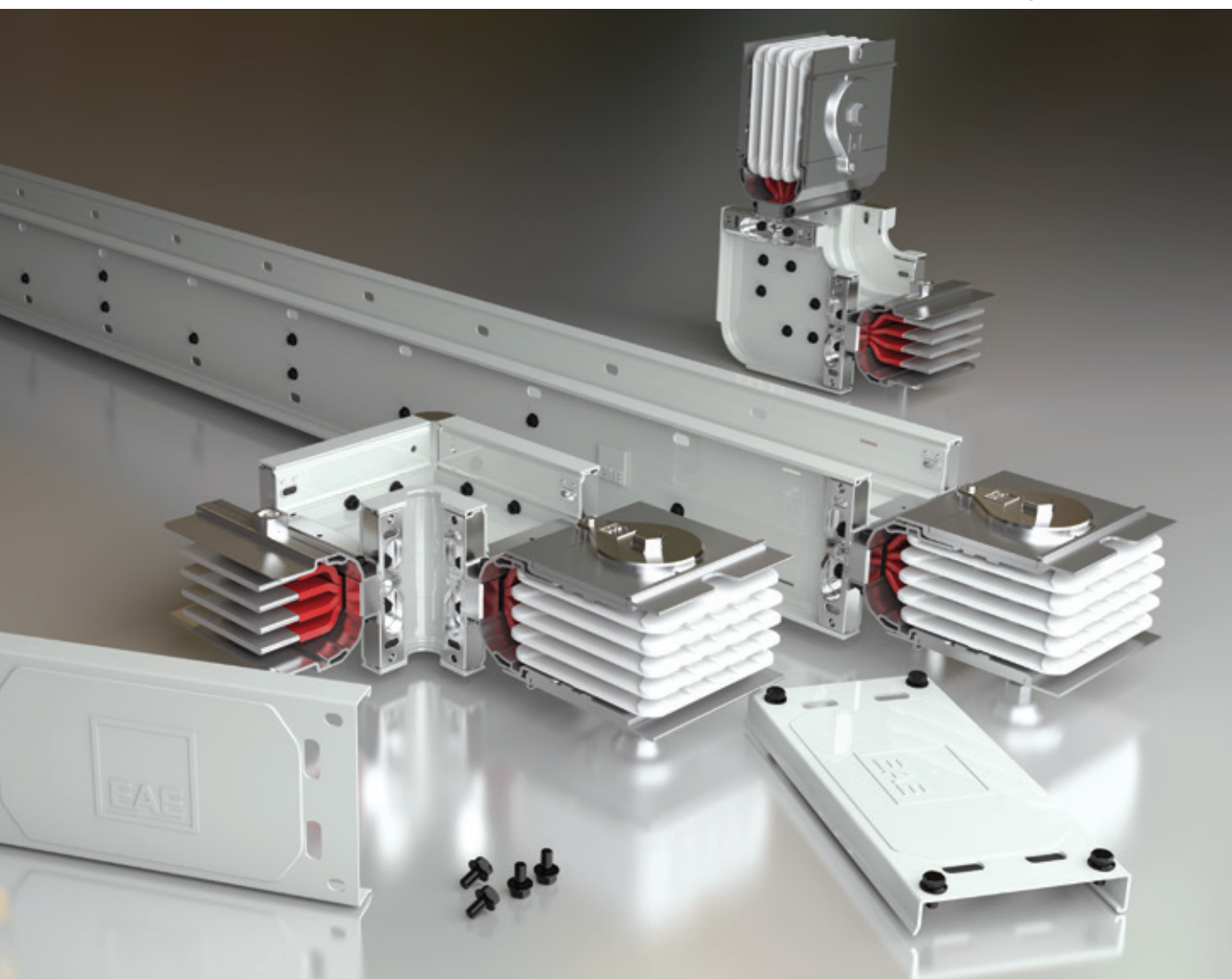


E-LINEKX

Busbar Systems 400...6300 A



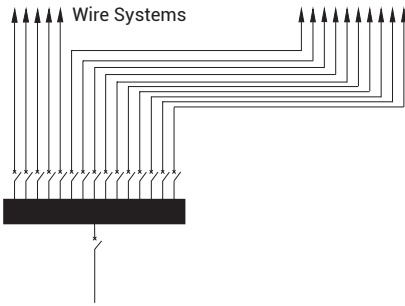
E-LINE KX

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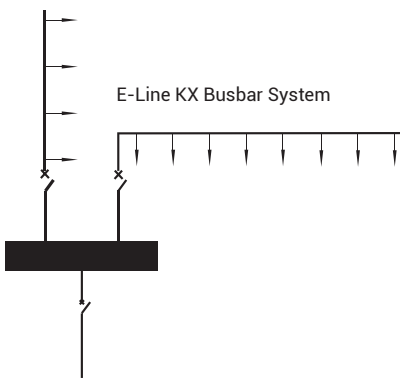
►► E-LINE KX

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Transportation and distribution of electricity especially at high ampere ratings used to be provided by paralleling a number of large sized cables. In order to support these cables in the buildings, there were used a lot of cable trays, cable ladders, under-floor cable channels, etc. Applications of cables, such as, fixing to cable channels, branching, connecting, calculating distances between cables for heat dissipation, adjusting difference lengths, etc. need special expert workers, more time, more effort, which means more money. Even after all above difficulties and expense, the result is not efficient enough. For example, there is no flexibility in this solution.

In order to eliminate all above disadvantages, modern **BUSBAR SYSTEMS** are developed. **EAE** manufactures **E-LINE** busbar systems from 25A up to 6.300A in order to convert above disadvantages to advantages. High technological, modular structured **E-LINE** busbar systems allow users to get safe energy how much and where ever they need by tap off boxes, easy and efficient planning, short installation time, better heat dissipation, automatic length adjustments, redesign / re-using capability, better electrical characteristics, etc. **E-LINE** busbar systems are designed and certified as per IEC 61439-6 standard.



Standard Prefabricated Structure

E-Line KX busbar system can be adapted to any kind of building structure using. Space-saving prefabricated components. All necessary components and fitting elements are manufactured items.

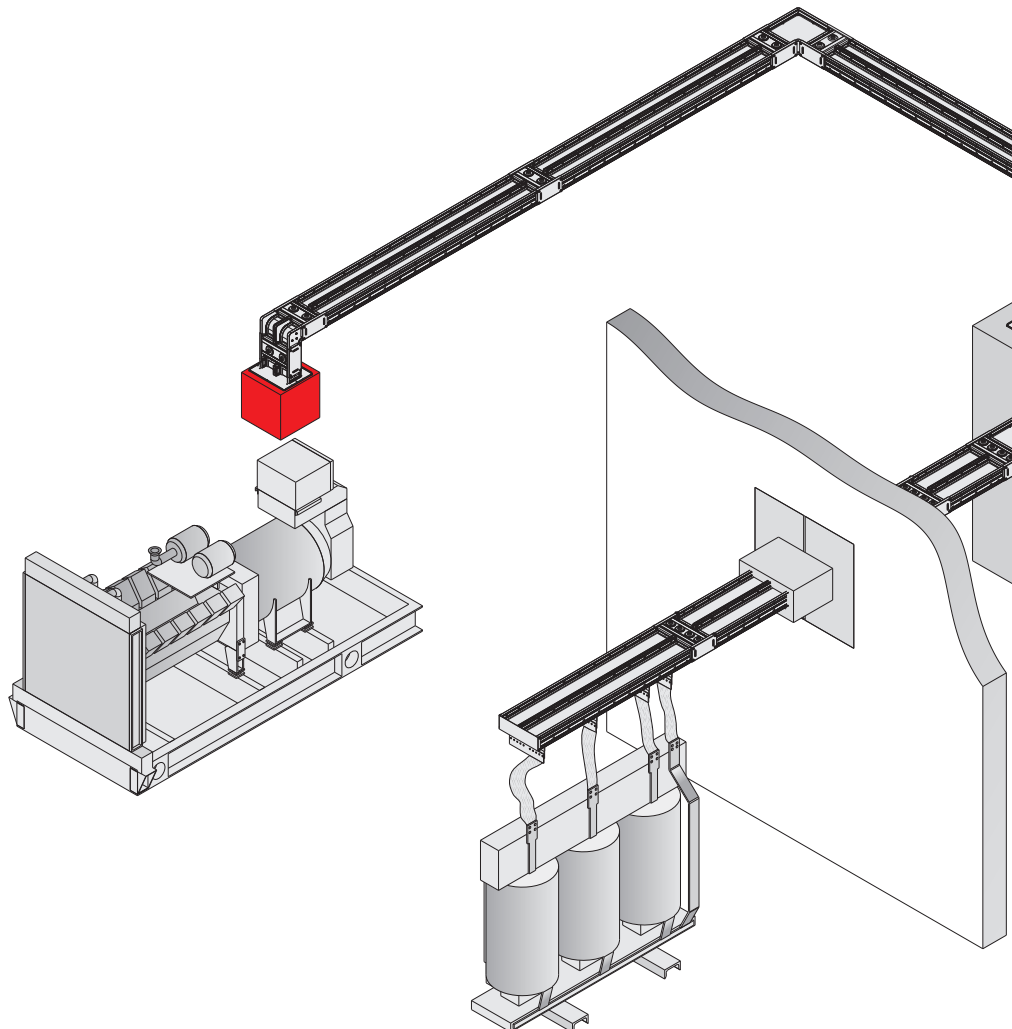
** Special components can be manufactured in one week on request.*

Rapid and Efficient Installation

It has been important to keep abreast with the rapidly improving building technologies in civil engineering, the installation time was we have lowered by reducing the number of bolts on the joint points of the busbar.

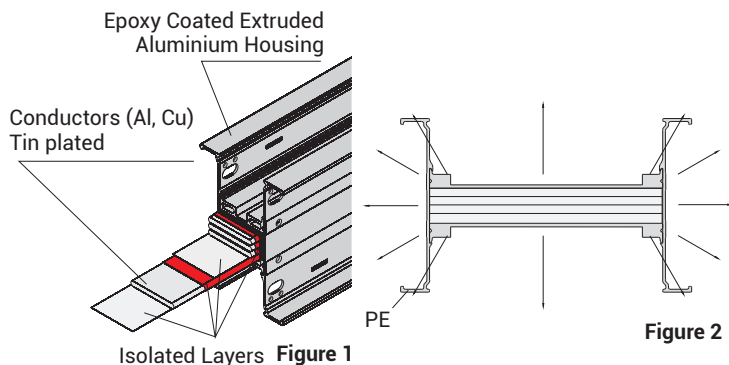
Flexible Power Supply

Tap-off points at short intervals make electrical power available in all locations; the power supply can be adapted to different production processes simply by relocating the tap-off unit.



Hybrid Insulation

The perfect design for high current busbar systems is the "compact structure" where tin plated and insulated with B class polyester film and epoxy coated on conductors are tightly placed into the extruded aluminium housing. (Figure 1).



Heat Transfer

"In compact structure" there is no empty space filled with air and heat is easily transferred to the environment by the housing that works like a heat-sink (Figure 2).

Minimum Voltage Drop

In E-Line KX, inductive reactance is very low due to closely placed conductors. The voltage drop comparison of compact and ventilated busbar that have same cross sectional area prove the importance of the compact structure.

High Short-Circuit Endurance

As there are no support points in "compact structure" momentum levers are not formed (Figure 1).

This feature ensures high short-circuit endurance (Figure 5).

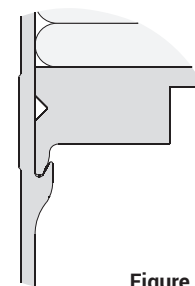


Figure 5

One Bolt Joint Ensures Safety and Easy Installation

E-Line KX Busbars are installed by tightening the "one bolt joint". Belleville spring washers on both ends of the bolt retains the original contact pressure, ensuring a more secure, reliable and maintenance-free joint.

E-Line KX Busbar Systems are easily installed (Figures 3-4).

*** The bolt is tightened to 83 Nm (60 lbft) using the torque spanner.**

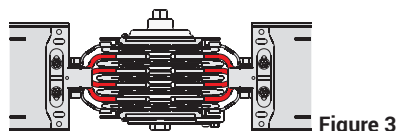


Figure 3

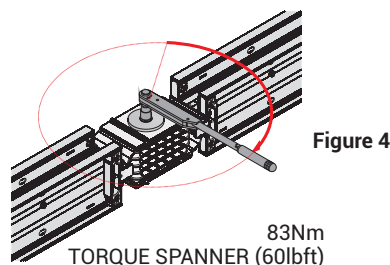


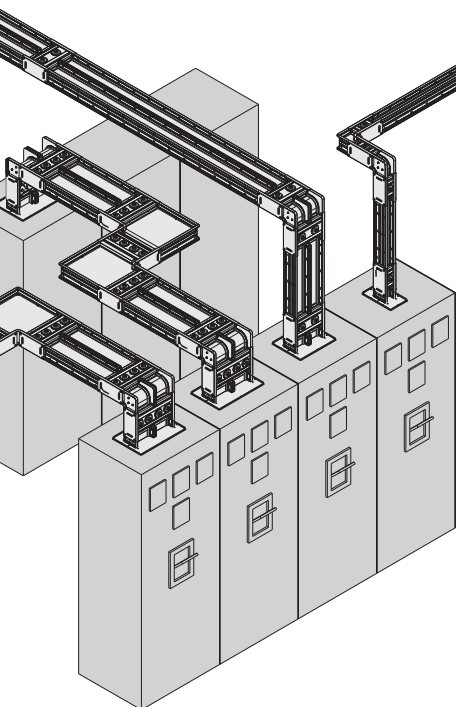
Figure 4

Easy and Safe Installation:

Due to alignment piece on the joint point, block joint element and busbar tray are aligned. This makes installation easier and correct on the right axes. (Figure 6).



Figure 6



While designing an electrical distribution system with E-Line KX a few approximate details will be necessary.

- Location, number, type and approximate ratings of loads,
- Transformer rates and short-circuit capacities, Utilization factor= α ,
- System coordination with other distribution system (heat, water, etc),
- Determining the route of E-Line KX on layout, If necessary, coordination of E-Line KX Busbar with E-Line KO-II runs,
- Deciding on suitable hanger types.

Utilization Factor (α)

Utilization factor (α) depends on the type and number of loads.

It is usually around 0.7 or lower. The utilization factor of a line that supplies electricity to motors and lighting systems is usually lower than 0.6.

It is as low as 0.30 in weld shops of car factories, it can be 1 in lines where only one big load is supplied.

Voltage Drop

For practical voltage drop calculation, necessary values, formula and easy calculation methods are given on the technical characteristics table on pages 6-9.

Rated Current

The current is calculated using the following equation:

$$I_B = \frac{P \cdot \alpha}{\sqrt{3} \cdot U \cdot \cos \varphi}$$

I_B = Operation current (A)

P = Installed load (W)

α = Utilization factor

U = Supply voltage (V)

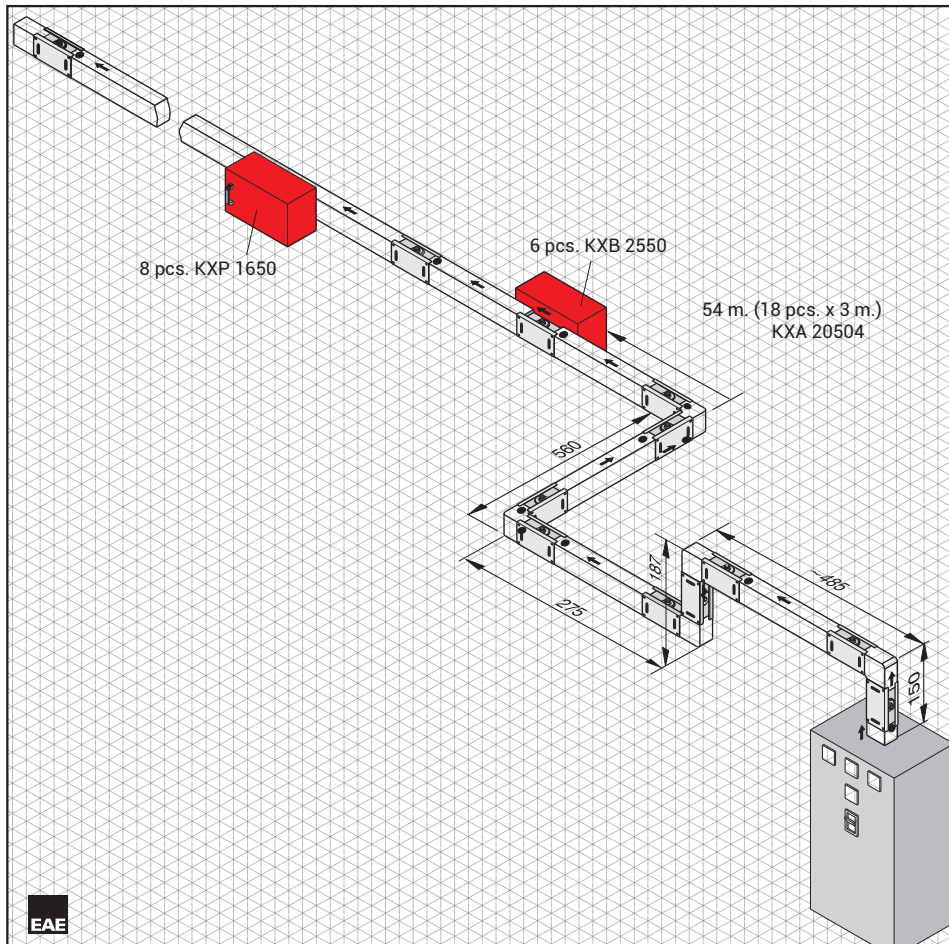
- Busbar current rating is chosen as equal to or higher then the calculated IB current.
- After the voltage drop calculation if the chosen current rate is not convenient, a higher rating is chosen.

Short-Circuit

Tested short-circuit capacities are given on technical characteristics table on pages 6-9.

Busbar Installation Plan

Our distributor's project & design departments will help you for preparing the installation plans on request.



Components List

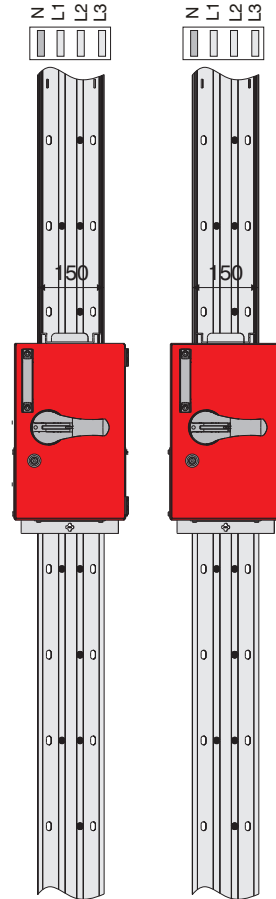
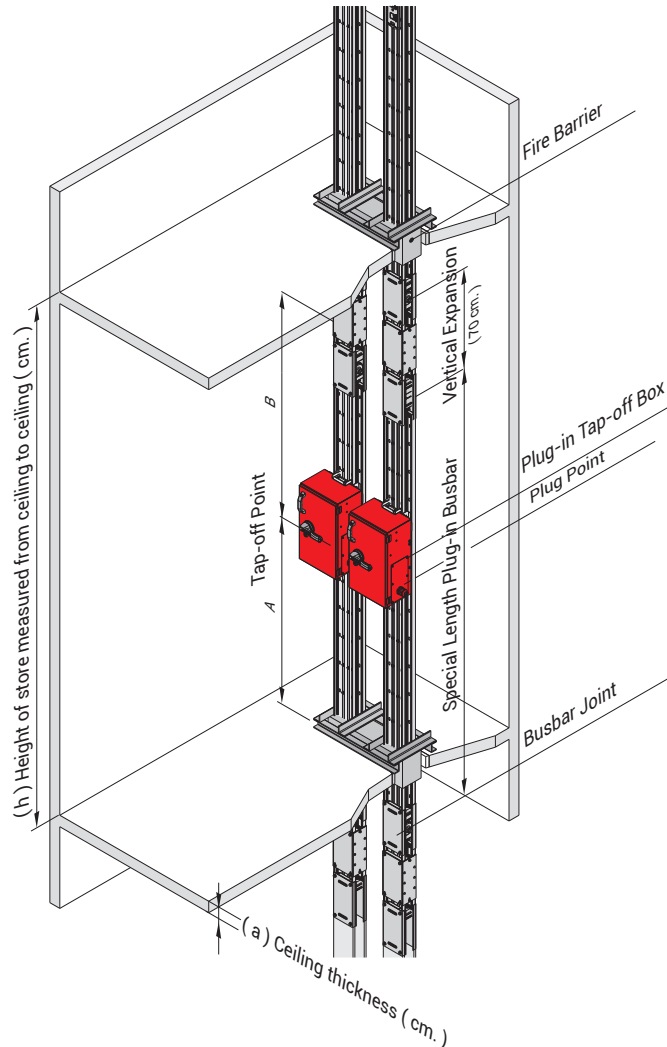
Item	Components	Quantity
1	KXA 20504 - STD Busbar (20 x 3m.)	60 m.
2	KXA 20504 - D Downwards Elbow	2 pcs.
3	KXA 20504 - R Right Elbow	1 pc.
4	KXA 20504 - U Upwards Elbow	1 pc.
5	KXA 20504 - L Left Elbow	1 pc.
6	KXA 20504 - P11 Panel Connection	1 pc.
7	KXA 20504 - S10 End Closer	1 pc.
8	KXA 20504 - X95 Special Straight Length	1 pc.
9	KXA 20504 - X120 Special Straight Length	1 pc.
10	KXA 20504 - X122 Special Straight Length	1 pc.
11	KXA 20504 - X200 Special Straight Length	1 pc.
12	KXA 20504 - X174 Special Straight Length	1 pc.
13	KXP 1650 Tap-off Box	8 pcs.
14	KXB 2550 Tap-off Box	6 pcs.

Company : Demir Makine
Project : II.OSB
Project No : 1128

Prepared by Name : Abdullah ELDELEKLI
Date : 02 / 01 / 2022
Signature :

As each building's structure is different than the other for vertical applications of **E-Line KX** special projects has to be designed.

The details on this page briefly explain the necessary information for drawing a vertical application project.



Project Design

The details below should be sent to our Project & Design department.

- Location and dimensions of the floor penetration where busbar will be installed.
- Number, height and ceiling thickness of storeys. (a=..., h=...)
- Connected load for each storey.
- Supply type of the vertical line (busbar or cable).

Please send the information to us by fax or e-mail with a sample drawing in Figure 1.

! In multipath busbars in high-rise vertical shaft applications; Due to floor heights, floor thickness and product tolerances, the window or additional point alignments on the upper floors may not be the same. In order for the Tap off boxes to be aligned and the joint point not to coincide with the floor transitions, the assembly should be continued by making measurements on each floor.

■ EAE is not responsible for the potential risks that may occur in cases where the products in our catalogue are used outside of the standard phase sequences as shown in the catalogue.

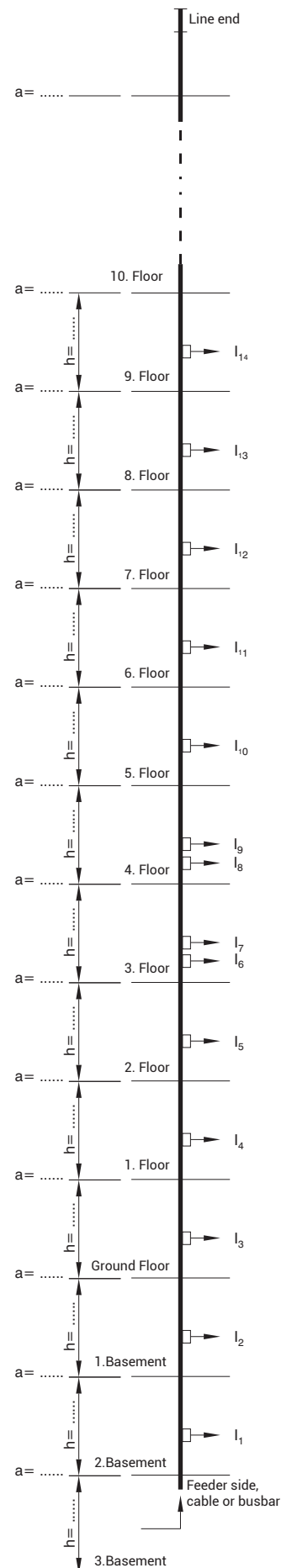
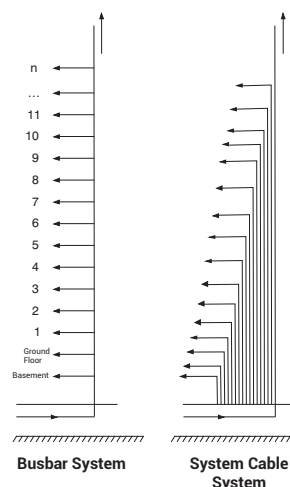
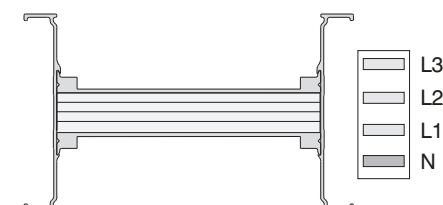


Figure 1

Aluminium Conductor (Al)

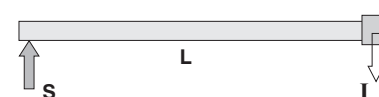
Standards	IEC 61439-6, TS EN 61439-6, IEC 61439-1, TS EN 61439-1									
Rated Isolation Voltage	Ui	V	1000	at Cat IV						
Max. Rated Operational Voltage	Ue	Vac	1000							
Rated Impulse Withstand Voltage	Uimp	kV	12							
Rated Frequency	f	Hz	50							
Pollution Degree	III									
Protection Degree	IP55 / IP65 / IP67									
External Mechanical Impacts (IK Code)*	Bolt-on Busbar IK10+, Plug-in Busbar IK08									
Rated Current	I _n	A	400	500	630	800	1000	1000	1250	1350
Busbar Code			04	05	06	08	11	10	12	14
Rated Short-time Withstand Current (1s) (Three phase)	I _{cw}	kA	16	16	25	35	35	50	60	60
Rated Peak Withstand Current	I _{pk}	kA	32	32	52,5	73,5	73,5	105	132	132
Rated Short-time Withstand Current for Neutral Conductor(1s)(Single phase)	I _{cw}	kA	9,6	9,6	15	21	21	30	36	36
Rated Peak Withstand Current for Neutral Conductor	I _{pk}	kA	16,32	16,32	30	44,1	44,1	63	75,6	75,6
Rated Short-time Withstand Current for PE (Housing) Conductor(1s)(Single phase)	I _{cw}	kA	9,6	9,6	15	21	21	30	36	36
Rated Peak Withstand Current for PE (Housing) Conductor	I _{pk}	kA	16,32	16,32	30	44,1	44,1	63	75,6	75,6
MEAN PHASE CONDUCTOR CHARACTERISTICS AT RATED CURRENT I _n										
Resistance at a conductor temperature of 20 °C	R ₂₀	mΩ/m	0,197	0,163	0,121	0,088	0,077	0,061	0,044	0,040
Resistance at an ambient air temperature of 35 °C	R	mΩ/m	0,258	0,225	0,159	0,116	0,103	0,080	0,058	0,052
Reactance (Independent from Temperature)	X	mΩ/m	0,035	0,033	0,027	0,021	0,020	0,015	0,013	0,013
Positive and negative sequence impedances at an ambient air temperature of 35 °C	Z	mΩ/m	0,260	0,227	0,162	0,118	0,105	0,082	0,060	0,053
Positive and negative sequence impedances at a conductor temperature of 20 °C	Z ₂₀	mΩ/m	0,200	0,167	0,124	0,091	0,077	0,063	0,046	0,042
DC Resistance at a conductor temperature of 20 °C for Phases	R/ort _{ph}	mΩ/m	0,197	0,161	0,124	0,087	0,075	0,060	0,043	0,039
DC Resistance at a conductor temperature of 20 °C for Neutral	R _N	mΩ/m	0,198	0,164	0,126	0,090	0,075	0,061	0,044	0,039
DC Resistance at a conductor temperature of 20 °C for PE (Housing)	R _{PE}	mΩ/m	0,038	0,033	0,028	0,024	0,024	0,023	0,023	0,026
SECTIONS										
L1,L2,L3,N		mm ²	150	180	240	330	360	480	660	750
PE (4 ½ Conductors)		mm ²	75	90	120	165	180	240	330	375
PE (5 Conductors)		mm ²	150	180	240	330	360	480	660	750
Aluminium Housing Section (Aluminium)		mm ²	1449	1509	1686	1788	1829	1894	2050	2128
Conductor Dimensions		mmxmm	6x25	6x30	6x40	6x55	6x60	6x80	6x110	6x125
Busbar Weight (4 Conductors)		kg/m	7,0	7,4	7,9	9,2	10,1	11,3	13,9	15,2
Busbar Weight (5 Conductors)		kg/m	7,4	7,9	8,6	10,2	11,1	12,8	15,9	17,5
MEAN FAULT-LOOP CHARACTERISTICS										
Zero-sequence Impedance										
Zero-sequence impedance at a conductor temperature of 20 °C	Z _{(0)b20phN}	mΩ/m	0,873	0,748	0,572	0,419	0,351	0,291	0,214	0,194
Zero-sequence impedance at a conductor temperature of 20 °C (Housing)	Z _{(0)b20phPE}	mΩ/m	0,430	0,398	0,326	0,268	0,215	0,245	0,208	0,199
Zero-sequence impedance at an ambient temperature of 35 °C	Z _{(0)bphN}	mΩ/m	1,129	1,011	0,742	0,540	0,470	0,371	0,274	0,245
Zero-sequence impedance at an ambient temperature of 35 °C (Housing)	Z _{(0)bphPE}	mΩ/m	0,528	0,507	0,406	0,331	0,276	0,303	0,260	0,245
RESISTANCES AND REACTANCES										
Resistance at a conductor temperature of 20 °C	R _{b20phph}	mΩ/m	0,399	0,337	0,249	0,184	0,153	0,125	0,092	0,083
Resistance at a conductor temperature of 20 °C	R _{b20phN}	mΩ/m	0,408	0,347	0,255	0,192	0,161	0,131	0,096	0,087
Resistance at a conductor temperature of 20 °C (Housing)	R _{b20phPE}	mΩ/m	0,252	0,223	0,175	0,137	0,112	0,112	0,093	0,086
Resistance at an ambient air temperature of 35 °C	R _{bphph}	mΩ/m	0,523	0,464	0,328	0,241	0,211	0,164	0,120	0,107
Resistance at an ambient air temperature of 35 °C	R _{bphN}	mΩ/m	0,534	0,477	0,336	0,252	0,220	0,171	0,126	0,113
Resistance at an ambient air temperature of 35 °C (Housing)	R _{bphPE}	mΩ/m	0,330	0,307	0,231	0,180	0,153	0,146	0,122	0,112
Reactance (Independent from temperature)	X _{bphph}	mΩ/m	0,073	0,065	0,043	0,042	0,037	0,032	0,024	0,023
Reactance (Independent from temperature)	X _{bphN}	mΩ/m	0,102	0,092	0,075	0,058	0,053	0,045	0,034	0,032
Reactance (Independent from temperature)	X _{bphPE}	mΩ/m	0,102	0,093	0,069	0,061	0,049	0,050	0,041	0,039

0,067	0,065	0,054	0,054	0,041	0,042	0,046	0,034	0,031	0,025	0,026	0,020	0,016
0,071	0,069	0,057	0,057	0,044	0,044	0,049	0,036	0,033	0,027	0,028	0,021	0,017
0,063	0,068	0,055	0,065	0,047	0,050	0,053	0,033	0,049	0,035	0,033	0,031	0,019
0,088	0,086	0,071	0,072	0,055	0,057	0,059	0,044	0,040	0,033	0,035	0,027	0,021
0,094	0,090	0,076	0,076	0,058	0,060	0,062	0,047	0,043	0,035	0,038	0,029	0,022
0,083	0,089	0,072	0,086	0,062	0,068	0,067	0,044	0,064	0,046	0,045	0,042	0,025
0,019	0,018	0,016	0,017	0,012	0,013	0,012	0,010	0,009	0,008	0,008	0,005	0,005
0,028	0,026	0,023	0,023	0,018	0,020	0,018	0,014	0,013	0,012	0,012	0,009	0,007
0,028	0,032	0,023	0,030	0,019	0,023	0,024	0,014	0,019	0,015	0,012	0,014	0,007



Generally Voltage drop of a busbar system can be calculated with the following formula.

