

智电未来

Smart Energy for the Future

**Wetown Electric Group Co., Ltd.**

Add: No.1, Nanzi Road, Technology Park, Xinba Town, Yangzhong City, Jiangsu, China

Tel: +86 511 88393699

E-mail: info@wetown.cc

Http://www.wetown.com

**LV 202211**

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Wetown Official Website

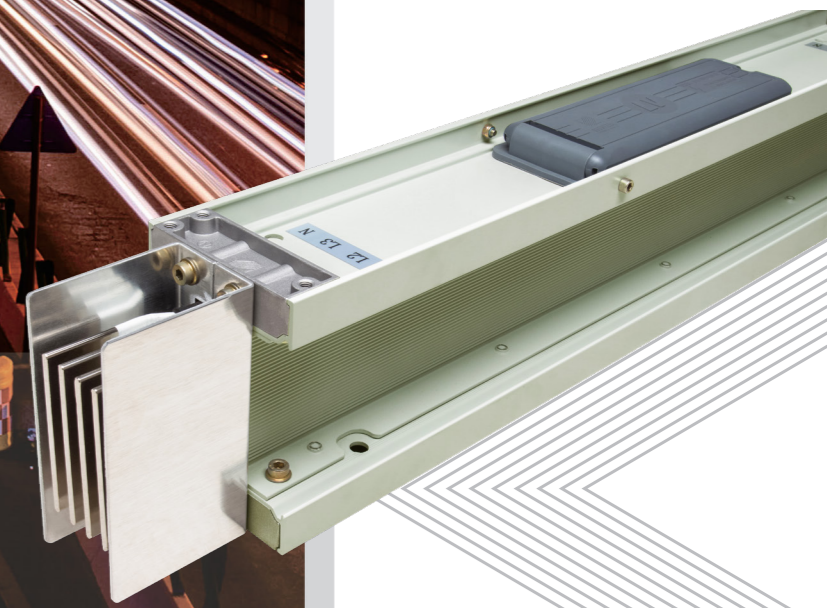
**WETOWN**

# LV Series

## Busway System

**IEC61439-6**

Provide high quality and complete busway solution for various application



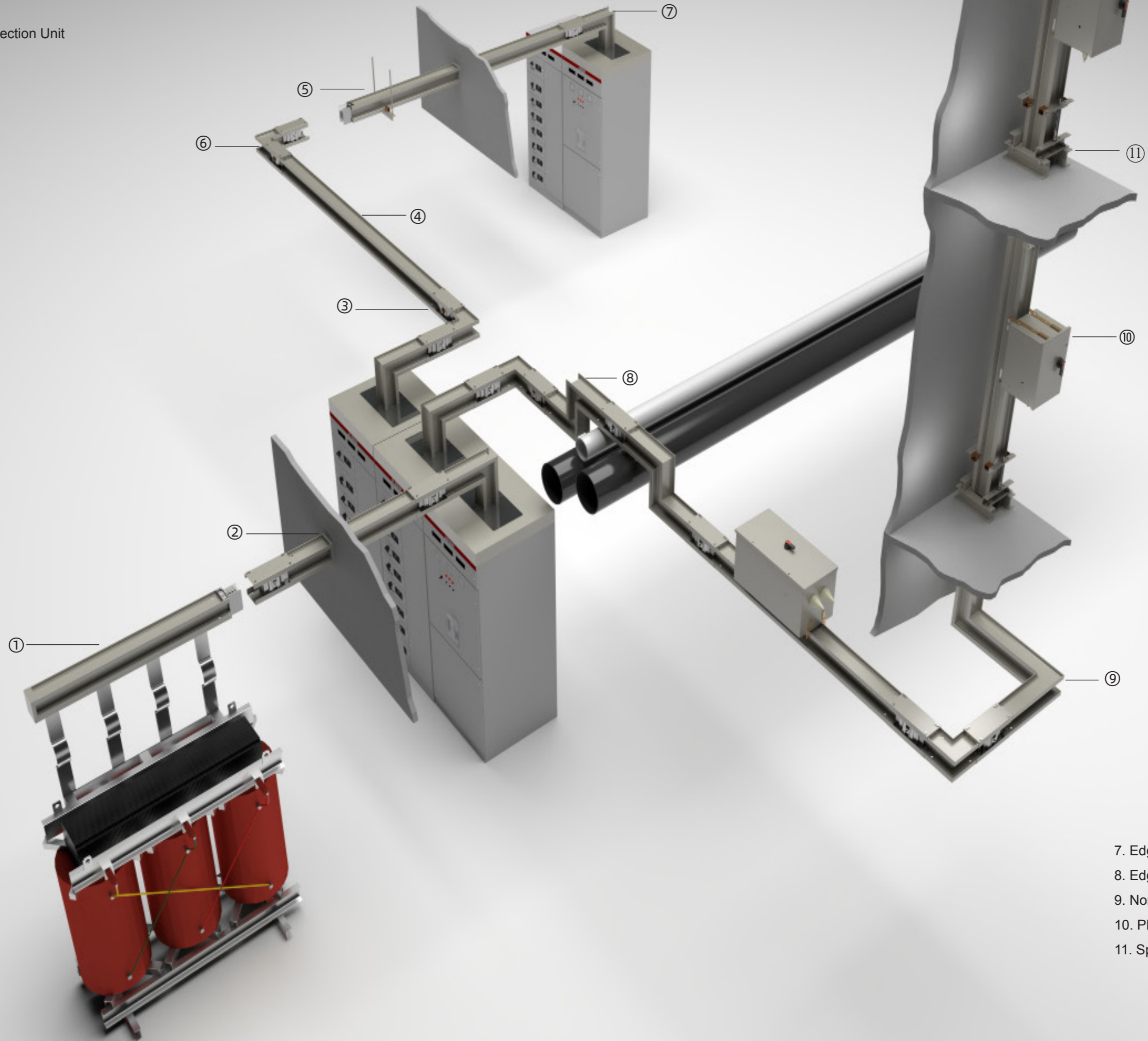
WETOWN LV series busway system is a reliable and efficient electrical distribution system with sandwich construction and superior performance. It is a safe and robust power distribution system with high electrical efficiency, low voltage drop, high mechanical strength.



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- 1. Transformer Connection Unit
- 2. Wall Flange
- 3. Joint
- 4. Straight Length
- 5. Hanger
- 6. Flatwise Elbow



- 7. Edgewise Elbow
- 8. Edgewise Offset
- 9. Nonstandard Elbow
- 10. Plug-in Box
- 11. Spring Hanger

## Company Profile

Wetown Electric (SH. 688226) mainly covers two business segments: power distribution and new energy, and is committed to providing high-quality solutions and services for customers in power, new energy, data communication, rail transit, industrial manufactures industries and

**Core Value:** Customer Orientation, Innovation and Foresight, Accountability

### Capability & Advantage

- Dedicated in electric product development and manufacturing for over 30 years, with the key business: busway, switchboard, electrical components, PV ribbon, copper/aluminum conductors;
- Large scale of intelligent manufacturing system and complete industrial chains in busway industry;
- Comprehensive international certifications including KEMA, ASTA, UL, CE;
- "Well-known Trademark in China" and "The Most influential national brand in electrical industry".

### Global Coverage

Wetown has wide global coverage with thousands of installation basis in over forty countries including South-east Asia, India, Middle East, Africa, Russia, Europe, Latin America, Australia etc.



## System Overview



WETOWN LV series busway system is a reliable and efficient electrical distribution system with sandwich construction and superior performance. It is a safe and robust power distribution system with high electrical efficiency, low voltage drop, high mechanical strength.



The system offers a full line of busway to meet the world market: suitable for 3P3W, 3P4W, 3P5W, power supply and distribution, with rated current from 250A to 5000A (for aluminum conductor) & 400A to 6300A (for copper conductor), rated operation voltage up to 690V (rated insulation voltage up to 1000V), IP degree up to IP66 and the frequency 50~60Hz.



Constructed with two-piece of extruded aluminum housing, WETOWN LV series busway breaks the barrier of weight and offers you maximum flexibility. The full aluminum alloy housing, a low magnetic material, avoids hysteresis loss in distribution system.



WETOWN LV series busway provides longer life epoxy insulation as option to polyester insulation. LV series busway system is an ideal choice for various applications including commercial, industrial buildings, data centers, rail transit, etc. From every aspect—performance, flexibility, quality and customer value, LV series busway is a superior choice for your next installation.

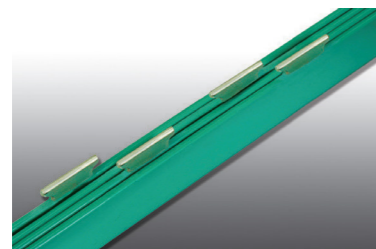
## Product Features

### —Superior design and performance



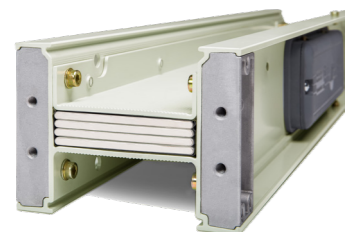
#### Unique structure design

The unique “serrated surface” design of extruded aluminum housing greatly improves the heat dissipation for the whole busway system. By the design of two-piece housing, Wetown LV series busway provides more reliable IP protection for the field application than traditional design, including IP54, IP65, IP66.



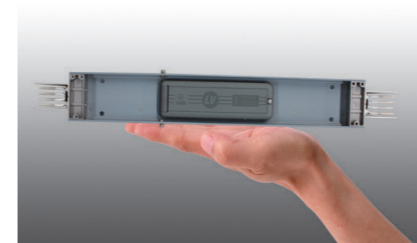
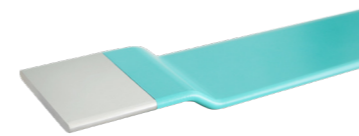
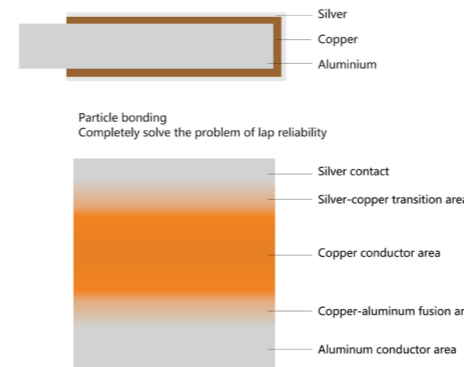
#### Novel conductor structure

True sandwich structure for the design and construction. Bus bars for plug in length are welded in place by state -of-the-art welding processes. Bus tabs, arranged compactly without bending and silver plated, to achieve the performance of superior heat dissipation, lower temperature rise and elimination of “chimney effect”.



#### "Sandwich" structure

The conductors are arranged densely in the housing, achieving the performance of superior heat dissipation, lower temperature rise and elimination of "chimney effect". Current-carrying capability is not affected by different installation sites or methods. This compact structure has a width of only 125mm, occupying smaller building space.



#### PBT particle bonding technology

Applying nanoparticle bonding technology, silver-silver bonding is used between segments and taps contact, reducing the contact resistance and improving the contact reliability.

The weakest link of busbar performance lies in the conductive contact position. In electrical connection parts such as connectors and sockets, it is easy to cause problems such as temperature rise, concentrated energy consumption, and frequent failures.

PBT ion bonding technology can form a perfect transition body alloy structure between aluminum, copper and silver, break through the bottleneck of electrical connection, and improve the electrical connection performance to a new height.

#### Superior & reliable insulation

Both polyester film insulation (Class B) and epoxy insulation (IEC 60085:2007Class H) are available with exceptional electrical performance and superior mechanical strength.

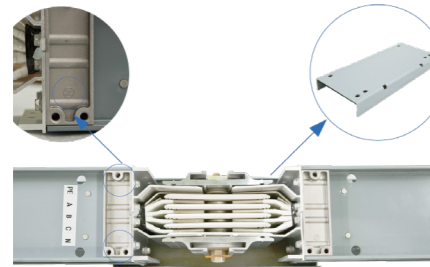
Environmental friendly materials are applied with certification by reputed international laboratory. The busway system is halogen-free with no toxicity emission in case of fire.

