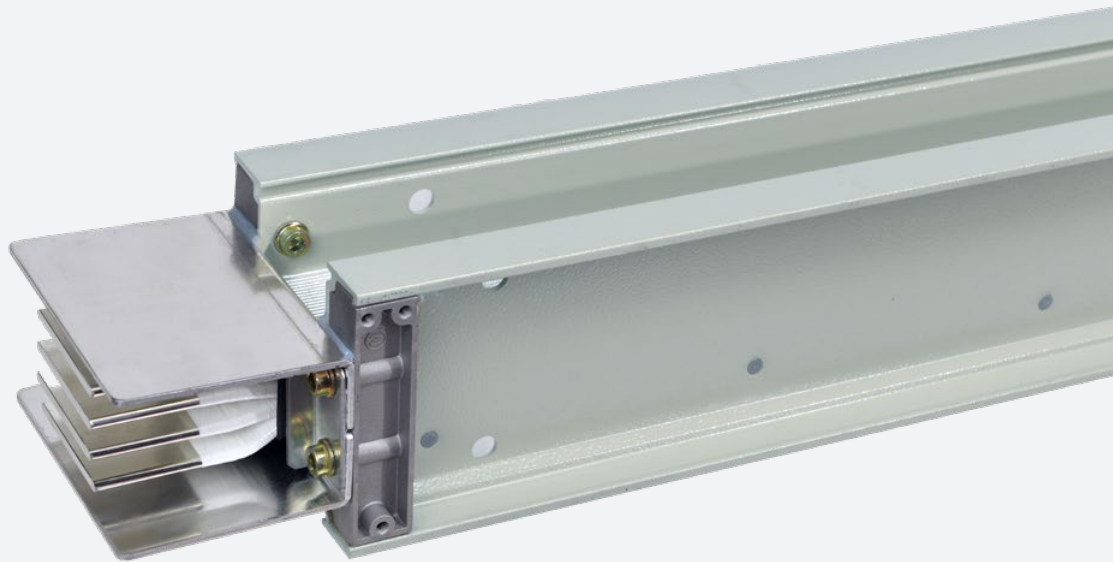


CATALOG

WavePro-A

Low Voltage Busway



- Enhanced safety and protection measures
- Wide range of designs to suit every customer
- Cost-efficient installation and maintenance

—
ABB Busway provides a safe, reliable and cost-effective means of distributing electrical power in commercial and industrial applications.

As an alternative to cable, ABB's busway solutions offer a range of products to ensure safe, flexible, and reliable cost-effective distribution of electrical power.



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WavePro-A Busway Overview

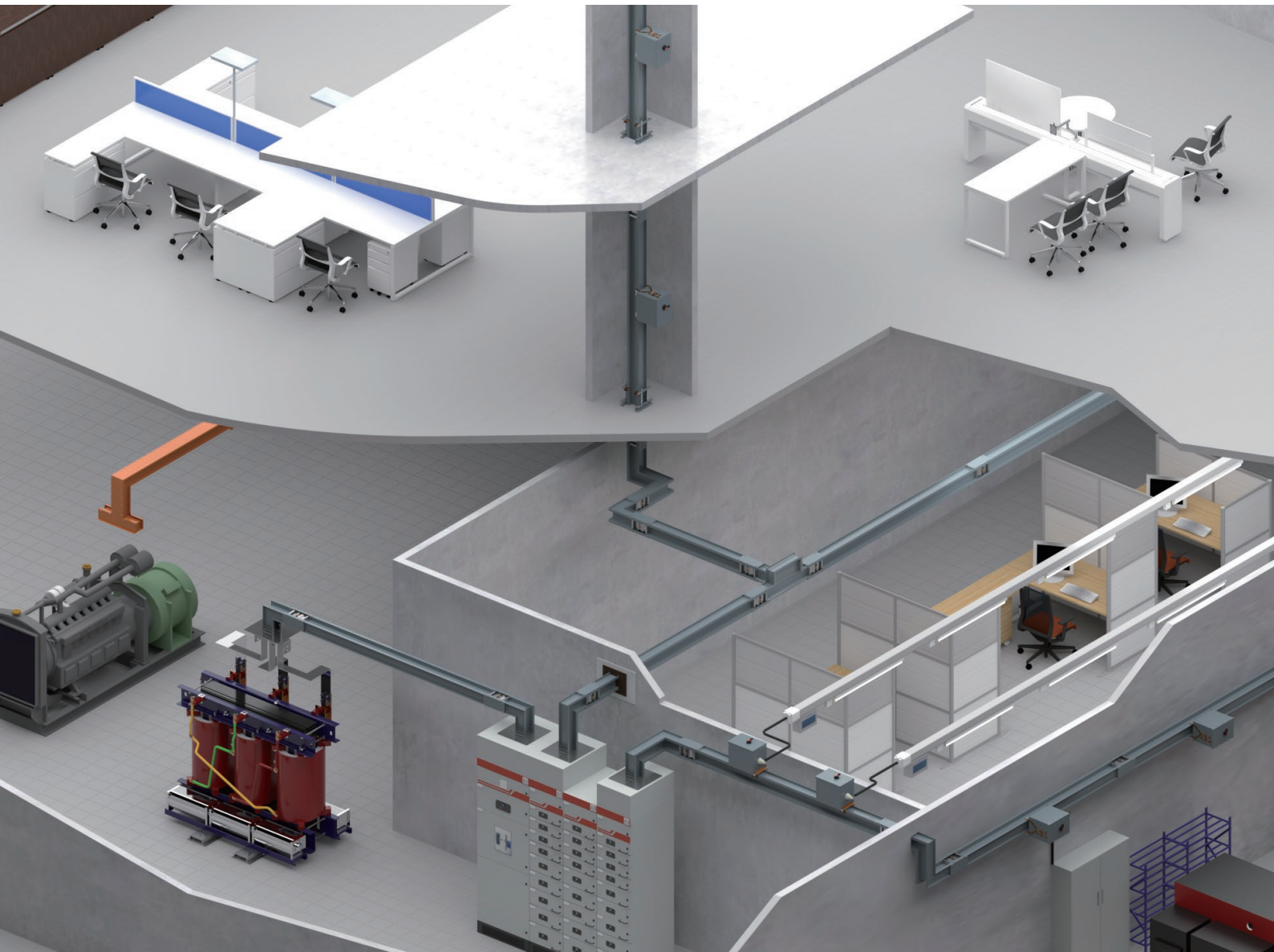
WavePro-A Busway offers:

- Maximum safety and reliability: ensured through design-verified solution according to IEC 61439-6
- Footprint reduction: up to 25% space saving compared to alternative designs
- Low loss: All aluminum housing for reduced losses and heat dissipation
- Easy to install: Unique error proof joint design to ensure correct installation

WavePro-A busway has an aluminum conductor design with aluminum housing and sandwich structure that provides perfect heat dissipation performance. As low magnetic material, aluminum housing can effectively reduce the eddy current hysteresis loss.

Plugin boxes utilising ABB's TMax MCCB's up to 800A provide electrical distribution options.

Reliability and Safety is a priority and WavePro-A meets the requirements of IEC 61439-6, rigorous testing has been conducted to ensure safety, availability and reliability.



Technical Data

Standards	IEC 61439-6 2012: LV switchgear and control gear assemblies – Part 6: Busbar trunking systems (busways) IEC 60331-1:2018, Fire rated option complies with circuit integrity under fire with shock at temperature of 950 °C at 1000 Vac for 180 min
Test certificates	KEMA KEUR
Electrical data	
Rated frequency (fn)	50 / 60Hz
Rated current (InA)	250A - 5000A
Rated short-time withstand current (Icw)	15kA / 1s - 120kA / 1s
Rated peak withstand current (Ipk)	30kA - 264kA
Rated operational voltage (Ue)	1000V
Rated insulation voltage (Ui)	1000V
Rated impulse withstand voltage (Uimp)	8kV
Construction	
Construction	Sandwich busway
Degree of protection - Busway	IP66 (without TOU outlet) IP54 (with TOU outlet)
Degree of protection - Tap-off unit	IP41, IP54
Housing	Aluminium alloy
Busbars	Aluminum conductor, Copper plating and then tin plating (at two ends and joints) as standard offer, silver plating on request
Main insulation material	Polyester film (PET), class B 130°C Fire rated option: Mica film and Polyester film
Resistance to flame propagation	Comply
Service conditions	
Ambient air temperature – Lower limit	Indoor: -5 °C
Ambient air temperature – Upper limit	40 °C
Ambient air temperature – Daily average maximum	35 °C
Maximum relative humidity	Indoor: 50 % at 40 °C
Pollution degree	III
Altitude	≤ 2000 m

Product Features



Busway construction

- The housing is made of an aluminium alloy profile which is low magnetic material and effectively minimizes the hysteresis loss during busway energisation
- The aluminium alloy profile has excellent heat dissipation performance, ensuring the maximum temperature rise of the busway not exceeding the limit at rated current
- The housing is powder coated and has been tested to withstand 1000 hours of salt fog test
- Optimized housing design, compact structure, stronger busway overall protection



Busbars

- The polish-saw process is used to cut the conductors to ensure a high quality bar end finish. This process is better than cutting and avoids secondary damage to insulation materials
- The conductor is machined and then electroplated



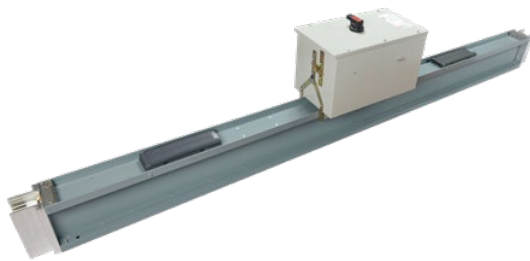
Reliable insulation material

- WavePro-A busway is wrapped with two layers of polyester film as insulation, insulation level is class B
- Prior to the busway leaving the factory it is tested to withstand 3750V AC high voltage, which ensures 100% qualified insulation performance
- WavePro-A fire rated option comply with IEC 60331-1, circuit integrity under fire with shock at temperature of 950 °C at 1000 Vac for 180 min: busway conductors are wrapped with one layer of mica film and one layer of polyester film



