



# E-LINE KD

Data Rack Busbar Systems 160A...1000A



## DATA RACK BUSBAR

# E-LINE KD

## DATA RACK BUSBAR

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## ►► E-LINE KD

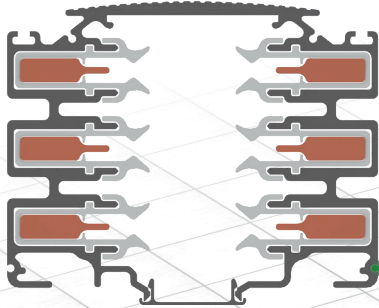
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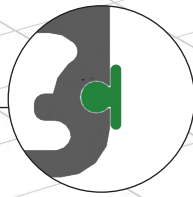
# E-LINE KD

## ►►Overview

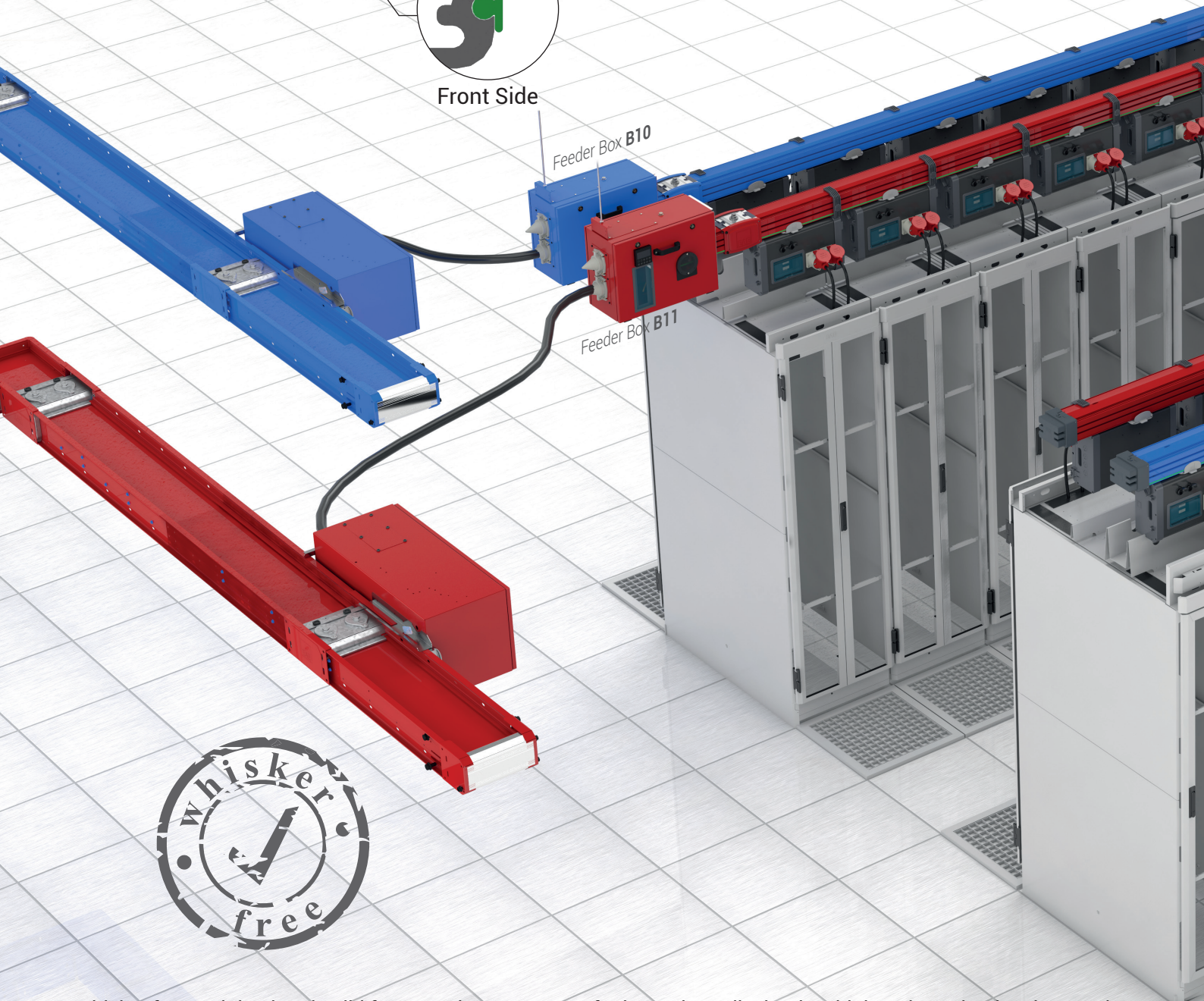
To power the mission critical IT infrastructures on the Data Rack Cabinets, EAE offers a highly flexible and reliable Busbar System to meet the "Scalability" challenge in the Data Centers finding the way to Moves, Adds and Changes (MACs).



Al or Cu conductor options with whisker free coating

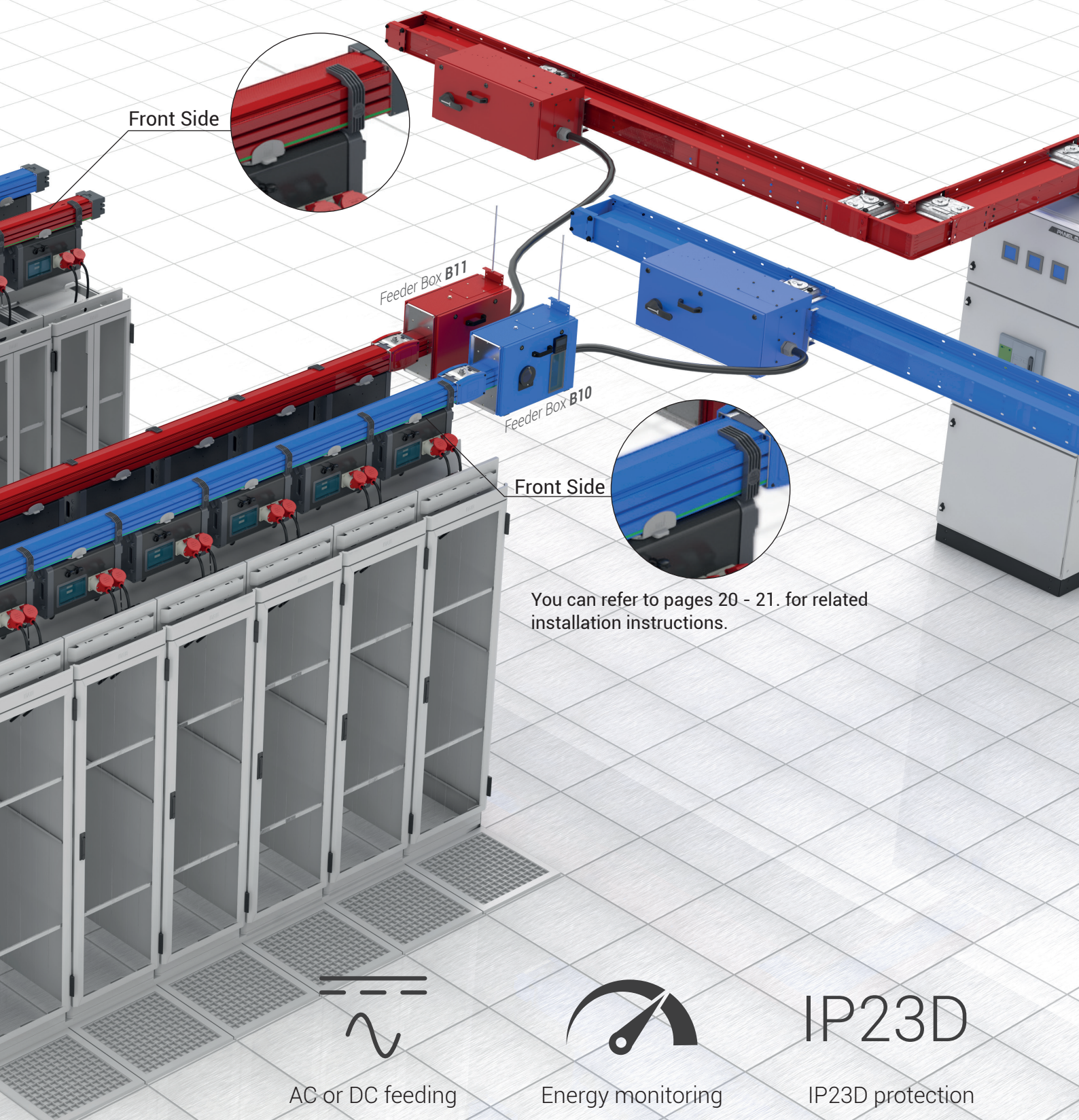


Front Side

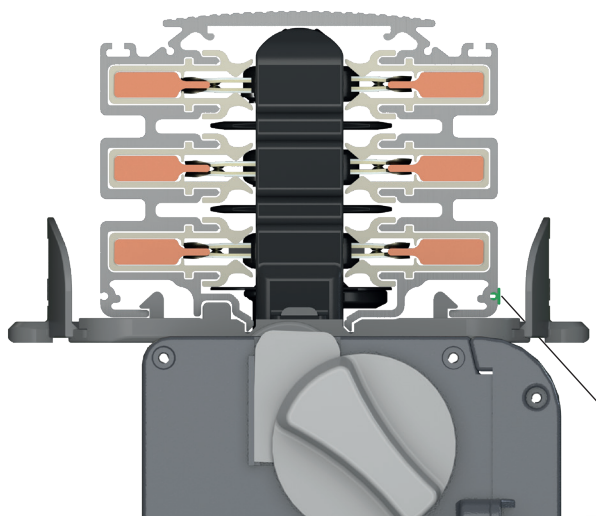


Whisker free and tin plated solid form conductors ensure for better heat dissipation, higher short circuit values and longer operation life while significantly contributing to the "Availability" challenge in the data center environments



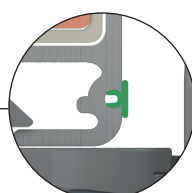




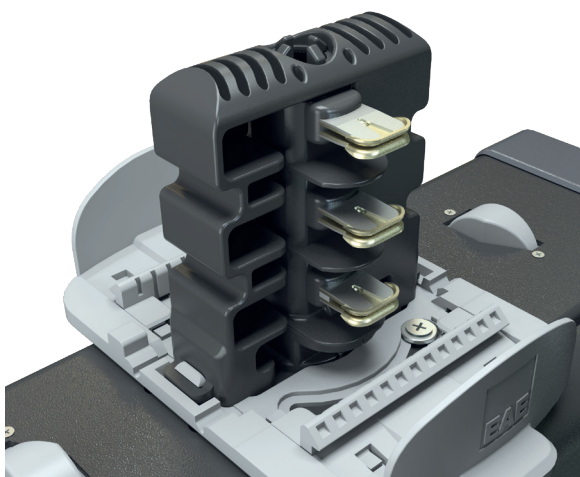


### Plug-n-Play

Easy plug-in Tap-Off Boxes on any point along the busbar, remove and relocate wherever necessary

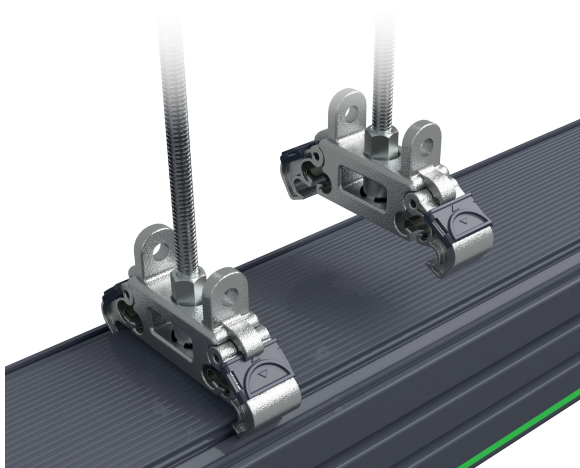


Front Side



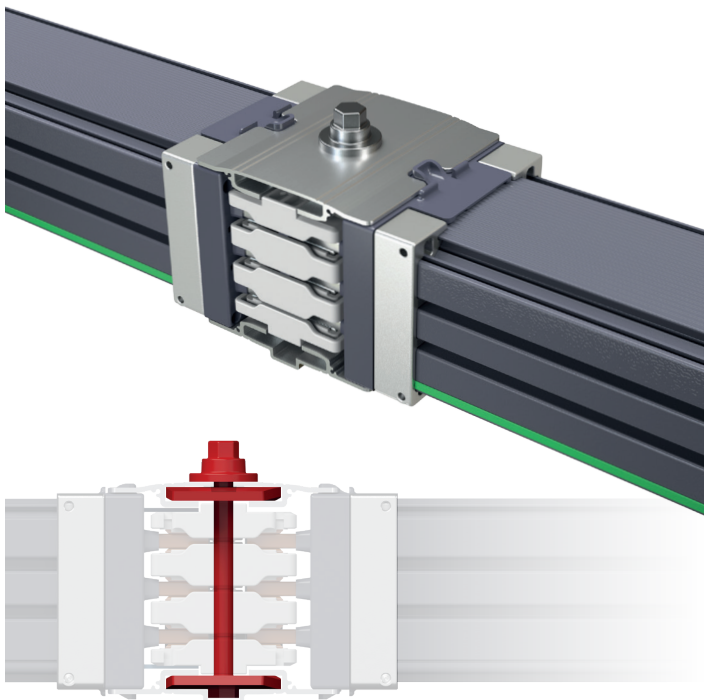
### Tap-Off Contacts

Constant contact pressure with double sided spring system and safe locking mechanism on Tap-Off Box contacts