#### Compact design

The dimension of LV busway begins at 125mmx103mm for 250-400A ratings with very compact design. Tap-off box is also compressive and dimension begins at 360mmx250mmx255 mm for 100A, giving more space for other equipments.

#### Conductor sawing

High-speed sawing machine offers a high sawing accuracy, make smooth cut without issues like deformed, stretched, inconsistent flat end, as a result the temperature rise at the busway joint is decreased.



### Unique error-proof device (Bridge Type Joint)

A unique error-proof device is designed to prevent potential damage on bus bar due to incorrect connection. With this unique device, the installers can not connect two sections of busway successfully with incorrect phase orientation. Bridge type joint, each joint allow  $\pm 8\text{mm}$  liner adjustment.



### Unique joint design

- Single bolt joint design is applied to shorten the time of connection by 50% than the traditional design.
- Double headed "break off" joint bolt is applied to tighten the busway with just a common 16mm socket wrench. Belleville spring washers are adopted to ensure pressure evenly applied across the joint.



### Plug outlet and busway plug

- Both outlet on busway and plug-in pins are fully silver-plated.
- The tap-off box has complete safty interlock mechanism to ensure electric safty.
- The plug outlet protection module is embedded with waterproof silicone rubber, up to IP54.
- Up to 10 plug outlets can be installed every 3 m of straight length busway.



## Features —Intelligent control System



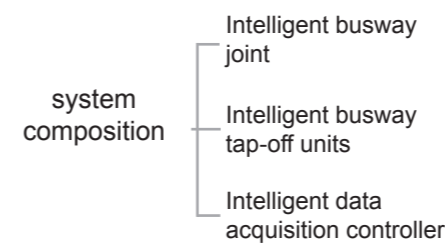
### Temperature rise Indicator

- Joint insulator with a convex-concave groove edge provides an increased creepage distance.
- Color-coded-temperature indicator applied at busway joint is to give an early warning when high temperature occurs at the joint.



### Smart temperature control

The temperature can be monitored via the plug-in box. An alarm will be sounded in the event of overheating according to the smart temperature control, thus providing a reliable and user-friendly system.



### Measurement & Control System

This intelligent M&C system is composed of busway, intelligent busway joint, intelligent busway TOU and SCADA. It can exchange data with remote monitoring and early warning management platform to realize one or more functions such as remote adjustment, remote measurement, remote control, remote communication and so on.



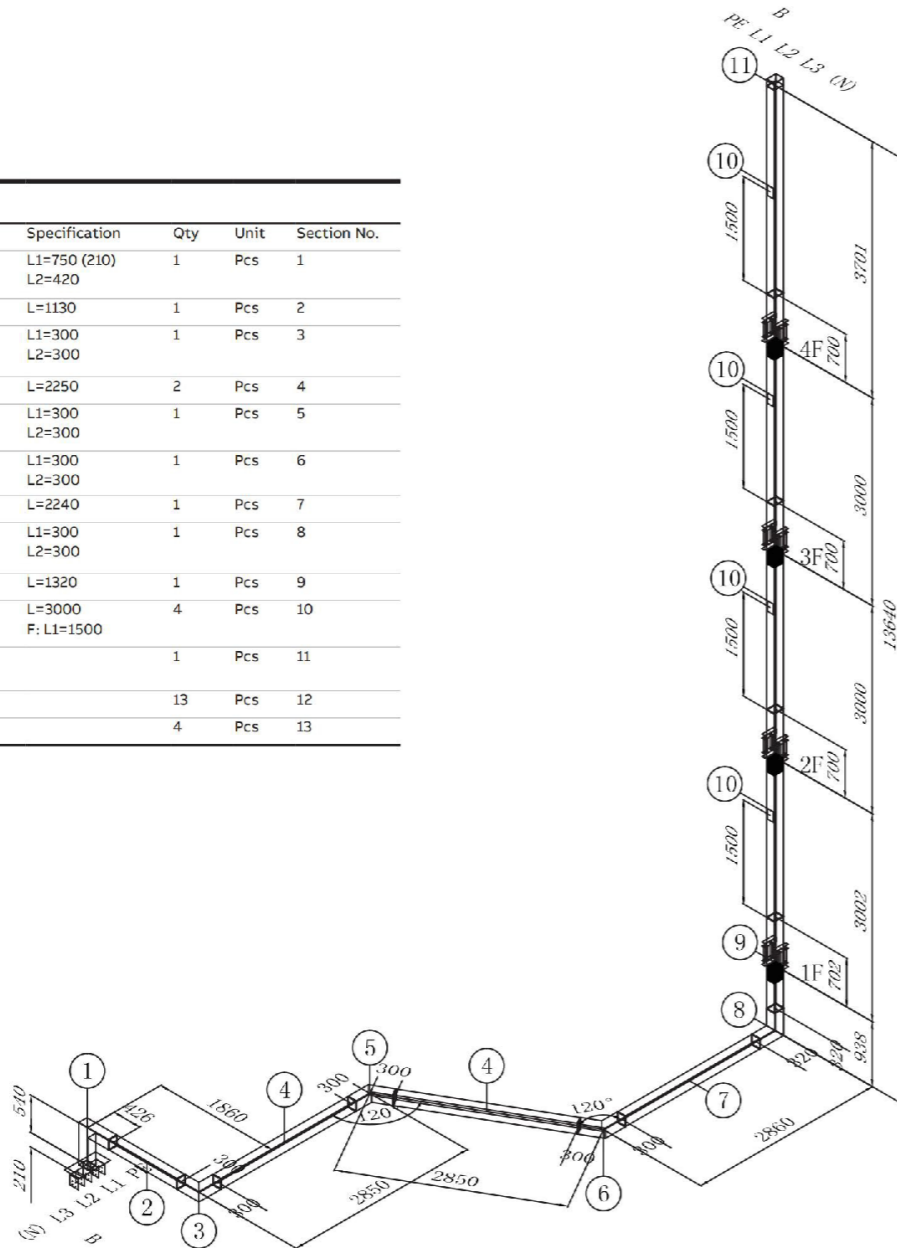
## BDM Software

BDM is a software dedicated for LV busway routing design, segmentation and BOM generation. BDM built in detailed busway product parameters and related design standards, seamless integration

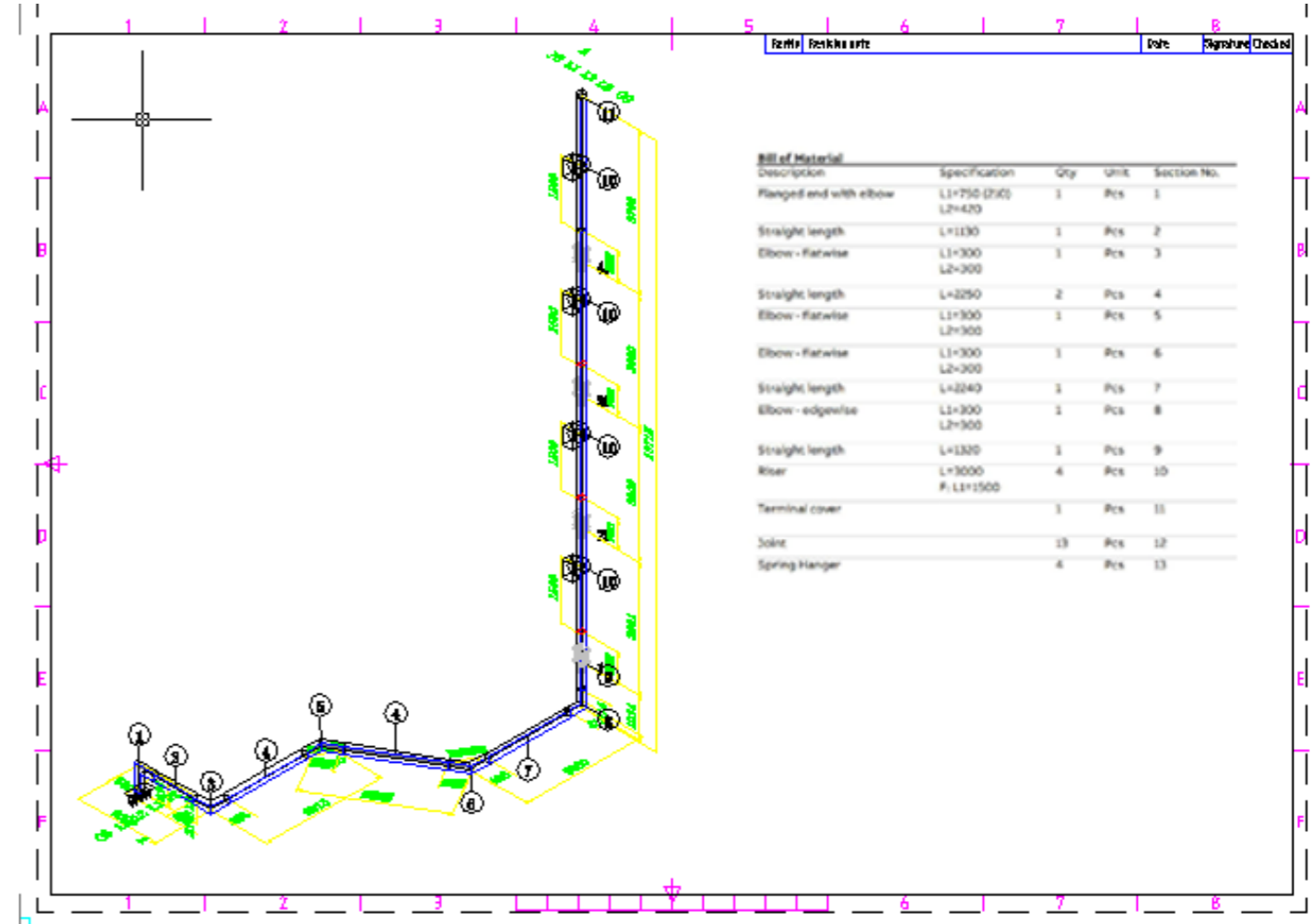
with ERP system:

- 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



## Application Legend of BDM Software



### Description of shortcut icons

Icon	Function
	Create a new busway
	Modify busway properties
	Add busway
	End busway
	Insert walls/Floors

## Electrical Specification

Aluminum alloy housing of WETOWN LV Series Busway provides an extremely low impedance ground path with small resistance for both copper and aluminum systems. plug-in outlet grounding is supplied with tin-plated copper tabs bolted to the plug in box housing for superior continuity through standard bus plug ground stabs.

Grounding resistance of LV busway system (temperature=20°C):

Copper			Aluminum		
Current	Internal 50% ground bus resistance(μΩ/m)	Integral housing ground DC resistance(μΩ/m)	Current	Internal 50% ground bus resistance(μΩ/m)	Integral housing ground DC resistance(μΩ/m)
400A	197.4	22.88	250A	291.7	22.88
630A	148.1	22.88	400A	233.3	22.01
800A	107.7	21.60	630A	179.5	20.83
1000A	91.1	20.83	800A	147.7	19.84
1250A	66.6	19.19	1000A	112.2	18.29
1600A	47.4	17.16	1250A	83.9	16.48
2000A	37.3	15.60	1350A	83.9	16.48
2500A	28.3	13.76	1600A	61.7	14.44
3200A	24.9	9.14	2000A(S)	58.4	12.36
4000A	18.6	8.12	2000A(D)	56.1	9.59
5000A	14.2	7.13	2500A	42.0	8.60
6300A	11.4	6.15	3200A	30.9	7.50
			4000A	25.5	6.80
			5000A	22.3	6.20

Grounding capacity of LV busway system:

Copper					Aluminum				
SN	Rating	Deck	Internal Ground (mm <sup>2</sup> )	Housing Ground(mm <sup>2</sup> )	SN	Rating	Deck	Internal Ground (mm <sup>2</sup> )	Integral housing ground(mm <sup>2</sup> )
1	400	1	120	1563	1	250	1	120	1563
2	630	1	120	1563	2	400	1	150	1623
3	800	1	165	1623	3	630	1	195	1713
4	1000	1	195	1713	4	800	1	240	1803
5	1250	1	270	1863	5	1000	1	315	1953
6	1600	1	375	2043	6	1250	1	420	2163
7	2000	1	480	2283	7	1350	1	420	2163
8	2500	1	630	2583	8	1600	1	570	2463
9	3200	2	720	3842	9	2000A(S)	1	690	2730
10	4000	2	960	4322	10	2000A(D)	2	630	3662
11	5000	2	1260	4922	11	2500	2	840	4082
12	6300A	3	1620	5328	12	3200	2	1140	4682
					13	4000	2	1380	5162
					14	5000	2	1710	5822

## Short-circuit ratings

The ratings shown below are comply with IEC61439 for short circuit withstand test at 1 Second.