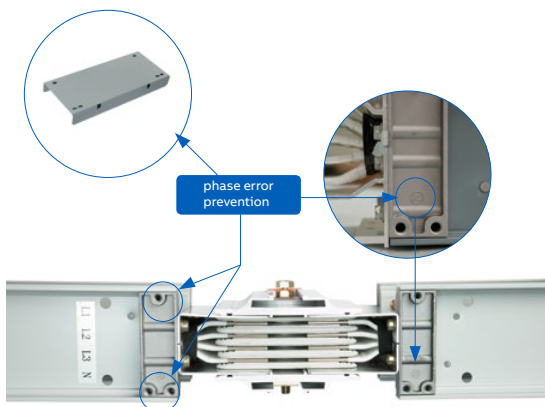
Joint

- It has a stopper mechanism which ensures quick and reliable joint installation
- It uses the double-headed torque limiting joint bolt, with standard tightening torque of $70 \pm 5N \cdot m$. When the bolt is properly tightened with required torque, the orange identification label is released
- Each joint has a $\pm 4mm$ adjustment range to compensate for the length change due to thermal expansion



Degree of protection

- IP rating up to IP66 for feeder and IP54 for plug-in busway.
- The plug outlet protection module is embedded with waterproof silicone rubber. The joint is protected with an all-round protection cover plate suitable for the busway of IP66
- Suitable for indoor application



Busway phase error prevention mechanism

- Aluminium cast terminal of the busway is of asymmetrically fixed hole construction, and it combines with joint cover to effectively prevent phase error

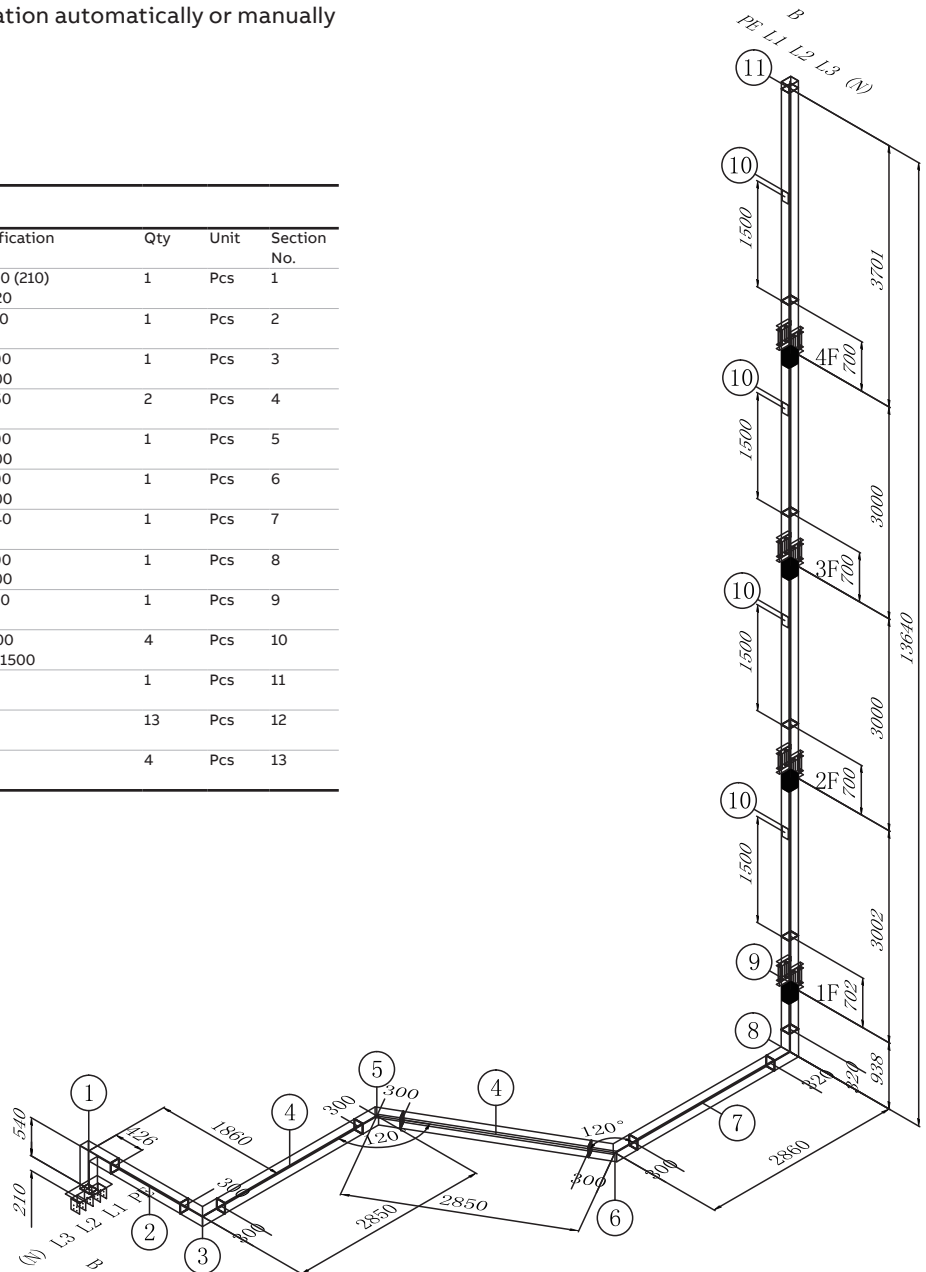
Bus Pro Software

Bus Pro is a software dedicated for WavePro busway routing design, segmentation and BOM generation.

Bus Pro built in detailed busway product parameters and related design standards, seamless integration with ERP system:

- 3D layout generation (direct drawing or generate from polyline)
- Non-standard unit customization
- Wall / floor setting up
- Tap-off units, hangers and customized units' insertion
- Busway segmentation automatically or manually
- Labeling
- BOM output

Bill of Material				
Description	Specification	Qty	Unit	Section No.
Flanged end with elbow	L1=750 (210) L2=420	1	Pcs	1
Straight length	L=1130	1	Pcs	2
Elbow - flatwise	L1=300 L2=300	1	Pcs	3
Straight length	L=2250	2	Pcs	4
Elbow - flatwise	L1=300 L2=300	1	Pcs	5
Elbow - flatwise	L1=300 L2=300	1	Pcs	6
Straight length	L=2240	1	Pcs	7
Elbow - edgewise	L1=300 L2=300	1	Pcs	8
Straight length	L=1320	1	Pcs	9
Riser	L=3000 F: L1=1500	4	Pcs	10
Terminal cover		1	Pcs	11
Joint		13	Pcs	12
Spring Hanger		4	Pcs	13



Electrical Data

Integrated housing PE

WavePro-A busway profiled aluminum alloy housing provides excellent integrated housing earth path with low resistance. An internal earth bus bar thickness is 50% of phase bar is also available to meet customers' special needs.

PE resistance (DC)

(10°Ω/m) @ ambient temperature of 20 °C)

No.	Rated current	Housing PE	50% internal PE
1	250	46.9	39.3
2	400	42.8	35.0
3	630	37.8	30.1
4	800	33.8	26.5
5	1000	28.8	22.0
6	1250	23.8	17.7
7	1600	19.1	13.9
9	2000	15.0	11.1
10	2500	12.3	9.1
11	3200	9.8	7.1
12	4000	8.4	6.0
13	5000	7.1	5.0

Ambient Temperature's influence on application

If an ambient temperature other than the reference value of 35°C is present, the derating factors listed in the following table must be used:

Derating factors for the current-carrying capacity at different ambient temperatures

Ambient temperature (°C)	Derating factor
20	1.09
25	1.06
30	1.03
35	1.00
40	0.97
45	0.94
50	0.90

Voltage drop

WavePro-A busway features low voltage drop. The aluminium housing designed with compact sandwich construction and low magnetic materials can minimize the conductor reactance. Electrical impedance and voltage drop data of the busway straight lengths are shown below. The following data is for a 50Hz systems, for 60Hz applications multiply the Reactance by 1.205, there is no change to the Resistance. For distributed loads when using plug in busway, the voltage drop is divided by 2.

[Data source: calculation]

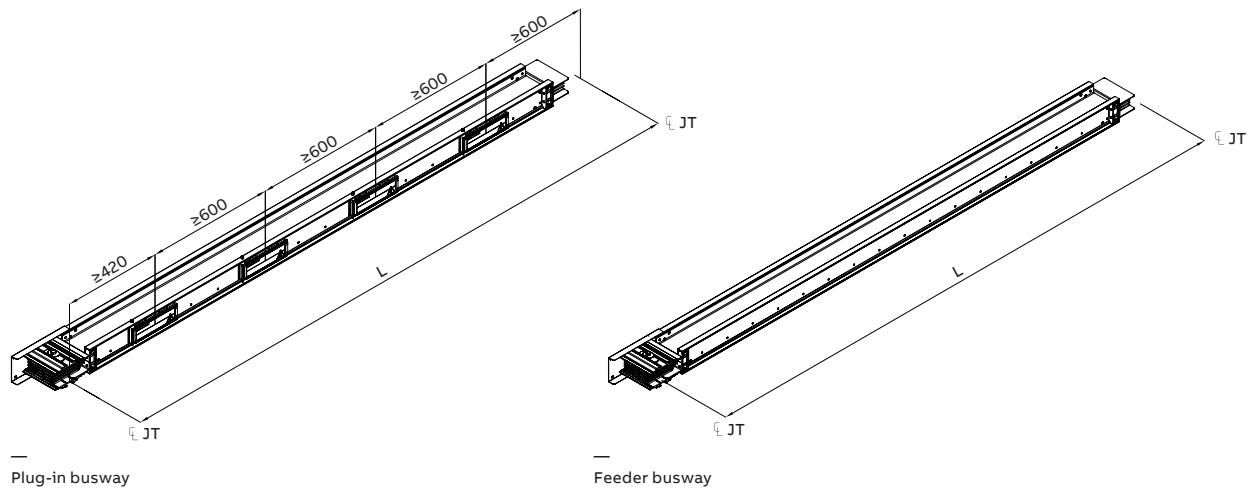
Rated Current ¹	Rated short-time withstand (I _{cw})	Rated peak current (I _{pk})	100% Rated Load/steady state (50Hz), 20°C Amb.									
			20°C DC Resistance	Resistance	Reactance	Impedance	Line-to-line voltage drop (V/m) - Concentrated load ²					
A	kA/s	kA	(10 ⁻⁶ Ω/m, phase-to-neutral)					cosφ=0.6	cosφ=0.7	cosφ=0.8	cosφ=0.9	cosφ=1.0
250	15	30	151.0	178.3	87.9	198.8	0.077	0.081	0.085	0.086	0.077	
400			120.8	149.5	73.5	166.6	0.103	0.109	0.113	0.116	0.104	
630	30	63	92.9	122.1	62.6	137.2	0.135	0.142	0.148	0.150	0.133	
800			76.5	105.4	32.5	110.3	0.124	0.134	0.144	0.151	0.146	
1000	50	105	58.1	85.5	55.4	101.8	0.166	0.172	0.176	0.175	0.148	
1250			43.5	66.8	14.5	68.3	0.112	0.123	0.134	0.144	0.145	
1600	65	143	32.0	49.9	18.1	53.1	0.123	0.132	0.141	0.147	0.138	
2000	80	176	25.3	41.5	21.9	46.9	0.147	0.155	0.161	0.163	0.144	
2500			21.7	33.2	22.9	40.3	0.166	0.171	0.175	0.173	0.144	
3200	120	264	16.0	25.4	12.1	28.1	0.138	0.146	0.153	0.156	0.141	
4000			12.7	20.6	8.4	22.2	0.132	0.141	0.149	0.154	0.143	
5000			8.5	14.3	6.0	15.5	0.116	0.123	0.130	0.134	0.124	

