

# **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.**

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.



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# SINCE 1911

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

## Based on local manufacturing

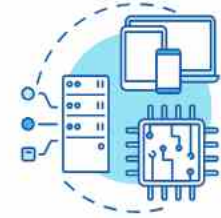
### Eaton Busway (Jiangsu) Co.,Ltd

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 23,000 square meters and has the industry's top manufacturing solutions to



#### Advanced insulation technology

Fully automatic Polyester film (Mylar Class B 130 or Mica (1200C) insulation wrapping.



#### Full automatic busway assembly line

integrating assembly, inspection and packing together, effectively



#### Intelligent warehousing improves delivery efficiency

Intelligent warehouse can accept more busway, and the storage



#### Dispatching center makes service faster

Online dispatching of national technical service staff  
view the progress of various services in real time



#### Refinement of production management

Standardized production management  
Plant performs MES system, which can display production, quality, safety

# OUR ADVANTAGE

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



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



Canadian Accurpress, German Behringer, Italian Euromac and Ame-pressta 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.



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



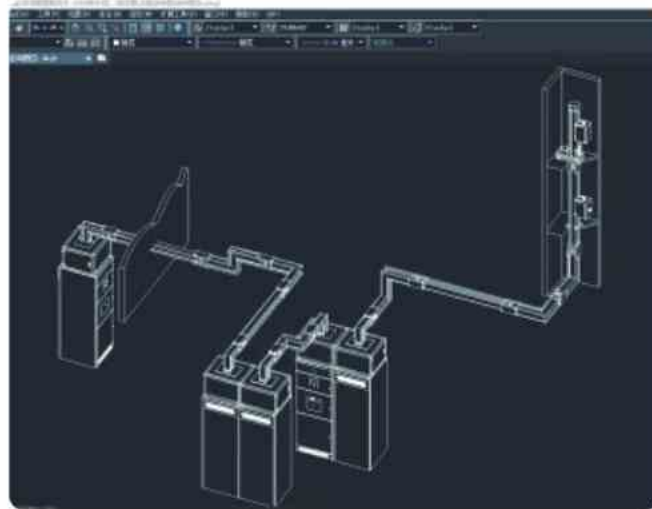
Application of dust simulation tank and water spray platform give product superior IP protection degree performance at the research stage.



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

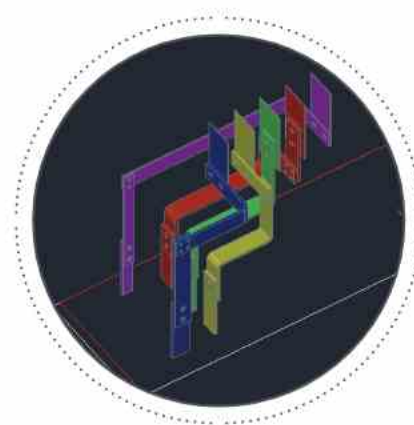
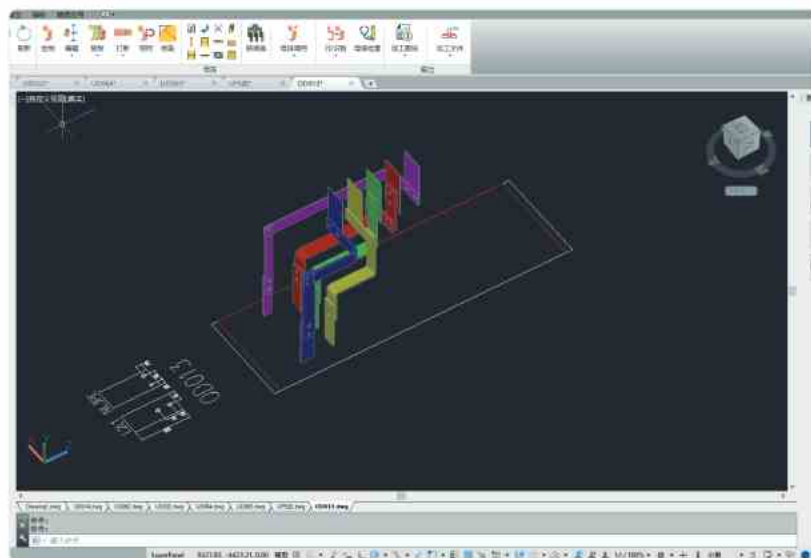
# OUR ADVANTAGE

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.

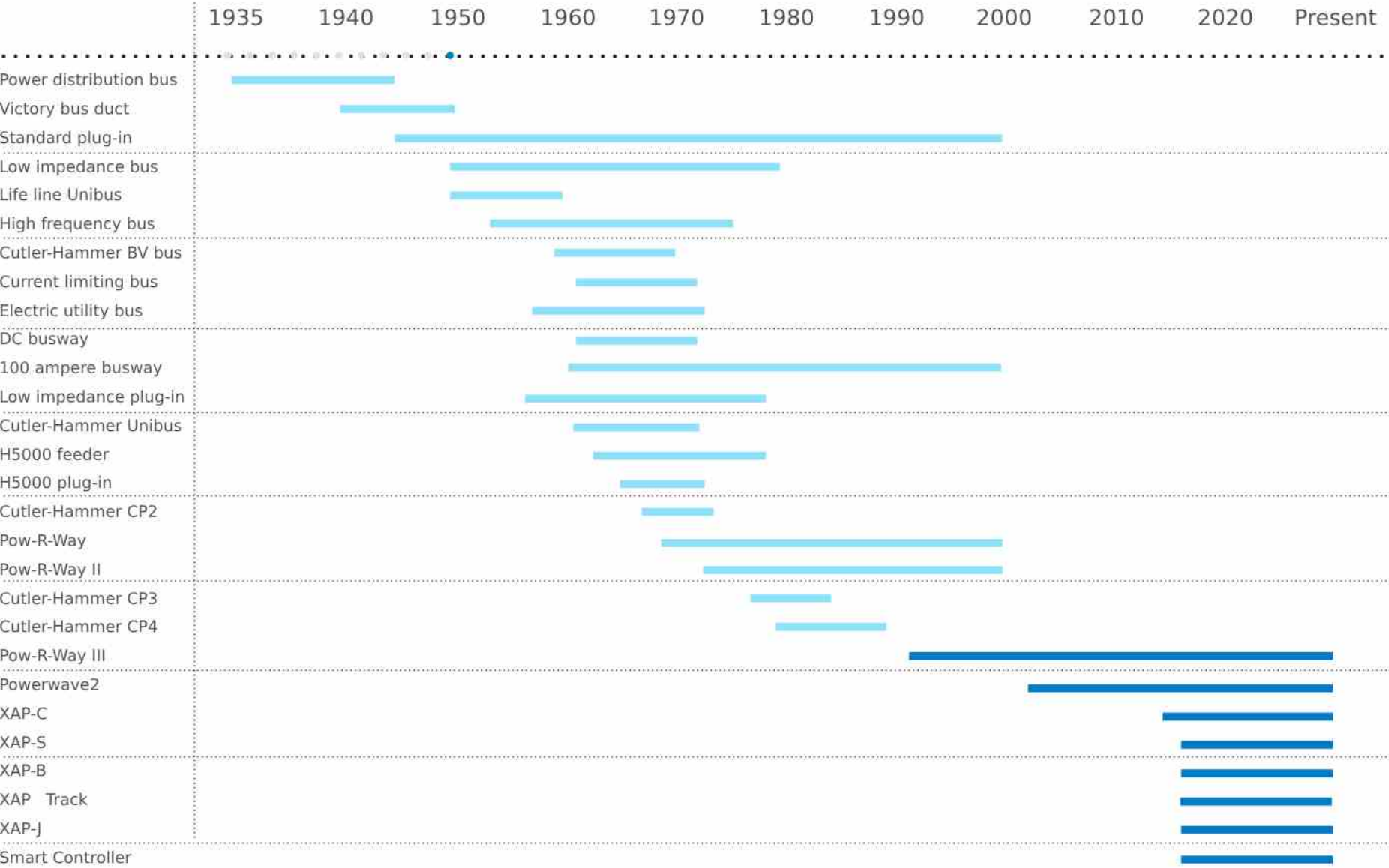
Intelligent factory data platform fully monitors the factory operation efficiency by statistic and analysis of all the data related with manufacturing, quality and safety.