Rated short circuit withstand current

Copper	(I <sub>cw</sub> , kA)
Current	1 Sec.
400A	30
630A	30
800A	30
1000A	50
1250A	50
1600A	65
2000A	65
2500A	65
3200A	120
4000A	120
5000A	120
6300A	120

Rated short circuit withstand current

Aluminum	(I <sub>cw</sub> , kA)
Current	1 Sec.
250A	15
400A	15
630A	30
800A	30
1000A	50
1250A	50
1350A	50
1600A	65
2000A(S)	80
2000A(D)	80
2500A	80
3200A	120
4000A	120
5000A	120



### Resistance, reactance, impedance and voltage drop

Copper conductor: Frequency-50Hz, temperature=20°C

Current	Resistance R <sub>20</sub> (mΩ/m)	Resistance R <sub>Full Load</sub> (mΩ/m)	Reactance X (mΩ/m)	Impedance Z <sub>20</sub> (mΩ/m)	Voltage Drop per Meter at Full Load Condition (V/m)				
					Power factor cosφ				
					0.6	0.7	0.8	0.9	1
400	0.088	0.116	0.037	0.118	0.057	0.061	0.064	0.066	0.061
630	0.088	0.116	0.037	0.118	0.090	0.096	0.101	0.104	0.095
800	0.064	0.085	0.032	0.084	0.088	0.093	0.097	0.099	0.088
1000	0.054	0.072	0.026	0.075	0.092	0.097	0.102	0.104	0.093
1250	0.039	0.052	0.019	0.053	0.085	0.089	0.093	0.095	0.085
1600	0.028	0.037	0.015	0.037	0.080	0.084	0.087	0.088	0.078
2000	0.022	0.029	0.012	0.031	0.080	0.084	0.087	0.087	0.076
2500	0.017	0.022	0.011	0.025	0.083	0.086	0.087	0.087	0.073
3200	0.015	0.020	0.006	0.025	0.074	0.079	0.084	0.087	0.082
4000	0.011	0.015	0.003	0.015	0.060	0.066	0.072	0.076	0.076
5000	0.008	0.011	0.002	0.011	0.058	0.064	0.069	0.073	0.073
6300	0.007	0.009	0.001	0.007	0.051	0.058	0.063	0.069	0.071

In the table above, the load distribution coefficient k=1. In specific project, the k value varies with the branch number of the BTS.

Aluminium conductor: Frequency-50Hz, temperature=20°C

Current	Resistance R <sub>20</sub> (mΩ/m)	Resistance R <sub>Full Load</sub> (mΩ/m)	Reactance X (mΩ/m)	Impedance Z <sub>20</sub> (mΩ/m)	Voltage Drop per Meter at Full Load Condition (V/m)				
					Power factor cosφ				
					0.6	0.7	0.8	0.9	1
250	0.142	0.188	0.028	0.171	0.048	0.053	0.058	0.062	0.063
400	0.114	0.150	0.026	0.152	0.063	0.069	0.075	0.080	0.080
630	0.088	0.115	0.024	0.131	0.082	0.090	0.097	0.103	0.101
800	0.072	0.061	0.021	0.108	0.087	0.095	0.102	0.108	0.106
1000	0.055	0.046	0.018	0.086	0.085	0.093	0.099	0.104	0.101
1250	0.041	0.034	0.015	0.062	0.082	0.089	0.095	0.099	0.094
1350	0.041	0.034	0.015	0.062	0.082	0.089	0.095	0.099	0.094
1600	0.030	0.025	0.012	0.049	0.080	0.086	0.091	0.094	0.089
2000A(S)	0.027	0.023	0.011	0.045	0.091	0.098	0.103	0.107	0.100
2000A(D)	0.027	0.023	0.011	0.045	0.091	0.098	0.103	0.107	0.100
2500	0.020	0.017	0.008	0.031	0.084	0.091	0.096	0.100	0.094
3200	0.015	0.013	0.007	0.024	0.081	0.086	0.090	0.092	0.083
4000	0.012	0.010	0.003	0.015	0.069	0.076	0.083	0.088	0.088
5000	0.01	0.014	0.003	0.015	0.085	0.095	0.105	0.109	0.103

In the table above, the load distribution coefficient k=1. In specific project, the k value varies with the branch number of the BTS.

### Resistance, reactance, impedance and voltage drop

Copper conductor: Frequency-60Hz, temperature=20°C

Current	Resistance R <sub>20</sub> (mΩ/m)	Resistance R <sub>Full Load</sub> (mΩ/m)	Reactance X (mΩ/m)	Impedance Z <sub>20</sub> (mΩ/m)	Voltage Drop per Meter at Full Load Condition ( V /m)				
					Power factor cosφ				
					0.6	0.7	0.8	0.9	1
400	0.088	0.116	0.045	0.118	0.061	0.065	0.067	0.068	0.061
630	0.088	0.116	0.039	0.118	0.097	0.102	0.106	0.107	0.095
800	0.064	0.085	0.031	0.084	0.096	0.100	0.103	0.103	0.088
1000	0.054	0.072	0.023	0.075	0.099	0.104	0.107	0.108	0.093
1250	0.039	0.052	0.018	0.053	0.091	0.096	0.098	0.099	0.085
1600	0.028	0.037	0.015	0.037	0.086	0.090	0.092	0.092	0.078
2000	0.022	0.029	0.014	0.031	0.087	0.090	0.092	0.091	0.076
2500	0.017	0.022	0.007	0.025	0.091	0.093	0.093	0.091	0.073
3200	0.015	0.020	0.003	0.025	0.079	0.084	0.088	0.090	0.082
4000	0.011	0.015	0.003	0.015	0.063	0.069	0.074	0.078	0.076
5000	0.008	0.011	0.001	0.011	0.061	0.066	0.071	0.075	0.073
6300	0.007	0.009	0.003	0.007	0.053	0.059	0.065	0.070	0.071

In the table above, the load distribution coefficient k=1. In specific project, the k value varies with the branch number of the BTS.

Aluminium conductor: Frequency-60Hz, temperature=20°C

Current	Resistance R <sub>20</sub> (mΩ/m)	Resistance R <sub>Full Load</sub> (mΩ/m)	Reactance X (mΩ/m)	Impedance Z <sub>20</sub> (mΩ/m)	Voltage Drop per Meter at Full Load Condition ( V /m)				
					Power factor cosφ				
					0.6	0.7	0.8	0.9	1
250	0.142	0.188	0.034	0.171	0.050	0.055	0.059	0.063	0.063
400	0.114	0.150	0.031	0.152	0.066	0.072	0.077	0.082	0.080
630	0.088	0.115	0.029	0.131	0.086	0.094	0.100	0.105	0.101
800	0.072	0.061	0.025	0.108	0.092	0.099	0.106	0.111	0.106
1000	0.055	0.046	0.022	0.086	0.090	0.097	0.103	0.107	0.101
1250	0.041	0.034	0.018	0.062	0.088	0.094	0.099	0.102	0.094
1350	0.041	0.034	0.018	0.062	0.088	0.094	0.099	0.102	0.094
1600	0.030	0.025	0.014	0.049	0.085	0.091	0.095	0.097	0.089
2000A(S)	0.027	0.023	0.013	0.045	0.097	0.103	0.108	0.110	0.100
2000A(D)	0.027	0.023	0.013	0.045	0.097	0.103	0.108	0.110	0.100
2500	0.020	0.017	0.010	0.031	0.090	0.096	0.100	0.103	0.094
3200	0.015	0.013	0.008	0.024	0.080	0.086	0.091	0.094	0.089
4000	0.012	0.010	0.004	0.015	0.073	0.079	0.085	0.090	0.088
5000	0.01	0.014	0.005	0.015	0.09	0.104	0.108	0.111	0.102

In the table above, the load distribution coefficient k=1. In specific project, the k value varies with the branch number of the BTS.

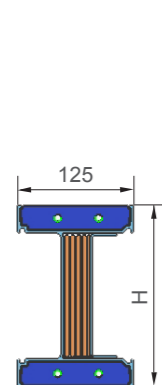
## Physical Data

### Straight length

Feeder, the straight length without outlets, can be installed either horizontally or vertically.

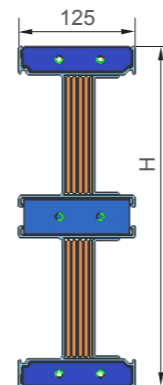
The standard length is either 3000mm or 4000mm.

The minimum length is 460mm.



Single-deck  
LVC-04 ~ 25  
LVA-02 ~ 16

01



Dual-deck  
LVC-32 ~ 50  
LVA-20 ~ 50

02

#### Copper conductor

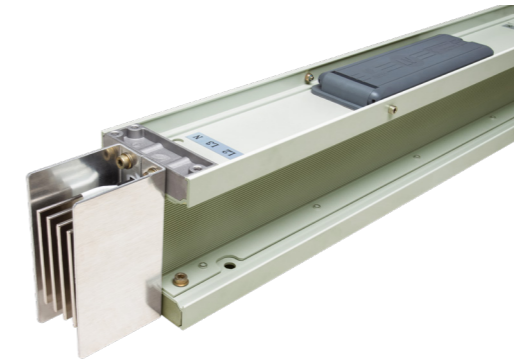
Current	Dimension		Weight per meter (kg/m)		Fig.	
	Width (W)	Height (H)	4wire 100%N	5wire 100%N, 50%PE		
400	125	103	11.3	12.4	01	
630	125	103	12.5	13.6		
800	125	118	15.4	17.1		
1000	125	128	18.1	19.9		
1250	125	153	22.8	25.4		
1600	125	188	30.7	34.3		
2000	125	223	38.2	42.8		
2500	125	273	52.8	59.4	02	
3200	125	352	59.5	66.5		
4000	125	432	76.9	86.3		
5000	125	532	97.3	108.9		
6300	125	761	143.6	160.5		/

#### Aluminium conductor

Current	Dimension		Weight per meter (kg/m)		Fig.
	Width (W)	Height (H)	4wire 100%N	5wire 100%N, 50%PE	
250	125	103	6.8	7.2	01
400	125	113	7.5	7.9	
630	125	128	8.8	9.3	
800	125	143	9.8	10.4	
1000	125	168	11.8	12.7	
1250	125	203	14.6	15.7	
1350	125	203	14.6	15.7	
1600	125	253	18.3	19.8	
2000(S)	125	293	19.7	21.5	
2000(D)	125	322	22.6	24.3	
2500	125	392	28.7	31	
3200	125	492	36.2	39.4	
4000	125	572	44.7	48.9	
5000	125	685	50.1	53.4	

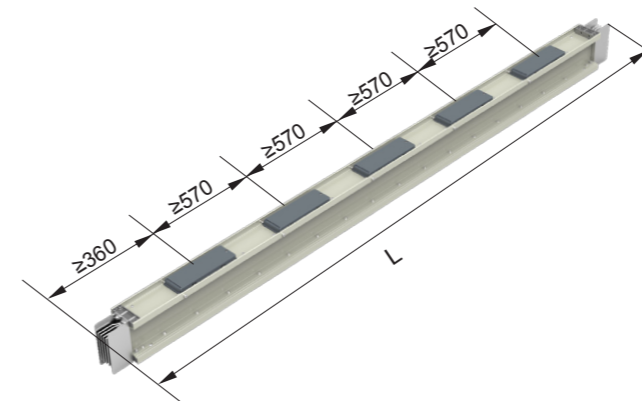
## Fittings

### Plug-in straight length



The plug-in busway has a flexible design with optional plug outlets on both sides. A maximum of 5 outlets can be fixed on each side of 3m standard length. The customer may reserve plug outlets for extension in the future when changes occur in terms of the equipment load or busway run. Both base plate and socket cover are set for each plug outlet. Base plate helps to prevent fingers from contacting live conductors (IP2X) by accident, on which the phase sequences of conductors are identified. Socket cover prevents the conductive contacting surface from being contaminated. A pad may be used to keep off dust or moisture.