Note:

1. With an average ambient temperature of 35°C, the busway can continuously operate at rated current. If the busway is continuously operated at higher ambient temperature, please contact with local ABB office.
2. Concentrated load: Voltage drop= $\sqrt{3} I (R\cos\phi + X\sin\phi)$ Distributed load: voltage drop= $[\sqrt{3} I (R\cos\phi + X\sin\phi)]/2$
To determine Actual voltage drop = Voltage Drop from Table x actual load/rated load

Physical Data

Straight lengths



Feeder busway minimum length is 400mm, maximum length is 3000mm. Other lengths can be customized. Plug-in busway with 1 plug outlet, the minimum length is 720mm. The outlet is set in the center.

Both sides of the plug-in busway can be customized with plug outlets. For the busway with standard length of 3 meters, one side can be customized with up to 4 outlets.

Rating (A)	H (mm)	Weight (kg/m)				Fig. No.
		50% Housing PE		50% Internal PE		
		3L+50%PE	3L+N+50%PE	3L+N+50%PE	3L+2N+50%PE	
250	103	6.2	6.7	7.1	7.6	Fig.11-1
400	113	6.8	7.4	7.8	8.4	
630	128	7.6	8.4	8.9	9.7	
800	143	8.4	9.4	10.0	11.0	
1000	168	9.8	11.1	11.9	13.2	
1250	203	11.7	13.5	14.6	16.4	
1600	253	14.5	16.9	18.3	20.7	
2000	293	18.1	21.2	22.8	25.9	
2500	392	22.4	26.0	28.1	31.7	Fig.11-2
3200	492	27.9	32.8	35.7	40.6	
4000	572	33.0	39.2	42.9	49.1	
5000	684	40.9	50.1	53.4	62.6	

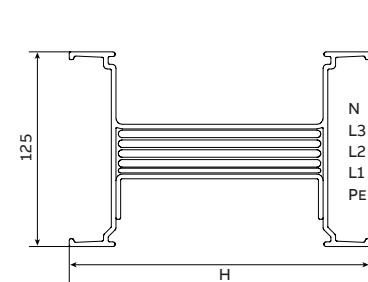


Fig 11-1

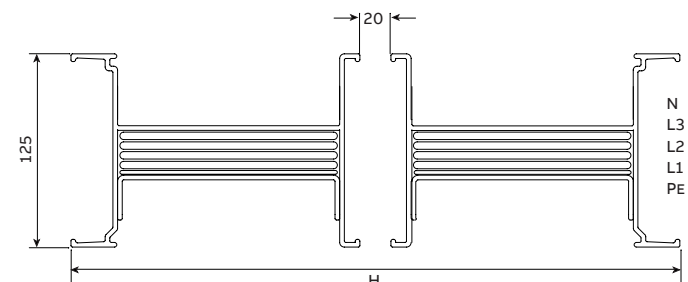
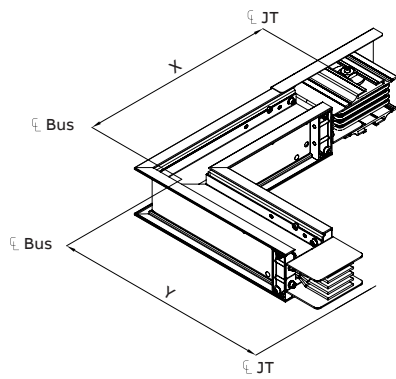


Fig 11-2

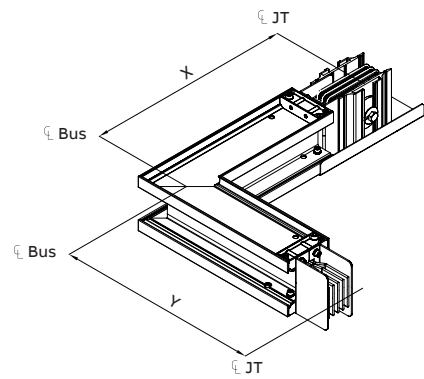
Note: Fig 11-1 and Fig 11-2 show arrangement with internal PE bar, dimensions are the same for housing PE arrangement

Physical Data

Elbows



— Flatwise Elbow



— Edgewise Elbow

Flatwise Elbow

Rated current (A)	Minimum Size		Standard Size	
	X	Y	X	Y
250	292	292	400	400
400	297	297	400	400
630	304	304	400	400
800	312	312	400	400
1000	324	324	400	400
1250	342	342	400	400
1600	367	367	400	400
2000	387	387	500	500
2500	436	436	500	500
3200	486	486	600	600
4000	526	526	600	600
5000	546	546	600	600

mm

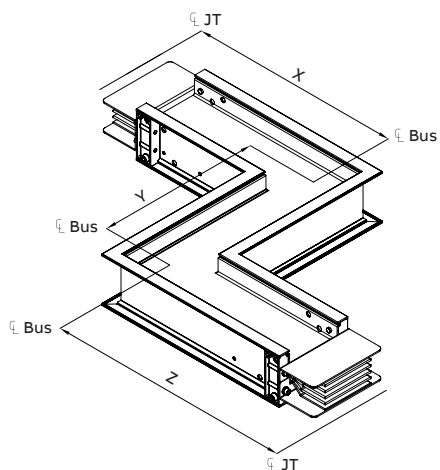
Edgewise Elbow

Rated current (A)	Minimum Size		Standard Size	
	X	Y	X	Y
250	303	303	400	400
400	303	303	400	400
630	303	303	400	400
800	303	303	400	400
1000	303	303	400	400
1250	303	303	400	400
1600	303	303	400	400
2000	303	303	400	400
2500	303	303	400	400
3200	303	303	400	400
4000	303	303	400	400
5000	303	303	400	400

mm

Physical Data

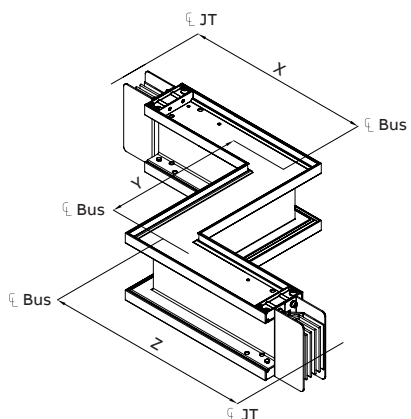
Offsets



Flatwise offset

Flatwise offsets

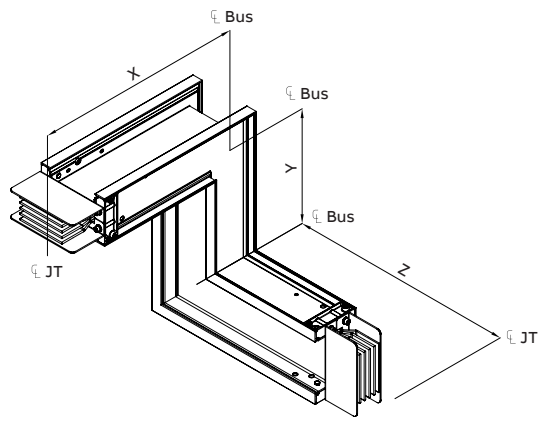
Rated current (A)	Minimum Size			Standard Size		
	X	Y	Z	X	Y	Z
250	292	223	292	400	300	400
400	297	233	297	400	300	400
630	304	248	304	400	300	400
800	311	263	311	400	300	400
1000	324	288	324	400	300	400
1250	341	323	341	400	400	400
1600	366	373	366	400	400	400
2000	387	413	387	500	600	500
2500	435	512	435	500	600	500
3200	485	612	485	600	700	600
4000	525	692	525	600	800	600
5000	586	772	586	600	800	600



Edgewise offset

Edgewise offsets

Rated current (A)	Minimum Size			Standard Size		
	X	Y	Z	X	Y	Z
250	303	245	303	400	300	400
400	303	245	303	400	300	400
630	303	245	303	400	300	400
800	303	245	303	400	300	400
1000	303	245	303	400	300	400
1250	303	245	303	400	300	400
1600	303	245	303	400	300	400
2000	303	245	303	400	300	400
2500	303	245	303	400	300	400
3200	303	245	303	400	300	400
4000	303	245	303	400	300	400
5000	303	245	303	400	300	400



