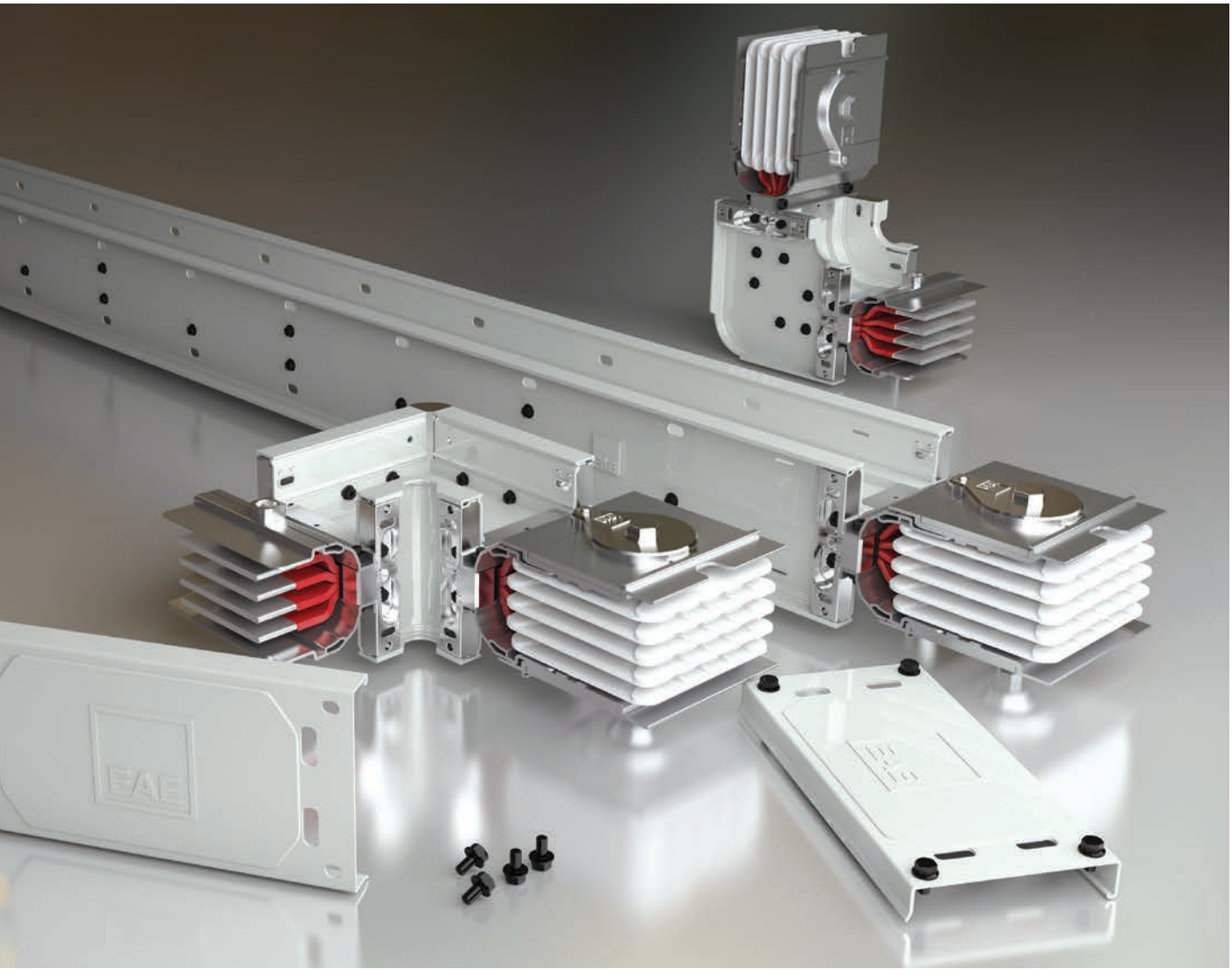
EAE
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E-LINEKX

Busbar Systems 400...6300 A



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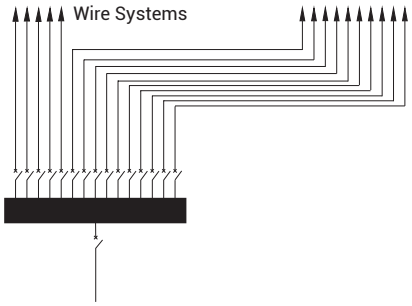
E-LINEKX

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CONTENTS

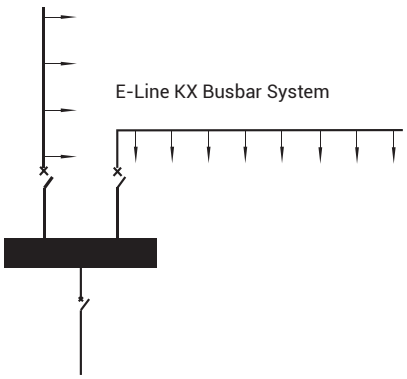
E-LINE KX

Introduction 2-3
Distribution & Horizontal Applications 4
Riser & Vertical Applications 5
Technical Characteristics 6-9
Order Code System 10
Straight Lengths 11
Elbows 12-15
"T" Module 16
Reduction Modules 17
Expansions 18
Phase Transposition Module 19
End Closers 20
Panel Connections 21-25
Transformer Connections 26-30
Tap-off Boxes 31-36
Vertical and Horizontal Busbar Applications 37-38
Feeder Boxes 39-40
Fixing Elements 41-49
Joint Structure 50
Measuring a Special Lenght 51
Inserting "Make up Section" 52
Declaration 53
Certificate 54
Product Overview 55



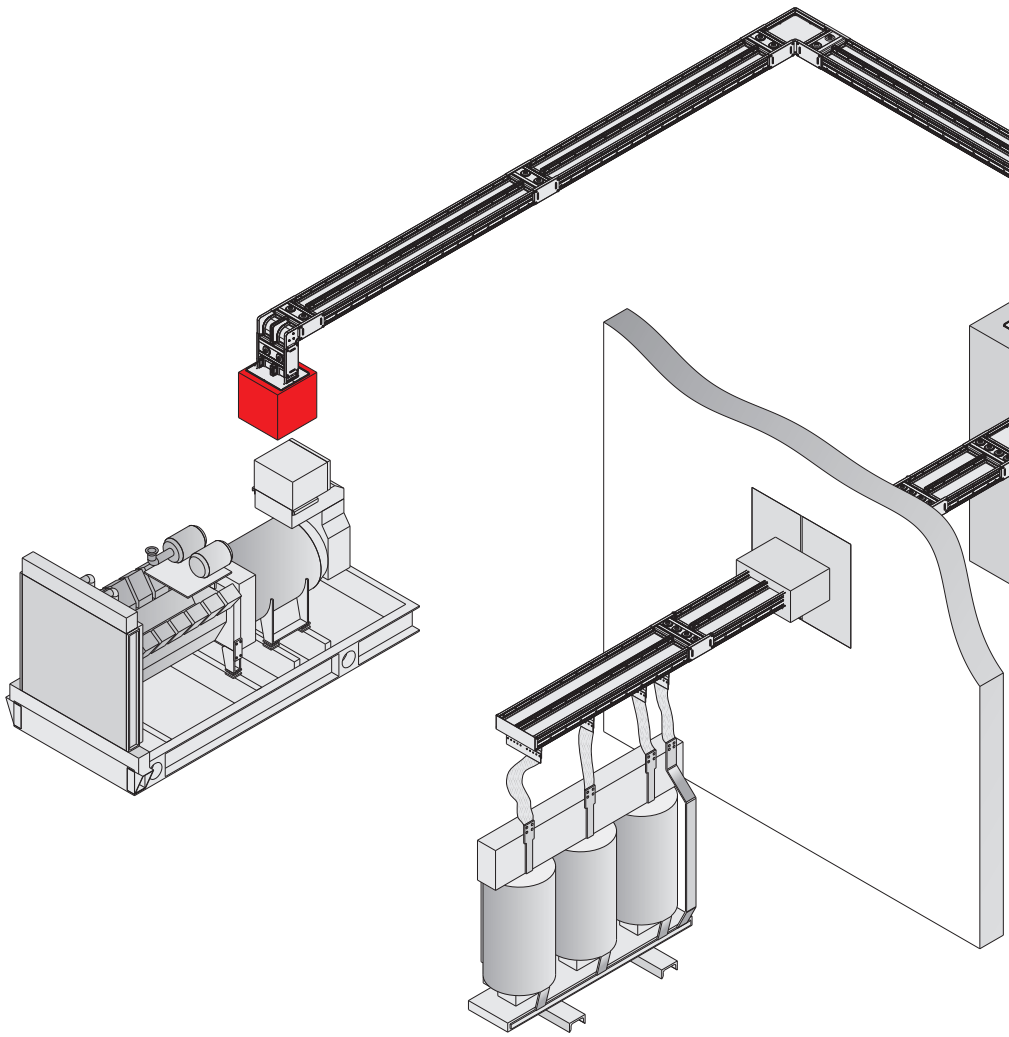
Transportation and distribution of electricity especially at high ampere ratings used to be provided by paralelling a number of large sized cables. In order to support these cables in the buildings, there were used a lot of cable trays, cable ladders, under-floor cable channels, etc. Applications of 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).

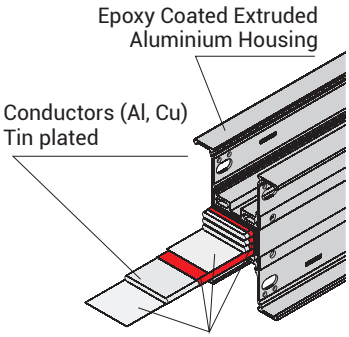


Figure 1

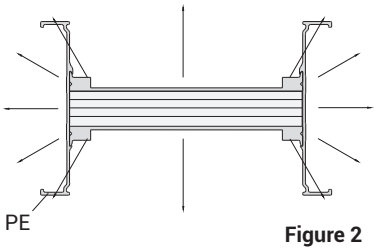
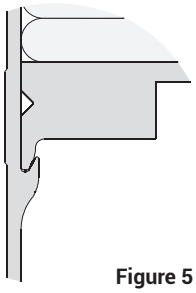


Figure 2

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-shink (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

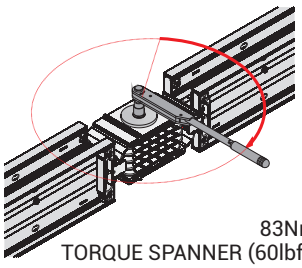


Figure 4

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=a,
- 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:

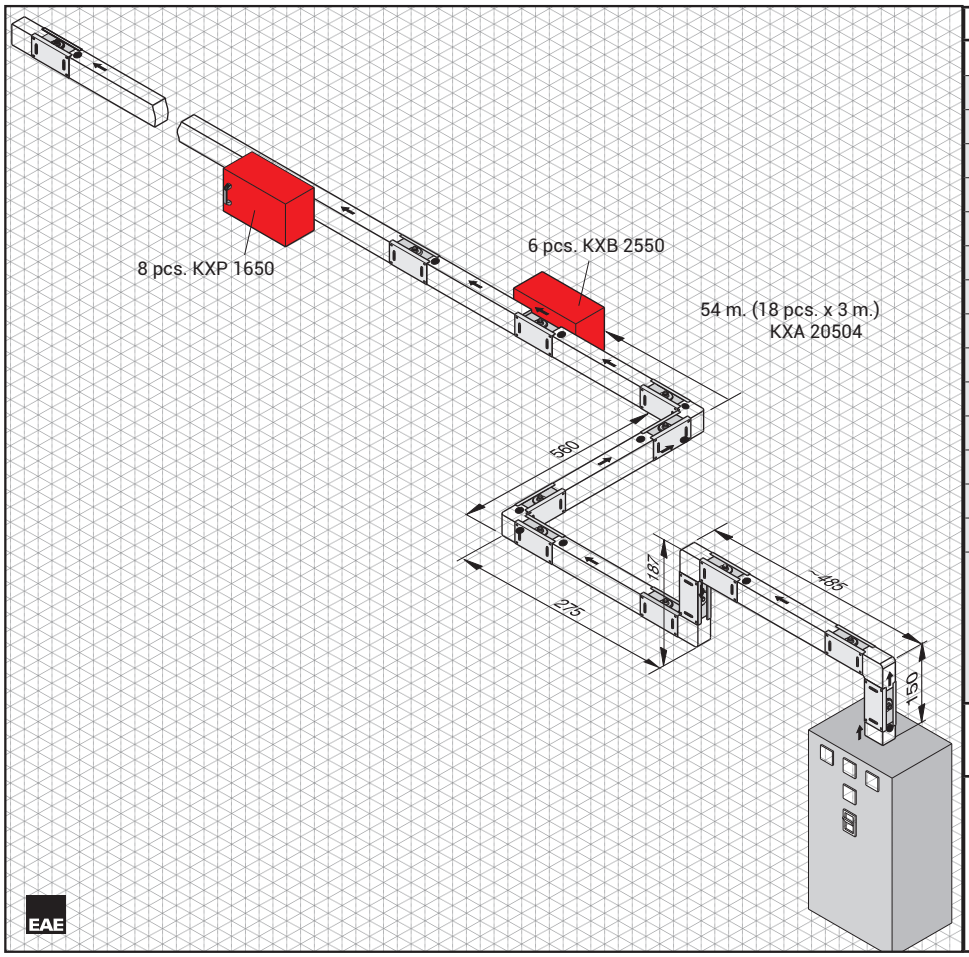
$$I_B = \frac{P.\alpha}{\sqrt{3}.U.\cos\varphi}$$

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.

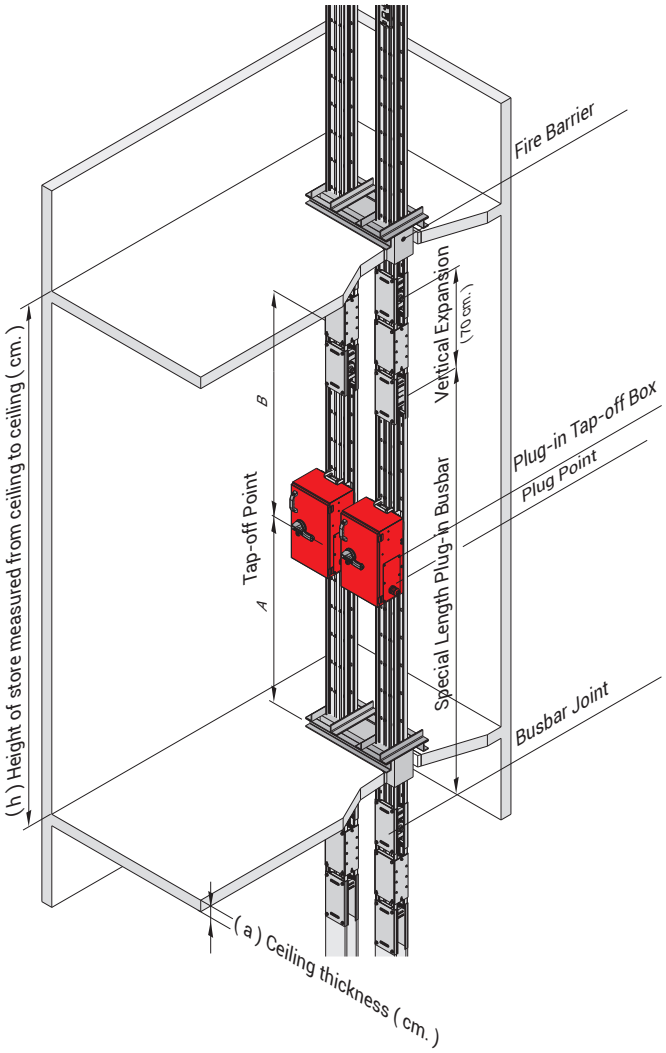
Company : Demir Makine
Project : II.OSB
Project No : 1128

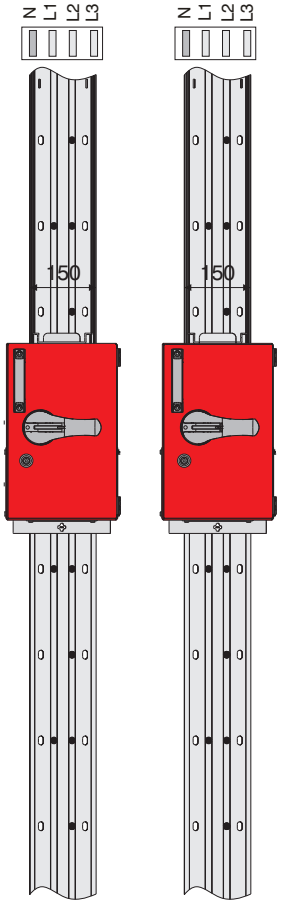
Prepared by
Name : Abdullah ELDELEKLI
Date : 02 / 01 / 2022
Signature :

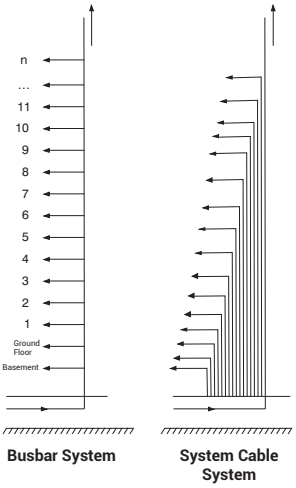
Project Sample

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.







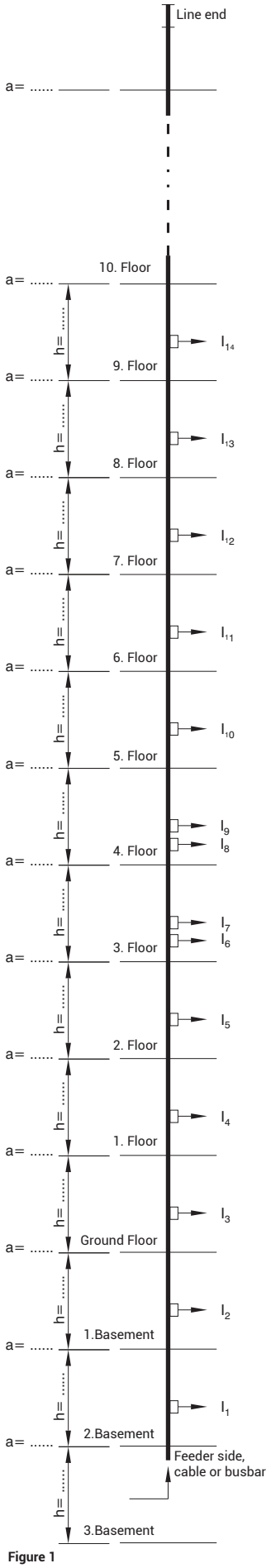


Figure 1

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.

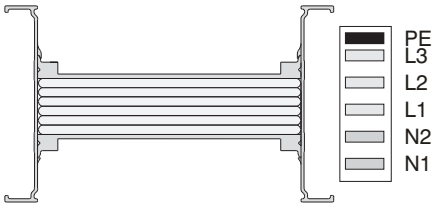
⚠ In multipath busbars in high-rise vertical shaft applications;
Due to floor heights, floor thickness and product tolerances, the window or additional point alignments on the upper floors may not be the same. In order for the Tap off boxes to be aligned and the joint point not to coincide with the floor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

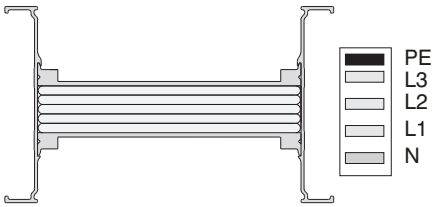
■ EAE is not responsible for the potential risks that may occur in cases where the products in our catalogue are used outside of the standard phase sequences as shown in the catalogue.

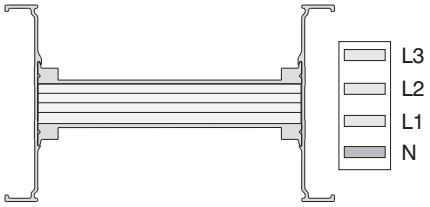
Aluminium Conductor (Al)

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									
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 In										
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		mm²	150	180	240	330	360	480	660	750
PE (4 ½ Conductors)		mm²	75	90	120	165	180	240	330	375
PE (5 Conductors)		mm²	150	180	240	330	360	480	660	750
Aluminium Housing Section (Aluminium)		mm²	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

1600	1600	2000	2000	2500	2500	2500	3200	3200	4000	4000	5000	6000
16	17	18	20	29	27	25	32	33	40	41	51	60
60	80	80	80	80	80	100	100	120	120	120	120	120
132	176	176	176	176	176	220	220	264	264	264	264	264
36	48	48	48	48	48	60	60	72	72	72	72	72
75,6	100,8	100,8	100,8	100,8	100,8	132	132	158,4	158,4	158,4	158,4	158,4
36	48	48	48	48	48	60	60	72	72	72	72	72
75,6	100,8	100,8	100,8	100,8	100,8	132	132	158,4	158,4	158,4	158,4	158,4
0,034	0,031	0,027	0,024	0,021	0,019	0,022	0,017	0,015	0,012	0,014	0,010	0,008
0,044	0,041	0,035	0,034	0,028	0,026	0,029	0,022	0,020	0,016	0,017	0,014	0,010
0,010	0,010	0,008	0,008	0,007	0,007	0,007	0,005	0,005	0,004	0,004	0,003	0,002
0,045	0,042	0,036	0,035	0,029	0,027	0,030	0,022	0,020	0,017	0,018	0,014	0,010
0,034	0,033	0,028	0,027	0,022	0,021	0,023	0,017	0,016	0,013	0,013	0,010	0,008
0,032	0,030	0,025	0,024	0,020	0,019	0,022	0,016	0,015	0,012	0,013	0,010	0,008
0,032	0,031	0,025	0,025	0,020	0,020	0,023	0,018	0,017	0,013	0,013	0,010	0,008
0,022	0,022	0,021	0,021	0,022	0,020	0,019	0,017	0,017	0,015	0,016	0,013	0,013
840	960	1080	1200	1380	1500	1320	1680	1920	2400	2160	3000	3600
420	480	540	600	690	750	660	840	960	1200	1080	1500	1800
840	960	1080	1200	1380	1500	1320	1680	1920	2400	2160	3000	3600
2206	2314	2410	2518	2679	2764	3912	4224	4411	4848	4640	5275	7128
6x140	6x160	6x180	6x200	6x230	6x250	2(6x110)	2(6x140)	2(6x160)	2(6x200)	2(6x180)	2(6x250)	3(6x200)
17,0	18,3	20,5	21,7	24,9	28,5	27,3	32,5	35,9	42,9	38,6	57,2	63,9
19,6	21,1	23,7	25,3	29,0	34,2	31,2	37,5	41,6	50	45,0	68,5	74,6
0,164	0,153	0,132	0,130	0,102	0,103	0,108	0,081	0,074	0,060	0,065	0,048	0,039
0,141	0,161	0,126	0,158	0,112	0,131	0,101	0,076	0,101	0,084	0,085	0,078	0,043
0,209	0,195	0,169	0,167	0,131	0,135	0,140	0,104	0,094	0,078	0,084	0,064	0,050
0,176	0,199	0,159	0,199	0,143	0,168	0,126	0,095	0,127	0,108	0,111	0,102	0,054
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





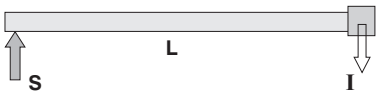


Voltage Drop Calculation

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

$$\Delta U = \sqrt{3}.L.I.(R.\cos\varphi + X.\sin\varphi)\ 10^{-3}\ [V]$$

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



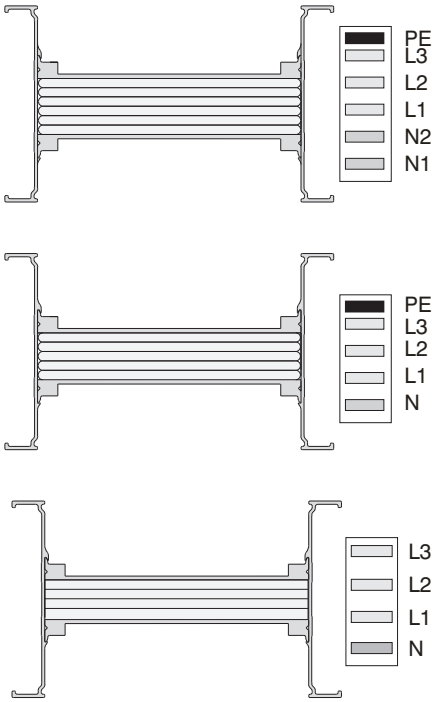
S = Supply Point

■ 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								
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 In									
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

2000	2500	2000	2500	3300	3600	4000	5000	6300
23	25	22	27	32	36	40	50	63
80	100	80	100	120	120	120	120	120
176	220	176	220	264	264	264	264	264
48	60	48	60	72	72	72	72	72
100,8	132	100,8	132	158,4	158,4	158,4	158,4	158,4
48	60	48	60	72	72	72	72	72
100,8	132	100,8	132	158,4	158,4	158,4	158,4	158,4
0,024	0,016	0,028	0,021	0,014	0,012	0,011	0,008	0,005
0,033	0,021	0,036	0,028	0,019	0,016	0,015	0,010	0,006
0,010	0,008	0,012	0,009	0,007	0,006	0,005	0,004	0,003
0,034	0,022	0,038	0,030	0,020	0,017	0,016	0,011	0,007
0,026	0,018	0,030	0,023	0,016	0,014	0,012	0,009	0,006
383,3	384,4	436,8	528,8	604,4	633,7	705,6	772,5	750,1
0,022	0,014	0,025	0,021	0,013	0,012	0,010	0,007	0,005
0,023	0,014	0,026	0,021	0,015	0,012	0,009	0,008	0,005
0,039	0,031	0,019	0,022	0,018	0,023	0,021	0,021	0,011
750	1200	660	840	1320	1500	1680	2400	3600
375	600	330	420	660	750	840	1200	1800
750	1200	660	840	1320	1500	1680	2400	3600
2128	2518	3340	3580	3912	4068	4224	4848	7128
6x125	6x200	2(6x55)	2(6x70)	2(6x110)	2(6x125)	2(6x140)	2(6x200)	3(6x200)
36,2	54,7	35,9	44	63,5	71,1	78,6	108,8	162,8
43,8	66,5	42,4	52	76,5	85,8	95,2	132,4	198,2
0,130	0,086	0,148	0,107	0,073	0,067	0,060	0,038	0,029
0,153	0,146	0,144	0,090	0,091	0,090	0,100	0,086	0,061
0,167	0,107	0,189	0,136	0,092	0,084	0,077	0,046	0,034
0,193	0,181	0,176	0,111	0,113	0,112	0,128	0,106	0,075
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

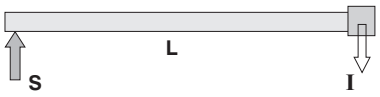


Voltage Drop Calculation

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

$$\Delta U = \sqrt{3}.L.I.(R.\cos\varphi + X.\sin\varphi)\ 10^{-3}\ [V]$$

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

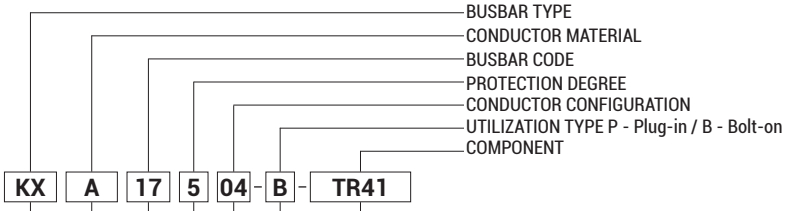


S = Supply Point

■ 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.

