA10	52
EBHA11	52
EBHA12	52
EBHA13	52
EBHA2	52
EBHA3	52
EBHA4	52
EBHA5	52
EBHA6	52
EBHA7	52
EBHA8	52
EBHA9	52
EBH0003TV1L	28
EBV0011SS8	59
EBV0011SV0	59
EBV0011SV1	59

Index

Catalogue number	Page
EBV0011TS8	59
EBV0011TV0	59
EBV0011TV1	59
EBV0023TS8	58
EBV0023TV0	58
EBV0023TV1	58
EBV0033SS8	59
EBV0033SV0	59
EBV0033SV1	59
EBV0033TS8	59
EBV0033TV0	59
EBV0033TV1	59
EBV223SW0	62
EBV233SM1	62
EBV233SM1-E	66
EBV233SM2-L	64
EBV233SM2-R	64
EBV233SV0	62
EBV233SV0-E	66
EBV233SV1	62
EBV233SV1-E	66
EBV233SW0-E	66
EBV233SW1	62
EBV233SW1-E	66
EBV233TM1	62
EBV233TM1-E	66
EBV233TM2-L	64
EBV233TM2-R	64
EBV233TV0	62
EBV233TV0-E	66
EBV233TV1	62
EBV233TV1-E	66
EBV233TW0	62
EBV233TW0-E	66
EBV233TW1	62
EBV233TW1-E	66
EBV3-1250-3-2M-L	64
EBV3-1250-3-3M-R	64
EBV333SM2	63
EBV333SM2-E	66
EBV333SM2-L	64
EBV333SM2-R	64
EBV333SV0	63
EBV333SV0-E	66
EBV333SV1	63
EBV333SV1-E	66
EBV333SW0	63
EBV333SW0-E	66
EBV333SW1	63

Catalogue number	Page
EBV333SW1-E	66
EBV333TM2	63
EBV333TM2-E	66
EBV333TM2-L	64
EBV333TM2-R	64
EBV333TV0	63
EBV333TV0-E	66
EBV333TV1	63
EBV333TV1-E	66
EBV333TW0	63
EBV333TW0-E	66
EBV333TW1	63
EBV333TW1-E	66

Contact details

Customer Satisfaction team

Eaton's Customer Satisfaction team is available to answer questions regarding Bussmann series products.

Calls can be made between:

Monday - Thursday 7.30 a.m. - 5.30 p.m. GMT

Friday 7.30 a.m. - 5.00 p.m. GMT

The Customer Satisfaction team can be reached via:

Phone: 00 44 (0) 1509 882 600

Fax: 00 44 (0) 1509 882 786

Email: bulesales@eaton.com

www.my.eaton.com

Tailored just for you. Powerful online tools and resources get you the up-to-date information you need to work smarter, make informed decisions and streamline your transactions with Eaton.

Get started today at www.my.eaton.com by clicking 'Request User ID and Password'.

- Easy to Navigate
- Simple to Use
- Real-Time Data.

Online resources

Visit www.eaton.com/bussmannseries for the following resources:

- Product cross reference
- Product profiles
- Online catalogues for the latest United States and European catalogues.

Application engineering

Application Engineering assistance is available to all customers. The Application Engineering team is staffed by university-qualified electrical engineers who are available with technical and application support.

Calls can be made between:

Monday - Thursday 8.30 a.m. - 4.30 p.m. GMT

Friday 8.30 a.m. - 4.00 p.m. GMT

Application Engineering can be reached via:

Phone: 00 44 (0) 1509 882 699

Fax: 00 44 (0) 1509 882 794

General technical enquiries:

buletechnical@eaton.com

High speed technical enquiries:

bulehighspeedtechnical@eaton.com