Combination offset

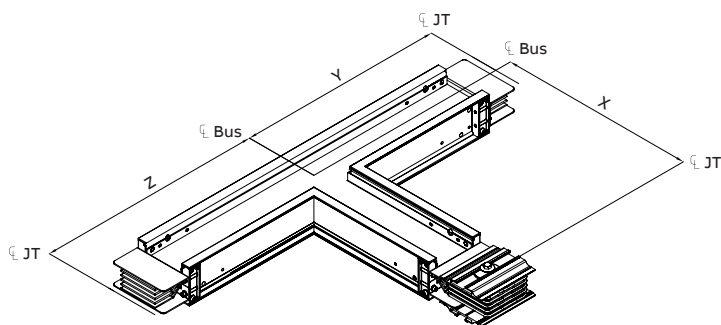
Combination offsets

Rated current (A)	Minimum Size			Standard Size		
	X	Y	Z	X	Y	Z
250	303	234	292	400	300	400
400	303	239	297	400	300	400
630	303	247	304	400	300	400
800	303	254	311	400	300	400
1000	303	267	324	400	300	400
1250	303	284	341	400	400	400
1600	303	309	366	400	400	400
2000	303	329	387	400	400	500
2500	303	379	435	400	500	500
3200	303	429	485	400	500	600
4000	303	469	525	400	600	600
5000	303	529	586	400	600	600

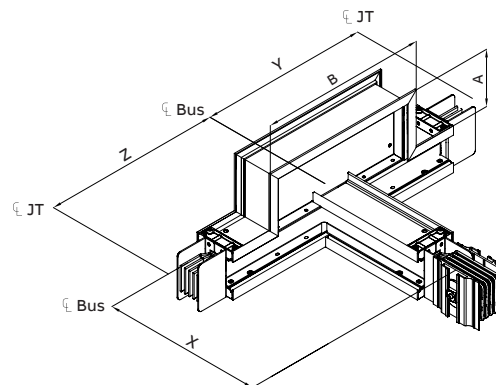
mm

Physical Data

Tees



Flatwise Tee



Edgewise Tee

Flatwise Tee

Rated current (A)	Minimum Size			Standard Size		
	X	Y	Z	X	Y	Z
250	292	292	292	400	400	400
400	297	297	297	400	400	400
630	304	304	304	400	400	400
800	311	311	311	400	400	400
1000	324	324	324	400	400	400
1250	341	341	341	400	400	400
1600	366	366	366	400	400	400
2000	387	387	387	500	500	500
2500	435	435	435	500	500	500
3200	485	485	485	600	600	600
4000	525	525	525	600	600	600
5000	586	586	586	600	600	600

mm

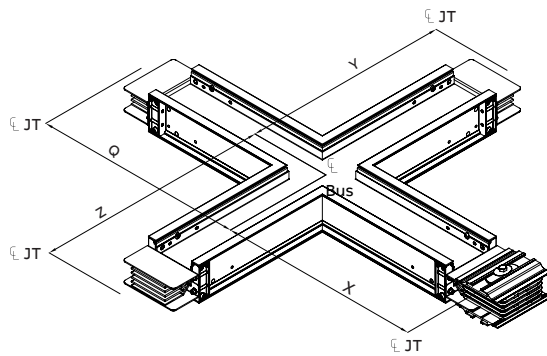
Edgewise Tee

Rated current (A)	Minimum Size			Standard Size				
	X	Y	Z	X	Y	Z	A	B
250	303	362	362	400	400	400	122	352
400	303	367	367	400	400	400	132	372
630	303	374	374	400	400	400	147	402
800	303	382	382	400	400	400	161	430
1000	303	394	394	400	500	500	186	480
1250	303	412	412	400	500	500	221	550
1600	303	437	437	400	500	500	271	650
2000	303	457	457	500	600	600	311	730
2500	303	536	536	500	600	600	221	550
3200	303	586	586	600	700	700	271	650
4000	303	626	626	600	700	700	311	730
5000	303	686	686	600	700	700	380	860

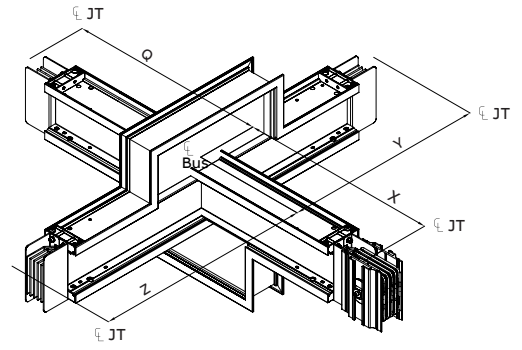
mm

Physical Data

Cross



Flatwise Cross



Edgewise Cross

Flatwise Cross

Rated current (A)	Minimum Size				Standard Size			
	X	Y	Z	Q	X	Y	Z	Q
250	292	292	292	292	400	400	400	400
400	297	297	297	297	400	400	400	400
630	304	304	304	304	400	400	400	400
800	311	311	311	311	400	400	400	400
1000	324	324	324	324	400	400	400	400
1250	341	341	341	341	400	400	400	400
1600	366	366	366	366	400	400	400	400
2000	387	387	387	387	500	500	500	500
2500	435	435	435	435	500	500	500	500
3200	485	485	485	485	600	600	600	600
4000	525	525	525	525	600	600	600	600
5000	586	586	586	586	600	600	600	600

mm

Edgewise Cross

Rated current (A)	Minimum Size				Standard Size			
	X	Y	Z	Q	X	Y	Z	Q
250	362	362	362	362	400	400	400	400
400	367	367	367	367	400	400	400	400
630	374	374	374	374	400	400	400	400
800	382	382	382	382	400	400	400	400
1000	394	394	394	394	500	500	500	500
1250	412	412	412	412	500	500	500	500
1600	437	437	437	437	500	500	500	500

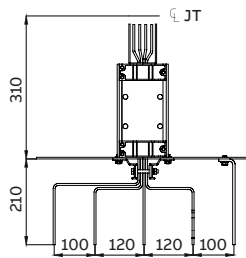
mm

Physical Data

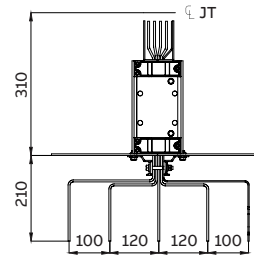
Flanged End

Flanged End

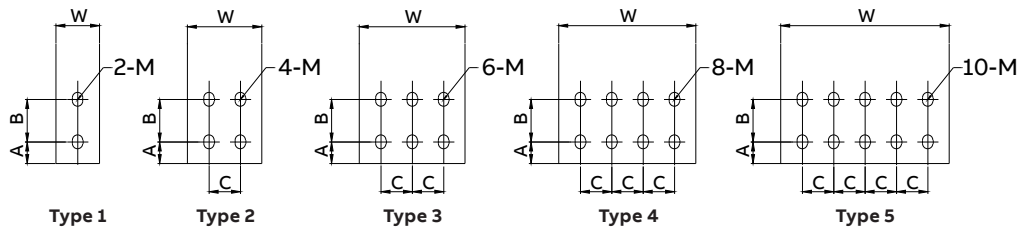
Flanged End combined with End Tap Box serving as an incoming unit. Electrical energy is normally fed into the busway run through an incoming unit.



3L+100%N+50% housing PE



3L+100%N+50% internal PE



Bar hole pattern

mm

Rated current (A)	A	B	C	M	Type
250	25	50	-	Φ14×20	1
400	25	50	-	Φ14×20	1
630	25	50	-	Φ14×20	1
800	25	50	-	Φ14×20	1
1000	25	50	50	Φ14×20	2
1250	25	50	50	Φ14×20	2
1600	25	50	50	Φ14×20	3
2000	25	50	50	Φ14×20	2
2500	25	50	50	Φ14×20	2
3200	25	50	50	Φ14×20	3
4000	25	50	50	Φ14×20	4
5000	25	50	50	Φ14×20	5

Flanged End Stub

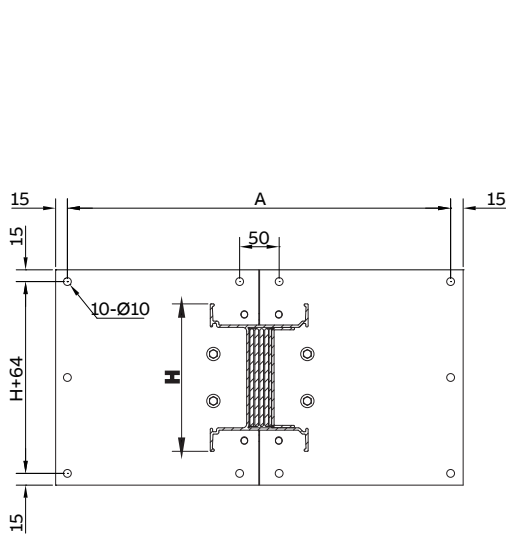


Fig 17-1

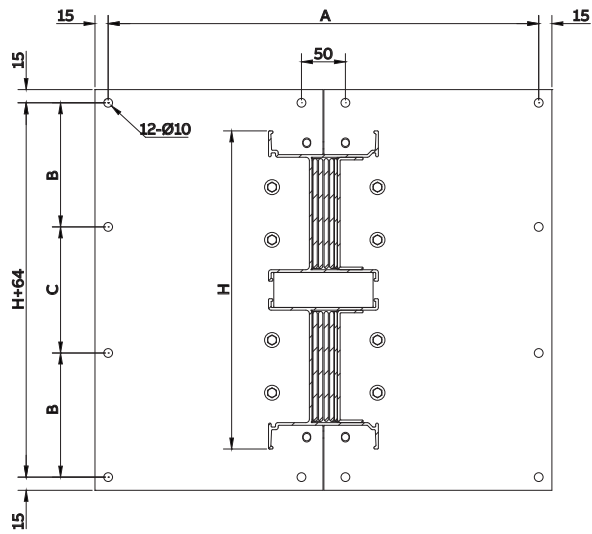


Fig 17-2

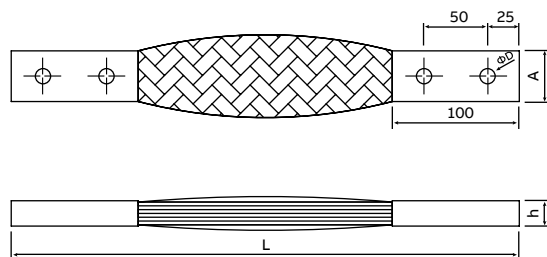
mm

Rated current (A)	H	A	B	C	Fig. No.
250	103	490	-	-	Fig. 17-1
400	113	490	-	-	
630	128	490	-	-	
800	143	490	-	-	
1000	168	490	-	-	
1250	203	490	-	-	
1600	253	490	-	-	
2000	293	490	-	-	
2500	392	490	150	156	Fig. 17-2
3200	492	490	185	186	
4000	572	490	210	216	
5000	685	490	250	249	