ΔU = Voltage Drop (V)
 L = Line Length (m)
 I = Line Current or Load (A)
 R = Resistance (m Ω /m)
 X = Reactance (m Ω /m)



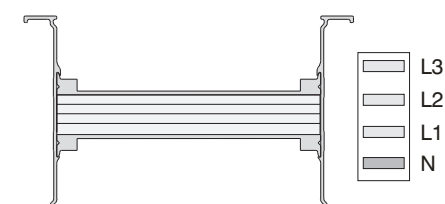
S = Supply Point

- All phase conductor characteristics had been determined according to Annex BB of IEC / EN 61439-6.
- Fault-loop zero-sequences impedances had been determined according to Annex CC of IEC / EN 61439-6.
- Fault-loop resistances and impedances had been determined according to Annex DD of IEC / EN 61439-6.
- * IK10 corresponds to impact energy of 20J according to IEC 62262.

Copper Conductor (Cu)

Standards	IEC 61439-6, TS EN 61439-6, IEC 61439-1, TS EN 61439-1								
Rated Isolation Voltage	Ui	V	1000	at Cat IV					
Max. Rated Operational Voltage	Ue	Vac	1000						
Rated Impulse Withstand Voltage	Uimp	kV	12						
Rated Frequency	f	Hz	50						
Pollution Degree	III								
Protection Degree	IP55 / IP65 / IP67								
External Mechanical Impacts (IK Code)*	Bolt-on Busbar IK10+, Plug-in Busbar IK08								
Rated Current	I _n	A	550	650	800	1000	1250	1350	1600
Busbar Code			05	06	08	10	12	14	17
Rated Short-time Withstand Current (1s) (Three phase)	I _{cw}	kA	24	24	40	50	60	60	80
Rated Peak Withstand Current	I _{pk}	kA	50,4	50,4	84	105	132	132	176
Rated Short-time Withstand Current for Neutral Conductor(1s)(Single phase)	I _{cw}	kA	14,4	14,4	24	30	36	36	48
Rated Peak Withstand Current for Neutral Conductor	I _{pk}	kA	28,8	28,8	50,4	63	75,6	75,6	100,8
Rated Short-time Withstand Current for PE (Housing) Conductor(1s)(Single phase)	I _{cw}	kA	14,4	14,4	24	30	36	36	48
Rated Peak Withstand Current for PE (Housing) Conductor	I _{pk}	kA	28,8	28,8	50,4	63	75,6	75,6	100,8
MEAN PHASE CONDUCTOR CHARACTERISTICS AT RATED CURRENT I _n									
Resistance at a conductor temperature of 20 °C	R ₂₀	mΩ/m	0,123	0,100	0,074	0,055	0,044	0,038	0,032
Resistance at an ambient air temperature of 35 °C	R	mΩ/m	0,162	0,137	0,097	0,071	0,057	0,050	0,044
Reactance (Independent from Temperature)	X	mΩ/m	0,044	0,034	0,028	0,023	0,019	0,016	0,015
Positive and negative sequence impedances at an ambient air temperature of 35 °C	Z	mΩ/m	0,168	0,141	0,101	0,075	0,060	0,053	0,047
Positive and negative sequence impedances at a conductor temperature of 20 °C	Z ₂₀	mΩ/m	0,130	0,106	0,079	0,060	0,047	0,041	0,035
Rated Power Loss at 35 °C		W/m	143,5	166,8	185,5	213,6	264,8	274,5	325,1
DC Resistance at a conductor temperature of 20 °C for Phases	R/ort _{ph}	mΩ/m	0,118	0,097	0,072	0,053	0,041	0,036	0,031
DC Resistance at a conductor temperature of 20 °C for Neutral	R _N	mΩ/m	0,120	0,099	0,074	0,054	0,042	0,036	0,031
DC Resistance at a conductor temperature of 20 °C for PE (Housing)	R _{PE}	mΩ/m	0,036	0,034	0,027	0,029	0,024	0,028	0,028
SECTIONS									
L1,L2,L3,N		mm²	150	180	240	330	420	480	570
PE (4 ½ Conductors)		mm²	75	90	120	165	210	240	285
PE (5 Conductors)		mm²	150	180	240	330	420	480	570
Aluminium Housing Section (Aluminium)		mm²	1449	1509	1686	1788	1842	1894	1996
Conductor Dimensions		mmxmm	6x25	6x30	6x40	6x55	6x70	6x80	6x95
Busbar Weight (4 Conductors)		kg/m	10,7	11,9	14,4	18,3	22	24,5	27,7
Busbar Weight (5 Conductors)		kg/m	12,2	13,52	16,8	21,5	26,1	29,2	33,7
MEAN FAULT-LOOP CHARACTERISTICS									
Zero-sequence Impedance									
Zero-sequence impedance at a conductor temperature of 20 °C	Z _{(0)b20phN}	mΩ/m	0,585	0,489	0,393	0,295	0,250	0,198	0,168
Zero-sequence impedance at a conductor temperature of 20 °C (Housing)	Z _{(0)b20phPE}	mΩ/m	0,365	0,338	0,268	0,281	0,229	0,209	0,154
Zero-sequence impedance at an ambient temperature of 35 °C	Z _{(0)bphN}	mΩ/m	0,750	0,646	0,499	0,371	0,309	0,251	0,221
Zero-sequence impedance at an ambient temperature of 35 °C (Housing)	Z _{(0)bphPE}	mΩ/m	0,442	0,419	0,324	0,345	0,286	0,259	0,197
Resistances and Reactances									
Resistance at a conductor temperature of 20 °C	R _{b20phph}	mΩ/m	0,248	0,206	0,159	0,119	0,091	0,077	0,066
Resistance at a conductor temperature of 20 °C	R _{b20phN}	mΩ/m	0,256	0,214	0,167	0,126	0,097	0,083	0,071
Resistance at a conductor temperature of 20 °C (Housing)	R _{b20phPE}	mΩ/m	0,176	0,155	0,123	0,112	0,137	0,083	0,065
Resistance at an ambient air temperature of 35 °C	R _{bphph}	mΩ/m	0,328	0,283	0,209	0,154	0,118	0,103	0,091
Resistance at an ambient air temperature of 35 °C	R _{bphN}	mΩ/m	0,339	0,294	0,219	0,163	0,126	0,110	0,098
Resistance at an ambient air temperature of 35 °C (Housing)	R _{bphPE}	mΩ/m	0,233	0,213	0,161	0,145	0,178	0,111	0,089
Reactance (Independent from temperature)	X _{bphph}	mΩ/m	0,079	0,069	0,052	0,043	0,036	0,032	0,026
Reactance (Independent from temperature)	X _{bphN}	mΩ/m	0,105	0,094	0,071	0,059	0,050	0,045	0,037
Reactance (Independent from temperature)	X _{bphPE}	mΩ/m	0,101	0,093	0,070	0,061	0,054	0,050	0,036

0,050	0,033	0,059	0,044	0,029	0,025	0,023	0,016	0,011
0,054	0,035	0,063	0,047	0,031	0,027	0,025	0,017	0,012
0,059	0,053	0,061	0,040	0,035	0,034	0,044	0,032	0,023
0,067	0,043	0,077	0,058	0,038	0,033	0,030	0,020	0,013
0,073	0,046	0,083	0,062	0,041	0,036	0,033	0,022	0,015
0,080	0,070	0,080	0,052	0,047	0,044	0,059	0,041	0,028
0,022	0,014	0,022	0,016	0,012	0,011	0,010	0,008	0,005
0,032	0,022	0,029	0,023	0,018	0,015	0,014	0,011	0,008
0,035	0,028	0,033	0,022	0,020	0,018	0,018	0,014	0,010



KX A 17 5 04 B TR41

Busbar Type

Aluminium (Al)
Copper (Cu)

(Al)
(Cu)

A
C

CONDUCTOR MATERIAL

KXA - Al Conductor		KXC - Cu Conductor		Conductor
Rated Current	Busbar Code	Rated Current	Busbar Code	
*400	04	*550	05	6x25
*500	05	*650	06	6x30
*630	06	*800	08	6x40
800	08	1000	10	6x55
1000	11	-	-	6x60
-	-	1250	12	6x70
1000	10	1350	14	6x80
-	-	1600	17	6x95
1250	12	-	-	6x110
1350	14	2000	23	6x125
1700	16	-	-	6x140
1600	17	-	-	6x160
2000	18	-	-	6x180
2000	20	2500	25	6x200
2500	29	-	-	6x230
2500	27	-	-	6x250
-	-	2000	22	2(6x55)
-	-	2500	27	2(6x70)
2500	25	3300	32	2(6x110)
-	-	3600	36	2(6x125)
3200	32	4000	40	2(6x140)
3200	33	-	-	2(6x160)
4000	40	5000	50	2(6x200)
4000	41	-	-	2(6x180)
5000	51	-	-	2(6x250)
6000	60	6300	63	3(6x200)

(*)Bolt-on tap-off box can not be used on the joints of mentioned ratings of busbars. Plug-in points can be at one side only.

Busbar Code

IP55 / IP65*
IP67

5
6

PROTECTION DEGREE

*Please call us for IP65 orders.
IP65 and IP67 are not recommended for outdoor applications.
Please check CR catalog.

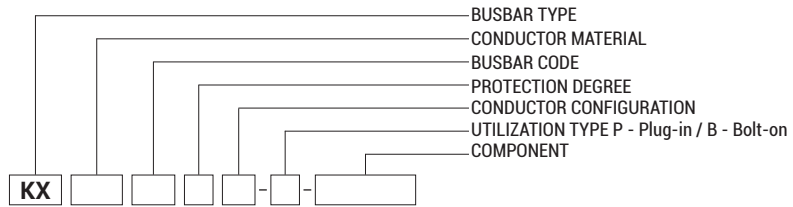
Number of Conductors	Code	Conductor Configuration									
		L1	L2	L3	N1	N2	PE	1/2 PE	CPE	1/2 CPE	PE (Housing)
3 Conductors	03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4 Conductors	04	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4 1/2 Conductors	07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4 1/2 Conductors	08	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5 Conductors	05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5 Conductors	09	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6 Conductors	06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

COMPONENTS

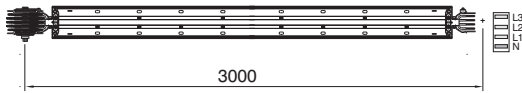
Standard Length.....	STD
Special Length.....	X
Upwards Elbow.....	U
Downwards Elbow.....	D
Right Elbow.....	R
Left Elbow.....	L
Left Horizontal Offset.....	LH
Right Horizontal Offset.....	RH
Upwards Vertical Offset.....	UV
Downwards Vertical Offset.....	DV
Upwards Left Combined Offset.....	KUL
Upwards Right Combined Offset.....	KUR
Downwards Left Combined Offset.....	KDL
Downwards Right Combined Offset.....	KDR
Left Upwards Combined Offset.....	KLU
Right Upwards Combined Offset.....	KRU
Left Downwards Combined Offset.....	KLD
Right Downwards Combined Offset.....	KRD
End Closer.....	S
Reduction.....	RD
Left Side Feeder "T".....	TYL
Right Side Feeder "T".....	TYR
Central Feeder "T".....	TO
Horizontal Expansion.....	YDT
Vertical Expansion.....	DDT
Phase Transposition Module.....	FDM
Panel Connection.....	P10
Panel Connection.....	P11
Upwards Panel Connection.....	PU20
Upwards Panel Connection.....	PU21
Downwards Panel Connection.....	PD20
Downwards Panel Connection.....	PD21
Right Panel Connection.....	PR30
Right Panel Connection.....	PR31
Left Panel Connection.....	PL30
Left Panel Connection.....	PL31
Panel Connection.....	P40
Panel Connection.....	P41
Transformer Connection.....	TR11
Upwards Transformer Con.....	TU21
Downwards Transformer Con.....	TD21
Transformer Connection.....	TR31
Transformer Connection.....	TR41
Right Transformer Connection.....	TR51
Left Transformer Connection.....	TL51
Transformer Connection.....	TR61
Transformer Connection.....	TR71
Feeder Box.....	B10
Feeder Box.....	B11
Central Feeder Box.....	BO
Flexible.....	F

*TYPE	Utilization Type
(B) Bolt-on	Energy is supplied from the joints.
(P) Plug-in	Energy is supplied from the joints and the plug-in points.

►► Standard Straight Length



Bolt-on



Electrical energy up to 1000 A can be supplied from the joints of bolt-on type by bolt-on tap-off boxes.

Note:

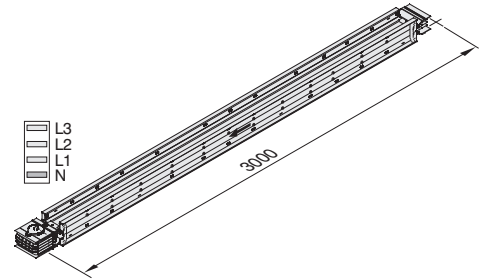
Busbar energy should be turned off, before installing bolt-on type tap-off boxes.

Bolt-on Standard Straight Length Busbar

- S T D

Sample Order:
2500 A, Aluminium,
Bolt-on, IP 55, 4 Conductors

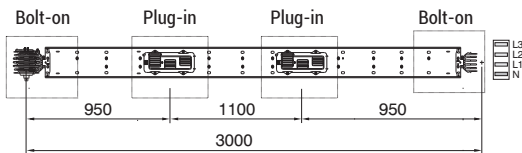
KXA 25504 - B - STD



Applications:

- As feeder or sub-feeder line,
- Where a load has to be supplied
- from the busbar.

Plug-in



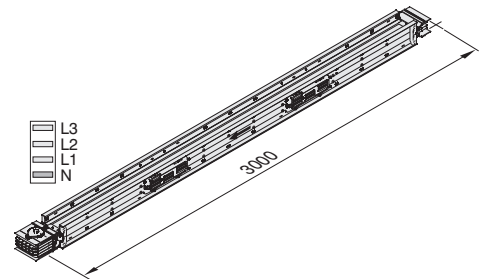
Electrical energy up to 1000 A can be supplied from the joints and up to 630 A can be supplied from the plus.

Plug-in Standard Straight Length Busbar

- S T D

Sample Order:
1250 A, Copper, Plug-in, IP 55,
4 Conductors

KXC 12504 - P - STD

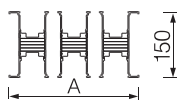
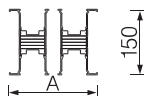


Applications:

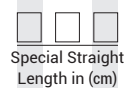
- In application of bolt-on
- As vertical feeder line high rise buildings
- For frequent energy supply
- If continuous energy needed, while tap-offs installed.

Table For Outer Dimension of Busbars

KXA - Al Conductor		KXC - Cu Conductor		A
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)
*400	04	*550	05	78
*500	05	*650	06	83
*630	06	*800	08	93
800	08	1000	10	108
1000	11	-	-	113
-	-	1250	12	123
1000	10	1350	14	133
-	-	1600	17	148
1250	12	-	-	163
1350	14	2000	23	178
1700	16	-	-	193
1600	17	-	-	213
2000	18	-	-	233
2000	20	2500	25	253
2500	29	-	-	283
2500	27	-	-	303
-	-	2000	22	204
-	-	2500	27	234
2500	25	3300	32	314
-	-	3600	36	344
3200	32	4000	40	374
3200	33	-	-	414
4000	40	5000	50	494
4000	41	-	-	454
5000	51	-	-	594
6000	60	6300	63	735



Special Straight Length

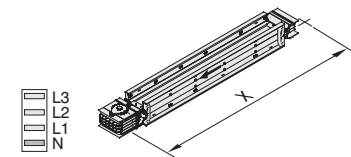


Sample Order:
2500 A, Copper, Bolt-on, IP 55,
4 Conductors, 147 cm

KXC 25504 - B - X - 147

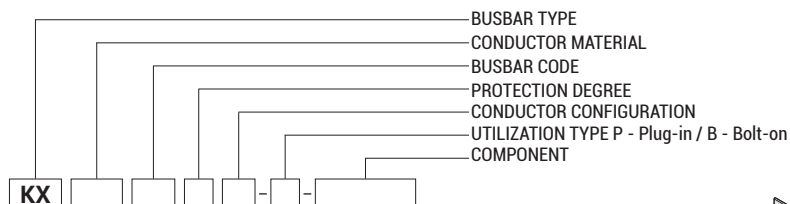
Note:

Bolt-on Minimum Length = 35cm
Plug-in Minimum Length = 100cm



Important Notice for the Tap-off box use;

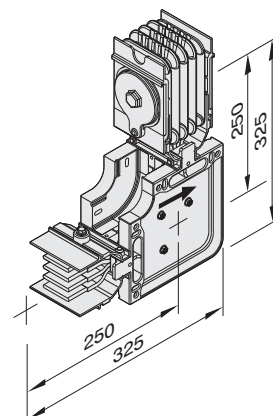
*It is not possible to install tap-off box at joint side for KXA 400A, KXA500A, KXA 630A, KXC 550A, KXC 650A and KXC 800A. KXA 400A, KXA500A, KXA 630A, KXC 550A, KXC 650A and KXC 800 busbar range may have plug-in windows at one side only. It is highly recommended to consider these points in your project designs.



Upwards Elbow - U

Sample Order:
3300 A, Copper, Bolt-on,
IP 55, 4 Conductors

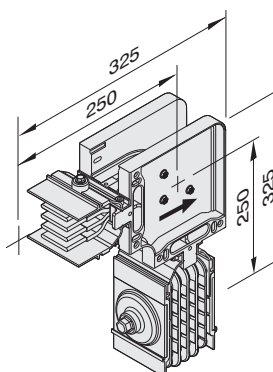
KXC 32504 - B - U



Downwards Elbow - D

Sample Order:
3300 A, Copper, Bolt-on,
IP 55, 4 Conductors

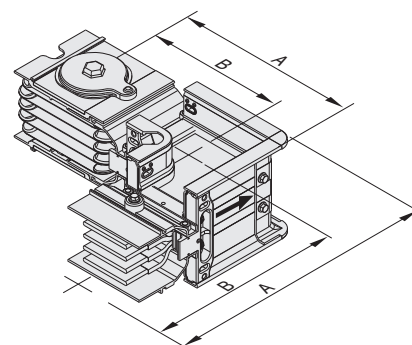
KXC 32504 - B - D



Left Elbow - L

Sample Order:
2000 A, Copper, Bolt-on,
IP 55, 4 Conductors

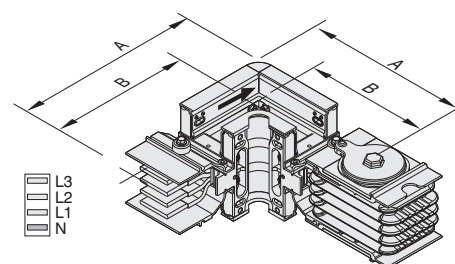
KXC 20504 - B - L



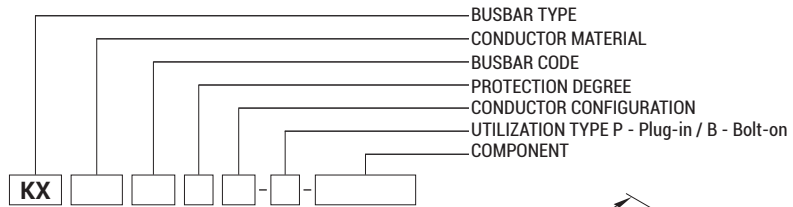
Right Elbow - R

Sample Order:
2000 A, Aluminium, Bolt-on, IP 55,
4 Conductors

KXA 20504 - B - R



KXA - Al Conductor		KXC - Cu Conductor		A	B
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)
*400	04	*550	05	253	214
*500	05	*650	06	258	217
*630	06	*800	08	268	222
800	08	1000	10	283	229
1000	11	-	-	288	232
-	-	1250	12	298	237
1000	10	1350	14	308	242
-	-	1600	17	323	249
1250	12	-	-	338	257
1350	14	2000	23	353	264
1700	16	-	-	368	272
1600	17	-	-	388	282
2000	18	-	-	408	292
2000	20	2500	25	428	302
2500	29	-	-	458	317
2500	27	-	-	478	327
-	-	2000	22	379	277
-	-	2500	27	409	292
2500	25	3300	32	489	332
-	-	3600	36	519	347
3200	32	4000	40	549	362
3200	33	-	-	589	382
4000	40	5000	50	669	422
4000	41	-	-	629	402
5000	51	-	-	769	472
6000	60	6300	63	910	543



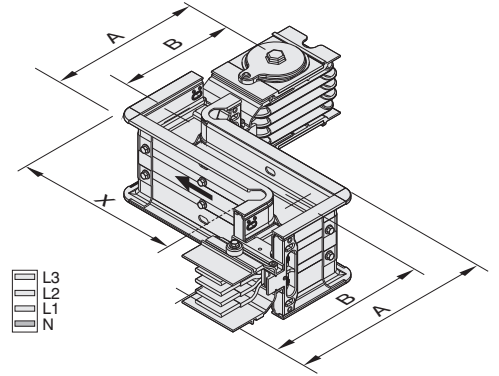
Left Horizontal Offset



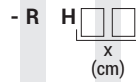
Sample Order:
X=60 cm, 3300 A, Copper
Bolton, IP 55, 4 Conductors

KXC 32504-B-LH60

Note:
X=min:28 cm,
max: *Please see table.
Used, if two horizontal elbows
can not fit.



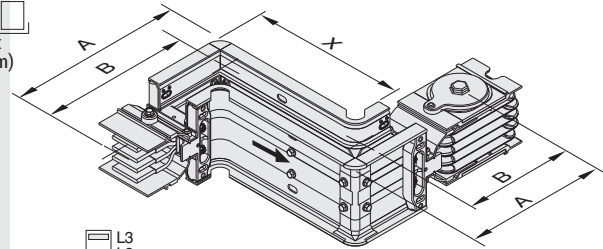
Right Horizontal Offset



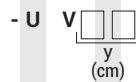
Sample Order:
X=60 cm, 3300 A, Copper
Bolton, IP 55, 4 Conductors

KXC 32504-B-RH60

Note:
X=min:28 cm,
max: *Please see table.
Used, if two horizontal elbows
can not fit.



