

# XAP-S Series Compact Busway

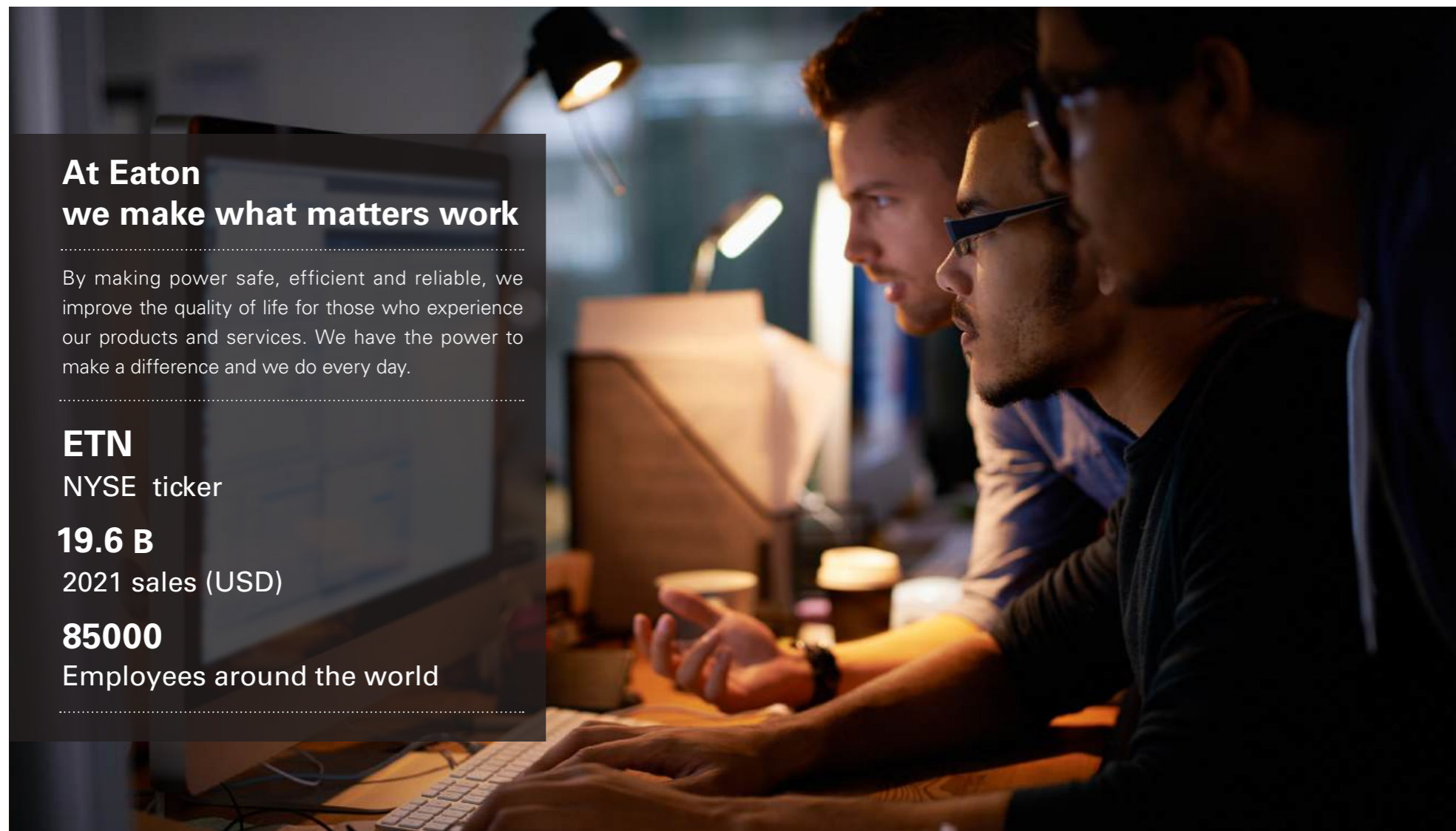
Rated Current 250-5000A



*Powering Business Worldwide*

**We're dedicated to improving people's lives and the environment with power management technologies that are more reliable, efficient, safe and sustainable.**

We are a power management company doing business in more than 175 countries. Our energy-efficient products and services help our customers effectively manage electrical, hydraulic and mechanical power more reliably, efficiently, safely and sustainably. By giving people tools to use power more efficiently. Helping companies do business more sustainably. And by encouraging each and every employee at Eaton to think differently about our business, our communities—and the positive impact we can have on the world.



**At Eaton  
we make what matters work**

By making power safe, efficient and reliable, we improve the quality of life for those who experience our products and services. We have the power to make a difference and we do every day.

**ETN**  
NYSE ticker

**19.6 B**  
2021 sales (USD)

**85000**  
Employees around the world

## CATALOGUE

Product features	/ 12
Installation accessories	/ 14
Technique data	/ 16
System selection	/ 17
Physical data	/ 18
Functional unit standard dimension	/ 20
Flanged end	/ 25
Production selection	/ 26
Connection with equipment	/ 28

# SINCE 1911

Eaton was founded by Joseph Eaton in 1911 and started to produce Power distribution buway in 1935.

Eaton's continuous innovation in the busway product line not only ensures the economy and reliability of its solutions, but also integrates excellent technology that can be installed horizontally or vertically. To seek the perfect combination of technical performance and exquisite design, Eaton XAP series busway system will be your wisest choice.

## Based on local manufacturing

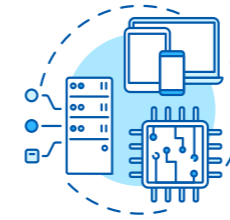
### Eaton Busway (Jiangsu) Co.,Ltd

According to Eaton's innovative spirit, one hundred years of technology accumulation and the development ability of the Asia Pacific market, Eaton busway factory has continuously introduced new products, It has realized the independent R & D and manufacturing of busway in the Asia Pacific region, providing customers with high-quality products and satisfactory solutions.



### Top manufacturing solutions

Eaton busway manufacturing plant covers an area of 12,000 square meters and has the industry's top manufacturing solutions to fully ensure the high-precision manufacturing of products.



### Advanced insulation technology

Self research and development fully automatic Polyester film insulation wrapping equipment Improve the standardization of product manufacturing



### Full automatic busway assembly line

integrating assembly, inspection and packing together, effectively guarantees delivery time and greatly improves project execution.



### Intelligent warehousing improves delivery efficiency

Intelligent warehouse can accept more busway, and the storage capacity is 4 times that of the traditional warehouse.



### Dispatching center makes service faster

Online dispatching of national technical service staff view the progress of various services in real time make pre-sales and after-sales service more worry free



### Refinement of production management

Standardized production management Plant performs MES system, which can display production, quality, safety and contract execution data on real-time.

# OUR ADVANTAGE

EATON owns state of art manufacturing system in the industry, it brings "high, precision and top" features to the products.

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German Trumpf laser cutting and Trupunch ensures  $\pm 0.1\text{mm}$  accuracy for sheet-metal parts.



Canadian Accurpress, German Behringer, Italian Euromac and Amepessta sheet-metal system enable parts to achieve International high quality level.



Application of Panasonic automatic welding, laser welding and automatic riveting technology highly improves production efficiency.

EATON owns independant laboratory for research and development ,which always brings customers high quality product and electricity safety.

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Temperature rise system allows max 6300A, which ensures product performance to reach design expectation.



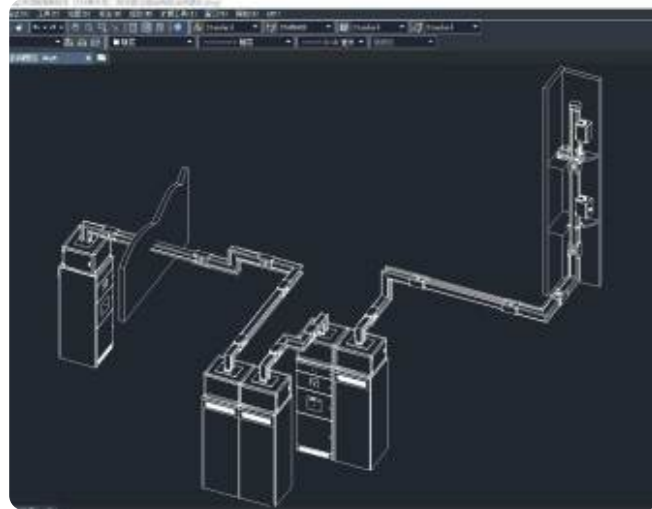
Application of dust simulation tank and water spray platform give product superior IP protection degree performance at the research stage.



Perform strict quality control on IQC, IPQC and OQC to secure product "Zero deflection" upon ex-factory.

