

PRODUCT NEWS

InLine II Cu+ fusegear replacement guide and order info

Ready to withstand high temperatures





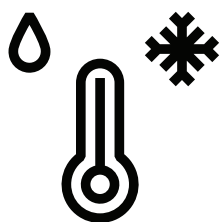
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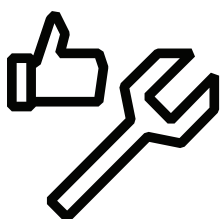
InLine II Cu+ fusegear

The new InLine II Cu+ range is specially engineered to perform without derating in ambient temperatures up to 55°C. ABB's InLine II Cu+ is a high performance range of low-voltage fusegear created for use in high-temperature environments and as a direct replacement for SLBM and BSL range, obsoleted in January 2020. InLine II Cu+ is available as fuse switch-disconnectors for 400A – 630A and switch-disconnectors ranging from 800A to 2000A in single-phase and three-phase versions.



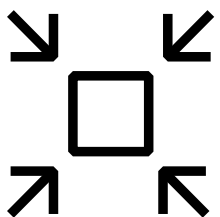
Reliable in extreme conditions

InLine II Cu+ range has been tested and approved for performance exceeding the requirements of IEC60947-1 and IEC60947-3. They switches can be used with 100% of the rated current I_e in ambient temperatures up to 55°C (131°F) – no derating required.



Easy to install

The design and dimensions are identical to the existing InLine II range, preserving its well-appreciated ease of installation and operation. InLine II Cu+ replaces the old range of SLBM and BSL switches. Those devices were known for their robustness and reliable performance in demanding surroundings. InLine II Cu+ is designed to replace the old range 1:1.



Space saving

Retrofitting switchboards equipped with SLBM/BSL switches with the new InLine II Cu+ range side by side can be accomplished by using an adapter that reduces the busbar distance from 210 mm to 185 mm.

Ordering information



ZHBM2-T-1P-M12



ZHBM3-T-1P-M12-TK



BZH1600A-T-1P-M12



BZH2000A-T-1P-M12-TK



ZHBM2-T-3P-M12



ZHBM3-T-3P-M12-TK



BZH1600A-T-3P-M12



BZH2000A-T-3P-M12-TK



BZH1600A-S-T-3P-MB



AD-ZLBM123-210-185

The following new InLine II Cu+ devices and accessories are now available

1P Designation	Description	Order code	Weight [kg]
ZHBM2-T-1P-M12	Single switch, incl. 3 x M12 bolts	1SEP620042R1000	3,9
ZHBM2-T-1P-M12-TK	Single switch, incl. Terminal kit	1SEP622562R1000	5,4
ZHBM3-T-1P-M12	Single switch, incl. 3 x M12 bolts	1SEP620044R1000	6,4
ZHBM3-T-1P-M12-TK	Single switch, incl. Terminal kit	1SEP620043R1000	7,9
BZH1000A-T-1P-M12	Single switch, incl. 3 x M12 bolts	1SEP622203R1000	8
BZH1000A-T-1P-M12-TK	Single switch, incl. Terminal kit	1SEP622022R0001	14,8
ZHBM1250A-T-1P-M12-TK	Double switch, incl. Terminal kit	1SEP622288R0001	16,4
BZH1600A-T-1P-M12	Single switch, incl. 3 x M12 bolts	1SEP622290R0001	16
BZH1600A-T-1P-M12-TK	Double switch, incl. Terminal kit	1SEP622024R0001	17,8
BZH2000A-T-1P-M12	Single switch, incl. 3 x M12 bolts	1SEP622294R0001	20
BZH2000A-T-1P-M12-TK	Double switch, incl. Terminal kit	1SEP622292R0001	22,5

3P Designation	Description	Order code	Weight [kg]
ZHBM2-T-3P-M12	Single switch, incl. 3 x M12 bolts	1SEP620042R3000	3,9
ZHBM2-T-3P-M12-TK	Single switch, incl. Terminal kit	1SEP622562R3000	5,4
ZHBM3-T-3P-M12	Single switch, incl. 3 x M12 bolts	1SEP620044R3000	6,4
ZHBM3-T-3P-M12-TK	Single switch, incl. Terminal kit	1SEP620043R3000	7,9
BZH1000A-T-3P-M12	Single switch, incl. 3 x M12 bolts	1SEP622203R3000	8
BZH1000A-T-3P-M12-TK	Single switch, incl. Terminal kit	1SEP622023R0001	14,8
ZHBM1250A-T-3P-M12-TK	Double switch, incl. Terminal kit	1SEP622289R0001	16,4
BZH1600A-T-3P-M12	Single switch, incl. 3 x M12 bolts	1SEP622291R0001	16
BZH1600A-T-3P-M12-TK	Double switch, incl. Terminal kit	1SEP622025R0001	17,8
BZH1600A-S-T-3P-MB	Single switch, 2 x 3 M12 universal bolts, terminal connection on rear side	1SEP620133R3050	15
BZH2000A-T-3P-M12	Single switch, incl. 3 x M12 bolts	1SEP622295R0001	20
BZH2000A-T-3P-M12-TK	Double switch, incl. Terminal kit	1SEP622293R0001	22,5

Accessories	Description	Order code	Weight [kg]
AD-ZLBM123-210-185	Adapter to enable mounting of Cu+ to 210 mm busbar system	1SEP622564R0001	4,6

Direct replacement guide

The table below lists the direct replacements of SLBM/BSL with InLine II Cu+. To enable Cu+ for 210 mm busbar distance installation, the use of the dedicated adapted, AD-ZLBM123-210-185 – 1SEP622564R0001 is mandatory.

SLBM/BSL range			Cu+ product range			
To be replaced (busbar distance)	Order code	Adapter required ²⁾	Description 1 pole	Order code	Description 3 pole	Order code
SLBM 400 (210 mm)	NHPL046202R0001	Yes, 1 pc.	ZHBM2-T-1P-M12	1SEP620042R1000	ZHBM2-T-3P-M12	1SEP620042R3000
SLBM 400 (185/210 mm) ¹⁾	NHPL046252R0001	Yes, 1 pc.				
SLBM 400 (210 mm)	ORD3703400	Yes, 1 pc.				
SLBM 400 (210 mm)	NHPL046202R0001	Yes, 1 pc.	ZHBM2-T-1P-M12-TK	1SEP622562R1000	ZHBM2-T-3P-M12-TK	1SEP622562R3000
SLBM 400 (185/210 mm) ¹⁾	NHPL046252R0001	Yes, 1 pc.				
SLBM 400 (210 mm) M12-TK	ORD3703400	Yes, 1 pc.				
SLBM 630 (210 mm) M12-TK	NHPL046203R0001	Yes, 1 pc.	ZHBM3-T-1P-M12	1SEP620044R1000	ZHBM3-T-3P-M12	1SEP620044R3000
SLBM 630 (185/210 mm) ¹⁾	NHPL046253R0001	Yes, 1 pc.				
SLBM 630 (210 mm) M12-TK	NHPL046203R0001	Yes, 1 pc.	ZHBM3-T-1P-M12-TK			
SLBM 630 (185/210 mm) ¹⁾	NHPL046253R0001	Yes, 1 pc.				
-	-	-	BZH1000A-T-1P-M12	1SEP622203R1000	BZH1000A-T-3P-M12	1SEP622203R3000
-	-	-	BZH1000A-T-1P-M12-TK	1SEP622022R0001	BZH1000A-T-3P-M12-TK	1SEP622023R0001
SLBM 1200 (210 mm)	NHPL046205R0001	Yes, 2 pcs.	ZHBM1250A-T-1P-M12 -TK	1SEP622288R0001	ZHBM1250A-T-3P-M12 -TK	1SEP622289R0001
SLBM 800 (210 mm)	NHPL046204R0001	Yes, 2 pcs.	ZHBM1250A-T-1P-M12 -TK	1SEP622288R0001	ZHBM1250A-T-3P-M12 -TK	1SEP622289R0001
BSL 1600 (210 mm)	NHPL013603R0001	Yes, 2 pcs.	BZH1600A-T-1P-M12	1SEP622290R0001	BZH1600A-T-3P-M12	1SEP622291R0001
BSL 1600 (210 mm)	NHPL013603R0001	Yes, 2 pcs.	BZH1600A-T-1P-M12-TK	1SEP622024R0001	BZH1600A-T-3P-M12-TK	1SEP622025R0001
BSL 2000 (210 mm)	NHPL013604R0001	Yes, 2 pcs.	BZH2000A-T-1P-M12	1SEP622294R0001	BZH2000A-T-3P-M12	1SEP622295R0001
BSL 2000 (210 mm)	NHPL013604R0001	Yes, 2 pcs.	BZH2000A-T-1P-M12-TK	1SEP622292R0001	BZH2000A-T-3P-M12-TK	1SEP622293R0001

¹⁾ If SLBM400 and 630 was mounted to 185 mm busbar system , so no adapter

²⁾ Adapter, AD-ZLBM123-210-185 – 1SEP622564R0001

Technical data

3-pole tier type Fuse Switch-Disconnecter SLBM/Switch-Disconnecter BSL

The grey columns include the SLBM/BSL values, and the white columns show the values of corresponding InLine II Cu+.