ELINEKX

▶▶Order Code System



Busbar Type

Aluminium	(Al)	**A**
Copper	(Cu)	**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
1600	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* 5

PROTECTION DEGREE

*Please call us for IP65 orders.
(IP65 is not recommended for outdoor applications. Please check CR catalog.)

Number of Conductors	Code	Conductor Configuration									
		L1	L2	L3	N1	N2	PE	½ PE	CPE	½ CPE	PE (Housing)
3 Conductors	03	√	√	√							√
4 Conductors	04	√	√	√	√						√
4 ½ Conductors	07	√	√	√	√			√			√
4 ½ Conductors	08	√	√	√	√					√	√
5 Conductors	05	√	√	√	√		√				√
5 Conductors	09	√	√	√	√				√		√
6 Conductors	06	√	√	√	√	√			√		√

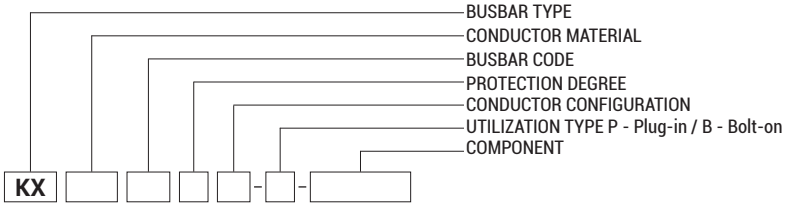
*TYPE	Utilization Type
(B) Bolt-on	Energy is supplied from the joints.
(P) Plug-in	Energy is supplied from the joints and the plug-in points.

COMPONENTS

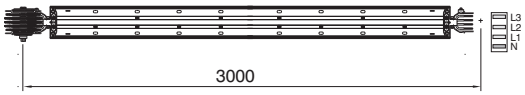
Standard Length	STD
Special Length	X
Upwards Elbow	U
Downwards Elbow	D
Right Elbow	R
Left Elbow	L
Left Horizontal Offset	LH
Right Horizontal Offset	RH
Upwards Vertical Offset	UV
Downwards Vertical Offset	DV
Upwards Left Combined Offset	KUL
Upwards Right Combined Offset	KUR
Downwards Left Combined Offset	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

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▶▶Standard Straight Length



Bolt-on



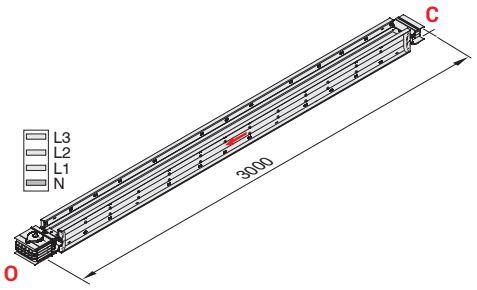
Electrical energy up to 1000 A can be supplied from the joints of bolt-on type by bolt-on tap-off boxes.

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

Bolt-on Standard Straight Length Busbar **- S T D**

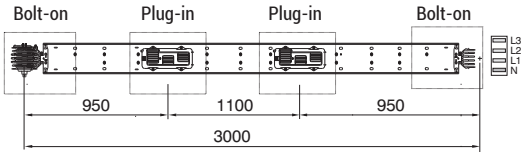
Sample Order:
2500 A, Aluminium,
Bolt-on, IP 55, 4 Conductors

KXA 25504 - B - STD



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

Plug-in



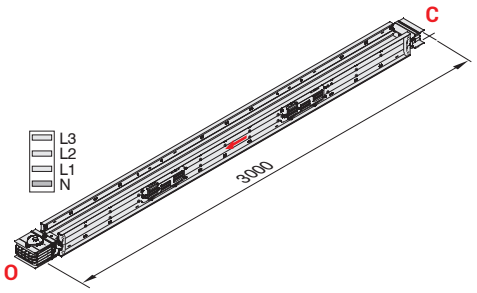
Electrical energy up to 1000 A can be supplied from the joints and up to 630 A can be supplied from the plus.

Plug-in Standard Straight Length Busbar **- S T D**

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

KXC 12504 - P - STD

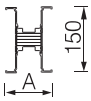
Note:
Please, determine number and side of plug-in points (single or double side).

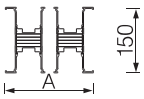


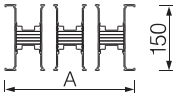
Applications:
- In application of bolt-on
- As vertical feeder line high rise buildings
- For frequent energy supply
- If continuous energy needed, while tap-offs installed.

Table For Outer Dimension of Busbars

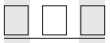
KXA - Al Conductor		KXC - Cu Conductor		A
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)
*400	04	*550	05	77,5
*500	05	*650	06	82,5
*630	06	*800	08	91
800	08	1000	10	106
1000	11	-	-	111
-	-	1250	12	121
1000	10	1350	14	131
-	-	1600	17	146
1250	12	-	-	161
1350	14	2000	23	176
1600	16	-	-	191
1600	17	-	-	211
2000	18	-	-	233
2000	20	2500	25	251
2500	29	-	-	281
2500	27	-	-	301
-	-	2000	22	202
-	-	2500	27	232
2500	25	3300	32	312
-	-	3600	36	342
3200	32	4000	40	372
3200	33	-	-	412
4000	40	5000	50	492
4000	41	-	-	454
5000	51	-	-	592
6000	60	6300	63	732







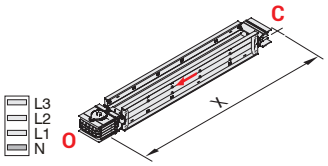
Special Straight Length



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

KXC 25504 - B - X - 147

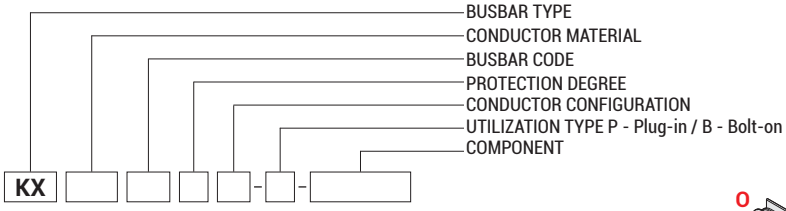
Note:
Bolt-on Minimum Length = 35cm
Plug-in Minimum Length = 100cm



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.

ELINEKX

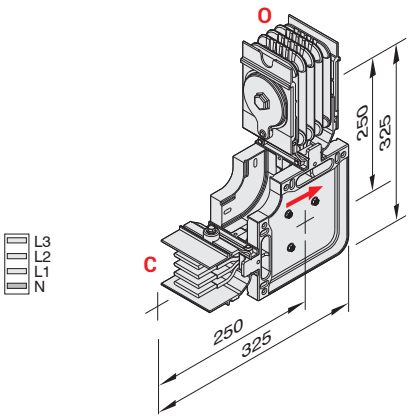
▶▶Elbows



Upwards Elbow - U

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

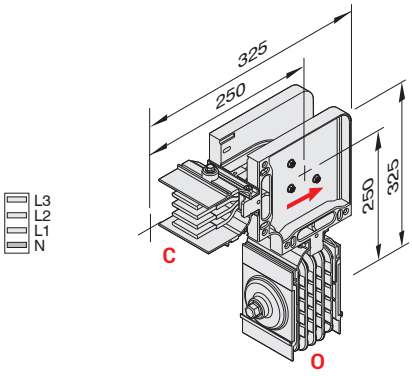
KXC 32504 - B - U



Downwards Elbow - D

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

KXC 32504 - B - D

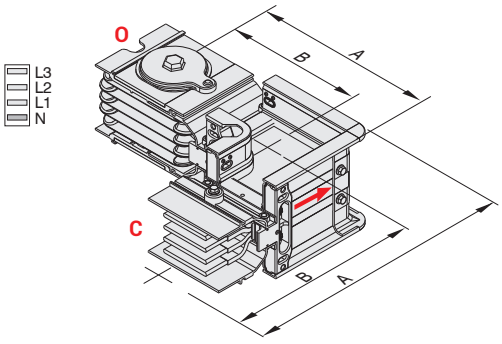


KXA - Al Conductor		KXC - Cu Conductor		A	B
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)
*400	04	*550	05	252	214
*500	05	*650	06	257	217
*630	06	*800	08	267	222
800	08	1000	10	282	229
1000	11	-	-	287	232
-	-	1250	12	297	236
1000	10	1350	14	307	241
-	-	1600	17	322	249
1250	12	-	-	337	256
1350	14	2000	23	352	264
1600	16	-	-	367	271
1600	17	-	-	387	281
2000	18	-	-	408	291
2000	20	2500	25	427	301
2500	29	-	-	457	316
2500	27	-	-	477	326
-	-	2000	22	377	276
-	-	2500	27	407	291
2500	25	3300	32	487	331
-	-	3600	36	517	346
3200	32	4000	40	547	361
3200	33	-	-	587	381
4000	40	5000	50	667	421
4000	41	-	-	627	401
5000	51	-	-	767	471
6000	60	6300	63	907	541

Left Elbow - L

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

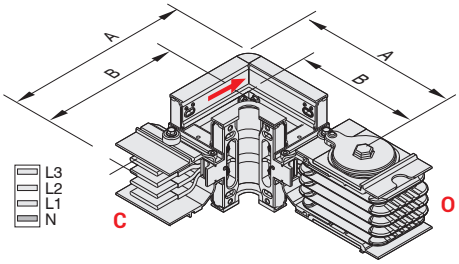
KXC 23504 - B - L



Right Elbow - R

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

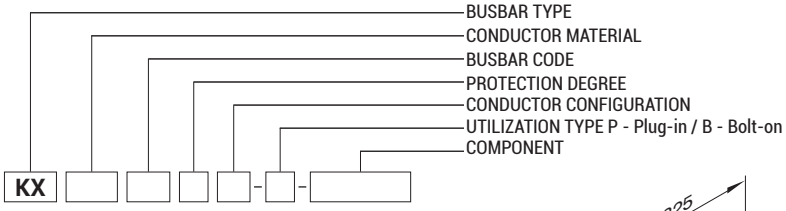
KXA 20504 - B - R



■ Special left or right elbows between 90° and 180° can be manufactured upon request.
■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

ELINEKX

▶▶ Elbows

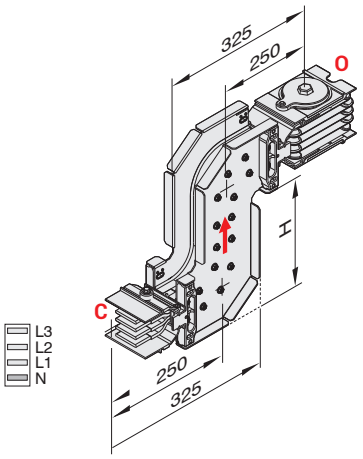


Upwards Vertical Offset - U V □□ H (cm)

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

KXA 20505-B-UV25

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

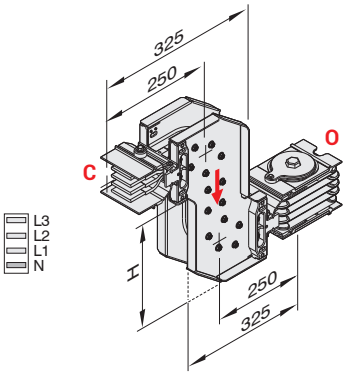


Downwards Vertical Offset - D V □□ H (cm)

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

KXA 20505-B-DV25

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



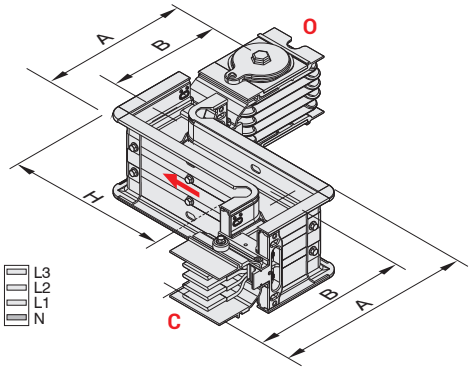
KXA - Al Conductor		KXC - Cu Conductor		A	B	$H_{max.}$
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	(mm)
*400	04	*550	05	252	214	427
*500	05	*650	06	257	217	432
*630	06	*800	08	267	222	442
800	08	1000	10	282	229	457
1000	11	-	-	287	232	462
-	-	1250	12	297	236	472
1000	10	1350	14	307	241	482
-	-	1600	17	322	249	497
1250	12	-	-	337	256	512
1350	14	2000	23	352	264	527
1600	16	-	-	367	271	542
1600	17	-	-	387	281	562
2000	18	-	-	408	291	582
2000	20	2500	25	427	301	602
2500	29	-	-	457	316	632
2500	27	-	-	477	326	652
-	-	2000	22	377	276	552
-	-	2500	27	407	291	582
2500	25	3300	32	487	331	662
-	-	3600	36	517	346	692
3200	32	4000	40	547	361	722
3200	33	-	-	587	381	762
4000	40	5000	50	667	421	842
4000	41	-	-	627	401	802
5000	51	-	-	767	471	942
6000	60	6300	63	907	541	1082

Left Horizontal Offset - L H □□ H (cm)

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

KXC 32504-B-LH60

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

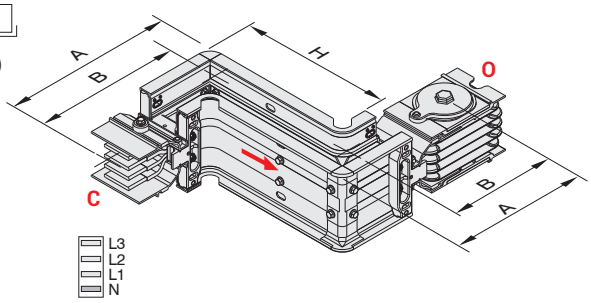


Right Horizontal Offset - R H □□ H (cm)

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

KXC 32504-B-RH60

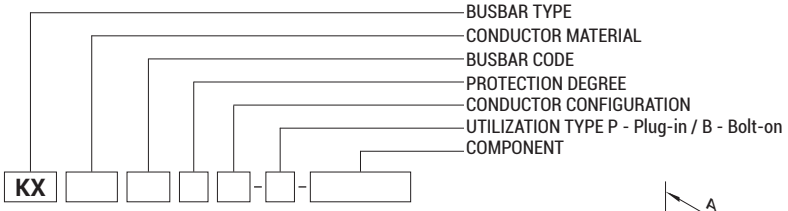
Note:
H=min:28 cm,
max: *Please see table.
Used, if two horizontal elbows can not fit.



■ Special left or right elbows between 90° and 180° can be manufactured upon request.
■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

ELINEKX

▶▶Elbows



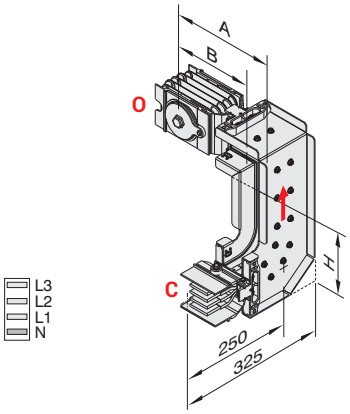
KXA - Al Conductor		KXC - Cu Conductor		A	B
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)
*400	04	*550	05	252	214
*500	05	*650	06	257	217
*630	06	*800	08	267	222
800	08	1000	10	282	229
1000	11	-	-	287	232
-	-	1250	12	297	236
1000	10	1350	14	307	241
-	-	1600	17	322	249
1250	12	-	-	337	256
1350	14	2000	23	352	264
1600	16	-	-	367	271
1600	17	-	-	387	281
2000	18	-	-	408	291
2000	20	2500	25	427	301
2500	29	-	-	457	316
2500	27	-	-	477	326
-	-	2000	22	377	276
-	-	2500	27	407	291
2500	25	3300	32	487	331
-	-	3600	36	517	346
3200	32	4000	40	547	361
3200	33	-	-	587	381
4000	40	5000	50	667	421
4000	41	-	-	627	401
5000	51	-	-	767	471
6000	60	6300	63	907	541

Upwards Left Combined Offset - K U L

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

KXC 32504 - B - KUL

Note:
H=min. 30 cm

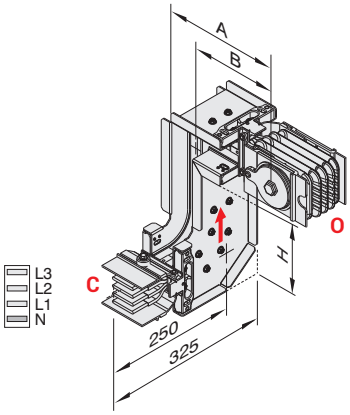


Upwards Right Combined Offset - K U R

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

KXA 33504 - B - KUR

Note:
H=min. 30 cm

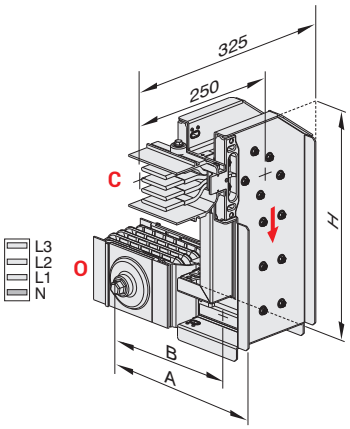


Downwards Left Combined Offset - K D L

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

KXC 32504 - B - KDL

Note:
H=min. 30 cm

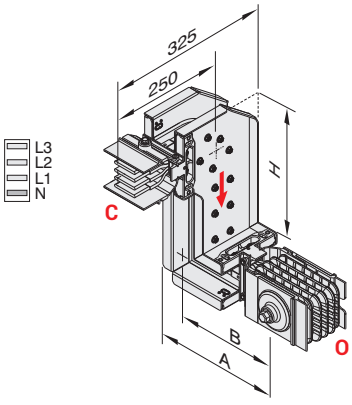


Downwards Right Combined Offset - K D R

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

KXA 33504 - B - KDR

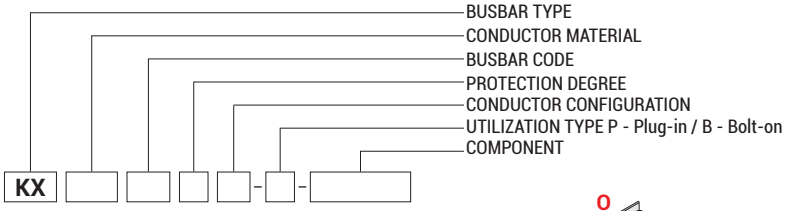
Note:
H=min. 30 cm



■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

ELINEKX

▶▶Elbows



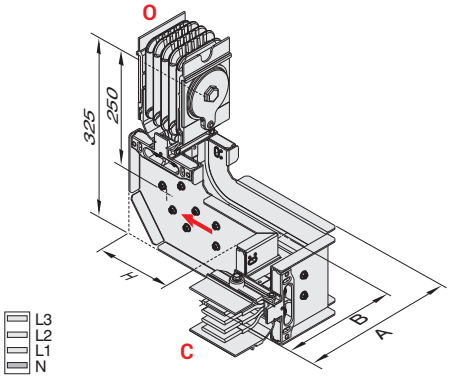
KXA - Al Conductor		KXC - Cu Conductor		A	B
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)
*400	04	*550	05	252	214
*500	05	*650	06	257	217
*630	06	*800	08	267	222
800	08	1000	10	282	229
1000	11	-	-	287	232
-	-	1250	12	297	236
1000	10	1350	14	307	241
-	-	1600	17	322	249
1250	12	-	-	337	256
1350	14	2000	23	352	264
1600	16	-	-	367	271
1600	17	-	-	387	281
2000	18	-	-	408	291
2000	20	2500	25	427	301
2500	29	-	-	457	316
2500	27	-	-	477	326
-	-	2000	22	377	276
-	-	2500	27	407	291
2500	25	3300	32	487	331
-	-	3600	36	517	346
3200	32	4000	40	547	361
3200	33	-	-	587	381
4000	40	5000	50	667	421
4000	41	-	-	627	401
5000	51	-	-	767	471
6000	60	6300	63	907	541

Left Upwards Combined Offset - K L U

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

KXA 33504 - B - KLU

Note:
H=min. 30 cm

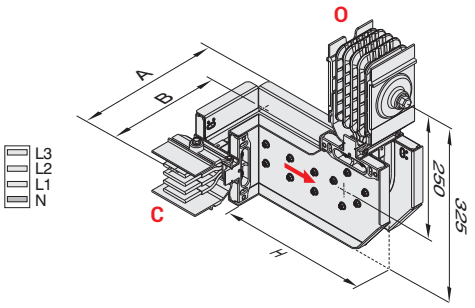


Right Upwards Combined Offset - K R U

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

KXC 32504 - B - KRU

Note:
H=min. 30 cm

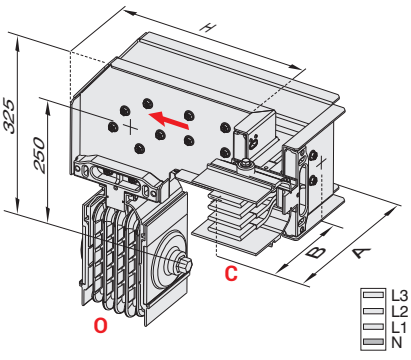


Left Downwards Combined Offset - K L D

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

KXA 33504 - B - KLD

Note:
H=min. 30 cm

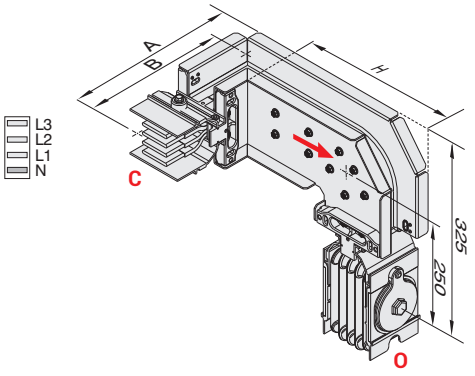


Right Downwards Combined Offset - K R D

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

KXC 32504 - B - KRD

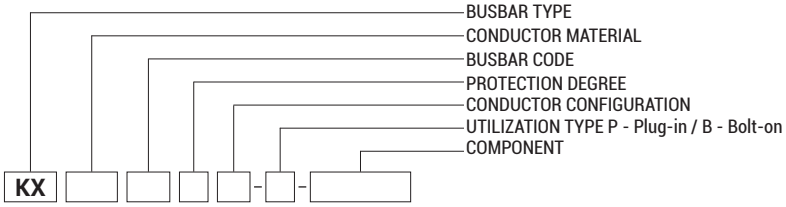
Note:
H=min. 30 cm

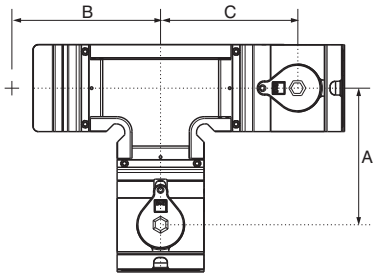


■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

ELINEKX

▶▶" T" Elbows

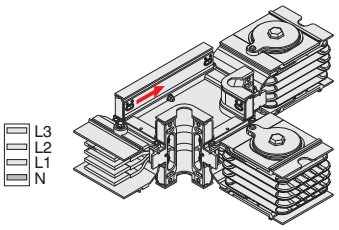


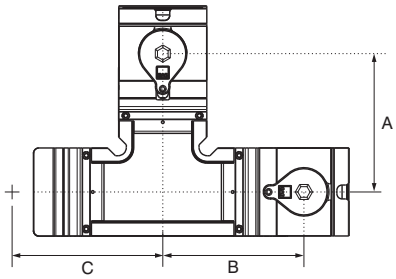


Right Side Feeder "T" **- T Y R**

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

KXC 25504 - B - TYR

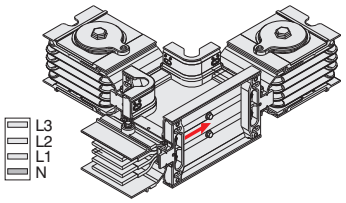




Left Side Feeder "T" **- T Y L**

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

KXA 25504 - B - TYL

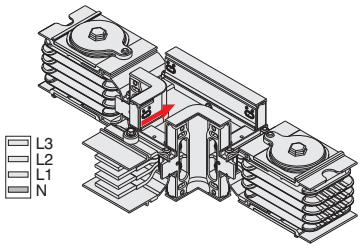


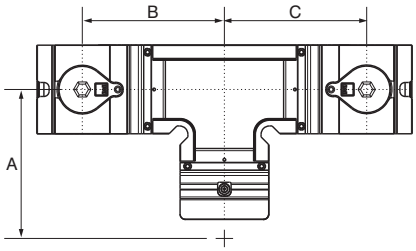
KXA - Al Conductor		KXC - Cu Conductor		A	B	C
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	(mm)
*400	04	*550	05	214	214	214
*500	05	*650	06	216	216	216
*630	06	*800	08	221	221	221
800	08	1000	10	229	229	229
1000	11	-	-	232	232	232
-	-	1250	12	236	236	236
1000	10	1350	14	241	241	241
-	-	1600	17	249	249	249
1250	12	-	-	256	256	256
1350	14	2000	23	264	264	264
1600	16	-	-	271	271	271
1600	17	-	-	281	281	281
2000	18	-	-	291	291	291
2000	20	2500	25	301	301	301
2500	29	-	-	316	316	316
2500	27	-	-	326	326	326
-	-	2000	22	276	276	276
-	-	2500	27	291	291	291
2500	25	3300	32	331	331	331
-	-	3600	36	346	346	346
3200	32	4000	40	361	361	361
3200	33	-	-	381	381	381
4000	40	5000	50	421	421	421
4000	41	-	-	401	401	401
5000	51	-	-	471	471	471
6000	60	6300	63	541	541	541

Central Feeder "T" **- T O**

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

KXC 32504 - B - TO

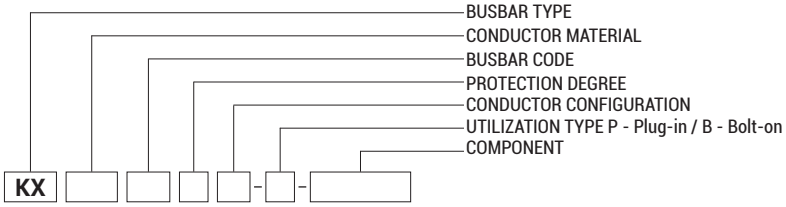




■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

ELINEKX

▶▶ Reduction Modules



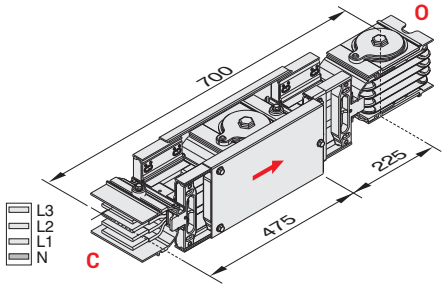
Reduction
Is used to change the busbar cross section.