Standard length is 3000mm or 4000mm. The minimum length is 720mm. The minimum length of L1 (distance from the center of plug outlet to standard end) is 360mm. The minimum length of L2 (distance between the centers of two adjacent plug outlets) is 570mm.



L1=0.36

L2=0.93

L3=1.50

L4=2.07

L5=2.64

Standard length:

LVC: L=1, 2, 3m

LVA: L=1, 2, 3m

Optional length:

LVC: L=0.72 ~ 4m

LVA: L=0.72 ~ 4m

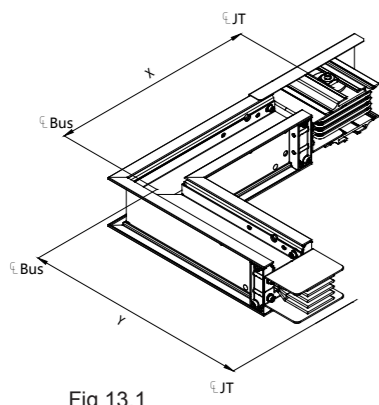


Fig 13.1

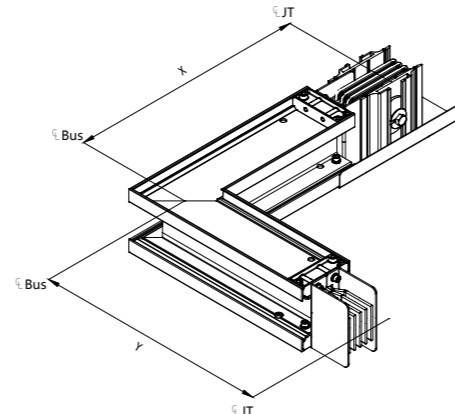


Fig 13.2

L flatwise elbow Fig 13.1

Rated current (A)	Copper busway size (mm)				Aluminium busway size (mm)			
	Minimum		Standard		Minimum		Standard	
	X	Y	X	Y	X	Y	X	Y
250	/	/	/	/	341	341	450	450
400	341	341	400	400	351	351	450	450
630	341	341	400	400	366	366	450	450
800	351	351	400	400	381	381	450	450
1000	366	366	400	400	406	406	450	450
1250	391	391	400	400	441	441	500	500
1350	/	/	/	/	441	441	500	500
1600	421	421	550	550	491	491	500	500
2000(S)	461	461	550	550	530	530	600	600
2000(D)	/	/	/	/	560	560	850	850
2500	511	511	550	550	630	630	850	850
3200	590	590	800	800	730	730	850	850
4000	670	670	800	800	810	810	850	850
5000	770	770	800	800	950	950	1000	1000
6300	1000	1000	1200	1200				

L edgewise elbow Fig 13.2

Rated current (A)	Copper busway size (mm)				Aluminium busway size (mm)			
	Minimum		Standard		Minimum		Standard	
	X	Y	X	Y	X	Y	X	Y
250	/	/	/	/	363	363	400	400
400	363	363	400	400	363	363	400	400
630	363	363	400	400	363	363	400	400
800	363	363	400	400	363	363	400	400
1000	363	363	400	400	363	363	400	400
1250	363	363	400	400	363	363	400	400
1350	/	/	/	/	363	363	400	400
1600	363	363	400	400	363	363	400	400
2000(S)	363	363	400	400	363	363	400	400
2000(D)	/	/	/	/	363	363	400	400
2500	363	363	400	400	363	363	400	400
3200	363	363	400	400	363	363	400	400
4000	363	363	400	400	363	363	400	400
5000	363	363	400	400	363	363	400	400
6300	363	363	400	400				

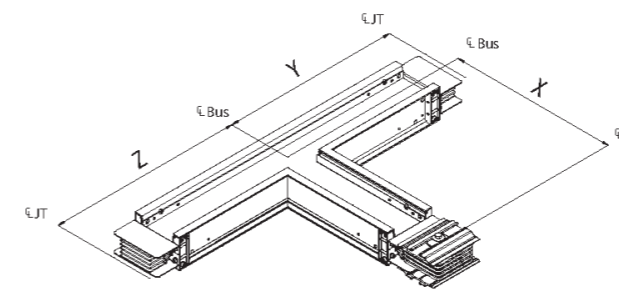


Fig 13.5

Flatwise Tee Fig 13.5

Rated current (A)	Copper busway size (mm)						Aluminium busway size (mm)					
	Minimum			Standard			Minimum			Standard		
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
250	/	/	/	/	/	/	341	290	290	450	350	350
400	341	290	290	400	350	350	351	295	295	450	350	350
630	341	290	290	400	350	350	366	302	302	450	350	350
800	351	295	295	400	350	350	381	310	310	450	350	350
1000	366	302	302	400	350	350	406	322	322	450	350	350
1250	391	315	315	400	350	350	441	340	340	500	400	400
1350	/	/	/	/	/	/	441	340	340	500	400	400
1600	421	330	330	550	400	400	491	365	365	500	400	400
2000(S)	461	350	350	550	400	400	530	400	400	850	550	550
2000(D)	/	/	/	/	/	/	560	399	399	850	550	550
2500	511	375	375	550	400	400	630	434	434	850	550	550
3200	590	414	414	800	550	550	730	484	484	850	550	550
4000	670	454	454	800	550	550	810	524	524	850	550	550
5000	770	504	504	800	550	550	950	950	950	1000	1000	1000
6300	1000	1000	1000	1200	1200	1200						

Edgewise Tee Fig 13.6

Rated current (A)	Copper busway size (mm)						Aluminium busway size (mm)					
	Minimum			Standard			Minimum			Standard		
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
250	/	/	/	/	/	/	363	411	411	400	500	500
400	363	411	411	400	500	500	363	411	411	400	500	500
630	363	411	411	400	500	500	363	426	426	400	500	500
800	363	426	426	400	500	500	363	436	436	400	500	500
1000	363	436	436	400	500	500	363	461	461	400	500	500
1250	363	461	461	400	500	500	363	496	496	400	600	600
1350	/	/	/	/	/	/	363	496	496	400	600	600
1600	363	496	496	400	600	600	363	531	531	400	600	600
2000(S)	363	531	531	400	600	600	363	571	571	400	600	600
2000(D)	/	/	/	/	/	/	363	581	581	400	600	600
2500	363	581	581	400	600	600	363	660	660	400	900	900
3200	363	660	660	400	900	900	363	740	740	400	900	900
4000	363	740	740	400	900	900	363	840	840	400	900	900
5000	363	840	840	400	900	900	363	950	950	400	1000	1000
6300	/	/	/	/	/	/						

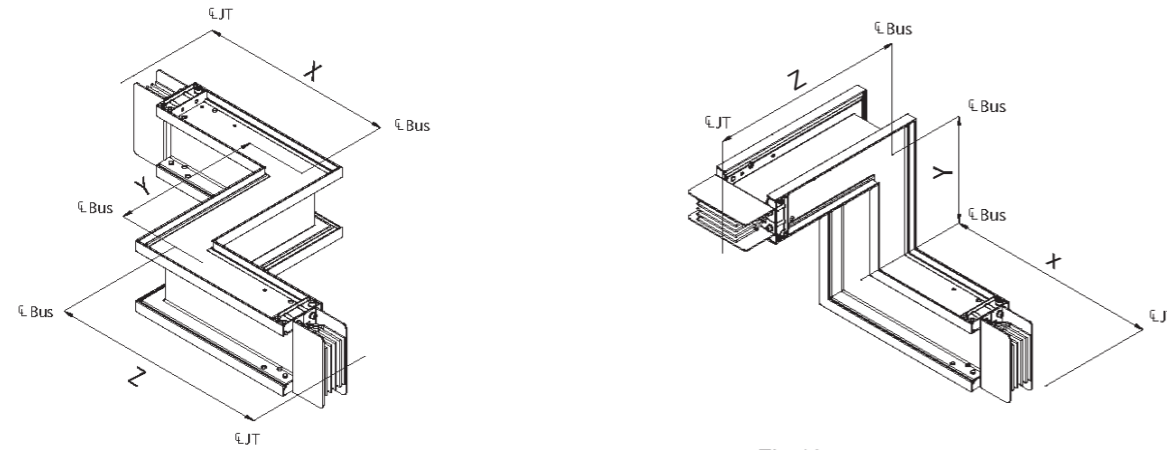


Fig 13.7

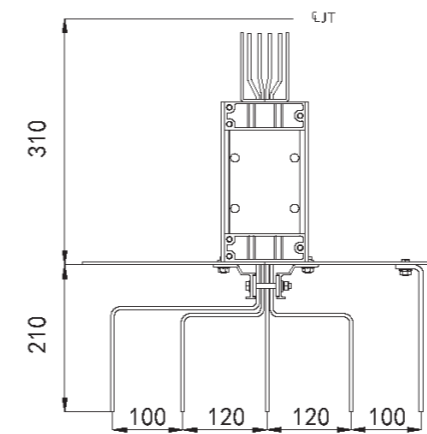
Combination Elbow Fig 13.7

Rated current (A)	Copper busway size (mm)						Aluminium busway size (mm)					
	Minimum			Standard			Minimum			Standard		
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
250	/	/	/	/	/	/	341	348	363	450	450	400
400	341	348	363	400	400	400	351	358	363	450	450	400
630	341	348	363	400	400	400	366	373	363	450	450	400
800	351	358	363	400	400	400	381	388	363	450	450	400
1000	366	373	363	400	400	400	406	413	363	450	450	400
1250	391	398	363	400	400	400	441	448	363	500	500	400
1350	/	/	/	/	/	/	441	448	363	500	500	400
1600	421	428	363	550	550	400	491	498	363	500	500	400
2000(S)	461	468	363	550	550	400	530	530	363	850	850	400
2000(D)	/	/	/	/	/	/	560	567	363	850	850	400
2500	511	518	363	550	550	400	630	637	363	850	850	400
3200	590	597	363	800	800	400	730	737	363	850	850	400
4000	670	677	363	800	800	400	810	817	363	850	850	400
5000	770	777	363	800	800	400	950	950	363	1000	1000	400
6300	1000	1000	363	1200	1200	400						