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SLBM (Fuse Switch)

Product		SLBM	Cu+	SLBM	Cu+	SLBM	Cu+	Cu+	SLBM	Cu+
Designation + Current rating [A]		400	ZHBM2T_400A	630	ZHBM3T_630A	800	ZHBM1250A-T	ZHBM1250A-T	1200	ZHBM1250A-T
Number of poles		-	1P/3P		1P/3P		1P/3P	1P/3P		1P/3P
Single switch/double switch		Single	Single	Single	Single	Double	Double	Single	Double	Double
For HRC fuse links acc. to DIN 43620/ IEC 269-2-1	Size	1/2	1/2	3	3	1/2	3	-	3	3
Rated operational voltage U_e	(V)	690	690	690	690	690	690	690	690	690
Rated operational current I_e	(A)	400	400	630	630	800	1250	1000	1200	1250
Rated insulation voltage U_i	(V)	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp}	(V)	8000	8000	8000	8000	8000	8000	8000	8000	8000
Fuse protected short circuit making	(kA_{rms})	50	100	50	100	50	-	-	50	-
Rated short time withstand current 1 sec.	(kA_{rms})	-	-	-	-	-	30	15 (1P) 20 (3P)	-	30
Rated making and breaking capacity		AC 22B	400V AC-23B 800V AC-22B 800V AC-21B	AC 22B	400V AC-23B 800V AC-22B 800V AC-21B	AC 21B	500V AC-22B 690V AC-21B	500V AC-22B 690V AC-21B	AC 21B	500V AC-22B 690V AC-21B
Rated frequency	(Hz)	50	50/60	50	50/60	50	50/60	50/60	50	50/60
Max. cable cross section to be connected	mm ²	240	240	240	240	240	4x240	240	240	4x240
Ditto with splice for two parallel cables	mm ²	2x240	2x240	2x240	2x240	2x240		2x240	6x240	
Degree of protection from the front acc. to IEC 529	Open Closed	IP10 IP20	IP20 IP30	IP10 IP20	IP20 IP30	IP10 IP20	IP20 IP30	IP20 IP30	IP10 IP20	IP20 IP30
Total power loss at I_{th} , incl. Terminal kit	(W)	-	70,4	-	122,9	-	225,8	287,7	-	225,8
Total power loss at I_{th}	(W)	-	57,8	-	102,9	-	205,8	255	-	205,8
Max permis. power loss per fuse link	Pv (W)	-	34	-	48	-	48	Solid links used	-	48

NOTE: To replace SLBM/BSL directly with Cu+ switches adapter, AD-ZLBM123-210-185 - 1SEP622564R0001 is required as mandatory accessory. 1 piece for single switches and 2 pieces for double switches.

Technical data

3-pole tier type Fuse Switch-Disconnecter SLBM/Switch-Disconnecter BSL

The grey columns include the SLBM/BSL values, and the white columns show the values of corresponding InLine II Cu+.

BSL (Switch-Disconnecter)					
Product	BSL	Cu+	Cu+	BSL	Cu+
Designation + Current rating [A]	1600	BZH1600A-S-T-3P-MB	BZH1600A-T	2000	BZH2000A-T
Number of poles		3P	1P/3P		1P/3P
Single switch/double switch	Single	Single	Double	Double	Double
Rated operational voltage U_e (V)	500	690	690	500	690
Rated operational current I_e (A)	1600	1600	1600	2000	2000
Rated insulation voltage U_i (V)	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (V)	8000	8000	8000	8000	8000
Rated short time withstand current 1 sec. (kA_{rms})	40	40	30	40	30
Rated making and breaking capacity	AC 20B	AC 20B	500V AC-22B 690V AC 21-B	AC 20B	500V AC-22B 690V AC-21B
Rated frequency (Hz)	50	50/60	50/60	50	50/60
Max. cable cross section to be connected Ditto with splice for two parallel cables	mm ² mm ² 240 2x240	2x300	4x240	240 2x240	4x240
Degree of protection from the front acc. to IEC 529	Open Closed	IP10 IP20	IP20 IP30	IP10 IP20	IP20 IP30
Total power loss at I_{th} , incl. Terminal kit (W)	-	-	38,8	-	461
Total power loss at I_{th} (W)	-	300	394,4	-	493
Max permis. power loss per fuse link P_v (W)	-	Solid links used	Solid links used	-	Solid links used

NOTE: To replace SLBM/BSL directly with Cu+ switches adapter, AD-ZLBM123-210-185 - 1SEP622564R0001 is required as mandatory accessory. 1 piece for single switches and 2 pieces for double switches.

Dimensional comparison

The drawings below include the dimensions and differences between SLBM/BSL and Inline II Cu+ shown when mounting on identical busbar systems. There is a label holder for ZLBM123 (1SEP619293P0001) added to the Inline II Cu+ in order to equalize the height difference at the top of the switches.

— Variants without -TK in the end of the designation differ only in depth and height.

- TK models are 184 mm higher
- TK models are 65 mm deeper

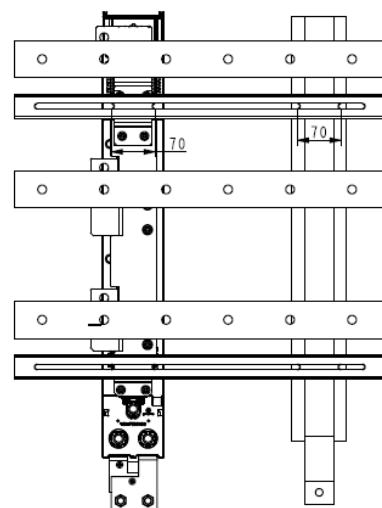
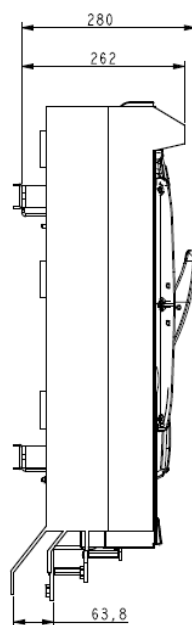
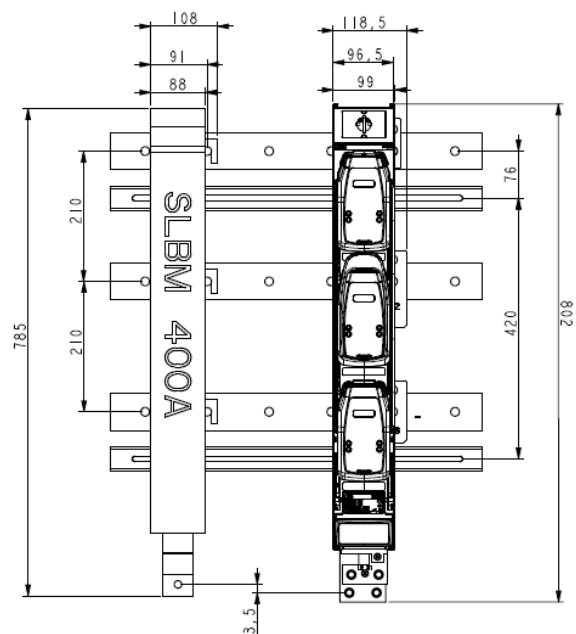


— All drawings can be found for download here

Dimensional comparison

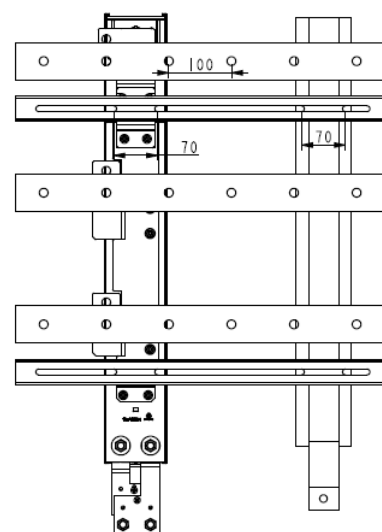
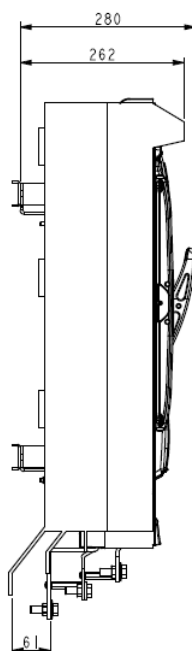
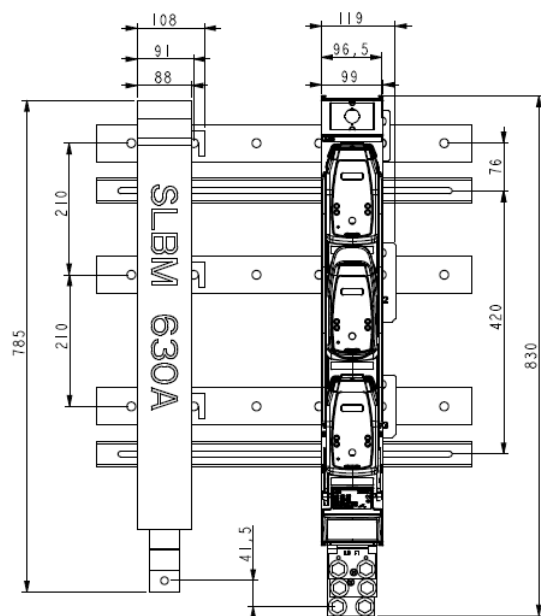
SLBM400 – ZHBM2-T-1P/3P-TK