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	-	-	-	√	√	√	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1600	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√	√

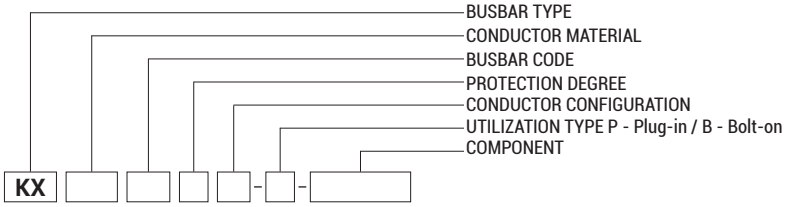
1 ↓ 2 →

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	√

1 ↓ 2 →

■ The dimensions given above are minumum values. ■ Please call us for non-standard components.



Vertical Expansion

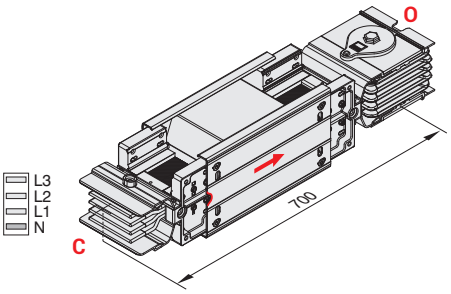
Used for vertical applications in multi storey buildings.

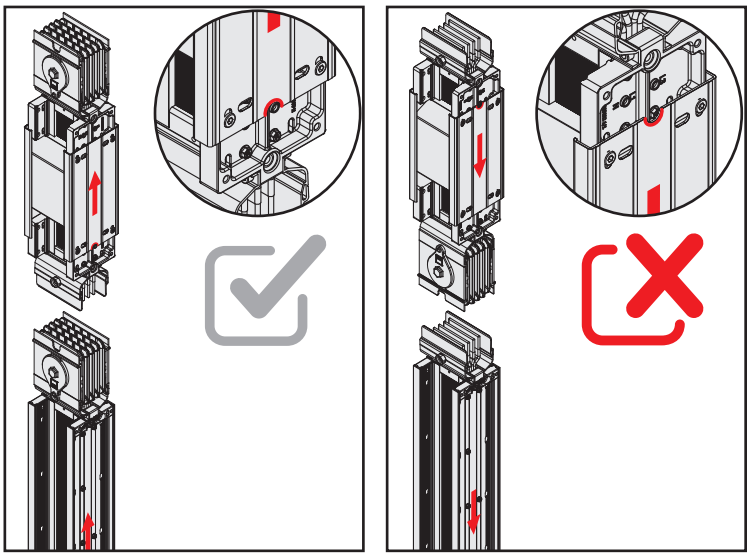
One vertical expansion unit is advised to be used at every floor between fixed support points.

Vertical Expansion - D D T

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

KXC 23504 - 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.

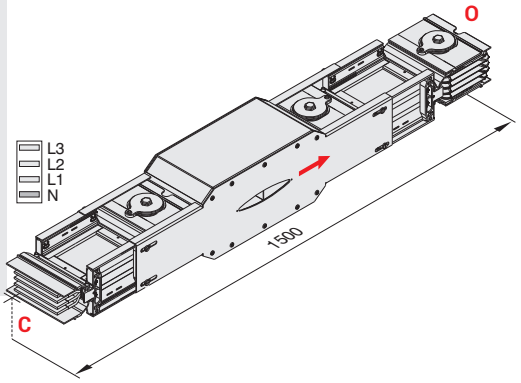
3) Horizontal expansion joint has sufficient movement span of 54mm.

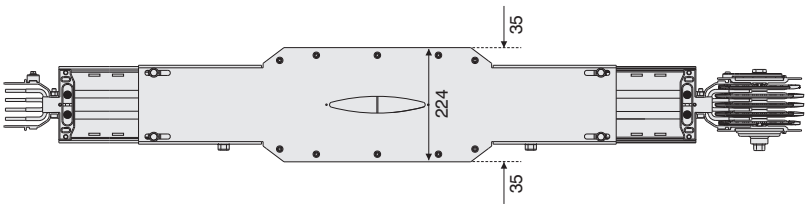
EAE requests to be consulted during design stage.

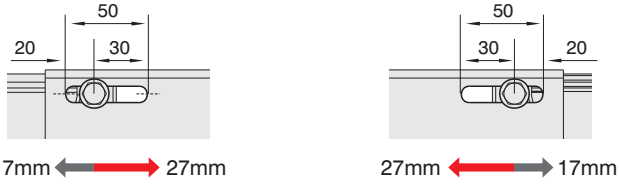
Horizontal Expansion - Y D T

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

KXA 25504 - B - YDT



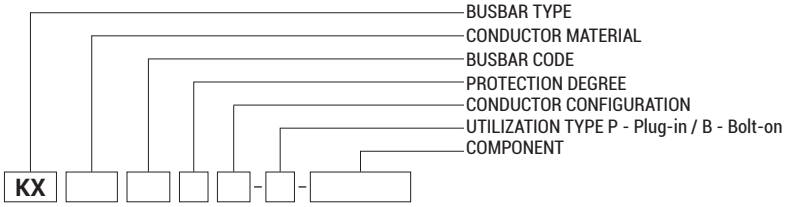




■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

ELINEKX

▶▶Phase Transposition Module



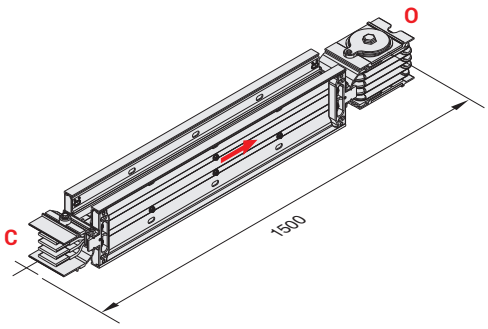
Phase Transposition Module

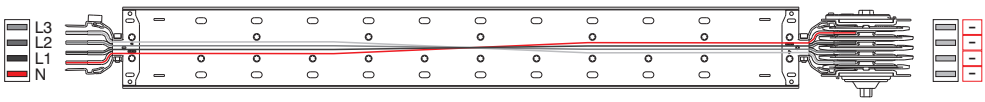
They used for transposition of phase sequence.

Phase Transposition Module - F D M

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

KXA 25504 - B - FDM

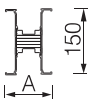


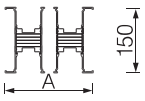


When installation of the Tap-Off Boxes needed after the phase changer box , an approvement must be taken from the customer representative in advance.

FDM Dimension Table

KXA - Al Conductor		KXC - Cu Conductor		A
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)
*400	04	*550	05	77,5
*500	05	*650	06	82,5
*630	06	*800	08	91
800	08	1000	10	106
1000	11	-	-	111
-	-	1250	12	121
1000	10	1350	14	131
-	-	1600	17	146
1250	12	-	-	161
1350	14	2000	23	176
1600	16	-	-	191
1600	17	-	-	211
2000	18	-	-	233
2000	20	2500	25	251
2500	29	-	-	281
2500	27	-	-	301
-	-	2000	22	202
-	-	2500	27	232
2500	25	3300	32	312
-	-	3600	36	342
3200	32	4000	40	372
3200	33	-	-	412
4000	40	5000	50	492
4000	41	-	-	454
5000	51	-	-	592
6000	60	6300	63	732





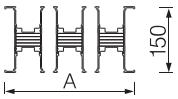


Figure 1

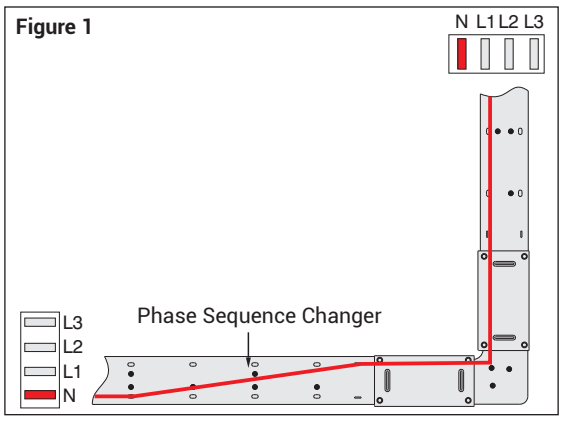
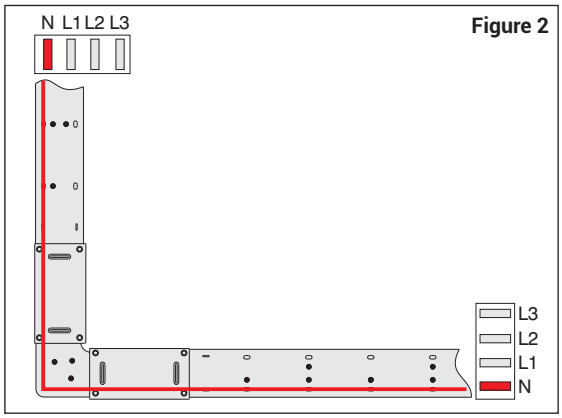


Figure 2



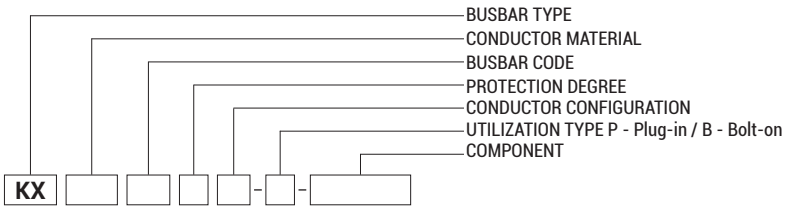
Vertical Shaft Application

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)

■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

ELINEKX

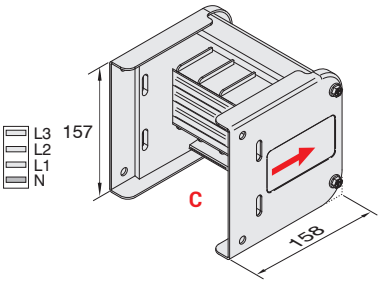
▶▶End Closers



End Closer **- S**

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

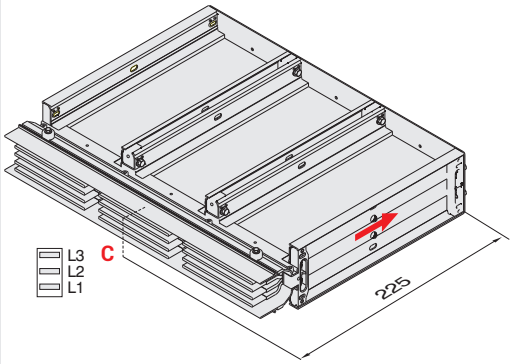
KX 205A / 255C - B- S



End Closer **- S 1 0**

Sample Order:
6300 A, Copper
Bolt-on, IP 55, 3 Conductors

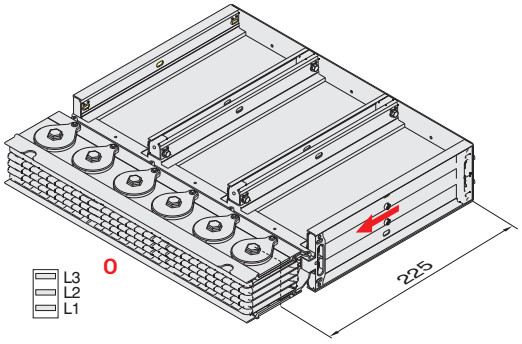
KXC 63503 - B- S 10



End Closer **- S 1 1**

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

KXC 50503 - B - S 11



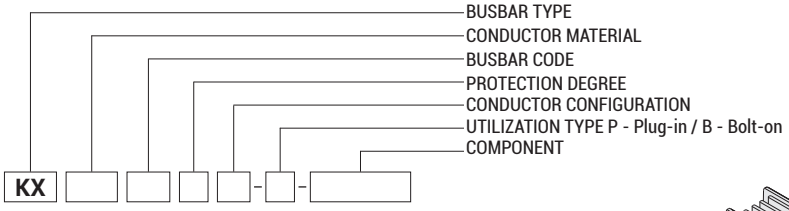
End Closer
Is used to close the end of busbar run.

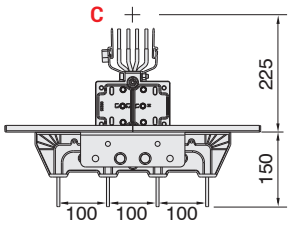
KXA - Al Conductor		KXC - Cu Conductor		L1, L2, L3, N + Housing 04 L1, L2, L3, N, ½PE + Housing 07 L1, L2, L3, N, PE + Housing 05	
Rated Current	Busbar Code	Rated Current	Busbar Code	Dimensions (mm)	Order Code
*400	04	*550	05	6x25	**3066129**
*500	05	*650	06	6x30	**3066131**
*630	06	*800	08	6x40	**3016698**
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**
1600	16	-	-	6x140	**3016704**
1600	17	-	-	6x160	**3016705**
2000	18	-	-	6x180	**3127358**
2000	20	2500	25	6x200	**3016706**
2500	29	-	-	6x230	**3135702**
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**

■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

ELINEKX

▶▶Panel Connections



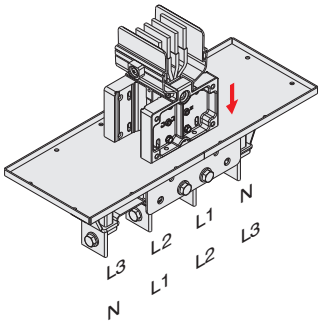


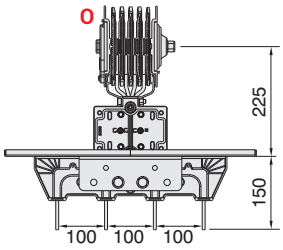
Panel Connection - P 1 0

Panel Feeder

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

KXC 25504 - B - P10



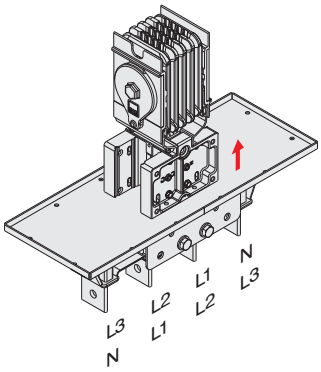


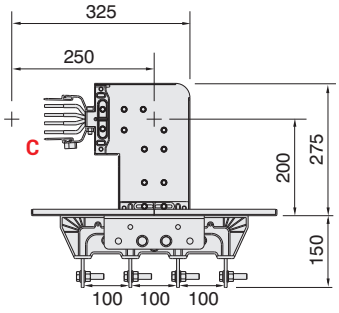
Panel Connection - P 1 1

Busbar Feeder

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

KXC 25504 - B -P11



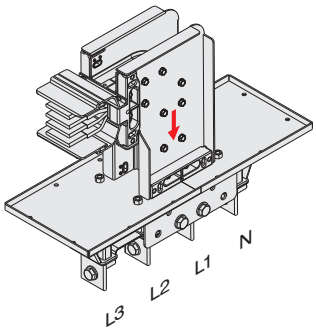


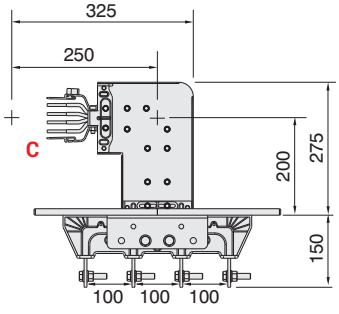
Upwards Panel Connection - P U 2 0

Panel Feeder

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

KXC 36504 - B - PU20



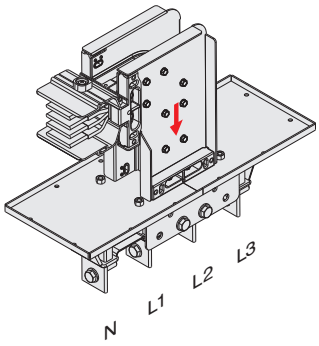


Downwards Panel Connection - P D 2 0

Panel Feeder

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

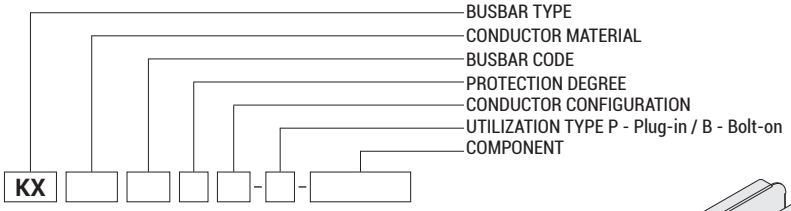
KXC 43504 - B - PD20

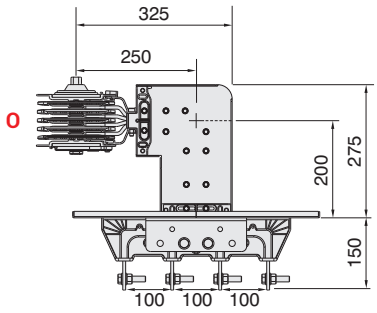


For connection dimensions please refer to tables on pages 24 and 25.

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

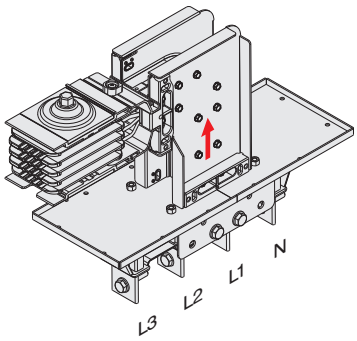
■ Distance between conductors can vary in ±5 mm. ■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

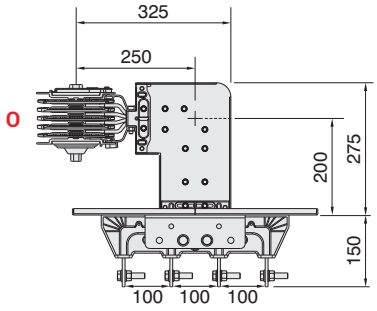




Upwards Busbar Connection **- P U 2 1**
Busbar Feeder
Sample Order:
3600 A, Copper, Bolt-on, 4 Conductors for Busbar Feeder

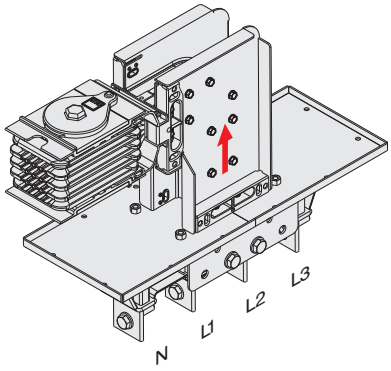
KXC 36504 - B - PU21

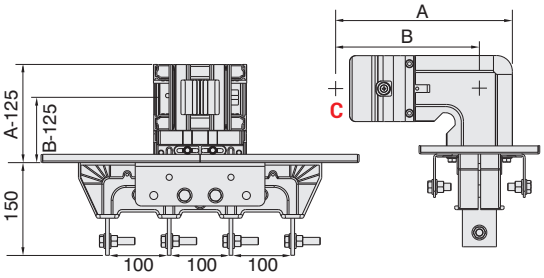




Downwards Busbar Connection **- P D 2 1**
Busbar Feeder
Sample Order:
4250 A, Copper, Bolt-on, 4 Conductors for Busbar Feeder

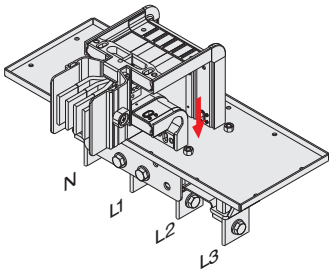
KXC 43504 - B - PD21

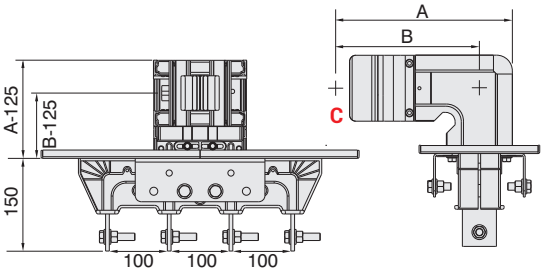




Right Panel Connection **- P R 3 0**
Panel Feeder
Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors for Panel Feeder

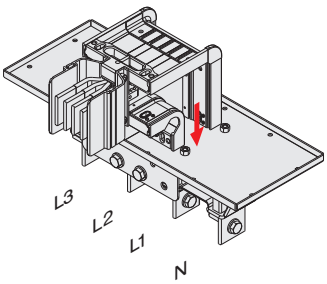
KXC 25504 - B - PR30





Left Panel Connection **- P L 3 0**
Panel Feeder
Sample Order:
2500 A, Copper, Bolt-on, 4 Conductors for Panel Feeder

KXC 25504 - B - PL30

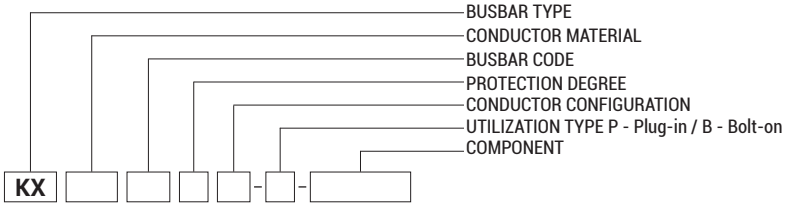


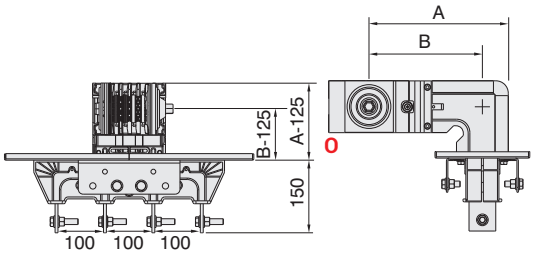
The "A" and "B" dimensions for PR30 and PL30 are the same dimensions as left and right elbows.
Please refer to page 12 for the dimensions.