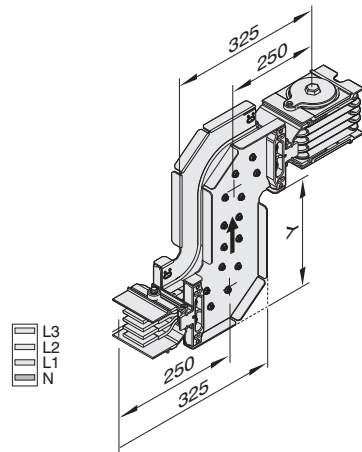
Upwards Vertical Offset



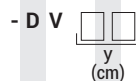
Sample Order:
Y=25 cm, 2000 A, Aluminium
Bolt-on, IP 55, 5 Conductors

KXA 20505-B-UV25

Note:
Y=min:25 cm max:49 cm



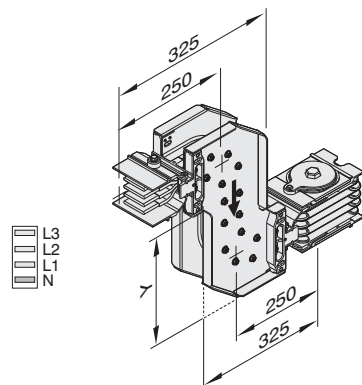
Downwards Vertical Offset



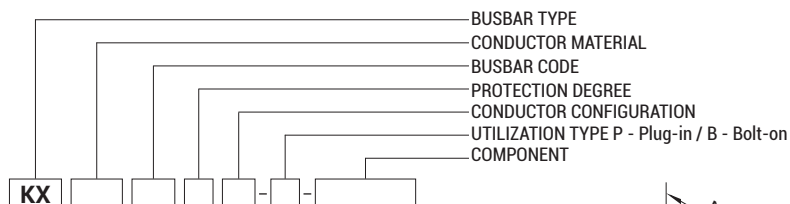
Sample Order:
Y=25 cm, 2000 A, Aluminium
Bolt-on, IP 55, 5 Conductors

KXA 20505-B-DV25

Note:
Y=min:25 cm max:49 cm



KXA - Al Conductor		KXC - Cu Conductor		A	B	X _{maks.}
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	(mm)
*400	04	*550	05	253	214	428
*500	05	*650	06	258	217	433
*630	06	*800	08	268	222	443
800	08	1000	10	283	229	458
1000	11	-	-	288	232	463
-	-	1250	12	298	237	473
1000	10	1350	14	308	242	483
-	-	1600	17	323	249	498
1250	12	-	-	338	257	513
1350	14	2000	23	353	264	528
1700	16	-	-	368	272	543
1600	17	-	-	388	282	563
2000	18	-	-	408	292	583
2000	20	2500	25	428	302	603
2500	29	-	-	458	317	633
2500	27	-	-	478	327	653
-	-	2000	22	379	277	554
-	-	2500	27	409	292	584
2500	25	3300	32	489	332	664
-	-	3600	36	519	347	694
3200	32	4000	40	549	362	724
3200	33	-	-	589	382	764
4000	40	5000	50	669	422	844
4000	41	-	-	629	402	804
5000	51	-	-	769	472	944
6000	60	6300	63	910	543	1085



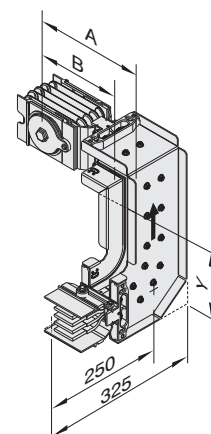
Upwards Left Combined Offset - K U L

Sample Order:
3300 A, Copper
Bolt-on, IP 55, 4 Conductors

KXC 32504 - B - KUL

Note:
Y=min. 30 cm

L3
L2
L1
N



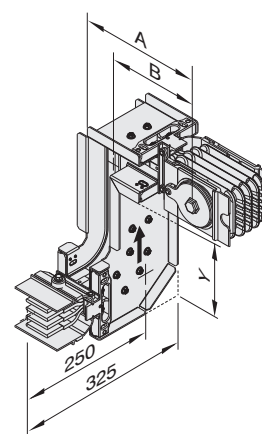
Upwards Right Combined Offset - K U R

Sample Order:
3200 A, Aluminium
Bolt-on, IP 55, 4 Conductors

KXA 33504 - B - KUR

Note:
Y=min. 30 cm

L3
L2
L1
N



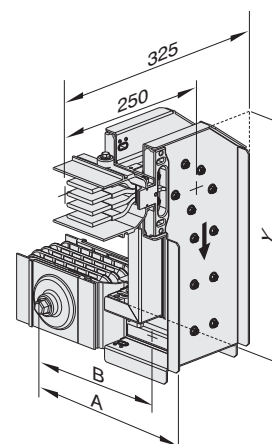
Downwards Left Combined Offset - K D L

Sample Order:
3300 A, Copper
Bolt-on, IP 55, 4 Conductors

KXC 32504 - B - KDL

Note:
Y=min. 30 cm

L3
L2
L1
N



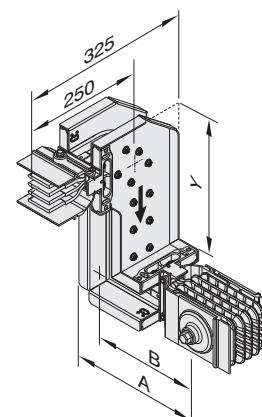
Downwards Right Combined Offset - K D R

Sample Order:
3200 A, Aluminium
Bolt-on, IP 55, 4 Conductors

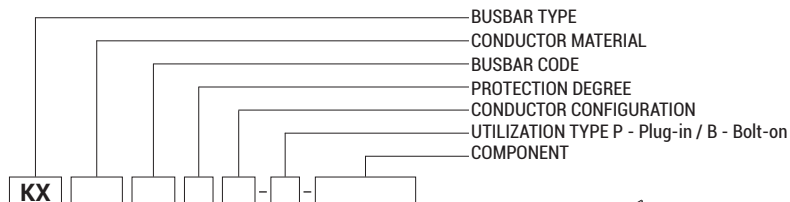
KXA 33504 - B - KDR

Note:
Y=min. 30 cm

L3
L2
L1
N



KXA - Al Conductor		KXC - Cu Conductor		A	B
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)
*400	04	*550	05	253	214
*500	05	*650	06	258	217
*630	06	*800	08	268	222
800	08	1000	10	283	229
1000	11	-	-	288	232
-	-	1250	12	298	237
1000	10	1350	14	308	242
-	-	1600	17	323	249
1250	12	-	-	338	257
1350	14	2000	23	353	264
1700	16	-	-	368	272
1600	17	-	-	388	282
2000	18	-	-	408	292
2000	20	2500	25	428	302
2500	29	-	-	458	317
2500	27	-	-	478	327
-	-	2000	22	379	277
-	-	2500	27	409	292
2500	25	3300	32	489	332
-	-	3600	36	519	347
3200	32	4000	40	549	362
3200	33	-	-	589	382
4000	40	5000	50	669	422
4000	41	-	-	629	402
5000	51	-	-	769	472
6000	60	6300	63	910	543

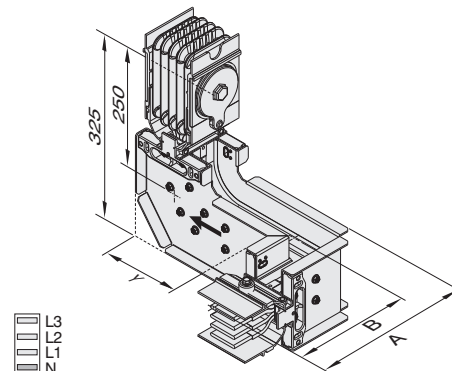


Left Upwards Combined Offset - K L U

Sample Order:
3200 A, Aluminium
Bolt-on, IP 55, 4 Conductors

KXA 33504 - B - KLU

Note:
Y=min. 30 cm

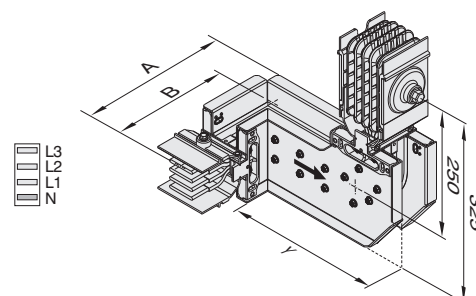


Right Upwards Combined Offset - K R U

Sample Order:
3300 A, Copper
Bolt-on, IP 55, 4 Conductors

KXC 32504 - B - KRU

Note:
Y=min. 30 cm

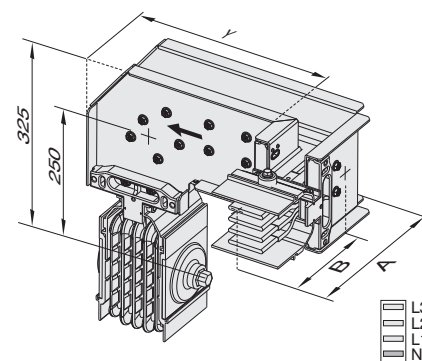


Left Downwards Combined Offset - K L D

Sample Order:
3200 A, Aluminium
Bolt-on, IP 55, 4 Conductors

KXA 33504 - B - KLD

Note:
Y=min. 30 cm

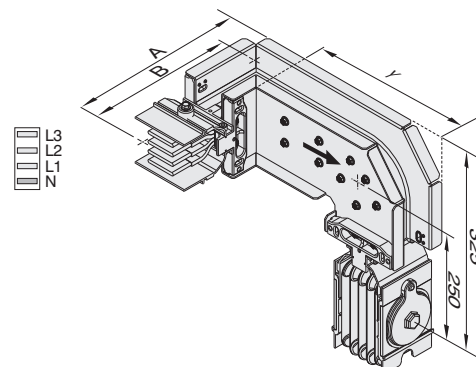


Right Downwards Combined Offset - K R D

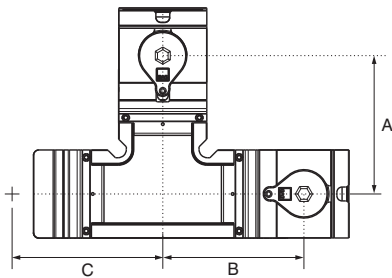
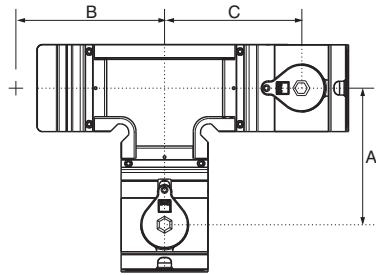
Sample Order:
3300 A, Copper
Bolt-on, IP 55, 4 Conductors

KXC 32504 - B - KRD

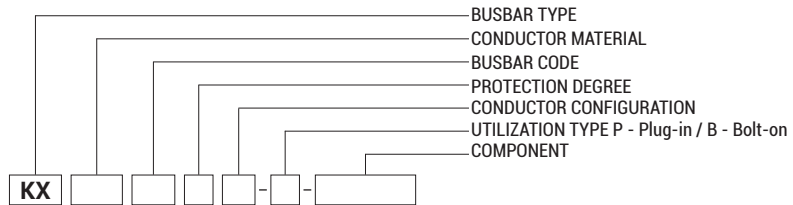
Note:
Y=min. 30 cm



KXA - Al Conductor		KXC - Cu Conductor		A	B
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)
*400	04	*550	05	253	214
*500	05	*650	06	258	217
*630	06	*800	08	268	222
800	08	1000	10	283	229
1000	11	-	-	288	232
-	-	1250	12	298	237
1000	10	1350	14	308	242
-	-	1600	17	323	249
1250	12	-	-	338	257
1350	14	2000	23	353	264
1700	16	-	-	368	272
1600	17	-	-	388	282
2000	18	-	-	408	292
2000	20	2500	25	428	302
2500	29	-	-	458	317
2500	27	-	-	478	327
-	-	2000	22	379	277
-	-	2500	27	409	292
2500	25	3300	32	489	332
-	-	3600	36	519	347
3200	32	4000	40	549	362
3200	33	-	-	589	382
4000	40	5000	50	669	422
4000	41	-	-	629	402
5000	51	-	-	769	472
6000	60	6300	63	910	543



KXA - Al Conductor		KXC - Cu Conductor		A	B	C
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	(mm)
*400	04	*550	05	214	214	214
*500	05	*650	06	217	217	217
*630	06	*800	08	222	222	222
800	08	1000	10	229	229	229
1000	11	-	-	232	232	232
-	-	1250	12	237	237	237
1000	10	1350	14	242	242	242
-	-	1600	17	249	249	249
1250	12	-	-	257	257	257
1350	14	2000	23	264	264	264
1700	16	-	-	272	272	272
1600	17	-	-	282	282	282
2000	18	-	-	292	292	292
2000	20	2500	25	302	302	302
2500	29	-	-	317	317	317
2500	27	-	-	327	327	327
-	-	2000	22	277	277	277
-	-	2500	27	292	292	292
2500	25	3300	32	332	332	332
-	-	3600	36	347	347	347
3200	32	4000	40	362	362	362
3200	33	-	-	382	382	382
4000	40	5000	50	422	422	422
4000	41	-	-	402	402	402
5000	51	-	-	472	472	472
6000	60	6300	63	543	543	543

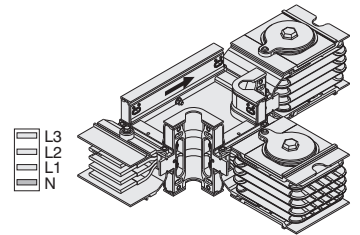


Right Side Feeder "T"

- T Y R

Sample Order:
2500 A, Copper, Bolt-on,
IP 55, 4 Conductors

KXC 25504 - B - TYR

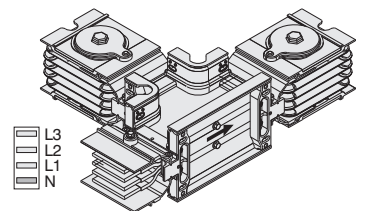


Left Side Feeder "T"

- T Y L

Sample Order:
2500 A, Aluminium, Bolt-on,
IP 55, 4 Conductors

KXA 25504 - B - TYL

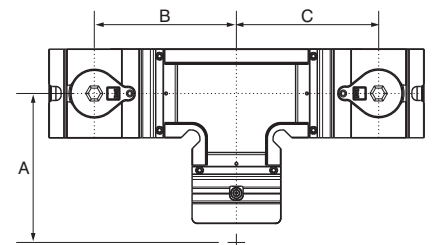
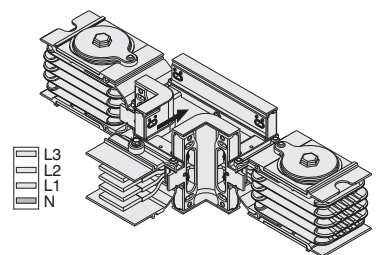


Central Feeder "T"

- T O

Sample Order:
3300 A, Copper, Bolton,
IP 55, 4 Conductors

KXC 32504 - B - TO

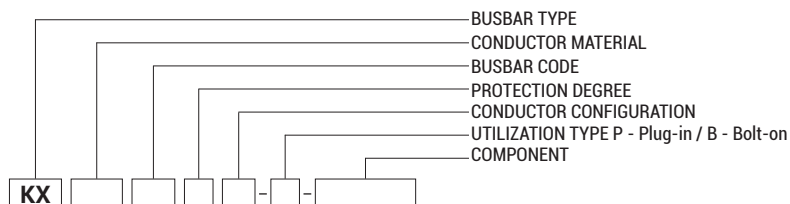


Reduction

Is used to change the busbar cross section.

NOTE:

Decisions and selection of reduction module and protection on lower side is under the customer's responsibility.

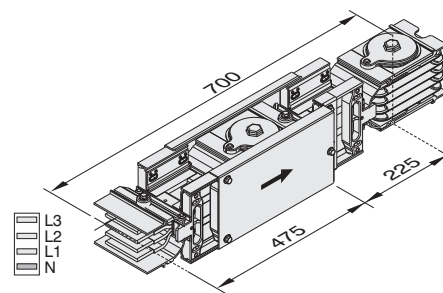


Reduction

- R D
Reduced
Busbar Current

Sample Order:
2000A / 1600A, Aluminium,
Bolt-on, IP 55, 4 Conductors

KXA 20504 - B - RD17



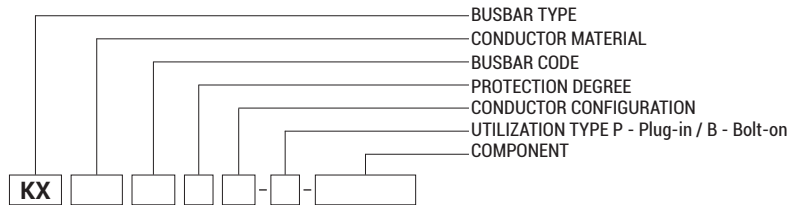
Reducers Table

KXA - Al Conductor

Rated Current	Reduced Busbar Current																			
	04	05	06	08	11	10	12	14	16	17	18	20	25	29	27	32	33	40	41	51
500	05	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
630	06	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
800	08	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	11	-	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	10	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1250	12	-	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1350	14	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-
1700	16	-	-	-	-	✓	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
1600	17	-	-	-	-	✓	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
2000	18	-	-	-	-	-	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-
2000	20	-	-	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-
2500	29	-	-	-	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
2500	27	-	-	-	-	-	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-
2500	25	-	-	-	-	-	-	-	✓	✓	-	-	-	-	-	-	-	-	-	-
3200	32	-	-	-	-	-	-	-	-	-	✓	✓	-	✓	-	-	-	-	-	-
3200	33	-	-	-	-	-	-	-	-	-	✓	✓	-	✓	-	-	-	-	-	-
4000	40	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	-	-	-	-
4000	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	-
5000	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	✓	-
6000	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓

KXC - Cu Conductor

Rated Current	Reduced Busbar Current																		
	05	06	08	10	12	14	17	22	23	25	27	32	36	40	50				
650	06	✓	-	-	-	-	-	-	-	-	-	-	-	-	-				
800	08	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-				
1000	10	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-				
1250	12	-	-	✓	✓	-	-	-	-	-	-	-	-	-	-				
1350	14	-	-	-	✓	✓	-	-	-	-	-	-	-	-	-				
1600	17	-	-	-	-	✓	✓	-	-	-	-	-	-	-	-				
2000	22	-	-	-	-	✓	✓	-	-	-	-	-	-	-	-				
2000	23	-	-	-	-	-	✓	✓	-	-	-	-	-	-	-				
2500	25	-	-	-	-	-	-	✓	✓	-	-	-	-	-	-				
2500	27	-	-	-	-	-	-	✓	✓	-	-	-	-	-	-				
3300	32	-	-	-	-	-	-	-	✓	✓	-	-	-	-	-				
3600	36	-	-	-	-	-	-	-	-	✓	✓	✓	-	-	-				
4000	40	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	-				
5000	50	-	-	-	-	-	-	-	-	-	-	-	-	✓	✓				
6300	63	-	-	-	-	-	-	-	-	-	-	-	-	-	✓				



Vertical Expansion

Used for vertical applications in multi storey buildings.

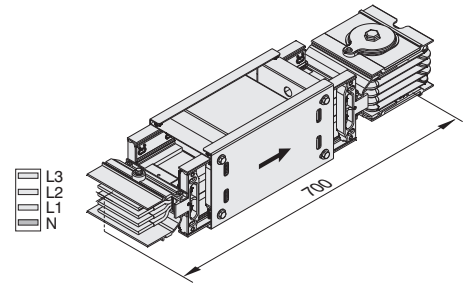
One vertical expansion unit is advised to be used at every floor between fixed support points.

Vertical Expansion

- D D T

Sample Order:
2000 A, Copper, Bolt-on,
IP 55, 4 Conductors

KXC 20504 - B - DDT



Horizontal Expansion

Used at every 40m in long horizontal straight lines and building expansion points.

Not:1) Horizontal expansion joint should be utilised if busbar line is crossing to adjacent through building expansion joints.

2) This module is used on the long busbar line (>75m.) where line is ended by end closure and is not fixed on the support rigidly.

3) Horizontal expansion joint has sufficient movement span of 54mm.

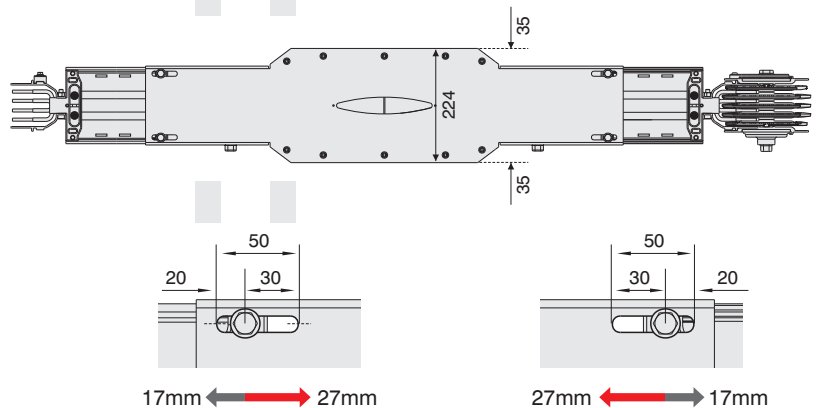
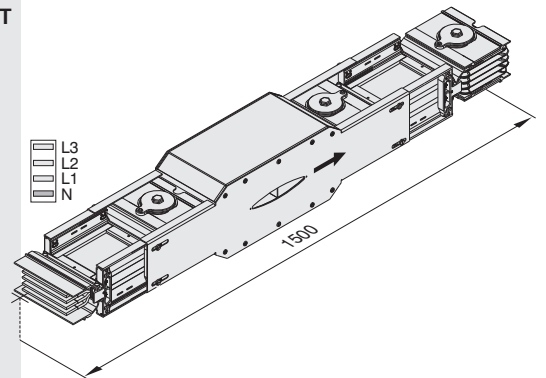
EAE requests to be consulted during design stage.

Horizontal Expansion

- Y D T

Sample Order:
2500 A, Aluminium, Bolt-on,
IP 55, 4 Conductors

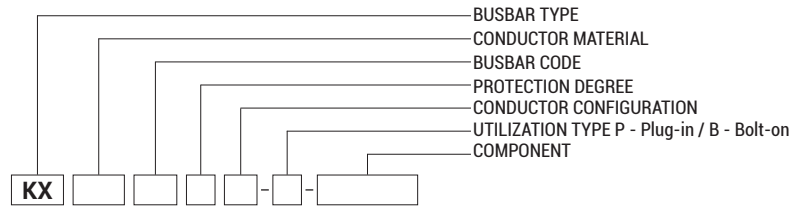
KXA 25504 - B - YDT



►► Phase Transposition Module

Phase Transposition Module

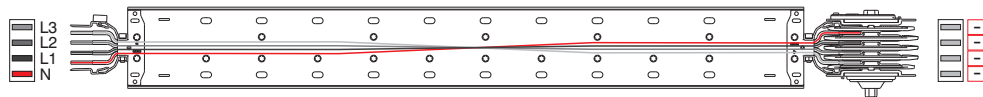
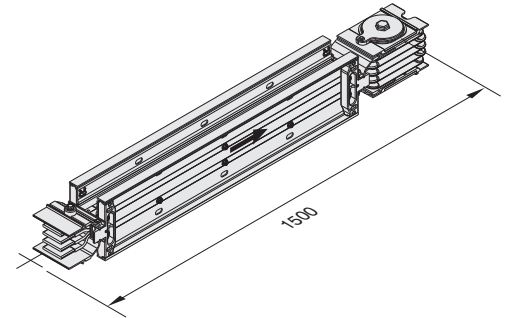
They used for transposition of phase sequence.



Phase Transposition - F D M Module

Sample Order:
2500 A, Aluminium, Bolt-on,
IP 55, 4 Conductors

KXA 25504 - B - FDM



When installation of the Tap-Off Boxes needed after the phase changer box , an approval must be taken from the customer representative in advance.

FDM Dimension Table

KXA - Al Conductor		KXC - Cu Conductor		A (mm)
Rated Current	Busbar Code	Rated Current	Busbar Code	
*400	04	*550	05	78
*500	05	*650	06	83
*630	06	*800	08	93
800	08	1000	10	108
1000	11	-	-	113
-	-	1250	12	123
1000	10	1350	14	133
-	-	1600	17	148
1250	12	-	-	163
1350	14	2000	23	178
1700	16	-	-	193
1600	17	-	-	213
2000	18	-	-	233
2000	20	2500	25	253
2500	29	-	-	283
2500	27	-	-	303
-	-	2000	22	204
-	-	2500	27	234
2500	25	3300	32	314
-	-	3600	36	344
3200	32	4000	40	374
3200	33	-	-	414
4000	40	5000	50	494
4000	41	-	-	454
5000	51	-	-	594
6000	60	6300	63	735

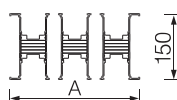
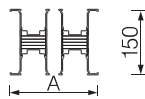
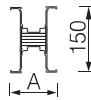


Figure 1

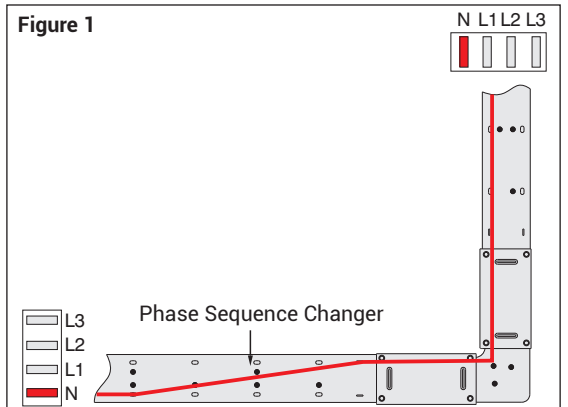
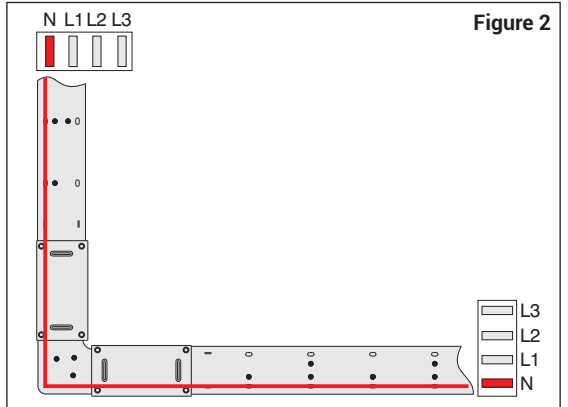
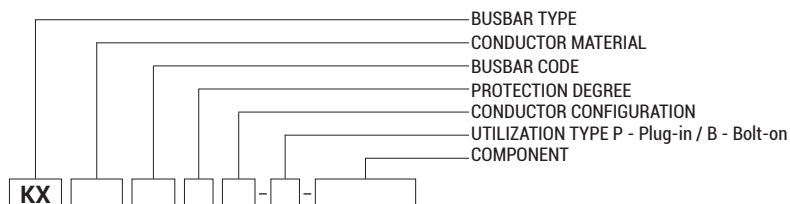


Figure 2



Vertical Shaft Application

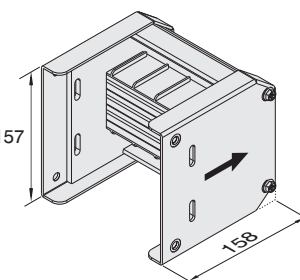
- 1- The neutral bar of KX busbar shall be at the bottom for horizontal busbar lines and on the left for vertical busbar lines. (Figure 1)
- 2- In order to maintain the neutral bar at the bottom and in the vertical busbar on the left, it is required to use the phase changing module. (Figure 2)



End Closer - S

Sample Order:
2000 A, Aluminium, 2500 A, Copper
Bolt-on, IP 55, 4 / 4½ / 5 Conductors

L3
L2
L1
N

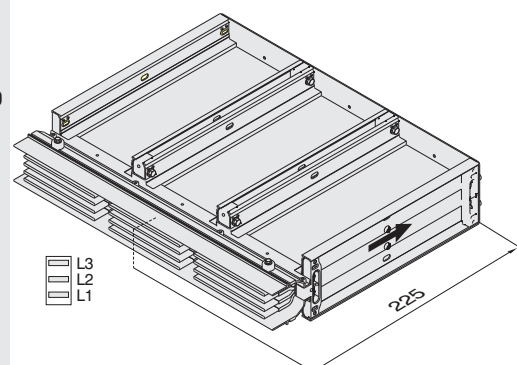


KX 205A / 255C - B - S

End Closer - S 1 0

Sample Order:
6300 A, Copper
Bolt-on, IP 67, 3 Conductors

L3
L2
L1



KXC 63603 - B - S 1 0

End Closer

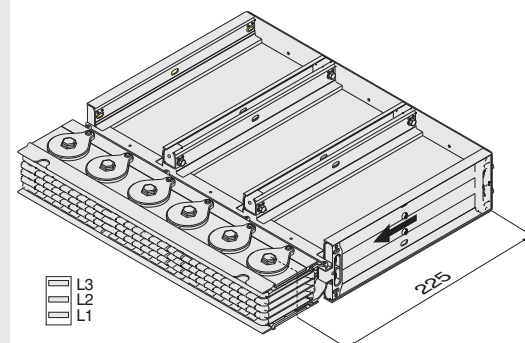
Is used to close the end of busbar run.

KXA - Al Conductor		KXC - Cu Conductor		L1, L2, L3, N + Housing 04	
				L1, L2, L3, N, ½ PE + Housing 07	
				L1, L2, L3, N, PE + Housing 05	
Rated Current	Busbar Code	Rated Current	Busbar Code	Dimensions (mm)	Order Code
*400	04	*550	05	6x25	3066129
*500	05	*650	06	6x30	3066131
*630	06	*800	08	6x40	3016698
800	08	1000	10	6x55	3016699
1000	11	-	-	6x60	3142393
-	-	1250	12	6x70	3016700
1000	10	1350	14	6x80	3016701
-	-	1600	17	6x95	3085740
1250	12	-	-	6x110	3016702
1350	14	2000	23	6x125	3016703
1700	16	-	-	6x140	3016704
1600	17	-	-	6x160	3016705
2000	18	-	-	6x180	3127358
2000	20	2500	25	6x200	3016706
2500	29	-	-	6x230	3142395
2500	27	-	-	6x250	3016710
-	-	2000	22	2(6x55)	3016707
-	-	2500	27	2(6x70)	3127358
2500	25	3300	32	2(6x110)	3016709
-	-	3600	36	2(6x125)	3016711
3200	32	4000	40	2(6x140)	3016712
3200	33	-	-	2(6x160)	3016713
4000	40	5000	50	2(6x200)	3113536
4000	41	-	-	2(6x180)	3188181
5000	51	-	-	2(6x250)	3127359
6000	60	6300	63	3(6x200)	3113537

End Closer - S 1 1

Sample Order:
5000 A, Copper,
Bolt-on, IP 55, 3 Conductors

L3
L2
L1

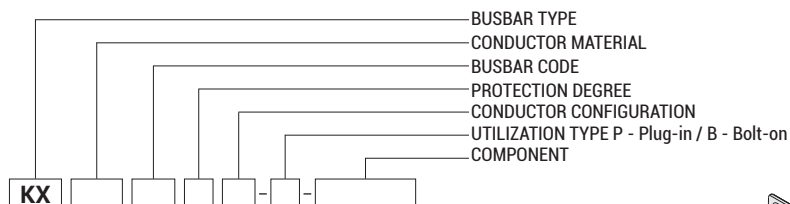
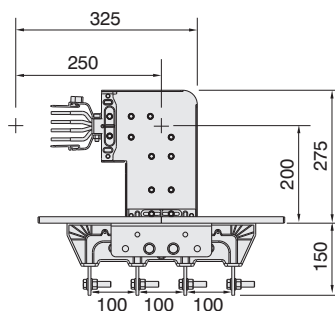
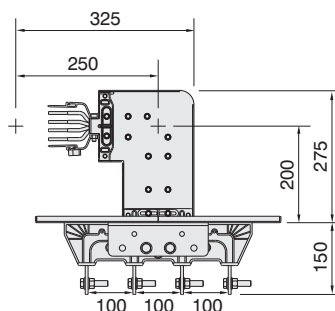
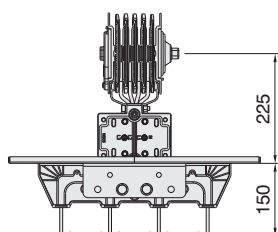
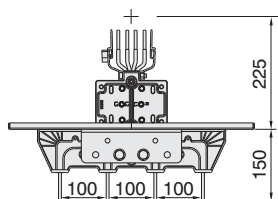


KXC 50603 - B - S 1 1

Note: S10 or S11 modules should be used as end closer for the busbars with 03, 08, 09, 06 codes and for all IP67 products.

■ The dimensions given above are minimum values.

■ Please call us for non-standard components.