Flexible connection (Copper)

mm

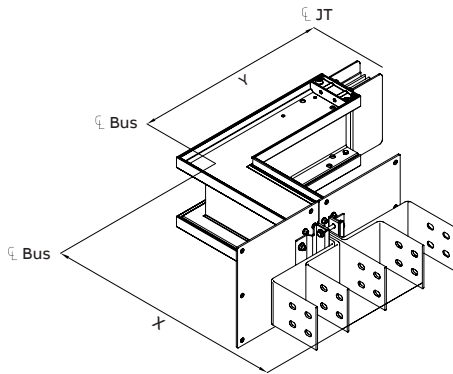
Rated current (A)	A	h	Qty connector / phase	
			A,B,C,N	PE
400	46	10	1	1
630	48	14	1	1
800	46	10	2	1
1000	48	14	2	1
1250	48	14	2	1
1600	48	14	3	2
2000	48	14	4	2
2500	48	14	4	2
3200	48	14	6	3
4000	48	14	7	4
5000	48	14	10	5



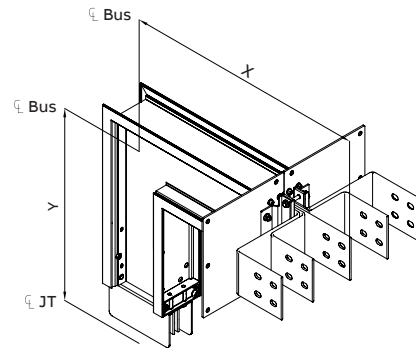
- Notes:
 1. Standard length is 400mm, other lengths can be customized.
 2. φD: φ14 or φ16

Physical Data

Combination Fittings



Flanged End with Elbow - Edgewise



Flanged End with Elbow - Flatwise

Flanged End with Elbow - Edgewise

mm

Rated current (A)	Minimum Size		Standard Size	
	X	Y	X	Y
250	393	303	500	400
400	393	303	500	400
630	393	303	500	400
800	393	303	500	400
1000	393	303	500	400
1250	393	303	500	400
1600	393	303	500	400
2000	393	303	500	400
2500	393	303	500	400
3200	393	303	500	400
4000	393	303	500	400
5000	393	303	500	400

Flanged End with Elbow - Flatwise

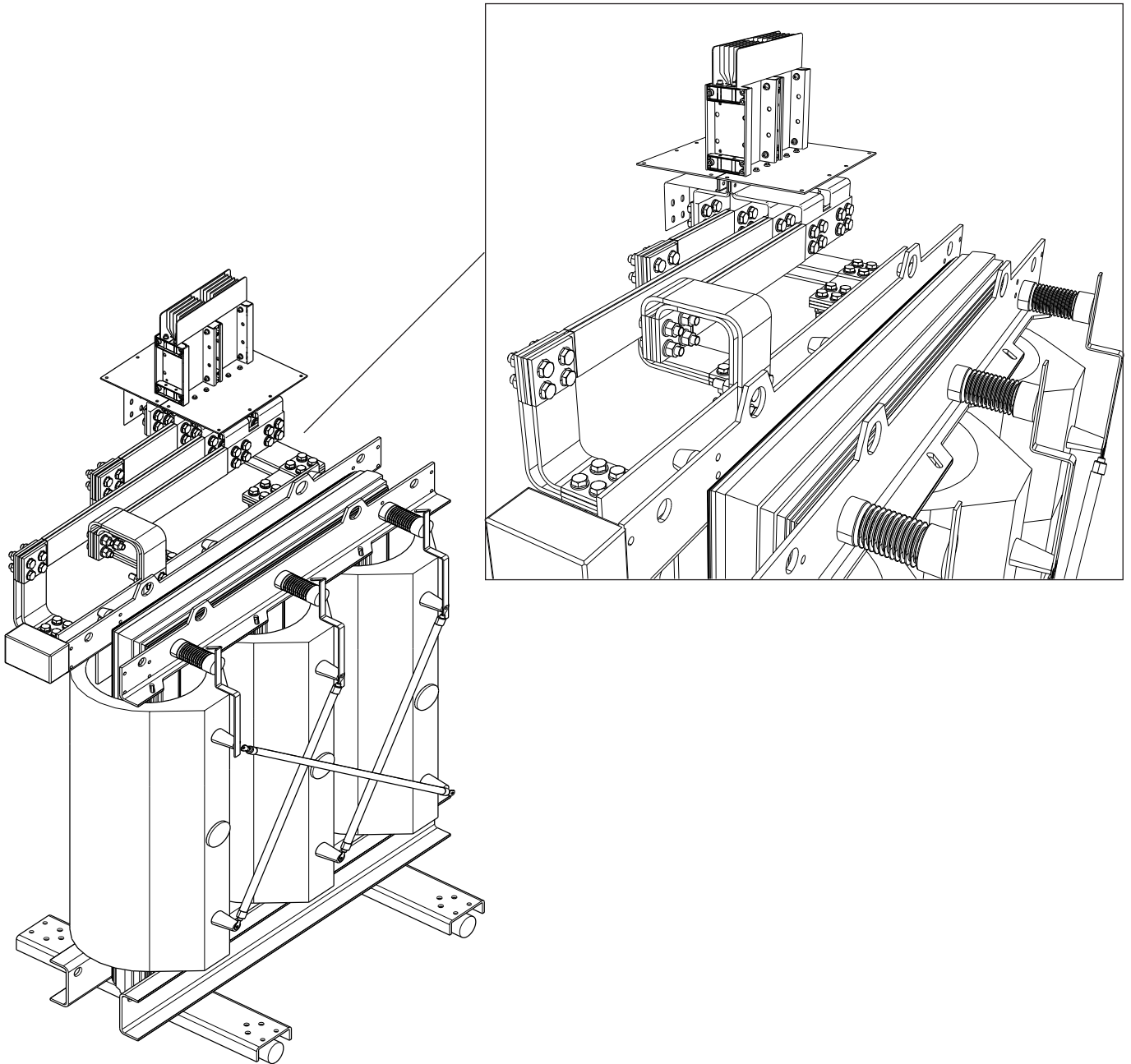
mm

Rated current (A)	Minimum Size		Standard Size	
	X	Y	X	Y
250	382	292	500	400
400	387	297	500	400
630	394	304	500	400
800	402	312	500	400
1000	414	324	500	400
1250	432	342	500	400
1600	457	367	600	400
2000	477	387	600	500
2500	526	436	600	500
3200	576	486	700	600
4000	616	526	700	600
5000	676	586	700	600

Physical Data

Transformer Connection

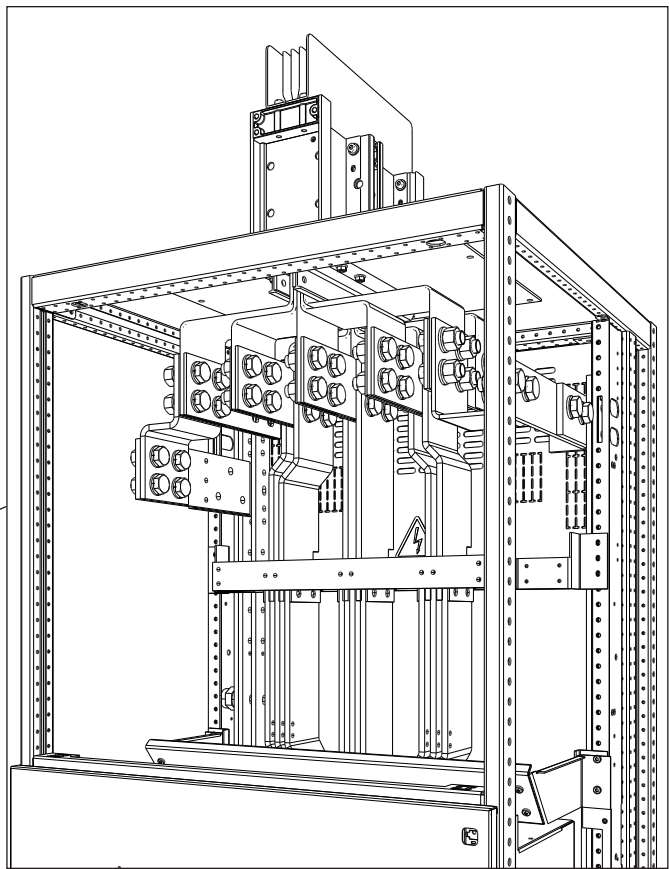
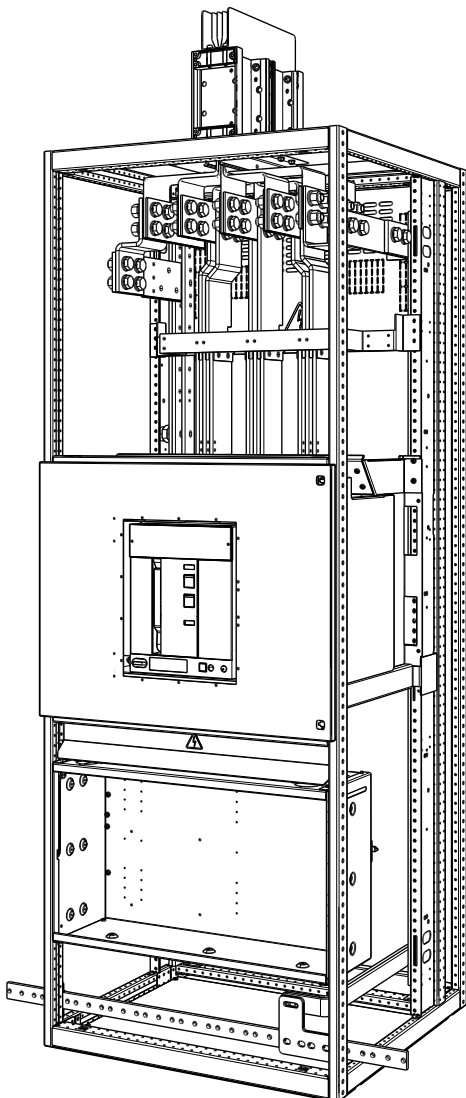
For the mechanical connection between busway and transformer outgoing bar on low voltage side, the busway flange end, flexible connection and connecting copper bar are required. The flexible connection is to isolate the vibration from transformer. The connecting copper bar shall be made locally according to the specific size measured on site, and provided by users.