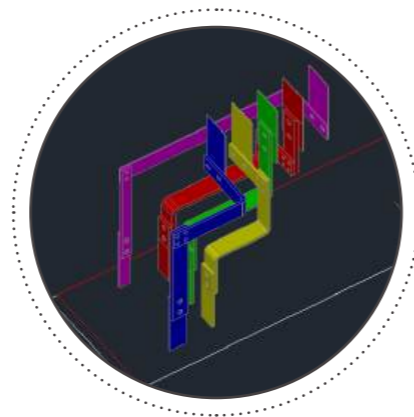
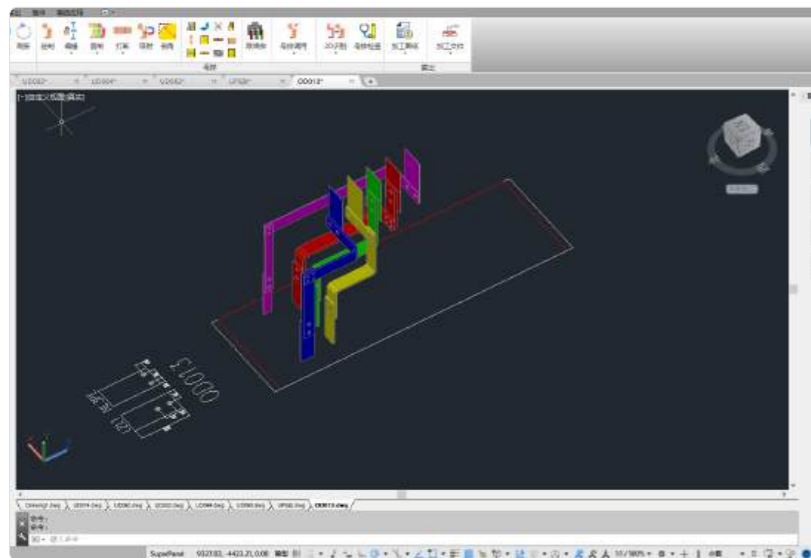
# OUR ADVANTAGE

EATON always sticks to innovation research and development, pushes busway technology to safe, energy saving and intelligent direction.



Advanced 3D engineering software, integrated with product features, quickly optimise the busway layout, offers first-best arrangement to the project.

Intelligent superpanel technology brings power to distribution system and provides customer with reliable power supply solution.



Manufacturing center sets up MES system and Intelligent factory data platform, closely butts with ERP, achieves the jump over from product manufacturing to "intelligent manufacturing".



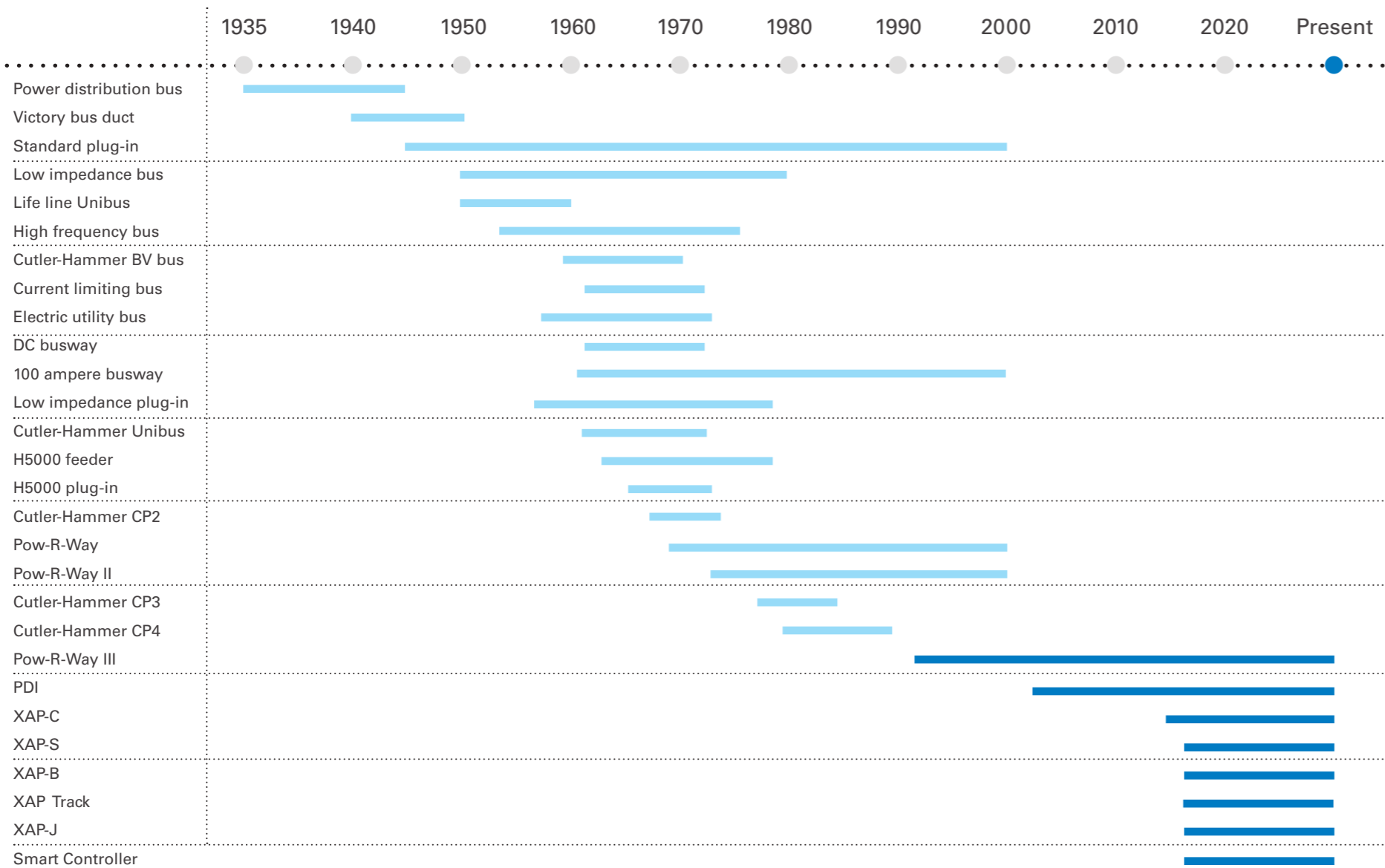
MES system precisely records all the process data and makes all the manufacturing data trackable.

Intelligent factory data platform fully monitors the factory operation efficiency by statistic and analysis of all the data related with manufacturing, quality and safety.

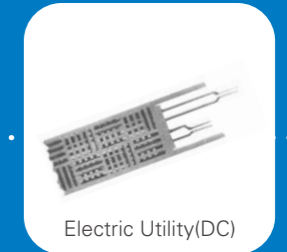
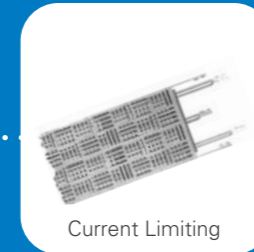
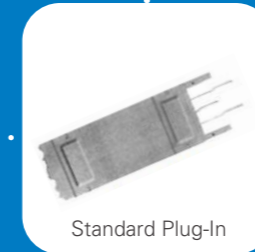


# KEEP INNOVATION SINCE 1935

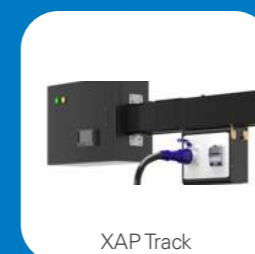
In 1935, comes out first type of busway "power distribution bus".



1935



Eaton busway history can be traced back to 1935 last century. 1st busway was called "power distribution bus", which consists of aluminum or copper bars inside a metal housing used for power distribution. it is available from 100–5000A.