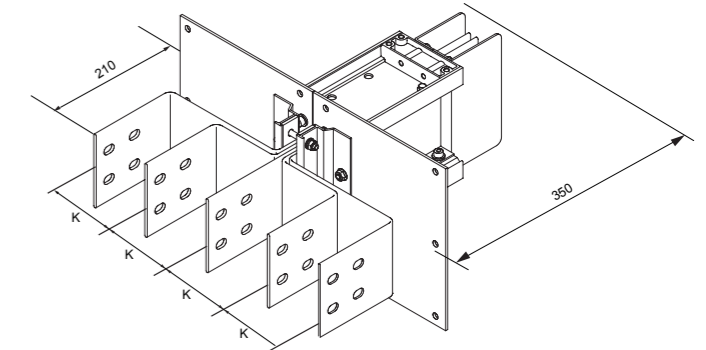
Flanged end

Standard length: L=0.56m

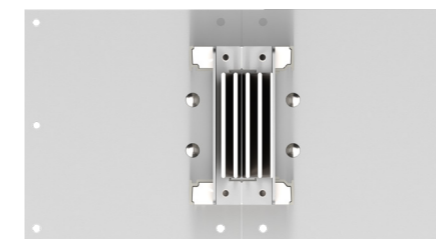
Nonstandard length: L=0.56 ~ 2.00m



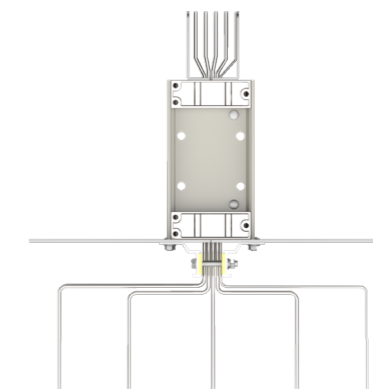
3P+100%N+50% integral housing as PE



3P+100%N+50% internal bar as PE



Top view



Section view



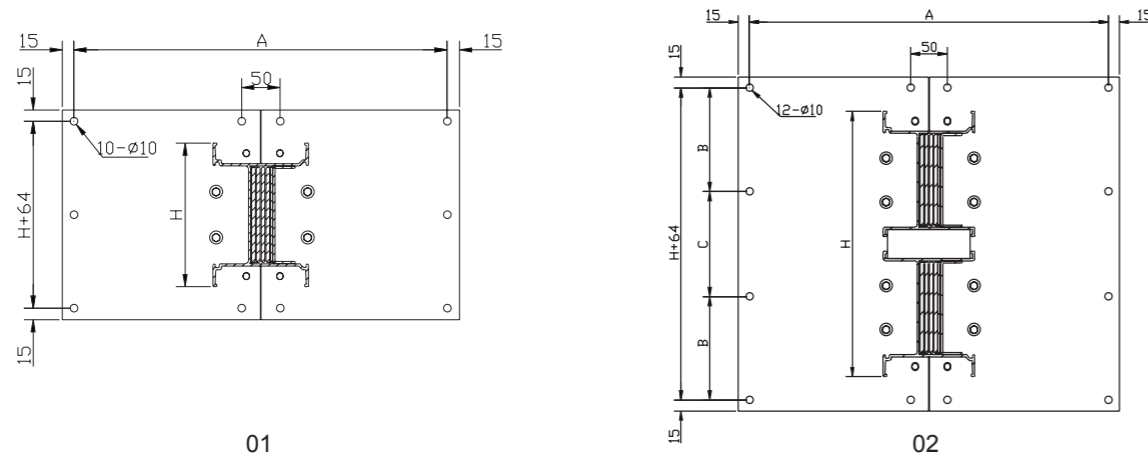
Section view

Flanged end and end tap box can be used in connection with any type of switchgear cabinets and transformers. Flanged end busbar spacing can be customized on specific application.

Note:

All the dimensions provided are for standard products. Please contact our engineers for customized dimensions.

Flanged end cut out and drilling pattern



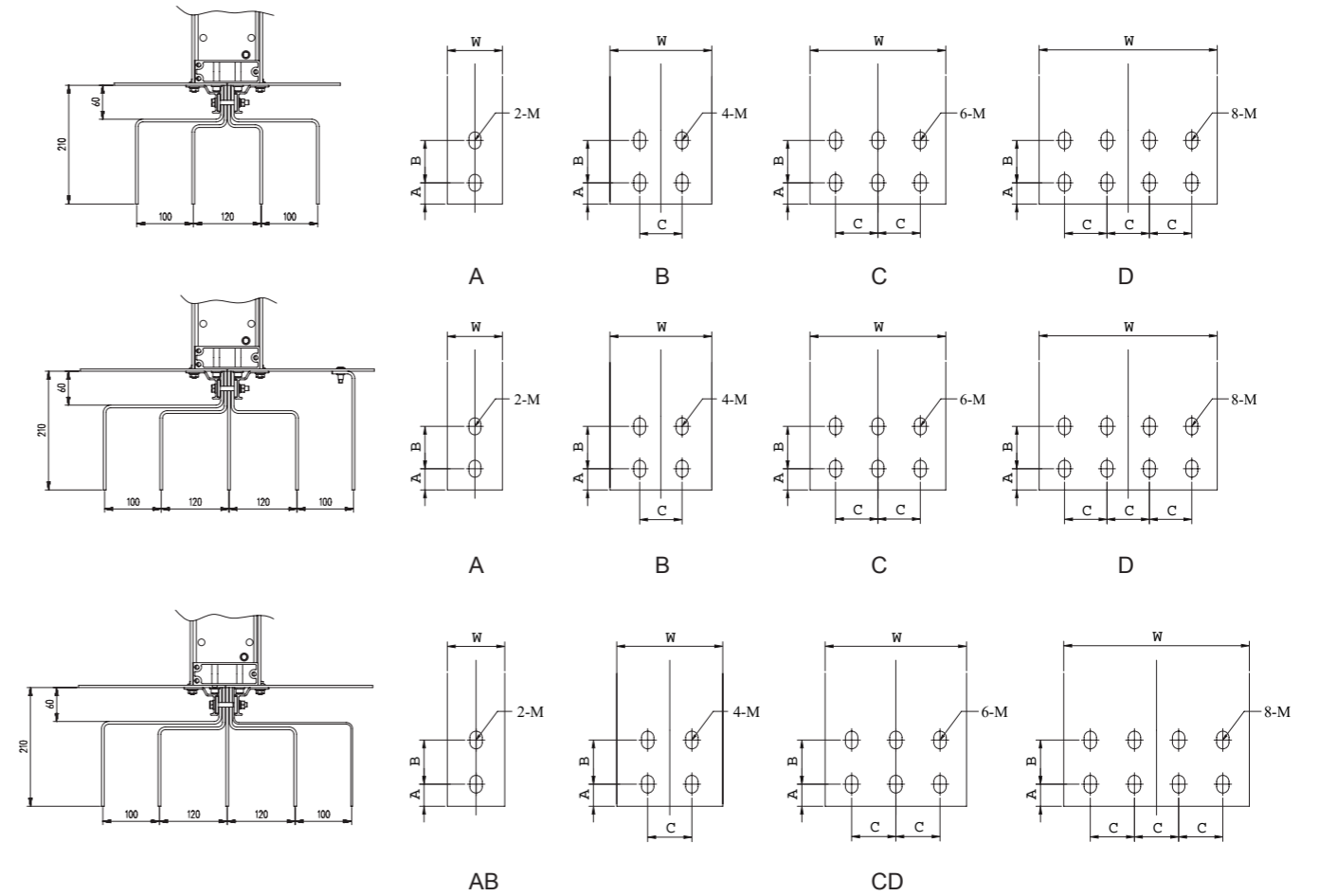
LVC

Rated Current(A)	3L+N+PE Size (mm)				3L+N Size (mm)			Fig
	H	A	B	C	A	B	C	
400	103	490			370			01
630	103	490			370			
800	118	490			370			
1000	128	490			370			
1250	153	490			370			
1350	153	490			370			
1600	188	490			370			
2000	223	490			370			
2500	273	490			370			
3200	352	490	140	136	370	140	136	
4000	432	490	165	166	370	165	166	
5000	532	490	200	196	370	200	196	
6300	701	490	255	255	370	255	255	

LVA

Rated Current(A)	3L+N+PE Size (mm)				3L+N Size (mm)				Fig
	H	A	B	C	A	B	C		
250	103	490			370				01
400	113	490			370				
630	128	490			370				
800	143	490			370				
1000	168	490			370				
1250	203	490			370				
1350	203	490			370				
1600	253	490			370				
2000(S)	293	490	130	126	370	130	126	02	
2000(D)	322	490	130	126	370	130	126		
2500	392	490	150	156	370	150	156		
3200	492	490	185	186	370	185	186		
4000	572	490	210	216	370	210	216		
5000	685	490	250	249	370	250	249		

Flanged end bar hole pattern



Copper conductor

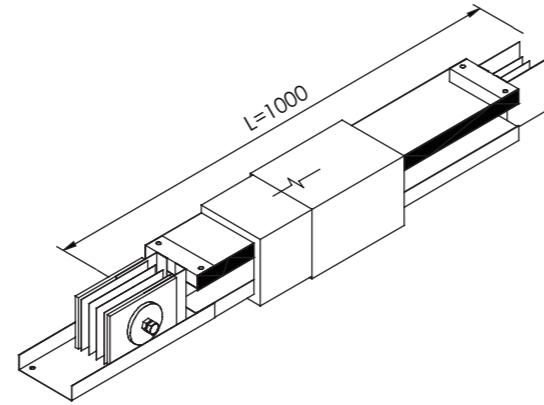
Rated Current	A	B	C	M	Type
400	25	50		Φ12	A
630	25	50		Φ14×20	A
800	25	50		Φ14×20	A
1000	25	50		Φ14×20	A
1250	25	50	50	Φ14×20	B
1350	25	50	50	Φ14×20	B
1600	25	50	50	Φ14×20	B
2000	25	50	50	Φ14×20	C
2500	25	50	50	Φ14×20	D
3200	25	50	50	Φ14×20	B
4000	25	50	50	Φ14×20	C
5000	25	50	50	Φ14×20	D
6300	25	50	50	Φ14×20	C

Aluminum conductor

Rated Current	A	B	C	M	Type
250	25	50		Φ14×20	A
400	25	50		Φ14×20	A
630	25	50		Φ14×20	A
800	25	50		Φ14×20	A
1000	25	50	50	Φ14×20	B
1250	25	50	50	Φ14×20	C
1350	25	50	50	Φ14×20	C
1600	25	50	50	Φ14×20	C
2000(S)	25	50	50	Φ14×20	D
2000(D)	25	50	50	Φ14×20	B
2500	25	50	50	Φ14×20	C
3200	25	50	50	Φ14×20	C
4000	25	50	50	Φ14×20	D
5000	25	50	50	Φ14×20	D

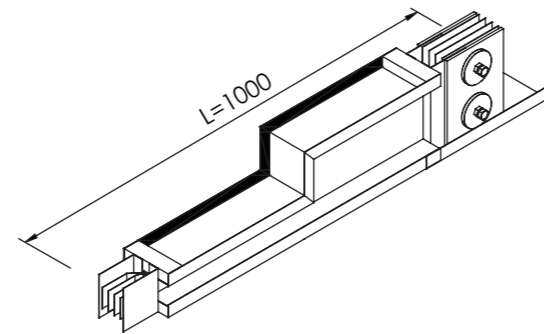
### Expansion joint

Expansion length is the transition section compensating for thermal expansion, one is normally set for each 60m in linear distance.



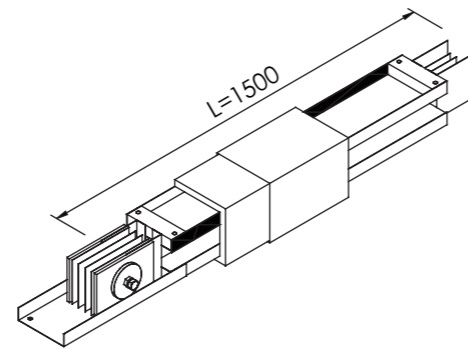
### Reducer

This reducer section is used for reducing busbar size to the final load, it provides users with more economic power transmission and distribution method.



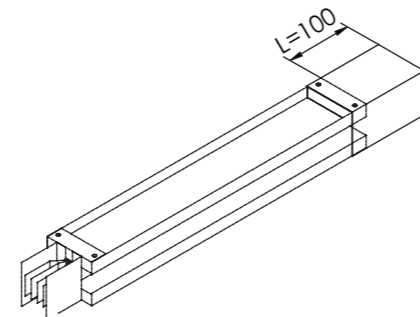
### Transposition joint

Transposition section is the transition parts used for changing phase sequence of the busbar; its minimum size is 1500mm. The phase sequence of both sides can be customized by the customer.