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 minumum values. ■ Please call us for non-standard components.

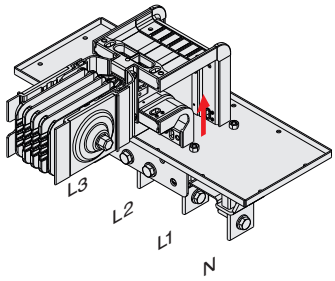


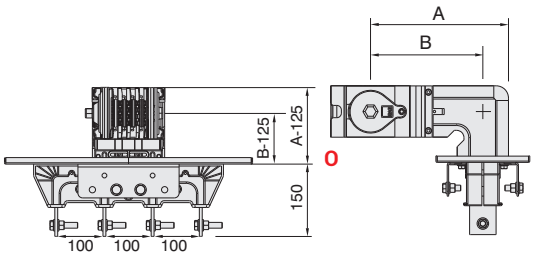


Right Panel Connection Busbar Feeder **- P R 3 1**

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

KXC 25504 - B - PR31

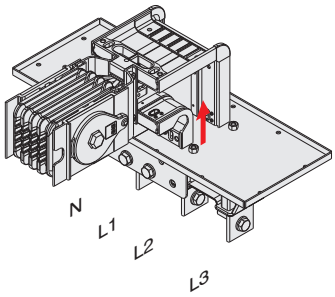


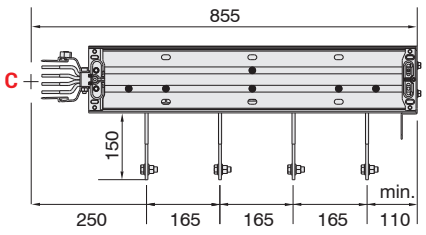


Left Panel Connection Busbar Feeder **- P L 3 1**

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

KXC 25504 - B - PL31



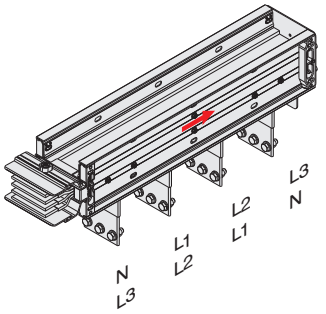


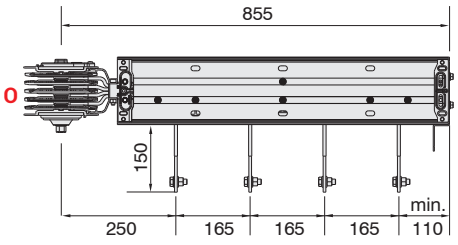
Panel Connection **- P 4 0**

Panel Feeder

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

KXC 32504 - B - P40



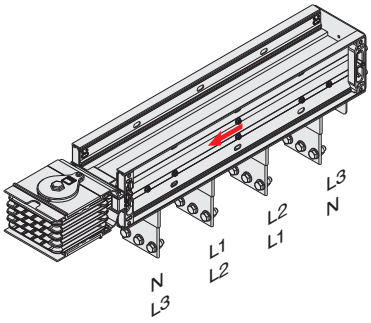


Panel Connection **- P 4 1**

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.

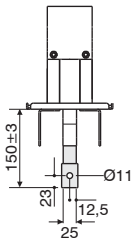
Note: Please contact with us for the dimensions of our 6 conductor solutions.

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

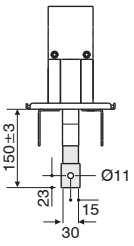
Panel Connection Units

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

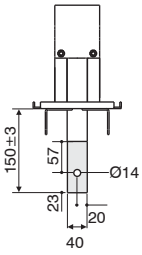
KXA 04
KXC 05



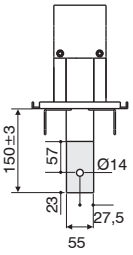
KXA 05
KXC 06



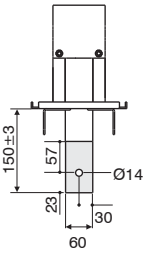
KXA 06
KXC 08



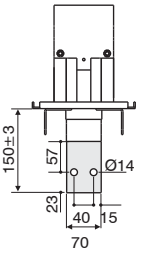
KXA 08
KXC 10



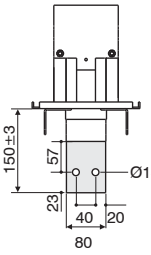
KXA 11



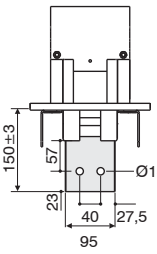
KXC 12



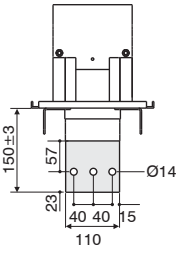
KXA 10
KXC 14



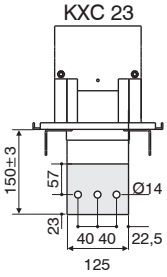
KXC 17



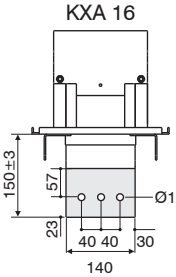
KXA 12



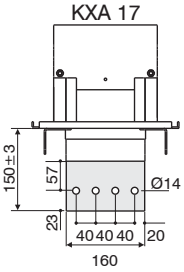
KXA 14
KXC 23



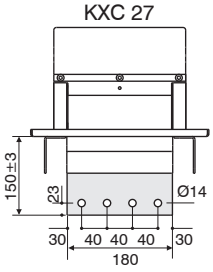
KXA 16



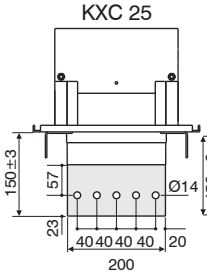
KXA 17



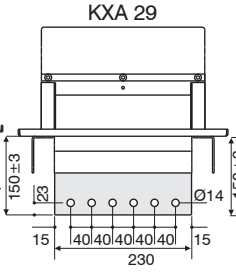
KXA 18
KXC 27



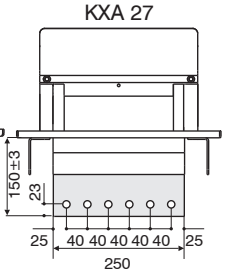
KXA 20
KXC 25



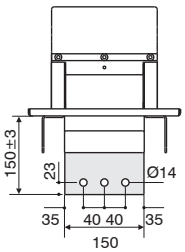
KXA 29



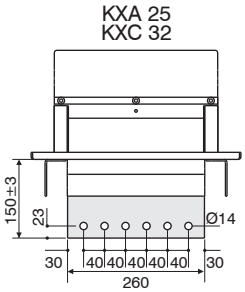
KXA 27



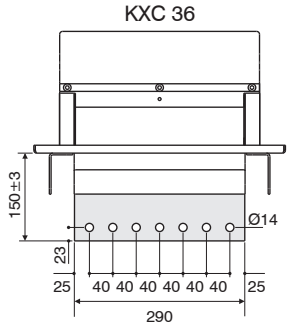
KXC 22



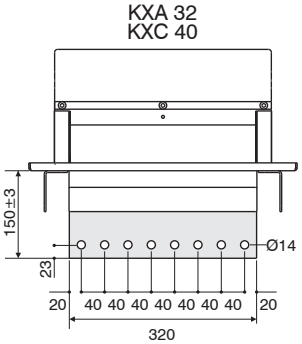
KXA 25
KXC 32



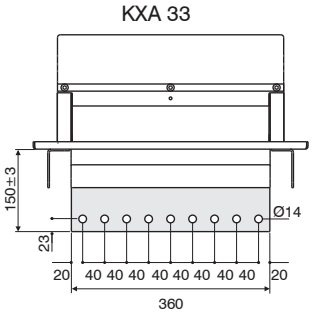
KXC 36



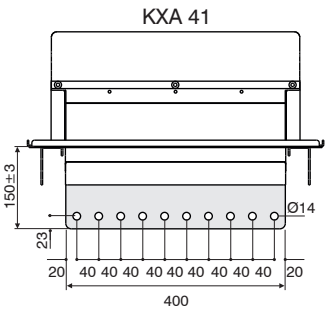
KXA 32
KXC 40



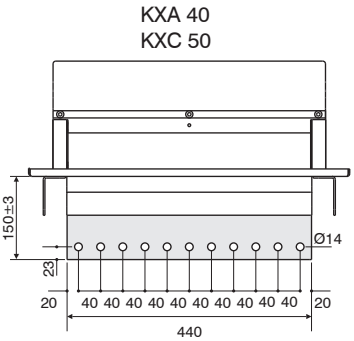
KXA 33



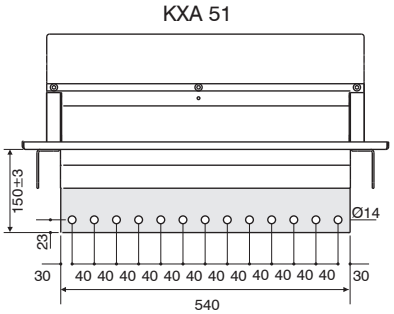
KXA 41



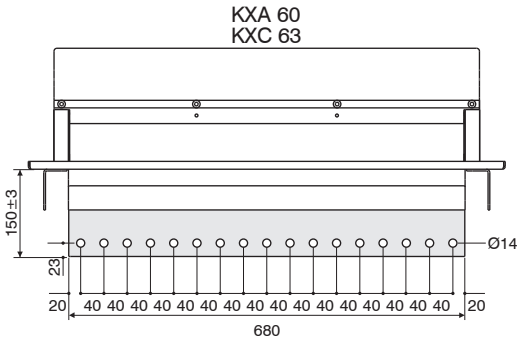
KXA 40
KXC 50



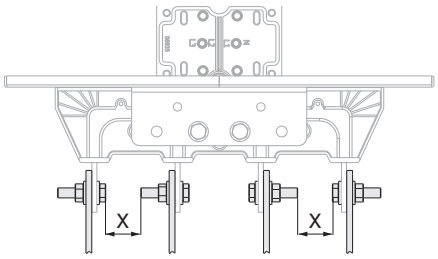
KXA 51



KXA 60
KXC 63



Sample Connection



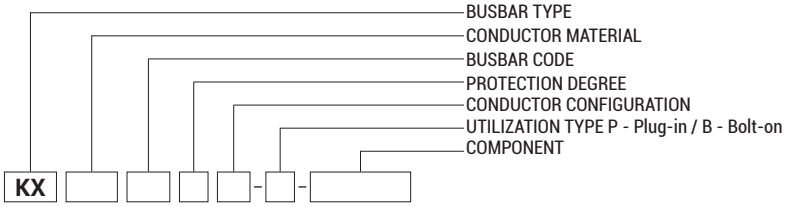
(Minimum X= 25 mm)

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 minumum values.

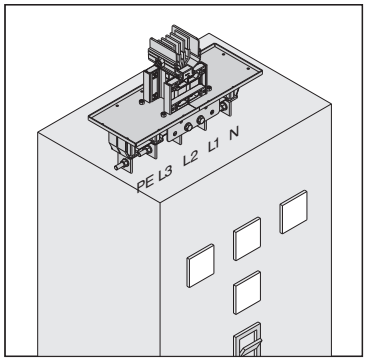
ELINEKX

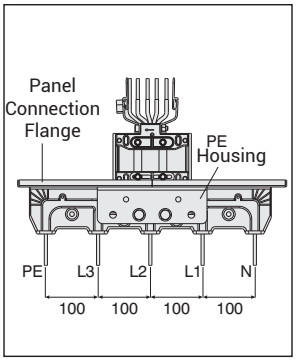
▶▶Panel Connections

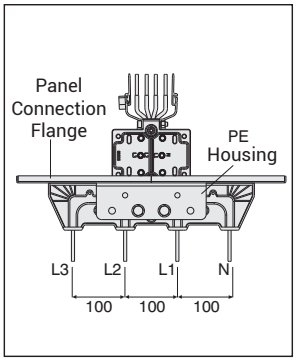


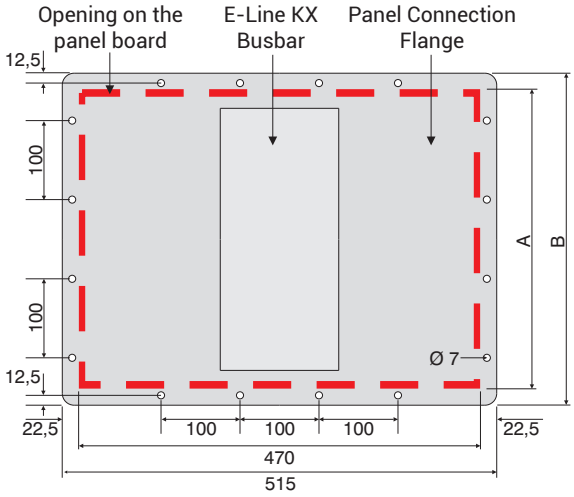
Flange Dimensions

Panel Connection Units are supplied with suitable flange as standard.









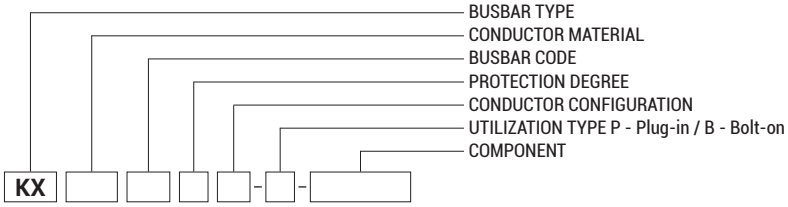
* Bolt and nut sets are supplied together with related product as per the quantities below.

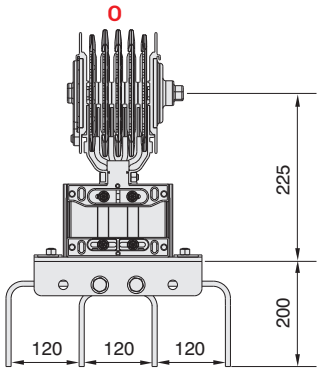
Aluminium (Al)		Copper (Cu)						
Rated Current	Busbar Code	Rated Current	Busbar Code	Conductor Size	A (mm)	B (mm)	Number of the holes along B length	* M6 Bolt/ Nut Set (pcs)
400	04	550	05	6x25	120	165	2	12
500	05	650	06	6x30	125	170	2	12
630	06	800	08	6x40	135	180	2	12
800	08	1000	10	6x55	150	195	2	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
1600	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

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

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▶▶Transformer Connections

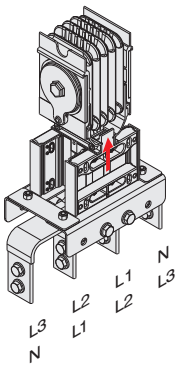


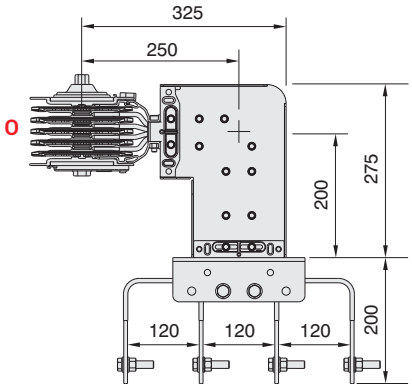


Transformer Connection **- T R 1 1**

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

KXA 25504 - B - TR11

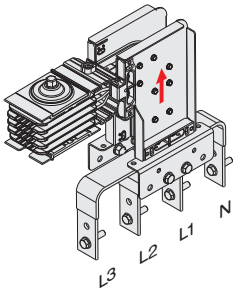


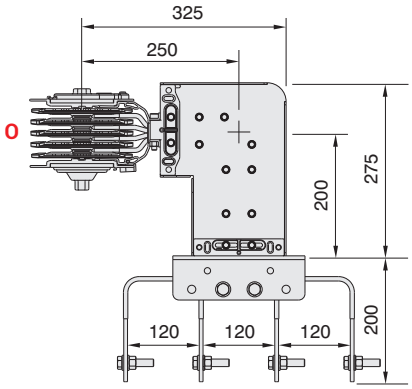


Upwards Transformer Connection **- T U 2 1**

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

KXC 25504 - B - TU21-120

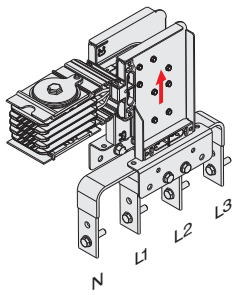




Downwards Transformer Connection **- T D 2 1**

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

KXA 25504 - B - TD21



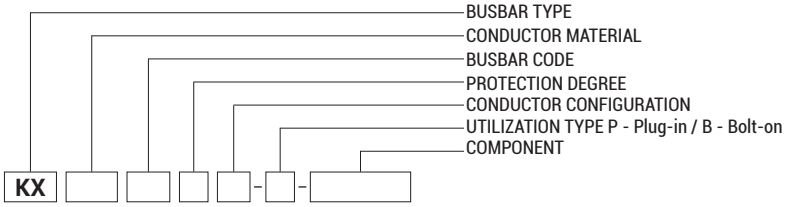
For connection dimensions please refer to tables on pages 29 and 30.

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 minumum values. ■ Please call us for non-standard components.

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▶▶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.

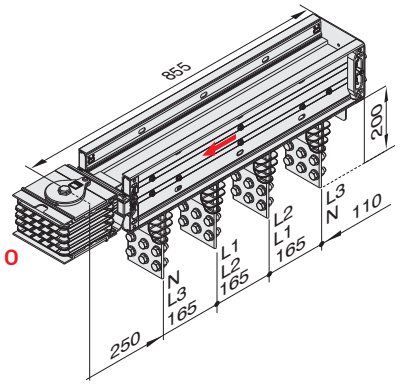
A and B dimensions of TR51 and TL51 are same as left and right elbows.
Please refer to page 12 for the dimensions.

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

Transformer Connection **- T R 3 1**

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

KXC 25504 - B - TR31



Flexible are used for

- Transformer - busbar,
- Panel - busbar connections.

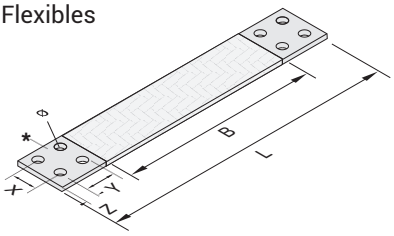
- F L (cm)

Sample Order:
800 A, Aluminium

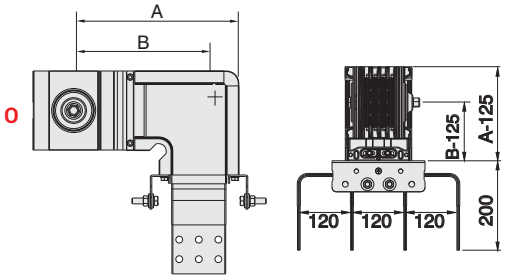
KXA 0800 - F40

B=.....mm
X=.....mm
Y=.....mm
Z=.....mm
ø=.....mm

Flexibles



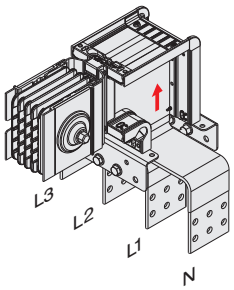
- This side is punched according to the needs of the custommer.

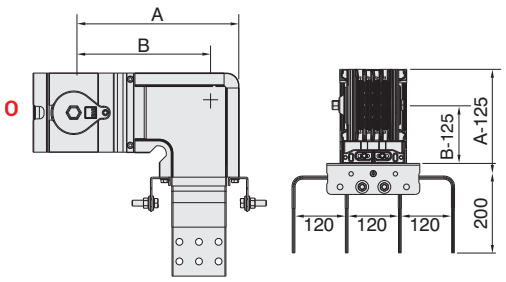


Right Transformer Connection **- T R 5 1**

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

KXC 25504 - B - TR51

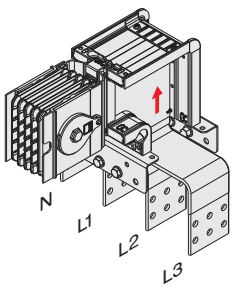




Left Transformer Connection **- T L 5 1**

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

KXA 25504 - B - TL51



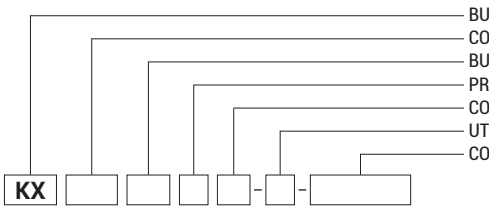
A and B dimensions of TR51 and TL51 are same as left and right elbows.
Please refer to page 12 for the dimensions.

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 minumum values. ■ Please call us for non-standard components.

ELINEKX

▶▶ 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;

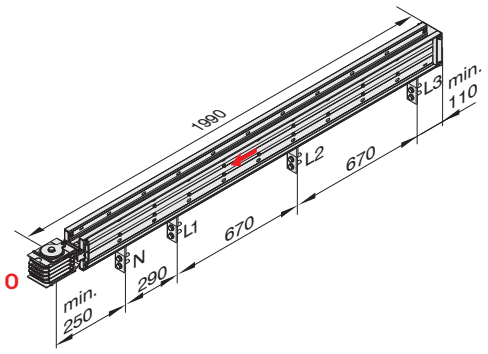
- Plan of transformer and panel board room, heights.
- Transformer dimensions, distance between bushings.

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

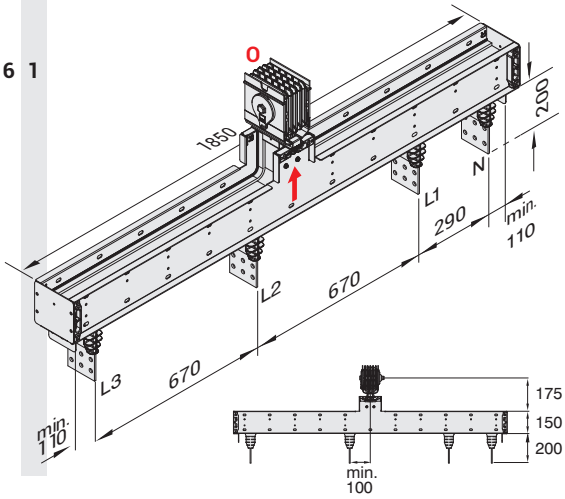
KXC 25504 - B - TR41



Transformer Connection **- T R 6 1**

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

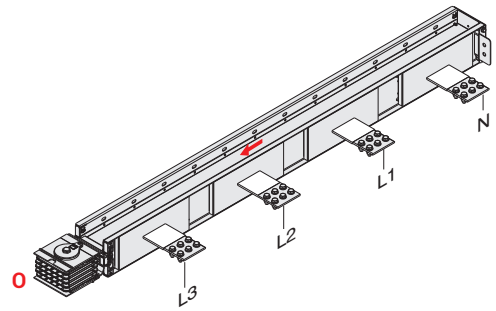
KXC 36504 - B - TR61



Transformer Connection **- T R 7 1**

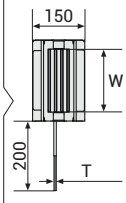
Sample Order:
4000 A, Copper, Bolt-on, 4 Conductors

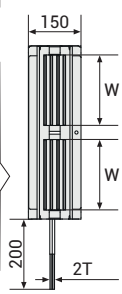
KXC 40504 - B - TR71

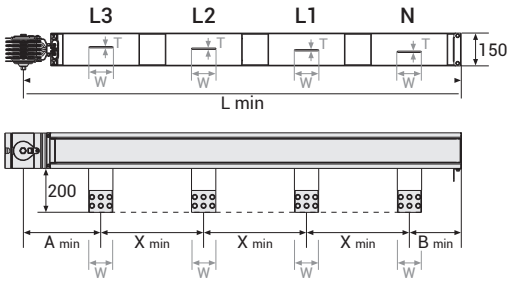


TR71 Dimension Table

KXA - Al Conductor		KXC - Cu Conductor		Conductor (*) T x W	A	B	X	L
Rated Current	Busbar Code	Rated Current	Busbar Code		(mm)	(mm)	(mm)	(mm)
* 400	04	*550	05	6x25	263	123	85	715
* 500	05	*650	06	6x30	265	125	90	730
* 630	06	*800	08	6x40	270	130	100	760
800	08	1000	10	6x55	278	138	115	805
1000	11	-	-	6x60	280	140	120	820
-	-	1250	12	6x70	285	145	130	850
1000	10	1350	14	6x80	290	150	140	880
-	-	1600	17	6x95	298	158	155	925
1250	12	-	-	6x110	305	165	170	970
1350	14	2000	23	6x125	313	173	185	1015
1600	16	-	-	6x140	320	180	200	1060
1600	17	-	-	6x160	330	190	220	1120
2000	18	-	-	6x180	340	200	240	1180
2000	20	2500	25	6x200	350	210	260	1240
2500	29	-	-	6x230	365	225	290	1330
2500	27	-	-	6x250	375	235	310	1390
-	-	2000	22	2(6x55)	278	138	115	805
-	-	2500	27	2(6x70)	285	145	130	850
2500	25	3300	32	2(6x110)	305	165	170	970
-	-	3600	36	2(6x125)	313	173	185	1015
3200	32	4000	40	2(6x140)	320	180	200	1060
3200	33	-	-	2(6x160)	330	190	220	1120
4000	40	5000	50	2(6x200)	350	210	260	1240
4000	41	-	-	2(6x180)	340	200	240	1180
5000	51	-	-	2(6x250)	375	235	310	1390







(*) **Note:** The conductor cross-sectional values (T x W) are the same as the transformer connection conductor dimensions.