### Snap-In Suspension Mechanism

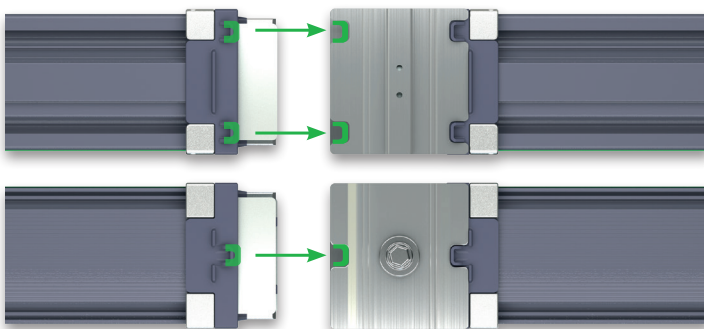
Easy and fast structural mounting thanks to Snap-In Fixing Unit



### Joint Mechanism

Safe alignment mechanism with a single bolt monoblock joint for correct installation and operation

Front Side



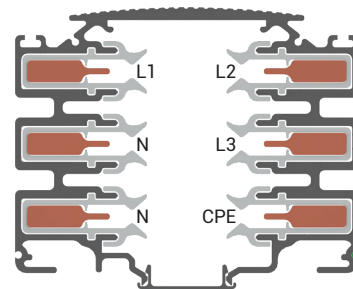
### Easy and Safe Installation

Patented EAE Alignment Solution, ideal alignment of the block joint element and busbar thanks to the alignment guides on the joint area



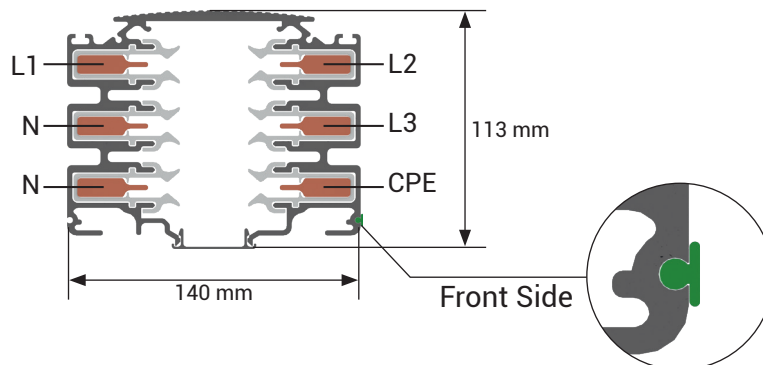


|                                              |                                                        |
|----------------------------------------------|--------------------------------------------------------|
| <b>Standards</b>                             | IEC 61439-6, TS EN 61439-6, IEC 61439-1, TS EN 61439-1 |
| <b>Rated Isolation Voltage</b>               | Ui: 1000 V at Cat IV                                   |
| <b>Max. Rated Operational Voltage</b>        | Ue: 1000 Vac                                           |
| <b>Rated Impulse Withstand Voltage</b>       | Uimp: 12 kV                                            |
| <b>Rated Frequency</b>                       | f: 50 Hz                                               |
| <b>Pollution Degree</b>                      | III                                                    |
| <b>Protection Degree</b>                     | IP23D                                                  |
| <b>External Mechanical Impacts (IK Code)</b> | IK08                                                   |
| <b>Protection for Safety</b>                 | Basic Protection (HD 60364-4-41, Clause A1)            |

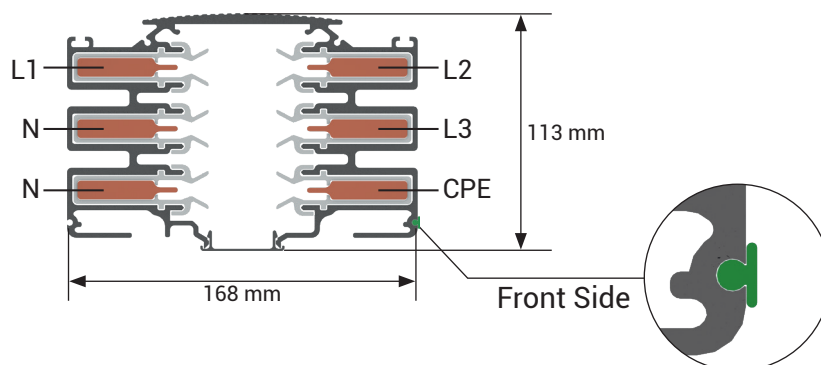


|                                                                                  |                          |                 | AI         |            |            |            |            |
|----------------------------------------------------------------------------------|--------------------------|-----------------|------------|------------|------------|------------|------------|
| <b>RATED CURRENT</b>                                                             | <b>I<sub>n</sub></b>     | <b>A</b>        | <b>160</b> | <b>250</b> | <b>400</b> | <b>630</b> | <b>250</b> |
| <b>BUSBAR CODE</b>                                                               |                          |                 | 01         | 02         | 04         | 06         | 02         |
| <b>MEAN PHASE CONDUCTOR CHARACTERISTICS AT RATED CURRENT</b>                     | <b>ENT I<sub>n</sub></b> |                 |            |            |            |            |            |
| Resistance at a conductor temperature of 20 °C                                   | R <sub>20</sub>          | mΩ/m            | 0,358      | 0,352      | 0,234      | 0,159      | 0,215      |
| Average resistance at I <sub>n</sub> , thermal balance                           | R                        | mΩ/m            | 0,403      | 0,426      | 0,299      | 0,220      | 0,246      |
| Reactance (Independent from Temperature)                                         | X                        | mΩ/m            | 0,098      | 0,100      | 0,087      | 0,077      | 0,100      |
| Positive and negative sequence impedances at an ambient air temperature of 35 °C | Z                        | mΩ/m            | 0,415      | 0,437      | 0,311      | 0,233      | 0,265      |
| Positive and negative sequence impedances at a conductor temperature of 20 °C    | Z <sub>20</sub>          | mΩ/m            | 0,371      | 0,366      | 0,249      | 0,177      | 0,237      |
| Rated Power Loss at I <sub>n</sub>                                               |                          | W/m             | 30,08      | 76,9       | 140        | 252,4      | 43,74      |
| Aluminium Housing Section (Aluminium)                                            |                          | mm <sup>2</sup> | 3302       | 3302       | 3302       | 3302       | 3302       |
| Busbar Weight (4 Conductors)                                                     |                          | kg/m            | 11,1       | 11,1       | 11,8       | 12,6       | 13,6       |
| Busbar Weight (5 Conductors)                                                     |                          | kg/m            | 11,4       | 11,4       | 12,2       | 13,3       | 14,6       |
| Busbar Weight (6 Conductors)                                                     |                          | kg/m            | 11,6       | 11,6       | 12,6       | 14,0       | 15,3       |
| <b>MEAN FAULT-LOOP CHARACTERISTICS</b>                                           |                          |                 |            |            |            |            |            |
| <b>ZERO-SEQUENCE IMPEDANCE</b>                                                   |                          |                 |            |            |            |            |            |
| Zero-sequence impedance at a conductor temperature of 20 °C                      | Z <sub>(0)b20phN</sub>   | mΩ/m            | 1,482      | 1,482      | 1,016      | 0,725      | 0,949      |
| Zero-sequence impedance at a conductor temperature of 20 °C (Housing)            | Z <sub>(0)b20phPE</sub>  | mΩ/m            | 0,701      | 0,701      | 0,350      | 0,287      | 0,367      |
| Zero-sequence impedance at a conductor temperature of 20 °C (Double Notr)        | Z <sub>(0)b20ph2N</sub>  | mΩ/m            | 0,988      | 0,988      | 0,686      | 0,510      | 0,649      |
| Zero-sequence impedance at a conductor temperature of 20 °C (CPE)                | Z <sub>(0)b20phCPE</sub> | mΩ/m            | 1,509      | 1,509      | 1,039      | 0,743      | 0,962      |
| Zero-sequence impedance at an ambient temperature of 35 °C                       | Z <sub>(0)bphN</sub>     | mΩ/m            | 1,659      | 1,775      | 1,272      | 0,968      | 1,063      |
| Zero-sequence impedance at an ambient temperature of 35 °C (Housing)             | Z <sub>(0)bphPE</sub>    | mΩ/m            | 0,787      | 0,844      | 0,441      | 0,389      | 0,416      |
| Zero-sequence impedance at an ambient temperature of 35 °C (Double Notr)         | Z <sub>(0)bph2N</sub>    | mΩ/m            | 1,106      | 1,184      | 0,856      | 0,680      | 0,727      |
| Zero-sequence impedance at an ambient temperature of 35 °C (CPE)                 | Z <sub>(0)bphCPE</sub>   | mΩ/m            | 1,689      | 1,807      | 1,300      | 0,989      | 1,077      |
| <b>RESISTANCES AND REACTANCES</b>                                                |                          |                 |            |            |            |            |            |
| Resistance at a conductor temperature of 20 °C                                   | R <sub>b20phph</sub>     | mΩ/m            | 0,722      | 0,722      | 0,483      | 0,346      | 0,433      |
| Resistance at a conductor temperature of 20 °C                                   | R <sub>b20phN</sub>      | mΩ/m            | 0,718      | 0,718      | 0,479      | 0,342      | 0,434      |
| Resistance at a conductor temperature of 20 °C (Double Notr)                     | R <sub>b20ph2N</sub>     | mΩ/m            | 0,558      | 0,558      | 0,373      | 0,274      | 0,340      |
| Resistance at a conductor temperature of 20 °C (Housing)                         | R <sub>b20phPE</sub>     | mΩ/m            | 0,473      | 0,473      | 0,271      | 0,207      | 0,261      |
| Resistance at a conductor temperature of 20 °C (CPE)                             | R <sub>b20phCPE</sub>    | mΩ/m            | 0,723      | 0,723      | 0,485      | 0,343      | 0,427      |
| Resistance at an ambient air temperature of 35 °C                                | R <sub>bphph</sub>       | mΩ/m            | 0,815      | 0,875      | 0,618      | 0,479      | 0,494      |
| Resistance at an ambient air temperature of 35 °C                                | R <sub>bphN</sub>        | mΩ/m            | 0,809      | 0,869      | 0,613      | 0,473      | 0,496      |
| Resistance at an ambient air temperature of 35 °C (Double Notr)                  | R <sub>bph2N</sub>       | mΩ/m            | 0,629      | 0,676      | 0,478      | 0,378      | 0,389      |
| Resistance at an ambient air temperature of 35 °C (Housing)                      | R <sub>bphPE</sub>       | mΩ/m            | 0,533      | 0,572      | 0,347      | 0,286      | 0,298      |
| Resistance at an ambient air temperature of 35 °C (CPE)                          | R <sub>bphCPE</sub>      | mΩ/m            | 0,815      | 0,875      | 0,620      | 0,475      | 0,488      |
| Reactance (Independent from temperature)                                         | X <sub>bphph</sub>       | mΩ/m            | 0,194      | 0,194      | 0,169      | 0,141      | 0,196      |
| Reactance (Independent from temperature)                                         | X <sub>bphN</sub>        | mΩ/m            | 0,199      | 0,199      | 0,170      | 0,140      | 0,197      |
| Reactance (Double Notr) (Independent from temperature)                           | X <sub>bph2N</sub>       | mΩ/m            | 0,152      | 0,152      | 0,135      | 0,114      | 0,157      |
| Reactance (Housing) (Independent from temperature)                               | X <sub>bphPE</sub>       | mΩ/m            | 0,103      | 0,103      | 0,086      | 0,075      | 0,102      |
| Reactance (CPE) (Independent from temperature)                                   | X <sub>bphCPE</sub>      | mΩ/m            | 0,199      | 0,199      | 0,173      | 0,145      | 0,214      |