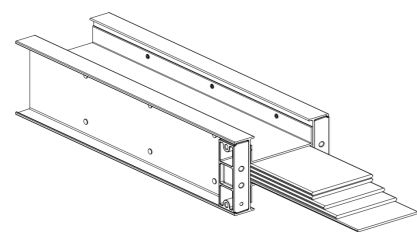
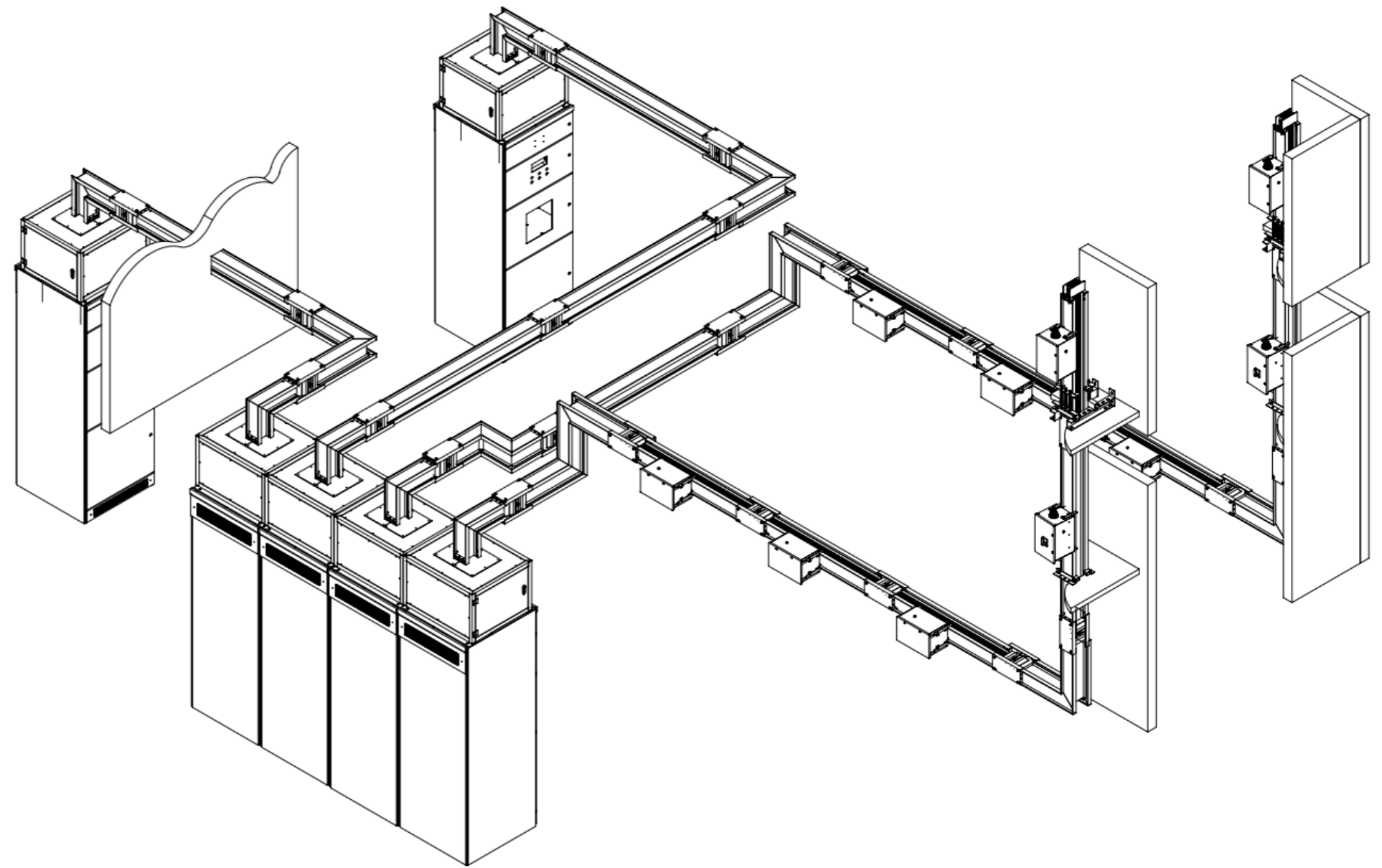
# XAP Series Compact Busway

Rated current rating 250-5000A

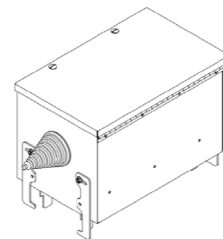


To seek the perfect combination of technical performance and exquisite design, Eaton XAP series busway system will be your wisest choice. Eaton's continuous innovation in the busway product line not only ensures the economy and reliability of its solutions, but also integrates excellent technology that can be installed horizontally or vertically.

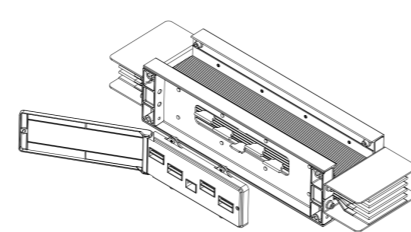
-  Superior insulation performance  
More in line with the transmission requirements of power system.
-  Higher degree of protection  
Strong impact resistance
-  Powerful current carrying capacity  
Suitable for high power and load power transmission
-  Flexible connection  
Greatly improve continuous adaptability



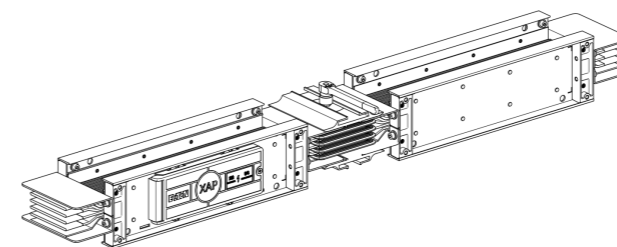
Housing is made of aluminum-alloy profile with high strength and light weight, painted with epoxy powder, it has superior performance on anti-corrosion and bending strength.



Compact structure for the plug in box, safe and reliable, protection degree is up to IP54.



Sandwich plug in opening, low impedance, better heat dissipation.



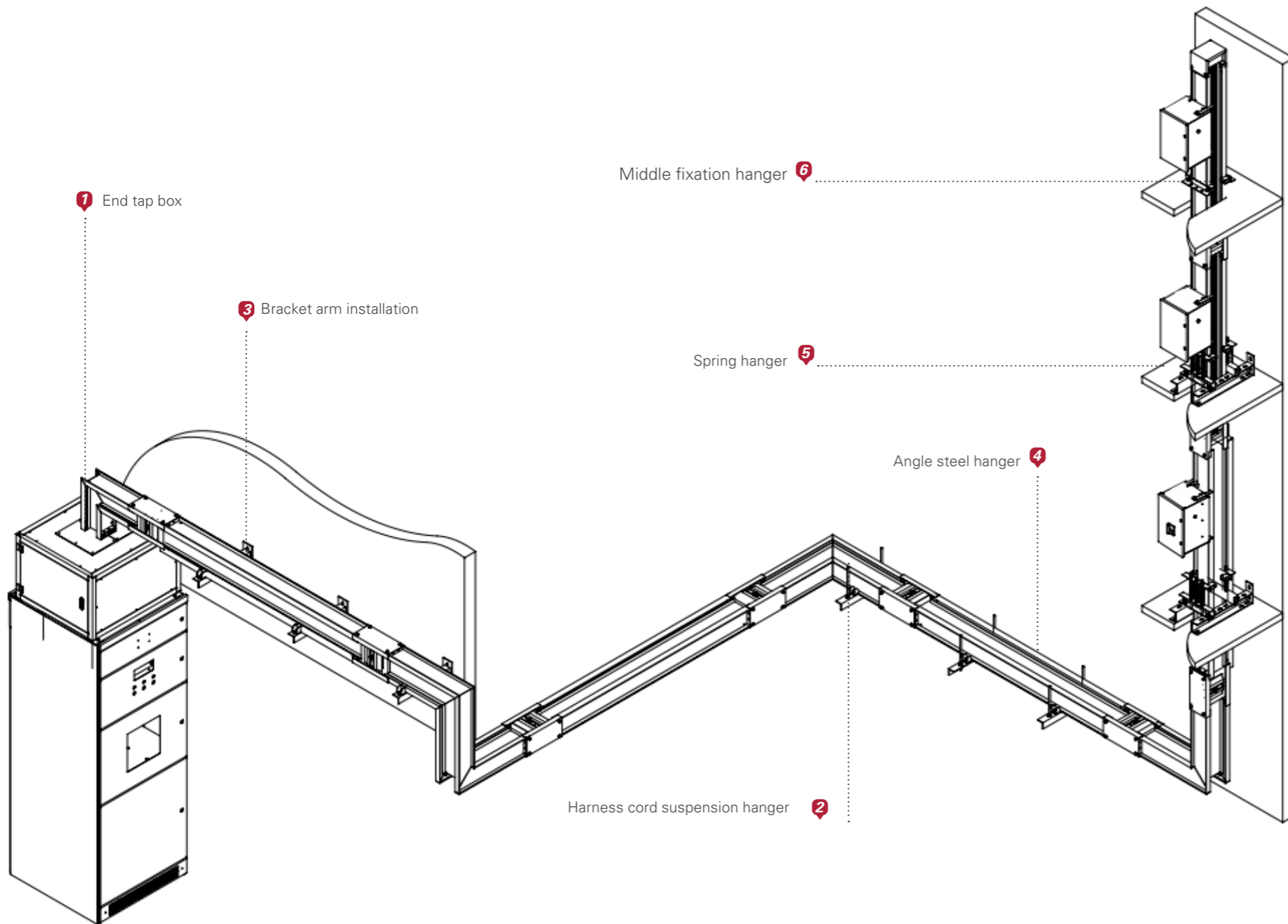
Bolt assembly joint, reliable connection, fast installation, minimize the total cost of site construction.