# KEEP INNOVATION SINCE 1935

In 1935,comes out first type of busway

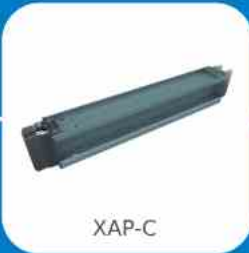
"power



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 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



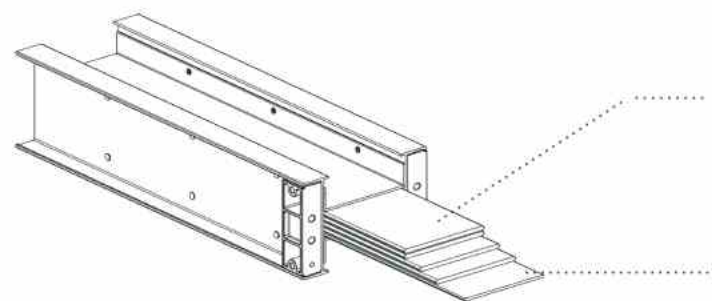
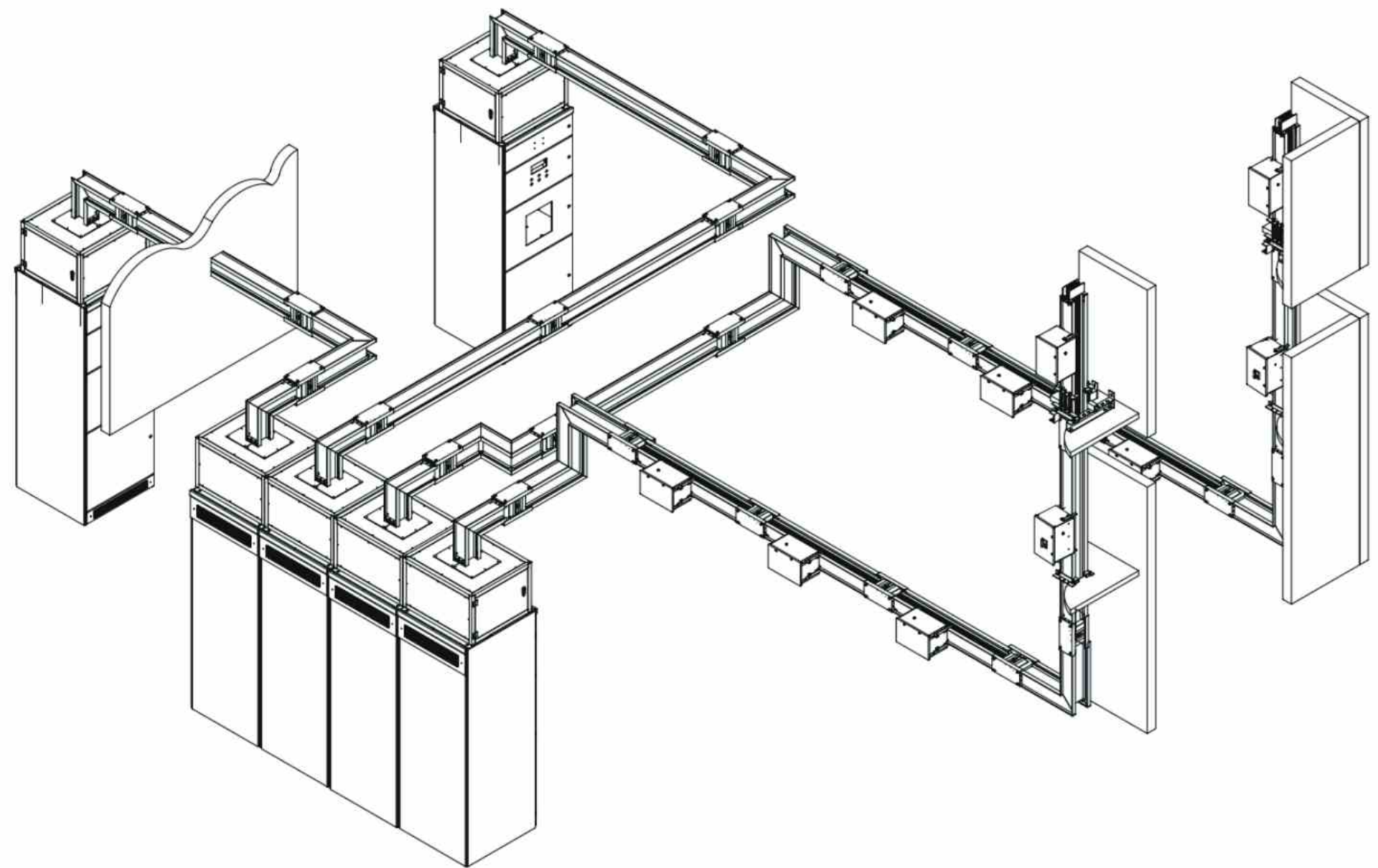
Higher degree of protection



Powerful current carrying capacity  
Suitable for high power and load power



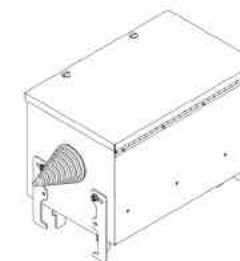
Flexible connection  
Greatly improve continuous



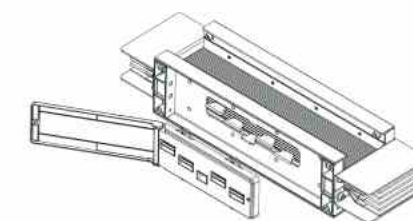
Conductors are wrapped by polyester with class B 130 degree insulation and mica (option).

Busway has passed fire resistance test under IEC60331-1:2018 standard on the basis of test voltage AC1000V, test 950°C, 180 min and mechanical shock interval 5 min.

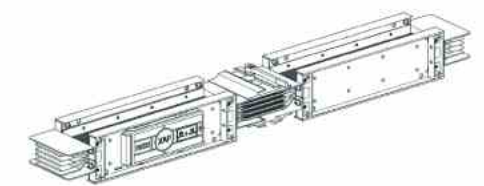
Housing is made of aluminum-alloy profile with high strength and light weight, painted with epoxy powder, it has superior performance on anti-corrosion and bending strength.