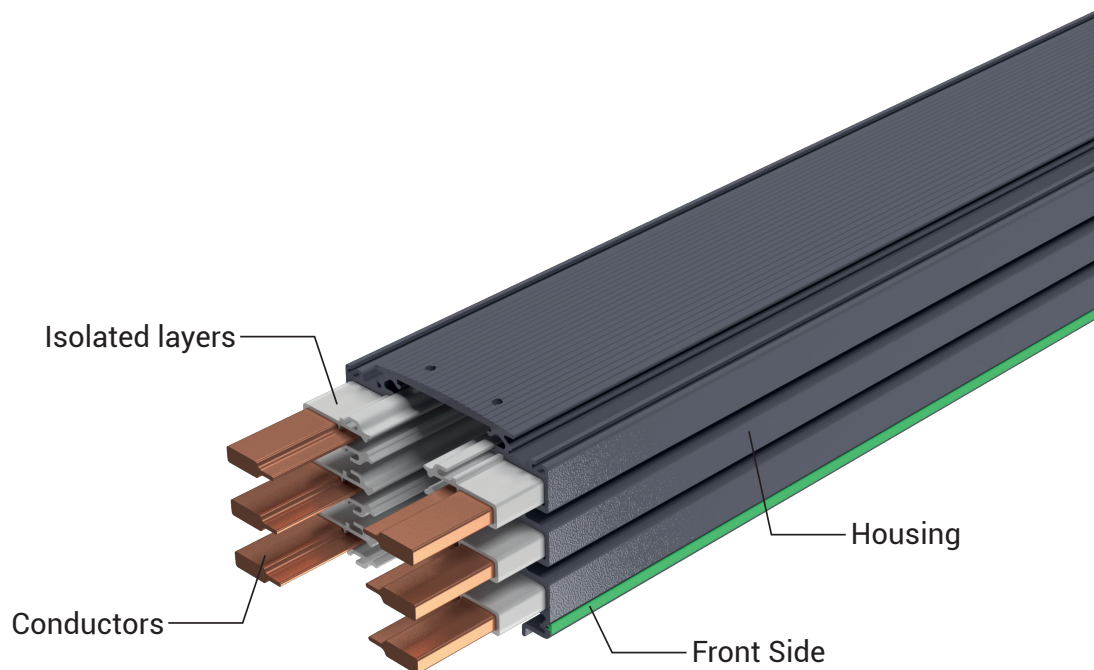
## ►Housing Type 1: 160A...630A (Al); 250A...800A (Cu)



## ►Housing Type 2: 1000A (Cu)



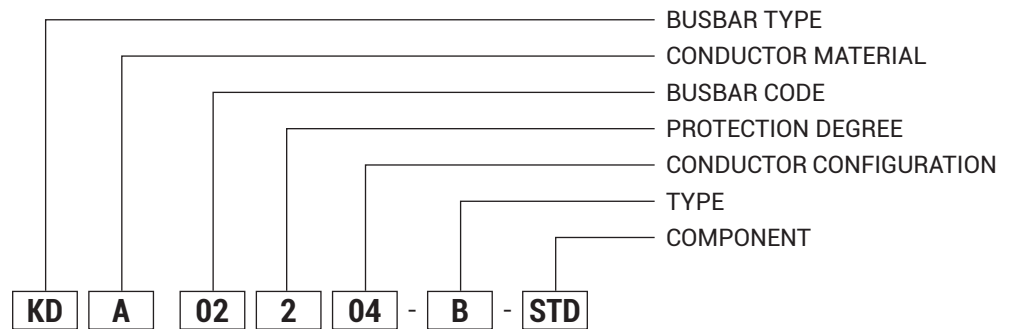
| Cu     |        |        |       |
|--------|--------|--------|-------|
| 400    | 630    | 800    | 1000  |
| 04     | 06     | 08     | 10    |
| 0,211  | 0,140  | 0,101  | 0,080 |
| 0,274  | 0,198  | 0,139  | 0,107 |
| 0,101  | 0,090  | 0,077  | 0,070 |
| 0,292  | 0,218  | 0,159  | 0,127 |
| 0,234  | 0,167  | 0,127  | 0,105 |
| 127,48 | 228,29 | 257,01 | 325   |
| 3302   | 3302   | 3302   | 3565  |
| 13,6   | 11,6   | 14,3   | 26,43 |
| 14,6   | 13,0   | 17,0   | 29,68 |
| 15,3   | 14,3   | 18,3   | 32,94 |
|        |        |        |       |
| 0,949  | 0,682  | 0,501  | 0,363 |
| 0,367  | 0,292  | 0,193  | 0,151 |
| 0,649  | 0,485  | 0,358  | -     |
| 0,962  | 0,707  | 0,518  | 0,374 |
| 1,191  | 0,902  | 0,636  | 0,445 |
| 0,470  | 0,400  | 0,256  | 0,195 |
| 0,814  | 0,643  | 0,456  | -     |
| 1,206  | 0,934  | 0,659  | 0,456 |
|        |        |        |       |
| 0,433  | 0,305  | 0,222  | 0,156 |
| 0,434  | 0,301  | 0,219  | 0,153 |
| 0,340  | 0,241  | 0,178  | -     |
| 0,261  | 0,192  | 0,136  | 0,1   |
| 0,427  | 0,305  | 0,223  | 0,155 |
| 0,562  | 0,430  | 0,305  | 0,207 |
| 0,564  | 0,424  | 0,301  | 0,203 |
| 0,442  | 0,339  | 0,245  | -     |
| 0,339  | 0,271  | 0,187  | 0,133 |
| 0,555  | 0,430  | 0,307  | 0,206 |
| 0,196  | 0,170  | 0,143  | 0,112 |
| 0,197  | 0,170  | 0,141  | 0,111 |
| 0,157  | 0,137  | 0,113  | -     |
| 0,102  | 0,088  | 0,072  | 0,054 |
| 0,214  | 0,174  | 0,146  | 0,115 |





# E-LINE KD

## ►►Order Code System



Busbar Type

Aluminium (Al) **A**  
Copper (Cu) **C**

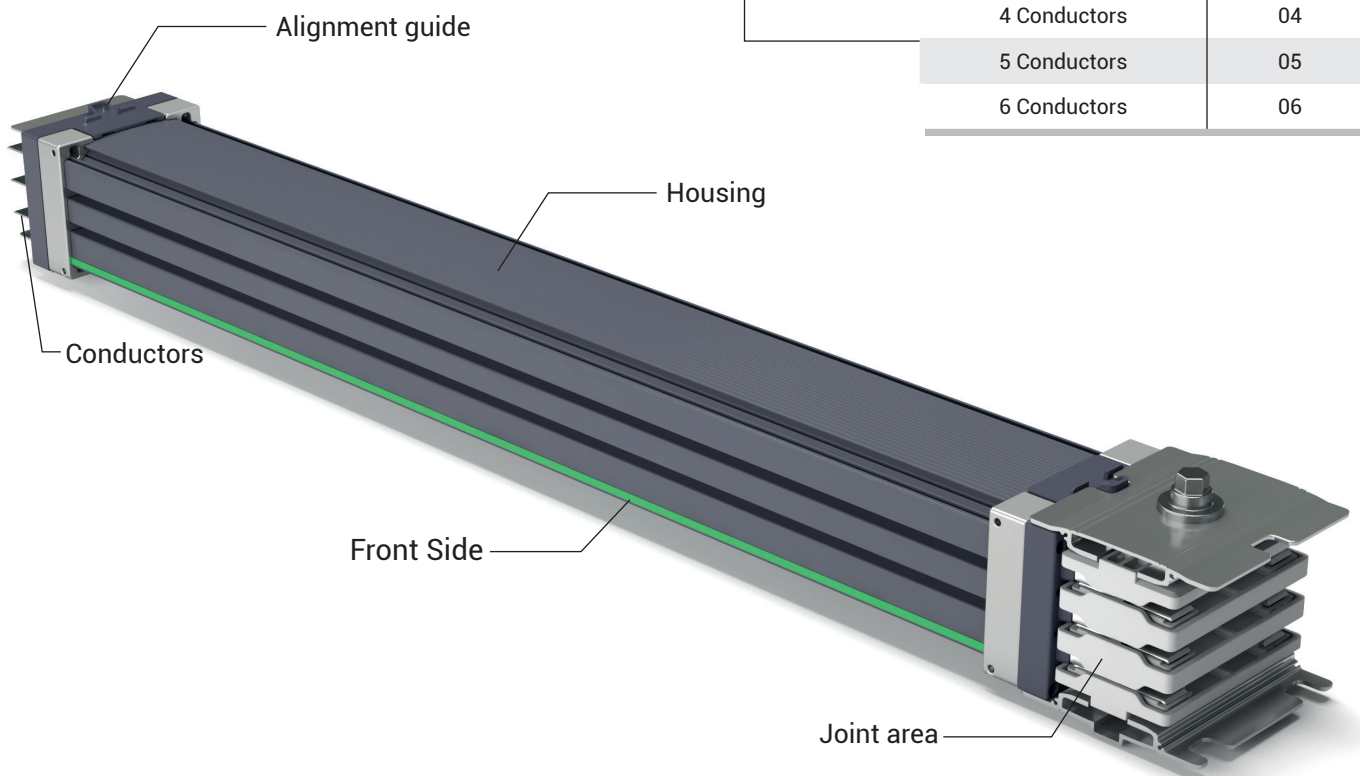
| Al Conductor  |             | Cu Conductor  |             |
|---------------|-------------|---------------|-------------|
| Rated Current | Busbar Code | Rated Current | Busbar Code |
| 160           | 01          | -             | -           |
| 250           | 02          | 250           | 02          |
| 400           | 04          | 400           | 04          |
| 630           | 06          | 630           | 06          |
| -             | -           | 800           | 08          |
| -             | -           | 1000          | 10          |

IP23D

| Standard Length   | STD |
|-------------------|-----|
| Special Length    | X   |
| Feeder Box        | B10 |
| Feeder Box        | B11 |
| End Closer        | S   |
| Left Elbow        | L   |
| Right Elbow       | R   |
| Central Feeder    | TO  |
| Left Side Feeder  | TYL |
| Right Side Feeder | TYR |

| Type    |   |
|---------|---|
| Painted | B |

| Conductor Configuration | Code |
|-------------------------|------|
| 4 Conductors            | 04   |
| 5 Conductors            | 05   |
| 6 Conductors            | 06   |



# E-LINE KD

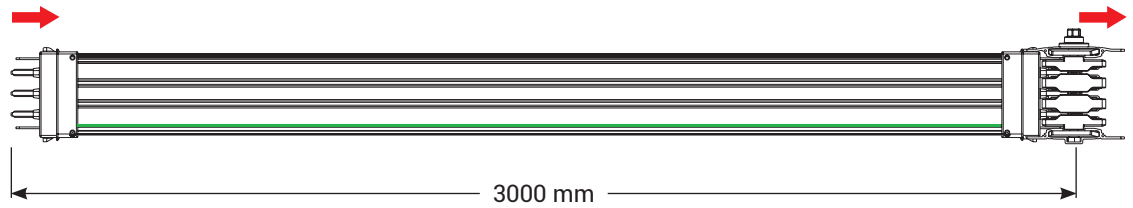


## ►►Standard Length

### Sample Order:

250 A, Aluminium,  
IP23D, 6 Conductors,  
Painted

**KDA 02206-B-STD**



**Housing Type 1:** 160A...630A (Al); 250A...800A (Cu)

**Housing Type 2:** 1000A (Cu)

## ►►Special Length

### Sample Order:

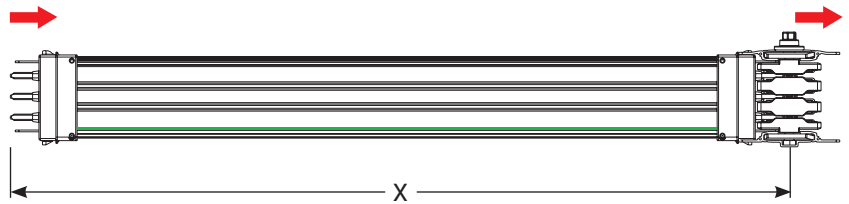
250 A, Aluminium,  
IP23D, 6 Conductors,  
Painted

**KDA 02206-B-X**

X=1500 mm.

### Note:

Minimum Length (X)=350 mm.