(SLBM400VSZHBM2-T.pdf)



SLBM630 – ZHBM3-T-1P/3P-TK

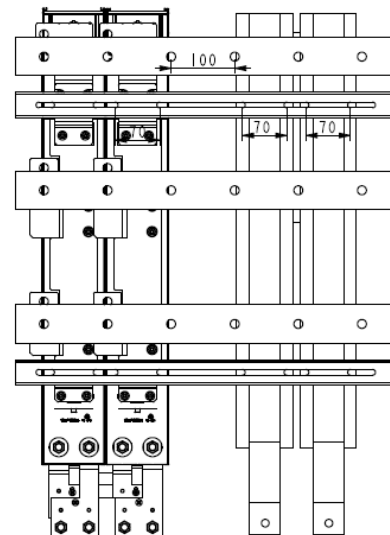
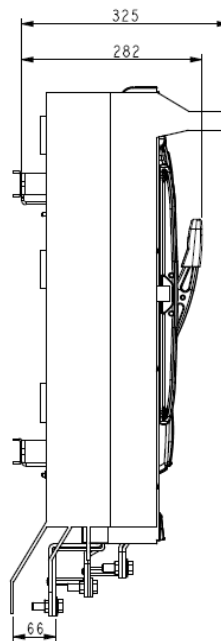
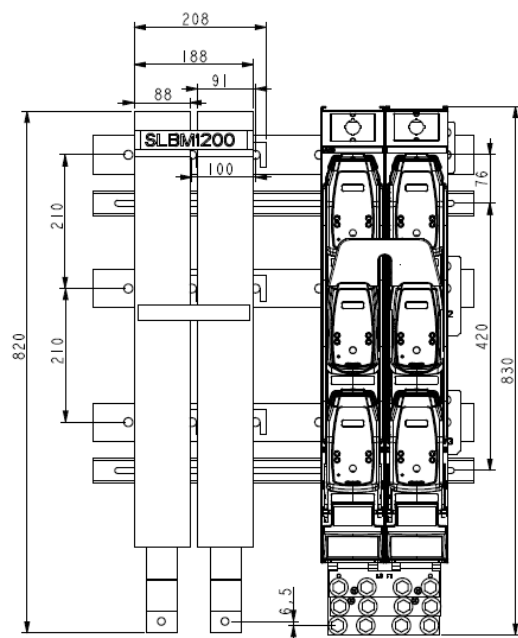
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Dimensional comparison

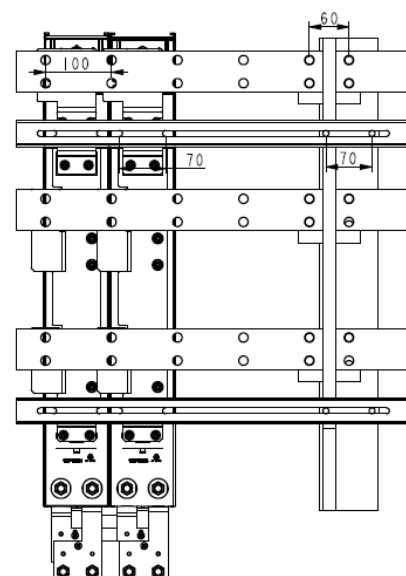
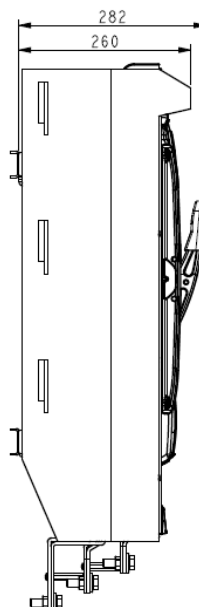
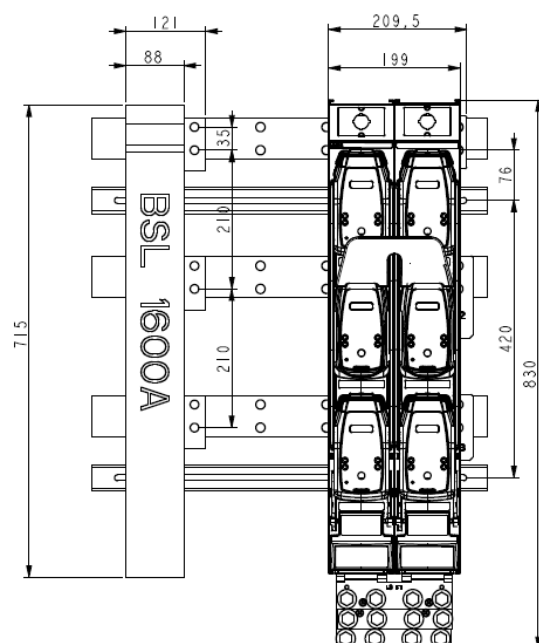
SLBM800 & SLBM1200 – ZHBM1250A-T-1P/3P TK

(SLBM1200SLBM800VSBZH1250A-T.pdf)



BSL1600 – BZH1600A-T-1P/3P-TK

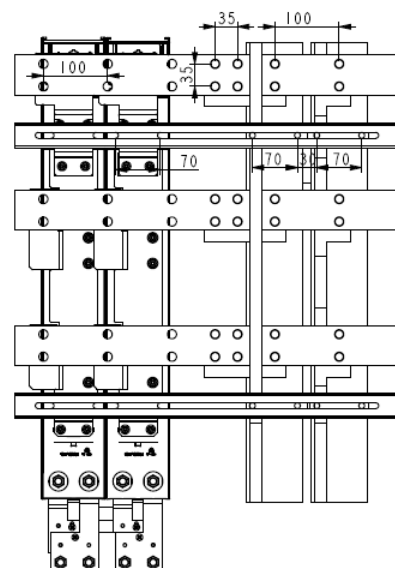
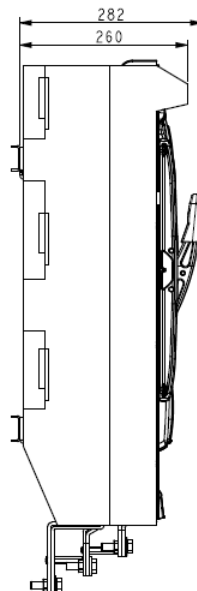
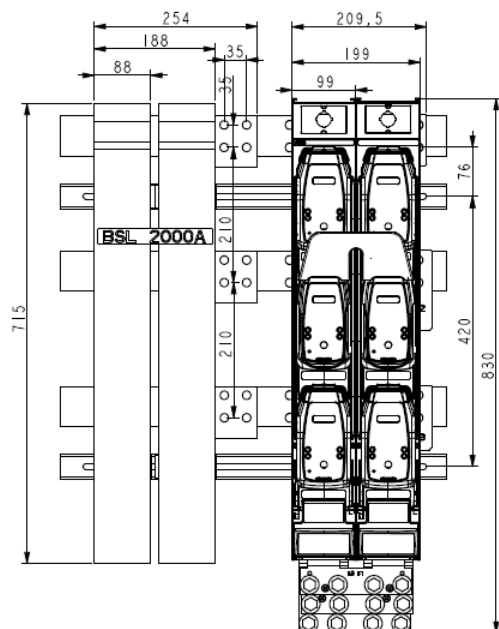
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Dimensional comparison