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

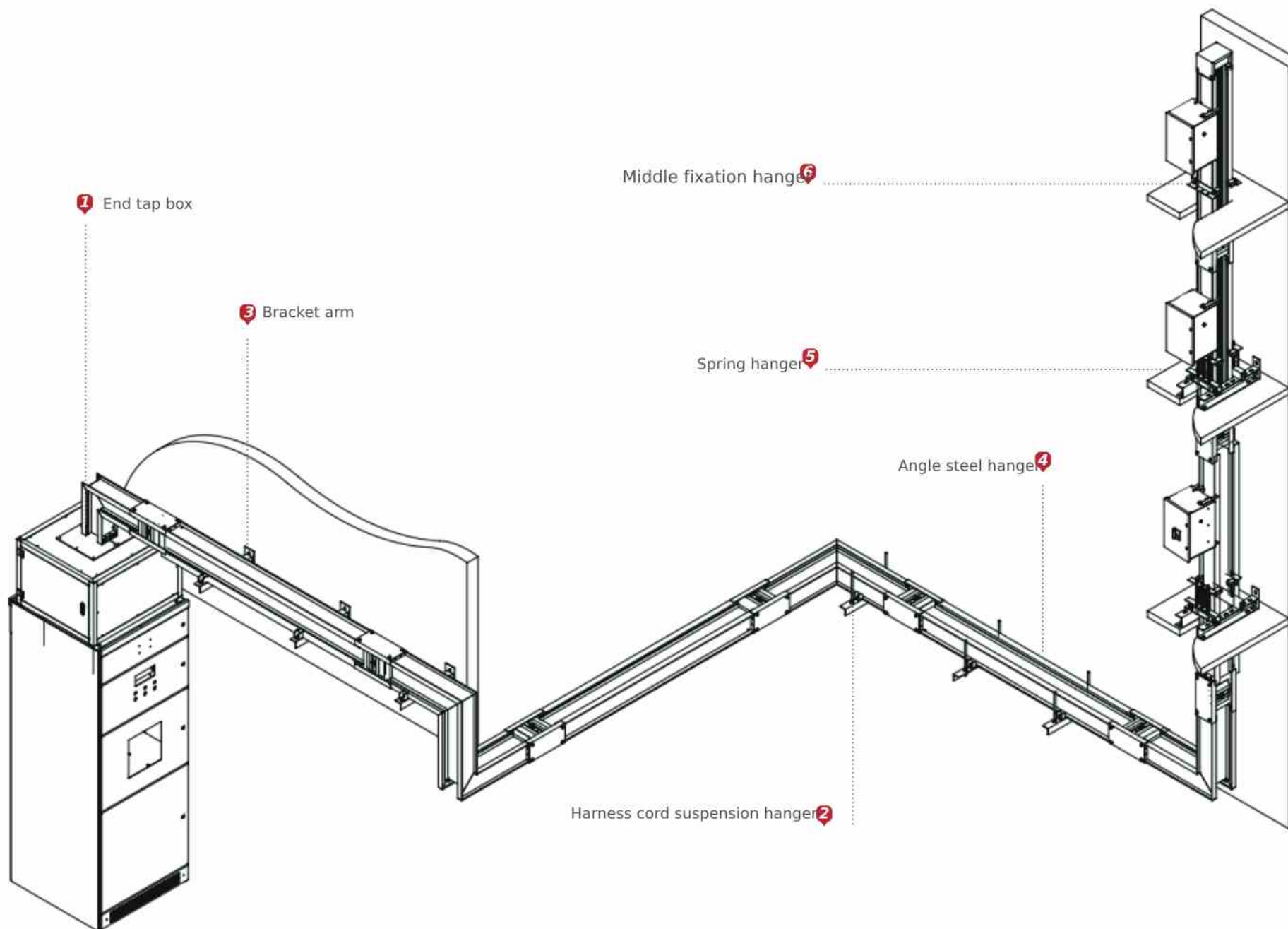


Sandwich plug in opening, low impedance, better heat



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

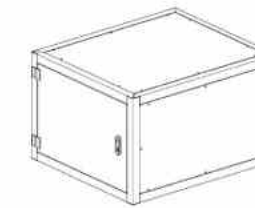
# KAP series compact Installation accessories



1

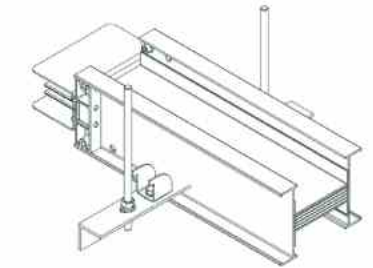
End tap box, to protect connection

between



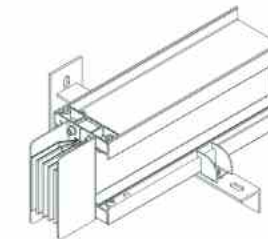
2

Harness cord suspension hanger, applicable



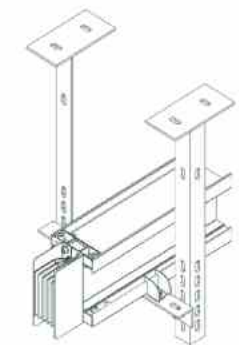
3

Bracket arm  
Bracket arm is applicable for the busway installation along



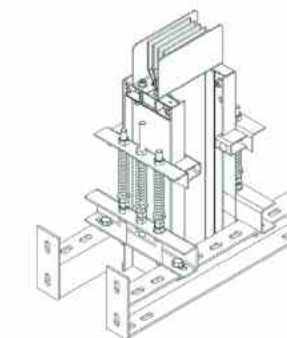
4

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



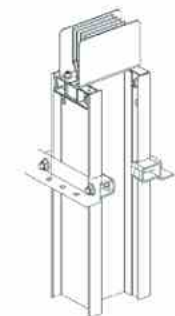
5

Spring hanger, for the application of busway



6

Middle fixation hanger, when the floor is 4 meters high, or equipped with plug in box,

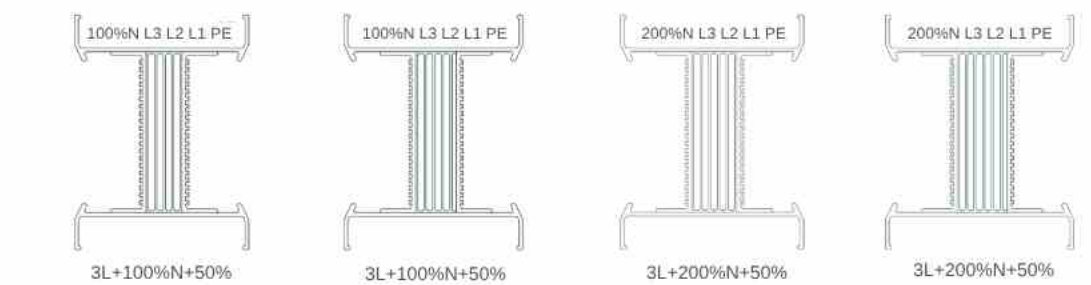


XAP-S series compact busway

Technique data

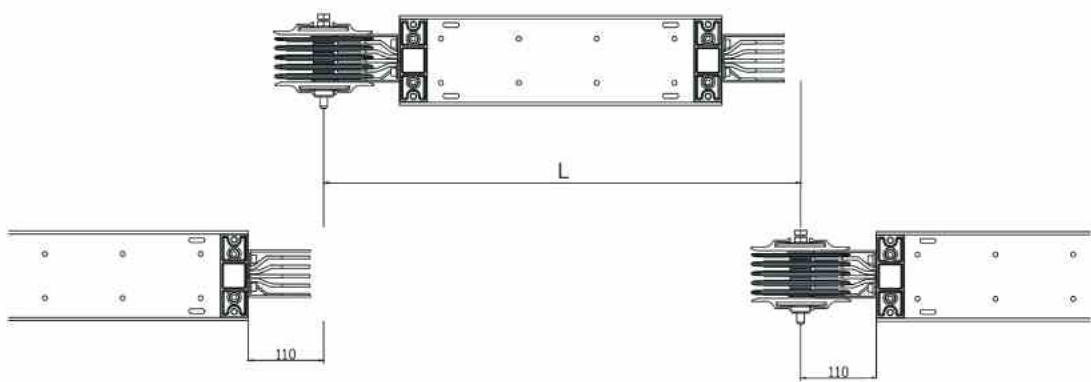
Item	Unit	Data													
Rated current	A	250	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	
Standard	IEC 61439-6 201:LV switchgear and control gear assemblies – Part 6:Busbar trunking systems (busways)														
Third party certificate	CQC,KEMA														
Frequency	Hz	50/60													
Rated operation voltage (Ue)	V	≤	690 V (including tap-off) ≤ 1000 V(without tap-off)												
Rated insulation voltage (Ui)	V	≤1000V													
Rated impulse 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	III														
Ambient temperature	°C -5 ~ 40 degree, average temperature does not exceed 35 degree with 24h														
Above sea level	m	≤2000													
Fire propagation features	Ye s														
Housing material	Aluminum-alloy														
Housing finishing	Electric static powder spray/Aluminum anodic oxidation														
Conductor material	Copper														
Conductor finishing	Tin / silver plating														
Insulation	Mylar Class B 130℃ Mica 1200℃(option)														
Conductor resistance															
Resistance(R20)	mΩ/m	0.192	0.144	0.128	0.105	0.082	0.061	0.046	0.033	0.025	0.022	0.017	0.013	0.008	
Resistance(R35)	mΩ/m	0.250	0.187	0.166	0.136	0.107	0.079	0.060	0.043	0.033	0.029	0.022	0.017	0.010	
Reactance(X)	mΩ/m	0.030	0.023	0.020	0.017	0.013	0.010	0.008	0.005	0.004	0.007	0.006	0.004	0.005	
Impedance(Z)	mΩ/m	0.195	0.146	0.130	0.106	0.083	0.061	0.047	0.033	0.025	0.023	0.018	0.014	0.009	
Voltage drop															
Power factor 0.6	V/m	0.060	0.073	0.081	0.083	0.083	0.077	0.073	0.067	0.064	0.083	0.082	0.079	0.073	
Power factor 0.7	V/m	0.068	0.081	0.090	0.093	0.093	0.086	0.081	0.075	0.071	0.090	0.088	0.085	0.077	
Power factor 0.8	V/m	0.074	0.089	0.099	0.102	0.102	0.094	0.090	0.082	0.078	0.096	0.094	0.091	0.079	
Power factor 0.9	V/m	0.081	0.097	0.108	0.111	0.111	0.102	0.097	0.089	0.084	0.100	0.098	0.095	0.080	
Power factor 1.0	V/m	0.083	0.100	0.111	0.114	0.114	0.105	0.100	0.091	0.087	0.096	0.094	0.091	0.070	