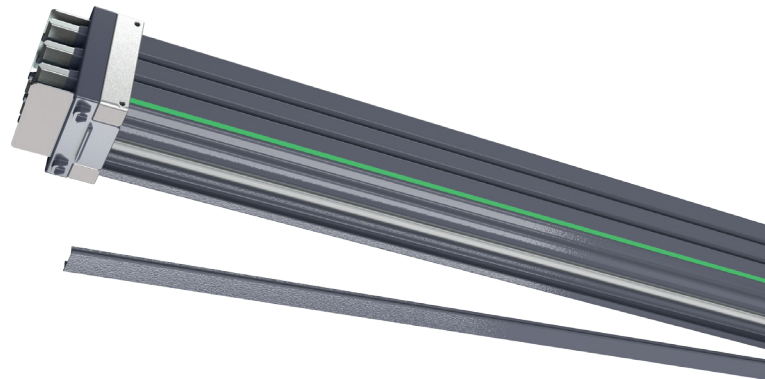
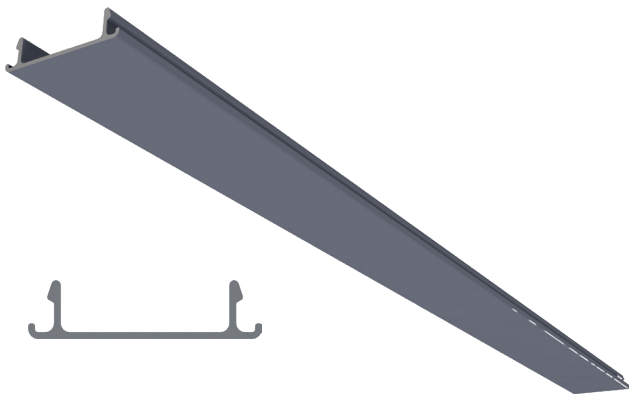


**Housing Type 1:** 160A...630A (Al); 250A...800A (Cu)

**Housing Type 2:** 1000A (Cu)

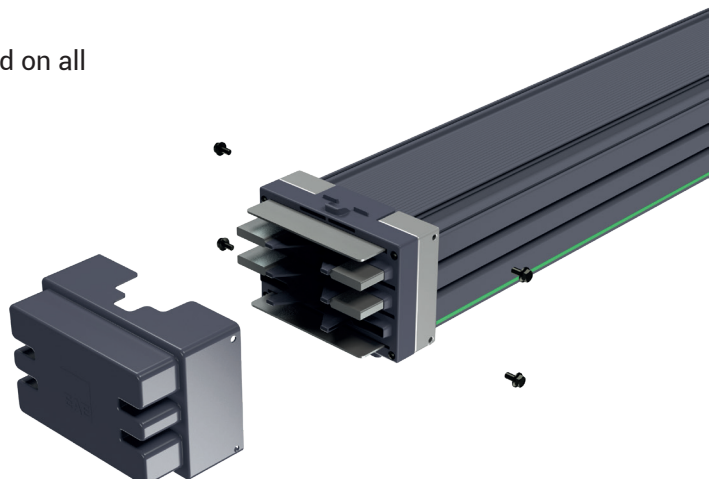
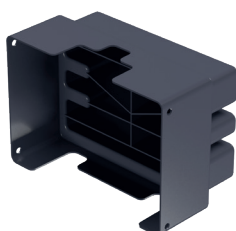
## ►Aluminium Closure Panel

Standard length= 2800 mm



## ►End Closer (S)

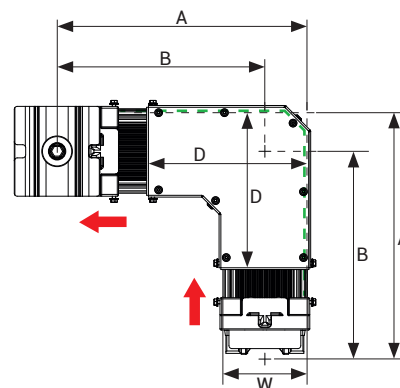
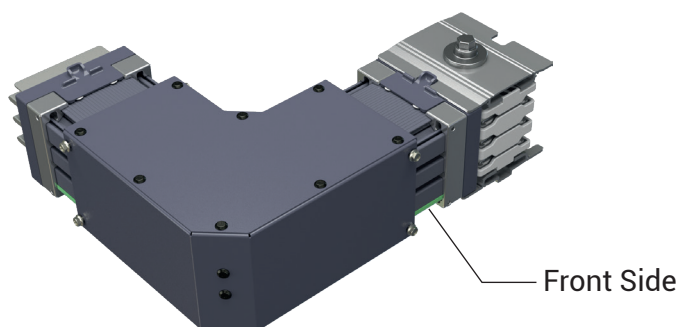
It is used to close the end of the busbar run and included on all standard and special length of busbars.



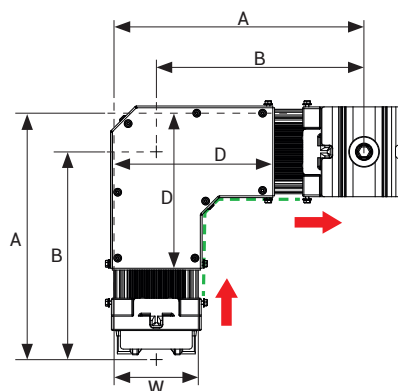
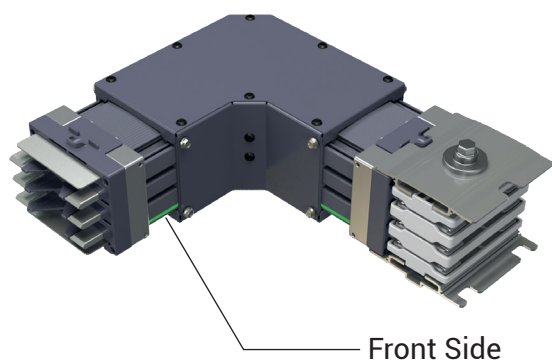
# E-LINE KD

## ►►Elbows

### ►Left Elbow (L)



### ►Right Elbow (R)



**Housing Type 1:** 160A...630A (Al); 250A...800A (Cu)

**Housing Type 2:** 800A (Al); 1000A (Cu)

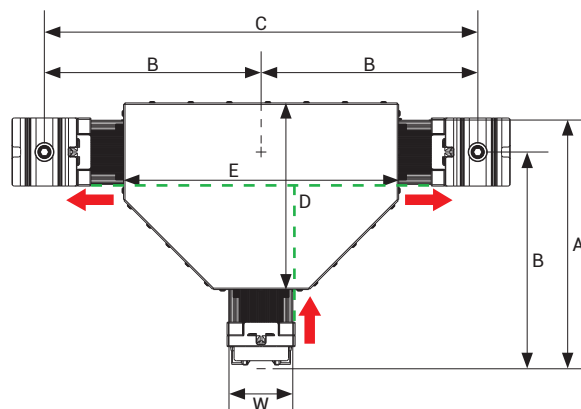
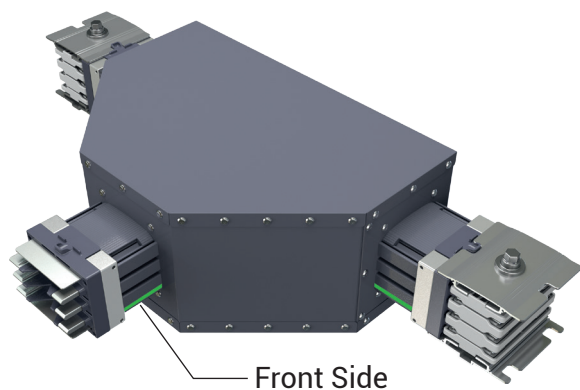
|                | A<br>(mm) | B<br>(mm) | D<br>(mm) | W<br>(mm) |
|----------------|-----------|-----------|-----------|-----------|
| Housing Type 1 | 417       | 347       | 274       | 140       |
| Housing Type 2 | 431       | 347       | 288       | 168       |



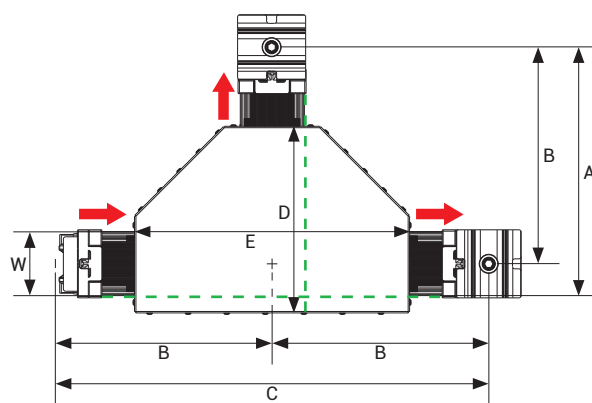
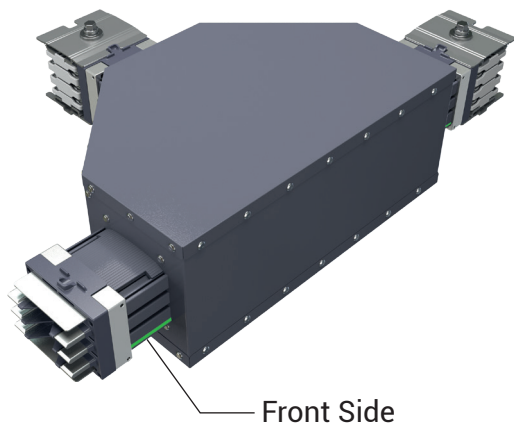
# E-LINE KD

## ►►Elbows

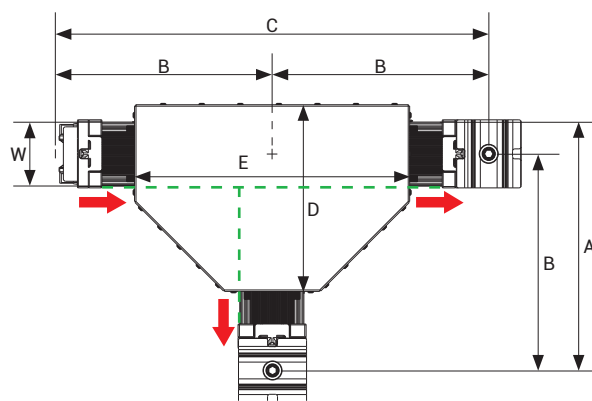
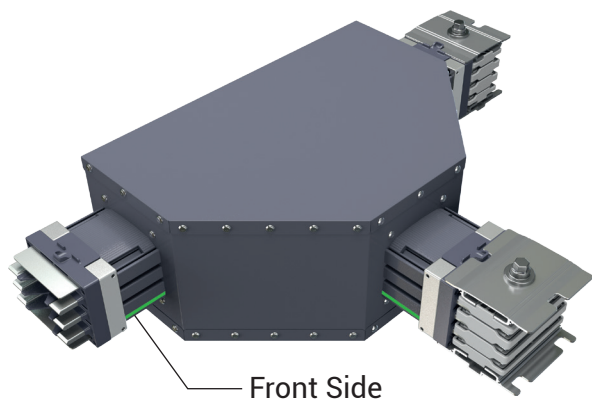
### ►Central Feeder (TO)



### ►Left Side Feeder (TYL)



### ►Right Side Feeder (TYR)



**Housing Type 1:** 160A...630A (Al); 250A...800A (Cu)

**Housing Type 2:** 1000A (Cu)

|                       | A<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | E<br>(mm) | W<br>(mm) |
|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Housing Type 1</b> | 548       | 478       | 956       | 411       | 606       | 140       |
| <b>Housing Type 2</b> | 562       | 478       | 956       | 425       | 606       | 168       |

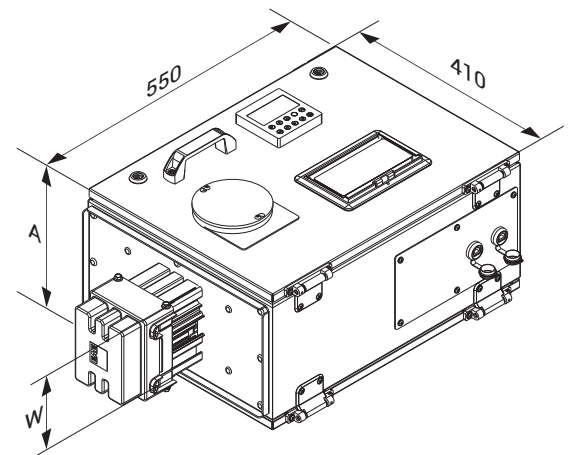
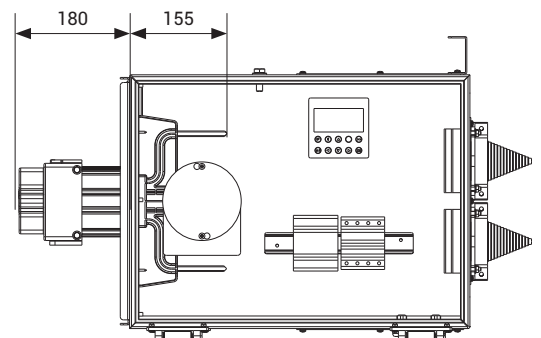
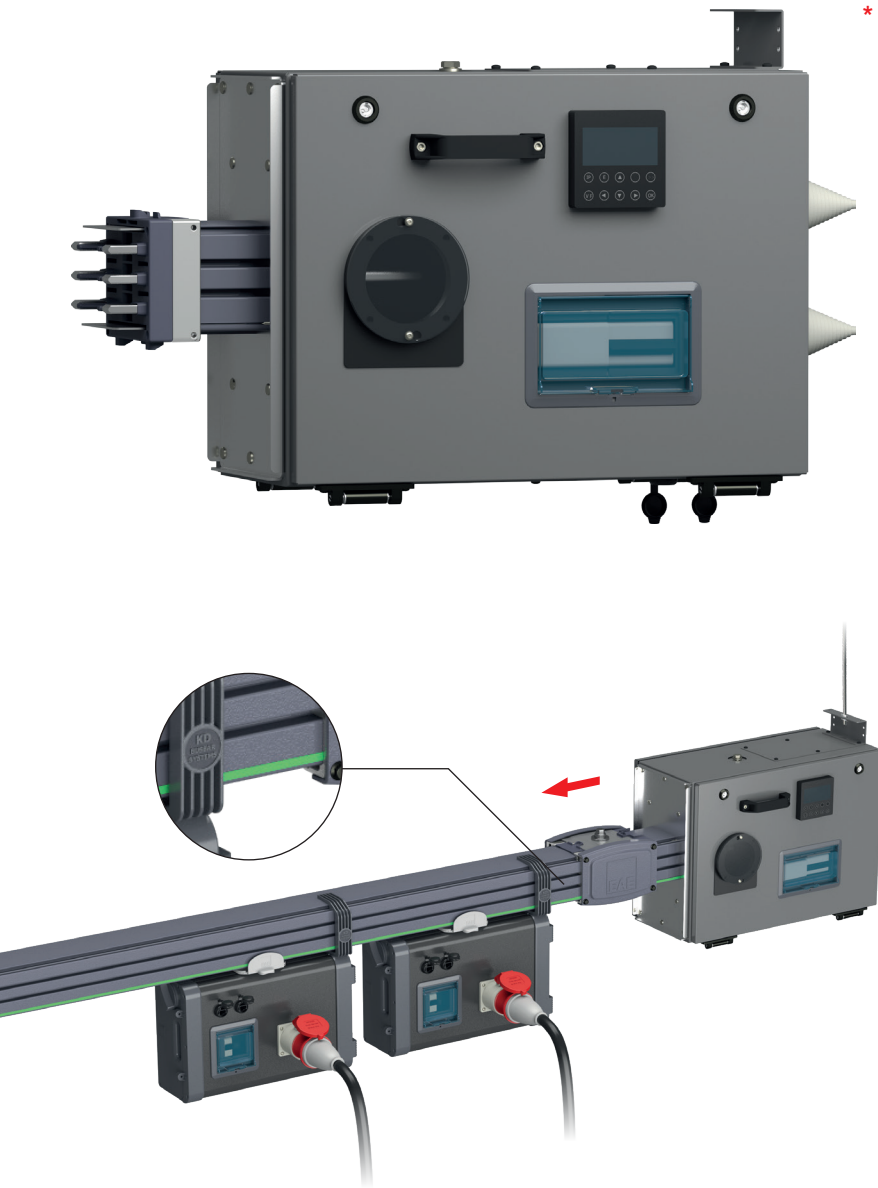
# E-LINE KD