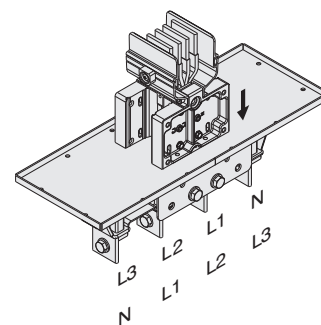


Panel Connection - P 1 0

Panel Feeder

Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors
for Panel Feeder

KXC 25504 - B - P10

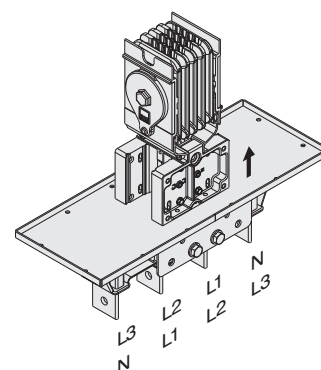


Panel Connection - P 1 1

Busbar Feeder

Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors
for Busbar Feeder

KXC 25504 - B - P11

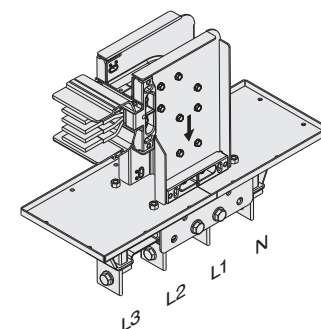


Upwards Panel Connection - P U 2 0

Panel Feeder

Sample Order:
3600 A, Copper, Bolt-on, 4 Conductors
for Panel Feeder

KXC 36504 - B - PU20

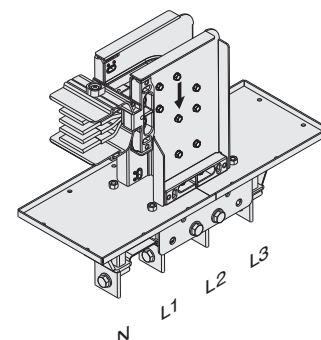


Downwards Panel Connection - P D 2 0

Panel Feeder

Sample Order:
4250 A, Copper, Bolt-on, 4 Conductors
for Panel Feeder

KXC 43504 - B - PD20



For connection dimensions please refer to tables on pages 24 and 25.

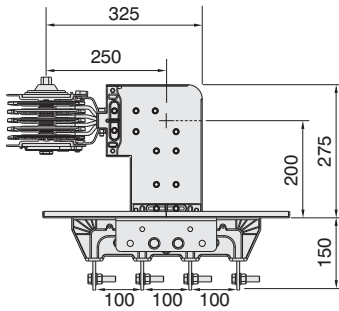
Note: Please contact with us for the dimensions of our 6 conductor solutions.

■ Distance between conductors can vary in ± 5 mm.

■ The dimensions given above are minimum values.

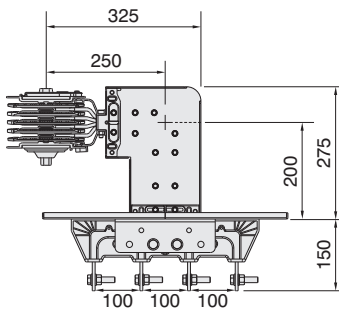
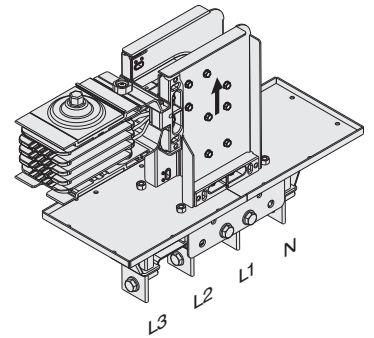
■ Please call us for non-standard components.

BUSBAR TYPE
CONDUCTOR MATERIAL
BUSBAR CODE
PROTECTION DEGREE
CONDUCTOR CONFIGURATION
UTILIZATION TYPE P - Plug-in / B - Bolt-on
COMPONENT



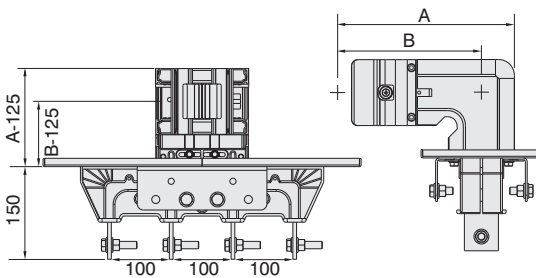
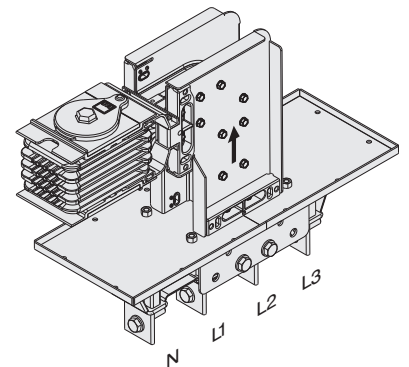
Upwards Busbar Connection
Busbar Feeder
Sample Order:
3600 A, Copper, Bolt-on, 4 Conductors
for Busbar Feeder

KXC 36504 - B - PU21



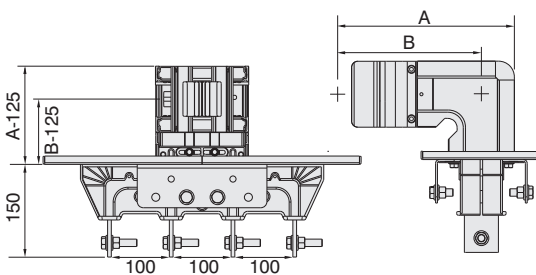
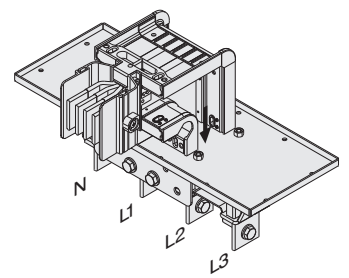
Downwards Busbar Connection
Busbar Feeder
Sample Order:
4250 A, Copper, Bolt-on, 4 Conductors
for Busbar Feeder

KXC 43504 - B - PD21



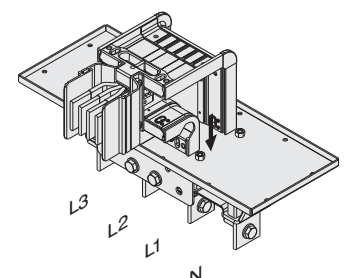
Right Panel Connection
Panel Feeder
Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors
for Panel Feeder

KXC 25504 - B - PR30



Left Panel Connection
Panel Feeder
Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors
for Panel Feeder

KXC 25504 - B - PL30



The "A" and "B" dimensions for PR30 and PL30 are the same dimensions as left and right elbows. Please refer to page 12 for the dimensions.

For connection dimensions please refer to tables on pages 24 and 25.

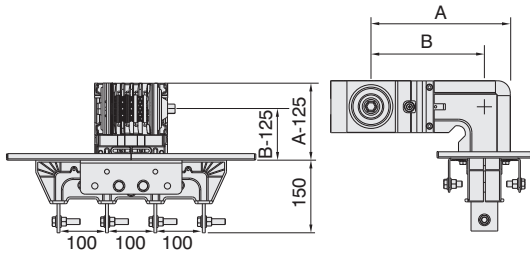
Note: Please contact with us for the dimensions of our 6 conductor solutions.

■ Distance between conductors can vary in ± 5 mm.

■ The dimensions given above are minimum values.

■ Please call us for non-standard components.

BUSBAR TYPE
CONDUCTOR MATERIAL
BUSBAR CODE
PROTECTION DEGREE
CONDUCTOR CONFIGURATION
UTILIZATION TYPE P - Plug-in / B - Bolt-on
COMPONENT

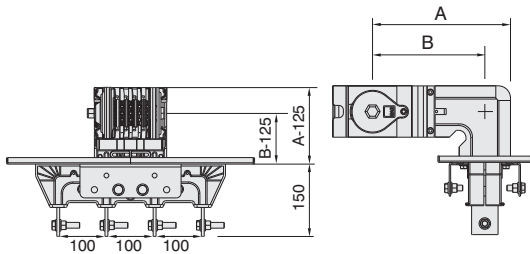
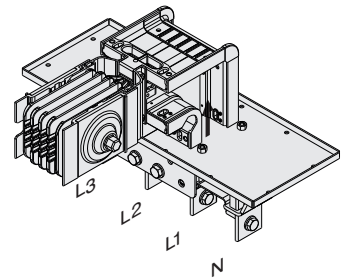


Right Panel Connection Busbar Feeder

- P R 3 1

Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors for Busbar Feeder

KXC 25504 - B - PR31

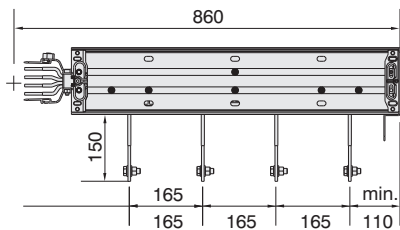
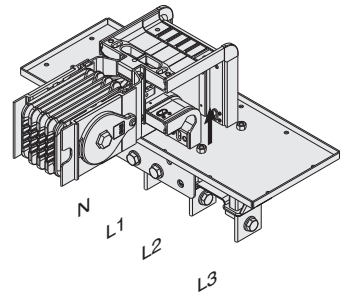


Left Panel Connection Busbar Feeder

- P L 3 1

Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors for Busbar Feeder

KXC 25504 - B - PL31



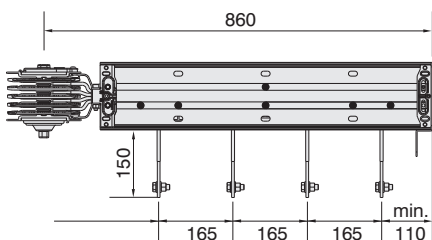
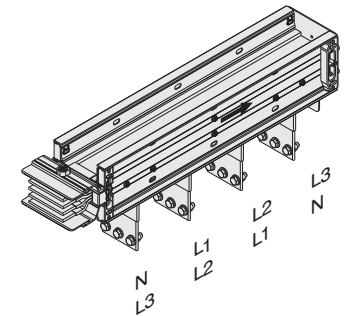
Panel Connection

- P 4 0

Panel Feeder

Sample Order:
3300 A, Copper, Bolt-on, 4 Conductors for Panel Feeder

KXC 32504 - B - P40



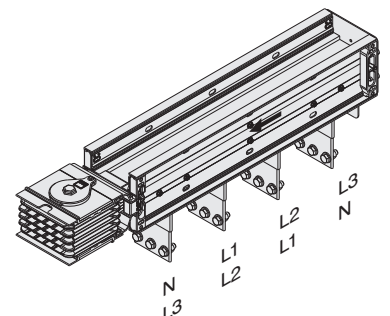
Panel Connection

- P 4 1

Busbar Feeder

Sample Order:
3300 A, Copper, Bolt-on, 4 Conductors for Busbar Feeder

KXC 32504 - B - P41



The "A" and "B" dimensions for PR31 and PL31 are the same dimensions as left and right elbows. Please refer to page 12 for the dimensions.

For connection dimensions please refer to tables on pages 24 and 25.

Note: Please contact with us for the dimensions of our 6 conductor solutions.

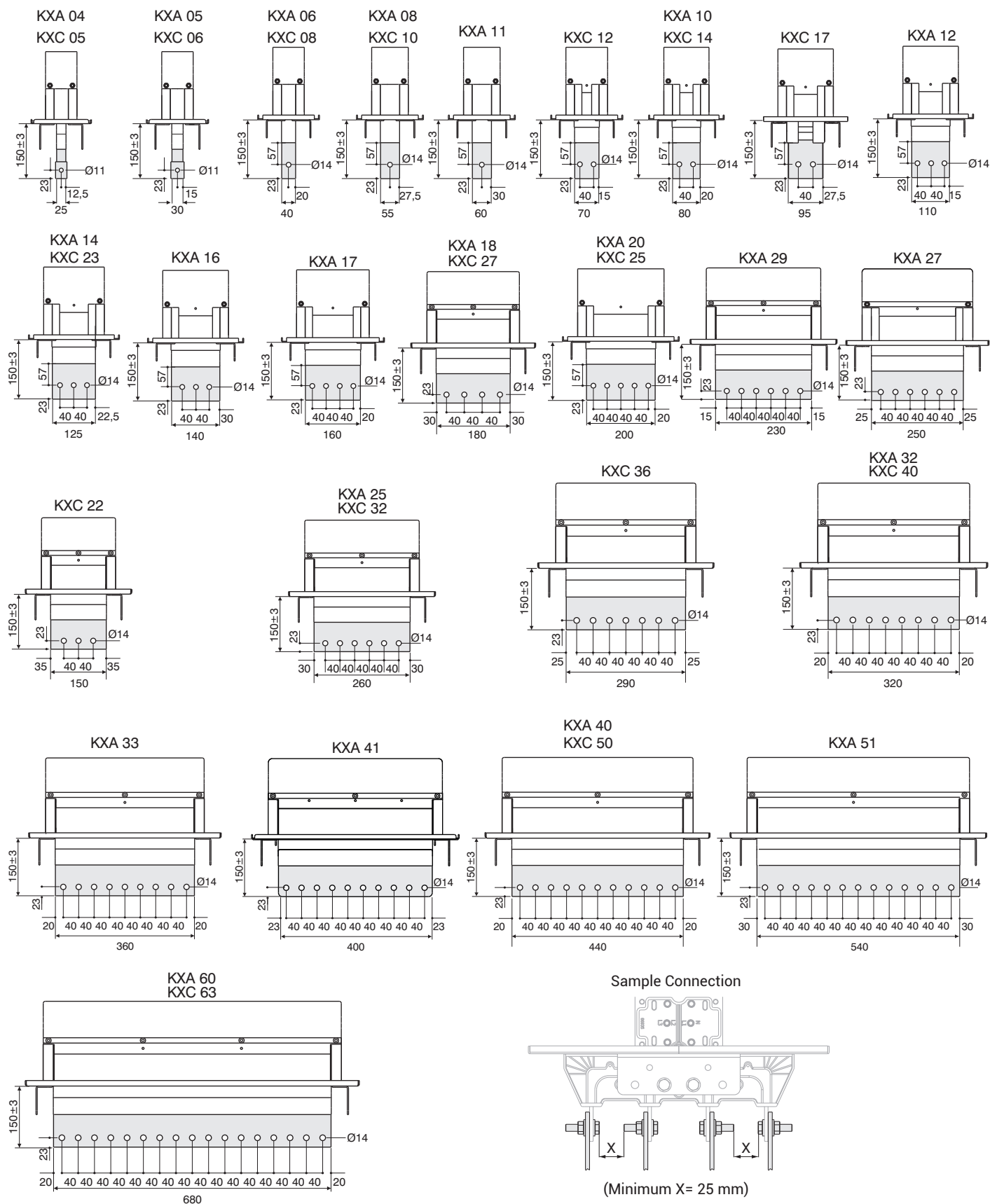
■ Distance between conductors can vary in ± 5 mm.

■ The dimensions given above are minimum values.

■ Please call us for non-standard components.

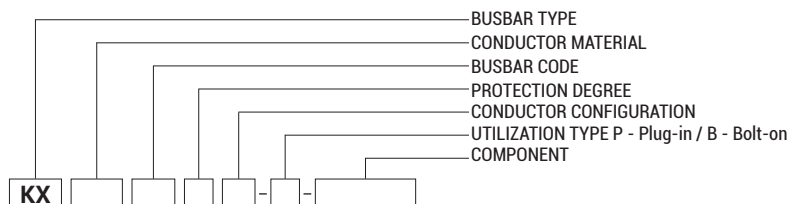
Panel Connection Units

Panel Connection Units (P10,P11,PU20, PD20, PU21, PD21, PL30,PR30,PL31,PR31,P40,P41)



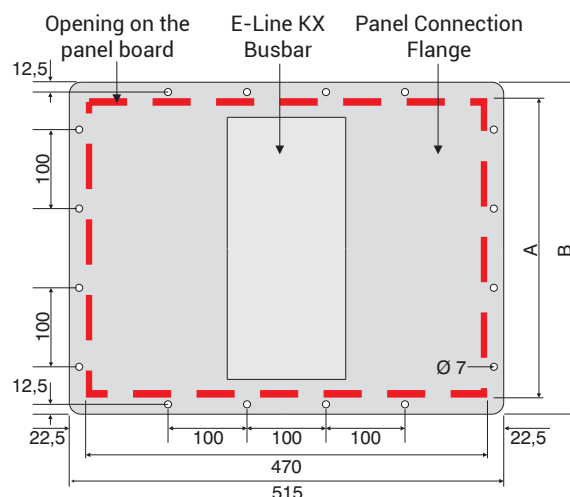
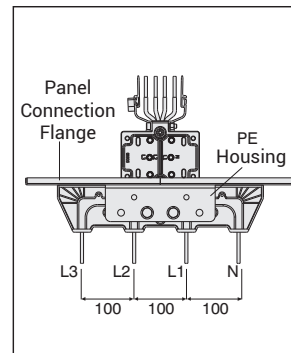
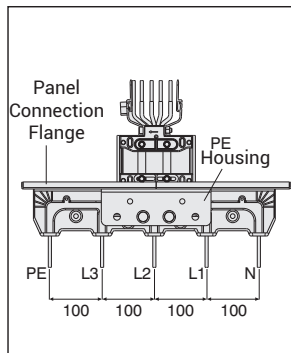
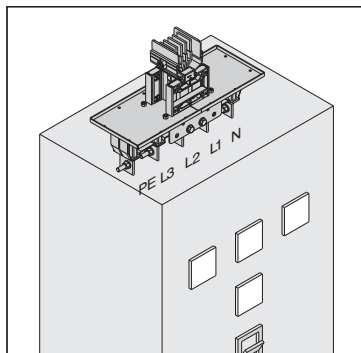
Note: Please contact with us for the dimensions of our 6 conductor solutions.

■ Please call us for non-standard components. ■ Distance between conductors can vary in ± 5 mm. ■ The dimensions given above are minimum values.



Flange Dimensions

Panel Connection Units are supplied with suitable flange as standard.

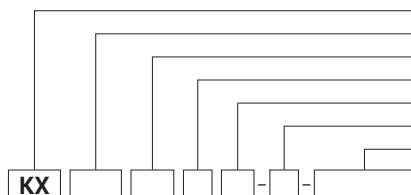
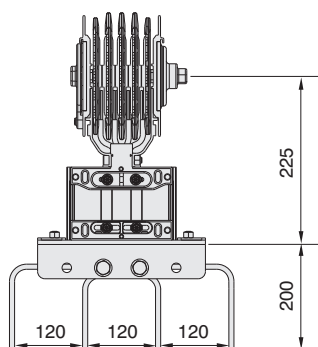


Aluminium (Al)		Copper (Cu)						
Rated Current	Busbar Code	Rated Current	Busbar Code	Conductor Size	A (mm)	B (mm)	Number of the holes along B length	* M6 Bolt/ Nut Set (pcs)
400	04	550	05	6x25	120	165	2	12
500	05	650	06	6x30	125	170	2	12
630	06	800	08	6x40	135	180	2	12
800	08	1000	10	6x55	150	195	2	12
1000	11	-	-	6x60	155	200	2	12
-	-	1250	12	6x70	165	210	2	12
1000	10	1350	14	6x80	175	220	2	12
-	-	1600	17	6x95	190	235	3	14
1250	12	-	-	6x110	205	250	3	14
1350	14	2000	23	6x125	220	265	3	14
1700	16	-	-	6x140	235	280	3	14
1600	17	-	-	6x160	255	300	3	14
2000	18	-	-	6x180	275	320	3	14
2000	20	2500	25	6x200	295	340	4	16
2500	29	-	-	6x230	325	370	4	16
2500	27	-	-	6x250	345	390	4	16
-	-	2000	22	2(6x55)	245	290	3	14
-	-	2500	27	2(6x70)	275	320	3	14
2500	25	3300	32	2(6x110)	355	400	4	16
-	-	3600	36	2(6x125)	385	430	4	16
3200	32	4000	40	2(6x140)	415	460	5	18
3200	33	-	-	2(6x160)	455	500	5	18
4000	40	5000	50	2(6x200)	535	580	6	20
4000	41	-	-	2(6x180)	495	540	5	19
5000	51	-	-	2(6x250)	635	680	7	22
6000	60	6300	63	3(6x200)	775	820	8	24

* Bolt and nut sets are supplied together with related product as per the quantities below.

Note: Please contact with us for the dimensions of our 6 conductor solutions.

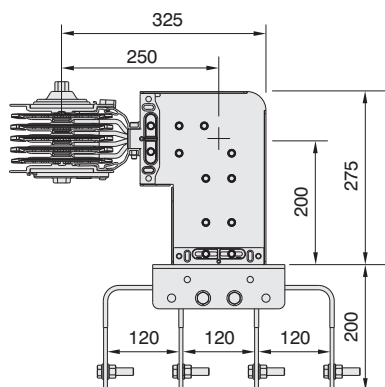
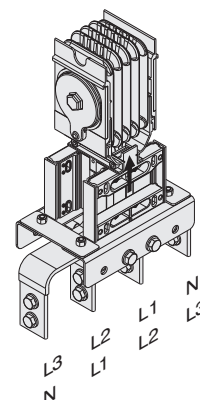
BUSBAR TYPE
CONDUCTOR MATERIAL
BUSBAR CODE
PROTECTION DEGREE
CONDUCTOR CONFIGURATION
UTILIZATION TYPE P - Plug-in / B - Bolt-on
COMPONENT



Transformer Connection - T R 1 1

Sample Order:
2500 A, Aluminium,
Bolt-on, 4 Conductors

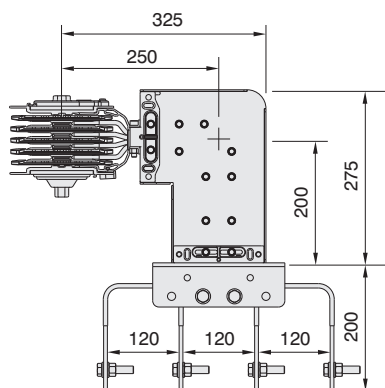
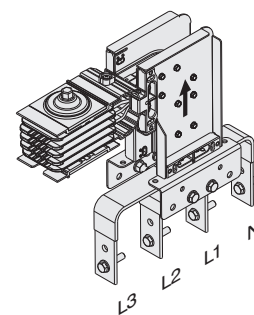
KXA 25504 - B - TR11



Upwards Transformer Connection - T U 2 1

Sample Order:
2500 A, Copper, Bolt-on,
4 Conductors

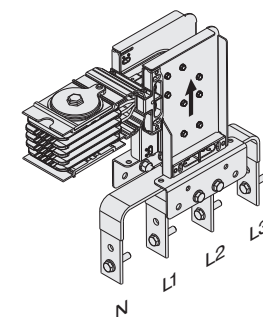
KXC 25504 - B - TU21-120



Downwards Transformer Connection - T D 2 1

Sample Order:
2500 A, Aluminium, Bolt-on, 4
Conductors

KXA 25504 - B - TD21

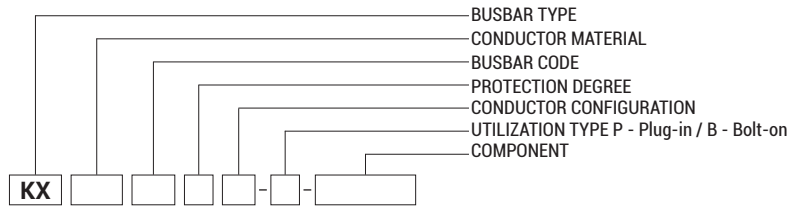


For connection dimensions please refer to tables on pages 29 and 30.

Note: Please contact with us for the dimensions of our 6 conductor solutions.

■ Distance between conductors can vary in ± 5 mm. ■ The dimensions given above are minimum values. ■ Please call us for non-standard components.

►► Transformer Connections



For transformer and panel connection applications EAE design and planning department can prepare your projects upon request.

For the design, the following information is required;

- Plan of transformer and panel board room, heights.
- Transformer dimensions, distance between bushings.

A and B dimensions of TR51 and TL51 are same as left and right elbows.

Please refer to page 12 for the dimensions.

For connection dimensions please refer to tables on pages 29 and 30.

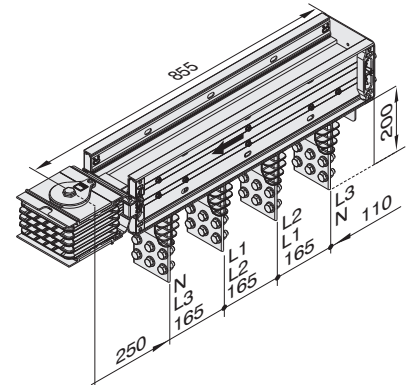
Flexible are used for

- Transformer - busbar,
- Panel - busbar connections.

Transformer Connection - T R 3 1

Sample Order:
2500 A, Copper, Bolt-on,
4 Conductors

KXC 25504 - B - TR31



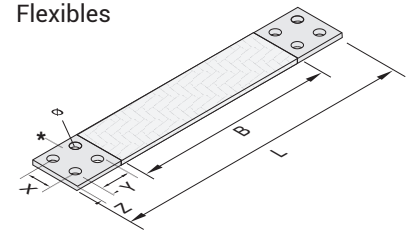
- F

Sample Order:
800 A, Aluminium

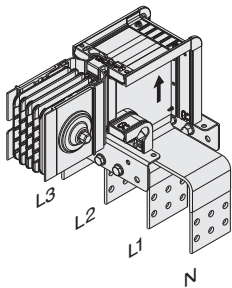
KXA 0800 - F40

B=.....mm
X=.....mm
Y=.....mm
Z=.....mm
Ø=.....mm

Flexibles



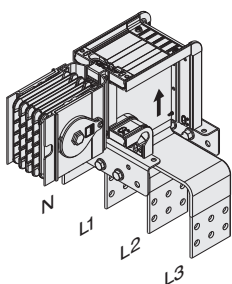
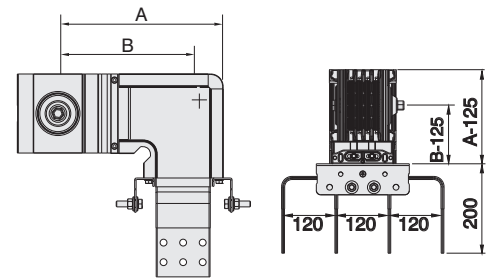
- This side is punched according to the needs of the customer.



Right Transformer Connection - T R 5 1

Sample Order:
2500 A, Copper, Bolt-on,
4 Conductors

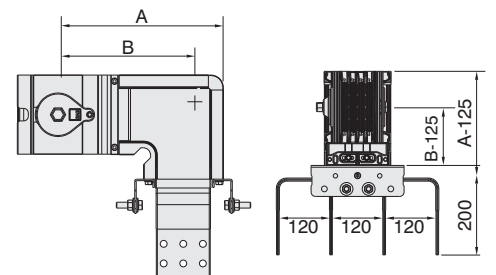
KXC 25504 - B - TR51



Left Transformer Connection - T L 5 1

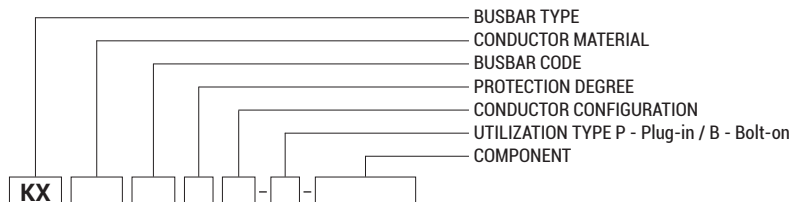
Sample Order:
2500 A, Aluminium,
Bolt-on, 4 Conductors

KXA 25504 - B - TL51



Note: Please contact with us for the dimensions of our 6 conductor solutions.

■ Distance between conductors can vary in ± 5 mm. ■ The dimensions given above are minimum values. ■ Please call us for non-standard components.



For transformer and panel connection applications EAE design and planning department can prepare your projects upon request.

For the design, the following information is required;

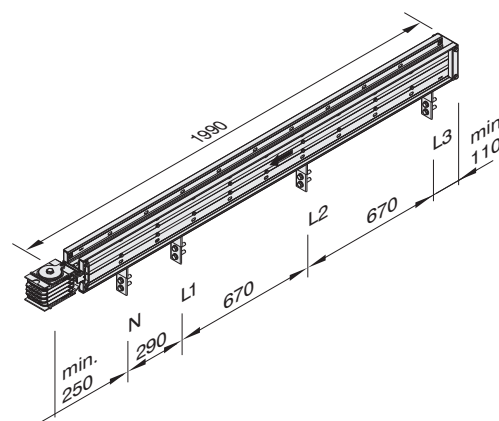
- Plan of transformer and panel board room, heights.
- Transformer dimensions, distance between bushings.

For connection dimensions please refer to tables on pages 29 and 30.