XAP-S series compact busway

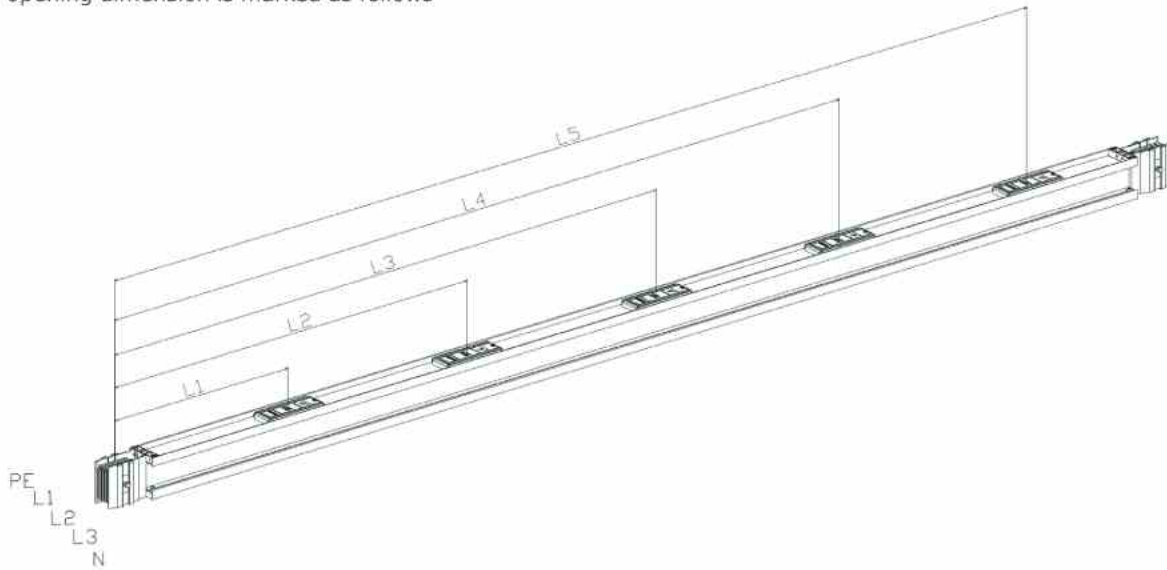


XAP-S busway length definition

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

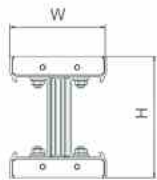
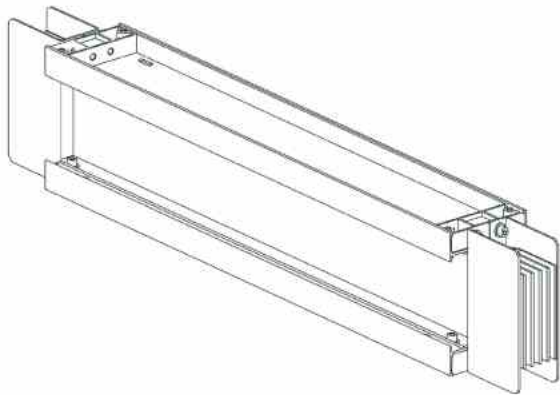


Plug in type busway, minimum length is 800mm, standard length is 3000mm, busway can be equipped with five plug in openings on each side, plug in opening dimension is marked as follows



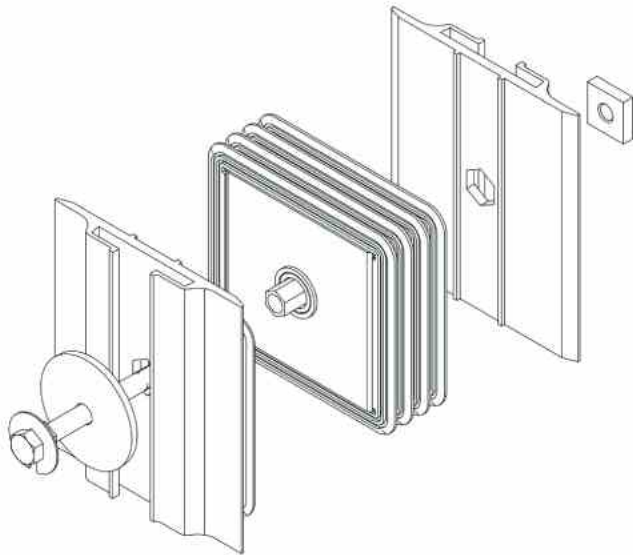
KAS series compact  
Physical data

Single deck busway



No.	Current (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

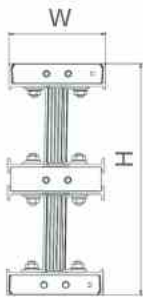
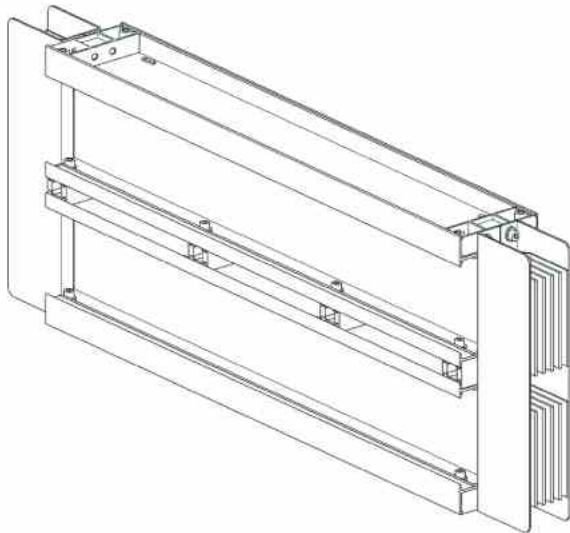
Joint



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

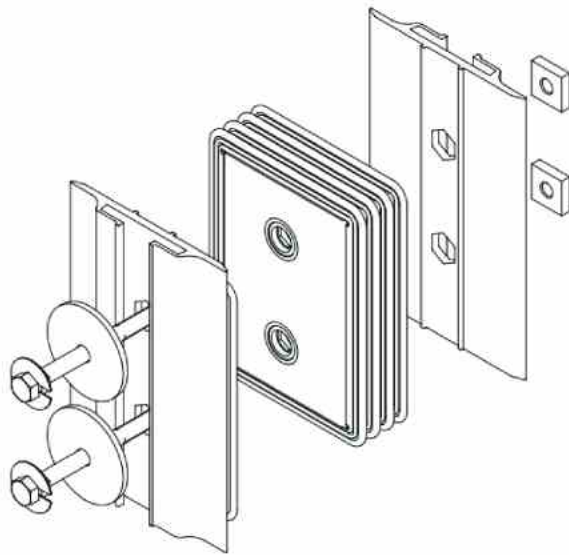
Note: Joint double-headed bolt torque value is 68±7 Nm

Double decks busway

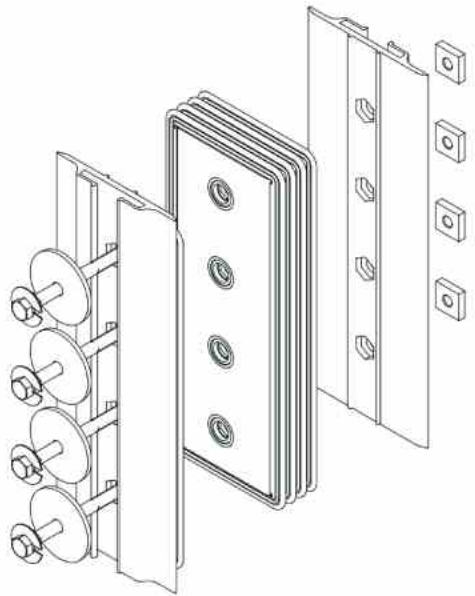


No.	Current	Dimension		Weight	
		Width W mm	Height H mm	4W kg/m	5W kg/m
1	2500	116	393	39.5	43
2	3200	116	473	50.5	55
3	4000	116	573	64.1	70
4	5000	142	537	93.4	103