►►Feeder Boxes 160A...630A (Al), 250A...1000A (Cu)

►Feeder Box (B10) (Orientation : Right → Left)



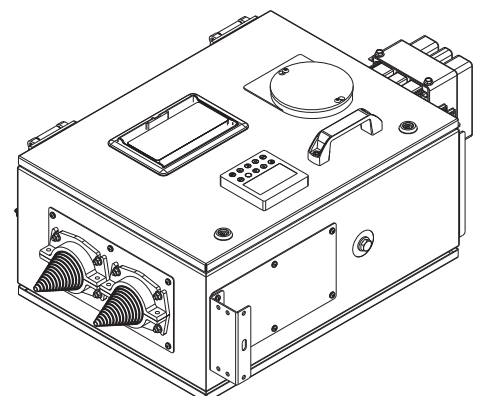
\* Support the feeder units from corresponding junction points.



**Housing Type 1:** 160A...630A (Al); 250A...800A (Cu)

**Housing Type 2:** 1000A (Cu)

|                | A<br>(mm) | W<br>(mm) |
|----------------|-----------|-----------|
| Housing Type 1 | 260       | 140       |
| Housing Type 2 | 288       | 168       |



- Hinged and easily removable cover
- IR window (optional)
- Energy Monitoring (optional)

\* Please contact us for special feeder boxes.  
\* All dimensions in mm.

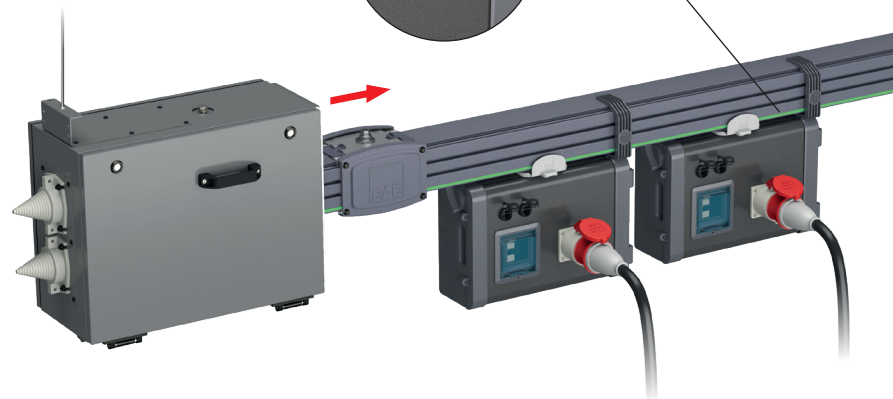
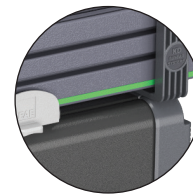
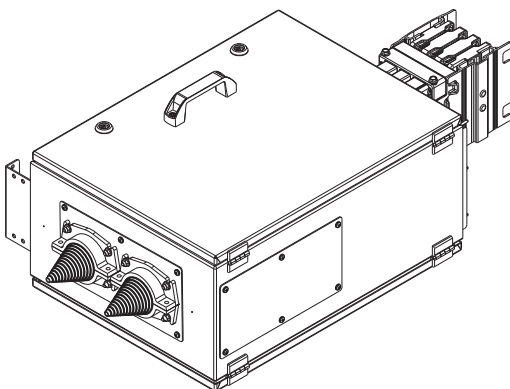
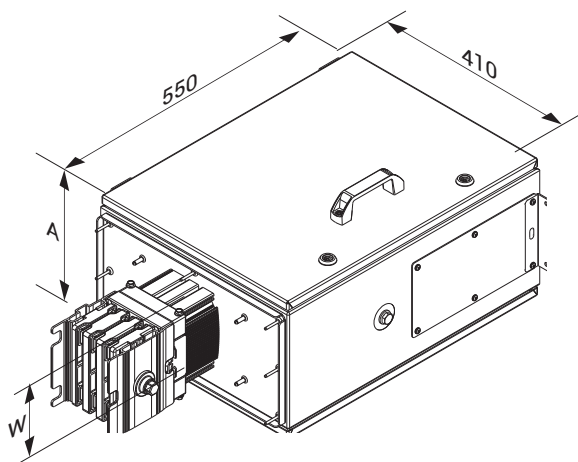
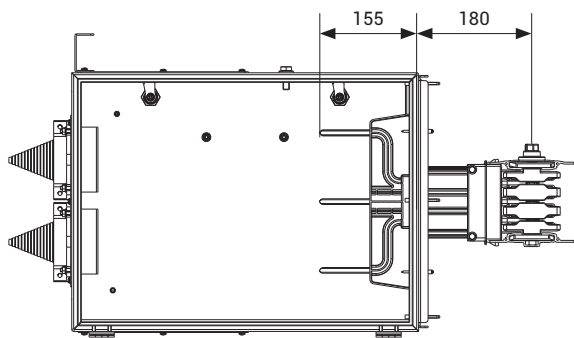
# E-LINE KD

►►Feeder Boxes 160A...630A (Al), 250A...1000A (Cu)

►Feeder Box (B11) (Orientation : Left → Right)



\* Support the feeder units from corresponding junction points.



**Housing Type 1:** 160A...630A (Al); 250A...800A (Cu)  
**Housing Type 2:** 1000A (Cu)

|                | A<br>(mm) | W<br>(mm) |
|----------------|-----------|-----------|
| Housing Type 1 | 260       | 140       |
| Housing Type 2 | 288       | 168       |

- Hinged and easily removable cover
- IR window (optional)
- Energy Monitoring (optional)

\* Please contact us for special feeder boxes.  
 \* All dimensions in mm.



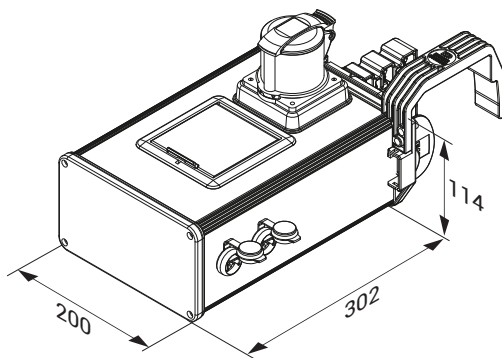
# E-LINE KD

## ►► Tap-Off Boxes

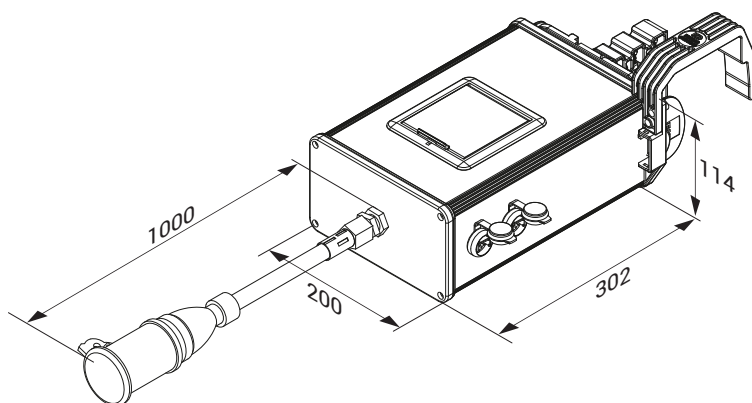
### ► KDP Terminal Box (80A)

16A/32A Single & Three Phase Circuit Breaker  
16A/32A, 3P & 5P Socket / Connector with cable  
RJ45 Ports (Optional for Energy Metering)

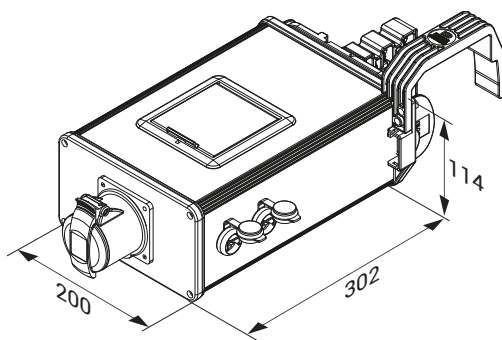
#### ► Type 01



#### ► Type 02



#### ► Type 03



- \* Please contact us for special boxes.
- \* All dimensions in mm.

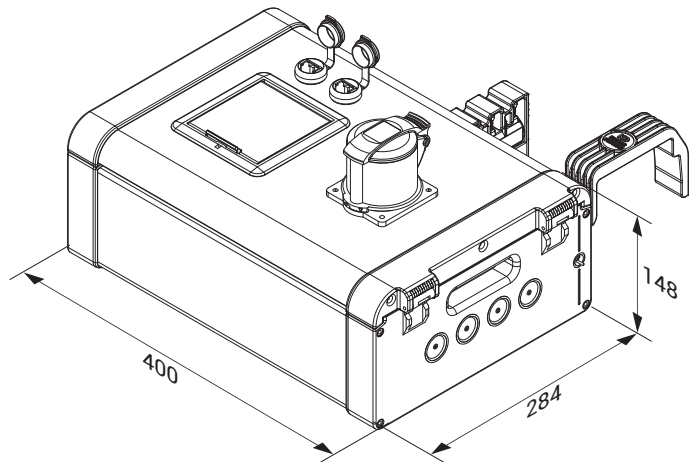
# E-LINE KD

## ►►Tap-Off Boxes

### ►KDP Single Socket Box (125A)



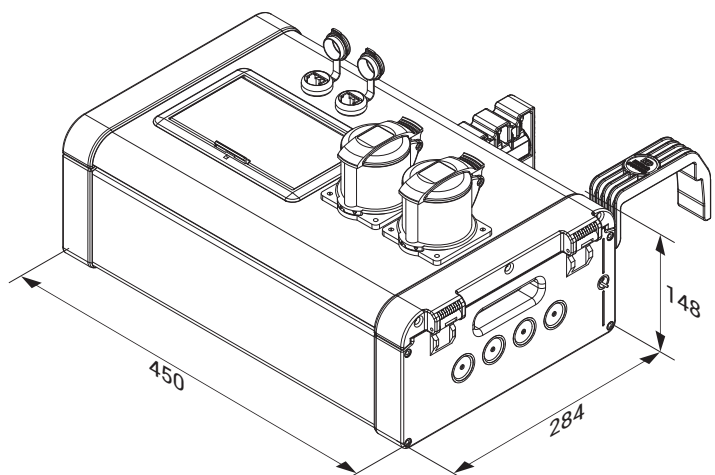
16A/32A Single & Three Phase Circuit Breaker  
63A Three Phase Circuit Breaker  
16A/32A Single & Three Phase Socket  
63A Three Phase Socket  
RJ45 Ports (Optional for Energy Metering)



### ►KDP Double Socket Box (125A)



16A/32A Single & Three Phase Circuit Breakers  
16A/32A Single & Three Phase Sockets  
RJ45 Ports (Optional for Energy Metering)



- \* Please contact us for special boxes.
- \* All dimensions in mm.