### Terminal cover

Protection for the busway terminal to avoid be damaged.



### Tap-off box

- LV plug-in box distributes power from the busway to the load, and as a mechanism for breaking branch current, the plug-in box is the most frequently used by users and the key part of branch current protection.
- LV fully considers the user's requirements in the design, and provides a variety of options for protection with internal circuit breakers or fuses.

#### Plug-in box with circuit breaker:

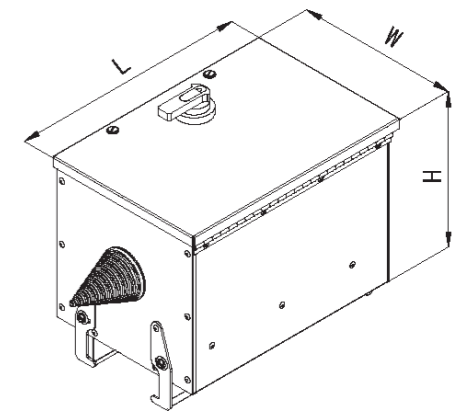
- For plug-in type, the standard current is 16A~630A(for copper busway);16A~400A(for aluminium busway)
- A 3-pole or 4-pole circuit breaker can be installed in the plug-in box to protect the load.
- Optional accessories of circuit breaker, such as operating handle, shunt tripping fire alarm leakage protection module, etc.

#### Dimensions of plug-in box (L×W×H) mm

Current rating (A)	Dimensions of plug-in box(for copper busway)		
	L (mm)	W (mm)	H (mm)
100	360	250	250
160	400	250	250
250	520	270	270
400	650	310	310
630	800	340	340
800(branch bolted on type)	1200	420	420

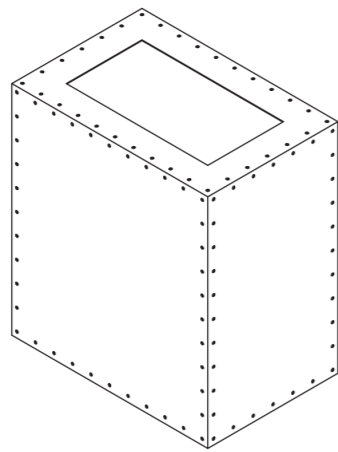
#### for aluminium busway

Current rating (A)	Dimensions of plug-in box(for aluminium busway)		
	L (mm)	W (mm)	H (mm)
100	360	250	250
160	400	250	250
250	520	270	270
400	650	310	310
630(branch bolted on type)	950	440	360
800(branch bolted on type)	1050	440	360



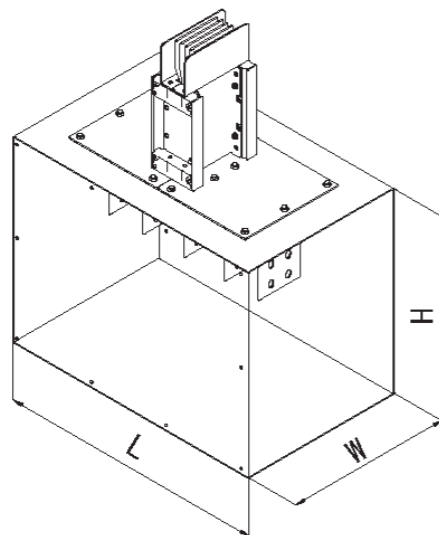
### End tap box

Wetown LV series busway system tap boxes are used where a run of busway is fed by cable. we offer standard size end tap box (1m×1m×1m) while we also supply with nonstandard box according to the on-site measurement.



### Flanged end with end tap box connection

The flange plate can be manufactured according to the size of the end tap box, it can be connected directly with end tap box.



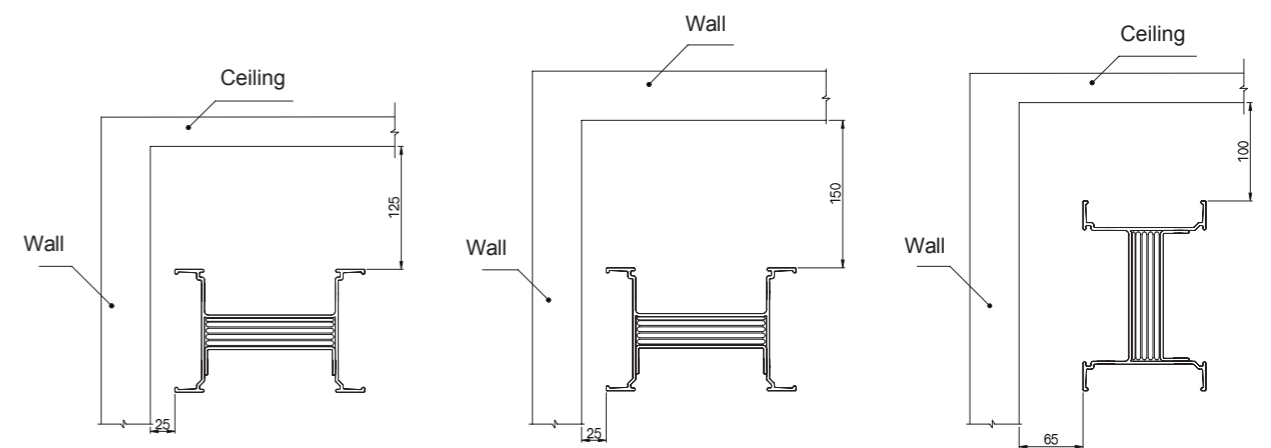
## Installation

LV busway protection class can be up to IP66 according to different applications.

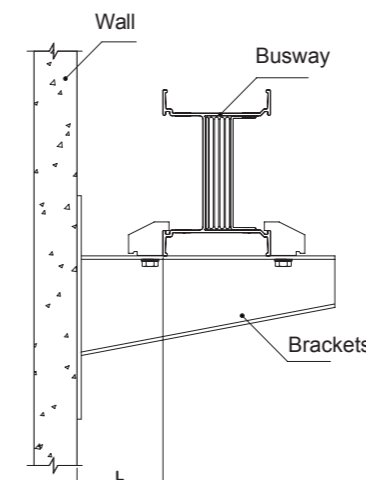
**Notes:**

- IP40---"4" indicates that solid objects greater than 1mm in diameter will not penetrate the housing."0" denotes no protection.
- IP42---"4" indicates that solid objects greater than 1mm in diameter will not penetrate the housing."2" denotes prevention of water dripping inside by an angle of up to 15°.
- IP54---"5" for dust, "4" indicates splashes of water.
- IP65---"6" for dust density, "5" indicates protection from water spray.
- IP66---"6" for dust density, "6" for protection of stronger water spray

### Minimum clearance required for installation

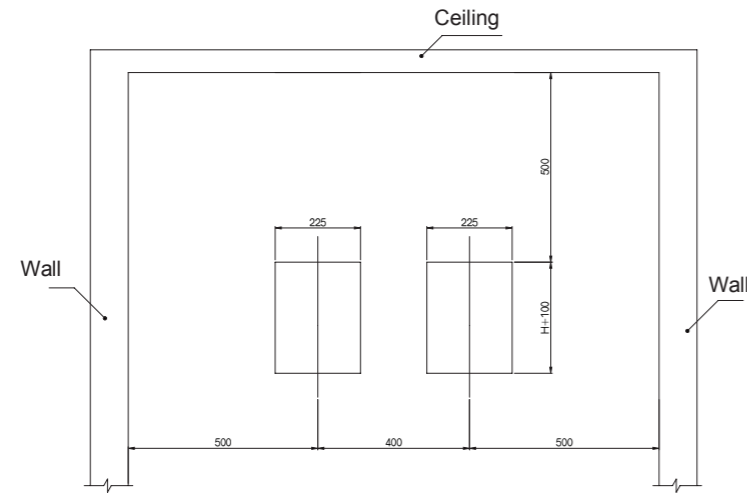


### Minimum clearance required for plug-in box installation

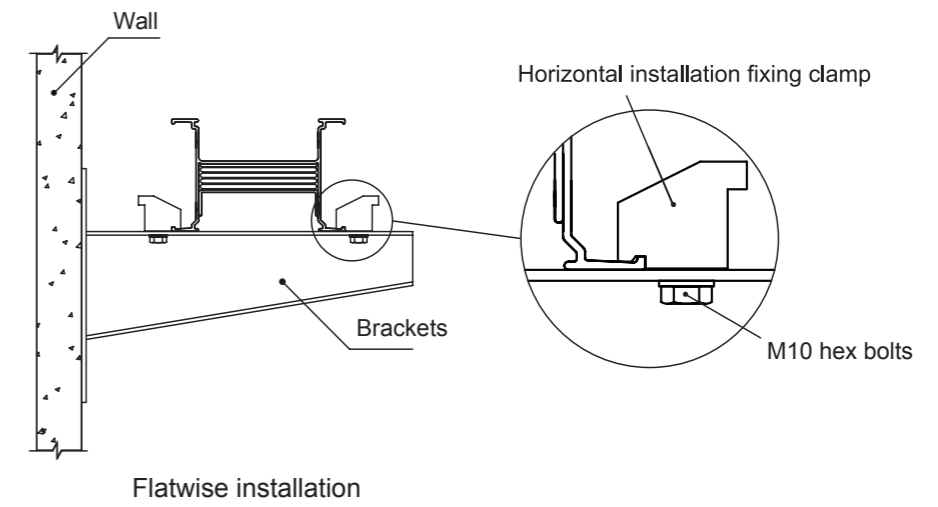


Current level for plug-in box	L(mm)
100	150
160	175
250	195
400	210
630	230
800	260
1000	300

Horizontal wall-through installation

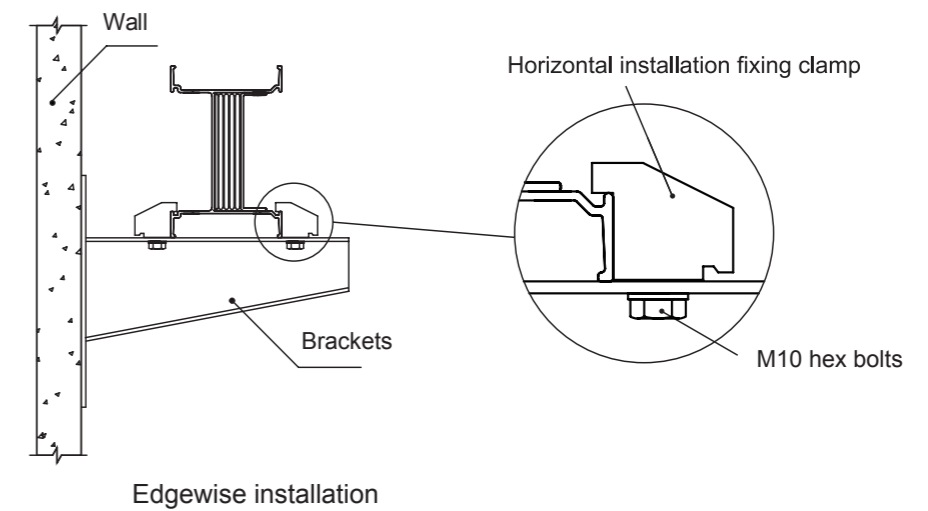
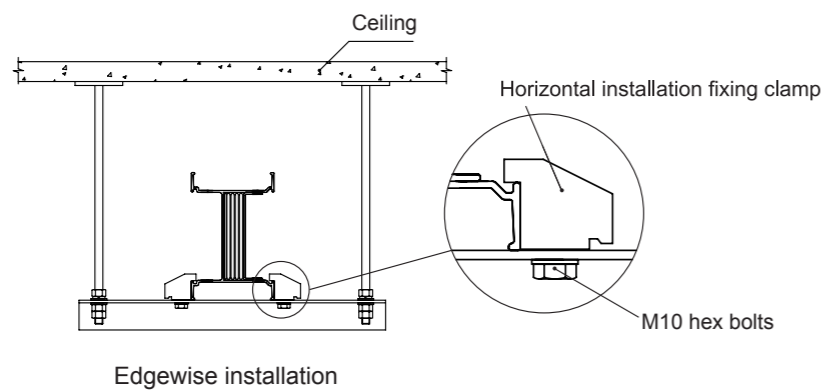
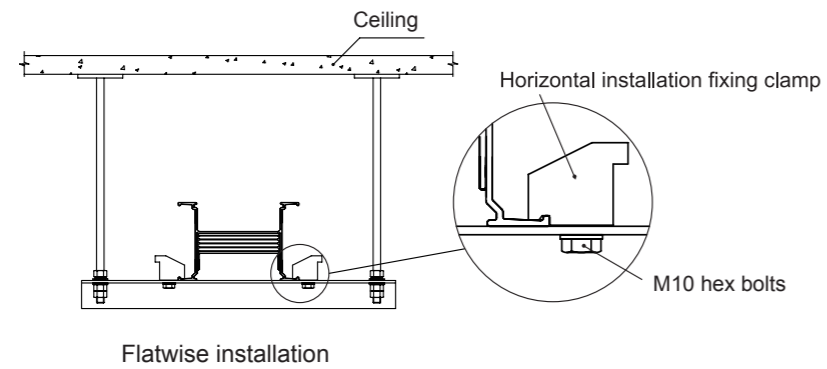