Transformer Connection - T R 4 1

Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors

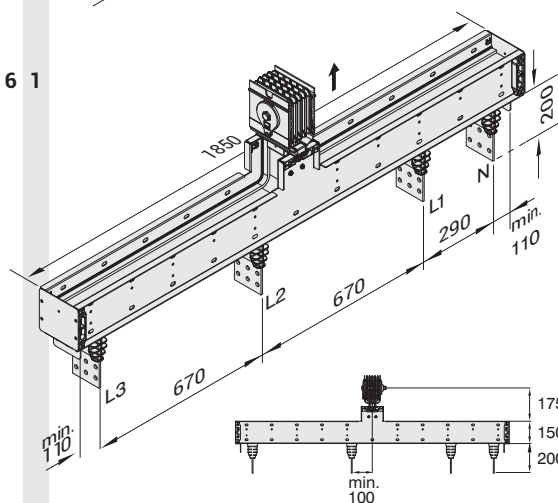
KXC 25504 - B - TR41



Transformer Connection - T R 6 1

Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors

KXC 36504 - B - TR61



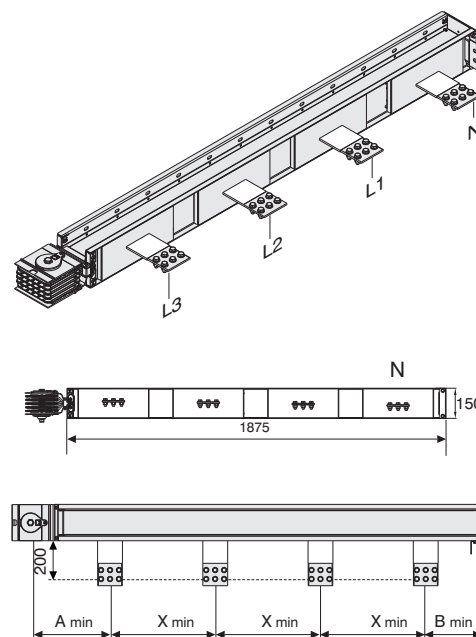
TR71 Dimension Table

KXA - Al Conductor		KXC - Cu Conductor		Conductor	A	B	X
Rated Current	Busbar Code	Rated Current	Busbar Code		(mm)	(mm)	(mm)
* 400	04	*550	05	6x25	263	123	85
* 500	05	*650	06	6x30	265	125	90
* 630	06	*800	08	6x40	270	130	100
800	08	1000	10	6x55	278	138	115
1000	11	-	-	6x60	280	140	120
-	-	1250	12	6x70	285	145	130
1000	10	1350	14	6x80	290	150	140
-	-	1600	17	6x95	298	158	155
1250	12	-	-	6x110	305	165	170
1350	14	2000	23	6x125	313	173	185
1700	16	-	-	6x140	320	180	200
1600	17	-	-	6x160	330	190	220
2000	18	-	-	6x180	340	200	240
2000	20	2500	25	6x200	350	210	260
2500	29	-	-	6x230	365	225	260
2500	27	-	-	6x250	375	235	310
-	-	2000	22	2(6x55)	278	138	115
-	-	2500	27	2(6x70)	285	145	130
2500	25	3300	32	2(6x110)	305	165	170
-	-	3600	36	2(6x125)	313	173	185
3200	32	4000	40	2(6x140)	320	180	200
3200	33	-	-	2(6x160)	330	190	220
4000	40	5000	50	2(6x200)	350	210	260
4000	41	-	-	2(6x180)	627	401	802
5000	51	-	-	2(6x250)	375	235	310

Transformer Connection - T R 7 1

Sample Order:
4000 A, Copper, Bolt-on, 4 Conductors

KXC 40504 - B - TR71



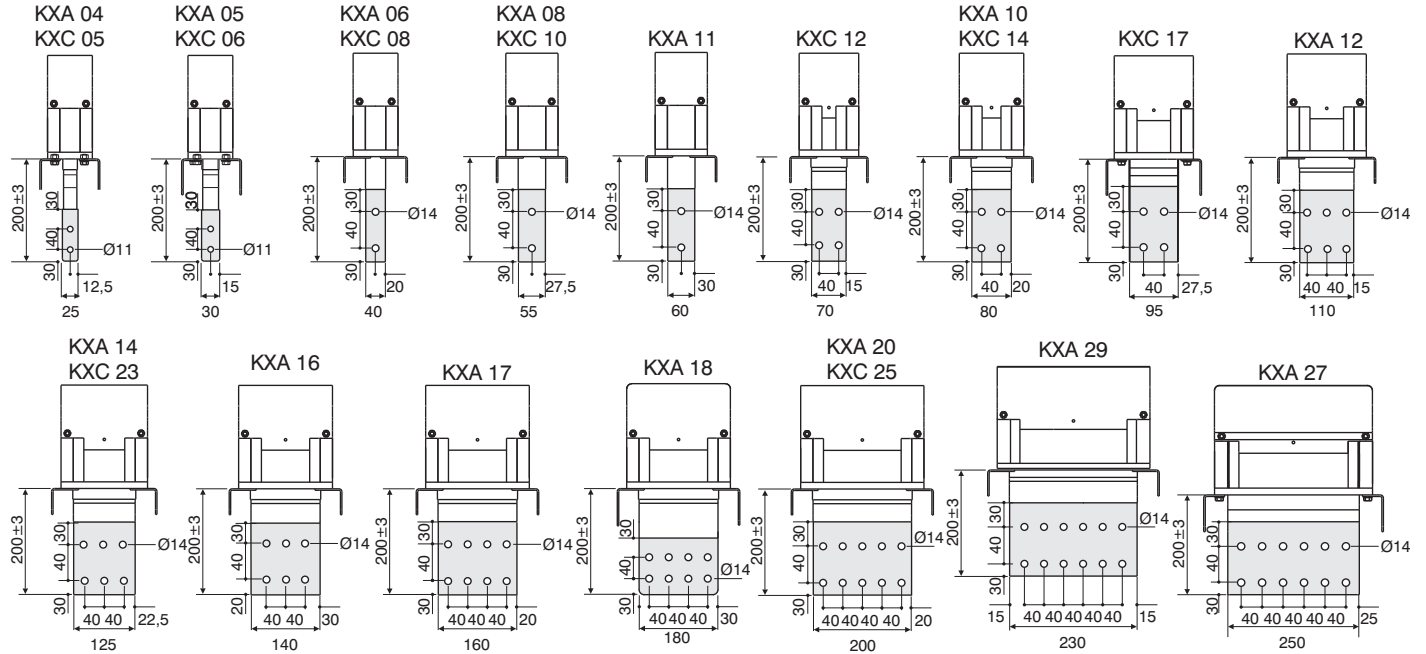
Note: Please contact with us for the dimensions of our 6 conductor solutions.

■ Distance between conductors can vary in ± 5 mm. ■ The dimensions given above are minimum values. ■ Please call us for non-standard components.

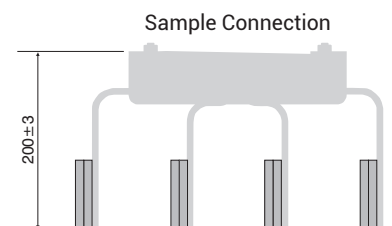
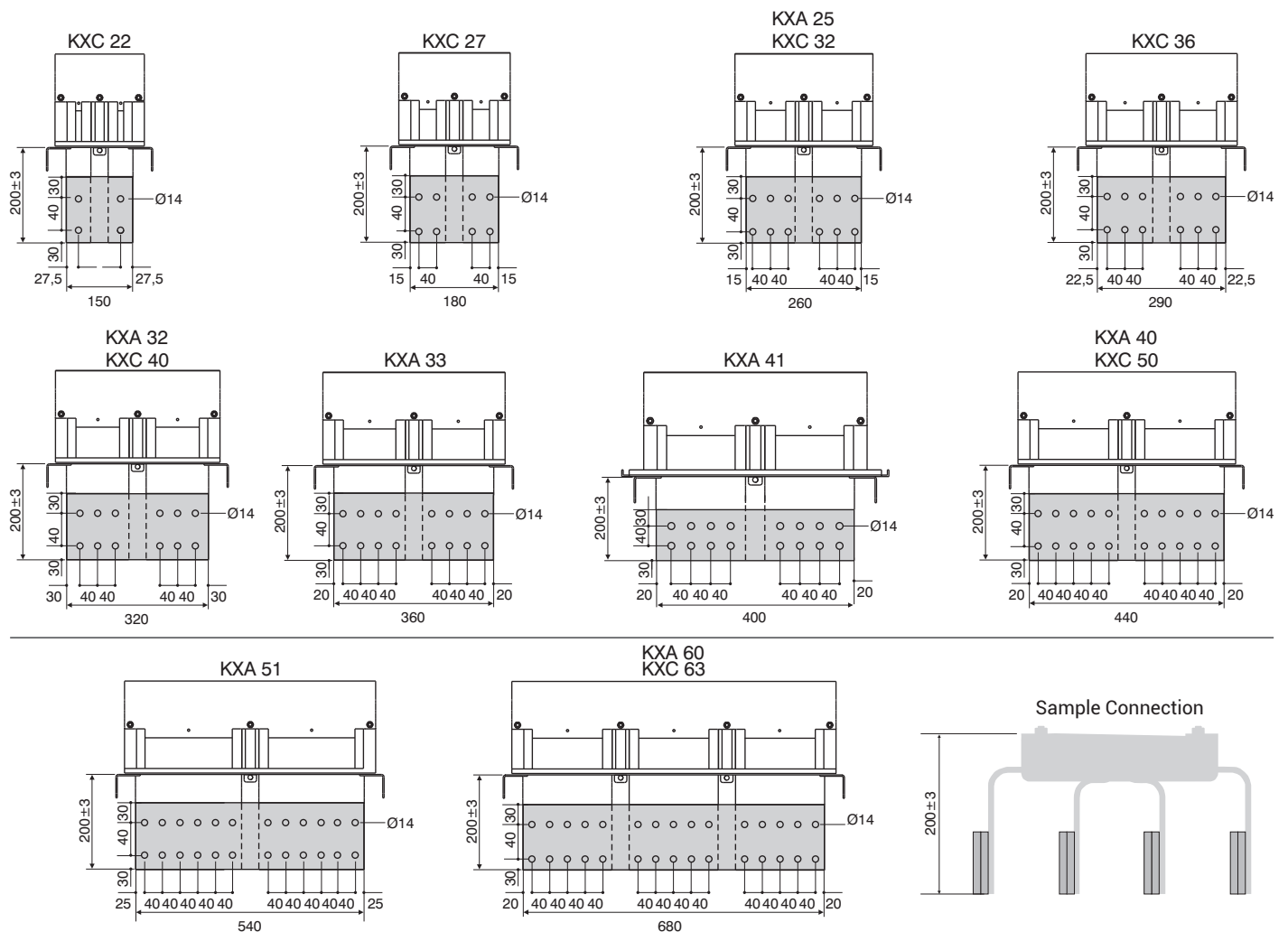
Transformer Connection Units

Transformer Connection Units (TR31, TR41, TR61, TR71)

Note: No flange supplied with transformer connection units.



■ Consider the dimensions given above for TR71 Transformer Modules.



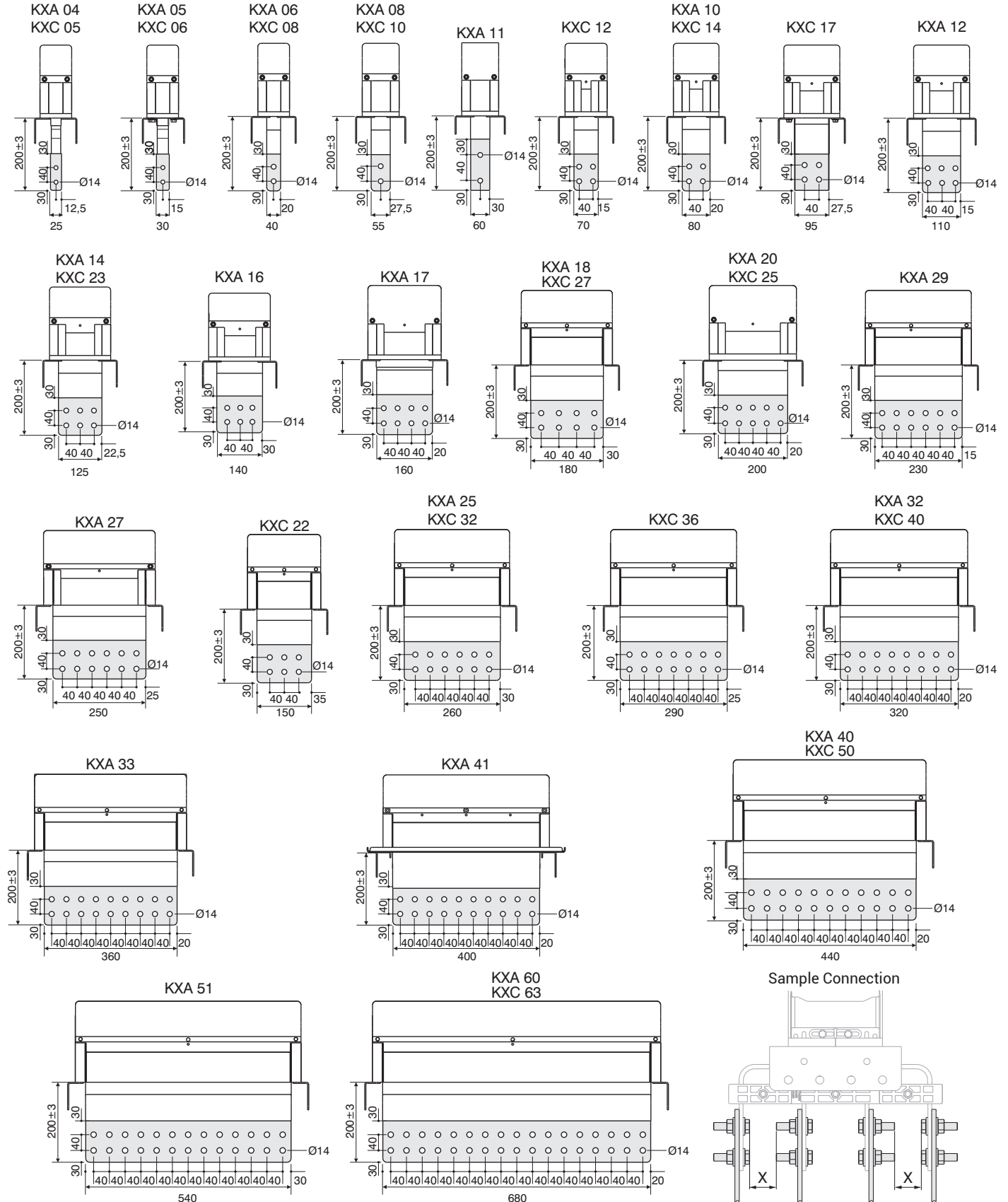
Note: Please contact with us for the dimensions of our 6 conductor solutions.

■ Distance between conductors can vary in ± 5 mm. ■ The dimensions given above are minimum values. ■ Please call us for non-standard components.

Transformer Connection Units

Transformer Connection Units (TR11, TU21, TD21, TR51, TL51)

Note: No flange supplied with transformer connection units.

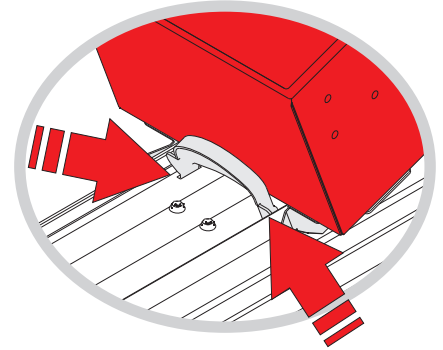
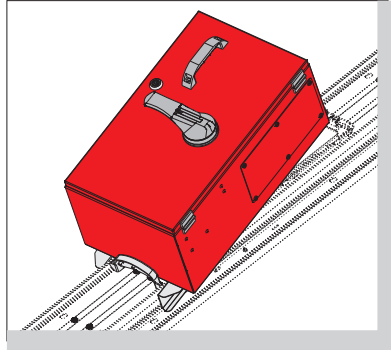
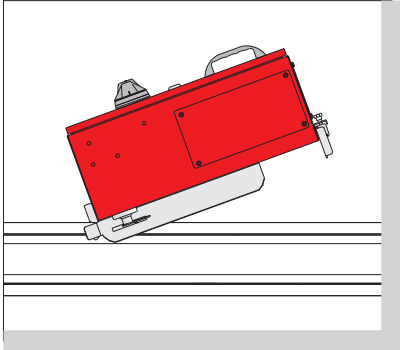


Note: Please contact with us for the dimensions of our 6 conductor solutions.

■ Distance between conductors can vary in ±5 mm. ■ The dimensions given above are minimum values. ■ Please call us for non-standard components.

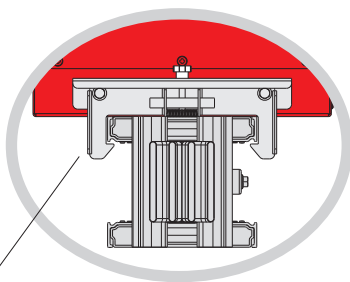
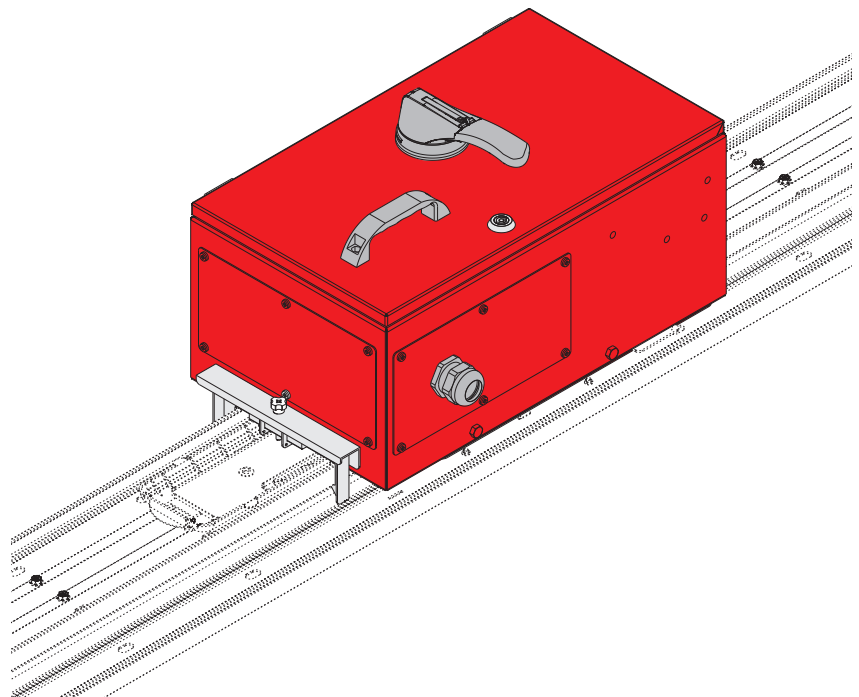
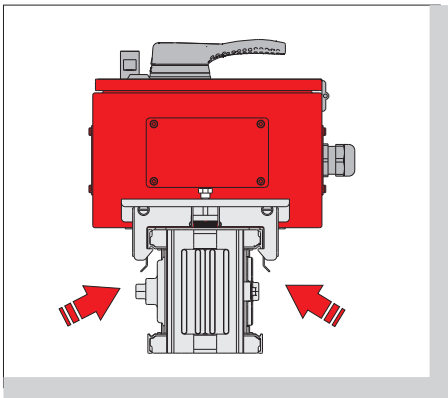
Easy Installation System of Tap-off Boxes

The patented hinge system is designed to allow the installation of plug-in tap-off boxes simply and easily.

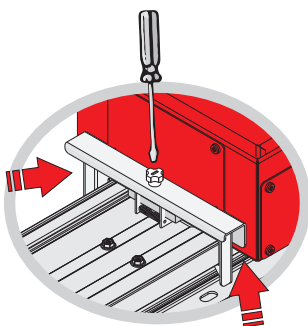


Fixing System of Tap-off Boxes to Busbars

Hook system, which is used for fixing of tap-off boxes on busbars.



Locking
Point

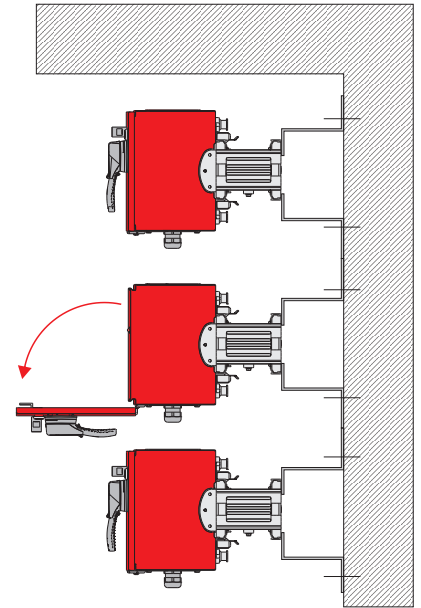
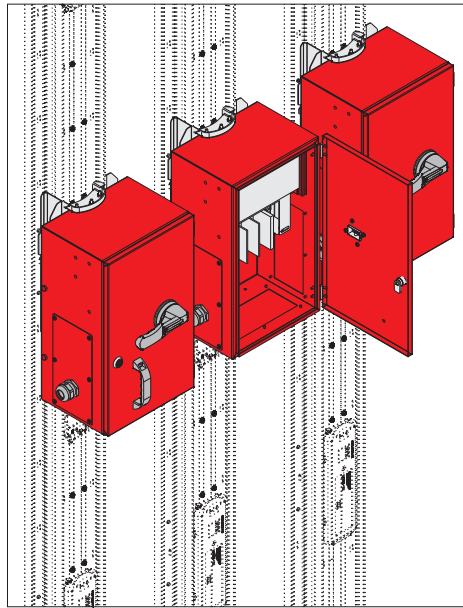


Universal Tap-off Boxes

Tap off boxes can be equipped with any brand of switches, circuit breakers and etc. Please inform EAE the type and brand of chosen MCCB, when ordering.

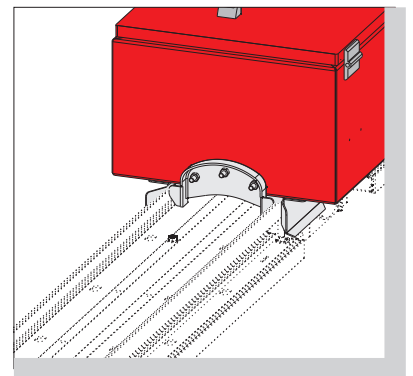
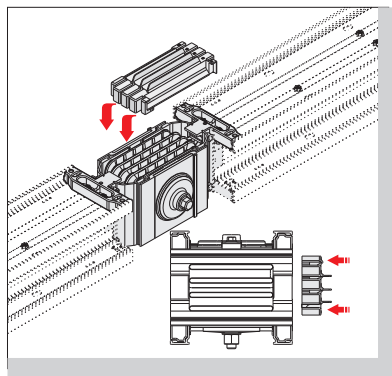
Side Opening Box Lids

A new generation of tap-off box with side opening lids enables easier connection to protective devices and maintenance.



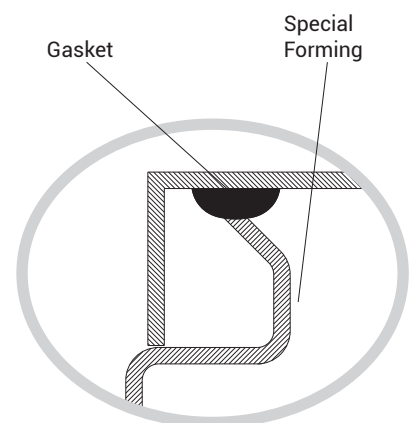
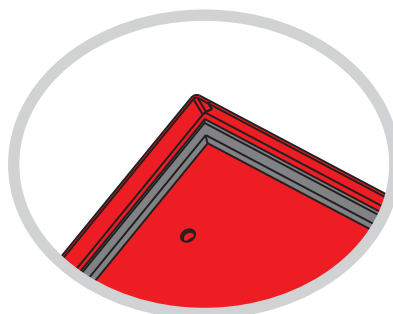
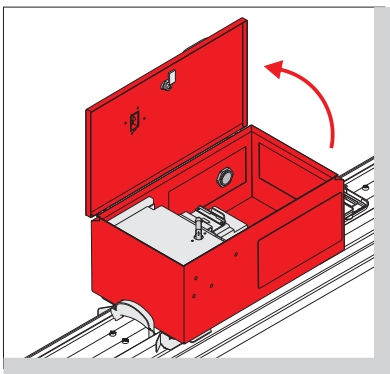
Bolt-on Tap-off Boxes

- Bolt-on tap-off boxes are designed to be installed at the joints without removing the joint block.
- The range of tap off boxes from 160A upto 1.000A.
- Busbar run must be de-energized before installing bolt-on tap-off boxes.

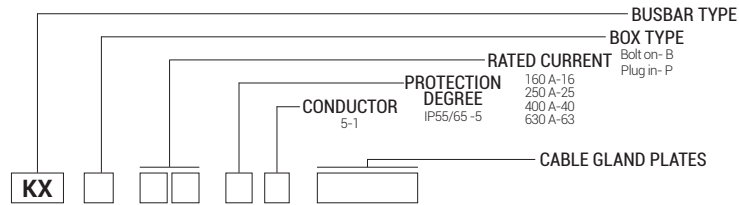


Effective Gasket

- Protection from dust and humidity due to effective gasket system.
- High IP Protection due to special forming.



►► Tap-off Boxes with Fused Switches (Bolt-on-KXB)



Cable Gland Plates

Mat.	Cable Gland Type	Order Code	Inner Diameter (mm)
Sheet	----	RP0	----
Sheet	M32	RP1	25
Sheet	M40	RP2	32
Sheet	Special	RP3	63
AL	2xSpecial	RP4	63
AL	4xM25	RP5	18
AL	4xM32	RP6	25
AL	4xM40	RP7	32
AL	8xM32	RP8	25

Notes:

EAE Bolt-on Tap Off Boxes are secured with an interlocking mechanism. This protects against attaching them to or removing them from the busbar in the "ON" position. When in the "OFF" position they are safe to attach to or remove from the busbar.

- Tap off boxes shall not be used empty. Fused switches, MCCBs or similar protection devices must be installed into tap-off boxes before they are installed to the busbar runs.

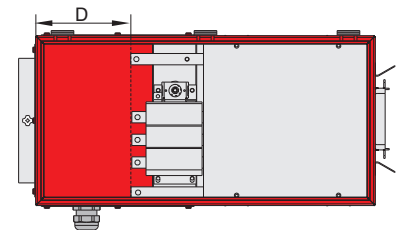
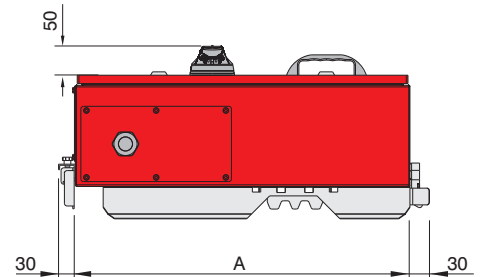
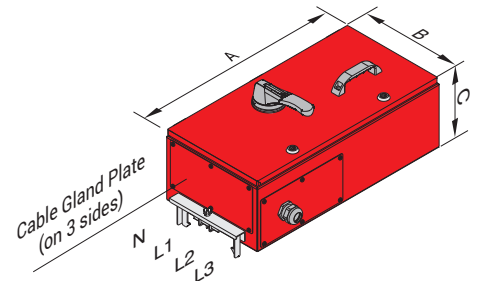
Bolt-on Tap-off Boxes

KX B 1 6 5 1
KX B 2 5 5 1
KX B 4 0 5 1
KX B 6 3 5 1

Sample Order:

Bolt-on / 630 A / IP-55 /
5 Conductors

KXB 6351



Bolt-on tap-off box can not be used on the joints of mentioned ranges of busbars.

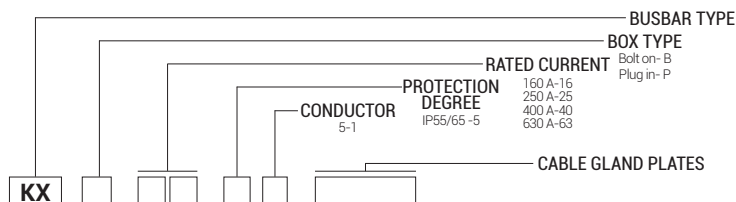
Tap-off Boxes	A (mm)	B (mm)	C (mm)	D (mm)	Fuse Size	Standard Gland
KXB 16	750	380	240	265	NH00	RP2
KXB 25	750	380	240	265	NH 1	RP3
KXB 40	850	420	260	265	NH 3	RP4
KXB 63	850	420	260	265	NH 3	RP4

KXA - Al Conductor		KXC - Cu Conductor		Bolt-on Tap-off Box
Rated Current	Busbar Code	Rated Current	Busbar Code	
400	04	550	05	x
500	05	650	06	x
630	06	800	08	x

Gland Type	Max. External Diameter of Cable Cross-section (mm)
M25	Ø 18
M32	Ø 26
M40	Ø 33
M50	Ø 39
M63	Ø 45
Special for EAE	Ø 60

*Tap-off boxes can be equipped with any brand of switches and etc.

►► Tap-off Boxes with Fused Switches (Plug-in-KXP)



Cable Gland Plates

	Mat.	Cable Gland Type	Order Code	Inner Diameter (mm)
	Sheet	----	RP0	----
	Sheet	M32	RP1	25
	Sheet	M40	RP2	32
	Sheet	Special	RP3	63
	AL	2xSpecial	RP4	63
	AL	4xM25	RP5	18
	AL	4xM32	RP6	25
	AL	4xM40	RP7	32
	AL	8xM32	RP8	25

Notes:

EAE Plug-in Tap Off Boxes are secured with an interlocking mechanism. This protects against attaching them to or removing them from the busbar in the "ON" position. When in the "OFF" position they are safe to attach to or remove from the busbar.

- Tap off boxes shall not be used empty. Fused switches, MCCBs or similar protection devices must be installed into tap-off boxes before they are installed to the busbar runs.