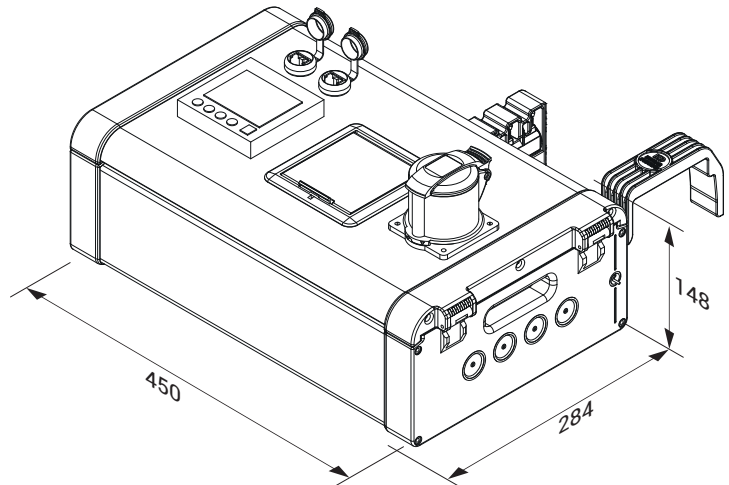
# E-LINE KD

## ►►Tap-Off Boxes

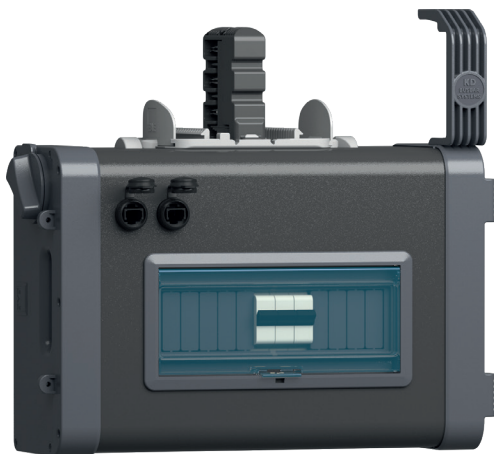
### ►KDP Energy Analyzer Box (125A)



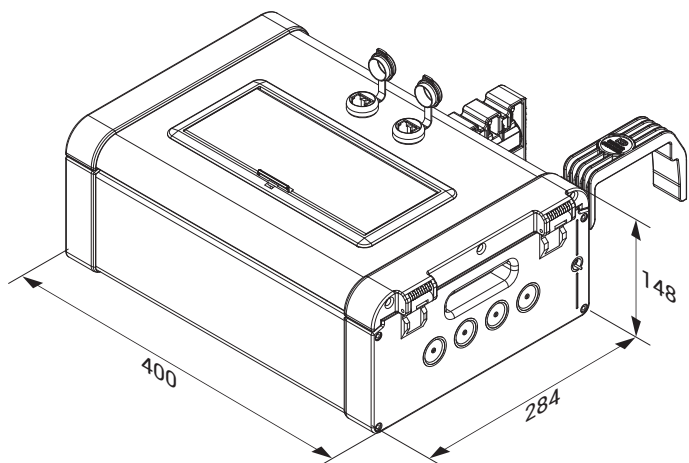
16A/32A Single & Three Phase Circuit Breakers  
63A Three Phase Circuit Breaker  
16A/32A Single & Three Phase Socket  
63A Three Phase Socket  
Energy Analyzer with Display  
RJ45 Ports



### ►KDP Empty Box (125A)



Configurable up to 12 modules with RJ45 ports with optional cable gland feed.



- \* Please contact us for special boxes.
- \* All dimensions in mm.



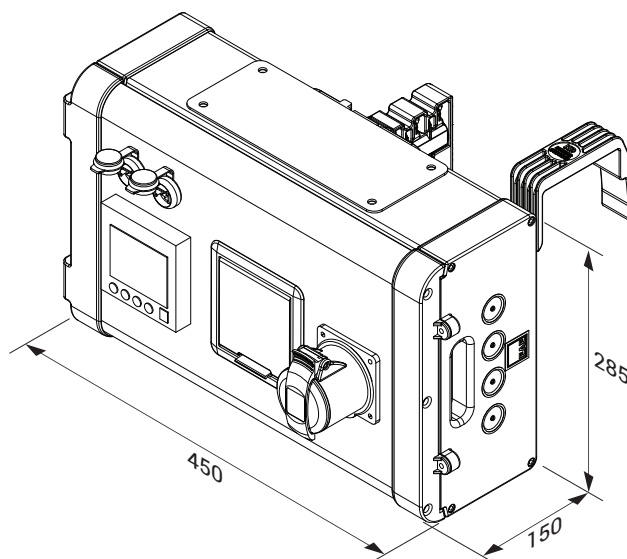
# E-LINE KD

## ►►Tap-Off Boxes Horizontal

### ►KDP Energy Analyzer Box Horizontal (125A)

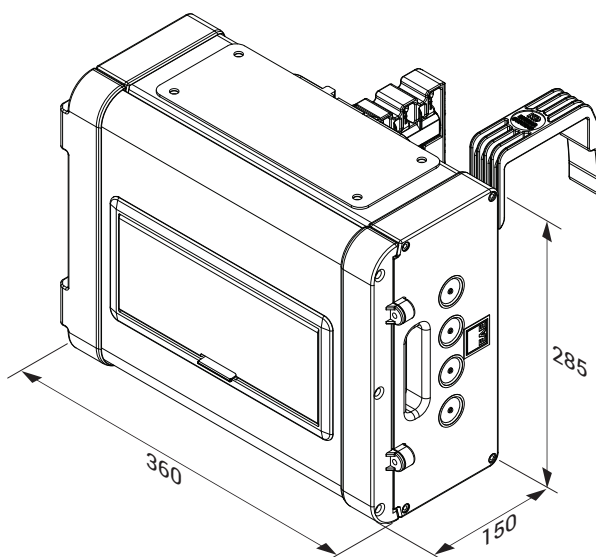


16A/32A Single & Three Phase Circuit Breakers  
63A Three Phase Circuit Breaker  
16A/32A Single & Three Phase Socket  
63A Three Phase Socket  
Energy Analyzer with Display  
RJ45 Ports



### ►KDP Empty Box Horizontal (125A)

Configurable up to 12 modules with optional cable gland feed.



- \* Please contact us for special boxes.
- \* All dimensions in mm.

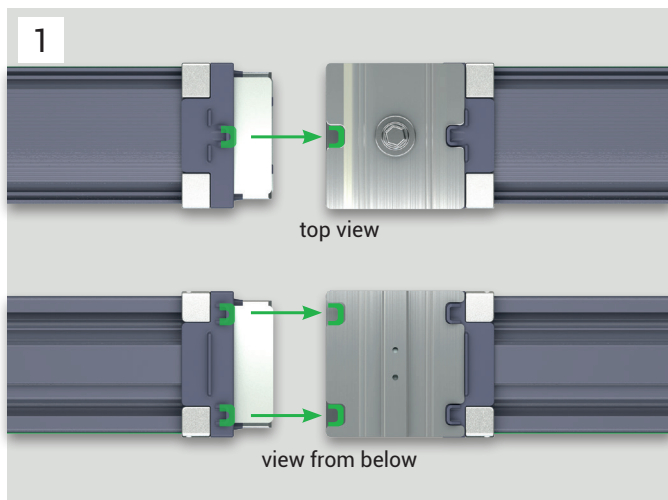




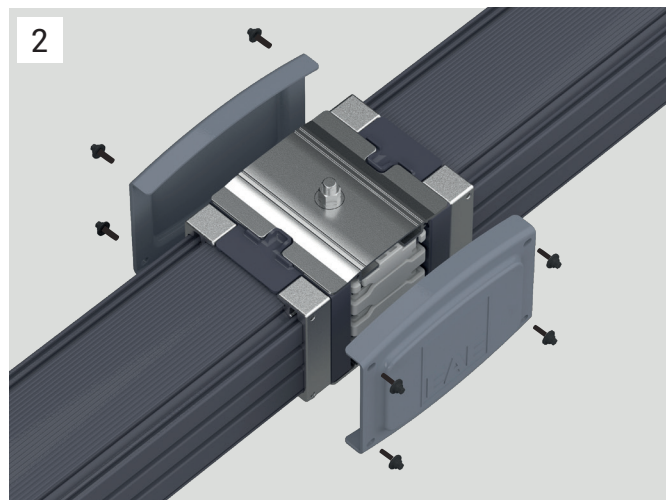
# E-LINE KD

## ►►Installation

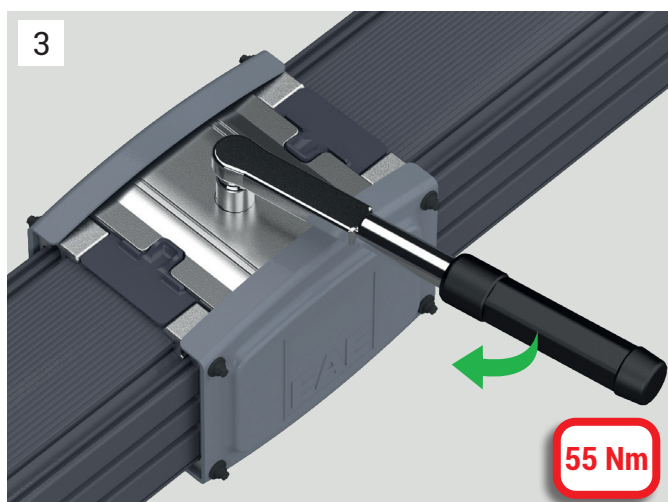
### ►Joint Installation



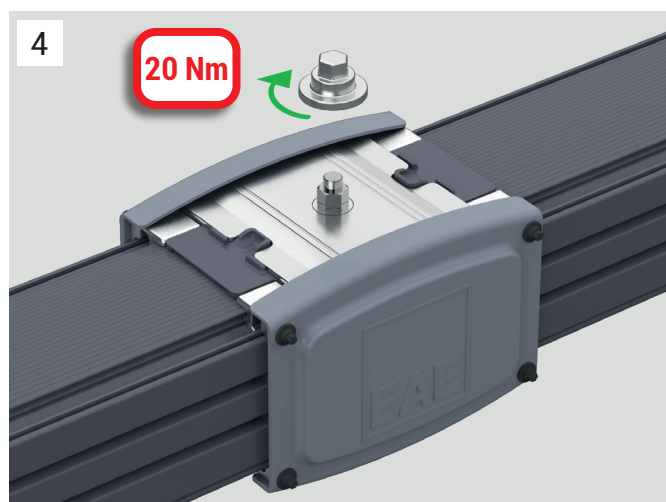
Align the busbars those with and without block joints facing each other and insert together



Assemble the joint cover and tighten the cover bolts



Adjust the torque wrench to 55 Nm and tighten the joint nut

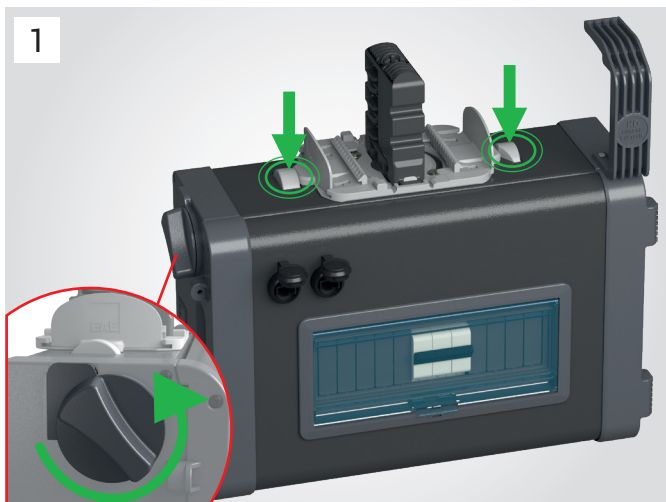


Mount the nut locking piece on the nut

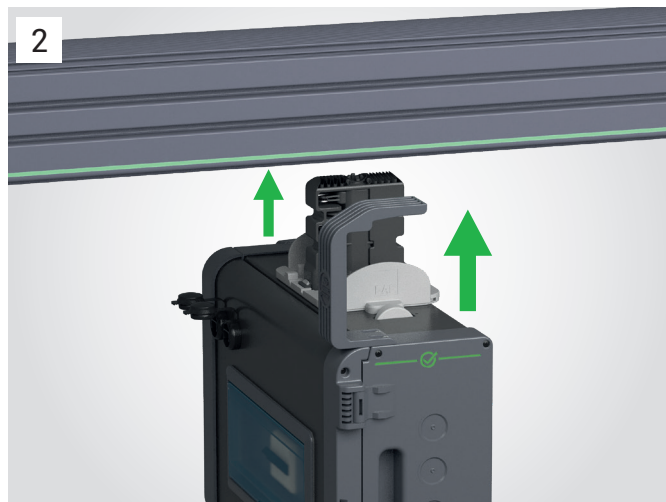
# E-LINE KD

## ►►Installation

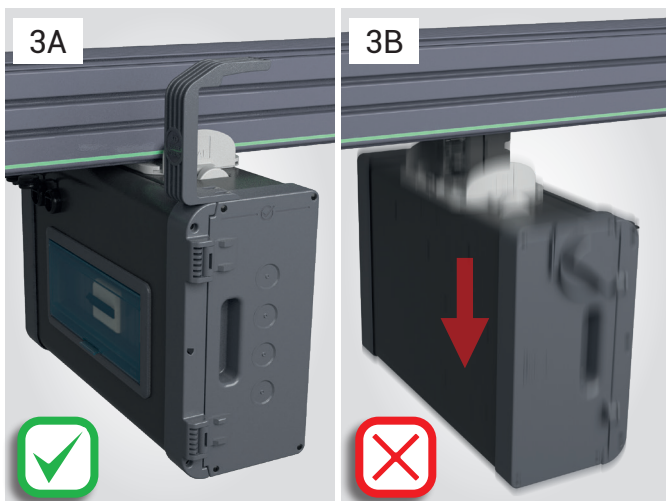
### ►Tap-Off Box Installation



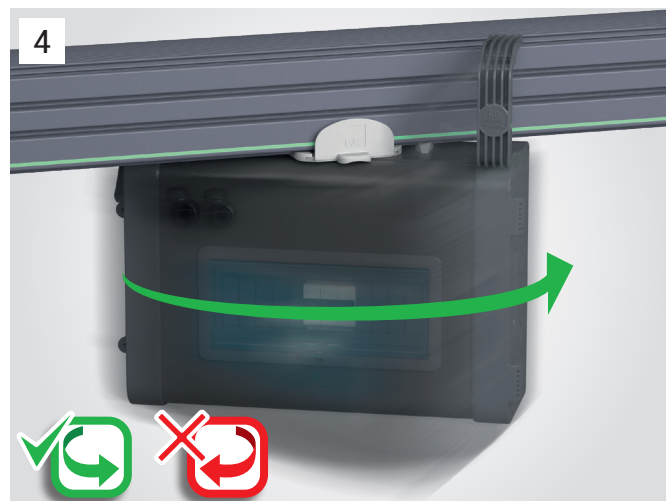
Ensure that the locking latch position is set right (as indicated), setup the installation mechanism by pressing on the claws. **If this step is not made, the box contact set may be damaged as a result of any force.**