XAP-S busway is available with Intelligent monitor system and operation platform, provide on-time data to customer, secures the electricity safety.

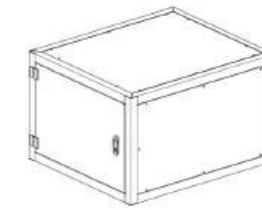
# XAP-S series compact busway

## Installation accessories



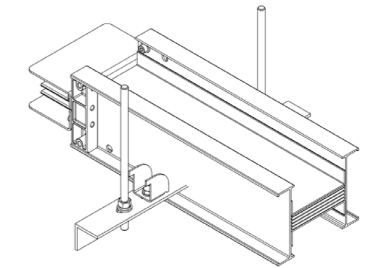
1

End tap box, to protect connection between busway and equipment, outline standard dimension:  
L=1000mm,W=800~1000mm,H=500mm



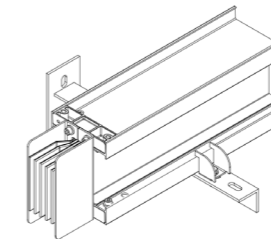
2

Harness cord suspension hanger, applicable for 250-2500A busway horizontal installation.



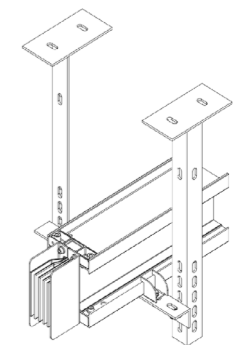
3

Bracket arm installation, Bracket arm is applicable for the busway installation along the wall.



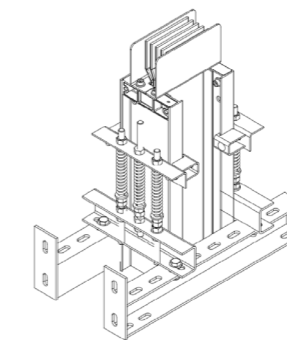
4

Angle steel hanger, applicable for 3200A-5000A busway horizontal installation.



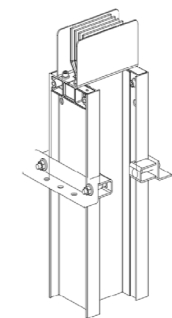
5

Spring hanger, for the application of busway when the floor is 4 meters high, or equipped with plug in box, need to add fixation hanger to secure the busway installation in the vertical riser.



6

Middle fixation hanger, when the floor is 4 meters high, or equipped with plug in box, need to add fixation hanger to secure the busway installation in the vertical riser.



# XAP-S series compact busway

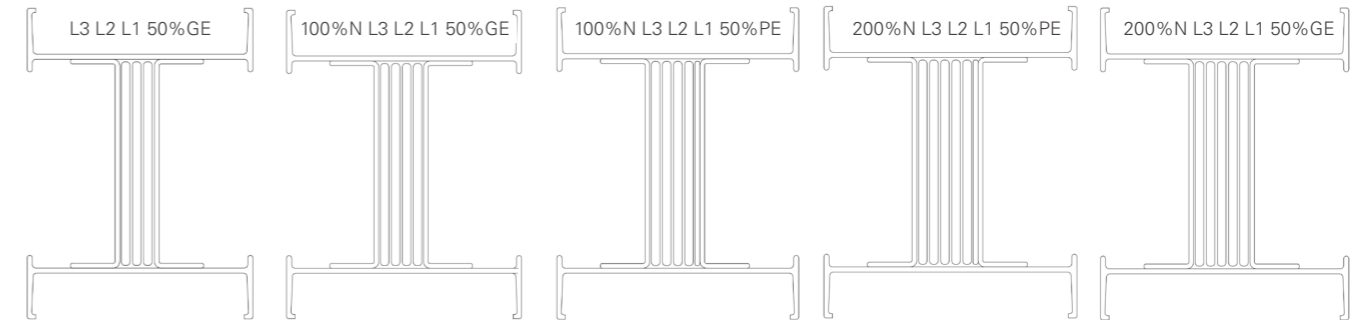
## Technique data

Item	Unit	Current rating
Rated current	A	250 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000
Standard	IEC 61439-6 2012: LV switchgear and control gear assemblies – Part 6:Busbar trunking systems (busways)	
Third party certificate	CQC、KEMA	
System	Applicable for 3P3W, 3P4W and 3P5W system	
Frequency	Hz	50/60
Rated operation voltage (Ue)	V	≤ 690 V ( including tap off unit ) , ≤ 1000 V ( without tap off unit)
Rated insulation voltage (Ui)	V	≤ 1000V
Rated impulse withstand voltage Uimp	kV	8
Rated short time withstand current (Icw)	kA	10 20 20 30 30 50 50 65 80 80 100 120 120
Rated peak short circuit current (Ipk)	kA	17 40 40 63 63 105 105 143 176 176 220 264 264
IP	IP54/IP66	
Pollution degree		
Ambient temperature	°C	-5 ~ 40 degree, average temperature does not exceed 35 degree within 24h
Above sea level	m	2000
Fire propagation features	Yes	
Housing material	Aluminum-alloy	
Housing finishing	Electric static powder spray/ Aluminum oxidation	
Conductor material	Copper	
Conductor finishing	Tin / silver plating	
Conductor resistance		
Resistance ( R20)	mΩ/m	0.192 0.144 0.105 0.082 0.064 0.048 0.036 0.027 0.024 0.018 0.013 0.014 0.009
Reactance ( X )	mΩ/m	0.192 0.147 0.107 0.084 0.065 0.050 0.037 0.029 0.025 0.019 0.016 0.004 0.006
Impedance ( Z )	mΩ/m	0.031 0.023 0.017 0.013 0.010 0.008 0.006 0.005 0.008 0.006 0.005 0.018 0.013
Voltage drop		
Power factor 0.6	V/m	0.063 0.077 0.088 0.088 0.083 0.085 0.080 0.079 0.083 0.082 0.100 0.078 0.086
Power factor 0.7	V/m	0.070 0.085 0.097 0.098 0.092 0.093 0.088 0.086 0.091 0.090 0.105 0.085 0.090
Power factor 0.8	V/m	0.076 0.092 0.106 0.106 1.101 0.100 0.095 0.093 0.099 0.096 0.108 0.092 0.092
Power factor 0.9	V/m	0.082 0.099 0.113 0.114 0.109 0.106 0.101 0.098 0.105 0.102 0.108 0.097 0.092
Power factor 1.0	V/m	0.083 0.100 0.114 0.114 0.111 0.104 0.100 0.095 0.104 0.100 0.093 0.094 0.078

# XAP-S series compact busway

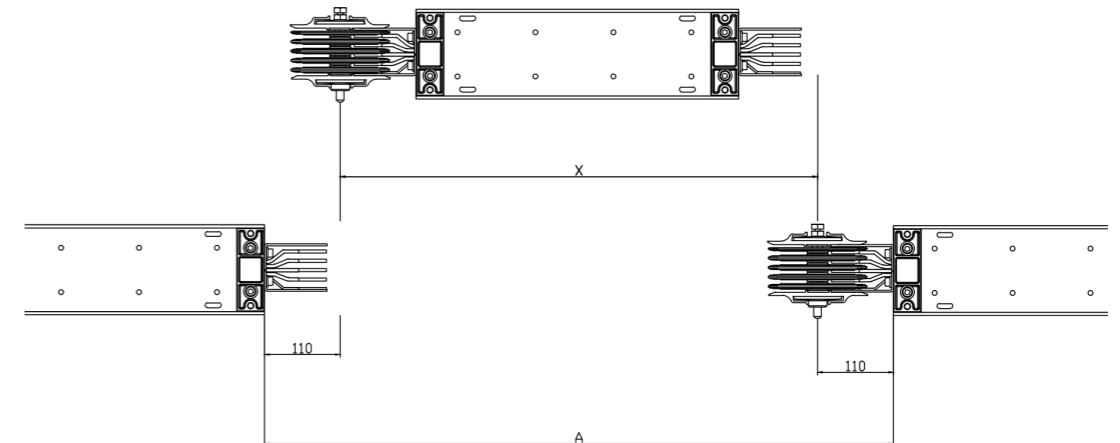
## System selection

XAP-S busway is widely used in the 3P3W, 3P4W and 3P5W system.