Physical Data

Switchgear Connection

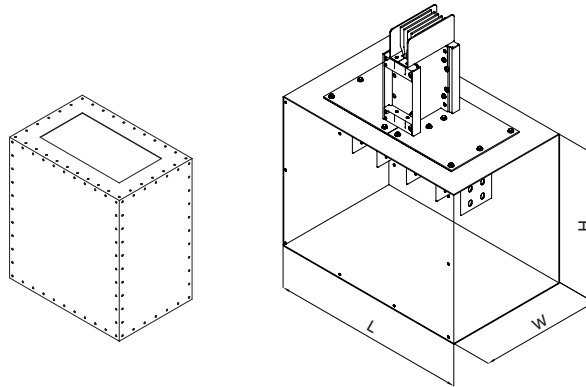
The mechanical connection of busway and low-voltage switchgear need flanged end and connecting copper bar. The copper bar shall be made locally according to the specific size measured on site and provided by users.



Physical Data

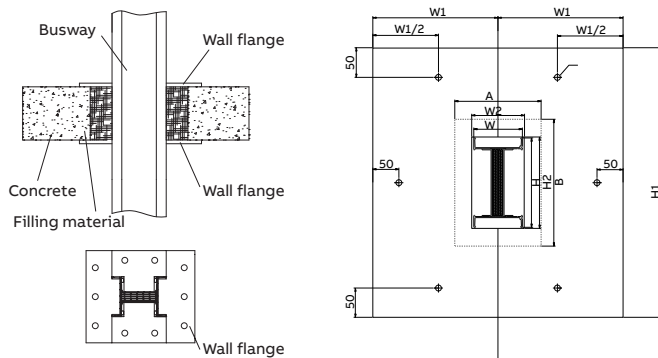
Other Fittings

End Tap Box



End tap boxes are used where a run of busway is fed by cable. The standard size is 1000mm × 1000mm × 1000mm, while we also able to supply with nonstandard box according to customer requirements.

Wall Flange



Wall flanges are used when the busway is penetrating a wall. To meet the fire resistance specification the wall flanges are required to be installed.

Wall flange and cutout dimensions

Rated current (A)	External dimension of busway W×H	Dimension of cutout A×B (≥)	External dimension of wall flange W1×H1 (≥)	Internal dimension of wall flange W2×H2 (≥)
250	125 X 103	230 X 205	215 X 405	140 X 115
400	125 X 113	230 X 215	215 X 415	140 X 125
630	125 X 128	230 X 230	215 X 430	140 X 140
800	125 X 143	230 X 245	215 X 445	140 X 155
1000	125 X 168	230 X 270	215 X 470	140 X 180
1250	125 X 203	230 X 305	215 X 505	140 X 215
1600	125 X 253	230 X 355	215 X 555	140 X 265
2000	125 X 293	230 X 395	215 X 595	140 X 305
2500	125 X 392	230 X 495	215 X 695	140 X 405
3200	125 X 492	230 X 595	215 X 795	140 X 505
4000	125 X 572	230 X 675	215 X 875	140 X 585
5000	125 X 682	230 X 785	215 X 985	140 X 695

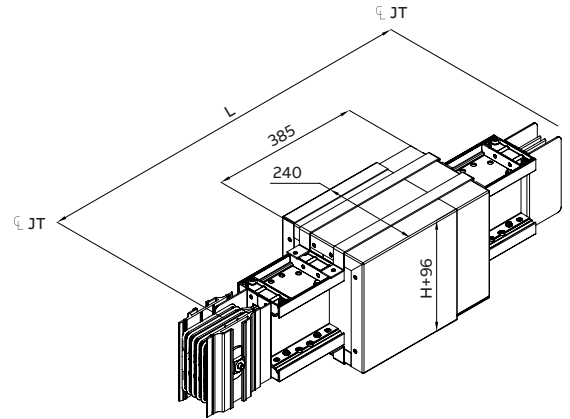
Notes:

1. One set includes two wall flanges (one per side)
2. Wall flange is fixed against the wall with internal expansion bolt

Expansion unit

Expansion unit intended to permit a certain movement in the axial direction of the busway run due to thermal expansion of the system.

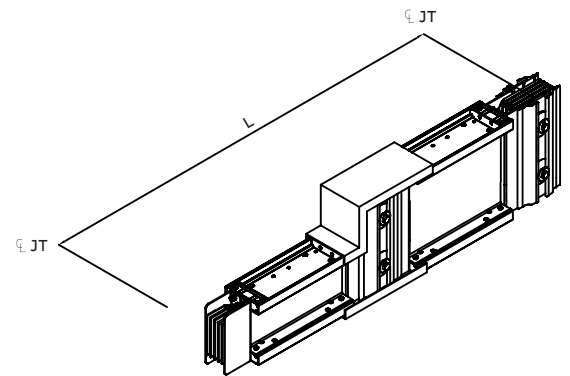
When the straight length of the busway run exceeds 80m, it is advisable to set up expansion units every 50m ~ 60m. The range of WavePro expansion unit is ± 25 mm.



Note: The standard length L is 1000mm

Reducer

Reducer intended to connect two units of the same busway system but of different rated current.



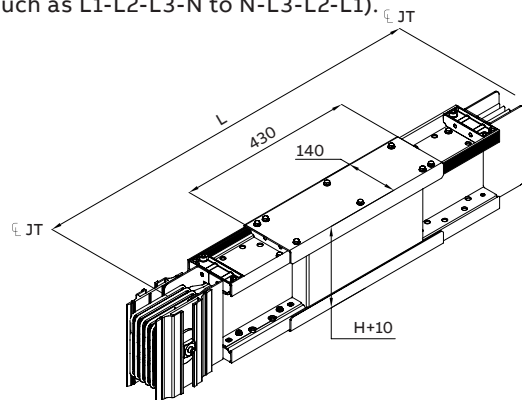
Note: The standard length L is 1000mm

Reducer

Busway rating SKU suffix	Rating after reducer									
	400	630	800	1000	1250	1600	2000	2500	3200	4000
630	R04	-	-	-	-	-	-	-	-	-
800	R04	R06	-	-	-	-	-	-	-	-
1000	R04	R06	R08	-	-	-	-	-	-	-
1250	-	R06	R08	R10	-	-	-	-	-	-
1600	-	R06	R08	R10	R12	-	-	-	-	-
2000	-	-	R08	R10	R12	R16	-	-	-	-
2500	-	-	-	R10	R12	R16	R20	-	-	-
3200	-	-	-	-	R12	R16	R20	R25	-	-
4000	-	-	-	-	-	R16	R20	R25	R32	-
5000	-	-	-	-	-	-	R20	R25	R32	R40

Phase Transposition Unit

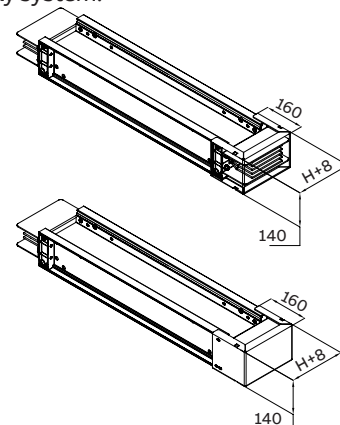
The unit is intended to change the relative positions of the phase conductors in order to balance the inductive reactances or to transpose the phases (such as L1-L2-L3-N to N-L3-L2-L1).



Note: The standard length L is 1000mm

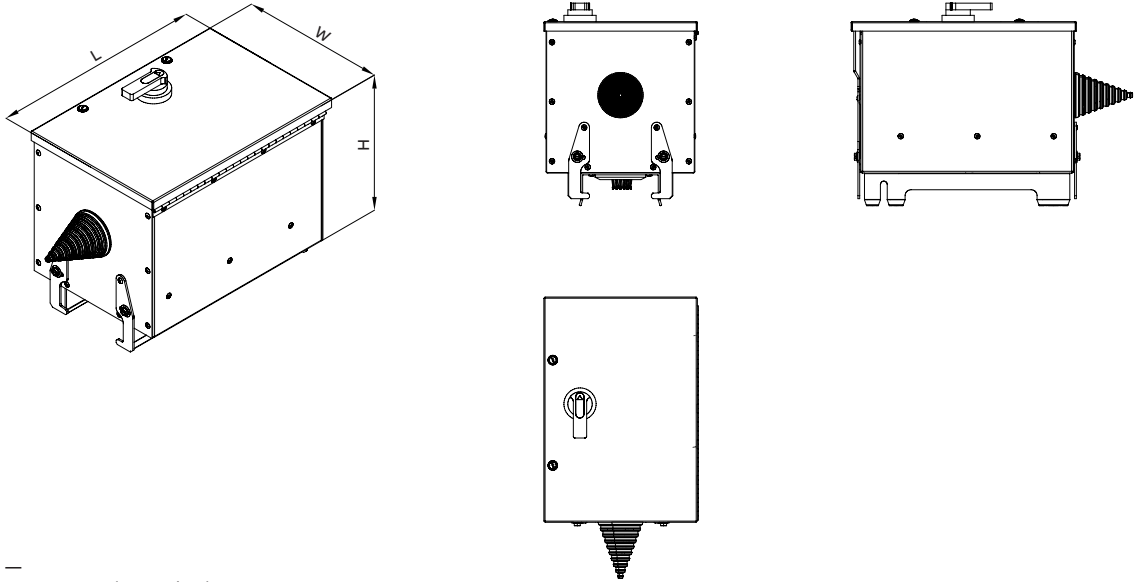
Terminal Cover

Terminal cover is installed to terminate the busway run to prevent ingress of external materials/particles and contact with live parts, thus enclosing the whole busway system.