BSL2000 – BZH2000A-T-1P/3P-TK

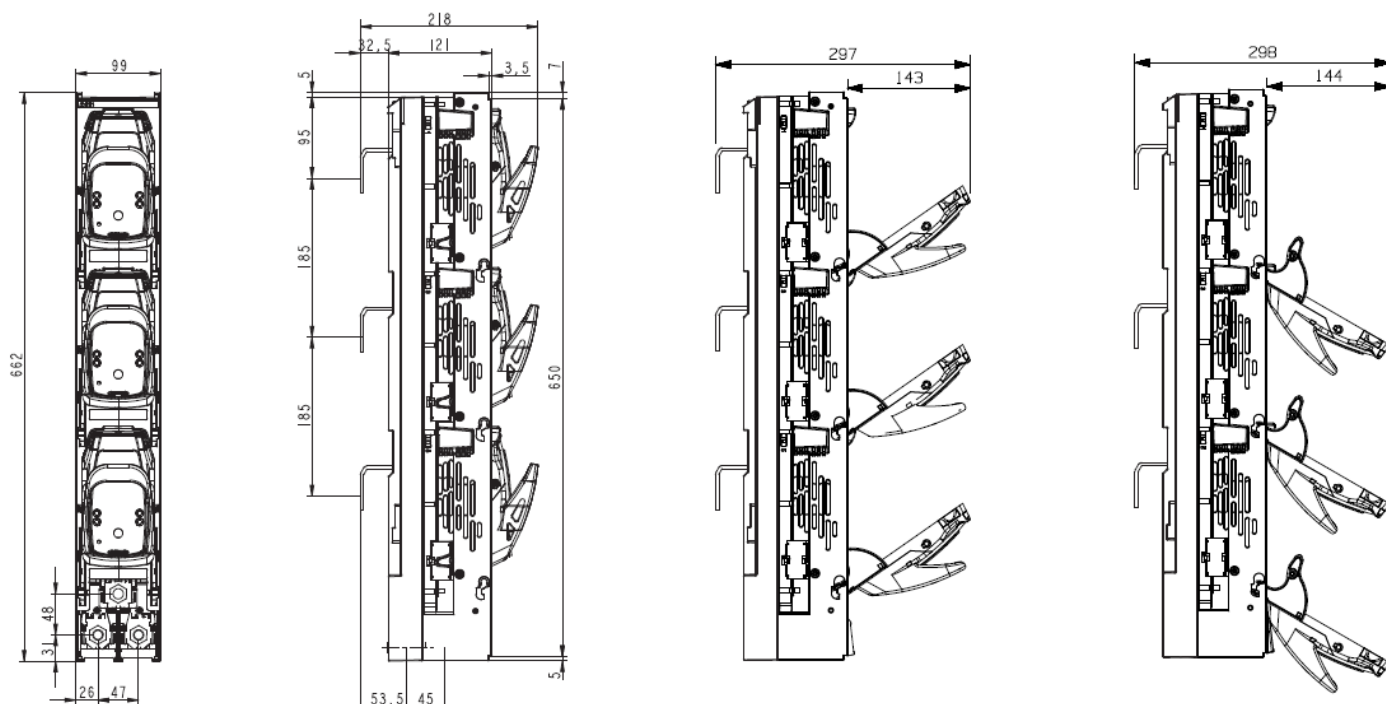
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Dimensional drawings

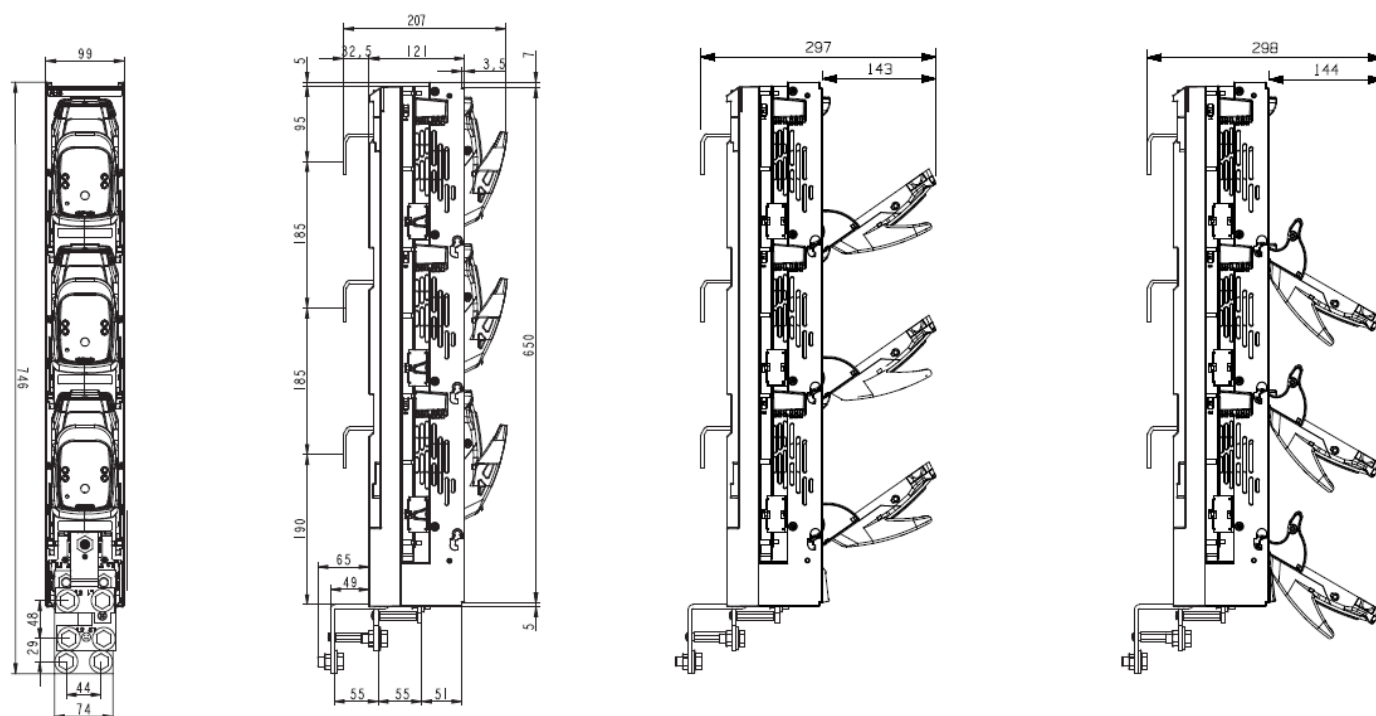
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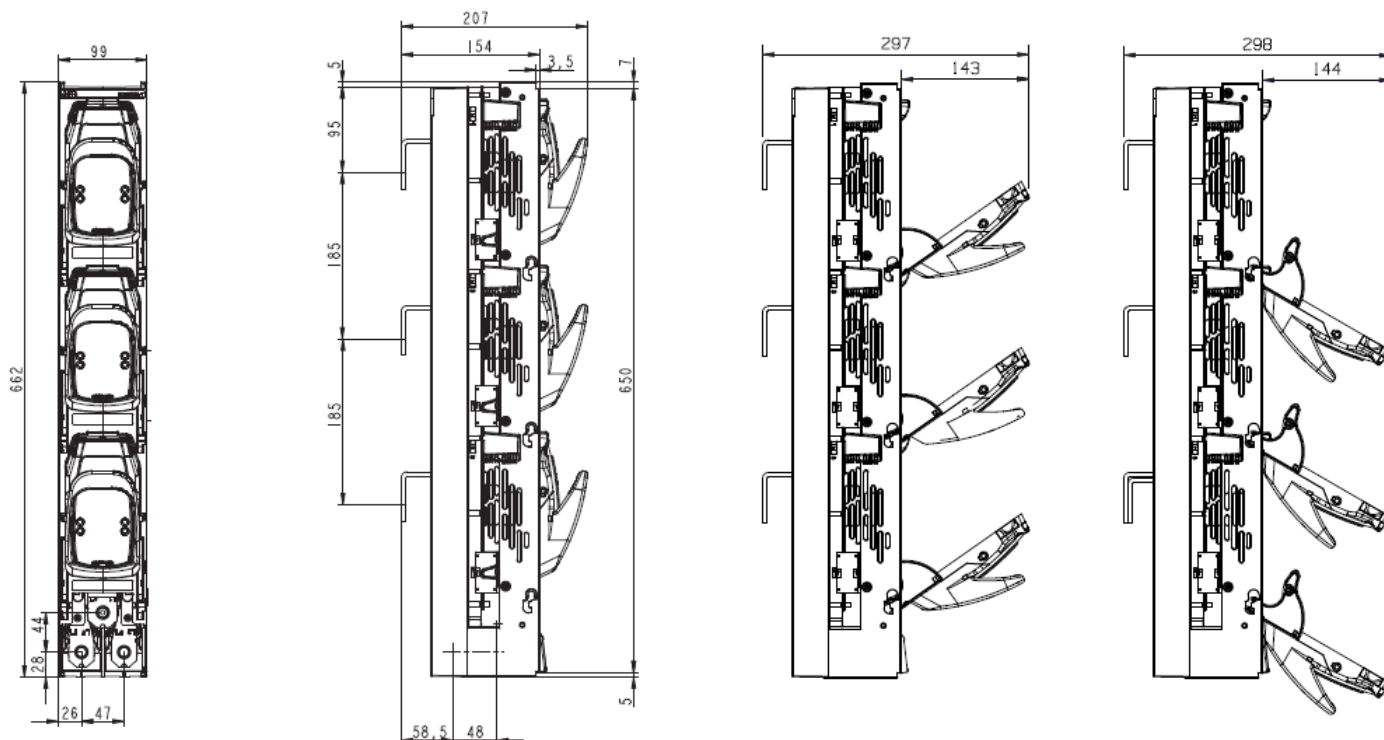
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Dimensional drawings