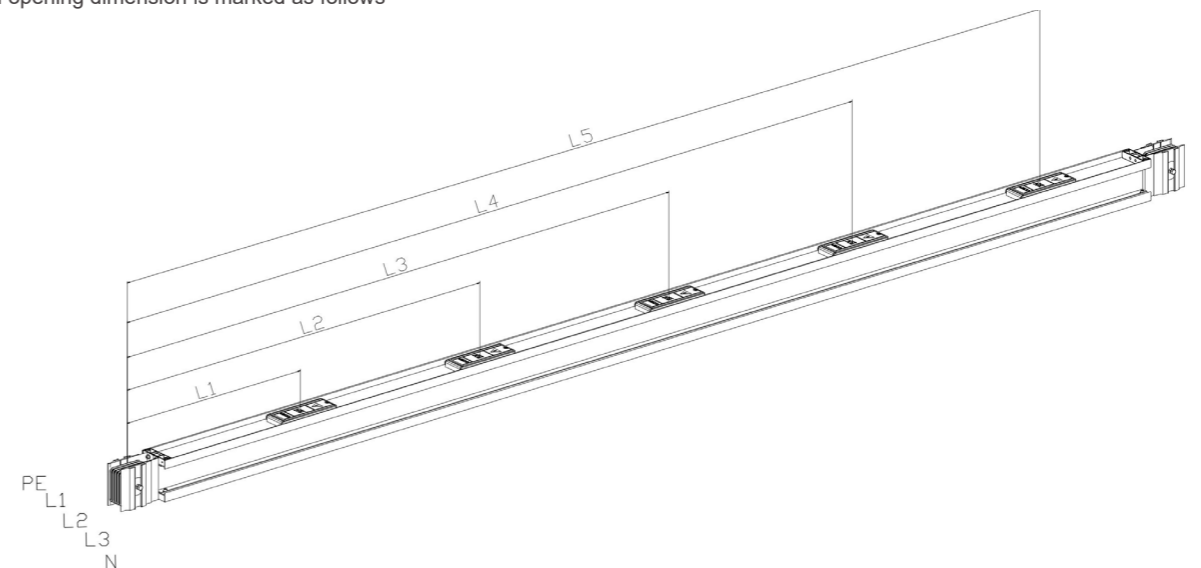


## XAP-S busway length definition

Busway and functional unit length is calculated from the joint centerline, for the feeder, minimum length is 400mm, standard length is 3000mm.



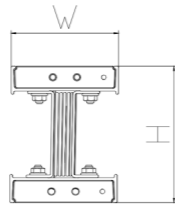
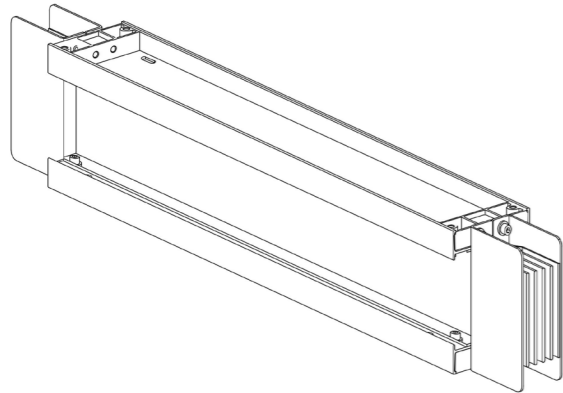
Plug in type busway, minimum length is 750mm, standard length is 3000mm, busway can be equipped with five plug in openings on each side, plug in opening dimension is marked as follows



# XAP-S series compact busway

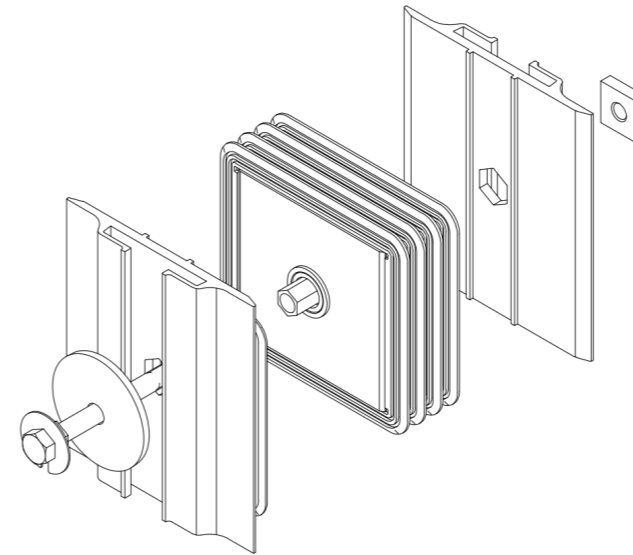
## Physical data

### Single deck busway



No.	Current rating (A)	Dimension		Weight	
		Width W (mm)	Height H (mm)	4W (kg/m)	5w (kg/m)
1	250	116	98	7.6	8
2	400	116	98	8.7	9.2
3	500	116	103	9.3	9.9
4	630	116	113	10.5	11.2
5	800	116	128	12.2	13.3
6	1000	116	153	15.4	16.7
7	1250	116	183	19.0	20.7
8	1600	116	233	25.2	27.5
9	2000	116	288	31.9	35.0

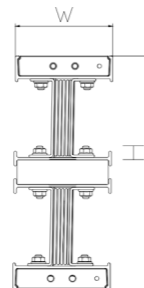
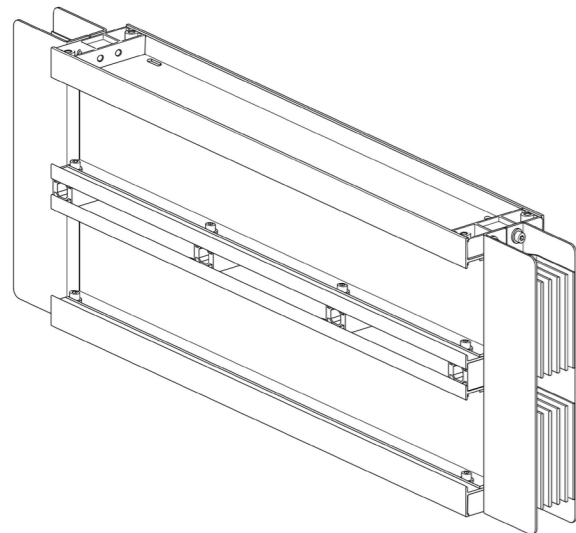
### Joint



No.	Current rating(A)	Joint bolt qty
1	250	1
2	500	1
3	400	1
4	630	1
5	800	1
6	1000	1
7	1250	1
8	1600	1

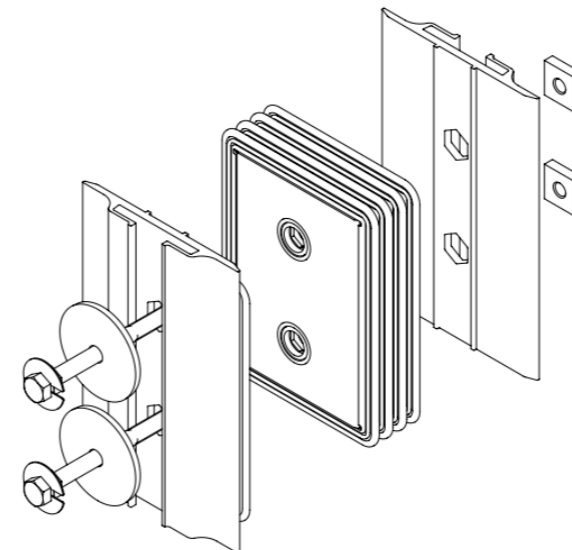
Note: Joint double-headed bolt torque value is 68±7 Nm

### Double decks busway

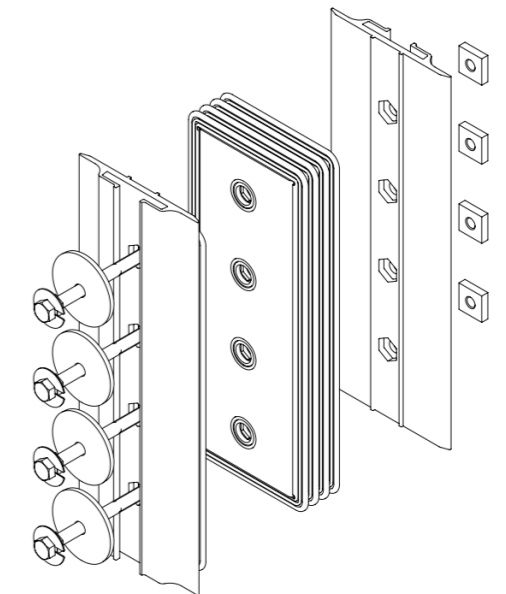


No.	Current rating (A)	Dimension		Weight	
		Width W (mm)	Height H (mm)	4W (kg/m)	5w (kg/m)
1	2500	116	393	39.5	43
2	3200	116	473	50.5	55
3	4000	116	573	64.1	70
4	5000	142	537	93.4	103

Note: The data is only used as reference to calculate the load for support hangers, not for site acceptance.