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



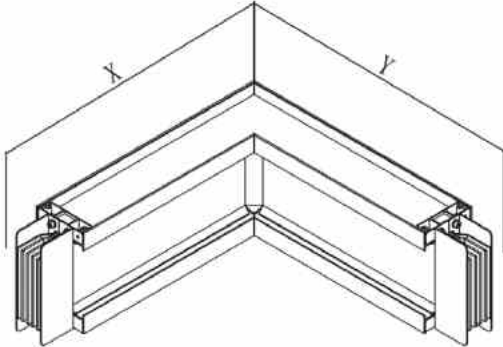
No.	Current rating(A)	Joint bolt qty
9	2000	2
10	2500	2

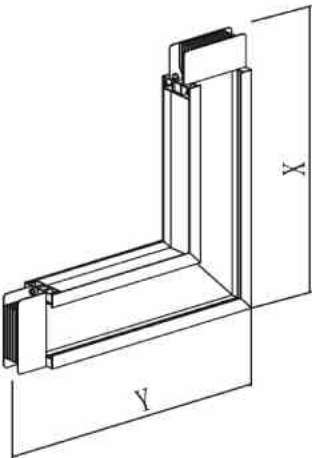


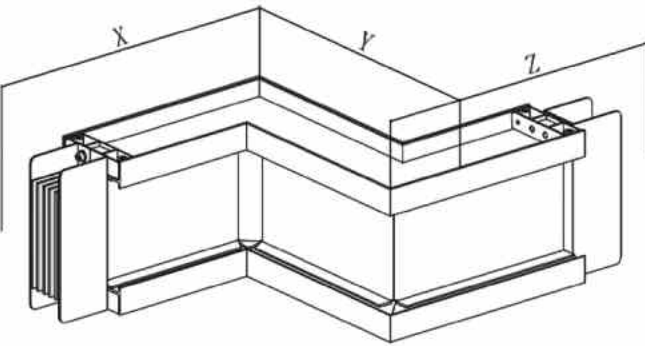
No.	Current rating(A)	Joint bolt qty
11	3200	4
12	4000	4
13	5000	4

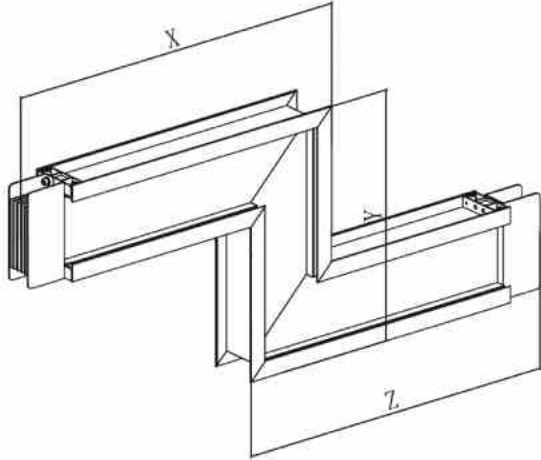
XAP-S series compact busway

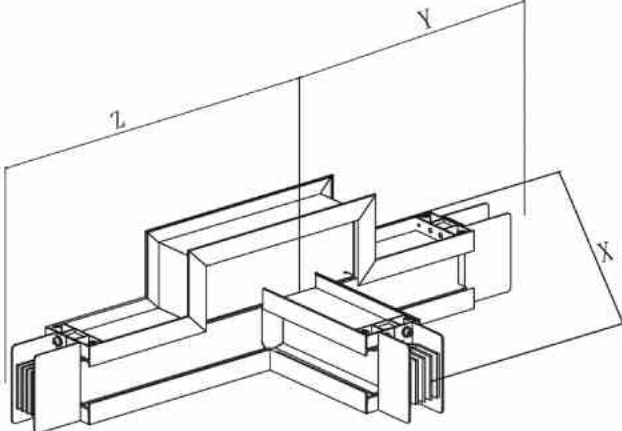
Fittings standard dimension

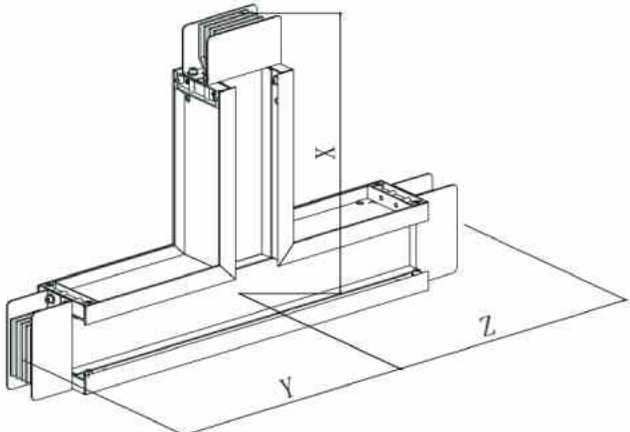
L horizontal elbow	No.	Current rating(A)	Dimension(mm)
	1	250	X=400 Y=400
	2	400	X=400 Y=400
	3	500	X=400 Y=400
	4	630	X=400 Y=400
	5	800	X=400 Y=400
	6	1000	X=400 Y=400
	7	1250	X=400 Y=400
	8	1600	X=400 Y=400
	9	2000	X=400 Y=400
	10	2500	X=400 Y=400
	11	3200	X=400 Y=400
	12	4000	X=400 Y=400
	13	5000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

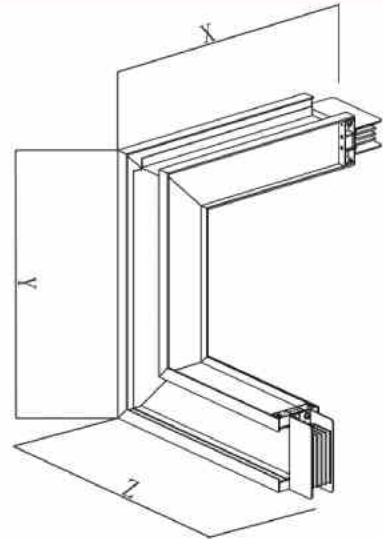
L vertical elbow	No.	Current rating(A)	Dimension(mm)
	1	250	X=400 Y=400
	2	400	X=400 Y=400
	3	500	X=400 Y=400
	4	630	X=400 Y=400
	5	800	X=500 Y=500
	6	1000	X=500 Y=500
	7	1250	X=500 Y=500
	8	1600	X=500 Y=500
	9	2000	X=500 Y=500
	10	2500	X=600 Y=600
	11	3200	X=700 Y=700
	12	4000	X=800 Y=800
	13	5000	X=900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

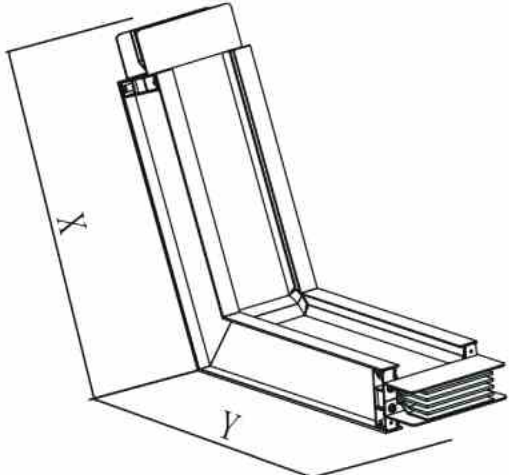
Z horizontal offset	No.	Current rating(A)	Dimension(mm)
	1	250	X=400 Y=400 Z=400
	2	400	X=400 Y=400 Z=400
	3	500	X=400 Y=400 Z=400
	4	630	X=400 Y=400 Z=400
	5	800	X=400 Y=400 Z=400
	6	1000	X=400 Y=400 Z=400
	7	1250	X=400 Y=400 Z=400
	8	1600	X=400 Y=400 Z=400
	9	2000	X=400 Y=400 Z=400
	10	2500	X=400 Y=400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