Physical Data

Tap-off Unit



—
Rotary operation mechanism

WavePro-A Tap-off Unit with Tmax XT

Plug-in type	Box dimensions	Weight	Icc/415V	Tmax XT						
Rating_A	(L x W x H, mm)	kg, w/o MCCB	(kA)	Frame	Type	In (A)	Poles			
16	360*250*250	14	20	XT1 160 TMF / XT2 160 Ekip	N	16	3/4			
25				XT1 160 TMD / XT2 160 Ekip	N	25	3/4			
32				XT1 160 TMD / XT2 160 Ekip	N	32	3/4			
40				XT1 160 TMD / XT2 160 Ekip	N	40	3/4			
50				XT1 160 TMD / XT2 160 Ekip	N	50	3/4			
63				XT1 160 TMD / XT2 160 Ekip	N	63	3/4			
80				XT1 160 TMD / XT2 160 Ekip	N	80	3/4			
100				XT1 160 TMD / XT2 160 Ekip	N	100	3/4			
125				400*250*250	19		XT1 160 TMD / XT2 160 Ekip	N	125	3/4
160							XT1 160 TMD / XT2 160 TMA/Ekip	N	160	3/4
200	500*270*270	22	30	XT4 250 TMA/Ekip	N	200	3/4			
250				XT4 250 TMA/Ekip	N	250	3/4			
400				XT5 400 TMA/Ekip	S	400	3/4			

Bolt-on type	Box dimensions	Weight	Icc/415V	Tmax XT			
Rating_A	(L x W x H, mm)	kg, w/o MCCB	(kA)	Frame	Type	In (A)	Poles
500	1050*420*350	55	50	XT6 800 Ekip	S	500	3/4
630				XT6 800 TMA/Ekip	S	630	3/4
800				XT7 1000 Ekip	S	800	3/4

Note: Additional 46mm shall be considered for installing the rotary handle

WavePro-A Tap-off Unit with Formula

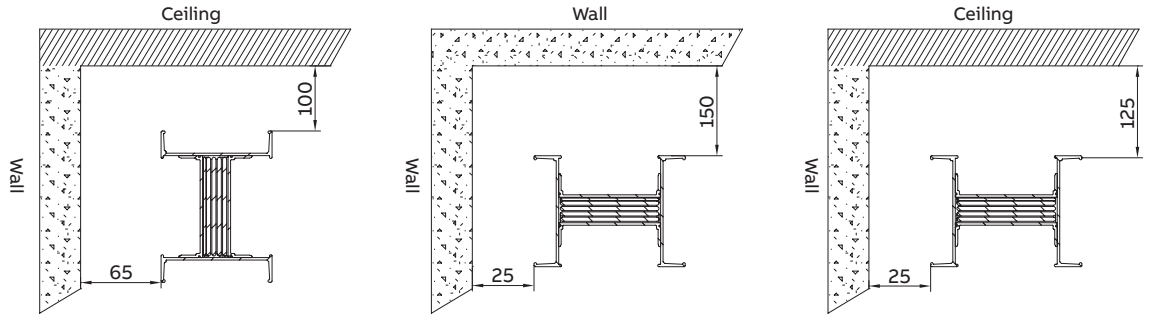
Plug-in type	Box dimensions	Weight	Icc/415V	Formula						
Rating_A	(L x W x H, mm)	kg, w/o MCCB	(kA)	Frame	Type	In (A)	Poles			
16	360*250*250	14	20	A1 125 TMF	C	16	3/4			
25				A1 125 TMF	C	25	3/4			
32				A1 125 TMF	C	32	3/4			
40				A1 125 TMF	C	40	3/4			
50				A1 125 TMF	C	50	3/4			
63				A1 125 TMF	C	63	3/4			
80				A1 125 TMF	C	80	3/4			
100				A1 125 TMF	C	100	3/4			
125				400*250*250	19		A2 250 TMF	C	125	3/4
160							A2 250 TMF	N	160	3/4
200	500*270*270	22		A2 250 TMF	N	200	3/4			
250				A2 250 TMF	N	250	3/4			
320				650*310*310	36	30	A3 400 TMF	S	320	3/4
400	A3 400 TMF	S	400				3/4			

Bolt-on type	Box dimensions	Weight	Icc/415V	Tmax XT			
Rating_A	(L x W x H, mm)	kg, w/o MCCB	(kA)	Frame	Type	In (A)	Poles
500	950*420*350	55	30	A3 630 TMF	S	500	3/4

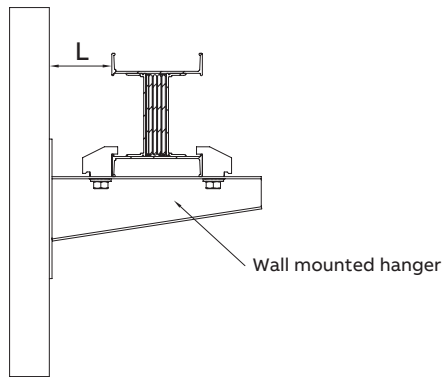
Note: Additional 46mm shall be considered for installing the rotary handle

Busway Installation

Minimum distance required for feeder busway installation



Minimum distance required for plug-in busway installation



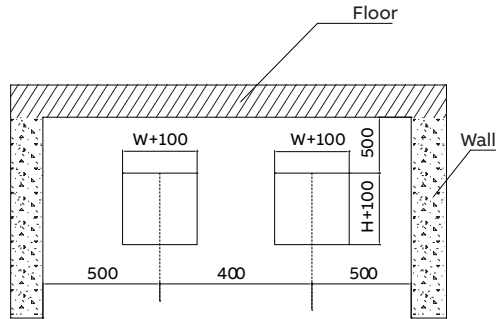
Relationship between the Tap-off unit (TOU) rated current and the spacing L

When the busway is installed against the wall horizontally or vertically, there should be certain spacing reserved for bus plug installation.

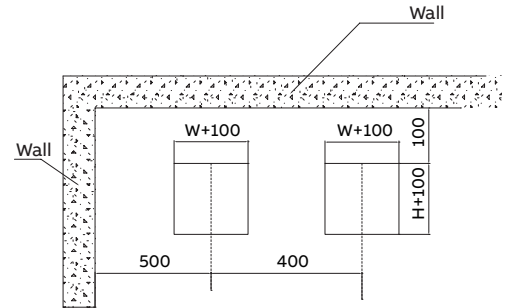
TOU Rating (A)	100	160	250	400	630	800
L (mm)	150	175	195	210	230	260

Reserved holes for busway installation

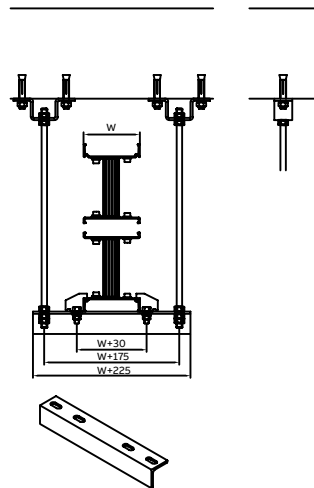
Dimensions of cut holes for busway horizontal through-the-wall installation



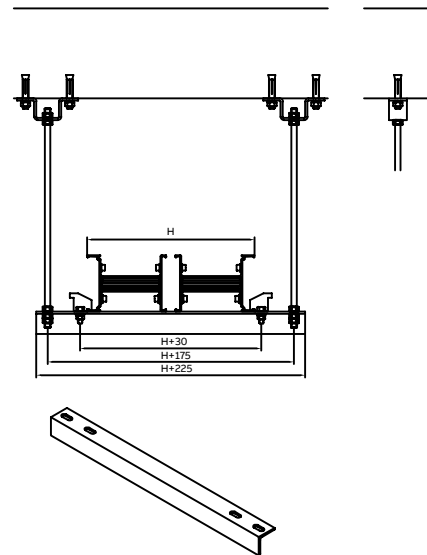
Dimensions of cut holes for busway vertical through-the-floor installation