Horizontal installation-wall support



Horizontal installation-trapeze hangers overhead support

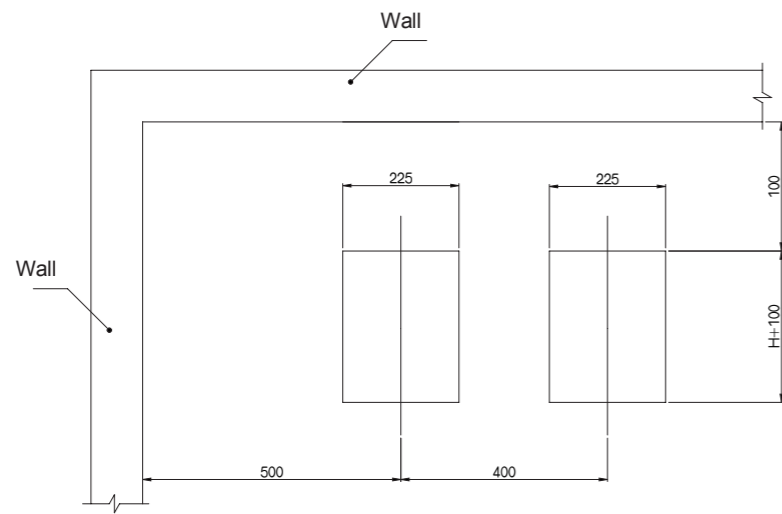
Holes should be first drilled in the floor so as to inlay steel expansion bolts (holes may also be drilled on site for flexible installation) or pre-bury steel U-channel for welding with hangers. The distance between two adjacent hangers shall not exceed 2m. Please specify any special requirements when placing your order.



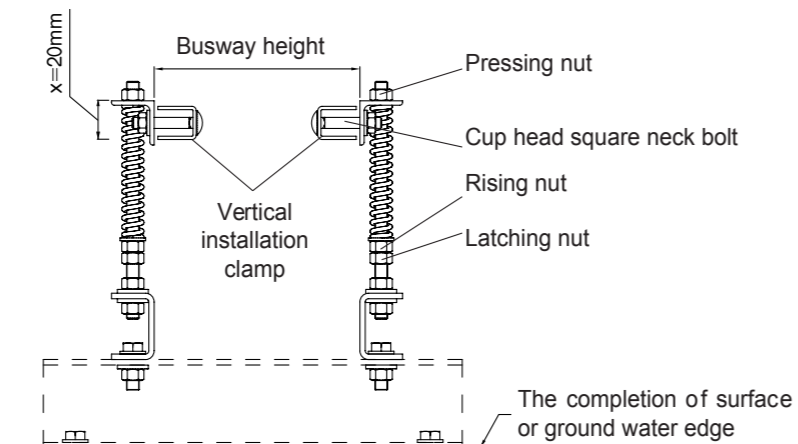
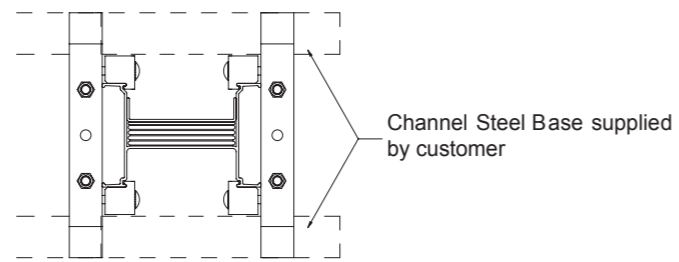
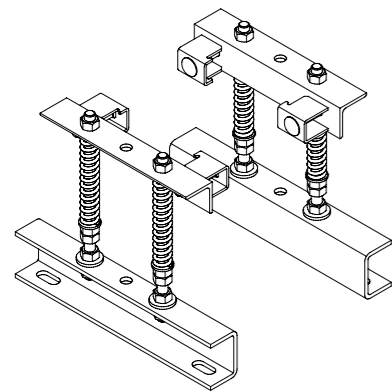


### Vertical installation

When installing a vertical bus run, please refer to the figure for the dimension of the access holes. Please ensure that the spacing between every two runs of busway exceeds 350mm, especially if there are two or more vertical runs of busway installed in the same riser. Please refer to the figure below:

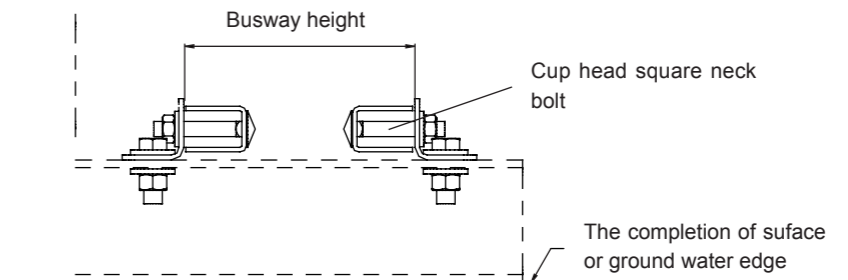
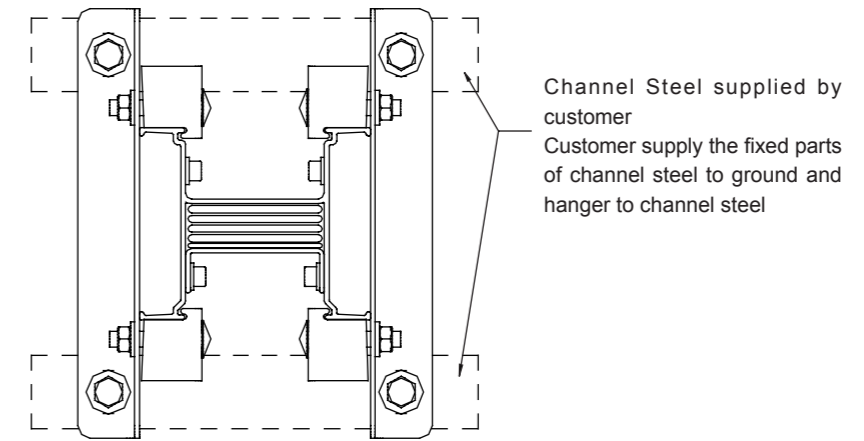


### Installation for vertical spring hanger



Installation Schematic Diagram

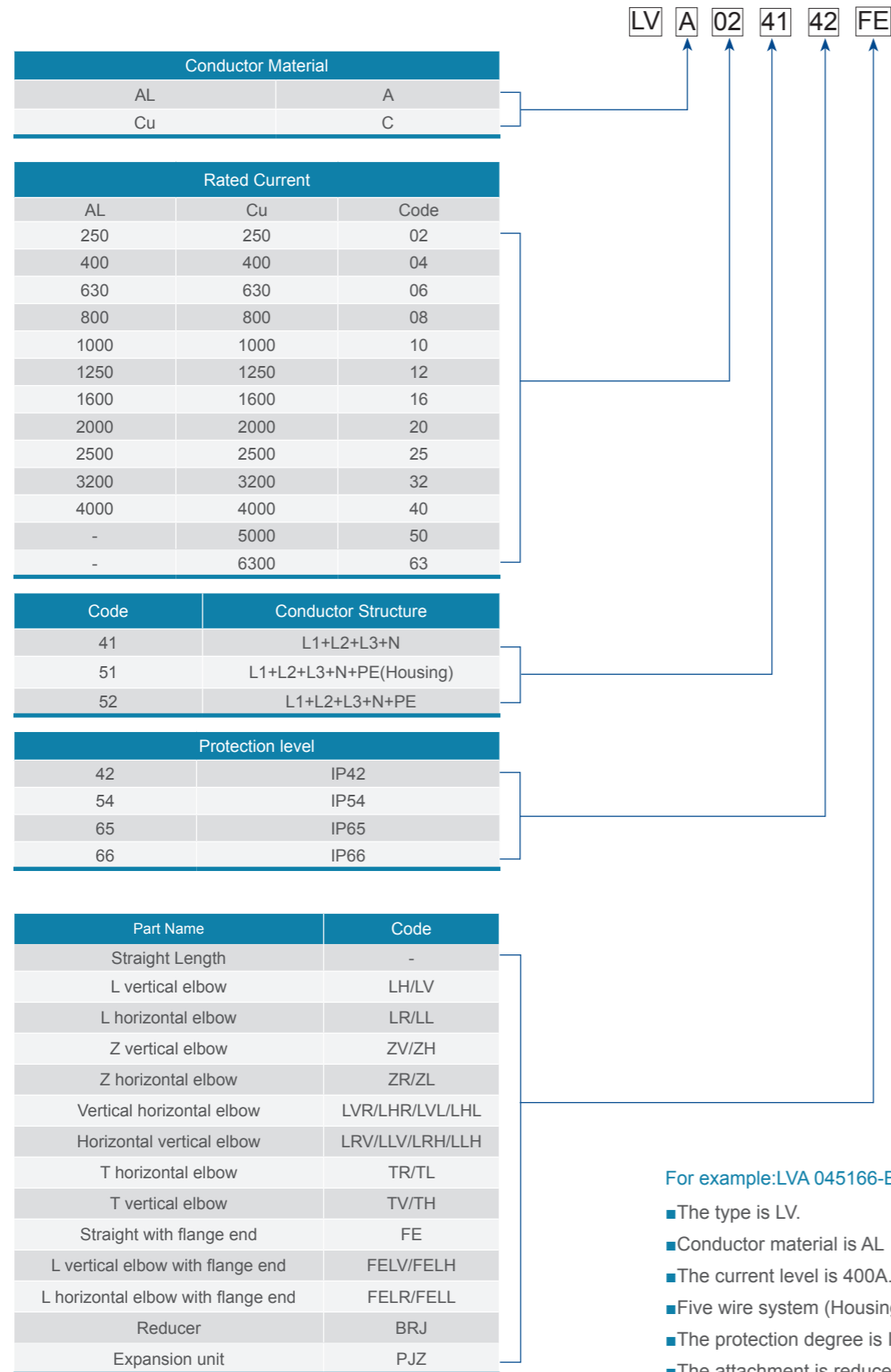
### Installation for vertical fixed hanger