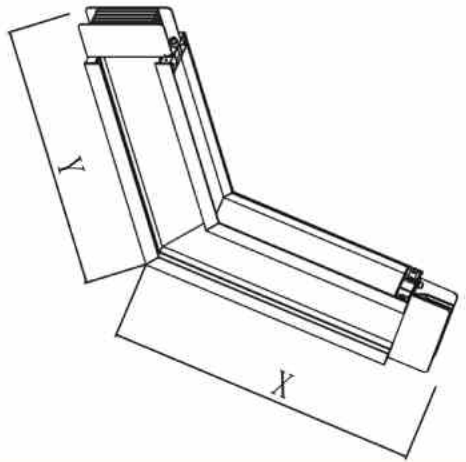
Z vertical offset	No.	Current rating(A)	Dimension(mm)
	1	250	X=400 Y=300 Z=400
	2	400	X=400 Y=300 Z=400
	3	500	X=400 Y=300 Z=400
	4	630	X=400 Y=300 Z=400
	5	800	X=500 Y=300 Z=500
	6	1000	X=500 Y=300 Z=500
	7	1250	X=500 Y=300 Z=500
	8	1600	X=500 Y=400 Z=500
	9	2000	X=500 Y=500 Z=500
	10	2500	X=600 Y=600 Z=600
	11	3200	X=700 Y=600 Z=700
	12	4000	X=800 Y=700 Z=800
	13	5000	X=900 Y=900 Z=900

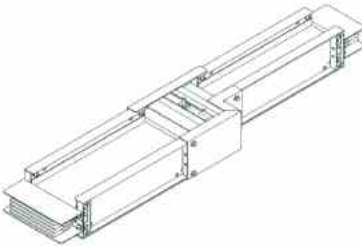
Tee horizontal offset	No.	Current rating(A)	Dimension(mm)
	1	250	X=400 Y=400 Z=400
	2	400	X=400 Y=400 Z=400
	3	500	X=400 Y=400 Z=400
	4	630	X=400 Y=400 Z=400
	5	800	X=400 Y=400 Z=400
	6	1000	X=400 Y=400 Z=400
	7	1250	X=400 Y=500 Z=500
	8	1600	X=400 Y=500 Z=500
	9	2000	X=400 Y=700 Z=700
	10	2500	X=400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

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

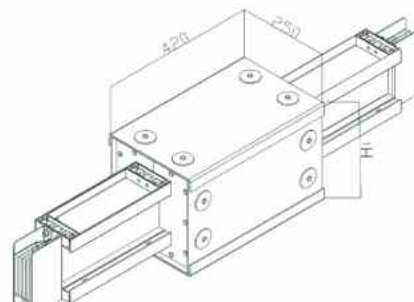
Combination elbow	No.	Current rating(A)	Dimension(mm)
	1	250	X=400 Y=400 Z=400
	2	400	X=400 Y=400 Z=400
	3	500	X=400 Y=400 Z=400
	4	630	X=400 Y=400 Z=400
	5	800	X=400 Y=400 Z=500
	6	1000	X=400 Y=400 Z=500
	7	1250	X=400 Y=400 Z=500
	8	1600	X=400 Y=400 Z=500
	9	2000	X=400 Y=400 Z=500
	10	2500	X=400 Y=600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

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

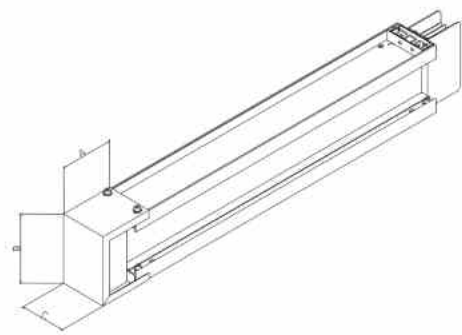
L special vertical elbow	No.	Current rating(A)	Dimension(mm)
	1	250	X=400 Y=400
	2	400	X=400 Y=400
	3	500	X=400 Y=400
	4	630	X=400 Y=400
	5	800	X=500 Y=500
	6	1000	X=500 Y=500
	7	1250	X=500 Y=500
	8	1600	X=500 Y=500
	9	2000	X=500 Y=500
	10	2500	X=600 Y=600
	11	3200	X=700 Y=700
	12	4000	X=800 Y=800
	13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

Reducer	Current rating before reduction	Rated current after reduction(A)													
		250	400	500	630	800	1000	1250	1600	2000	2500	3200	4000	5000	
	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	Current rating(A)	Height H mm
	250	198
	400	198
	500	203
	630	213
	800	228
	1000	248
	1250	278
	1600	318
	2000	368
	2500	473
	3200	553
	4000	663
	5000	673

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	Current rating(A)	□A mm	□B mm	□C mm
	250	128	111	120
	400	128	111	120
	500	128	116	120
	630	128	126	120
	800	128	141	120
	1000	128	161	120
	1250	128	191	120
	1600	128	231	120
	2000	128	281	120
	2500	128	386	120
	3200	128	466	120
	4000	128	576	120
	5000	128	550	146

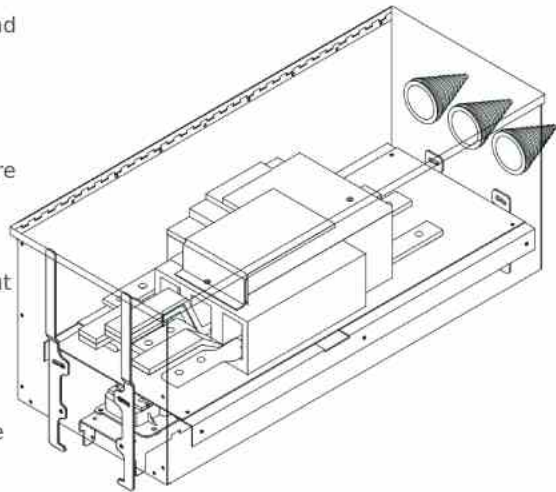
Note: End cover is the terminal part of the busway layout to protect the busway system.

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 fixiation 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.



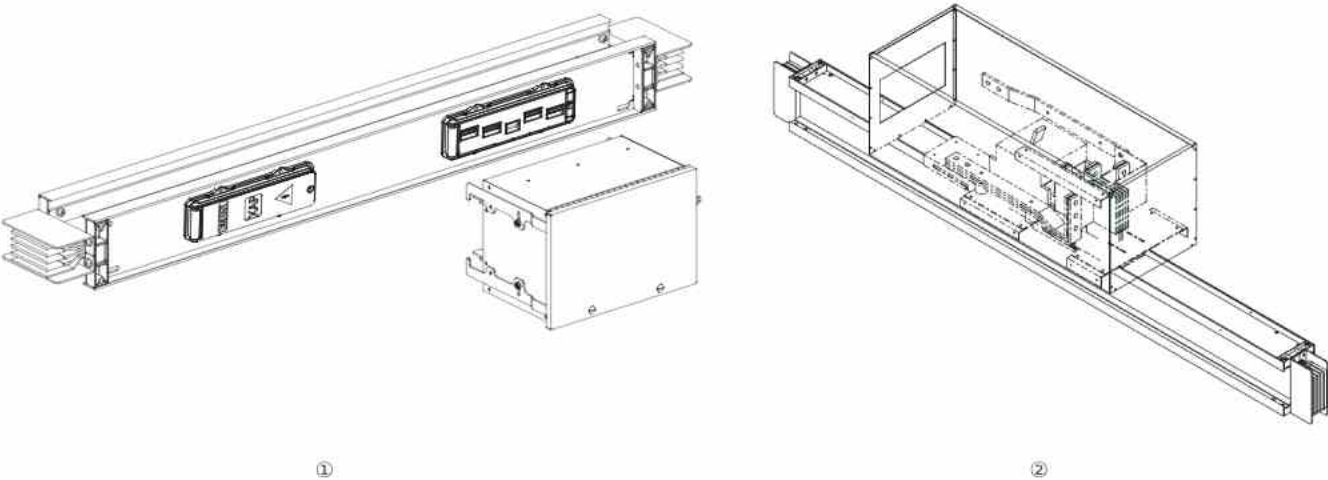
Product spec

- 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.