Sample (*): Single Line
2000 A, Copper, Bolt-on,
6x125 = TxW
T=6 W=125

Sample (*): Double Line
4000 A, Copper, Bolt-on,
2(6x140) = TxW
2T=12 W=140

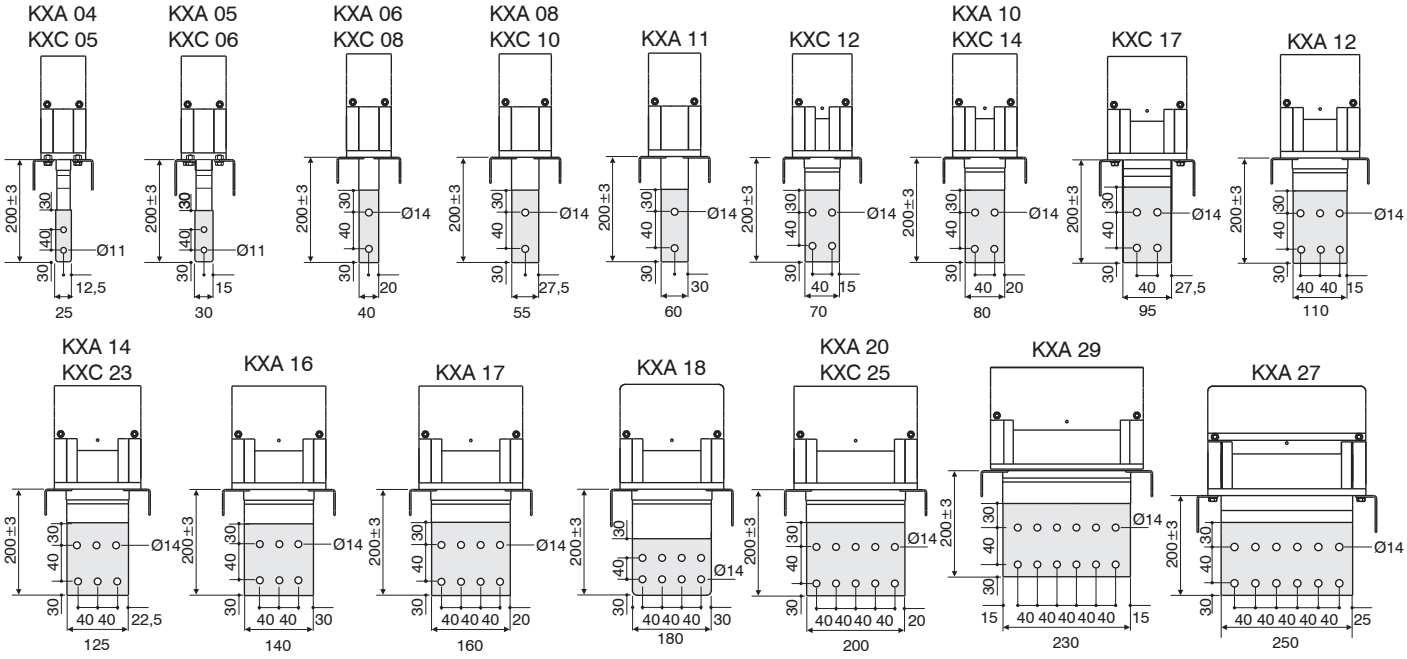
Note: Please contact with us for the dimensions of our 6 conductor solutions.

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

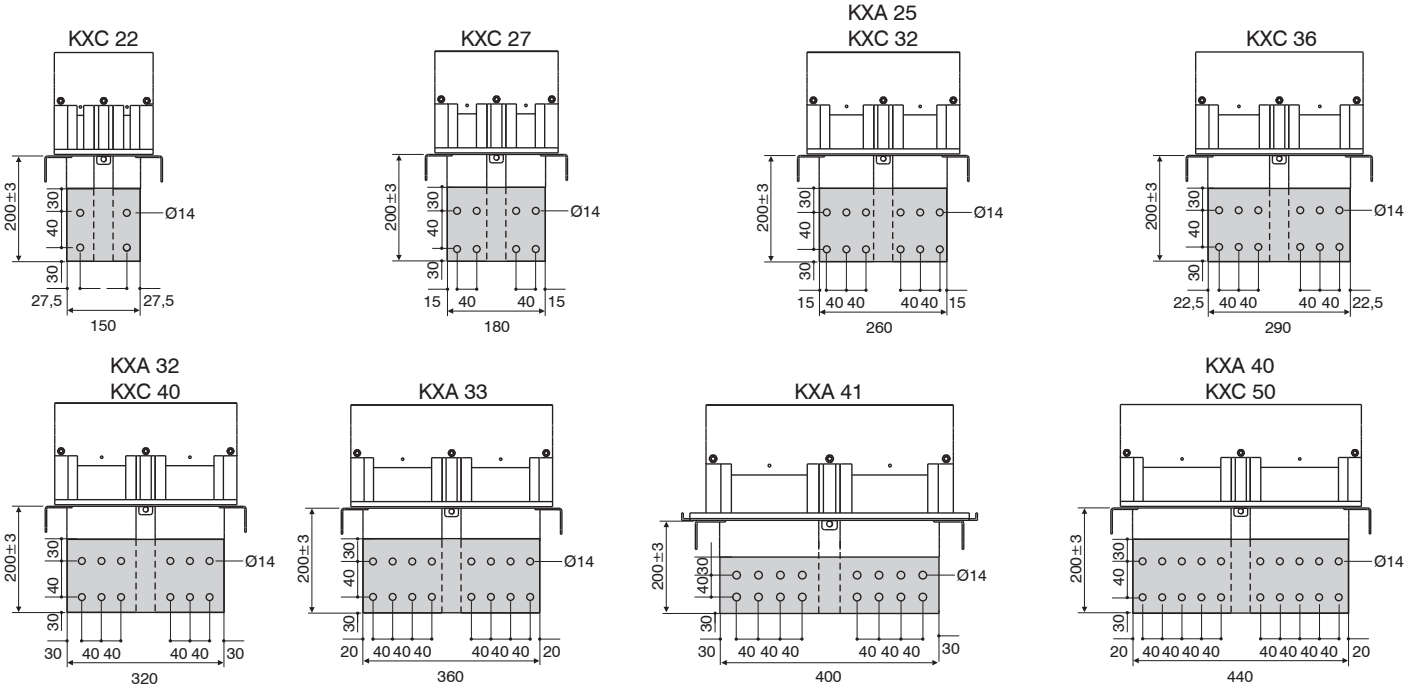
Transformer Connection Units

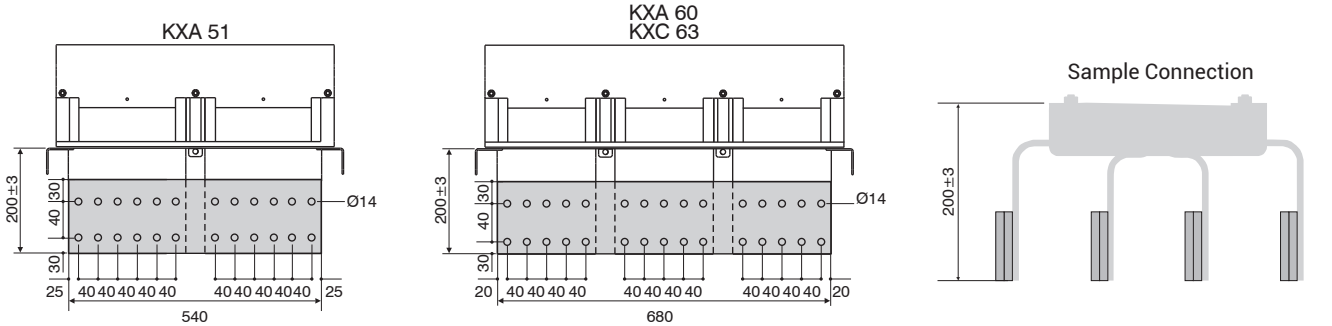
Transformer Connection Units (TR31, TR41, TR61, TR71)

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.

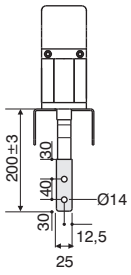
■ Distance between conductors can vary in ±5 mm. ■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

Transformer Connection Units

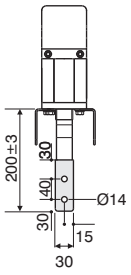
Transformer Connection Units (TR11, TU21, TD21, TR51, TL51)

Note: No flange supplied with transformer connection units.

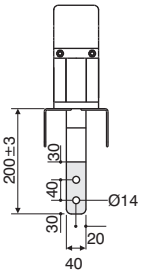
KXA 04
KXC 05



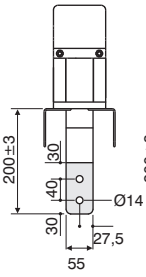
KXA 05
KXC 06



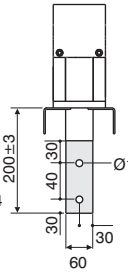
KXA 06
KXC 08



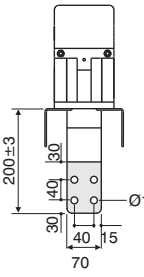
KXA 08
KXC 10



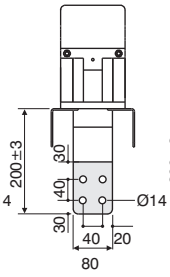
KXA 11



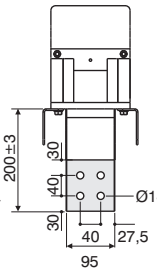
KXC 12



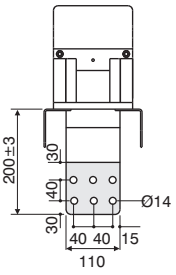
KXA 10
KXC 14



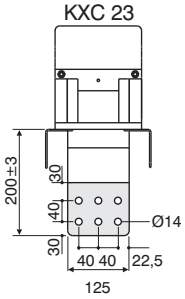
KXC 17



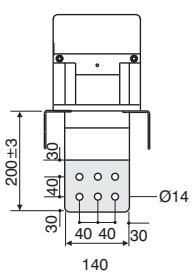
KXA 12



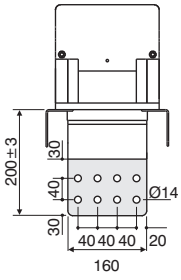
KXA 14
KXC 23



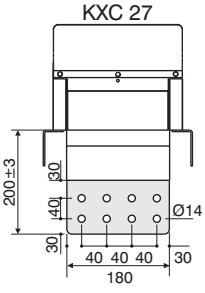
KXA 16



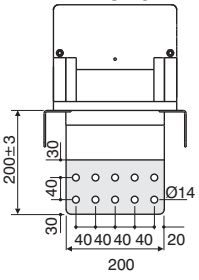
KXA 17



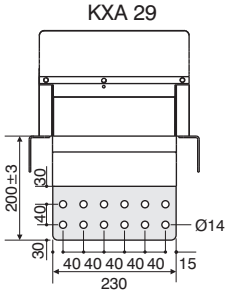
KXA 18
KXC 27



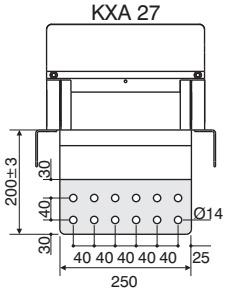
KXA 20
KXC 25



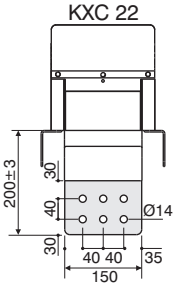
KXA 29



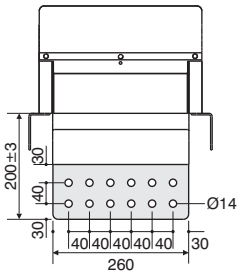
KXA 27



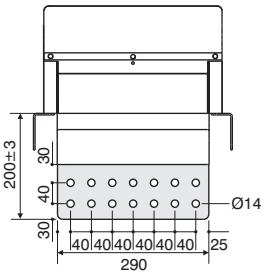
KXC 22



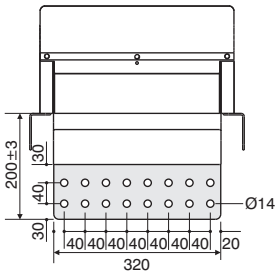
KXA 25
KXC 32



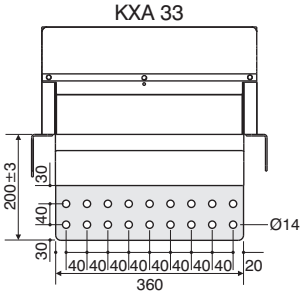
KXC 36



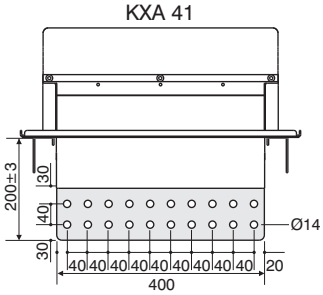
KXA 32
KXC 40



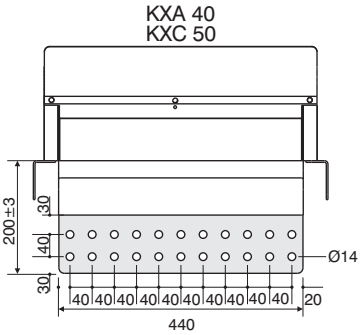
KXA 33



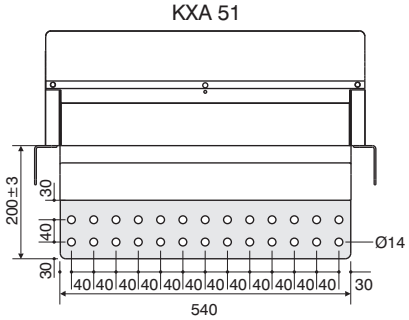
KXA 41



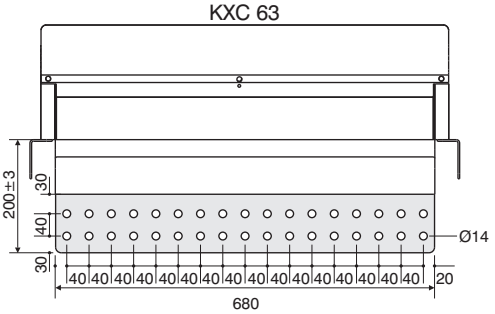
KXA 40
KXC 50



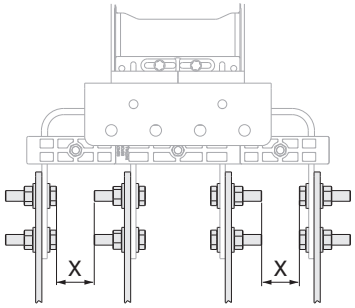
KXA 51



KXA 60
KXC 63



Sample Connection



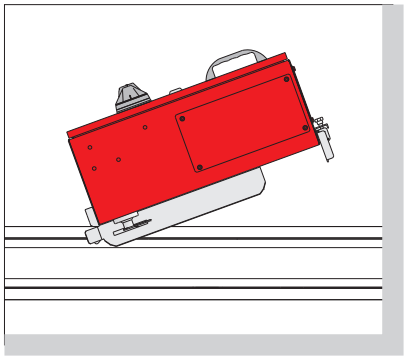
(Minimum X= 25 mm)

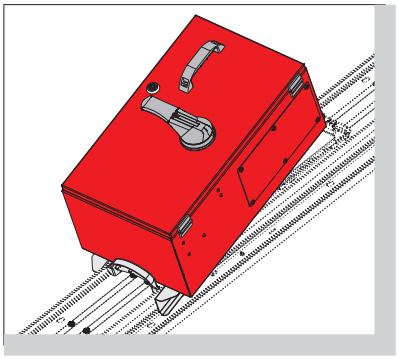
Note: Please contact with us for the dimensions of our 6 conductor solutions.

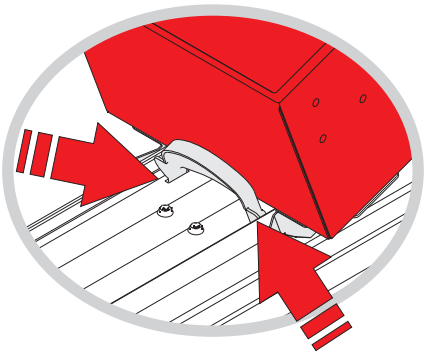
■ Distance between conductors can vary in ±5 mm. ■ The dimensions given above are minumum values. ■ Please call us for non-standard components.

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.

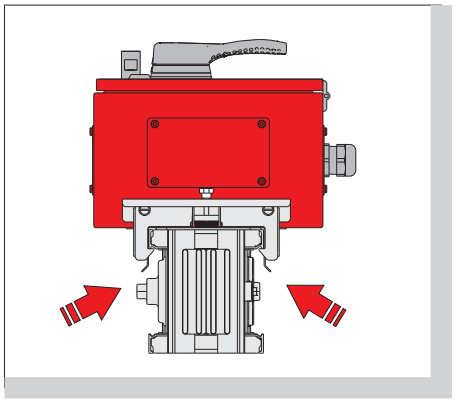


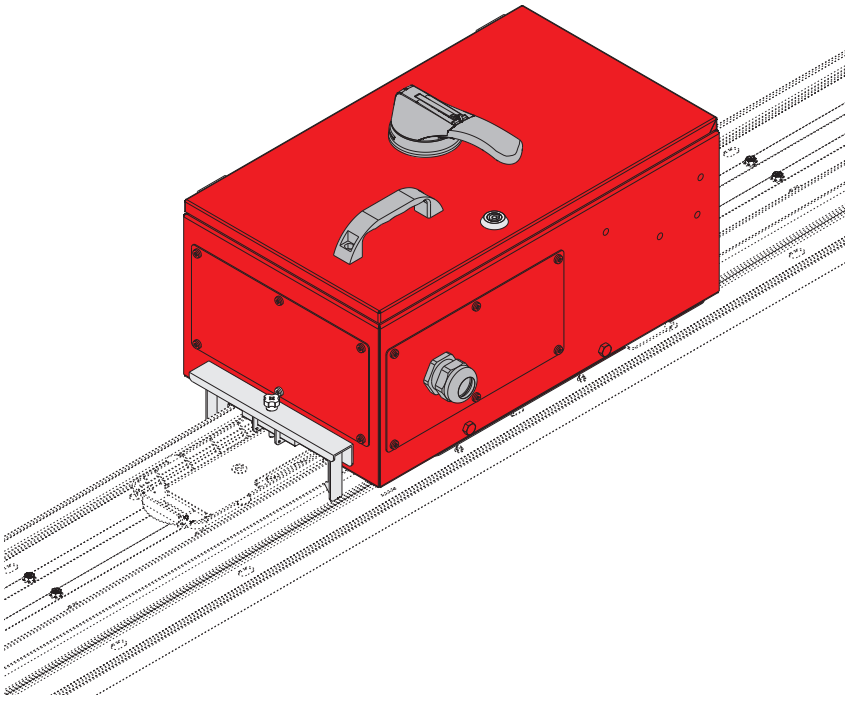


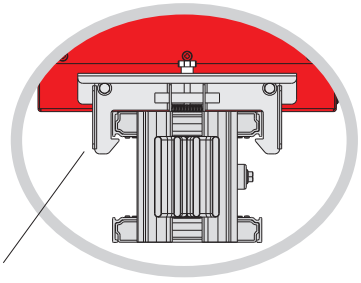


Fixing System of Tap-off Boxes to Busbars

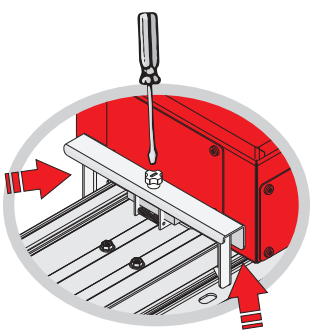
Hook system, which is used for fixing of tap-off boxes on busbars.







Locking Point



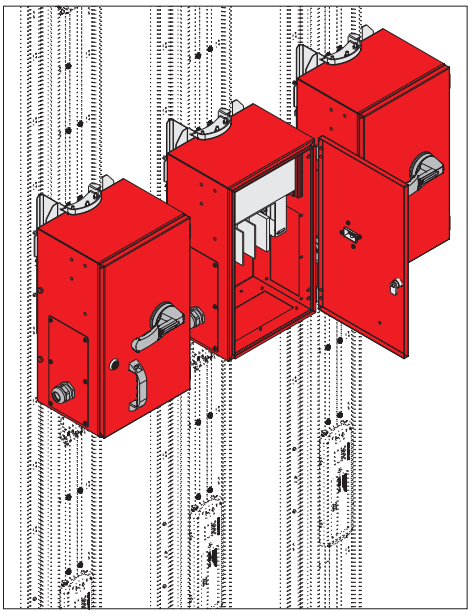
Universal Tap-off Boxes

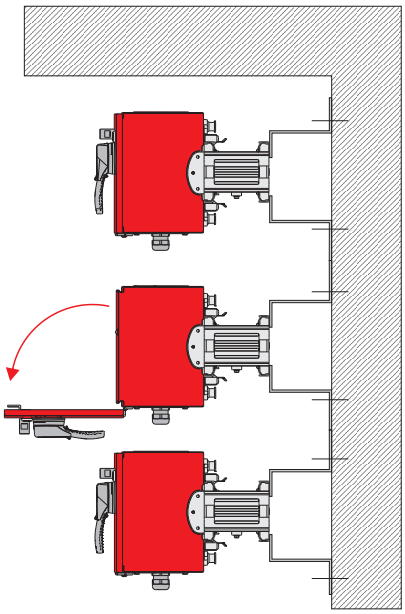
Tap off boxes can be equipped with any brand of switches, circuit breakers and etc. Please inform EAE the type and brand of choosen MCCB, when ordering.

- Please call us for non-standard components.
- When requesting special size tap off boxes, make sure that the distance between the two plug point does not prevent the installation of the tap off boxes.

Side Opening Box Lids

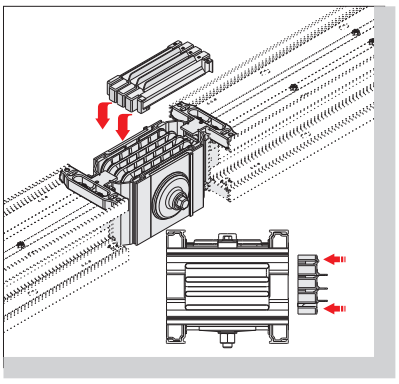
A new generation of tap-off box with side opening lids enables easier connection to protective devices and maintenance.

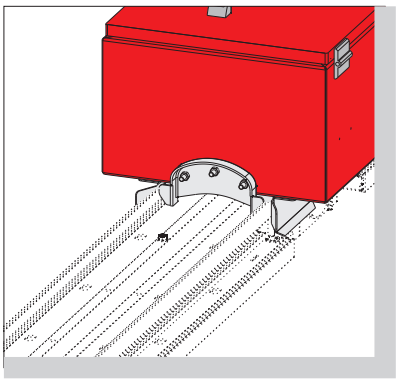




Bolt-on Tap-off Boxes

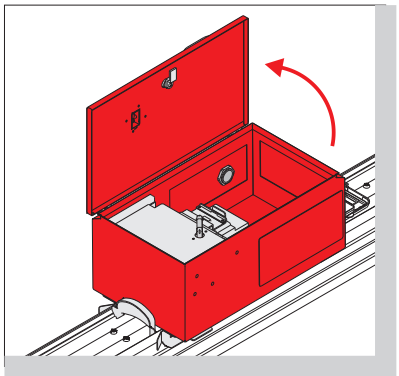
- Bolt-on tap-off boxes are designed to be installed at the joints without removing the joint block.
- The range of tap off boxes from 160A upto 1.000A.
- Busbar run must be de-energized before installing bolt-on tap-off boxes.

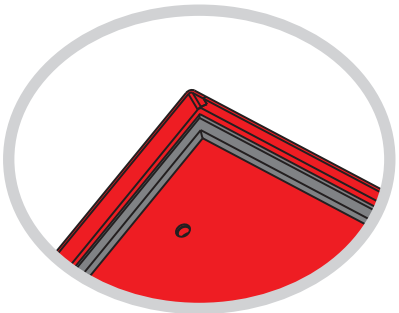


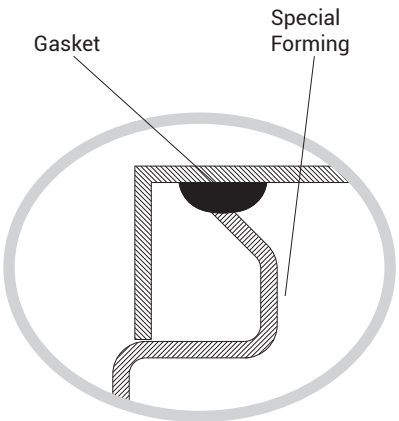


Effective Gasket

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



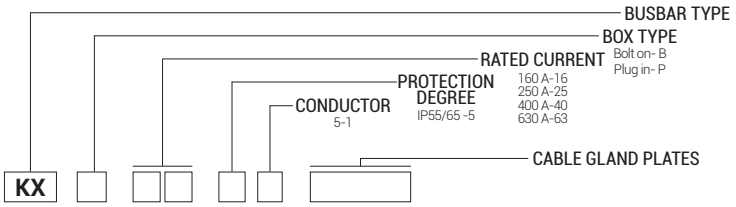




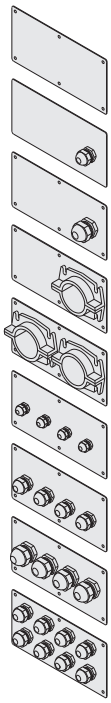
■ Please call us for non-standard components.
■ When requesting special size tap off boxes, make sure that the distance between the two plug point does not prevent the installation of the tap off boxes.