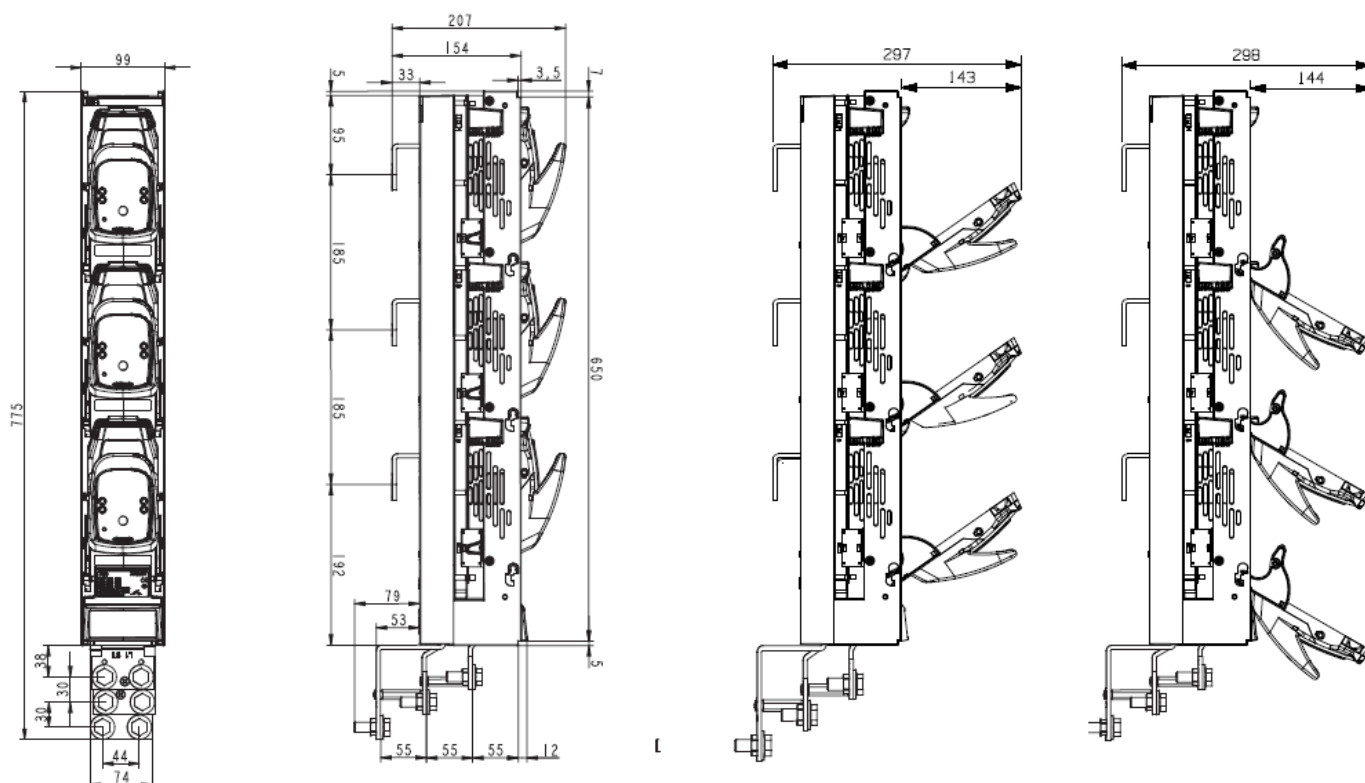
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ZHBM3-T-1P-M12-TK - 1SEP620043R1000

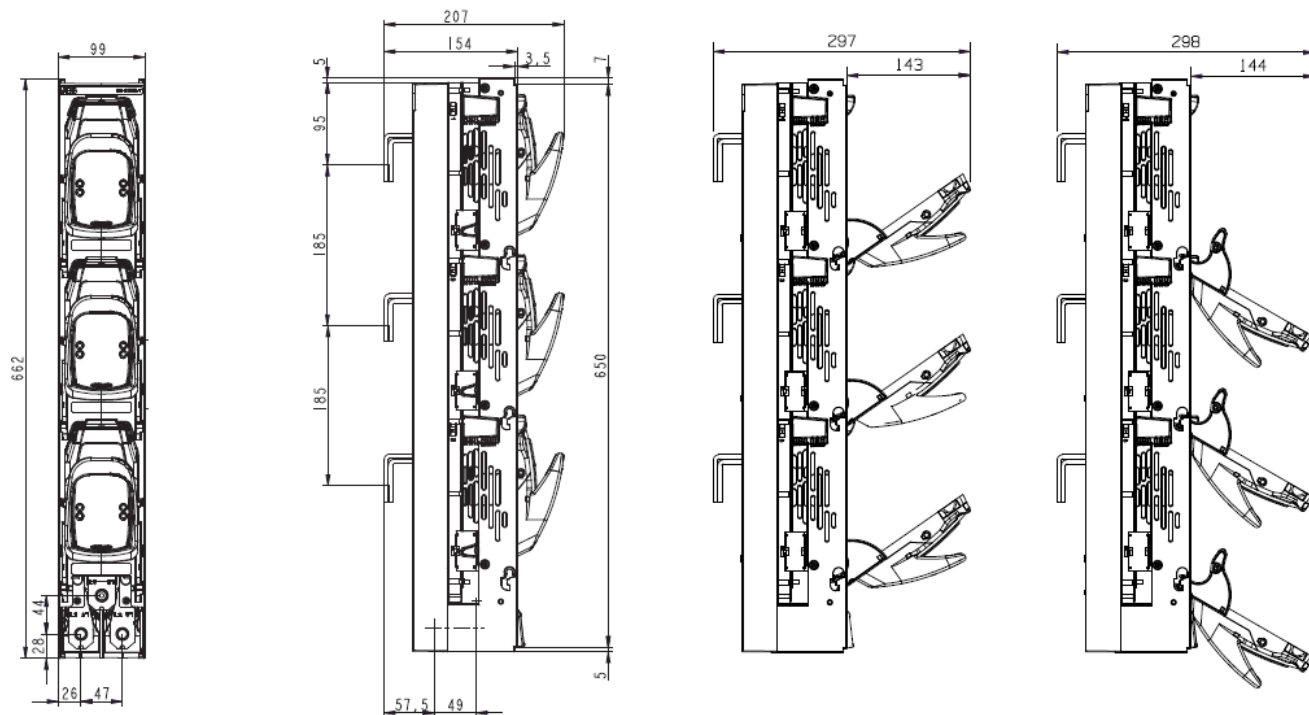
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Dimensional drawings