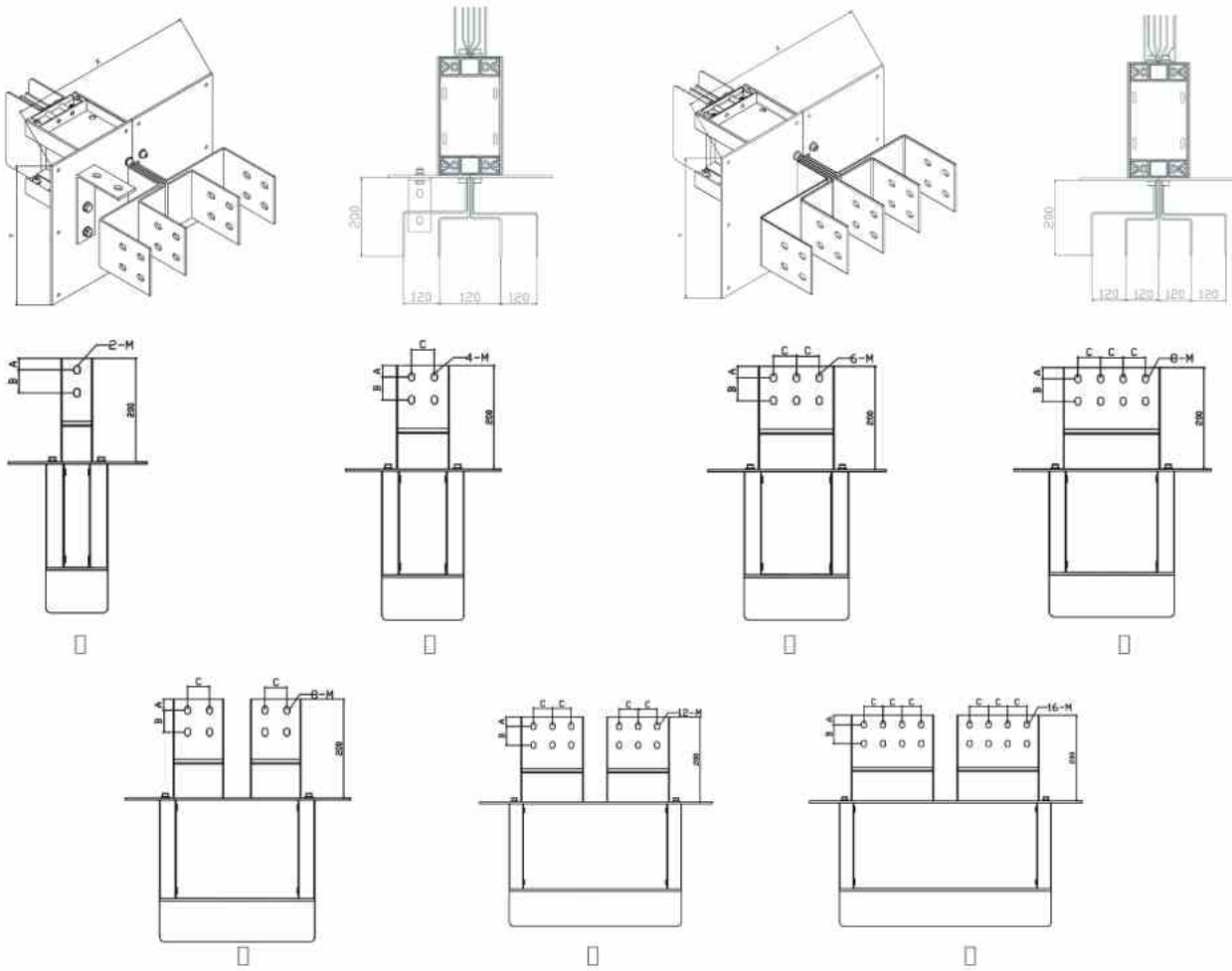
Plug in box outline standard dimension

Current rating(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	750	340	340	380	5	
800	1200	420	420	460	6	

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



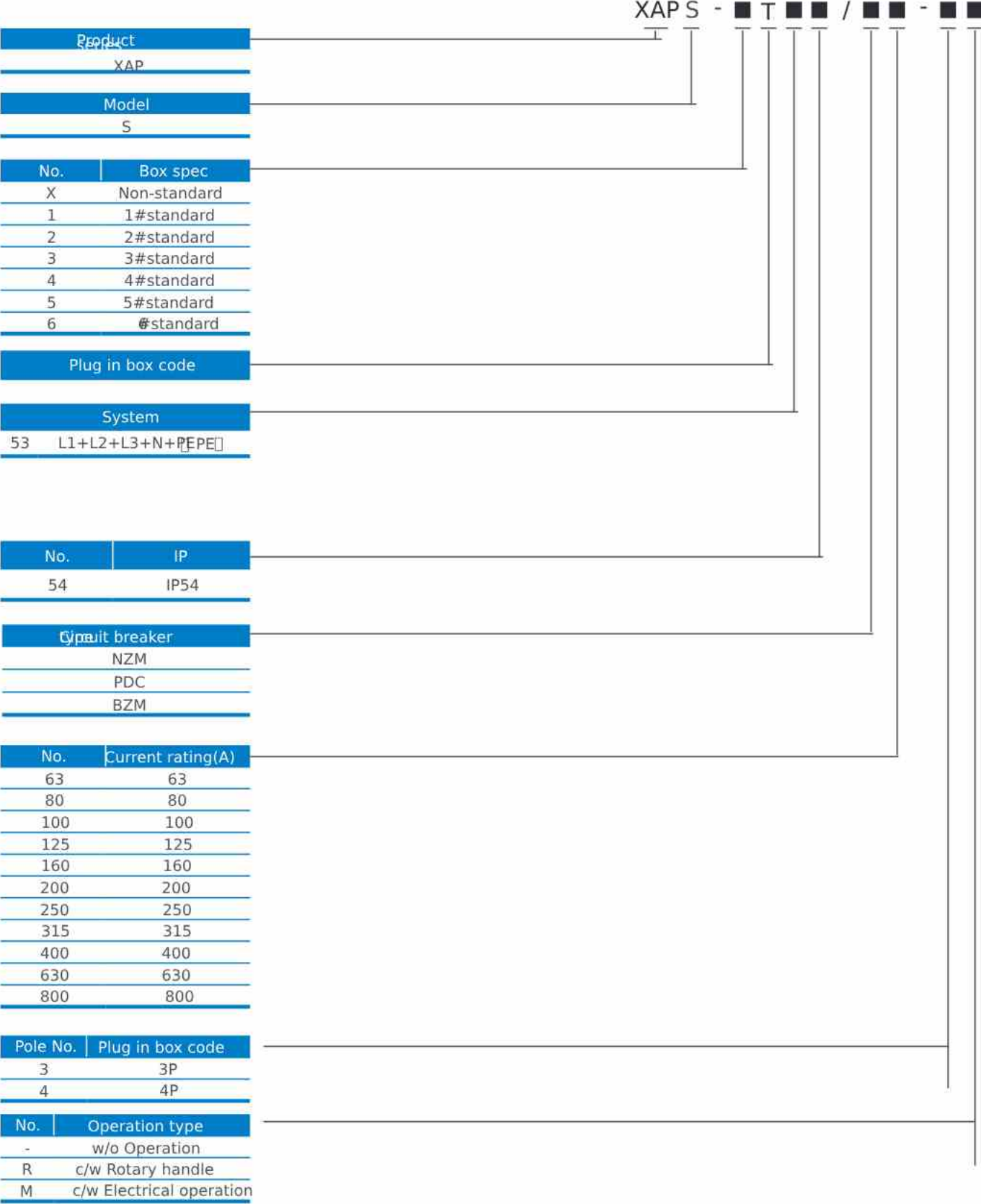
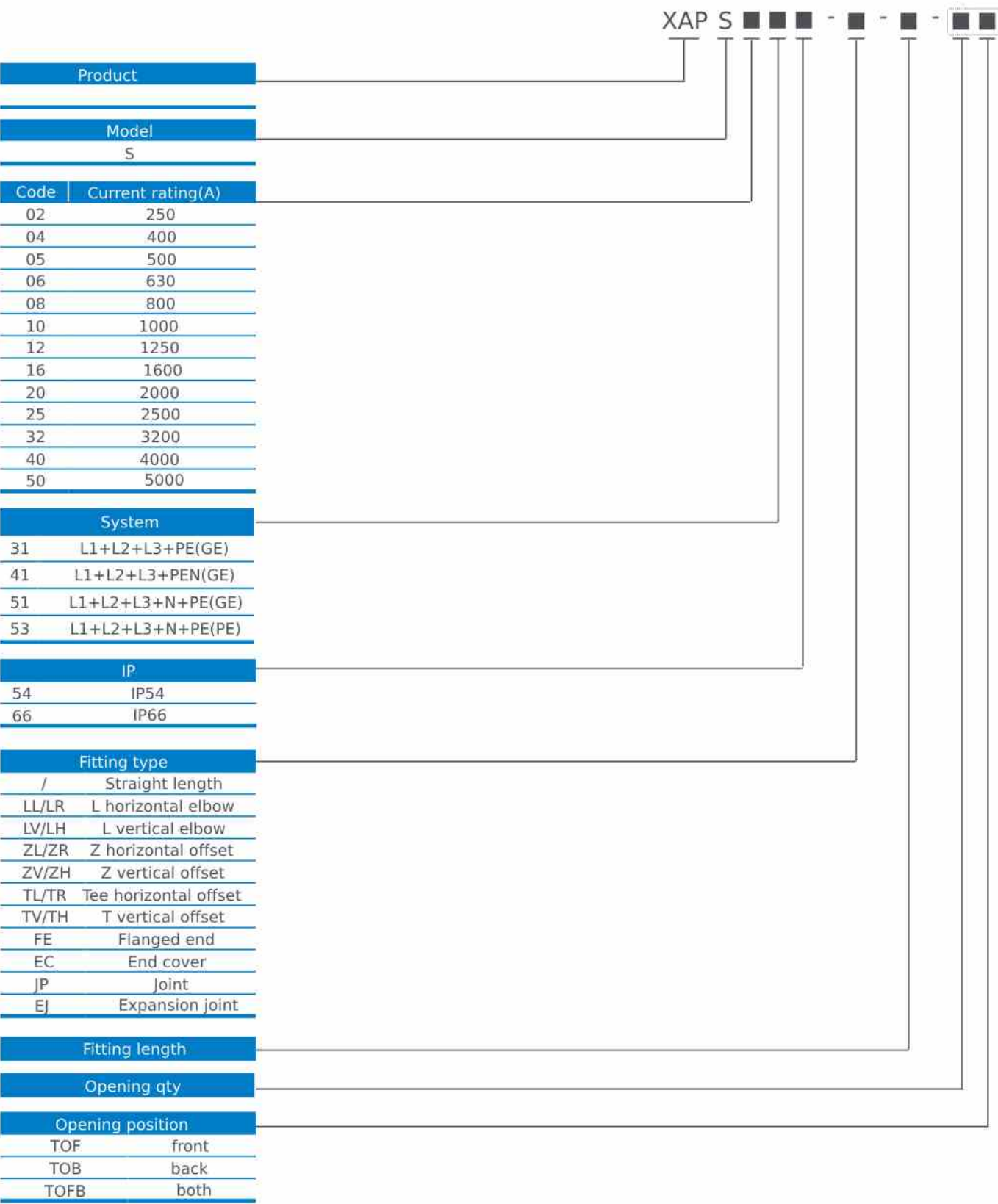
XAP-S series compact  
busway  
Flanged end