Installation Schematic Diagram

# LV Busway System Numbering

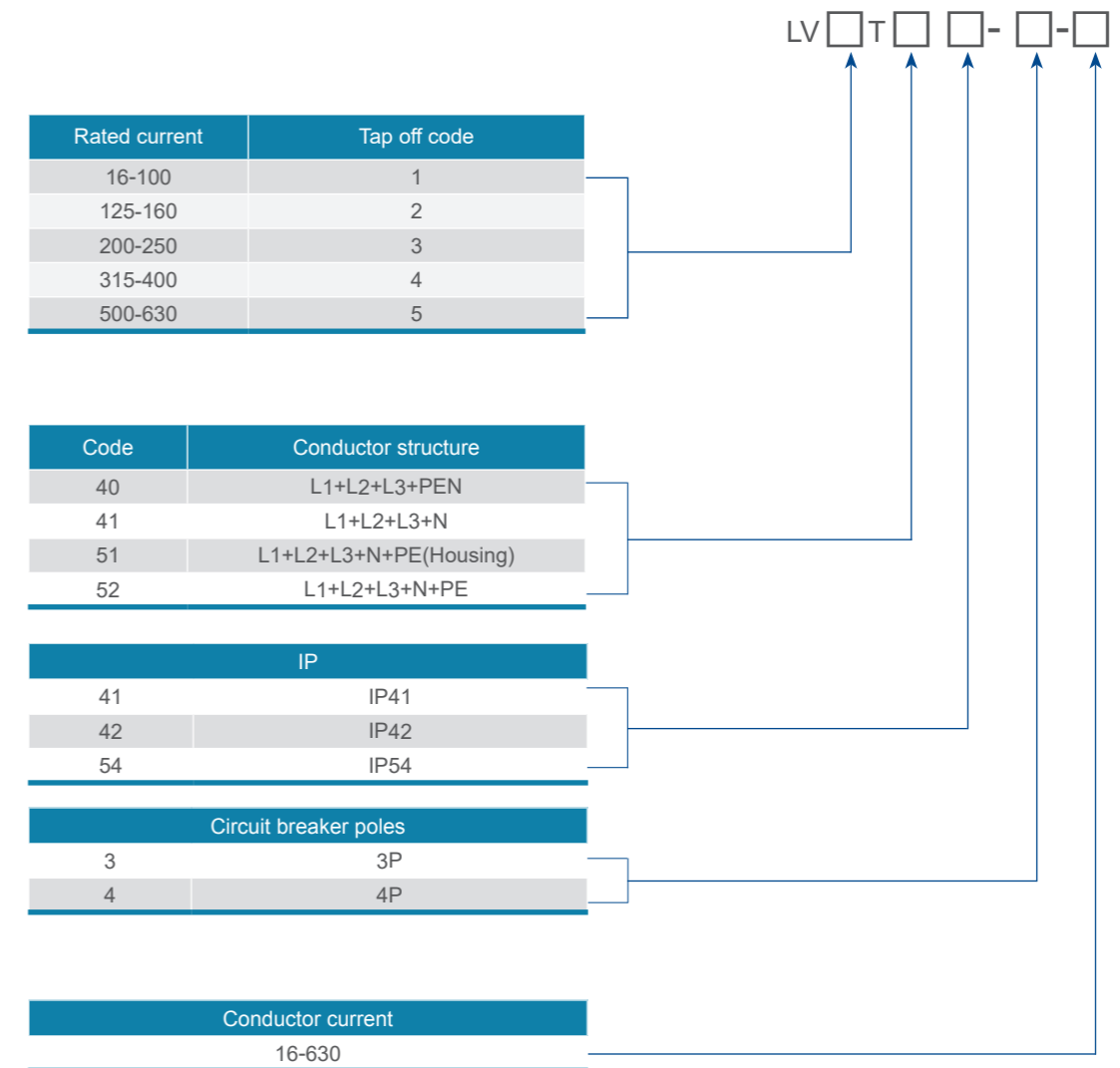
## LV Busway Code



For example:LVA 045166-BRJ indicates:

- The type is LV.
- Conductor material is AL
- The current level is 400A.
- Five wire system (Housing as PE).
- The protection degree is IP66.
- The attachment is reducer

## LV Tap-off box Code



For example: LV 1t5254-3-160 :

- The type is LV.
- Size of 1# box.
- Five wire system.
- The protection degree is IP54.
- The circuit breaker is the 3P 160A .

## Ordering Information

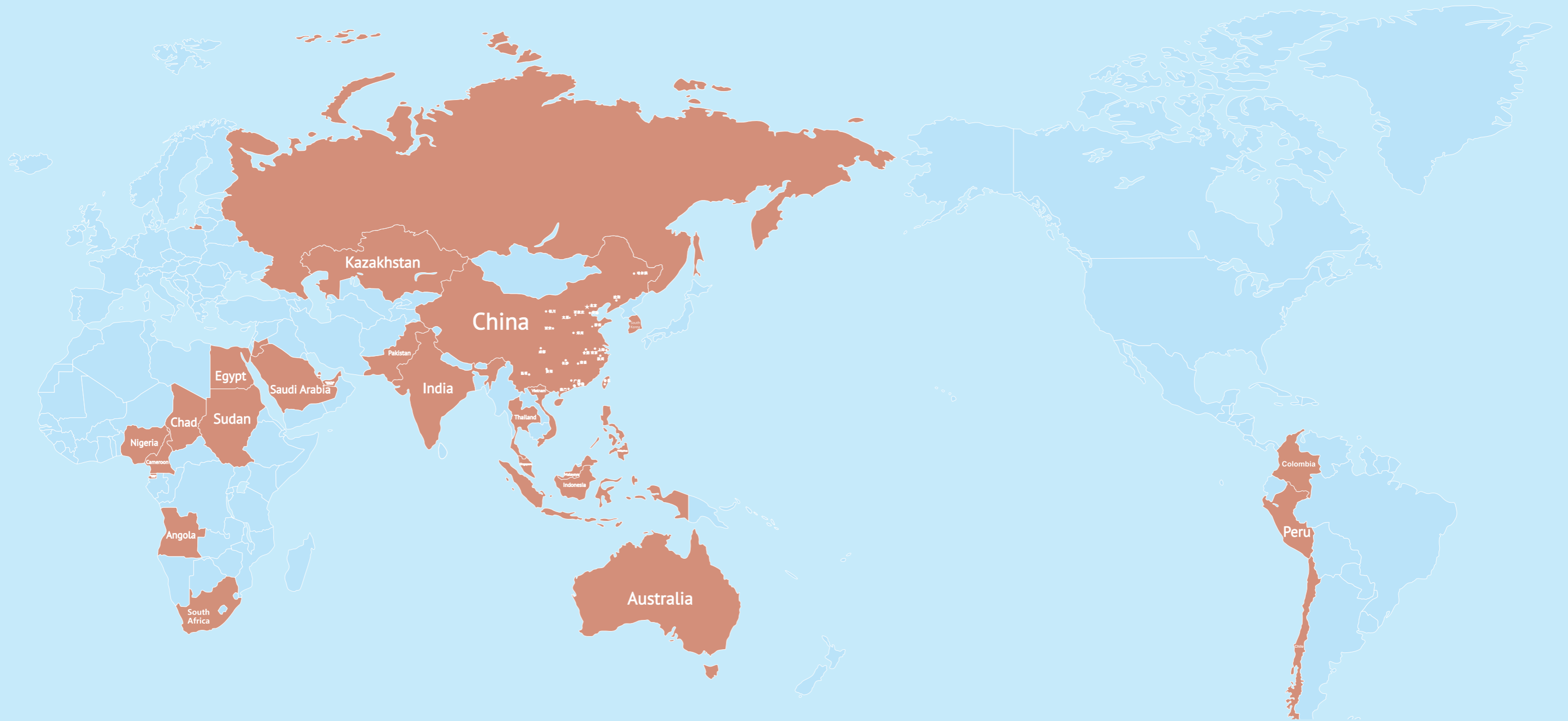
### WETOWN LV purchase guide

Quotation Inquiry Form

- Model, rated current, rated voltage
- Plug-in busway or in feeder busway
- Characteristics of the power supply and protection degree
- Surface treatment and color and accessories
- Name, model, specifications, quantity of components and protection degree of the plug

Remark

Items	Details
Conductor Type	<input type="checkbox"/> copper conductor <input type="checkbox"/> aluminium conductor
Rated Capacity	<input type="checkbox"/> 250A <input type="checkbox"/> 400A <input type="checkbox"/> 500A <input type="checkbox"/> 630A <input type="checkbox"/> 800A <input type="checkbox"/> 1000A <input type="checkbox"/> 1250A <input type="checkbox"/> 1350A <input type="checkbox"/> 1600A <input type="checkbox"/> 2000A <input type="checkbox"/> 2500A <input type="checkbox"/> 3200A <input type="checkbox"/> 3800A <input type="checkbox"/> 4000A <input type="checkbox"/> 4500A <input type="checkbox"/> 5000A <input type="checkbox"/> 6300A
Phase and Wire	<input type="checkbox"/> 3P4W L1, L2, L3, N100% <input type="checkbox"/> 3P5W L1, L2, L3, N100%, housing as PE <input type="checkbox"/> 3P5W L1, L2, L3, N100%PE50%
Phase Sequence	<input type="checkbox"/> option 1 <input type="checkbox"/> option 2 <input type="checkbox"/> option 3 <input type="checkbox"/> option 4 <input type="checkbox"/> option 5 <input type="checkbox"/> option 6 <input type="checkbox"/> option 7 <input type="checkbox"/> option 8 <input type="checkbox"/> others
Frequency	<input type="checkbox"/> 50Hz <input type="checkbox"/> 60Hz
Voltage	<input type="checkbox"/> 400V <input type="checkbox"/> 690V
Protection Class	<input type="checkbox"/> IP40 <input type="checkbox"/> IP42 <input type="checkbox"/> IP54 <input type="checkbox"/> IP65 <input type="checkbox"/> IP66 <input type="checkbox"/> others
Colour	<input type="checkbox"/> light grey <input type="checkbox"/> light yellow <input type="checkbox"/> others
Product Type	<input type="checkbox"/> Plug-in straight length_____M <input type="checkbox"/> Feeder straight length_____M
No. of Outlet	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> One side <input type="checkbox"/> Both side
Attachment	<input type="checkbox"/> L edgewise elbow (N-phase inward)_____ piece <input type="checkbox"/> L edgewise elbow (N-phase outward)_____ piece
	<input type="checkbox"/> L edgewise elbow (N-phase upside )_____ piece <input type="checkbox"/> L edgewise elbow (N-phase underside)_____ piece
	<input type="checkbox"/> T edgewise elbow (N-phase inward)_____ piece <input type="checkbox"/> T edgewise elbow (N-phase outward)_____ piece
	<input type="checkbox"/> T edgewise elbow (N-phase upside)_____ piece <input type="checkbox"/> T edgewise elbow (N-phase underside) _____ piece
	<input type="checkbox"/> terminal_____ piece <input type="checkbox"/> terminal busway _____ piece
	<input type="checkbox"/> transposition busway_____ piece <input type="checkbox"/> expansion busway _____ piece <input type="checkbox"/> phase conversion busway _____ piece
Plug-in box	<input type="checkbox"/> Isolating switch + fuze <input type="checkbox"/> MCCB <input type="checkbox"/> Rotary handle operation <input type="checkbox"/> Rotating crank operation
	Rated current ____A____ pce    ____A____ pce    ____A____ pce    ____A____ pce    ____A____ pce    ____A____ pce ____A____ pce    ____A____ pce    ____A____ pce    ____A____ pce    ____A____ pce    ____A____ pce
	Short Circuit Current
Support	<input type="checkbox"/> horizontal_____ pce <input type="checkbox"/> vertical_____ pce
Delivery date	
Transportation	
Destination Address	
Contact	
Special Requirements	



# Typical Job References



Casino Tower



Marina Bay Sands Hotel



Panzhuhua Steel(Group) Co. Ltd



Gezhouba Group Power Liability Co. Ltd.



National Stadium



Asian Games Stadium



Shenzhen Baohe Hospital



Wanda Plaza