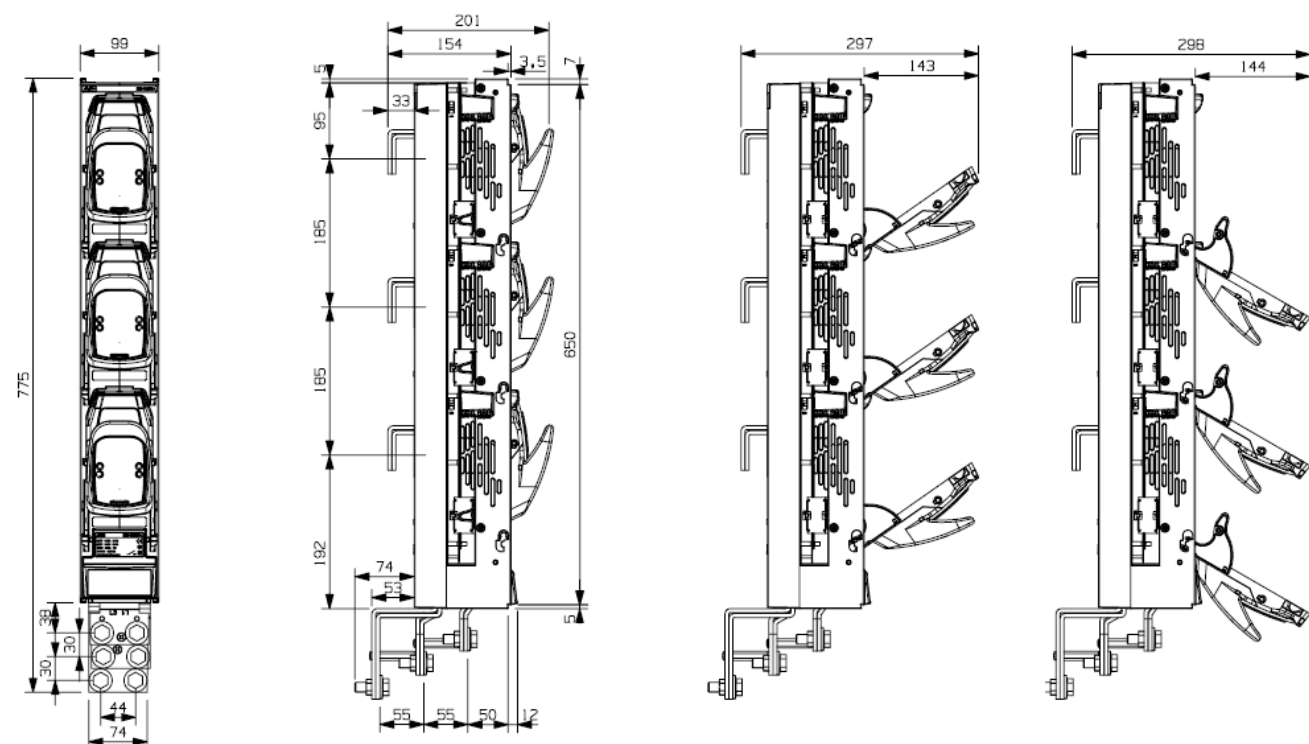
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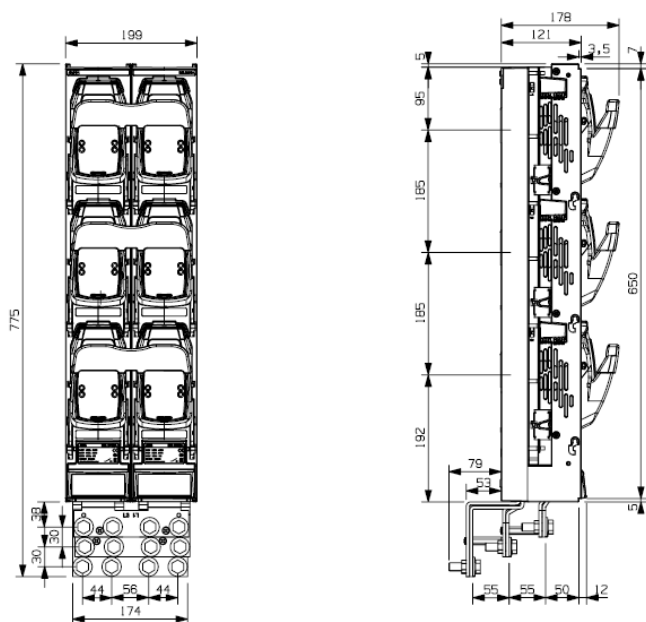
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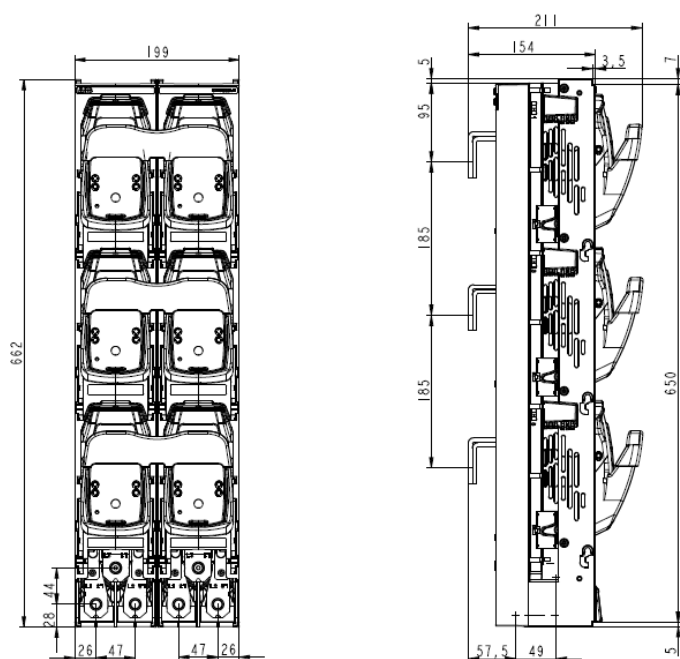


Dimensional drawings

**ZHBM1250A-T-1P-M12-TK - 1SEP622288R0001, BZH1600A-T-1P-M12-TK - 1SEP622024R0001,
BZH2000A-T-1P-M12-TK - 1SEP622292R0001**
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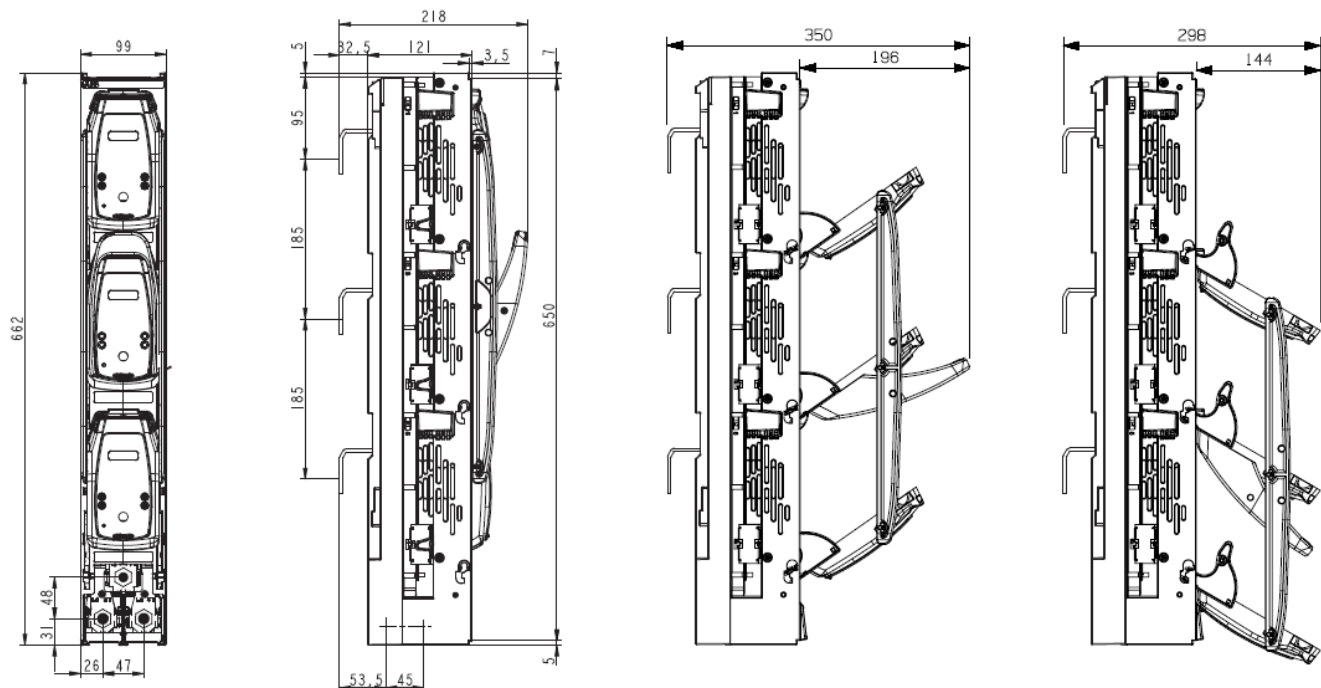
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Dimensional drawings

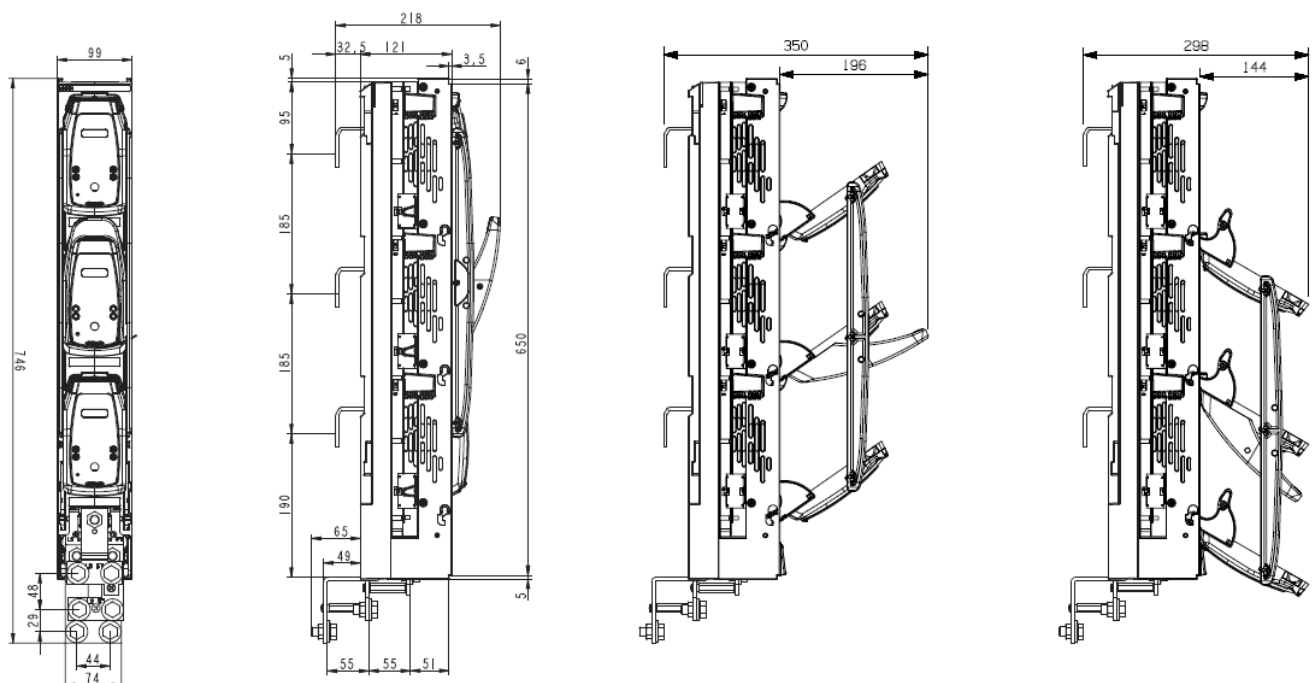
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ZHBM2-T-3P-M12-TK - 1SEP622562R3000