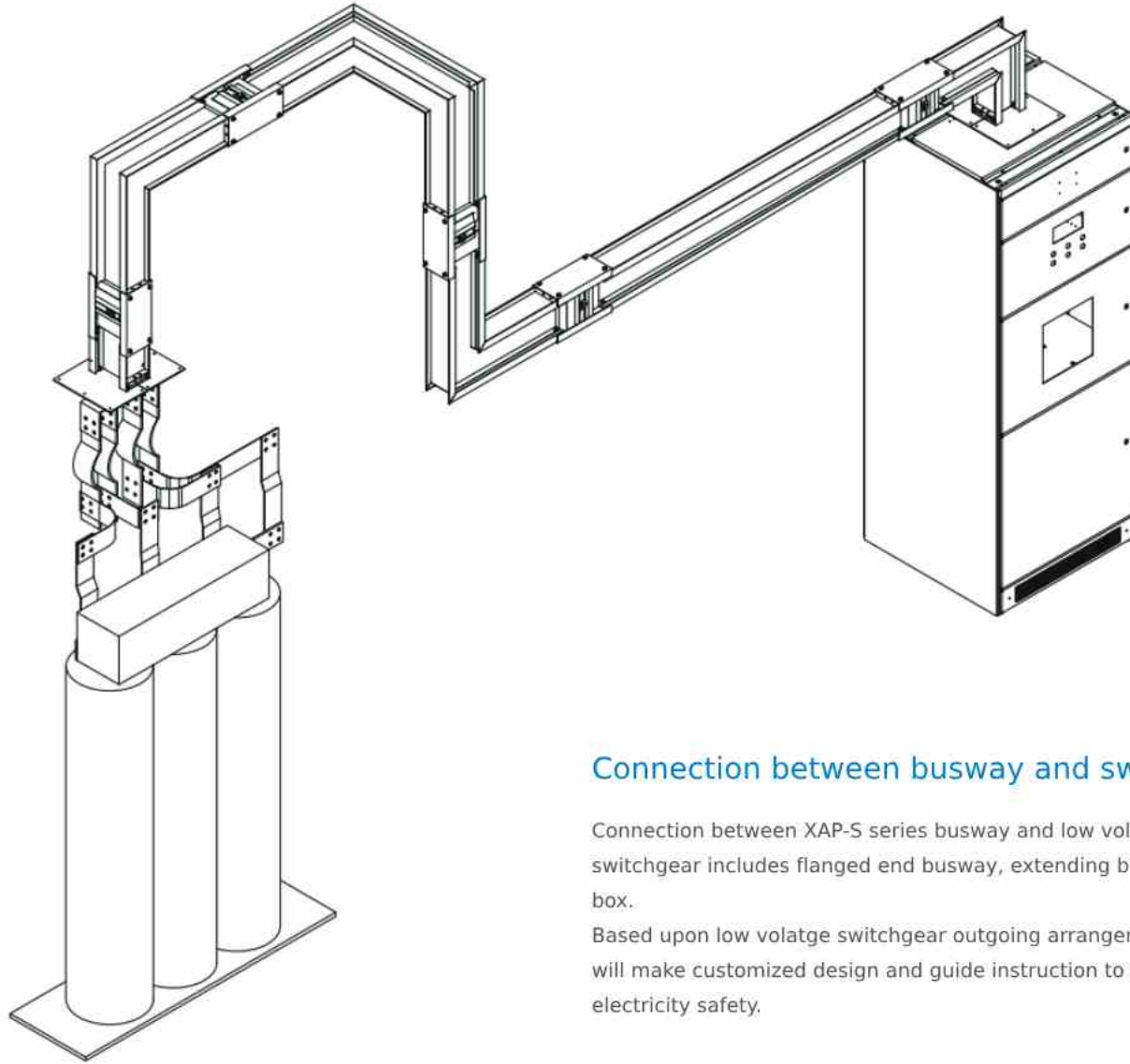
Current rating(A)	X mm	Y mm	A mm	B mm	C mm	M mm	Figure
250	530	188	25	50	/	13 X 17	
400	530	188	25	50	/	13 X 17	
500	530	188	25	50	/	13 X 17	
630	530	203	25	50	/	13 X 17	
800	530	218	25	50	/	13 X 17	
1000	530	238	25	50	/	13 X 17	
1250	530	268	25	50	/	13 X 17	
1600	530	308	25	50	50	13 X 17	
2000	530	358	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	622	25	50	50	13 X 17	
5000	450	696	25	50	50	13 X 17	

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

XAP series compact  
Product selection



## Connection with equipment



## Connection between busway and switchgear

Connection between XAP-S series busway and low voltage switchgear includes flanged end busway, extending bar and end tap box.

Based upon low voltage switchgear outgoing arrangement, we will make customized design and guide instruction to optimise the electricity safety.

### Connection between busway and transformer

Connection between XAP-S series busway and transformer includes flanged end busway, extending bar ,flexible link and end tap box. Flexible link is used to absorb vibration during transformer operation. End tap box is used to protect the connection unit to secure the reliable safety.

NOTE:

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