Insert the box inside the slot of the busbar by facing the mounting angle, the box label and the housing 'green' reference line on the same side

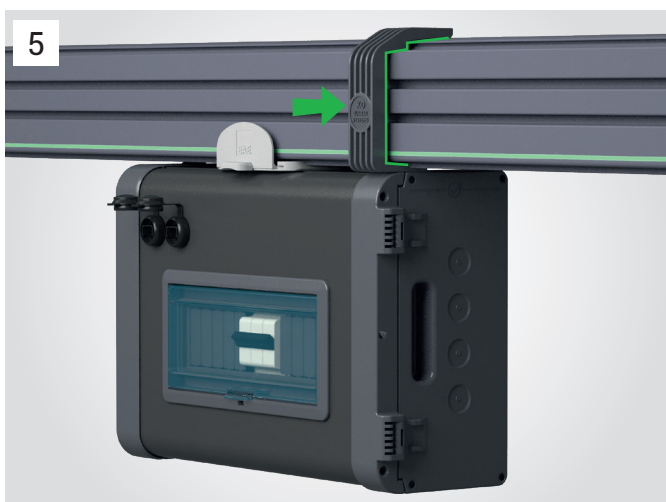


Assure that the box is inserted and locked inside the busbar slot



Engage the top off box by rotating in the direction of the arrow

**Do not rotate the box against the direction of the arrow**



Ensure that the mounting angle is correctly attached on the busbar housing



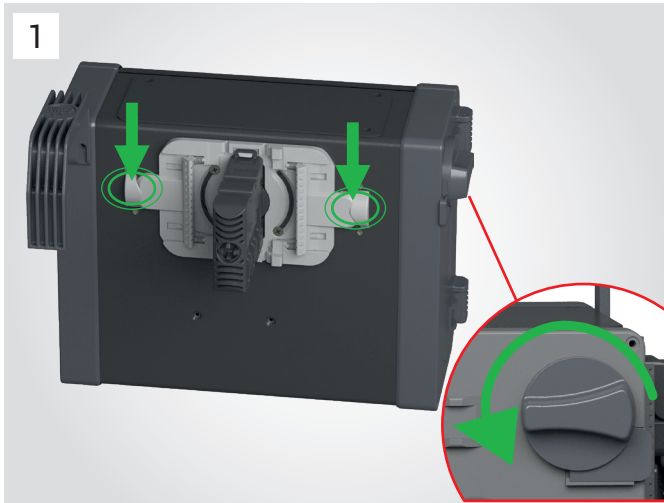
Secure the box by turning the locking latch in direction of the arrow



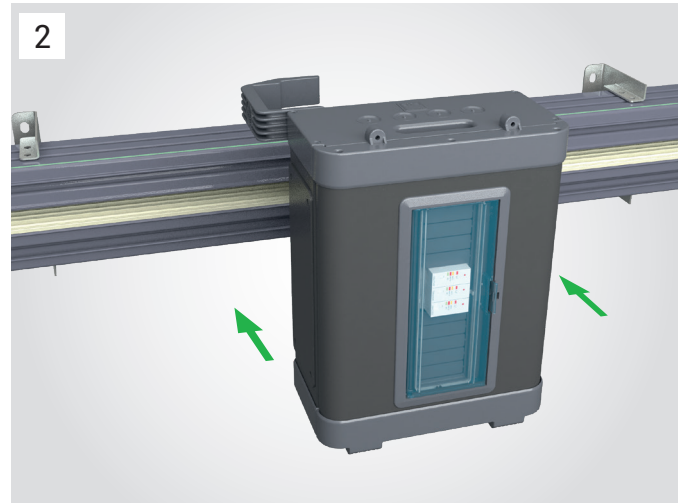
# E-LINE KD

## ►►Installation

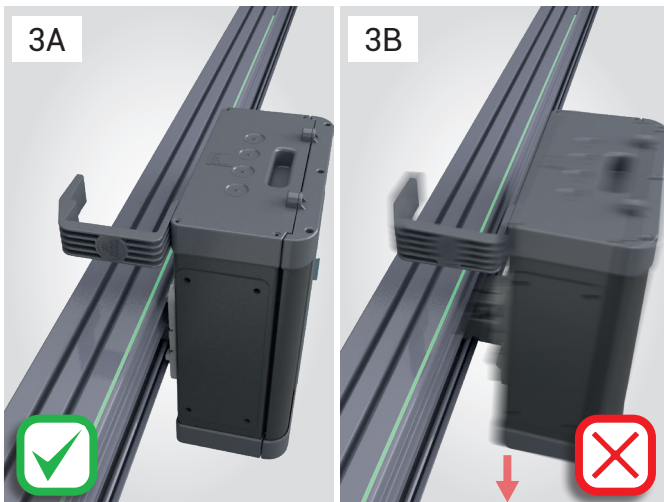
### ►Tap-Off Box Horizontal Installation



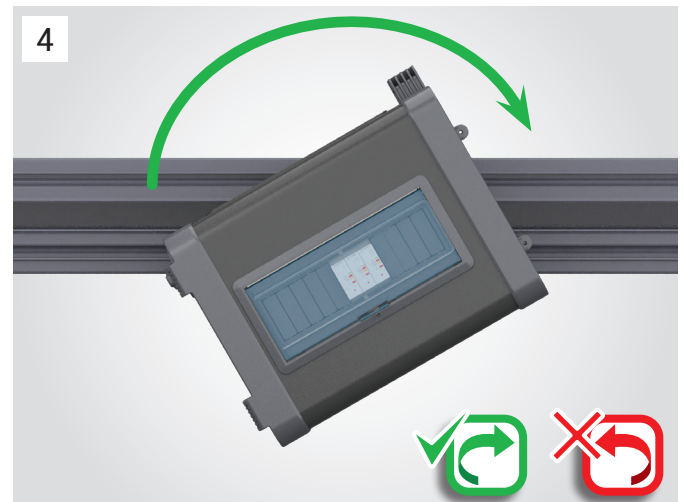
Ensure that the locking latch position is set right (as indicated), setup the installation mechanism by pressing on the claws



Insert the box inside the slot of the busbar by facing the mounting angle, the box label and the housing 'green' reference line on the same side

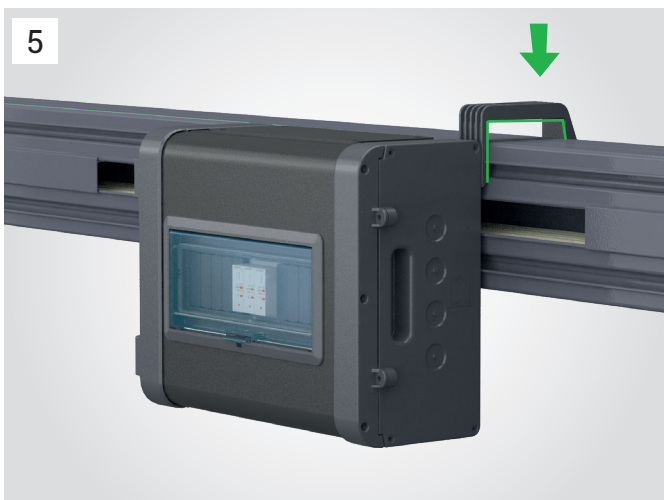


Assure that the box is inserted and locked inside the busbar slot



Engage the top off box by rotating in the direction of the arrow

**Do not rotate the box against the direction of the arrow**



Ensure that the mounting angle is correctly attached on the busbar housing

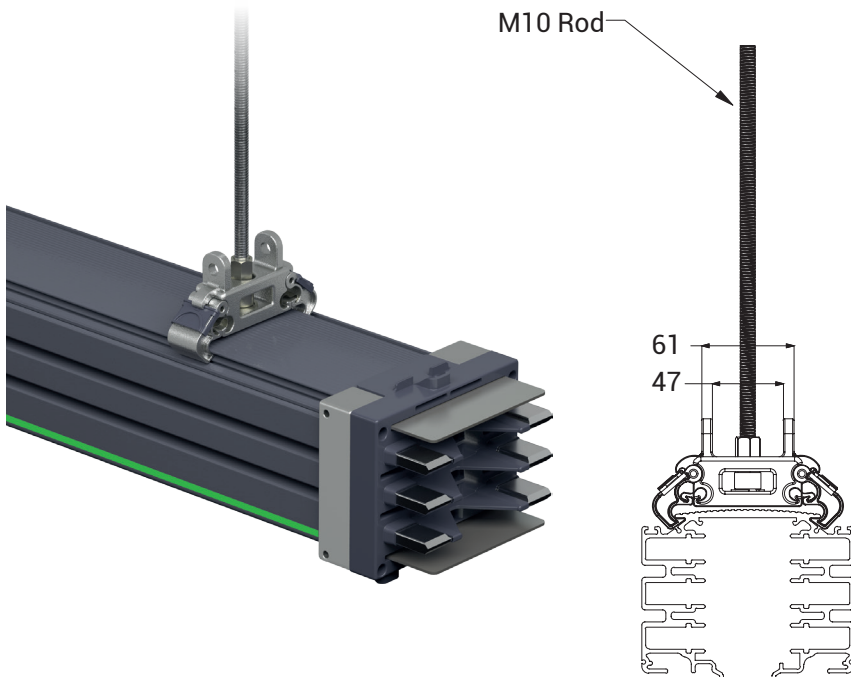


Secure the box by turning the locking latch in direction of the arrow.

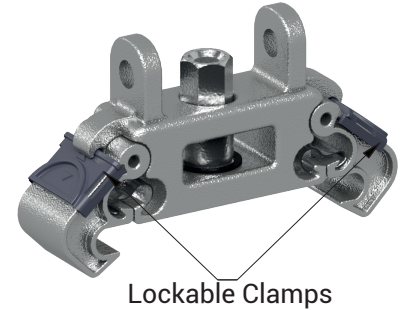
# E-LINE KD

## ►► Fixing Elements

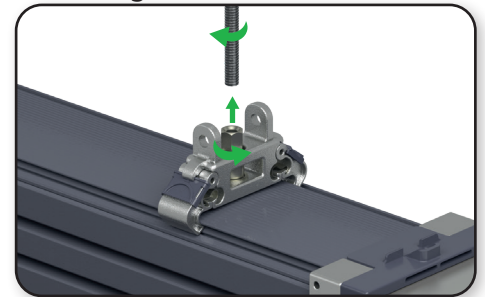
### ► Application I : Threaded Rod with Snap-In Fixing Unit



| THREADED ROD SUPPORT |         |
|----------------------|---------|
| KD SNAP-IN           | 2143683 |

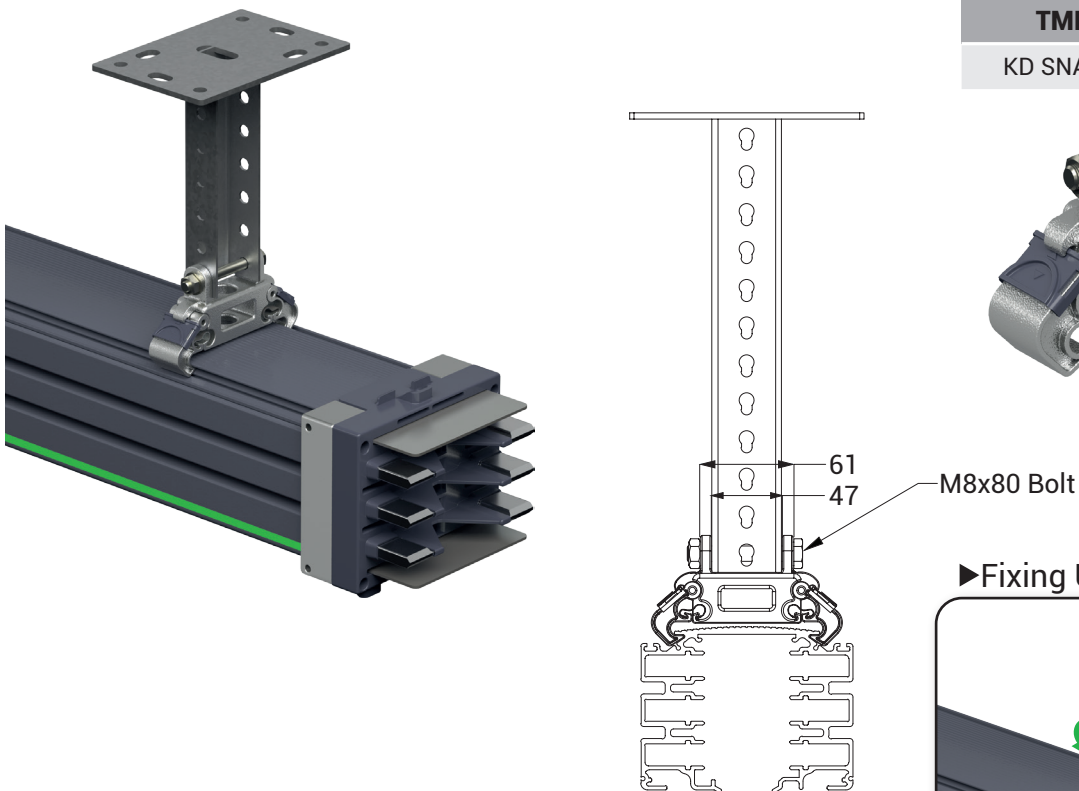


#### ► Fixing Unit Uninstallation

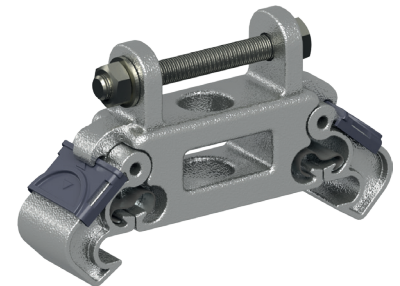


\* Bolt and Nuts are included.