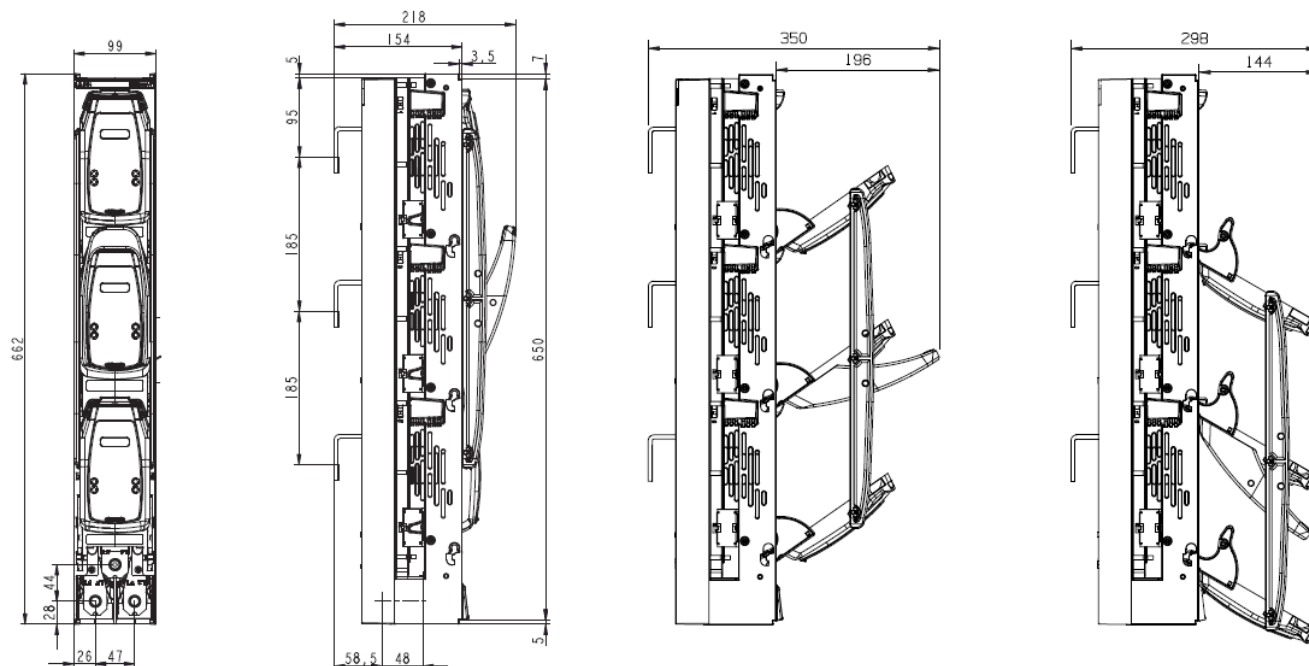
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Dimensional drawings

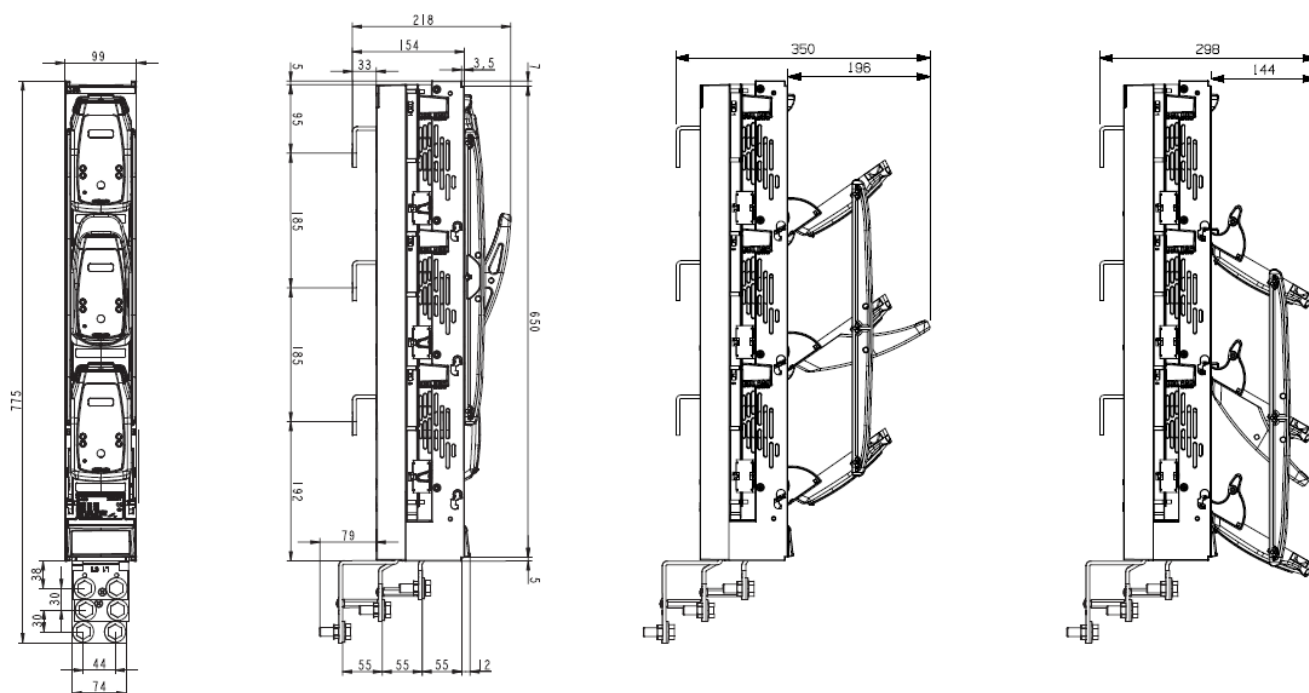
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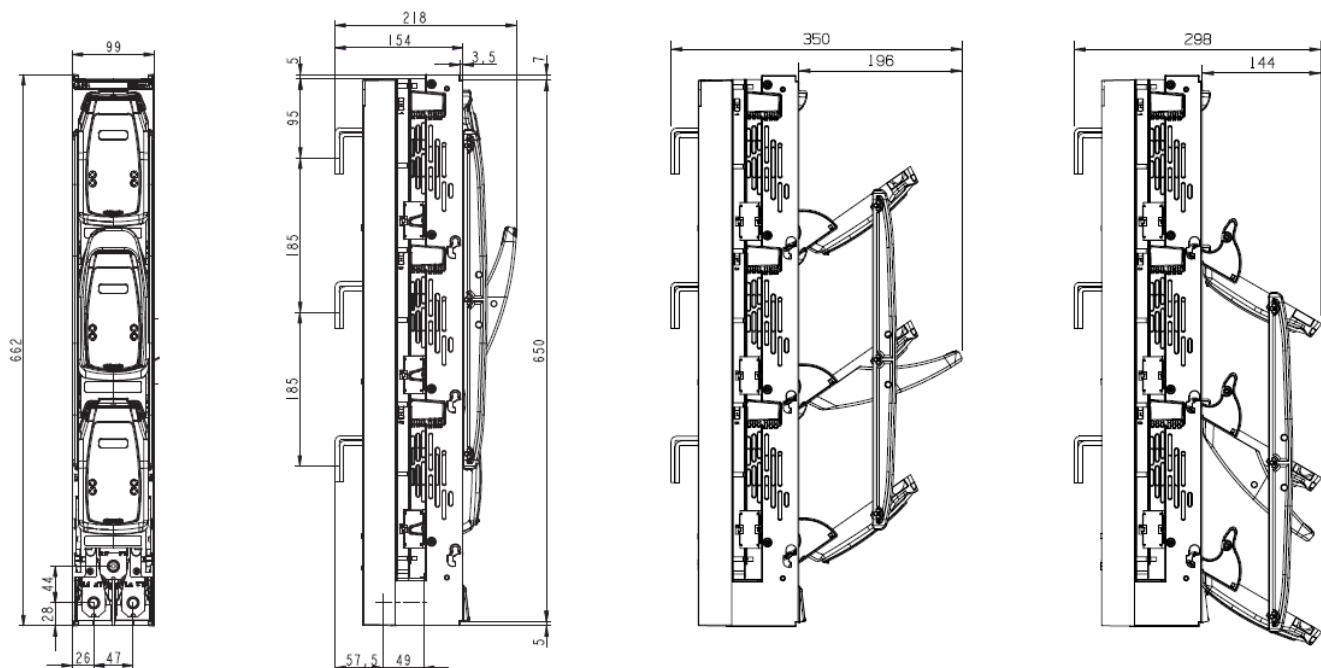
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Dimensional drawings