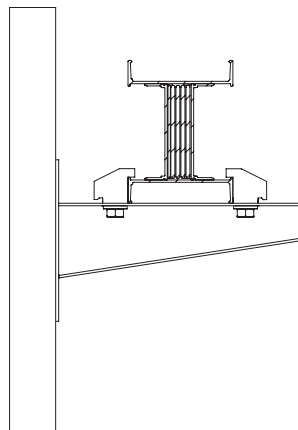
Trapeze - Edgewise



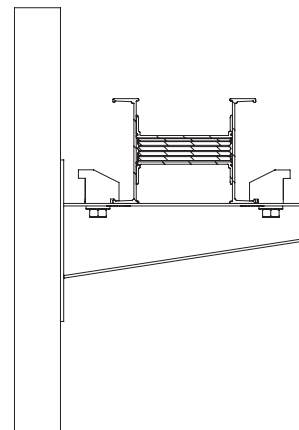
Trapeze - Flatwise



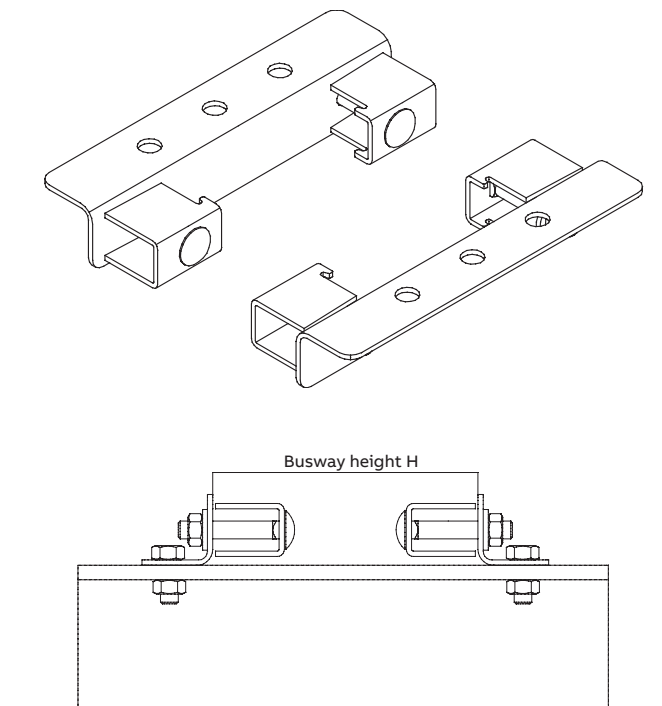
Wall mounted hanger - Edgewise



Wall mounted hanger - Flatwise

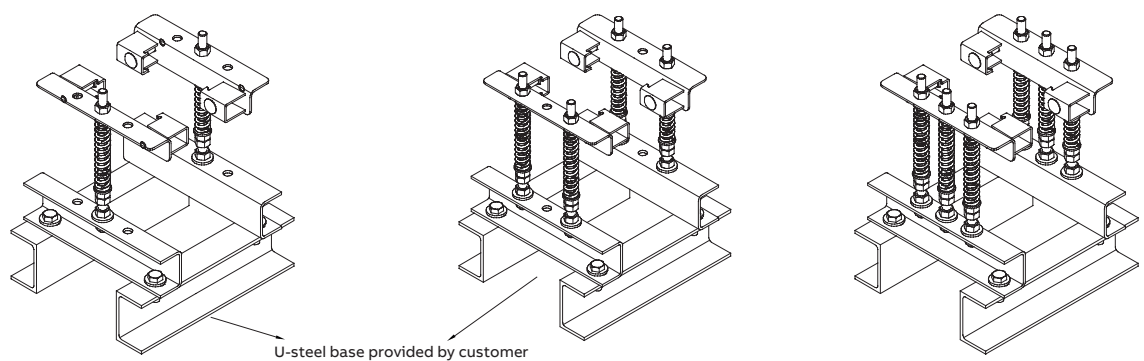


Vertical hanger



Rated current (A)	Number of springs
250-1250	2
1600-4000	4
5000	6

Vertical spring hanger



Note: The horizontally or vertically installed busway should be provided with a hanger per section, and each floor should not be less than one hanger, the spacing should not be greater than 2m, and the hanger should be set at 0.4m~0.6m from the bend point of the busway elbow, and the hangers should not be set at the place of joint or tap-off unit.

Numbering System

Straight Length & Fittings

NAAA NN N NN NN NF

Product	CID	Code
WavePro-A	9AAF617761	W761

Part Name	Code
Straight length	SL
Flanged end	FE
Elbow	EL
Offset	ZL
Tee	TE
Cross	CL
Reducer	RE
Expansion unit	EX
Transposition unit	TR
Joint	JT
Plug outlet	OL
Terminal cover	TC
Wall flange	WF
Fire Barrier	FB
Flexible connection	FLC
Connecting copper bar	CNB
End tap box	ETB

Neutral	PE	Code
NONE	Housing	31
NONE	50% Internal	32
100%	Housing	51
100%	50% Internal	52
200%	Housing	61
200%	50% Internal	62
NA	NA	00

Fire rated option	Code
Fire rated parts	FR

IP degree	Code
IP54	54
IP66	66
NA	00

Rated Current_A	Code
250	02
400	04
630	06
800	08
1000	10
1250	12
1600	16
2000	20
2500	25
3200	32
4000	40
5000	50
NA	00

Accessories

NAAA NNN NF

Product	CID	Code
WavePro-A	9AAF617761	W761

Part Name	Code
Trapeze hanger	THR
Wall mounted hanger	BKT
Spring hanger	SHR
Vertical Fixed Hanger	VHR
Trapeze hanger clamps	HPP
Vertical hanger clamps	VPP

Rated Current_A	Code
250	02
400	04
630	06
800	08
1000	10
1250	12
1600	16
2000	20
2500	25
3200	32
4000	40
5000	50
NA	00

Tap-off Unit

NAAA NN N NN N F

Product	CID	Code
WavePro-A	9AAF617761	W761

MCCB Type	Code
Tmax XT	TX
Formula	TF

Poles	Code
3P	3
4P	4

Material	Value	Code
Shunt Trip	Y	S
Shunt Trip	N	0

Release	Code
TM	M
Ekip	E

Rated Current_A	Code	Rated Current_A	Code
16	01	125	12
25	02	160	16
32	03	200	20
40	04	250	25
50	05	400	40
63	06	500	50
80	08	630	63
100	10	800	80

Check list

Technical standards	IEC 61439-6, <input type="checkbox"/> IEC 60331-1												
Relative humidity (%) at + 20°C	≤90												
Altitude (m)	<2000												
Max. temperature (°C)	40												
Min. temperature (°C)	-5												
Average temperature (°C)	35												
Conductor	<input type="checkbox"/> Aluminium												
Conductor plating	Copper plating & tin plating - partial <input type="checkbox"/> Other												
Rated operating voltage (V)	<input type="checkbox"/> 415 (plug-in) <input type="checkbox"/> 1000 (feeder)												
Rated insulation voltage (V)	<input type="checkbox"/> 800 (plug-in) <input type="checkbox"/> 1000 (feeder)												
Rated frequency (Hz)	50/60												
Rated current (A)	<input type="checkbox"/> 250 <input type="checkbox"/> 400 <input type="checkbox"/> 630 <input type="checkbox"/> 800 <input type="checkbox"/> 1000 <input type="checkbox"/> 1250 <input type="checkbox"/> 1600 <input type="checkbox"/> 2000 <input type="checkbox"/> 2500 <input type="checkbox"/> 3200 <input type="checkbox"/> 4000 <input type="checkbox"/> 5000												
Number of phases	3P												
Service	<input type="checkbox"/> 3L + housing PE <input type="checkbox"/> 3L+100%N+housing PE <input type="checkbox"/> 3L+100%N+50% internal PE <input type="checkbox"/> 3L+200%N+housing PE <input type="checkbox"/> 3L+200%N+50% internal PE <input type="checkbox"/> Other:												
Degree of protection	<input type="checkbox"/> IP54 (Plug-in busway) <input type="checkbox"/> IP66 (Feeder only) <input type="checkbox"/> Other												
Insulation class	<input type="checkbox"/> Class B <input type="checkbox"/> Other												
Housing color	<input type="checkbox"/> RAL7000 <input type="checkbox"/> RAL9001 <input type="checkbox"/> Other												
Phase sequence	<input type="checkbox"/> PE, L1, L2, L3, N <input type="checkbox"/> Other												
Tap-off unit	<table border="0"> <tr> <td>Protection grade</td> <td><input type="checkbox"/> IP41 <input type="checkbox"/> IP54 <input type="checkbox"/> Other</td> </tr> <tr> <td>Operation method</td> <td><input type="checkbox"/> Manual operation <input type="checkbox"/> Rotary handle</td> </tr> <tr> <td>Circuit breaker</td> <td><input type="checkbox"/> Tmax XT <input type="checkbox"/> Tmax <input type="checkbox"/> Formula</td> </tr> <tr> <td>Number of poles</td> <td><input type="checkbox"/> 3 poles, 3 trips <input type="checkbox"/> 4 poles, 4 trips</td> </tr> </table>	Protection grade	<input type="checkbox"/> IP41 <input type="checkbox"/> IP54 <input type="checkbox"/> Other	Operation method	<input type="checkbox"/> Manual operation <input type="checkbox"/> Rotary handle	Circuit breaker	<input type="checkbox"/> Tmax XT <input type="checkbox"/> Tmax <input type="checkbox"/> Formula	Number of poles	<input type="checkbox"/> 3 poles, 3 trips <input type="checkbox"/> 4 poles, 4 trips				
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Installation	<table border="0"> <tr> <td>Horizontal installation</td> <td> <table border="0"> <tr> <td>Hanger type</td> <td><input type="checkbox"/> Trapeze hangers <input type="checkbox"/> Wall mounted hanger</td> </tr> <tr> <td>Hanger accessories</td> <td><input type="checkbox"/> Horizontal hanger clamps</td> </tr> </table> </td> </tr> <tr> <td>Vertical installation</td> <td> <table border="0"> <tr> <td>Hanger type</td> <td><input type="checkbox"/> Spring hanger <input type="checkbox"/> Vertical fixed hanger</td> </tr> <tr> <td>Hanger accessories</td> <td><input type="checkbox"/> U-steel base <input type="checkbox"/> Vertical hanger clamps</td> </tr> </table> </td> </tr> </table>	Horizontal installation	<table border="0"> <tr> <td>Hanger type</td> <td><input type="checkbox"/> Trapeze hangers <input type="checkbox"/> Wall mounted hanger</td> </tr> <tr> <td>Hanger accessories</td> <td><input type="checkbox"/> Horizontal hanger clamps</td> </tr> </table>	Hanger type	<input type="checkbox"/> Trapeze hangers <input type="checkbox"/> Wall mounted hanger	Hanger accessories	<input type="checkbox"/> Horizontal hanger clamps	Vertical installation	<table border="0"> <tr> <td>Hanger type</td> <td><input type="checkbox"/> Spring hanger <input type="checkbox"/> Vertical fixed hanger</td> </tr> <tr> <td>Hanger accessories</td> <td><input type="checkbox"/> U-steel base <input type="checkbox"/> Vertical hanger clamps</td> </tr> </table>	Hanger type	<input type="checkbox"/> Spring hanger <input type="checkbox"/> Vertical fixed hanger	Hanger accessories	<input type="checkbox"/> U-steel base <input type="checkbox"/> Vertical hanger clamps
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Hanger accessories	<input type="checkbox"/> U-steel base <input type="checkbox"/> Vertical hanger clamps												
Copper busbar connection, flexible connection	<input type="checkbox"/> ABB provides plain copper bar, and the user bending and fabricates on site <input type="checkbox"/> Other:												
Other special requirements													

List of attachments



—
ABB Ltd.

Low Voltage Systems

Electrification

P.O. Box 8131

CH-8050 Zurich, Switzerland

abb.com/contact