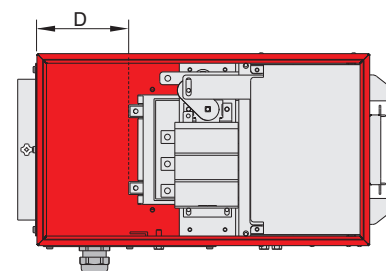
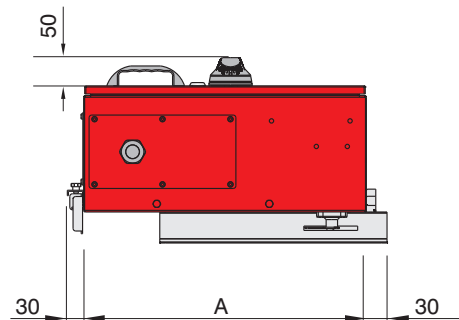
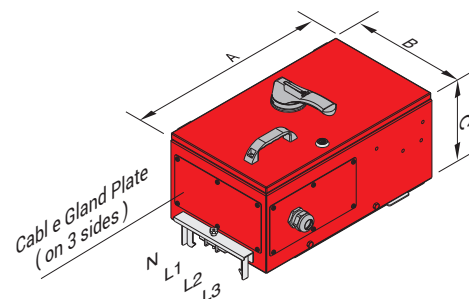
Plug-in Tap-off Boxes

KX P 1 6 5 1
KX P 2 5 5 1
KX P 4 0 5 1
KX P 6 3 5 1

Sample Order:

Plug-in / 630 A / IP-55
5 Conductors

KXP 6351



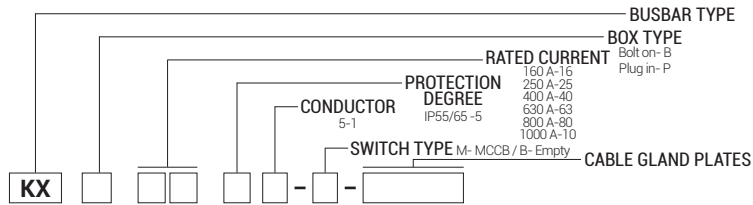
Tap-off Boxes	A (mm)	B (mm)	C (mm)	D (mm)	Fuse Size	Standard Gland
KXP 16	520	300	210	250	NH00	RP2
KXP 25	670	380	270	310	NH 1	RP3
KXP 40	750	420	300	285	NH 3	RP4
KXP 63	750	420	300	285	NH 3	RP4

Gland Type	Max. External Diameter of Cable Cross-section (mm)
M25	Ø 18
M32	Ø 26
M40	Ø 33
M50	Ø 39
M63	Ø 45
Special for EAE	Ø 60

*Tap-off boxes can be equipped with any brand of switches and etc.

■ Please call us for non-standard tap-off boxes and detailed information. ■ The dimensions given above are minimum values.

► Tap-off Boxes for MCCB's (KXB)



Cable Gland Plates

Mat.	Cable Gland Type	Order Code	Inner Diameter (mm)
Sheet	----	RP0	----
Sheet	M32	RP1	25
Sheet	M40	RP2	32
Sheet	Special	RP3	63
AL	2xSpecial	RP4	63
AL	4xM25	RP5	18
AL	4xM32	RP6	25
AL	4xM40	RP7	32
AL	8xM32	RP8	25
AL	3xSpecial	RP9	63

Bolt-on Tap-off Boxes

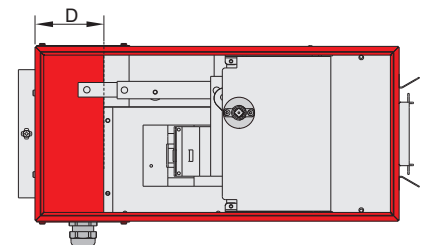
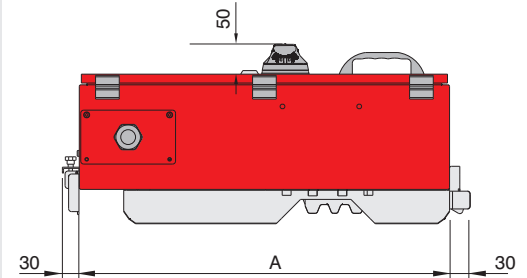
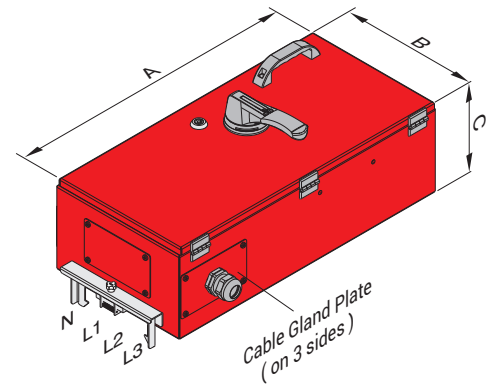
KX B 1 6 5 1 - B
KX B 2 5 5 1 - B
KX B 4 0 5 1 - B
KX B 6 3 5 1 - B

KX B 1 6 5 1 - M
KX B 2 5 5 1 - M
KX B 4 0 5 1 - M
KX B 6 3 5 1 - M

Sample Order:

Bolt-on / 630 A / IP-55
5 conductors, empty tap-off box

KXB 6351 - B



Special Cable Gland Plates

Mat.	Cable Gland Type	Order Code	Inner Diameter (mm)
Sheet	----	RPK0	----
Sheet	M25	RPK1	18
Sheet	M32	RPK2	25
Sheet	M40	RPK3	32
Sheet	1xSpecial	RPK4	63

KX B 8 0 5 1 - B
KX B 1 0 5 1 - B

KX B 8 0 5 1 - M
KX B 1 0 5 1 - M

Sample Order:

Bolt-on / 800 A / IP-55 /
5 conductors, empty tap-off box

KXB 8051 - B

Bolt-on tap-off box can not be used on the joints of mentioned ranges of busbars.

Tap-off Boxes	A (mm)	B (mm)	C (mm)	*D (mm)	Standard Gland
KXB 16	650	300	220	130	RPK3
KXB 25	650	300	220	130	RPK4
KXB 40	800	300	220	210	RP4
KXB 63	800	300	220	210	RP4
KXB 80	1100	450	275	385	RP9
KXB 10	1100	450	275	385	RP9

* D value varies as per the used switch.

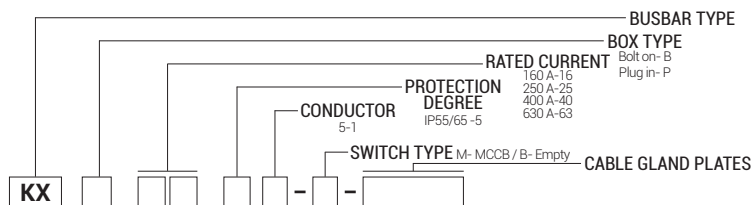
*** Tap-off boxes can be equipped with any brand of MCCB's.**

KXA - Al Conductor		KXC - Cu Conductor		Bolt-on Tap-off Box
Rated Current	Busbar Code	Rated Current	Busbar Code	
400	04	550	05	x
500	05	650	06	x
630	06	800	08	x

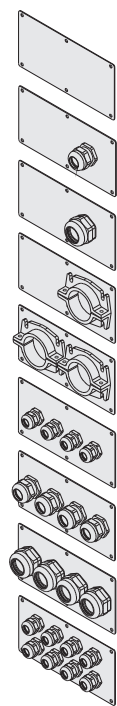
Gland Type	Max. External Diameter of Cable Cross-section (mm)
M25	Ø 18
M32	Ø 26
M40	Ø 33
M50	Ø 39
M63	Ø 45
Special for EAE	Ø 60

■ Please call us for non-standard tap-off boxes and detailed information. ■ The dimensions given above are minimum values.

►► Tap-off Boxes for MCCB's (KXP)



Cable Gland Plates



Mat.	Cable Gland Type	Order Code	Inner Diameter (mm)
Sheet	----	RP0	----
Sheet	M32	RP1	25
Sheet	M40	RP2	32
Sheet	Special	RP3	63
AL	2xSpecial	RP4	63
AL	4xM25	RP5	18
AL	4xM32	RP6	25
AL	4xM40	RP7	32
AL	8xM32	RP8	25

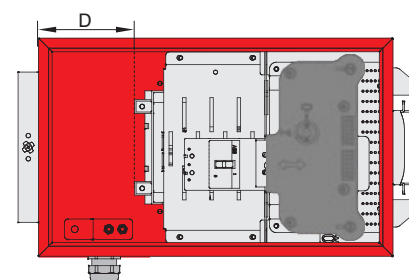
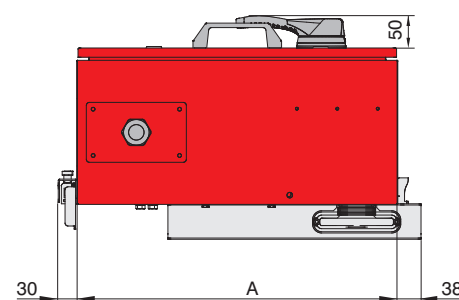
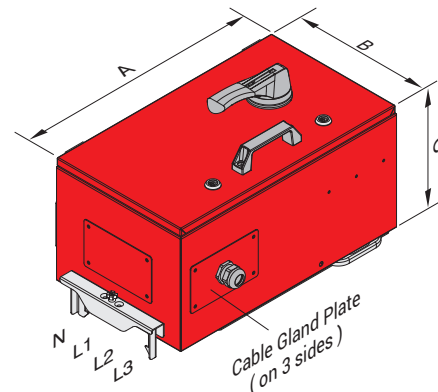
Plug-in Tap-off Boxes

KX	P	1	6	5	1	-	B
KX	P	2	5	5	1	-	B
KX	P	4	0	5	1	-	B
KX	P	6	3	5	1	-	B
KX	P	1	6	5	1	-	M
KX	P	2	5	5	1	-	M
KX	P	4	0	5	1	-	M
KX	P	6	3	5	1	-	M

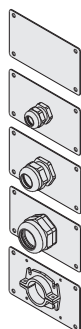
Sample Order:

Plug-in / 400 A / IP-55 /
5 conductors, empty tap-off box

KXP 4051 - B



Special Cable Gland Plates



Mat.	Cable Gland Type	Order Code	Inner Diameter (mm)
Sheet	----	RPK0	----
Sheet	M25	RPK1	18
Sheet	M32	RPK2	25
Sheet	M40	RPK3	32
Sheet	1xSpecial	RPK4	63

Tap-off Boxes	A (mm)	B (mm)	C (mm)	D (mm)	Standard Gland
KXP 16	520	320	250	150	RPK3
KXP 25	520	320	250	150	RPK4
KXP 40	700	320	250	255	RP4
KXP 63	700	320	250	255	RP4

Gland Type	Max. External Diameter of Cable Cross-section (mm)
M25	Ø 18
M32	Ø 26
M40	Ø 33
M50	Ø 39
M63	Ø 45
Special for EAE	Ø 60

* D value varies as per the used switch.

*Tap-off boxes can be equipped with any brand of switches and etc.

■ Please call us for non-standard tap-off boxes and detailed information. ■ The dimensions given above are minimum values.

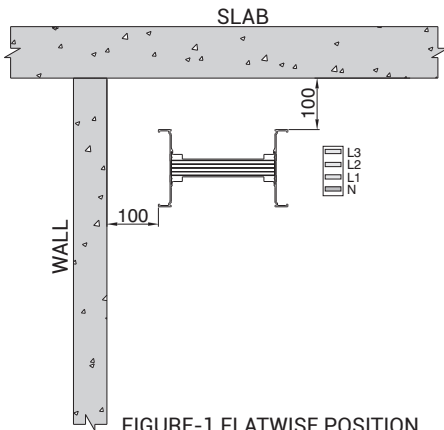


FIGURE-1 FLATWISE POSITION

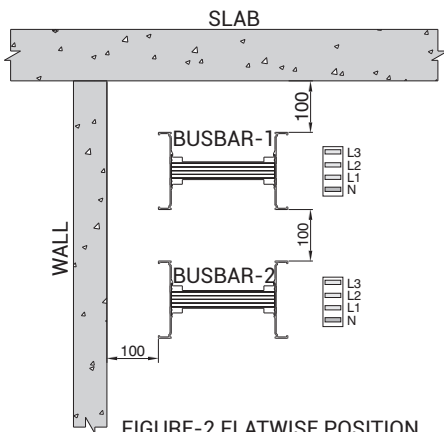


FIGURE-2 FLATWISE POSITION

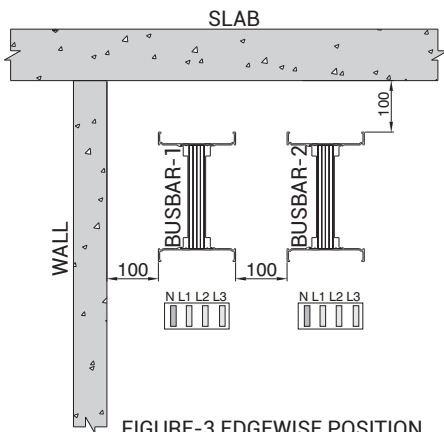


FIGURE-3 EDGEWISE POSITION

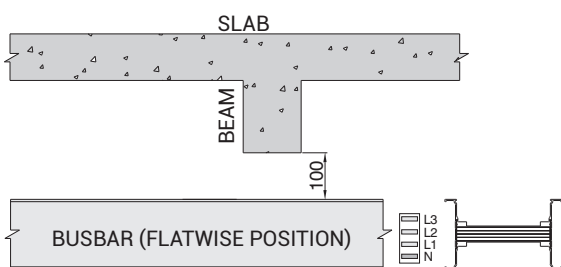


FIGURE-4 CROSSING UNDER A BEAM HORIZONTAL POSITION

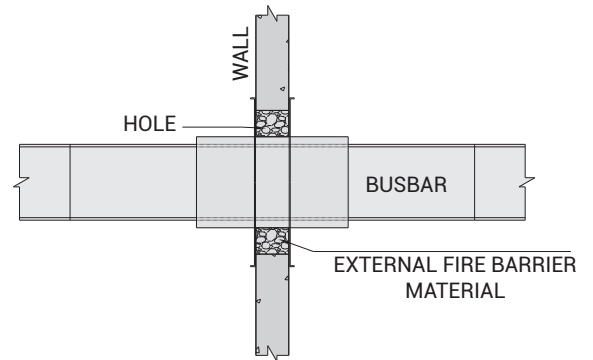


FIGURE-5 SAMPLE WALL CROSSING WITH FIRE BARRIER

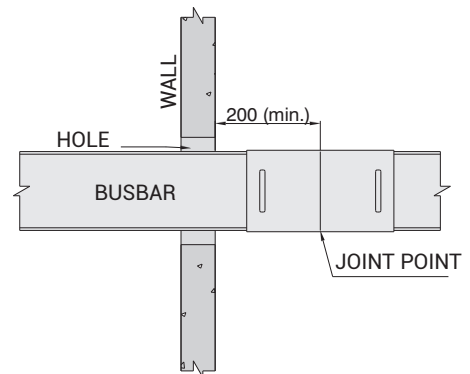
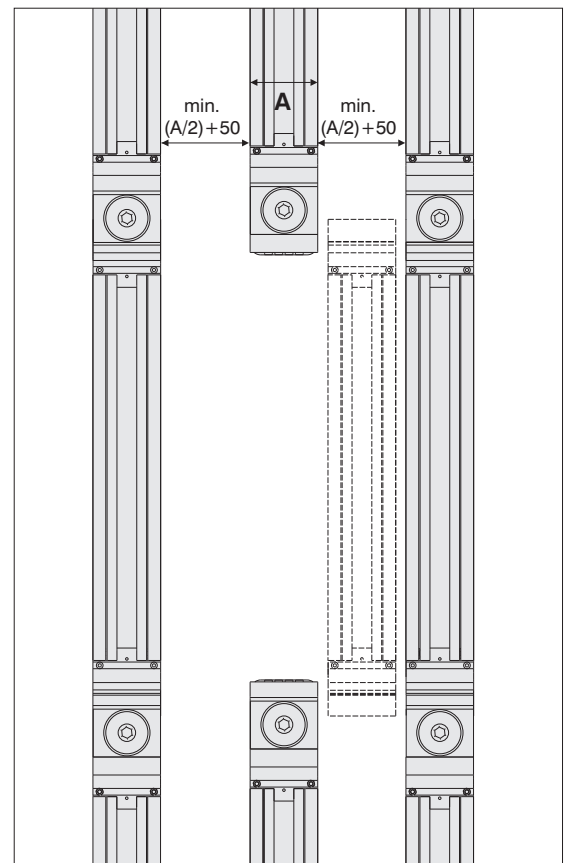


FIGURE-6 STANDARD WALL CROSSING



MINIMUM DISTANCE BETWEEN BUSBAR RUNS IN HORIZONTAL APPLICATIONS.

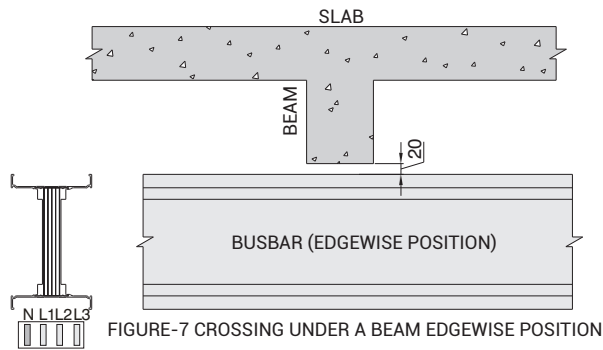


FIGURE-7 CROSSING UNDER A BEAM EDGEWISE POSITION

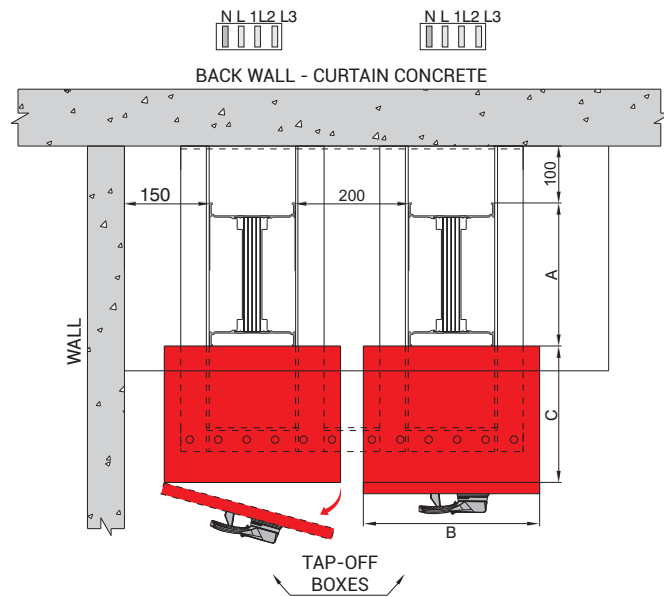


FIGURE-8 MINIMUM DIMENSIONS BETWEEN 2 TAP-OFF BOXES

KXA - Al Conductor		KXC - Cu Conductor		A
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)
* 400	04	*550	05	78
* 500	05	*650	06	83
* 630	06	*800	08	93
800	08	1000	10	108
1000	11	-	-	113
-	-	1250	12	123
1000	10	1350	14	133
-	-	1600	17	148
1250	12	-	-	163
1350	14	2000	23	178
1700	16	-	-	193
1600	17	-	-	213
2000	18	-	-	233
2000	20	2500	25	253
2500	29	-	-	283
2500	27	-	-	303
-	-	2000	22	204
-	-	2500	27	234
2500	25	3300	32	314
-	-	3600	36	344
3200	32	4000	40	374
3200	33	-	-	414
4000	40	5000	50	494
4000	41	-	-	454
5000	51	-	-	594
6000	60	6300	63	735



NOTE : In order to accomodate the busbar systems in the riser shaft;

MDM = Minimum Distance from the wall

"A" dimension = All dimensions are for standard modules .

"C" dimension = Please see page 32-35 and special dimension for Tap-off box "C" dimension

"B" dimension = Max. opening distance for Tap-off box cover.

Shaft Dimension = $MDM + A + C + B + 100mm$

Shown as (Figure-8)

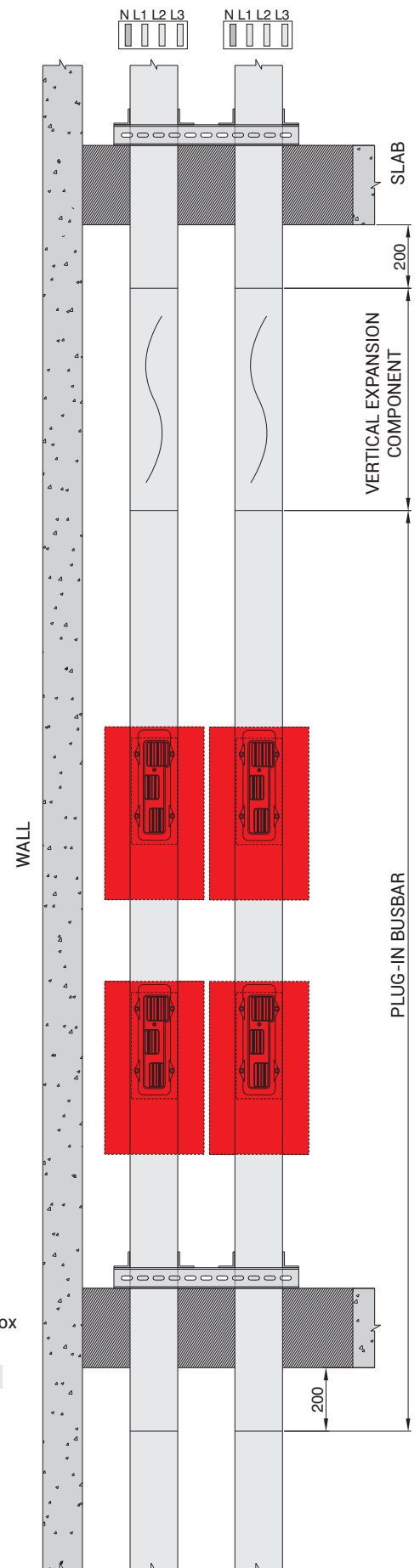
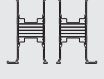
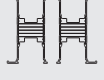


FIGURE-9 MINIMUM DIMENSIONS BETWEEN 2 RISERS

►► Feeder Boxes (B10,B11)

Cable Gland Plates

Busbar Housing Type	Cable Gland Plate	Type
		1
		2
		3
		2
		3
		4

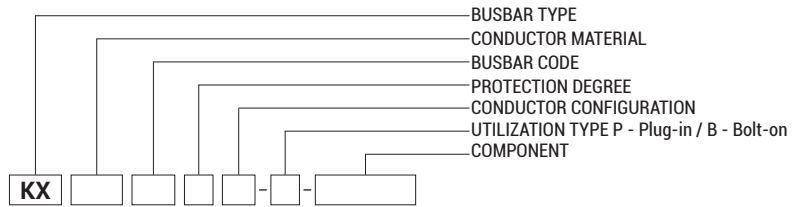
Ampere Ratings

KXA - Al Conductor		KXC - Cu Conductor		A	B	C	D	Cable Gland Type
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	(mm)	(mm)	
* 400	04	*550	05	500	520 / 620*	355	350	1
* 500	05	*650	06	500	520 / 620*	355	350	1
* 630	06	*800	08	500	520 / 620*	355	350	1
800	08	1000	10	500	520 / 620*	355	350	1
1000	11	-	-	500	520 / 620*	355	350	1
-	-	1250	12	500	520 / 620*	355	350	1
1000	10	1350	14	500	520 / 620*	355	350	1
-	-	1600	17	500	520 / 620*	355	350	1
1250	12	-	-	500	520 / 620*	355	350	1
1350	14	2000	23	500	520 / 620*	555	350	2
1700	16	-	-	500	520 / 620*	555	350	2
1600	17	-	-	500	520 / 620*	555	350	2
2000	18	-	-	500	520 / 620*	555	350	2
2000	20	2500	25	500	520 / 620*	555	350	3
2500	29	-	-	500	520 / 620*	555	350	2
2500	27	-	-	500	520 / 620*	555	350	2
-	-	2000	22	500	520 / 620*	555	350	2
-	-	2500	27	500	520 / 620*	555	350	3
2500	25	3300	32	500	520 / 620*	555	350	3
-	-	3600	36	500	520 / 620*	770	550	3
3200	32	4000	40	700	520 / 620*	770	550	3
3200	33	-	-	700	520 / 620*	770	550	3
4000	40	5000	50	700	520 / 620*	770	550	3
4000	41	-	-	700	520 / 620*	770	550	3
5000	51	-	-	700	520 / 620*	770	550	3
6000	60	6300	63	700	520 / 620*	1100	550	4

*The values are given for 08 and 09 codes clean earth models.

■ The dimensions given above are minimum values.

■ Please call us for special applications or for applications with MCCB's.



Feeder Box B10 - B 1 0

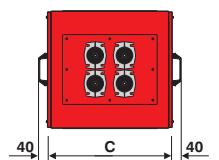
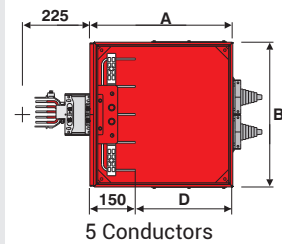
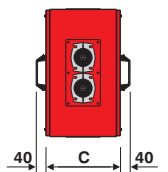
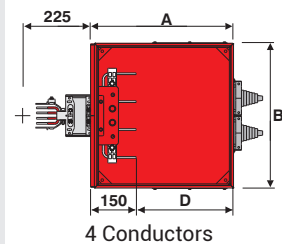
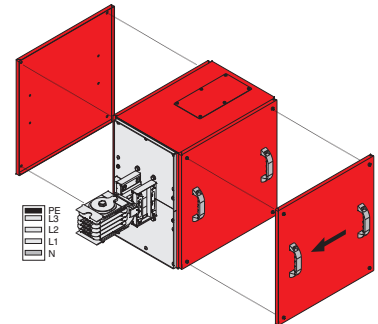
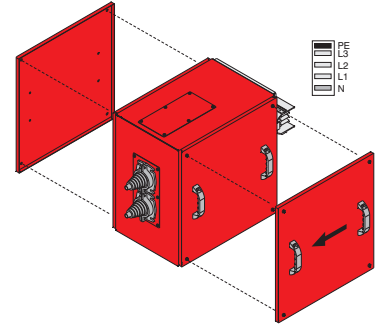
Sample Order:
3200 A, Aluminium, Bolt-on
4 Conductors

KXA 33504 - B - B10

Feeder Box B11 - B 1 1

Sample Order:
3600 A, Copper, Bolt-on,
4 Conductors

KXC 36504 - B - B11



►► Feeder Boxes (Central Feeder Boxes BO)

Cable Gland Plates

Busbar Housing Type	Cable Gland Plate	Type
		1
		2
		3
		2
		3
		4

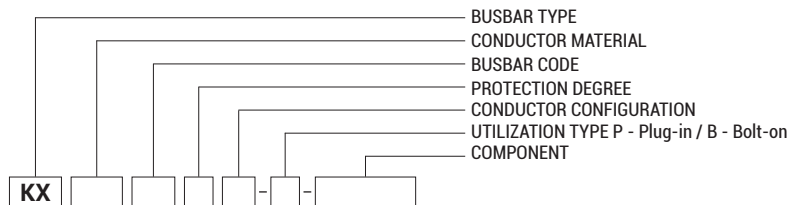
Ampere Ratings

KXA - Al Conductor		KXC - Cu Conductor		A	B	C	X	Cable Gland Type
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	(mm)	(mm)	
* 400	04	*550	05	500	520 / 620*	405	175	1
* 500	05	*650	06	500	520 / 620*	405	175	1
* 630	06	*800	08	500	520 / 620*	405	175	1
800	08	1000	10	500	520 / 620*	405	175	1
1000	11	-	-	500	520 / 620*	405	175	1
-	-	1250	12	500	520 / 620*	405	175	1
1000	10	1350	14	500	520 / 620*	405	175	1
-	-	1600	17	500	520 / 620*	405	175	1
1250	12	-	-	500	520 / 620*	805	277,5	1
1350	14	2000	23	500	520 / 620*	805	277,5	2
1700	16	-	-	500	520 / 620*	805	277,5	2
1600	17	-	-	500	520 / 620*	805	277,5	2
2000	18	-	-	500	520 / 620*	805	277,5	2
2000	20	2500	25	500	520 / 620*	805	277,5	3
2500	29	-	-	500	520 / 620*	805	277,5	2
2500	27	-	-	500	520 / 620*	805	277,5	2
-	-	2000	22	500	520 / 620*	805	277,5	2
-	-	2500	27	500	520 / 620*	805	277,5	3
2500	25	3300	32	500	520 / 620*	805	277,5	3
-	-	3600	36	500	520 / 620*	805	277,5	3
3200	32	4000	40	700	520 / 620*	1005	385	3
3200	33	-	-	700	520 / 620*	1005	385	3
4000	40	5000	50	700	520 / 620*	1005	385	3
4000	41	-	-	700	520 / 620*	1005	385	3
5000	51	-	-	700	520 / 620*	1005	385	3
6000	60	6300	63	700	520 / 620*	1005	385	4

*The values are given for 08 and 09 codes clean earth models.

■ The dimensions given above are minimum values.