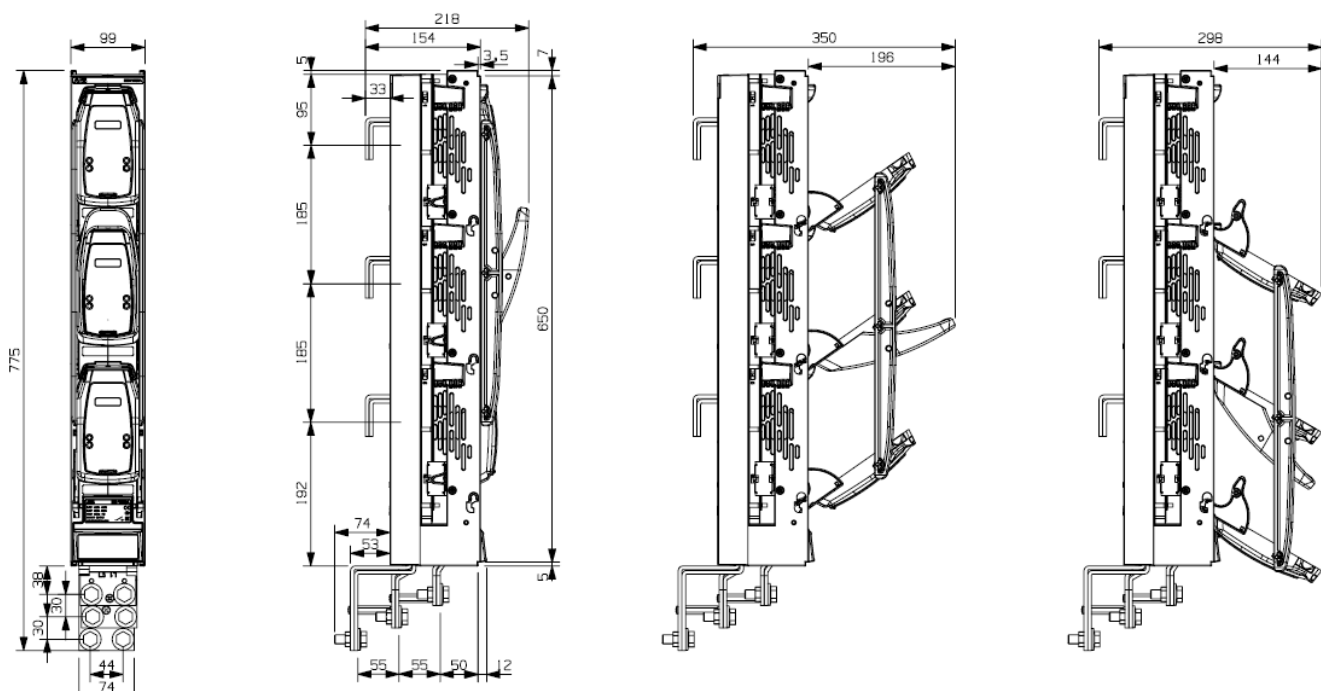
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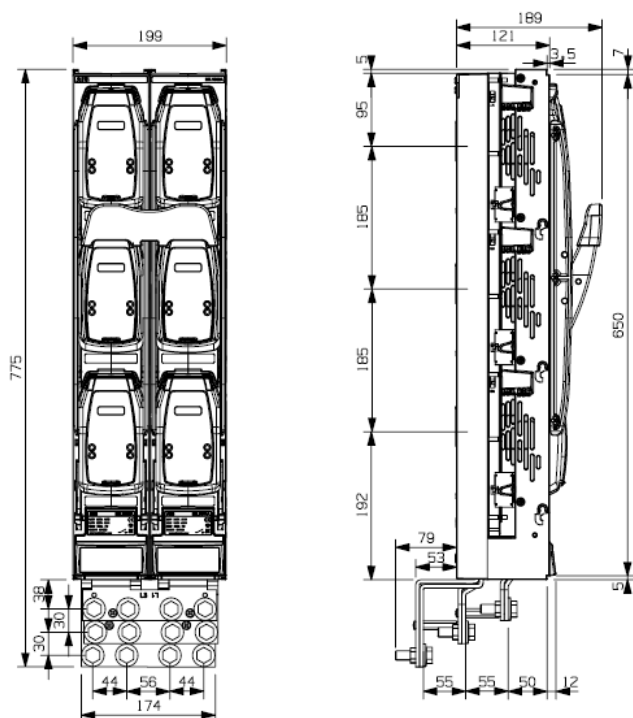
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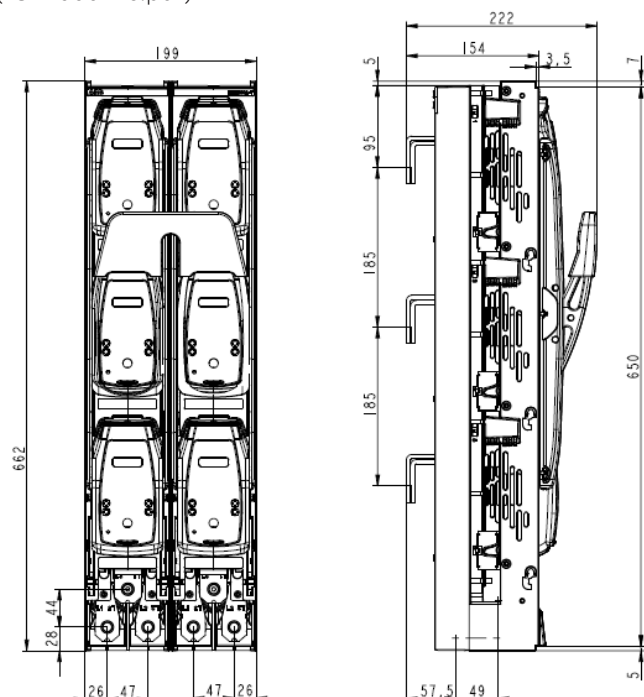


Dimensional drawings

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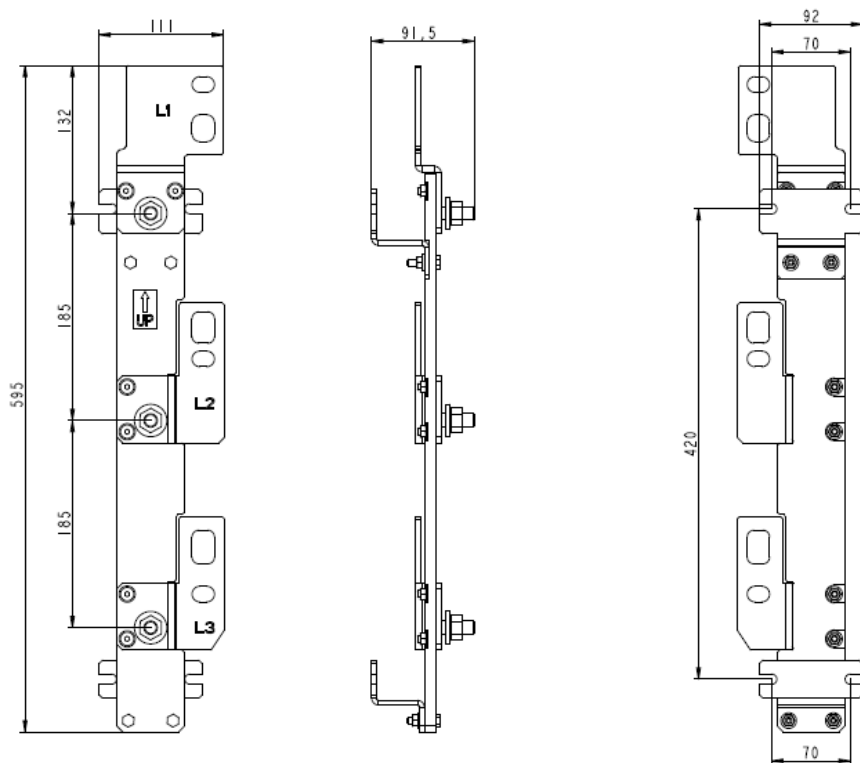
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Dimensional drawings

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