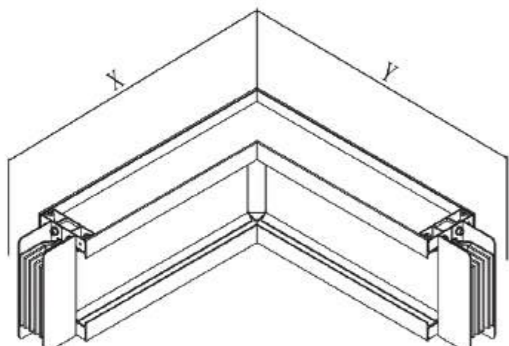
No.	Current rating(A)	Joint bolt qty
9	2000	2
10	2500	2

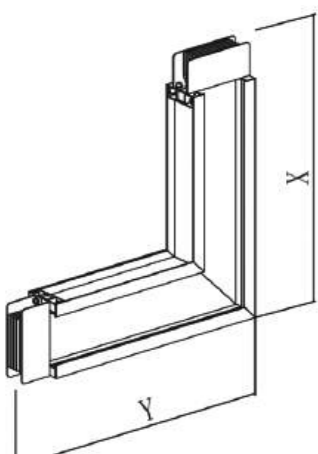


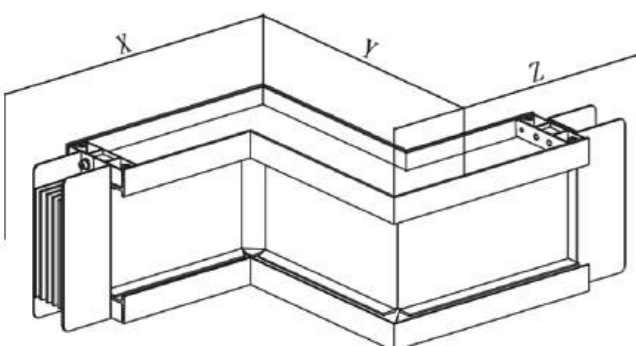
No.	Current rating(A)	Joint bolt qty
11	3200	4
12	4000	4
13	5000	4

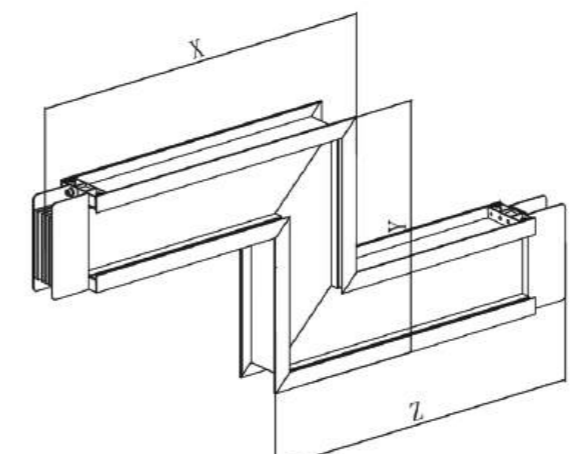
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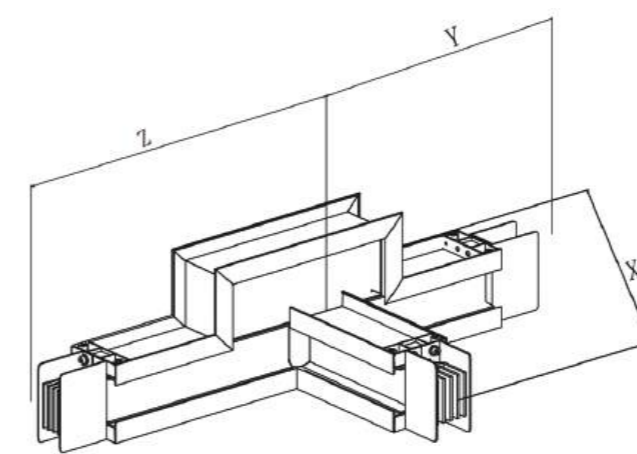
## Functional unit standard dimension

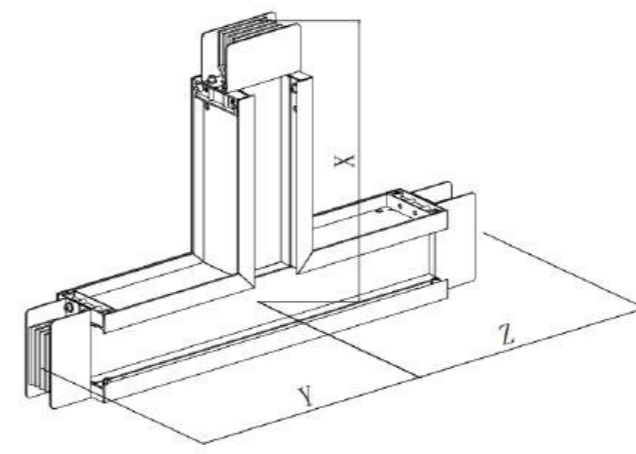
L horizontal elbow	No.	Current class	Dimension
	1	250A	X=400mm Y=400mm
	2	400A	X=400mm Y=400mm
	3	500A	X=400mm Y=400mm
	4	630A	X=400mm Y=400mm
	5	800A	X=400mm Y=400mm
	6	1000A	X=400mm Y=400mm
	7	1250A	X=400mm Y=400mm
	8	1600A	X=400mm Y=400mm
	9	2000A	X=400mm Y=400mm
	10	2500A	X=400mm Y=400mm
	11	3200A	X=400mm Y=400mm
	12	4000A	X=400mm Y=400mm
	13	5000A	X=400mm Y=400mm

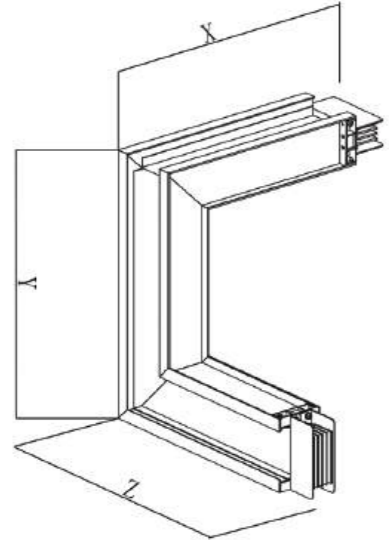
L vertical elbow	No.	Current class	Dimension
	1	250A	X=400mm Y=400mm
	2	400A	X=400mm Y=400mm
	3	500A	X=400mm Y=400mm
	4	630A	X=400mm Y=400mm
	5	800A	X=400mm Y=400mm
	6	1000A	X=400mm Y=400mm
	7	1250A	X=400mm Y=400mm
	8	1600A	X=500mm Y=500mm
	9	2000A	X=500mm Y=500mm
	10	2500A	X=600mm Y=600mm
	11	3200A	X=700mm Y=700mm
	12	4000A	X=800mm Y=800mm
	13	5000A	X=900mm Y=900mm

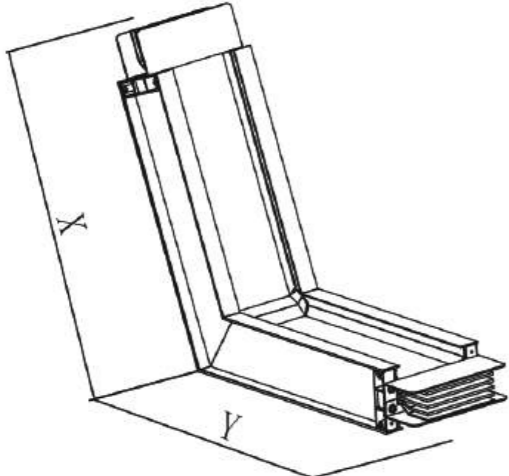
Z horizontal offset	No.	Current class	Dimension
	1	250A	X=400mm Y=400mm Z=400mm
	2	400A	X=400mm Y=400mm Z=400mm
	3	500A	X=400mm Y=400mm Z=400mm
	4	630A	X=400mm Y=400mm Z=400mm
	5	800A	X=400mm Y=400mm Z=400mm
	6	1000A	X=400mm Y=400mm Z=400mm
	7	1250A	X=400mm Y=400mm Z=400mm
	8	1600A	X=400mm Y=400mm Z=400mm
	9	2000A	X=400mm Y=400mm Z=400mm
	10	2500A	X=400mm Y=400mm Z=400mm
	11	3200A	X=400mm Y=400mm Z=400mm
	12	4000A	X=400mm Y=400mm Z=400mm
	13	5000A	X=400mm Y=200mm Z=400mm