ELINEKX

▶▶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.

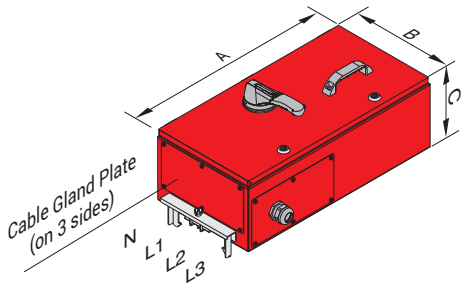
Bolt-on Tap-off Boxes

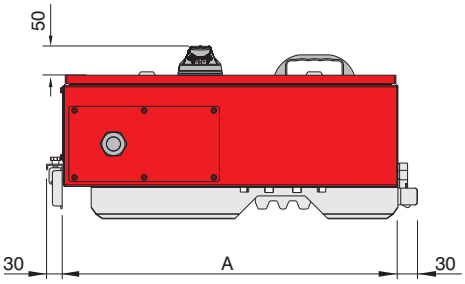
KX B 1 6 5 1
KX B 2 5 5 1
KX B 4 0 5 1
KX B 6 3 5 1

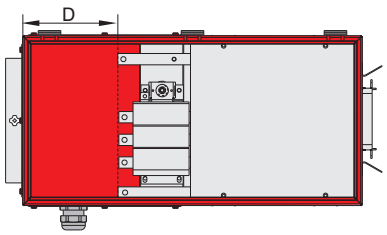
Sample Order:

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

KXB 6351







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

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

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

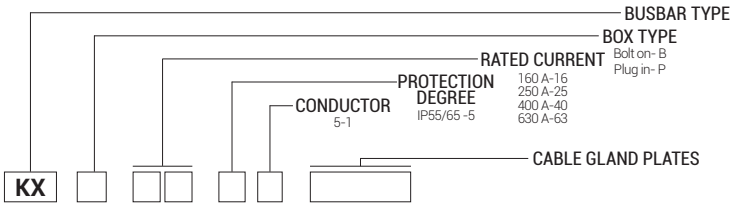
Gland Type	Max. External Diameter of Cable Cros-section (mm)
M25	Ø 18
M32	Ø 26
M40	Ø 33
M50	Ø 39
M63	Ø 45
Special for EAE	Ø 60

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

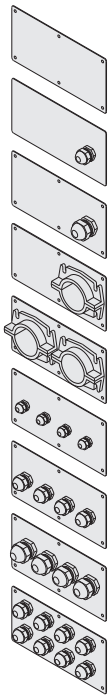
■ Please call us for non-standard components.
■ When requesting special size tap off boxes, make sure that the distance between the two plug point does not prevent the installation of the tap off boxes.

ELINEKX

▶▶ 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.

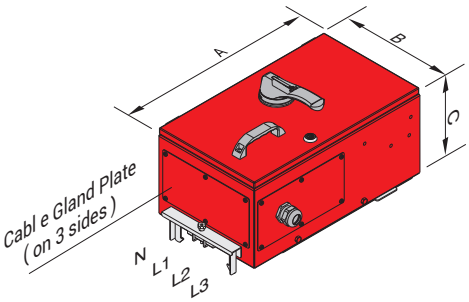
Plug-in Tap-off Boxes

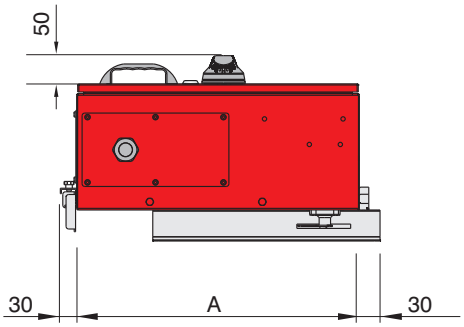
KX P 1 6 5 1
KX P 2 5 5 1
KX P 4 0 5 1
KX P 6 3 5 1

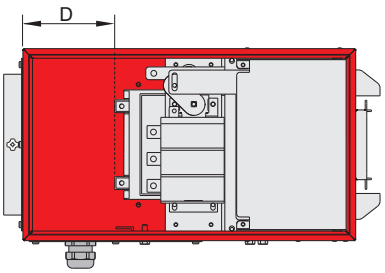
Sample Order:

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

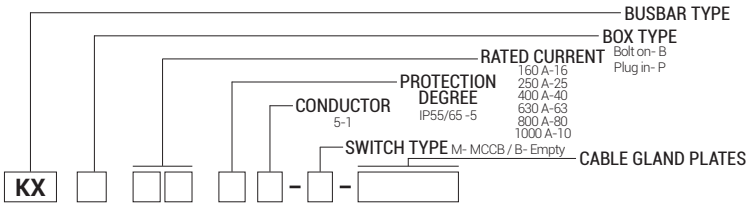
Gland Type	Max. External Diameter of Cable Cros-section (mm)
M25	Ø 18
M32	Ø 26
M40	Ø 33
M50	Ø 39
M63	Ø 45
Special for EAE	Ø 60

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

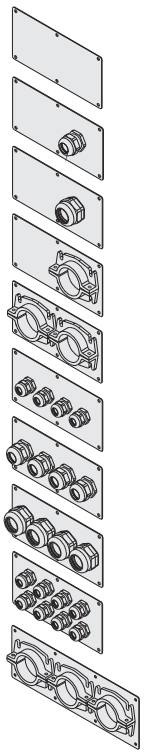
- Please call us for non-standard components.
- When requesting special size tap off boxes, make sure that the distance between the two plug point does not prevent the installation of the tap off boxes.

ELINEKX

▶▶ Tap-off Boxes
for MCCB's (KXB)

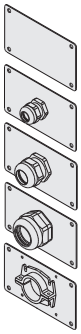


Cable Gland Plates



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

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

Bolt-on Tap-off Boxes

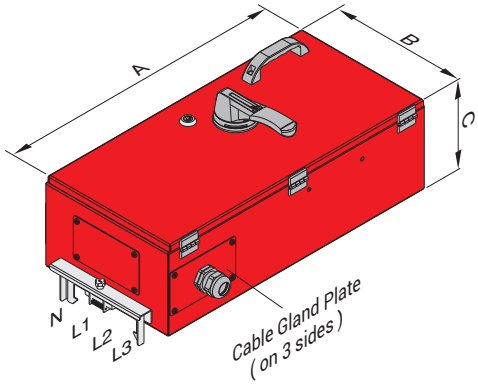
KX B 1 6 5 1 - B
KX B 2 5 5 1 - B
KX B 4 0 5 1 - B
KX B 6 3 5 1 - B

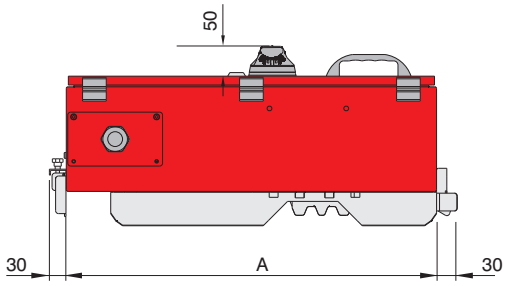
KX B 1 6 5 1 - M
KX B 2 5 5 1 - M
KX B 4 0 5 1 - M
KX B 6 3 5 1 - M

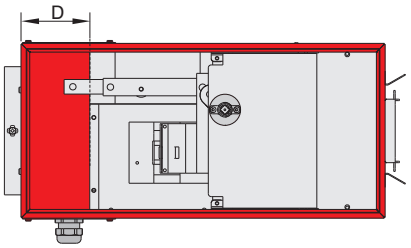
Sample Order:

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

KXB 6351 - B







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

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.**

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

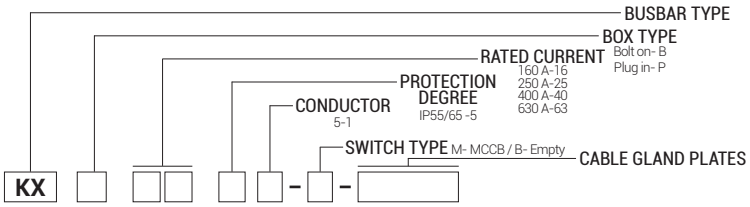
KXA - Al Conductor		KXC - Cu Conductor		Bolt-on Tap-off Box
Rated Current	Busbar Code	Rated Current	Busbar Code	
400	04	550	05	x
500	05	650	06	x
630	06	800	08	x

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

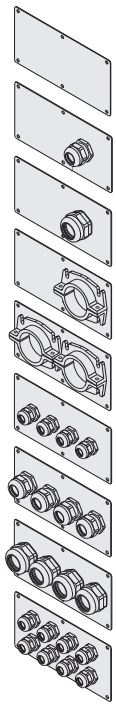
■ Please call us for non-standard components.
■ When requesting special size tap off boxes, make sure that the distance between the two plug point does not prevent the installation of the tap off boxes.

ELINEKX

▶▶ Tap-off Boxes
for MCCB's (KXP)

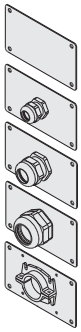


Cable Gland Plates



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

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

Plug-in Tap-off Boxes

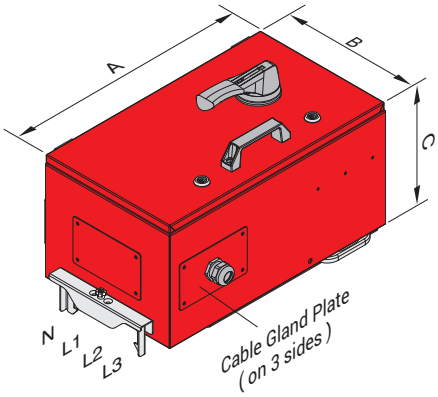
KX P 1 6 5 1 - B
KX P 2 5 5 1 - B
KX P 4 0 5 1 - B
KX P 6 3 5 1 - B

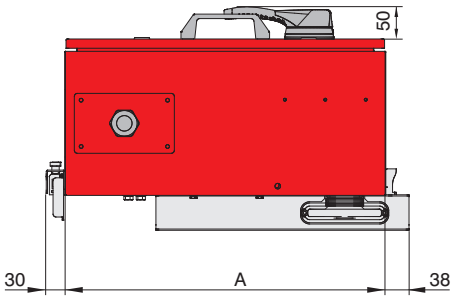
KX P 1 6 5 1 - M
KX P 2 5 5 1 - M
KX P 4 0 5 1 - M
KX P 6 3 5 1 - M

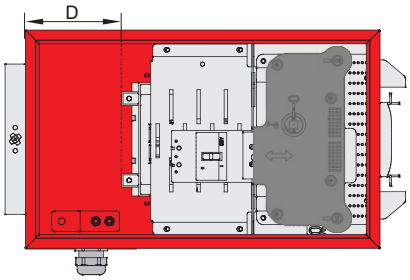
Sample Order:

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

KXP 4051 - B







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 Cros-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 components.
- When requesting special size tap off boxes, make sure that the distance between the two plug point does not prevent the installation of the tap off boxes.

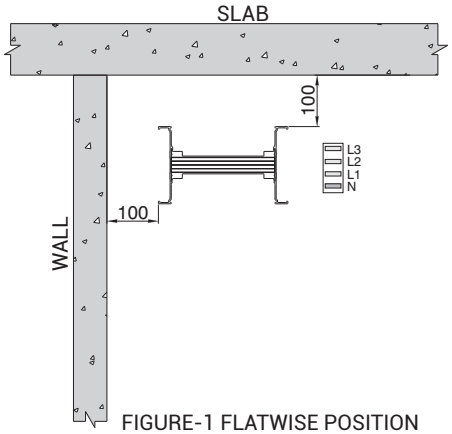


FIGURE-1 FLATWISE POSITION

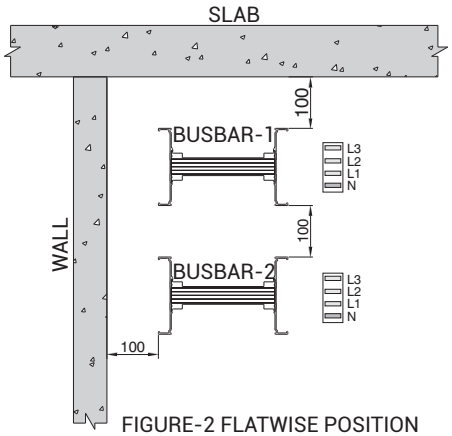


FIGURE-2 FLATWISE POSITION

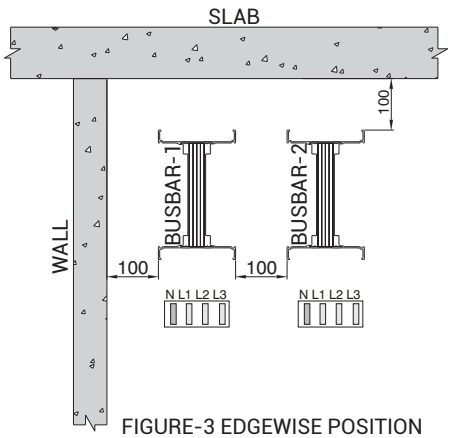


FIGURE-3 EDGEWISE POSITION

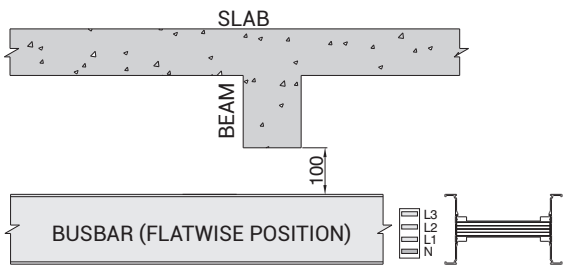


FIGURE-4 CROSSING UNDER A BEAM HORIZONTAL POSITION

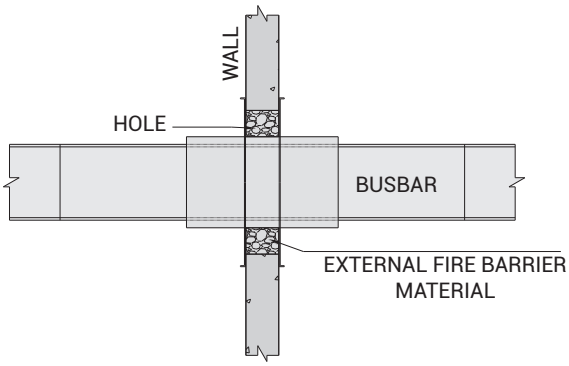


FIGURE-5 SAMPLE WALL CROSSING WITH FIRE BARRIER

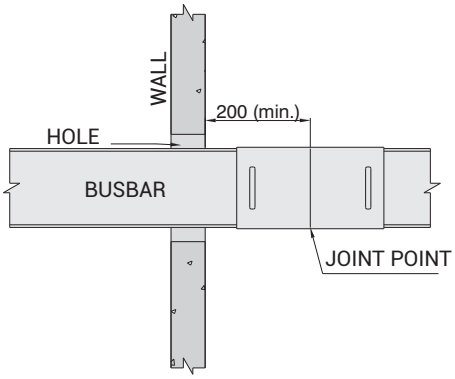
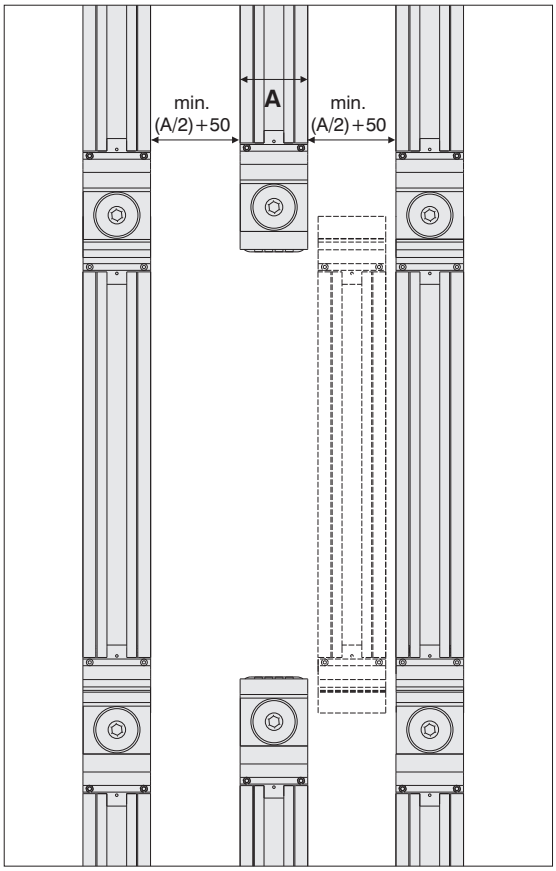


FIGURE-6 STANDARD WALL CROSSING



MINIMUM DISTANCE BETWEEN BUSBAR RUNS IN HORIZONTAL APPLICATIONS.

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

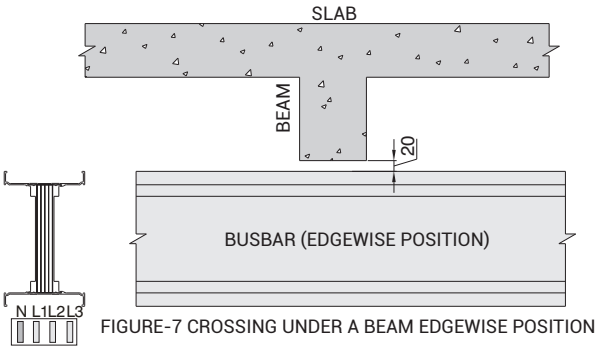


FIGURE-7 CROSSING UNDER A BEAM EDGEWISE POSITION

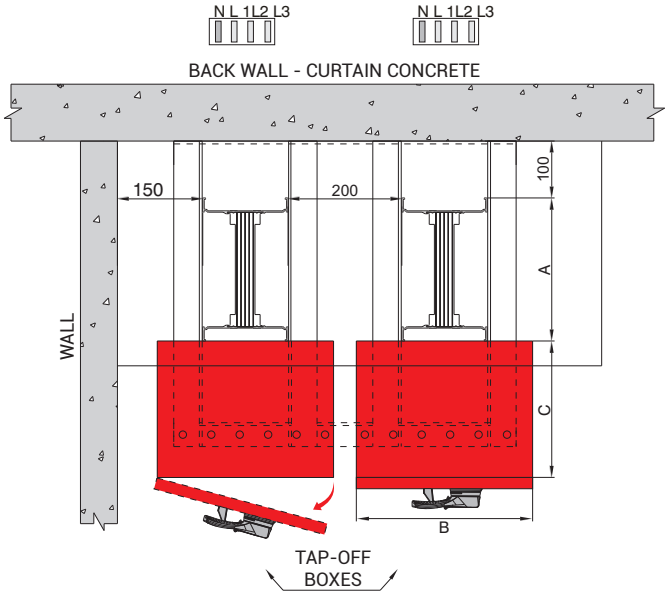


FIGURE-8 MINIMUM DIMENSIONS BETWEEN 2 TAP-OFF BOXES

KXA - Al Conductor		KXC - Cu Conductor		A
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)
* 400	04	*550	05	77,5
* 500	05	*650	06	82,5
* 630	06	*800	08	91
800	08	1000	10	106
1000	11	-	-	111
-	-	1250	12	121
1000	10	1350	14	131
-	-	1600	17	146
1250	12	-	-	161
1350	14	2000	23	176
1600	16	-	-	191
1600	17	-	-	211
2000	18	-	-	233
2000	20	2500	25	251
2500	29	-	-	281
2500	27	-	-	301
-	-	2000	22	202
-	-	2500	27	232
2500	25	3300	32	312
-	-	3600	36	342
3200	32	4000	40	372
3200	33	-	-	412
4000	40	5000	50	492
4000	41	-	-	454
5000	51	-	-	592
6000	60	6300	63	732

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)

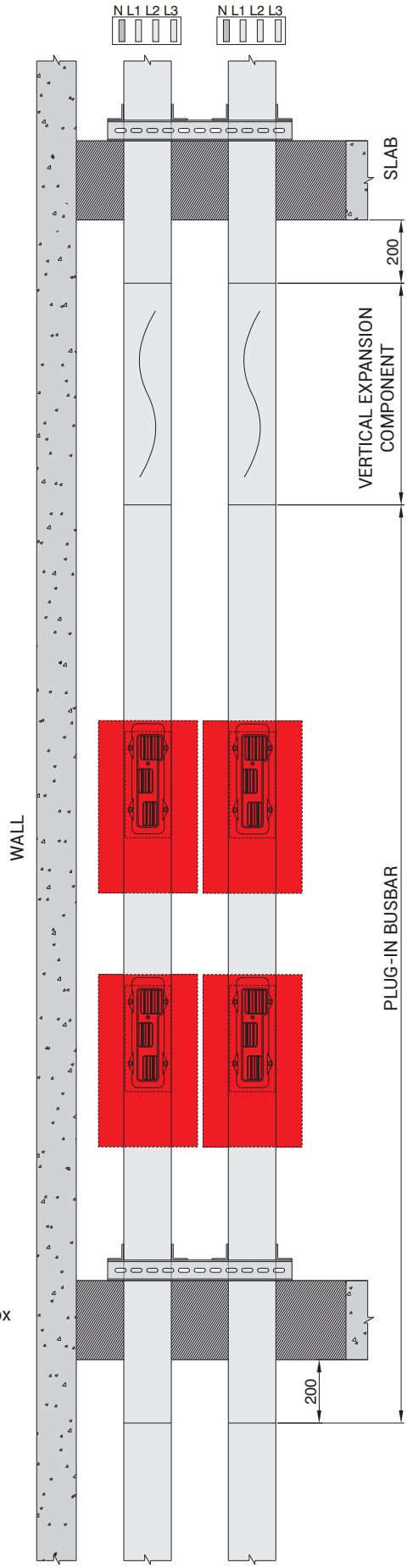
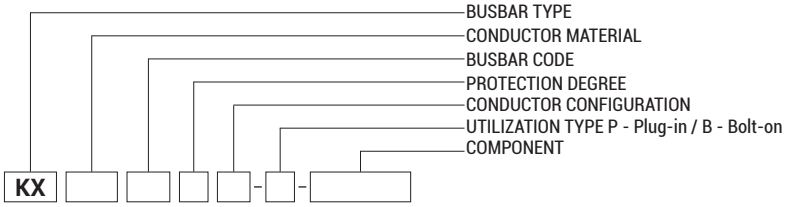


FIGURE-9 MINIMUM DIMENSIONS BETWEEN 2 RISERS

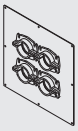
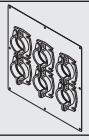
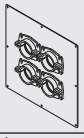
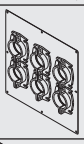
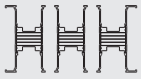
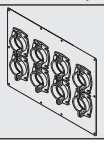
■ The dimensions given above are minumum values. ■ All measures are given in mm.

ELINEKX

▶▶Feeder Boxes (B10,B11)



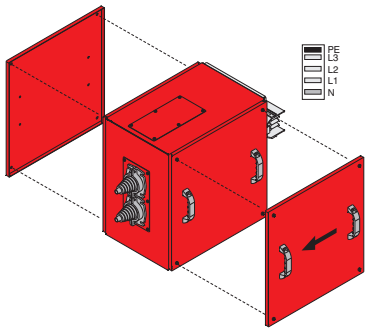
Cable Gland Plates

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

Feeder Box B10 **- B 1 0**

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

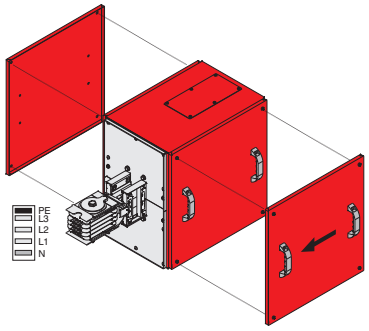
KXA 33504 - B - B10



Feeder Box B11 **- B 1 1**

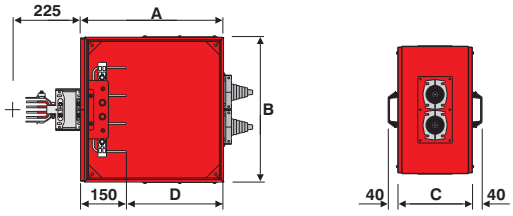
Sample Order:
3600 A, Copper, Bolt-on,
4 Conductors

KXC 36504 - B - B11

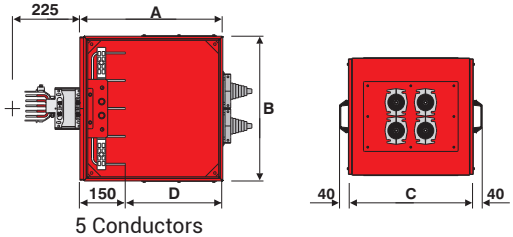


Ampere Ratings

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
1600	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



4 Conductors



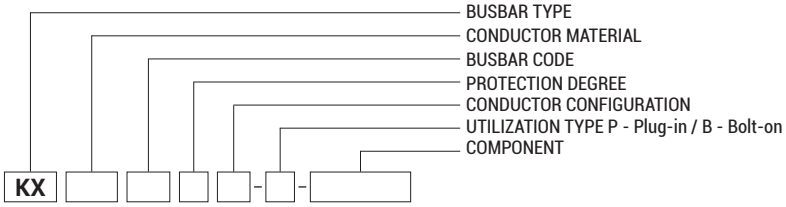
5 Conductors

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

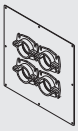
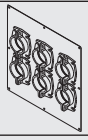
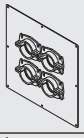
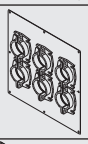
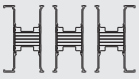
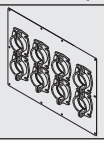
■ The dimensions given above are minumum values.
■ Please call us for special applications or for applications with MCCB's.