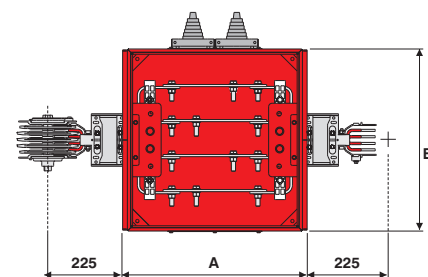
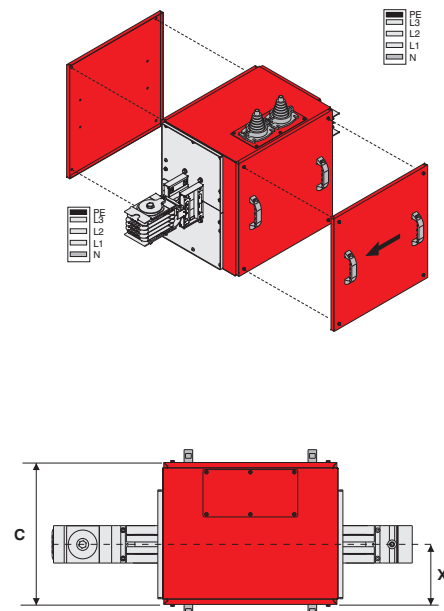
■ Please call us for special applications or for applications with MCCB's.



Central Feeder Box - B O

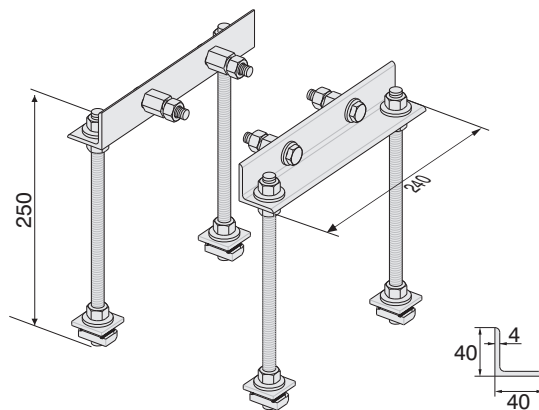
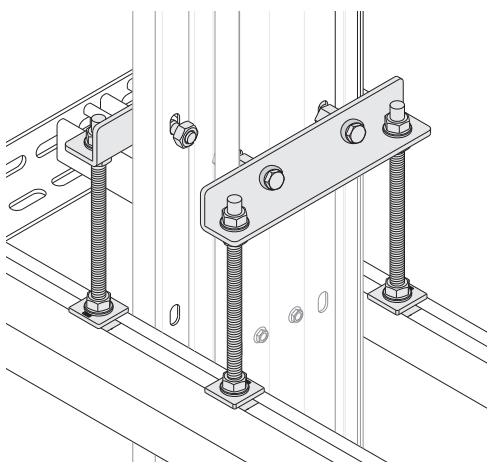
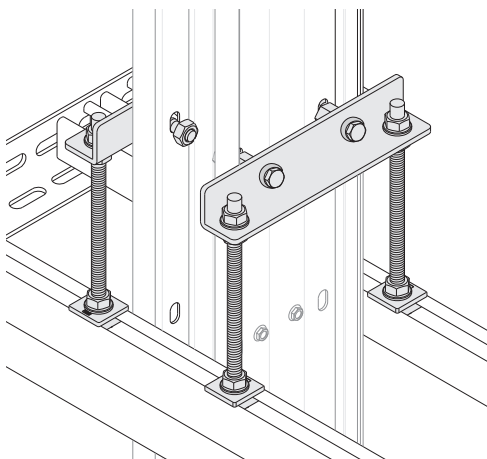
Sample Order:
2500 A, Aluminium, Bolt-on
4Conductor

KXA 25504 - B - BO



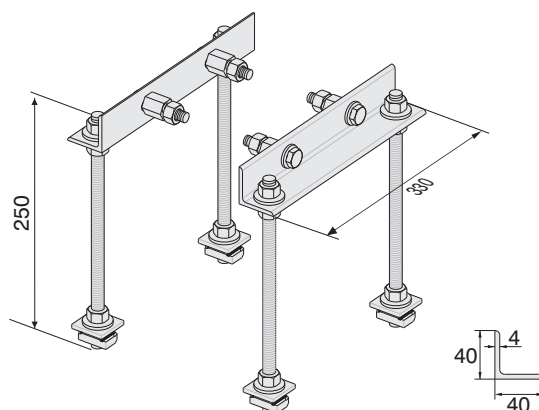


Supports



Description	Order Code
KX Vertical Riser Fixing Unit	3048475

Description	Order Code
KX Vertical Riser Fixing Unit (Fire Barrier)	3048707

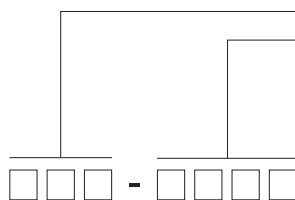
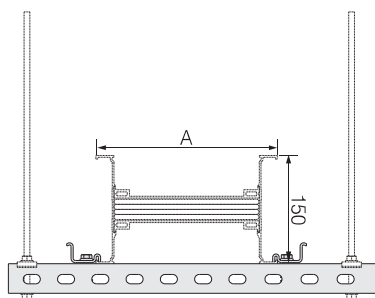
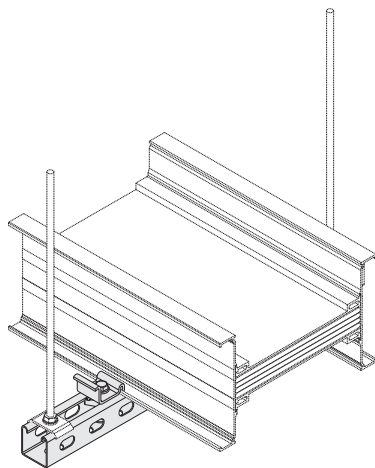
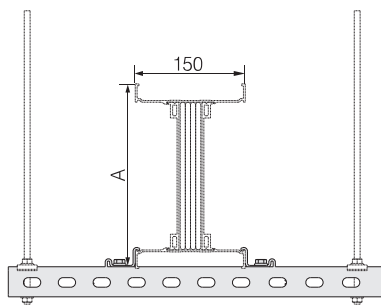
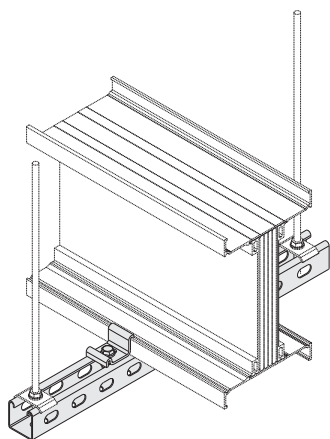


Fixing Elements



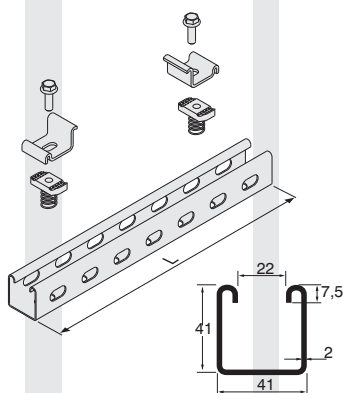
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KX Fixing Clamp for Binrak (Unistrut) Channel	2011227

Description	Order Code
KX Fixing Clamp for Steel Angle Profile	2011226

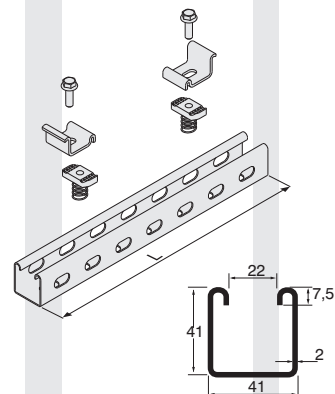


Supports

**KX - BRA HANGER
SET FOR EDGEWISE
APPLICATION TO
BINRAK (UNISTRUT)
CHANNEL**

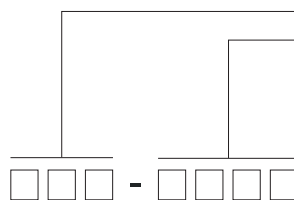
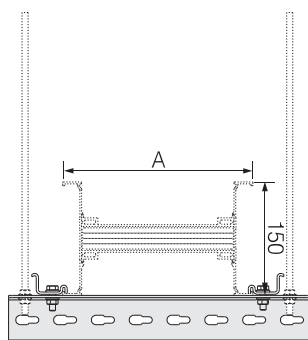
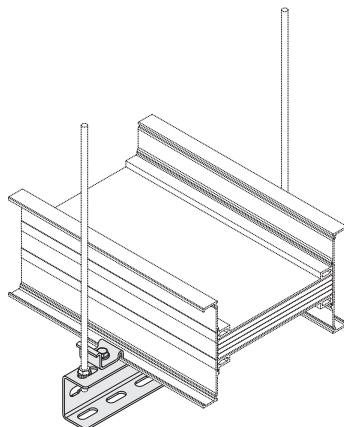
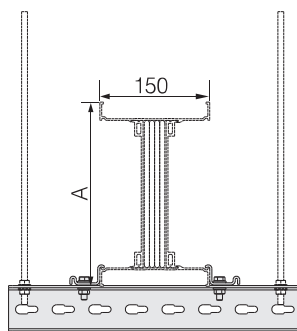
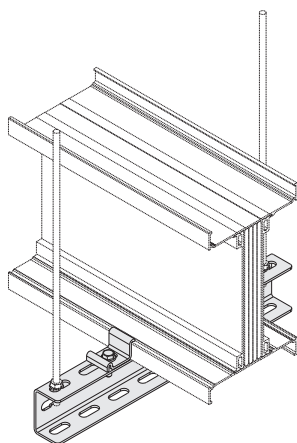


**KX - BRA HANGER
SET FOR FLATWISE
APPLICATION TO
BINRAK (UNISTRUT)
CHANNEL**



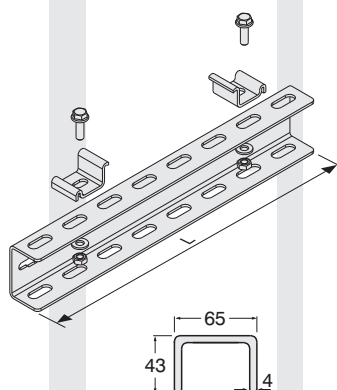
Al Conductor		Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
400	04	550	05	350	78	3025373
500	05	650	06		83	
630	06	800	08		93	
800	08	1000	10		108	
1000	11	-	-		113	
-	-	1250	12		123	
1000	10	1350	14		133	
-	-	1600	17		148	
1250	12	-	-		163	
1350	14	2000	23		178	
1700	16	-	-		193	
1600	17	-	-		213	
2000	18	-	-		233	
2000	20	2500	25		253	
2500	29	-	-		283	
2500	27	-	-		303	

Al Conductor		Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
400	04	550	05	300	78	3025372
500	05	650	06		83	
630	06	800	08		93	
800	08	1000	10		108	
1000	11	-	-		113	
-	-	1250	12	350	123	3025373
1000	10	1350	14		133	
-	-	1600	17		148	
1250	12	-	-	400	163	3025374
1350	14	2000	23		178	
1700	16	-	-		193	
1600	17	-	-	450	213	3025375
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2000	20	2500	25		253	
2500	29	-	-		283	
2500	27	-	-		303	

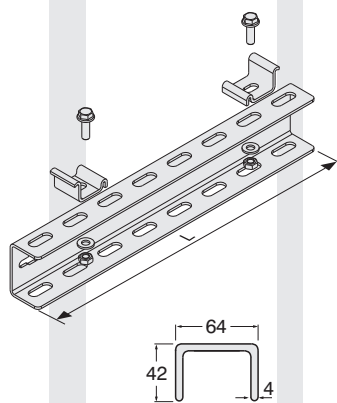


Supports

KX - UT HANGER SET
FOR EDGEWISE
APPLICATION
TO NPU CHANNEL

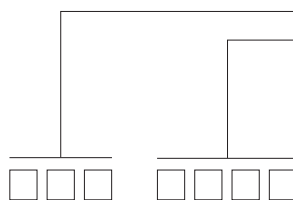
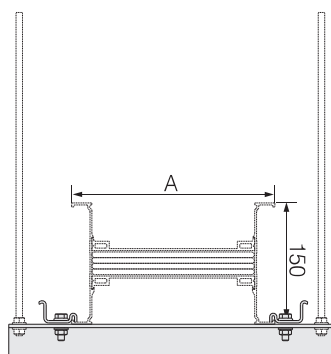
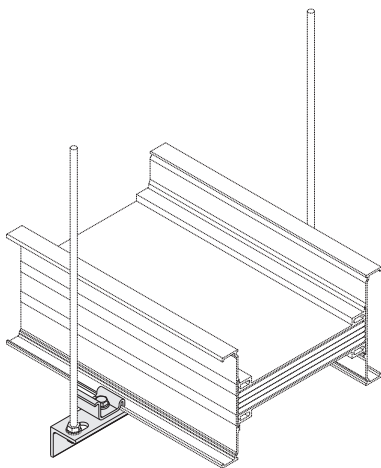
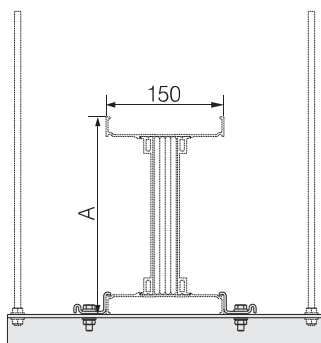
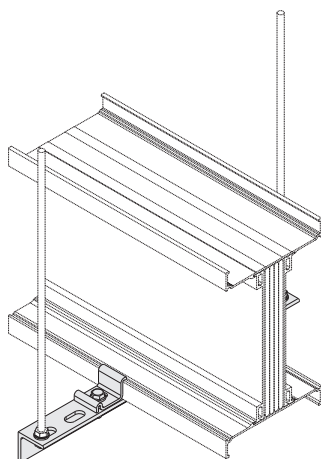


KX - UT HANGER SET
FOR FLATWISE
APPLICATION
TO NPU CHANNEL



KXA - Al Conductor		KXC - Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
* 400	04	*550	05	350	78	3025348
* 500	05	*650	06		83	
* 630	06	*800	08		93	
800	08	1000	10		108	
1000	11	-	-		113	
-	-	1250	12		123	
1000	10	1350	14		133	
-	-	1600	17		148	
1250	12	-	-		163	
1350	14	2000	23		178	
1700	16	-	-		193	
1600	17	-	-		213	
2000	18	-	-		233	
2000	20	2500	25		253	
2500	29	-	-		283	
2500	27	-	-		303	
-	-	2000	22		204	
-	-	2500	27		234	
2500	25	3300	32		314	
-	-	3600	36		344	
3200	32	4000	40		374	
3200	33	-	-		414	
4000	40	5000	50	400	494	3025349
4000	41	-	-		454	
5000	51	-	-		594	
6000	60	6300	63		735	

KXA - Al Conductor		KXC - Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
* 400	04	*550	05	300	78	3025347
* 500	05	*650	06		83	
* 630	06	*800	08		93	
800	08	1000	10		108	
1000	11	-	-		113	
-	-	1250	12		123	
1000	10	1350	14		133	
-	-	1600	17	350	148	3025348
1250	12	-	-		163	
1350	14	2000	23	400	178	3025349
1700	16	-	-		193	
1600	17	-	-		213	
2000	18	-	-		233	
2000	20	2500	25	450	253	3025350
2500	29	-	-		283	
2500	27	-	-		303	
-	-	2000	22	400	204	3025349
-	-	2500	27	450	234	3025350
2500	25	3300	32	500	314	3025351
-	-	3600	36	550	344	3025352
3200	32	4000	40		374	
3200	33	-	-	600	414	3025353
4000	40	5000	50	700	494	3025354
4000	41	-	-		454	
5000	51	-	-	800	594	3134130
6000	60	6300	63	900	735	3025355

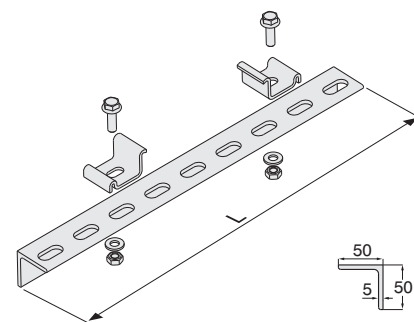


Supports

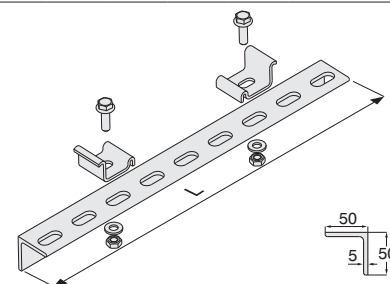
**KX HANGER
SET FOR EDGEWISE
APPLICATION
TO STEEL ANGLE
PROFILE**

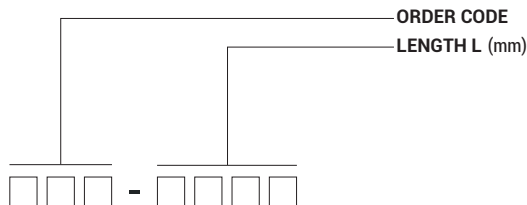
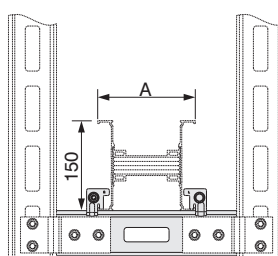
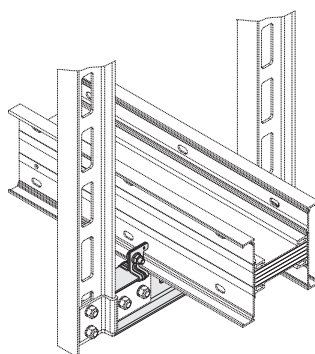
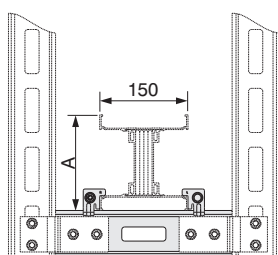
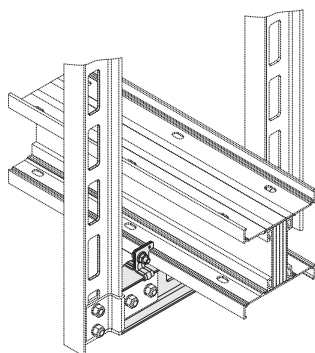
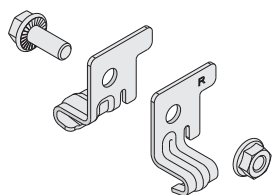
**KX HANGER
SET FOR FLATWISE
APPLICATION
TO STEEL ANGLE
PROFILE**

Al Conductor		Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
400	04	550	05	350	78	3025344
500	05	650	06		83	
630	06	800	08		93	
800	08	1000	10		108	
1000	11	-	-		113	
-	-	1250	12		123	
1000	10	1350	14		133	
-	-	1600	17		148	
1250	12	-	-		163	
1350	14	2000	23		178	
1700	16	-	-		193	
1600	17	-	-		213	
2000	18	-	-		233	
2000	20	2500	25		253	
2500	29	-	-		283	
2500	27	-	-		303	



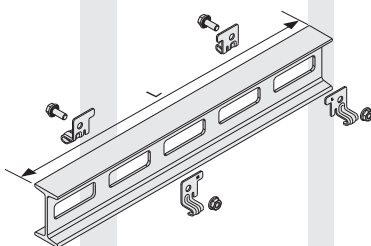
Al Conductor		Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
400	04	550	05	300	78	3025343
500	05	650	06		83	
630	06	800	08		93	
800	08	1000	10		108	
1000	11	-	-		113	
-	-	1250	12		123	
1000	10	1350	14	350	133	3025344
-	-	1600	17		148	
1250	12	-	-	400	163	3025345
1350	14	2000	23		178	
1700	16	-	-		193	
1600	17	-	-		213	
2000	18	-	-	450	233	3025346
2000	20	2500	25		253	
2500	29	-	-		283	
2500	27	-	-		303	



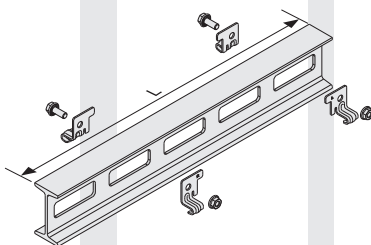


Supports

KX - IDU TWO-WAY
FOR EDGEWISE
APPLICATION
TO NPI CHANNEL



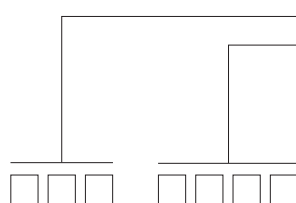
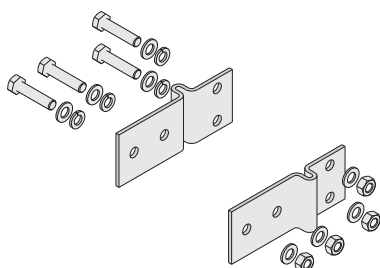
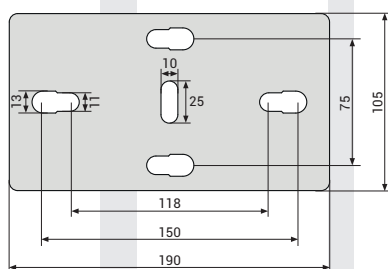
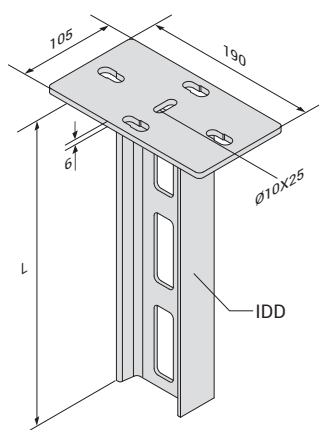
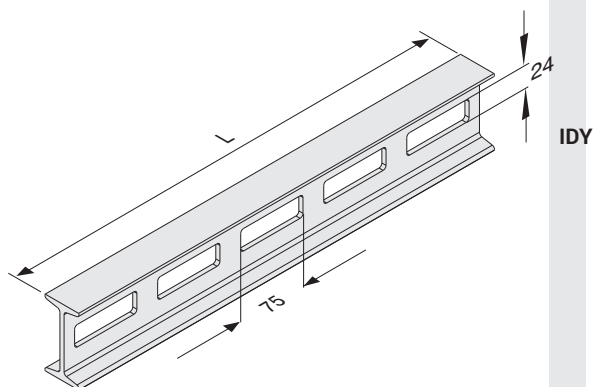
KX - IDU TWO-WAY
FOR FLATWISE
APPLICATION
TO NPI CHANNEL



Description	Order Code
KX IDU Support Set	2054590

KXA - Al Conductor	KXC - Cu Conductor	L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	
* 400	04	*550	05	78
* 500	05	*650	06	83
* 630	06	*800	08	93
800	08	1000	10	108
1000	11	-	-	113
-	-	1250	12	123
1000	10	1350	14	133
-	-	1600	17	148
1250	12	-	-	163
1350	14	2000	23	178
1700	16	-	-	193
1600	17	-	-	213
2000	18	-	-	233
2000	20	2500	25	253
2500	29	-	-	283
2500	27	-	-	303
-	-	2000	22	204
-	-	2500	27	234
2500	25	3300	32	314
-	-	3600	36	344
3200	32	4000	40	374
3200	33	-	-	414
4000	40	5000	50	494
4000	41	-	-	454
5000	51	-	-	594
6000	60	6300	63	735

KXA - Al Conductor	KXC - Cu Conductor	L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	
* 400	04	*550	05	78
* 500	05	*650	06	83
* 630	06	*800	08	93
800	08	1000	10	108
1000	11	-	-	113
-	-	1250	12	123
1000	10	1350	14	133
-	-	1600	17	148
1250	12	-	-	163
1350	14	2000	23	178
1700	16	-	-	193
1600	17	-	-	213
2000	18	-	-	233
2000	20	2500	25	253
2500	29	-	-	283
2500	27	-	-	303
-	-	2000	22	204
-	-	2500	27	234
2500	25	3300	32	314
-	-	3600	36	344
3200	32	4000	40	374
3200	33	-	-	414
4000	40	5000	50	494
4000	41	-	-	454
5000	51	-	-	594
6000	60	6300	63	735



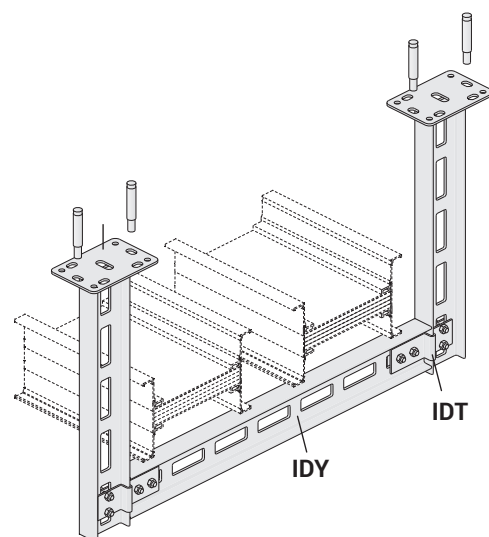
Supports

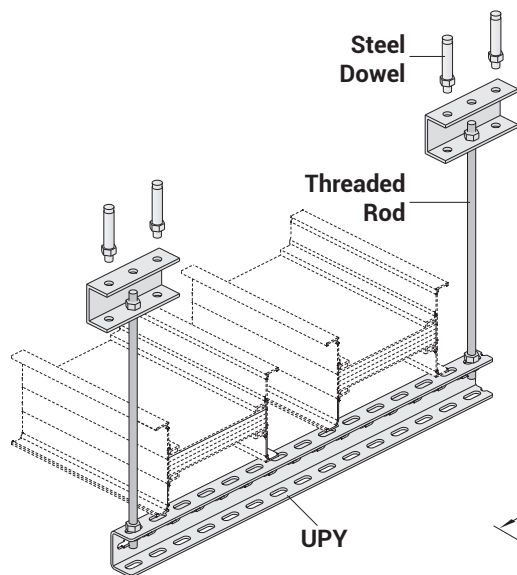
IDY

IDD

IDT

Description	L (mm)	Order Code
IDY 300	300	3008242
IDY 400	400	3008290
IDY 500	500	3008289
IDY 600	600	3008288
IDY 700	700	3008287
IDY 800	800	3008286
IDY 900	900	3008285
IDY 1000	1000	3008284
IDY 1100	1100	3008283
IDY 1200	1200	3008282
IDY 1300	1300	3008236
IDY 1400	1400	3008281
IDY 1500	1500	3008280
IDY 1600	1600	3008241
IDY 1700	1700	3008240
IDY 1800	1800	3008239
IDY 1900	1900	3008238
IDY 2000	2000	3008237
IDD 300	300	3008314
IDD 400	400	3008313
IDD 500	500	3008312
IDD 600	600	3008311
IDD 700	700	3008310
IDD 800	800	3008309
IDD 900	900	3008308
IDD 1000	1000	3008307
IDD 1100	1100	3008306
IDD 1200	1200	3008305
IDD 1300	1300	3008304
IDD 1400	1400	3008303
IDD 1500	1500	3008302
IDD 1600	1600	3008301
IDD 1700	1700	3008300
IDD 1800	1800	3008299
IDD 1900	1900	3008298
IDD 2000	2000	3008297
IDT Support Fitting	-	3008279

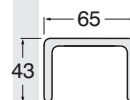
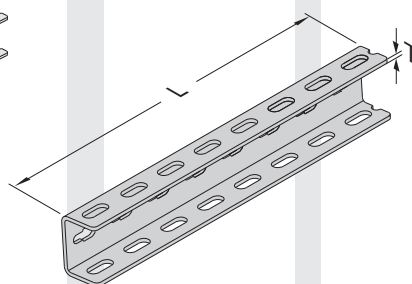




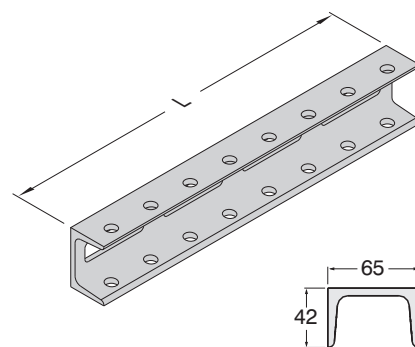
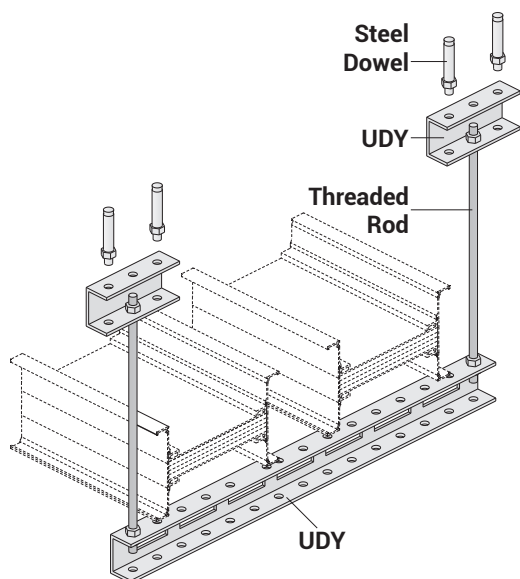
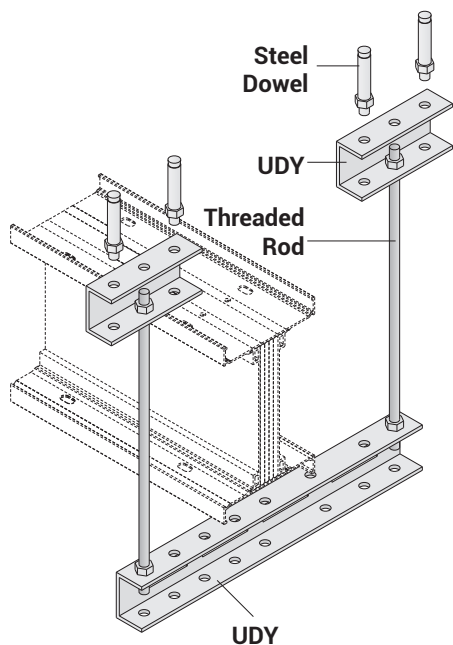
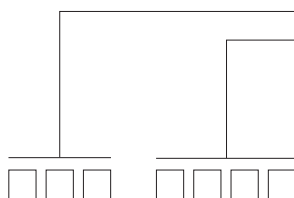
Supports