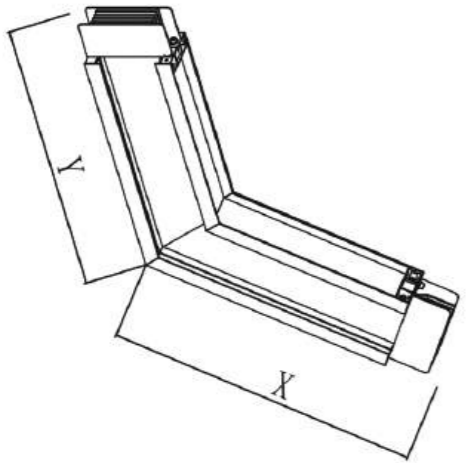
Z vertical offset	No.	Current class	Dimension
	1	250A	X=400mm Y=200mm Z=400mm
	2	400A	X=400mm Y=200mm Z=400mm
	3	500A	X=400mm Y=200mm Z=400mm
	4	630A	X=400mm Y=200mm Z=400mm
	5	800A	X=400mm Y=200mm Z=400mm
	6	1000A	X=400mm Y=300mm Z=400mm
	7	1250A	X=400mm Y=300mm Z=400mm
	8	1600A	X=400mm Y=300mm Z=400mm
	9	2000A	X=500mm Y=400mm Z=500mm
	10	2500A	X=600mm Y=500mm Z=600mm
	11	3200A	X=700mm Y=600mm Z=700mm
	12	4000A	X=800mm Y=700mm Z=800mm
	13	5000A	X=850mm Y=700mm Z=850mm

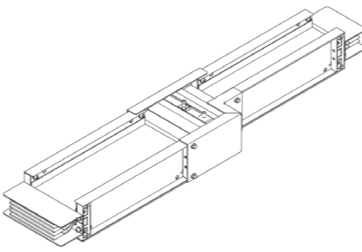
Tee horizontal offset	No.	Current class	Dimension
	1	250A	X=400mm Y=400mm Z=400mm
	2	400A	X=400mm Y=400mm Z=400mm
	3	500A	X=400mm Y=400mm Z=400mm
	4	630A	X=400mm Y=400mm Z=400mm
	5	800A	X=400mm Y=400mm Z=400mm
	6	1000A	X=400mm Y=400mm Z=400mm
	7	1250A	X=400mm Y=500mm Z=500mm
	8	1600A	X=400mm Y=500mm Z=500mm
	9	2000A	X=400mm Y=700mm Z=700mm
	10	2500A	X=400mm Y=700mm Z=700mm
	11	3200A	X=400mm Y=700mm Z=700mm
	12	4000A	X=400mm Y=700mm Z=700mm
	13	5000A	X=500mm Y=700mm Z=700mm

Tee vertical offset	No.	Current class	Dimension
	1	250A	X=400mm Y=400mm Z=400mm
	2	400A	X=400mm Y=400mm Z=400mm
	3	500A	X=400mm Y=400mm Z=400mm
	4	630A	X=400mm Y=400mm Z=400mm
	5	800A	X=400mm Y=400mm Z=400mm
	6	1000A	X=400mm Y=400mm Z=400mm
	7	1250A	X=400mm Y=400mm Z=400mm
	8	1600A	X=500mm Y=500mm Z=500mm
	9	2000A	X=500mm Y=500mm Z=500mm
	10	2500A	X=600mm Y=600mm Z=600mm
	11	3200A	X=700mm Y=700mm Z=700mm
	12	4000A	X=800mm Y=800mm Z=800mm
	13	5000A	X=900mm Y=900mm Z=900mm

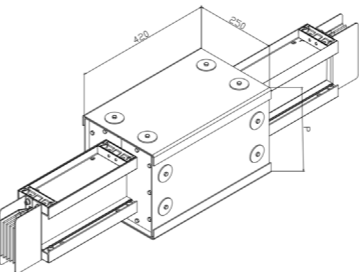
Combination elbow	No.	Current class	Dimension
	1	250A	X=400mm Y=400mm Z=400mm
	2	400A	X=400mm Y=400mm Z=400mm
	3	500A	X=400mm Y=400mm Z=400mm
	4	630A	X=400mm Y=400mm Z=400mm
	5	800A	X=400mm Y=400mm Z=400mm
	6	1000A	X=400mm Y=500mm Z=500mm
	7	1250A	X=400mm Y=500mm Z=500mm
	8	1600A	X=400mm Y=500mm Z=500mm
	9	2000A	X=400mm Y=500mm Z=500mm
	10	2500A	X=400mm Y=600mm Z=600mm
	11	3200A	X=400mm Y=700mm Z=700mm
	12	4000A	X=400mm Y=800mm Z=800mm
	13	5000A	X=400mm Y=900mm Z=900mm

L special horizontal elbow	No.	Current class	Dimension
	1	250A	X=400mm Y=400mm
	2	400A	X=400mm Y=400mm
	3	500A	X=400mm Y=400mm
	4	630A	X=400mm Y=400mm
	5	800A	X=400mm Y=400mm
	6	1000A	X=400mm Y=400mm
	7	1250A	X=400mm Y=400mm
	8	1600A	X=400mm Y=400mm
	9	2000A	X=400mm Y=400mm
	10	2500A	X=400mm Y=400mm
	11	3200A	X=400mm Y=400mm
	12	4000A	X=400mm Y=400mm
	13	5000A	X=400mm Y=400mm

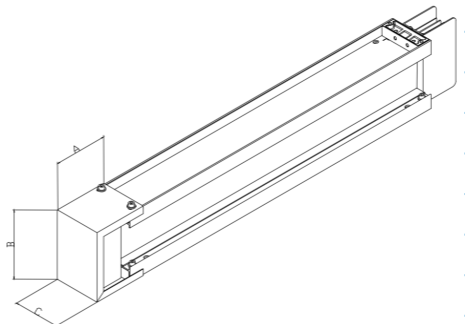
L special vertical elbow	No.	Current class	Dimension
	1	250A	X=400mm Y=400mm
	2	400A	X=400mm Y=400mm
	3	500A	X=400mm Y=400mm
	4	630A	X=400mm Y=400mm
	5	800A	X=400mm Y=400mm
	6	1000A	X=400mm Y=400mm
	7	1250A	X=400mm Y=400mm
	8	1600A	X=500mm Y=500mm
	9	2000A	X=500mm Y=500mm
	10	2500A	X=600mm Y=600mm
	11	3200A	X=700mm Y=700mm
	12	4000A	X=800mm Y=800mm
	13	5000A	X=900mm Y=900mm

Reducer	Rated current before reduction (A)	Rated current after reduction(A)												
		250	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000
	250	-	-	-	-	-	-	-	-	-	-	-	-	-
	400	R02	-	-	-	-	-	-	-	-	-	-	-	-
	500	R02	R04	-	-	-	-	-	-	-	-	-	-	-
	630	-	R04	R05	-	-	-	-	-	-	-	-	-	-
	800	-	R04	R05	R06	-	-	-	-	-	-	-	-	-
	1000	-	R04	R05	R06	R08	-	-	-	-	-	-	-	-
	1250	-	-	R05	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	-

Note: Reducer is also available to be equipped with fuse or MCCB, contact the factory for details.

Expansion joint	Rated current ( A )		Height ( P ) mm
	250	400	
	250	198	198
	400	198	198
	500	203	203
	630	213	213
	800	228	228
	1000	253	253
	1250	283	283
	1600	333	333
	2000	393	393
	2500	493	493
	3200	573	573
	4000	673	673
	5000	637	637

Note: Expansion joint has adjustment distance of  $\pm 40$ mm, when the linear distance is 60m, need to include one set of expansion joint.

End cover	Rated current ( A )			
	(A) mm	(B) mm	(C) mm	(D) mm
	250	128	111	120
	400	128	111	120
	500	128	116	120
	630	128	126	120
	800	128	141	120
	1000	128	166	120
	1250	128	196	120
	1600	128	246	120
	2000	128	301	120
	2500	128	406	120
	3200	128	486	120
	4000	128	586	120
	5000	158	550	149

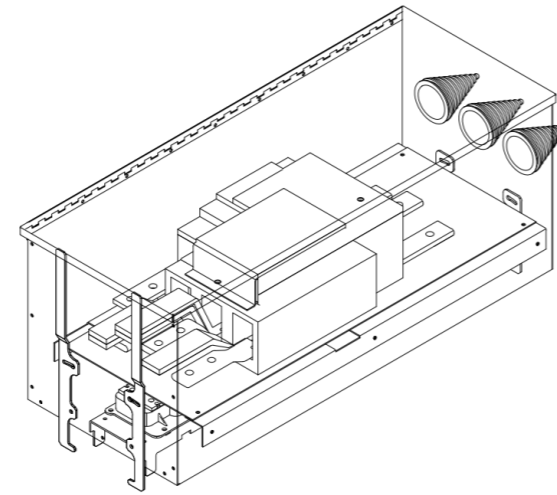
Note: End cover is the terminal part of the busway layout to protect the busway system.