ELINEKX

▶▶ Feeder Boxes (Central Feeder Boxes BO)



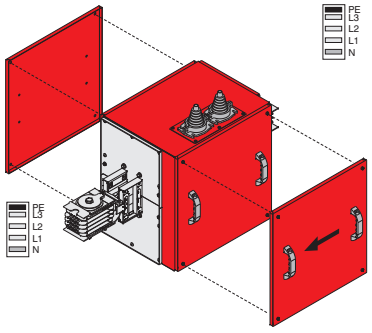
Cable Gland Plates

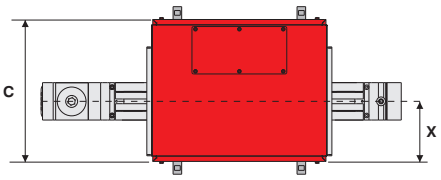
Busbar Housing Type	Cable Gland Plate	Type
		1
		2
		3
		2
		3
		4

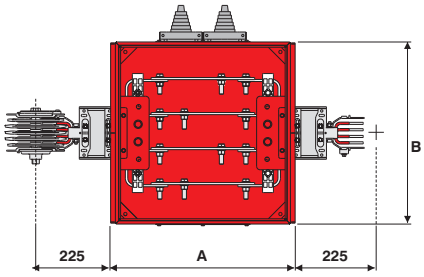
Central Feeder Box - B O

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

KXA 25504 - B - BO





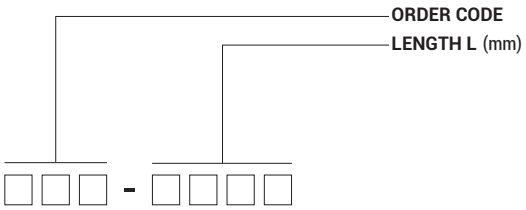


Ampere Ratings

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
1600	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

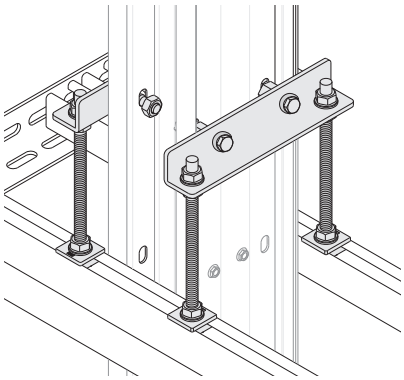
*The values are given for 08 and 09 codes clean earth models.

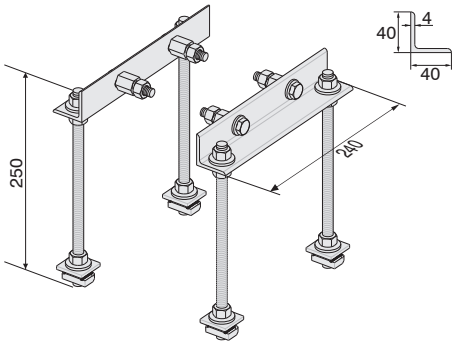
■ The dimensions given above are minumum values.
■ Please call us for special applications or for applications with MCCB's.

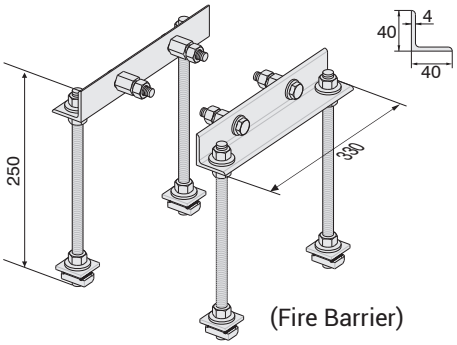


Supports

Description	Order Code
KX Vertical Riser Fixing Unit	**3048475**
KX Vertical Riser Fixing Unit (Fire Barrier)	**3048707**

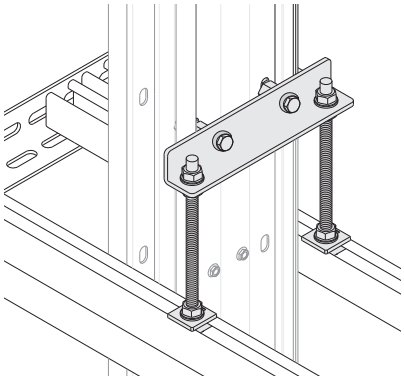




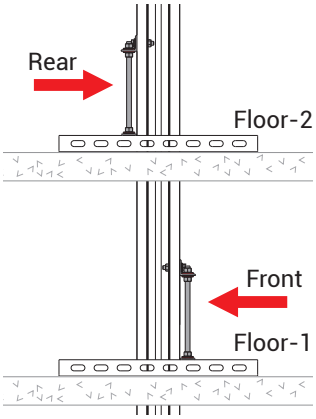


(Fire Barrier)

Description	Order Code
* KX Vertical Riser Fixing Unit	**3305415**
* KX Vertical Riser Fixing Unit (Fire Barrier)	**3305419**

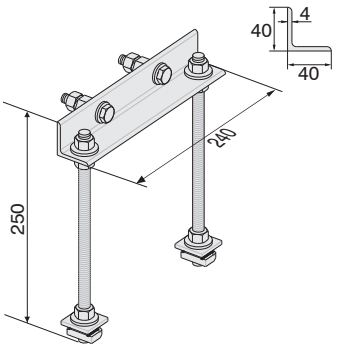


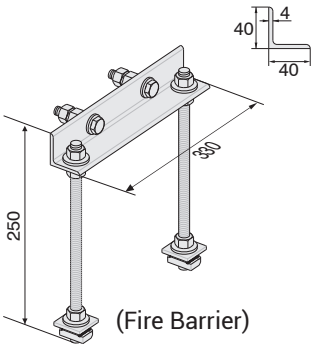
Installation Illustration



■ *KX Vertical Shaft Suspension Kit should be mounted individually on the Front and Rear sides of each floor for the Busbar, as shown above.

*It is valid for the specified sections.

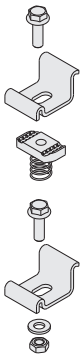




(Fire Barrier)

* KXA 04	* KXC 05	**6x25**
* KXA 05	* KXC 06	**6x30**
* KXA 06	* KXC 08	**6x40**

Fixing Elements



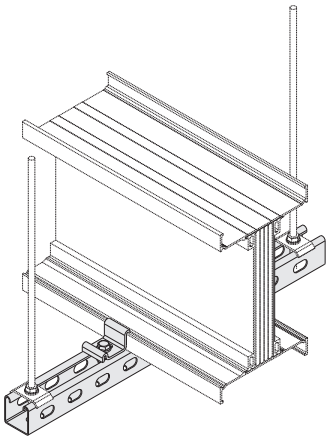
Description	Order Code
KX Fixing Clamp for Binrak (Unistrut) Channel	**2011227**

Description	Order Code
KX Fixing Clamp for Steel Angle Profile	**2011226**

■ Please call us for non-standard components.

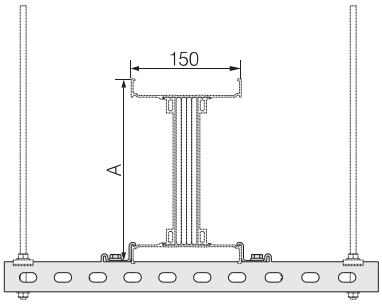
ORDER CODE
LENGTH L (mm)

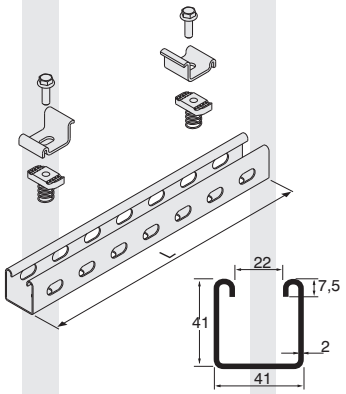
□□□ - □□□□



Supports

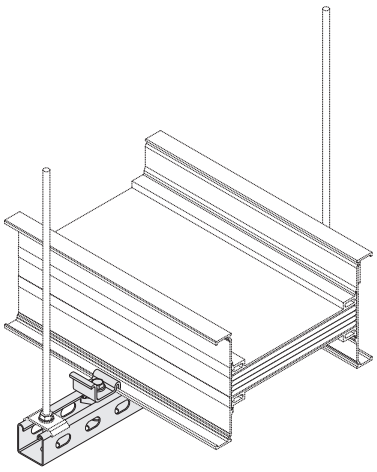
KX - BRA HANGER SET FOR EDGEWISE APPLICATION TO BINRAK (UNISTRUT) CHANNEL

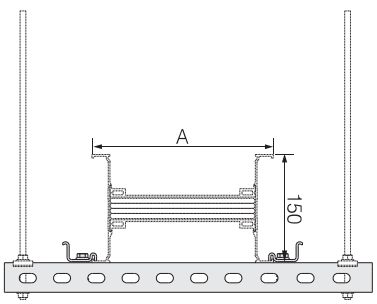


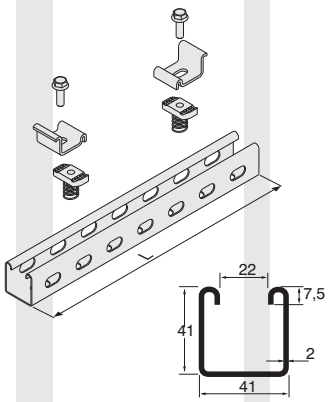


Al Conductor		Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
400	04	550	05	350	77,5	3025373
500	05	650	06		82,5	
630	06	800	08		91	
800	08	1000	10		106	
1000	11	-	-		111	
-	-	1250	12		121	
1000	10	1350	14		131	
-	-	1600	17		146	
1250	12	-	-		161	
1350	14	2000	23		176	
1600	16	-	-		191	
1600	17	-	-		211	
2000	18	-	-		233	
2000	20	2500	25		251	
2500	29	-	-		281	
2500	27	-	-		301	

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







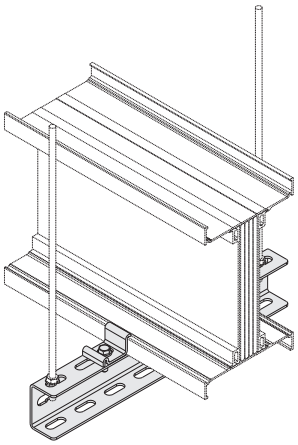
Al Conductor		Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
400	04	550	05	300	77,5	3025372
500	05	650	06		82,5	
630	06	800	08		91	
800	08	1000	10		106	
1000	11	-	-		111	
-	-	1250	12		121	
1000	10	1350	14		131	
-	-	1600	17	350	146	3025373
1250	12	-	-		161	
1350	14	2000	23	400	176	3025374
1600	16	-	-		191	
1600	17	-	-		211	
2000	18	-	-		233	
2000	20	2500	25	450	251	3025375
2500	29	-	-		281	
2500	27	-	-		301	

■ Please call us for non-standard components.

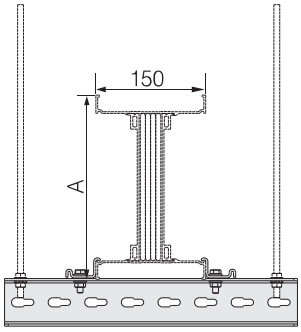
ORDER CODE
LENGTH L (mm)

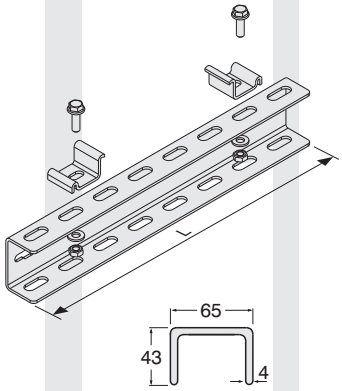
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Supports



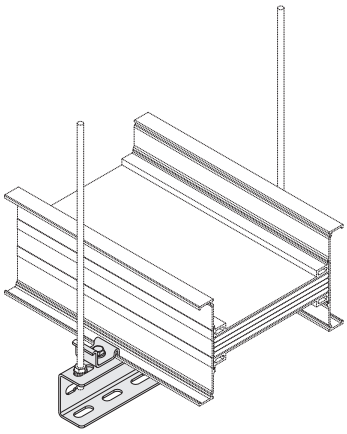
KX - UT HANGER SET FOR EDGEWISE APPLICATION TO NPU CHANNEL

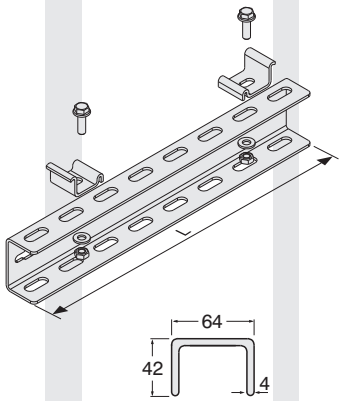


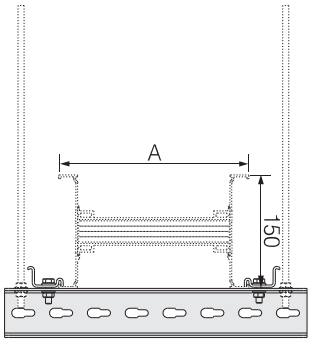


KXA - Al Conductor		KXC - Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
* 400	04	*550	05	350	77,5	3025348
* 500	05	*650	06		82,5	
* 630	06	*800	08		91	
800	08	1000	10		106	
1000	11	-	-		111	
-	-	1250	12		121	
1000	10	1350	14		131	
-	-	1600	17		146	
1250	12	-	-		161	
1350	14	2000	23		176	
1600	16	-	-		191	
1600	17	-	-		211	
2000	18	-	-		233	
2000	20	2500	25		251	
2500	29	-	-		281	
2500	27	-	-		301	
-	-	2000	22		202	
-	-	2500	27		232	
2500	25	3300	32		312	
-	-	3600	36		342	
3200	32	4000	40		372	
3200	33	-	-		412	
4000	40	5000	50		492	
4000	41	-	-		454	
5000	51	-	-		592	
6000	60	6300	63		732	

KX - UT HANGER SET FOR FLATWISE APPLICATION TO NPU CHANNEL





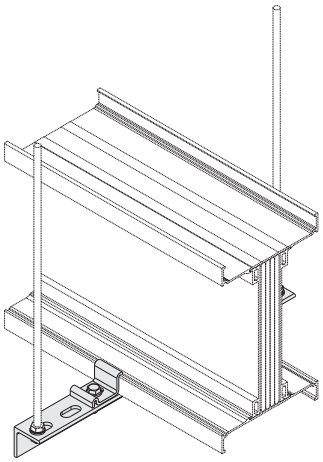


KXA - Al Conductor		KXC - Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
* 400	04	*550	05	300	77,5	3025347
* 500	05	*650	06		82,5	
* 630	06	*800	08		91	
800	08	1000	10		106	
1000	11	-	-		111	
-	-	1250	12		121	
1000	10	1350	14		131	
-	-	1600	17	350	146	3025348
1250	12	-	-		161	
1350	14	2000	23	400	176	3025349
1600	16	-	-		191	
1600	17	-	-		211	
2000	18	-	-		233	
2000	20	2500	25	450	251	3025350
2500	29	-	-		281	
2500	27	-	-		301	
-	-	2000	22	400	202	3025349
-	-	2500	27	450	232	3025350
2500	25	3300	32	500	312	3025351
-	-	3600	36	550	342	3025352
3200	32	4000	40		372	
3200	33	-	-	600	412	3025353
4000	40	5000	50	700	492	3025354
4000	41	-	-		454	
5000	51	-	-	800	592	3134130
6000	60	6300	63	900	732	3025355

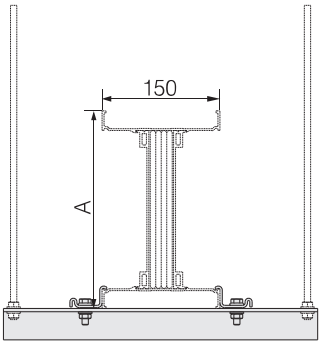
■ Please call us for non-standard components.

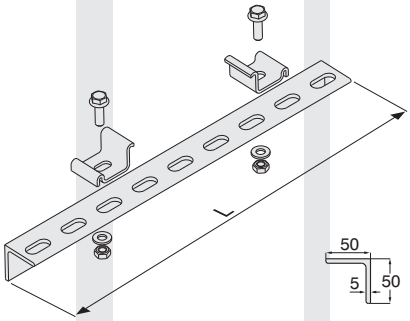
ORDER CODE
LENGTH L (mm)

Supports



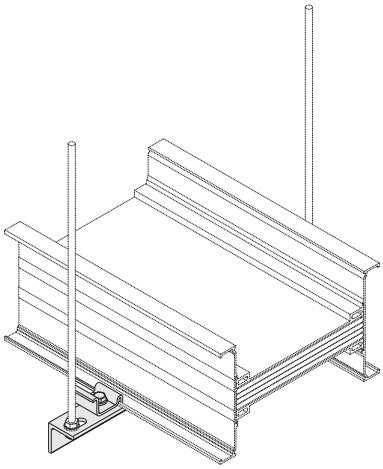
KX HANGER SET FOR EDGEWISE APPLICATION TO STEEL ANGLE PROFILE

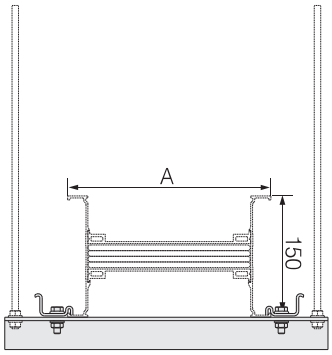


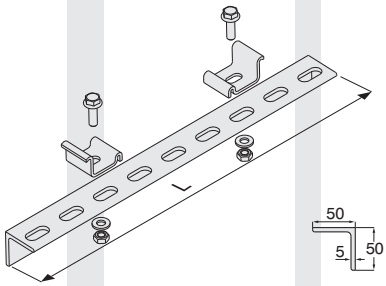


Al Conductor		Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
400	04	550	05	350	77,5	3025344
500	05	650	06		82,5	
630	06	800	08		91	
800	08	1000	10		106	
1000	11	-	-		111	
-	-	1250	12		121	
1000	10	1350	14		131	
-	-	1600	17		146	
1250	12	-	-		161	
1350	14	2000	23		176	
1600	16	-	-		191	
1600	17	-	-		211	
2000	18	-	-		233	
2000	20	2500	25		251	
2500	29	-	-		281	
2500	27	-	-		301	

KX HANGER SET FOR FLATWISE APPLICATION TO STEEL ANGLE PROFILE





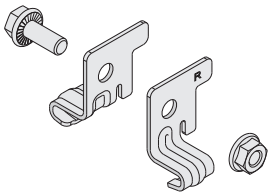


Al Conductor		Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
400	04	550	05	300	77,5	3025343
500	05	650	06		82,5	
630	06	800	08		91	
800	08	1000	10		106	
1000	11	-	-		111	
-	-	1250	12		121	
1000	10	1350	14		131	
-	-	1600	17	350	146	3025344
1250	12	-	-		161	
1350	14	2000	23	400	176	3025345
1600	16	-	-		191	
1600	17	-	-		211	
2000	18	-	-		233	
2000	20	2500	25	450	251	3025346
2500	29	-	-		281	
2500	27	-	-		301	

■ Please call us for non-standard components.

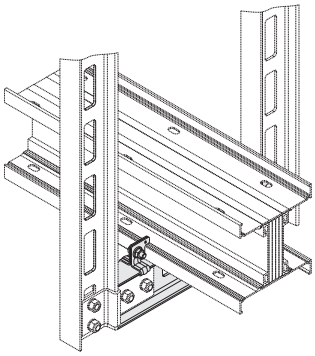
ORDER CODE
LENGTH L (mm)

□□□ - □□□□

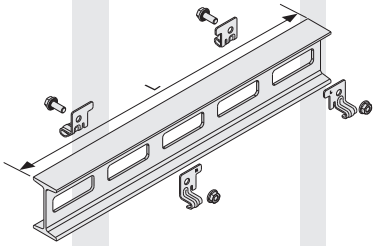


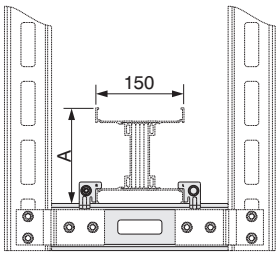
Supports

Description	Order Code
KX IDY Support Set	2054590



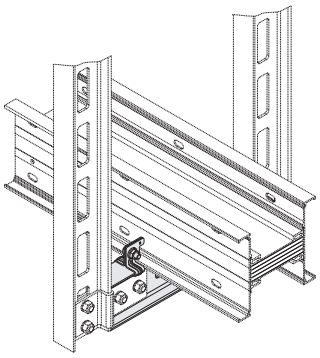
KX - IDY TWO-WAY FOR EDGEWISE APPLICATION TO NPI CHANNEL

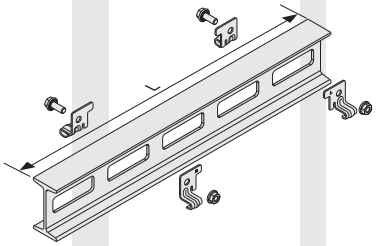


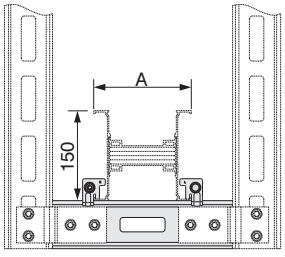


KXA - Al Conductor		KXC - Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
* 400	04	*550	05	300	77,5	3113547
* 500	05	*650	06		82,5	
* 630	06	*800	08		91	
800	08	1000	10		106	
1000	11	-	-		111	
-	-	1250	12		121	
1000	10	1350	14		131	
-	-	1600	17		146	
1250	12	-	-		161	
1350	14	2000	23		176	
1600	16	-	-		191	
1600	17	-	-		211	
2000	18	-	-		233	
2000	20	2500	25		251	
2500	29	-	-		281	
2500	27	-	-		301	
-	-	2000	22		202	
-	-	2500	27		232	
2500	25	3300	32		312	
-	-	3600	36		342	
3200	32	4000	40		372	
3200	33	-	-		412	
4000	40	5000	50		492	
4000	41	-	-		454	
5000	51	-	-		592	
6000	60	6300	63		732	

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

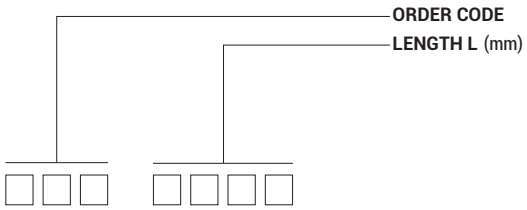






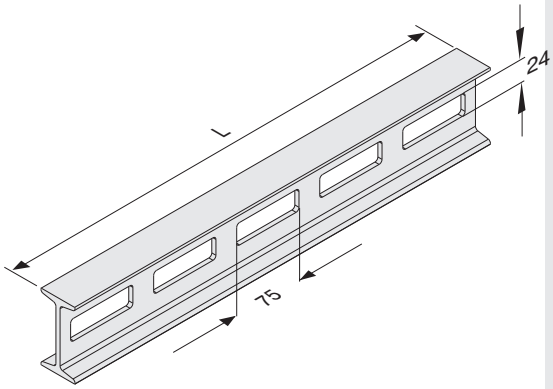
KXA - Al Conductor		KXC - Cu Conductor		L	A	Order Code
Rated Current	Busbar Code	Rated Current	Busbar Code	(mm)	(mm)	
* 400	04	*550	05	300	77,5	3113547
* 500	05	*650	06		82,5	
* 630	06	*800	08		91	
800	08	1000	10		106	
1000	11	-	-		111	
-	-	1250	12		121	
1000	10	1350	14		131	
-	-	1600	17		146	
1250	12	-	-		161	
1350	14	2000	23		176	
1600	16	-	-	400	191	3113548
1600	17	-	-		211	
2000	18	-	-		233	
2000	20	2500	25		251	
2500	29	-	-		281	
2500	27	-	-		301	
-	-	2000	22		202	
-	-	2500	27		232	
2500	25	3300	32	500	312	3113549
-	-	3600	36		342	
3200	32	4000	40		372	
3200	33	-	-	600	412	3113550
4000	40	5000	50		492	
4000	41	-	-		454	
5000	51	-	-	700	592	3134127
6000	60	6300	63	900	732	3113553

■ Please call us for non-standard components.