UPY

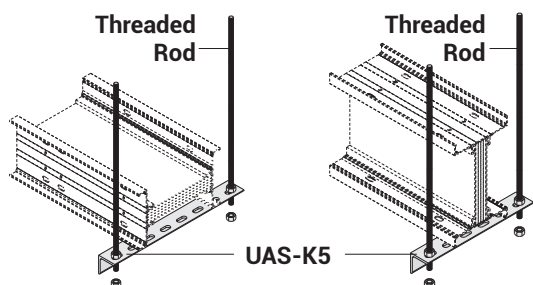
UPY



Description	T (mm)	L (mm)	Order Code
UPY 300	4	300	3004487
UPY 400	4	400	3004489
UPY 500	4	500	3004491
UPY 600	4	600	3004493
UPY 700	4	700	3004495
UPY 800	4	800	3004496
UPY 900	4	900	3004497
UPY 1000	4	1000	3004498
UPY 1100	4	1100	3004499
UPY 1200	4	1200	3004500
UPY 1500	4	1500	3004503

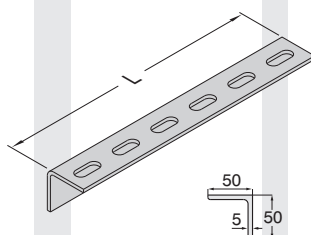


Description	L (mm)	Order Code
UDY 300	300	3008023
UDY 400	400	3008024
UDY 500	500	3008025
UDY 600	600	3008026
UDY 700	700	3008027
UDY 800	800	3008028
UDY 900	900	3008029
UDY 1000	1000	3008030
UDY 1100	1100	3008031
UDY 1200	1200	3008032
UDY 1300	1300	3008033
UDY 1400	1400	3008034
UDY 1500	1500	3008035
UDY 1600	1600	3008036
UDY 1700	1700	3008037
UDY 1800	1800	3008038
UDY 1900	1900	3008039
UDY 2000	2000	3008040

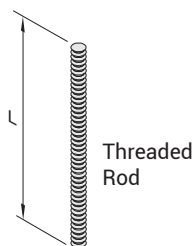


Supports

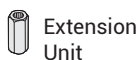
UAS-K5



Connection Units



Threaded Rod



Extension Unit



Steel Dowel

Diameter of the
hole to be drilled
M10.....Ø14
M12.....Ø16



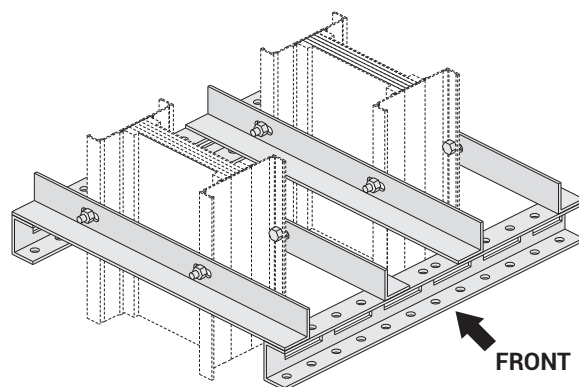
Steel Nut



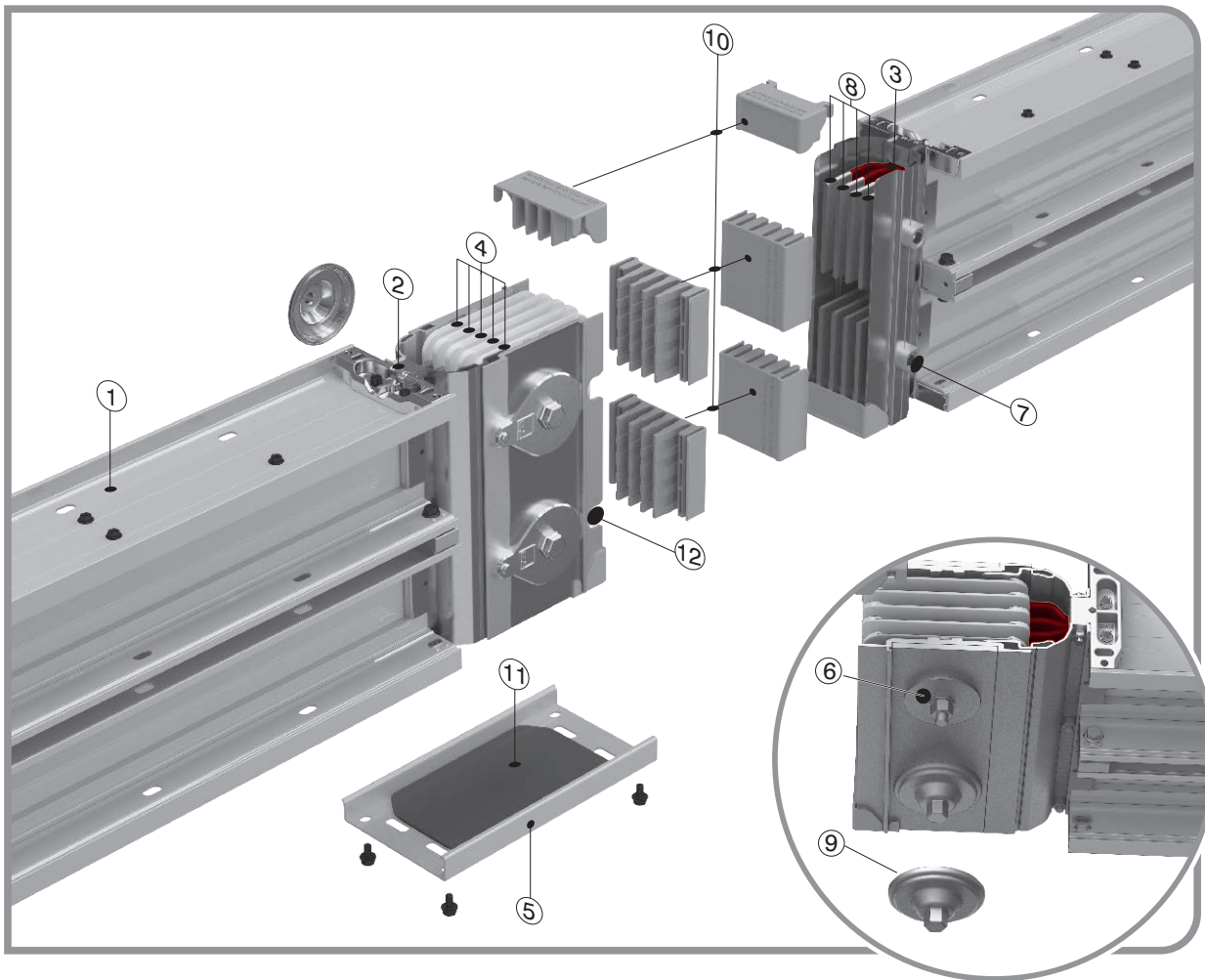
Washer

Description	L (mm)	Order Code
UAS-K5 Supports (1)	200	3005324
UAS-K5 Supports (2)	250	3005323
UAS-K5 Supports (3)	300	3005322
UAS-K5 Supports (4)	350	3005321
UAS-K5 Supports (5)	400	3005320
UAS-K5 Supports (6)	500	3005319
UAS-K5 Supports (7)	600	3005318
UAS-K5 Supports (8)	700	3005317
UAS-K5 Supports (9)	1100	3005316

Description	L (mm)	Order Code
BRA 12-05 Threaded Rod (M10)	500	5000037
BRA 12-10 Threaded Rod (M10)	1000	5000032
BRA 14-05 Threaded Rod (M12)	500	5000026
BRA 14-10 Threaded Rod (M12)	1000	5000034
BRA 13 Extension Unit (M10)	-	1004312
BRA 13 Extension Unit (M12)	-	1004282
BRA 9 Steel Dowel (M10)	-	5000023
BRA 9 Steel Dowel (M12)	-	5000022
M10 Steel Nut	-	1000522
M12 Steel Nut	-	1000964
M10 Washer	-	1000504
M12 Washer	-	1000505



Vertical Riser Application
Sample Order Hanging
(Special to project)



1. Extruded Aluminium Housing
2. PE Fixing Piece
3. Insulation Layers (Epoxy+B class polyester film)
4. Joint Insulators
5. Joint Cover
6. Belleville
7. Alignment Pin (removable)
8. Conductors
9. IP55 Nut Locking Piece
10. Protection Plastic
11. IP55 Joint Cover Gasket
12. Alignment Pin Slot

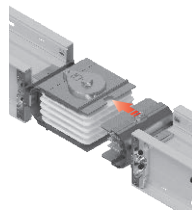


Figure 3

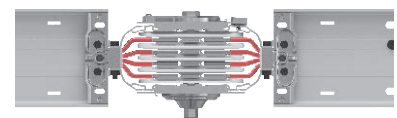


Figure 4 Joint assembly

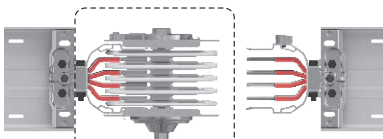


Figure 1 Block Joint

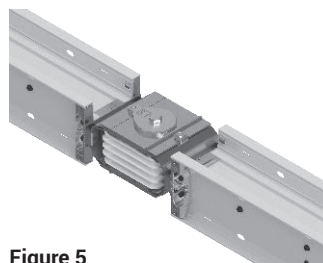


Figure 5



Figure 2 Alignment Slot Alignment Pin (removable)

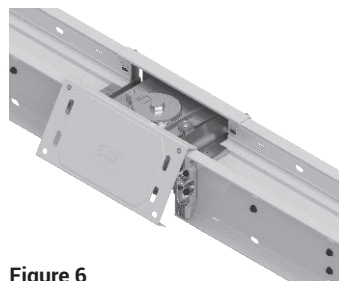
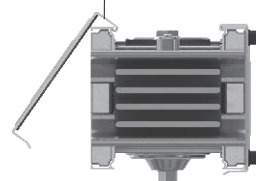


Figure 6

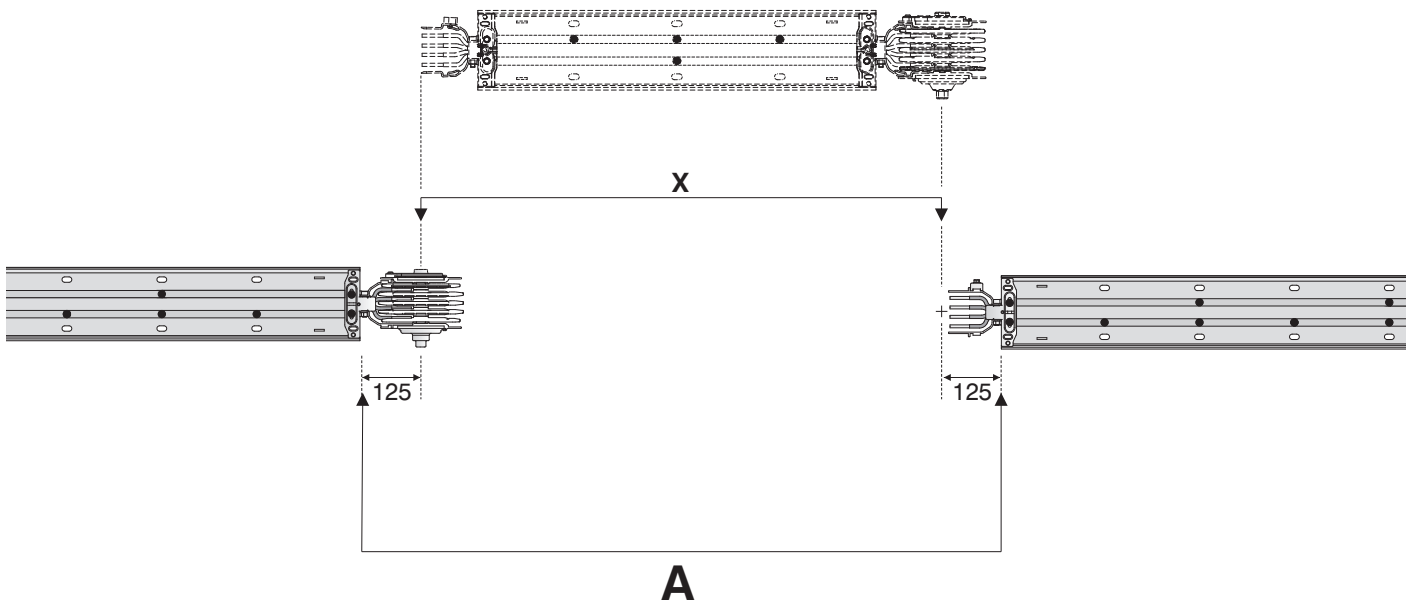
The joint cover is closed by leverage.

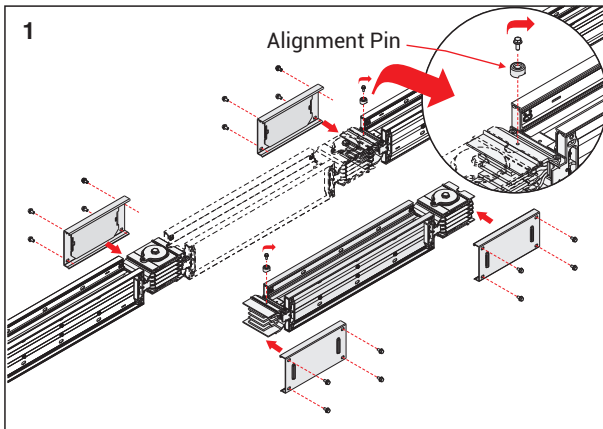


After installation of standard busbar 3m lengths, you will be in need of special lengths which are smaller than 3m. The minimum length for these special elements can be 35 cm. Please measure the lengths of these modules as shown below.

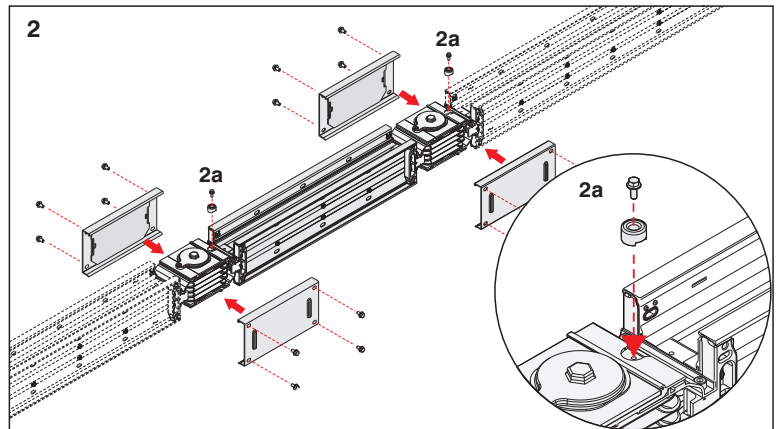
Length A is measured between housing of 2 busbars in cm. A. The special length is calculated by deducting 25 cm from this measured length.

$X = A - 25$ (cm) X = Length of Special Busbar (The busbar module will be manufactured as per X value.)

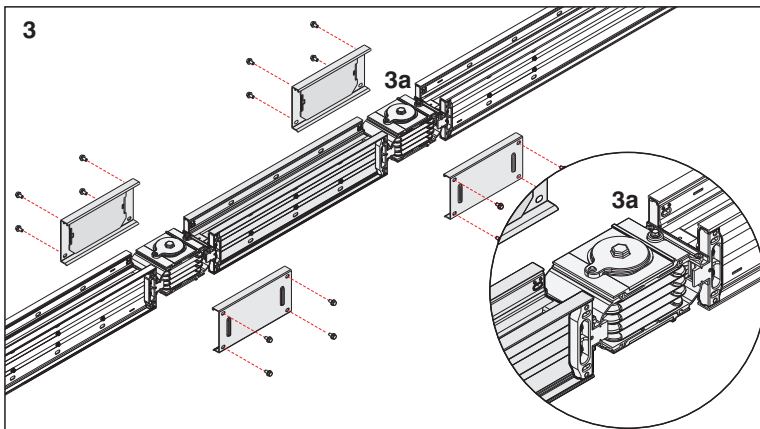




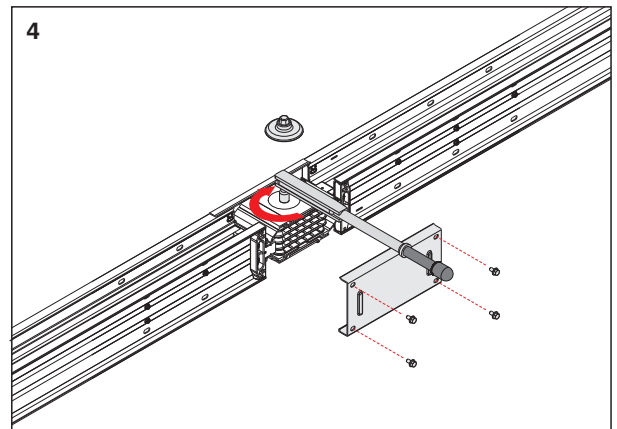
1- Remove Alignment Pin on the busbar, without block joint.



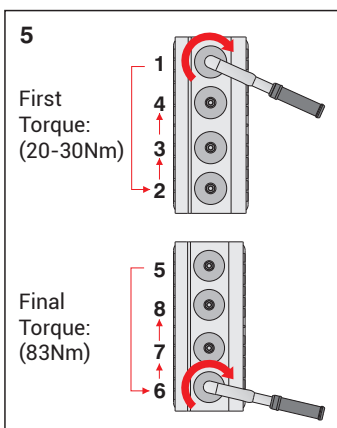
2- Insert the piece aligning conductors correctly. Fix back the Alignment pin.



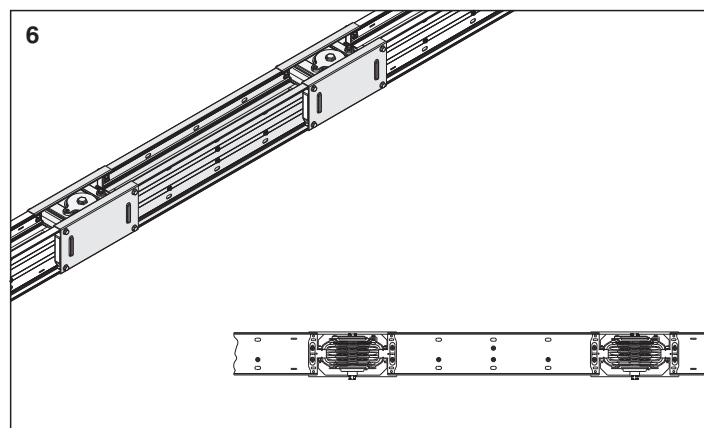
3- Make sure busbar piece is aligned according to alignment pin.



4- Fix one of the joint cover to stabilize joint. Apply 83Nm to the main bolt.



5- If there are more than one bolt for the same phase, bolts shall be tightened by hand approximately 20-30Nm as per above sequence, then 83Nm shall be applied at final torque with the same sequence.



6- Fix the remaining joint cover. Joint installation is completed.

Note: If the final joint cover does not close correctly, it indicates the busbar is not completely aligned. Release the bolts and reapply the sequence from figure 4 to complete the joint.

Please check related installation manual for details.

CE DECLARATION OF CONFORMITY

Product Group E-Line KX Busbar Energy Distribution System

Manufacturer EAE Elektrik Asansor End. Insaat San. ve Tic. A.S.
Akcaburgaz Mahallesi, 3114. Sokak,
No:10 34522 Esenyurt-Istanbul

The objects of the declaration described below is in conformity with the relevant Union harmonisation legislation. This declaration of conformity is issued under the sole responsibility of the manufacturer.

Standard :

TS EN 61439-6

Low-voltage switchgear and controlgear assemblies - Part 6: Busbar trunking systems

CE - Directive

2014/35/EU "The Low Voltage Directive"

2014/30/EU "Electromagnetic Compatibility (EMC) Directive"

2011/65/EU "Restriction of the use of certain hazardous substances (RoHS)"

Technical Document Preparation Official:

EAE Elektrik Asansor End. Insaat San. ve Tic. A.S.
Akcaburgaz Mahallesi, 3114. Sokak, No:10 34522 Esenyurt-Istanbul

Emre GURLEYEN

Date

20.04.2016

Document Authorized Signatory

Elif Gamze KAYA OK
Deputy General Manager



EAE Elektrik As
Insaat San. ve T
Akçaburgaz Ma
34510 Esenyur
Turkey

For the product: Low-voltage busbar trunking system

EAE
KXA06

Type	Ind
Typical value	1000 V, 25 kA
Range	1000 V, 25 kA to 1000 V, 25 kA
Manufacturer	ABB
Accessories	ABB
Options	ABB
Remarks	ABB

z, IP55

for more details

EAE Elektrik As
İnşaat San. ve T
Akçaburgaz Ma
34510 Esenyur
Turkey

Subject: Design verification

CERTIFICATE

Busbar trunking

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400A ... 6300A COMPACT BUSBAR PRODUCT OVERVIEW (E-LINE KX)

1- Standards & Certification:

- Busbar system shall be designed and manufactured as per IEC 61439-6 standard, which requires below listed tests. Each busbar rating shall have a separate type test certificate from an independent internationally accredited laboratory including below tests:
10.2- Strength of material and parts, 10.2.2- Resistance to corrosion, 10.2.3- Properties of insulating materials, 10.2.3.1- Verification of thermal stability of enclosures, 10.2.3.2- Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects, 10.2.6- Mechanical impact, 10.2.7- Marking, 10.2.101- Ability to withstand mechanical loads, 10.2.101.1- Test procedure for a straight busbar trunking unit, 10.2.101.2- Test procedure for a joint, 10.2.101.3- Resistance of the enclosure to crushing, 10.3- Degree of protection of assembly, 10.4- Clearances and creepage distances, 10.5- Protection against electric shock and integrity of protective circuits, 10.5.2- Effective earth continuity between the exposed conductive parts of the assembly and the protective circuit, 10.5.3- Short-circuit withstand strength of the protective circuit, 10.9- Dielectric properties, 10.9.2- Power-frequency withstand voltage, 10.9.3- Impulse withstand voltage, 10.10- Verification of temperature rise, 10.11- Shortcircuit withstand strength, 10.101- Resistance to flame propagation, 10.102- Fire resistance in building penetrations, Annex BB Phase conductor characteristics, Annex CC Fault-loop zero-sequences impedances, Annex DD Fault-loop resistances and reactances.
- Busbar system shall have CE marking.
- The manufacturer of busbar system shall have ISO 9001 and ISO 14001 certification.
- Each product shall have a "Type Label" including coding system, which identifies the brand, type of the unit, number of conductors and electrical details. The same coding shall be on the related certificate and catalogue.

2- Electrical Characteristics

- Busbar systems nominal insulation voltage shall be 1000 V.
- As per ampere rates, minimum short circuit values shall be as given below;

For Aluminium Conductors;	For Copper Conductors;
400-500A :1 sec/rms 16kA, Peak 32kA	550-650A :1 sec/rms 24kA, Peak 50,4kA
630A :1 sec/rms 25kA, Peak 52,5kA	800A :1 sec/rms 40kA, Peak 84kA
800-1000A :1 sec/rms 35kA, Peak 73,5kA	1000A :1 sec/rms 50kA, Peak 105kA
1000A :1 sec/rms 50kA, Peak 105kA	1250-1350A :1 sec/rms 60kA, Peak 132kA
1250-1350-1700A :1 sec/rms 60kA, Peak 132kA	1600-2000A :1 sec/rms 80kA, Peak 176kA
1600-2000-2500A :1 sec/rms 80kA, Peak 176kA	2500A :1 sec/rms 100kA, Peak 220kA
2500-3200A :1 sec/rms 100kA, Peak 220kA	3300A and above :1 sec/rms 120kA, Peak 264kA
3200A and above :1 sec/rms 120kA, Peak 264kA	

2.1- Housing

- Busbar system shall have "Sandwich-Compact" structure. Conductors shall be packed and placed into the housing without leaving air gap in order to provide low reactance.
- Housing shall be made of thermal processed, extruded aluminium, RAL7038-Electrostatic painted.
- Compact structure of the housing shall be provided by M6 screws applied at every 19cm along the entire length.
- The sandwich-compact structure shall continue at the plug-in points too. There shall not be air gap between conductors at the plug-in points.

2.2- Conductors

- Aluminium or Copper conductors shall be epoxy coated and tin plated at the joints upon the wire configuration and required numbers, which are described below.
- Compact busbar system shall have aluminium conductors between 400A – 6000A.
- Compact busbar system shall have copper conductors between 550A – 6300A.
- Compact busbar system shall have the following number of conductors and wire configuration;
a) 4 Conductors: (4 full size conductors + PE (housing)).
b) 4 ½ Conductors: (4 full size conductors + PE (50% earth conductor + housing)),
c) 5 Conductors: (5 full size conductors + PE (100% earth conductor + housing)).
- Phase conductors and neutral conductor shall have the same cross-section and they shall be insulated.
- Aluminium conductors shall be of EC grade aluminium. Minimum conductivity shall be 34m/mm².Ω.
- Copper conductors shall be minimum 99,95% electrolytic copper. Minimum conductivity shall be 56m/mm².Ω.

2.3- Insulation

- Insulation system shall be suitable for 1.000V continuous operation. Conductors shall be minimum thermo-set epoxy coated. Conductor size shall be designed so that temperature rise on the conductors shall not exceed 100C degree at nominal current, which helps to global heating problem. With this reason, insulation class shall be "B class".

2.4- Joint Structure

- Electrical and mechanical connection shall be made by placing conductor joints into the joint blocks of the connected conductors and followed by tightening and fastening of the joint bolts.

2.5- Protection

- Protection degree of the housing and joints shall be IP55/IP65 and IP67.
Call our company for your IP65 and IP67 orders. (IP65 and IP67 are not recommended for outdoor applications. Please check CR catalog.)

2.6- Accessories

- Busbar system shall have all necessary accessories (elbows, offsets, panel-transformer connections, reductions, etc.) Manufacturer shall supply special dimensioned units in short time, if the project conditions requires.
- For horizontal runs, a horizontal expansion unit shall be used at every 40m and expansion points of the building.
- For vertical applications, a vertical expansion unit shall be used at every floor. Busbar system shall be rigidly fixed by supports at every floor.

3- Tap Off Boxes

- Both, Feeder and Plug-in busbar systems shall be suitable for bolt-on type tap off box connections at the joints up to 1.000A.
- Bolt-on tap off boxes shall be installed to the joints without changing or adding any piece. Bolt-on tap off boxes shall be able to be moved between different rated busbars.
- Plug-In busbars shall have minimum 2 plug-in points on each 300cm length. Plug-in tap off box sizes shall be up to 630A. Unused plug-in points shall have covers, which can provide IP55 protection degree.
- Plug-in tap off boxes shall be suitable to install or removed from busbars without switching off the power on the busbar.
- Contacts of plug-in tap off box shall be plated by silver.
- Tap off boxes shall be manufactured of sheet steel and epoxy painted RAL3020 colour.
- Plug-in tap off boxes shall have electromechanical safety interlock system. Which means;
a-) Electromechanical interlock mechanism shall ensure that the tap off box cannot be removed mechanically from the busbar, when the switch is at "ON" position.
b-) Electromechanical interlock mechanism shall ensure that, cover of the box can be opened only, when the switch is at "OFF" position.
c-)When the cover is opened, inside protection degree shall be minimum IP2X against accessing to live conductors.
d-) While inserting the contacts of plug-in tap off box, earth contact shall make the first touch. While removing, it shall be disconnected last.
- Tap off boxes shall be suitable for any brand of MCCBs. Electromechanical interlock mechanism shall be suitable for all these MCCBs too.

4- Installation and Commissioning

- Busbar systems shall be installed as per Single-Line drawings respect to required ampere rates and manufacturer installation guide (torque values, lockers, etc.). Electrical installator shall run an insulation test after installation according to manufacturers test procedures. The results of the test shall be reported to the manufacturer. Minimum insulation value shall be 1 Mohm.

Component List		
Item	Component	Quantity

Company

Project

Project No

:

:

:

Prepared by

Name

Date

Signature

:

:

:

EAE

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PRODUCT TYPES

BUSBAR ENERGY DISTRIBUTION SYSTEMS



CABLE TRAYS



TROLLEY BUSBAR ENERGY DISTRIBUTION SYSTEMS



INDOOR SOLUTIONS



SUPPORT SYSTEMS



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