## Plug in box

Plug in box distributes electricity power from the busway to the load, and provides over load protection for the branch unit.

### Product features

- Plug in box enclosure is made of cold-rolled steel with compact structure and high strength.
- Door panel comes with piano hinge with easy operation.
- Plug in box is equipped with fixation hook, to prevent accidental pull out with load.
- Plug in box bottom is assembled with guide plate to guarantee correct phase during the installation.
- Both T type plug jaw and busway opening stab has silver plating on the surface, which reduces the contact resistance.



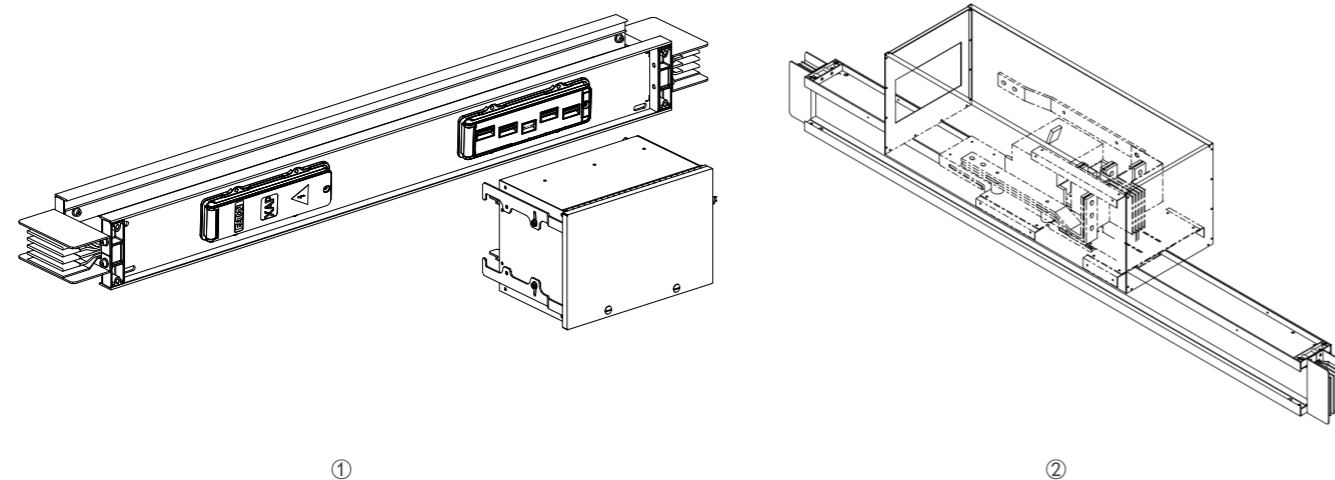
### Product spec

- Plug in box includes six standard specification, they can be equipped with fuse, MCCB or any other protection component;
- MCCB can be 3 or 4 pole, with option of shunt trip, fire alarm, leakage protection and electrical operation, etc.

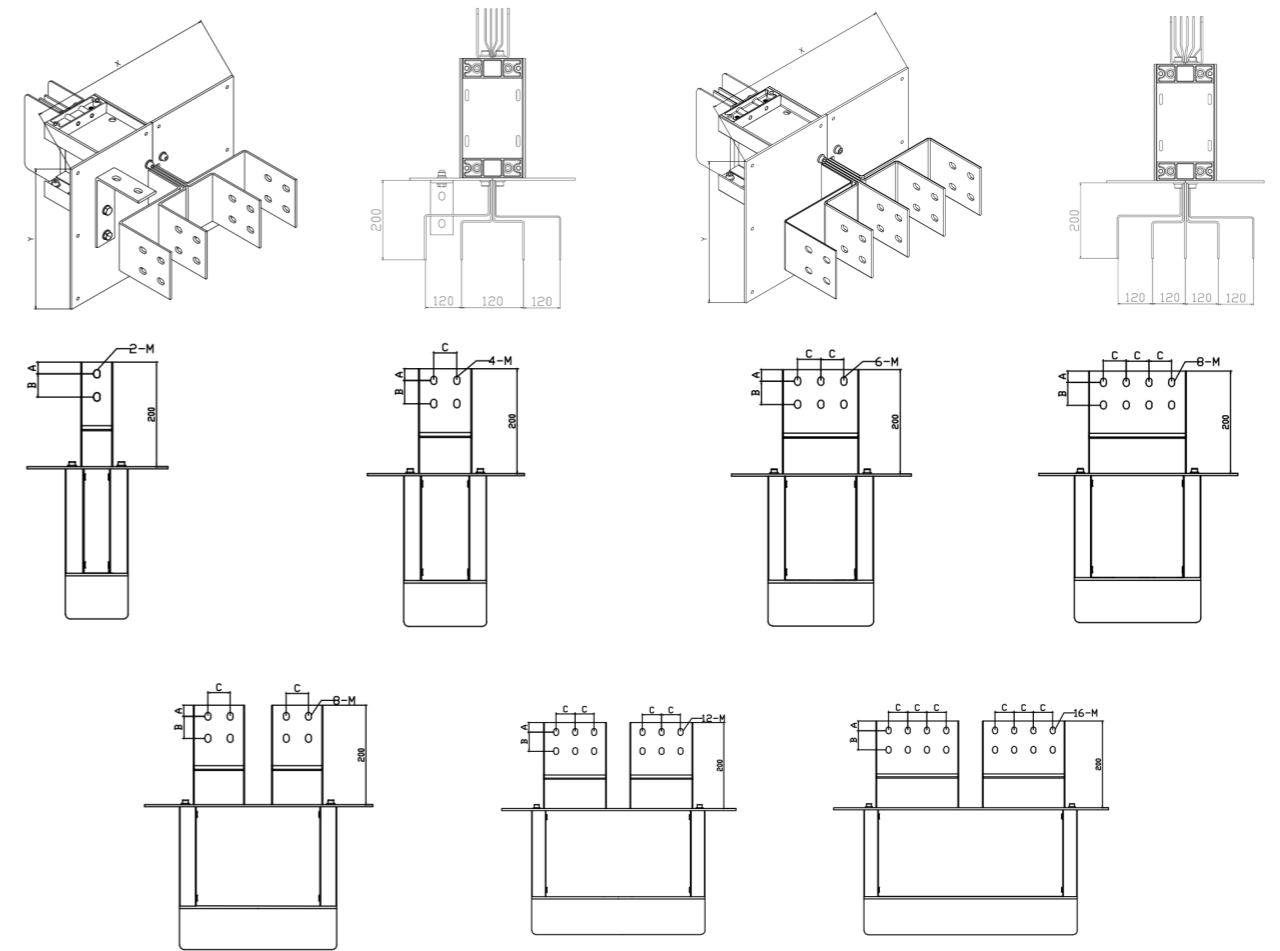
### Plug in box outline standard dimension

Current ( A )	L (mm)	W(mm)	H(mm) w/o rotary handle	H(mm) with rotary handle	Box No.	Figure
100	360	230	230	270	1	
160	400	250	250	290	2	
250	500	270	270	310	3	
400	650	310	310	350	4	
630	850	340	340	380	5	
800	1200	420	420	460	6	

Note: Above dimension indicates standard value, for special design, pls contact our engineer.



## XAP-S series compact busway Flanged end



Current class(A)	X ( mm )	Y ( mm )	A ( mm )	B ( mm )	C ( mm )	M ( mm )	Figure
250	530	188	25	50	/	13 X 17	
400	530	188	25	50	/	13 X 17	
500	530	193	25	50	/	13 X 17	
630	530	203	25	50	/	13 X 17	
800	530	218	25	50	/	13 X 17	
1000	530	238	25	50	/	13 X 17	
1250	530	268	25	50	/	13 X 17	
1600	530	308	25	50	50	13 X 17	
2000	530	358	25	50	50	13 X 17	
2500	530	452	25	50	50	13 X 17	
3200	530	532	25	50	50	13 X 17	
4000	530	612	25	50	50	13 X 17	
5000	450	696	25	50	50	Φ 13 X 17	⑦

Note: All the data above indicates standard, for special design, contact our engineer.





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