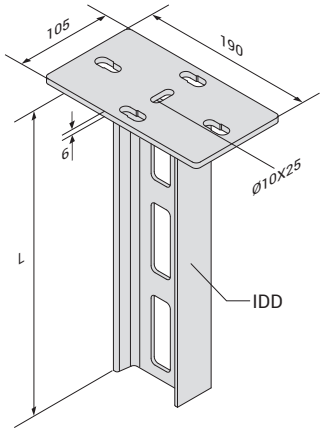


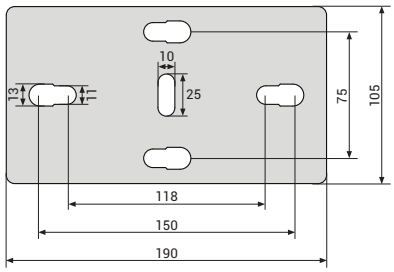
Supports

IDY

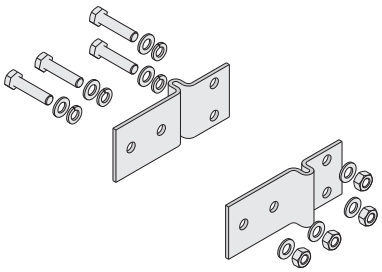


IDD

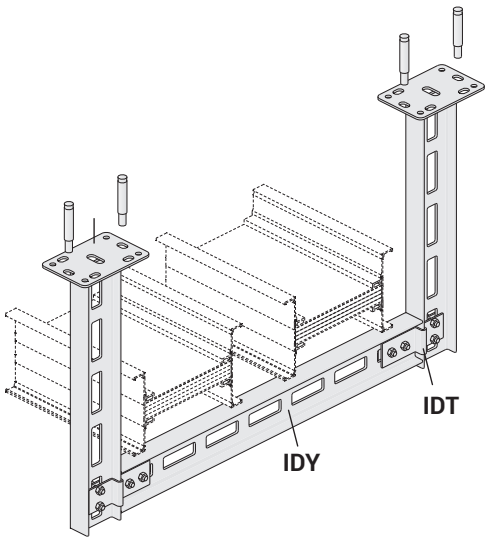




IDT



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

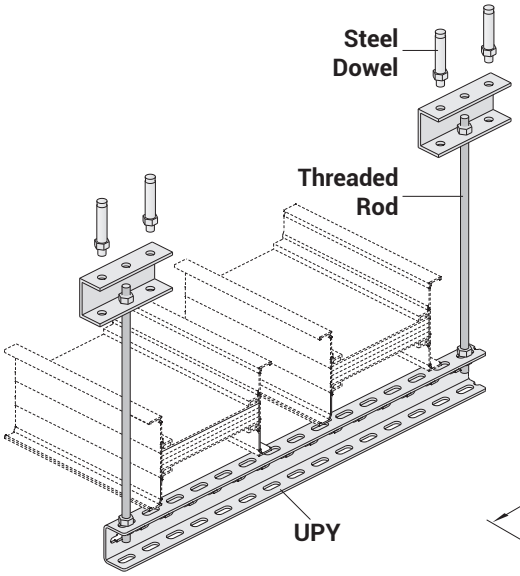


■ Please call us for non-standard components.

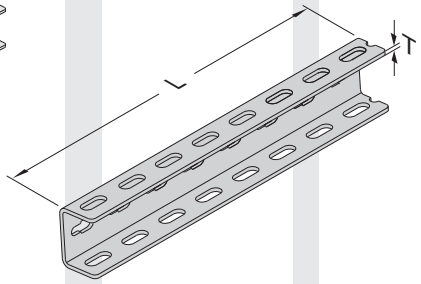
ORDER CODE
LENGTH L (mm)

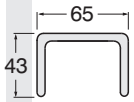
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Supports



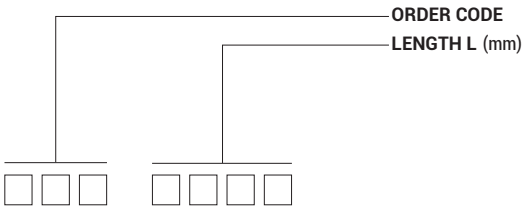
UPY





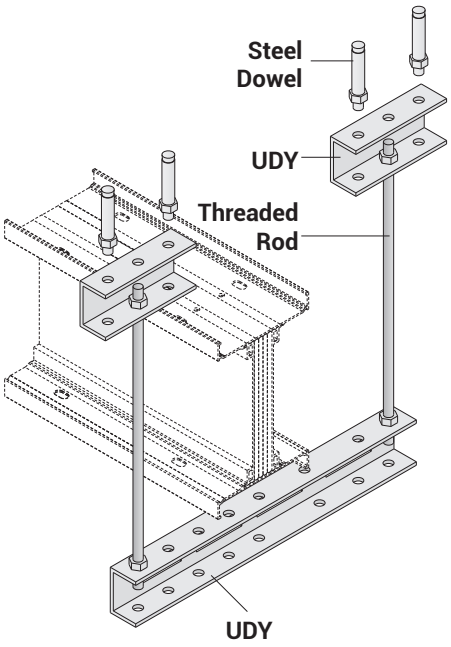
Description	T (mm)	L (mm)	Order Code
UPY 300	4	300	**3004487**
UPY 400	4	400	**3004489**
UPY 500	4	500	**3004491**
UPY 600	4	600	**3004493**
UPY 700	4	700	**3004495**
UPY 800	4	800	**3004496**
UPY 900	4	900	**3004497**
UPY 1000	4	1000	**3004498**
UPY 1100	4	1100	**3004499**
UPY 1200	4	1200	**3004500**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

■ Please call us for non-standard components.

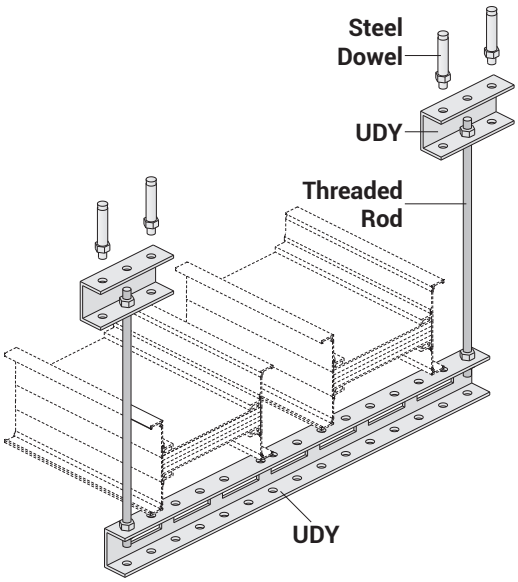


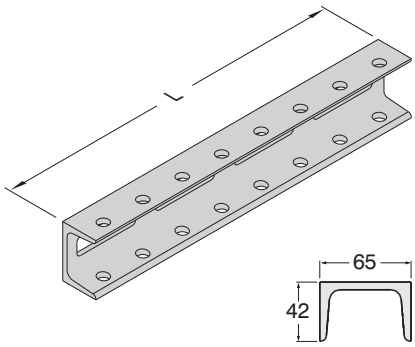
Supports

UDY



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**



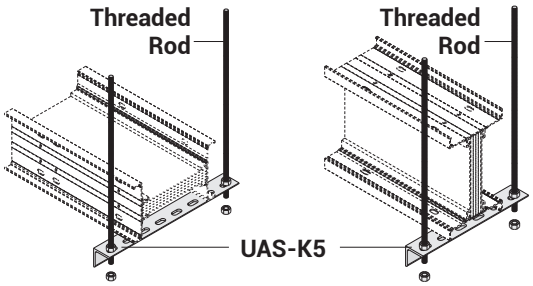


■ Please call us for non-standard components.

ORDER CODE
LENGTH L (mm)

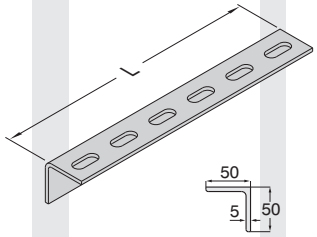
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Supports



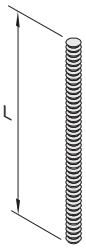
UAS-K5

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**



Connection Units

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**



Threaded Rod



Extension Unit



Steel Dowel

Diameter of the hole to be drilled

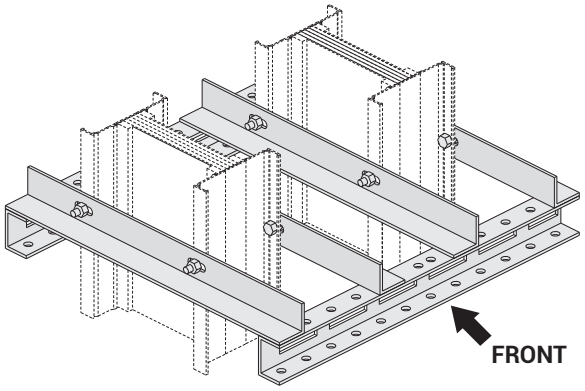
M10.....Ø14
M12.....Ø16



Steel Nut



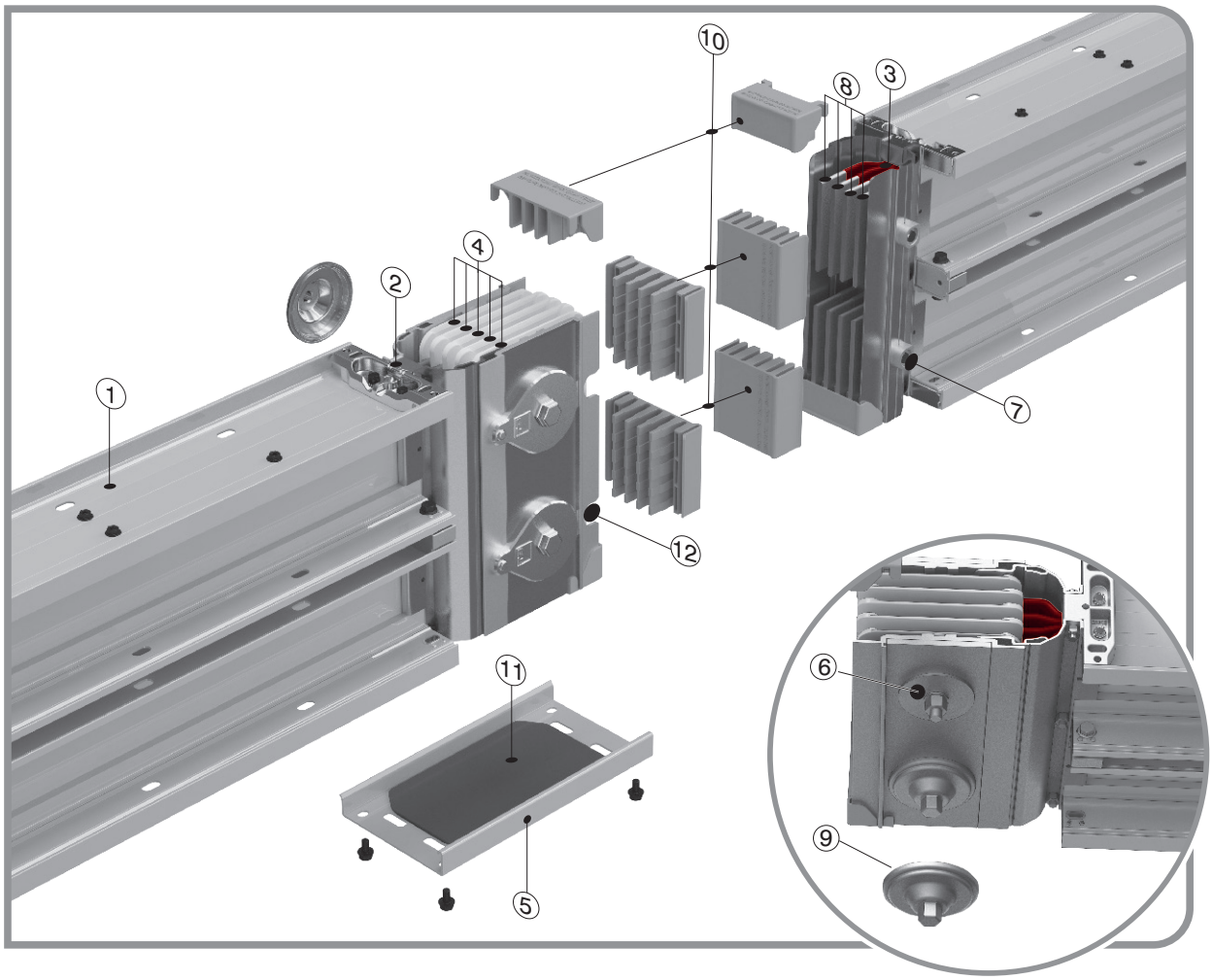
Washer



Vertical Riser Application
Sample Order Hanging
(Special to project)

■ Please call us for non-standard components.

Vertical riser shaft supports that corresponds your special needs can be designed regarding to the project and shaft dimensions.



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

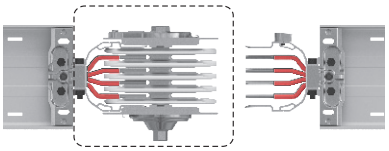


Figure 1 Block Joint

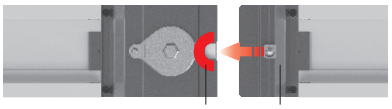


Figure 2 Alignment Slot — Alignment Pin (removable)

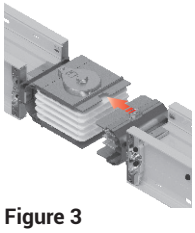


Figure 3

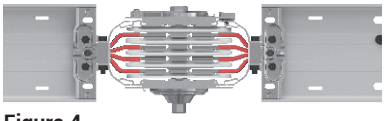


Figure 4 Joint assembly

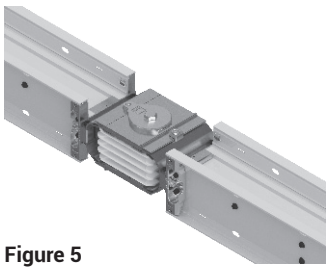


Figure 5

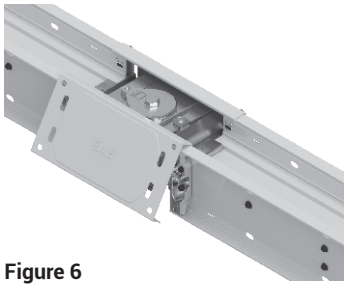
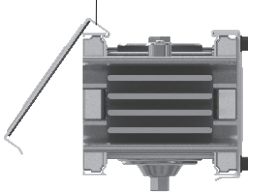


Figure 6

The joint cover is closed by leverage.



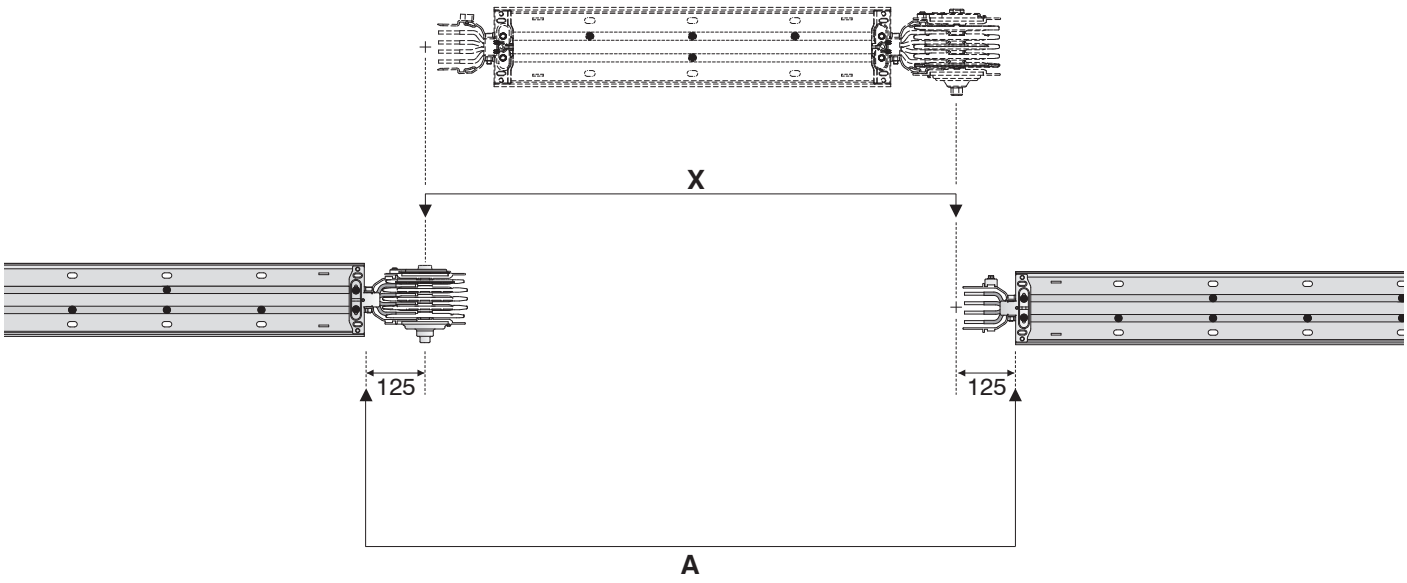
■ Please check related installation manual for details.

►►Measuring a Special Length

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 350 mm. Please measure the lengths of these modules as shown below.

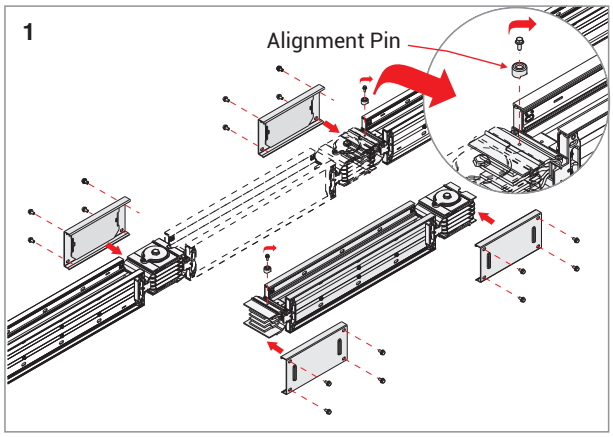
Length A is measured between housing of 2 busbars in cm. A. The special length is calculated by deducting 250mm from this measured length.

X=A-250 (mm) X=Length of Special Busbar (The busbar module will be manufactured as per X value.)

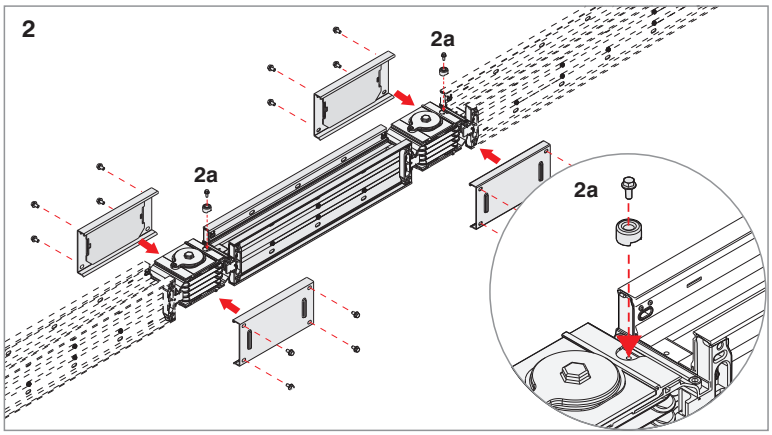


■ Please call us for non-standard components.

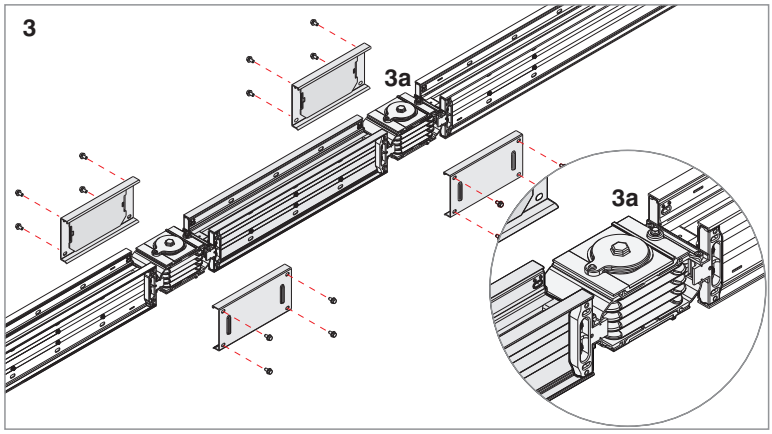
▶▶ Inserting "Make up Section"



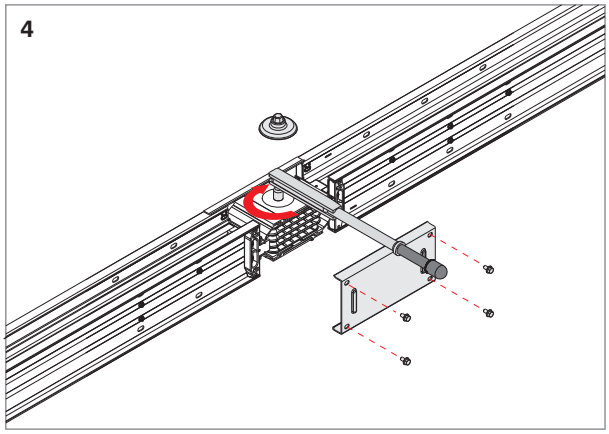
1- Remove Alignment Pin on the busbar, without block joint.



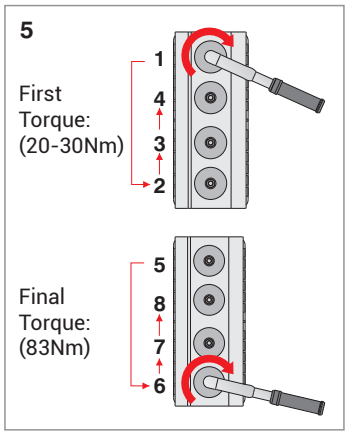
2- Insert the piece aligning conductors correctly. Fix back the Alignment pin.



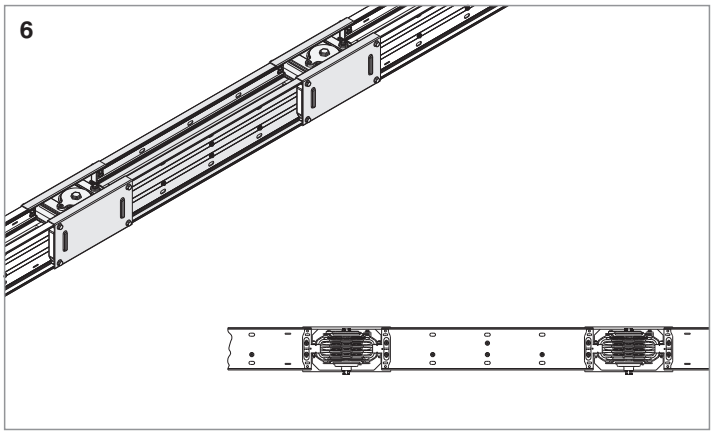
3- Make sure busbar piece is aligned according to alignment pin.



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 tighten by hand approximately 20-30Nm as per above sequence, then 83Nm shall be applied at final torque with the same sequence.



6- Fix the remaning 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

20.04.2023

Document Authorized Signatory

Elif Gamze KAYA OK
Deputy General Manager


TEST CERTIFICATE
DEKRA Certification B.V.
For the product:
Low-voltage busbar trunking system
Trade name:
EAE
Type/Model:
KXA06
Subject:
Design verification
Requirements:
IEC 61439-6: 2012
Busbar trunking
DEKRA Certification B.V.

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;

400-500A	:1 sec/rms 16kA, Peak 32kA
630A	:1 sec/rms 25kA, Peak 52,5kA
800-1000A	:1 sec/rms 35kA, Peak 73,5kA
1000A	:1 sec/rms 50kA, Peak 105kA
1250-1350-1700A	:1 sec/rms 60kA, Peak 132kA
1600-2000-2500A	:1 sec/rms 80kA, Peak 176kA
2500-3200A	:1 sec/rms 100kA,Peak 220kA
3200A and above	:1 sec/rms 120kA,Peak 264kA

For Copper Conductors;

550-650A	:1 sec/rms 24kA, Peak 50,4kA
800A	:1 sec/rms 40kA, Peak 84kA
1000A	:1 sec/rms 50kA, Peak 105kA
1250-1350A	:1 sec/rms 60kA, Peak 132kA
1600-2000A	:1 sec/rms 80kA, Peak 176kA
2500A	:1 sec/rms 100kA,Peak 220kA
3300A 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 130C 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. Call our company for your IP65 orders.
(IP65 is not recommended for outdoor applications. Please check CR catalog.)

2.6- Acessories

-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 Commisioning

-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 : :

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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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Catalog 12- EN. / Rev 24 1000 Pcs. 15.08.2024
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