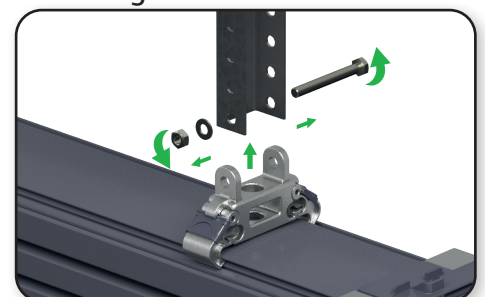
### ► Application II : TMP Ceiling Support with Snap-In Fixing Unit



| TMP CEILING SUPPORT |         |
|---------------------|---------|
| KD SNAP-IN          | 2143682 |



#### ► Fixing Unit Uninstallation

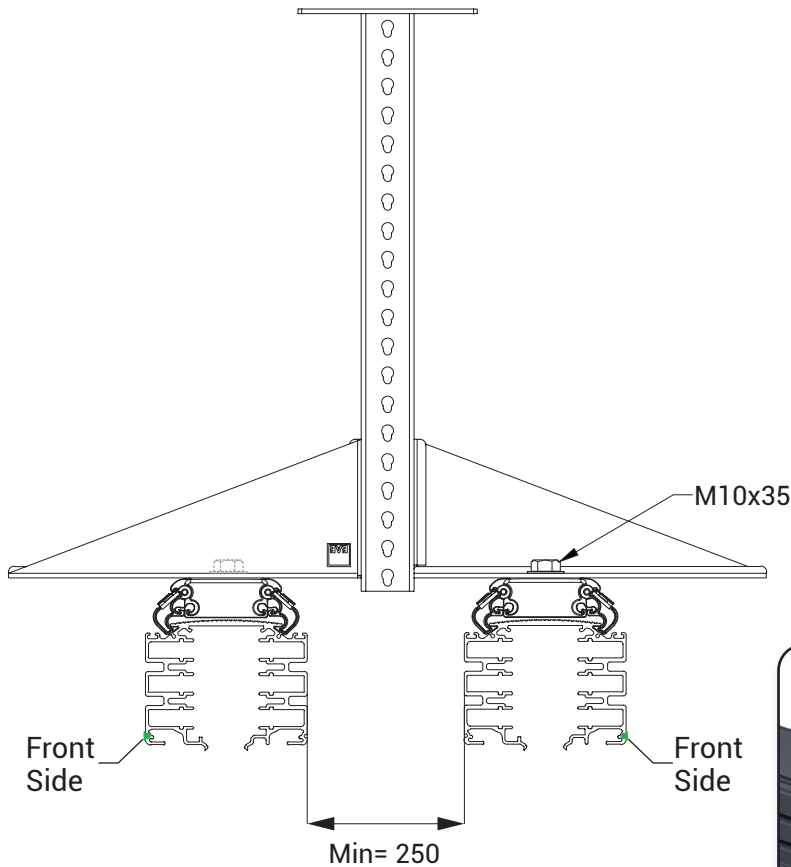
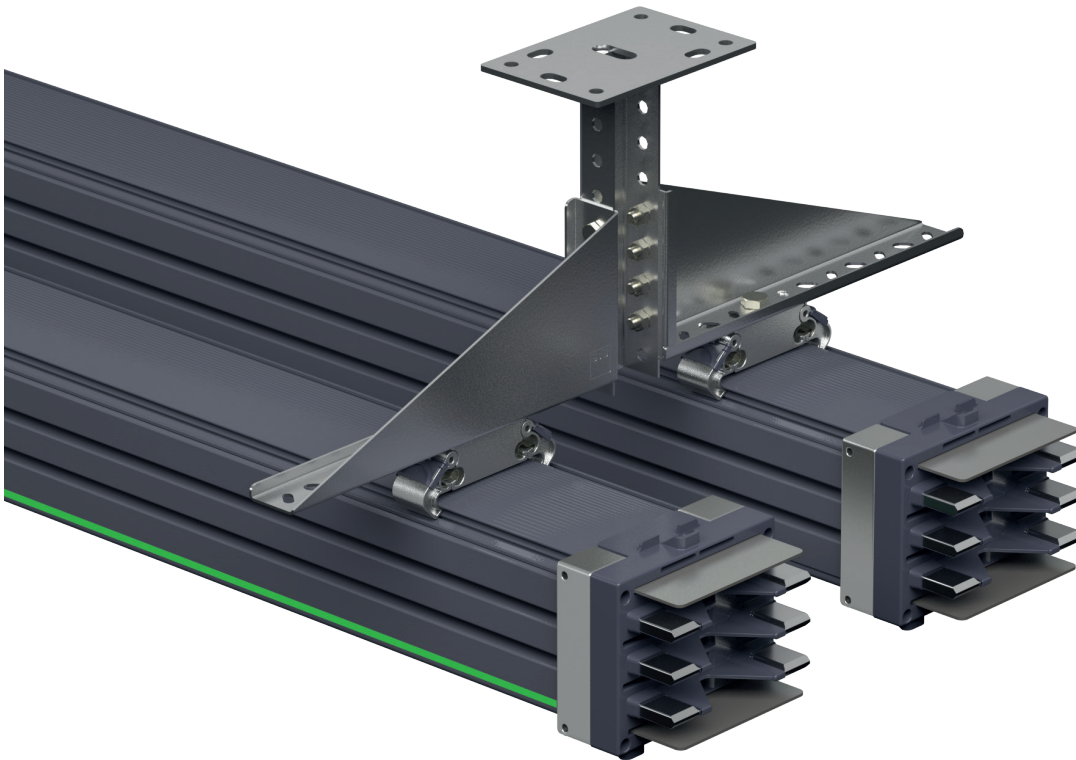


\* Bolt and Nuts are included.  
\* All dimensions in mm.

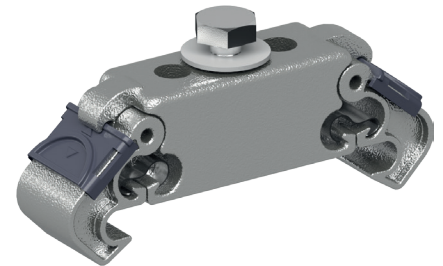
# E-LINE KD

## ►►Fixing Elements

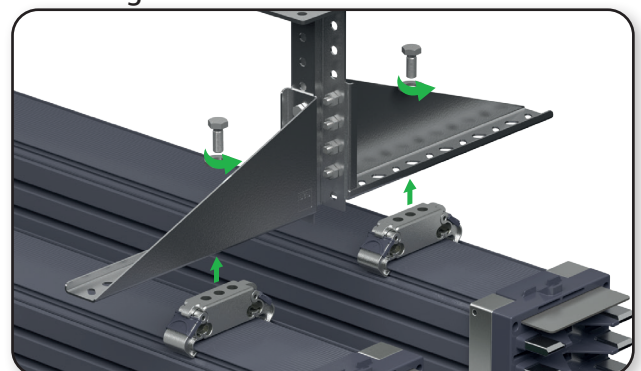
### ►Application III : TMP Ceiling Support and Tray Bracket with Snap-In Fixing Unit



| TS TRAY SUPPORT |         |
|-----------------|---------|
| KD SNAP-IN      | 2143684 |



### ►Fixing Unit Uninstallation



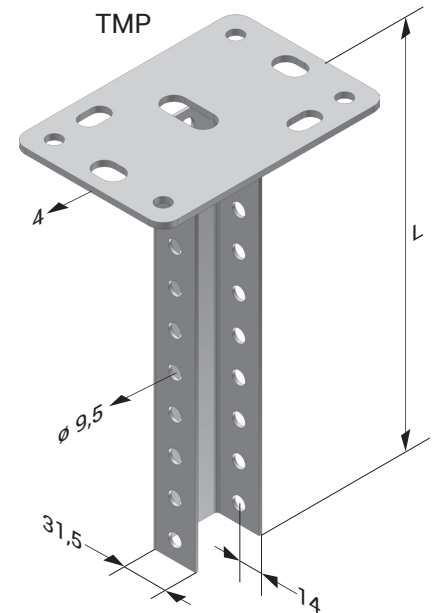
- \* Bolt and Nuts are included.
- \* All dimensions in mm.



### ►Ceiling Mounting Fittings

Hot Dip Galvanized After Fabrication (TS EN ISO 1461)

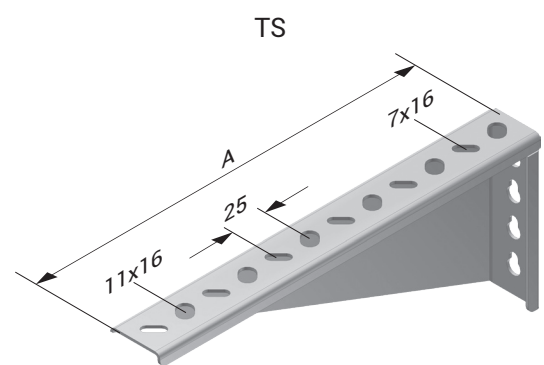
| Description                 | L (mm) | T (mm) | Pulling Load (kg.) | Weight (kg./pc.) | Order Code | Pack (pc.) |
|-----------------------------|--------|--------|--------------------|------------------|------------|------------|
| TMP 42 Ceiling Support Unit | 250    | 2      | 500                | 0,542            | 3008233    | 20         |
| TMP 43 Ceiling Support Unit | 500    | 2      | 500                | 0,949            | 3008234    | 10         |
| TMP 44 Ceiling Support Unit | 1000   | 2      | 500                | 2,131            | 3008235    | -          |
| TMP 45 Ceiling Support Unit | 2000   | 2      | 500                | 3,791            | 3007952    | -          |



### ►Tray Supports

Hot Dip Galvanized After Fabrication (TS EN ISO 1461)

| Description | A (mm) | T (mm) | Weight (kg./pc.) | Order Code | Pack (pc.) |
|-------------|--------|--------|------------------|------------|------------|
| TS 200      | 205    | 2      | 0,311            | 3008551    | 10         |
| TS 250      | 255    | 2      | 0,521            | 3008549    | 10         |
| TS 300      | 305    | 2      | 0,607            | 3008547    | 10         |
| TS 400      | 405    | 2      | 0,781            | 3008545    | 10         |
| TS 500      | 505    | 2      | 0,955            | 3008543    | 10         |
| TS 600      | 605    | 2      | 1,128            | 3005828    | 10         |



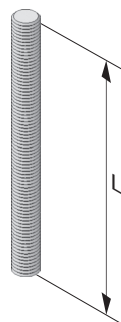
\* Please contact us for special size.  
\* All dimensions in mm.

### ►Connection Accessories

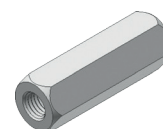
| Description                           | L<br>(mm) | Weight<br>(kg./pc.) | Order<br>Code |
|---------------------------------------|-----------|---------------------|---------------|
| Threaded Rod (M10)                    | 500       | 0,245               | 5000037       |
| Threaded Rod (M10)                    | 1000      | 0,490               | 5000032       |
| Threaded Rod (M10)                    | 1500      | 0,735               | 5000031       |
| Threaded Rod (M10)                    | 2000      | 1,030               | 5000030       |
| Threaded Rod (M10)                    | 3000      | 1,520               | 5000029       |
| Threaded Rod (M10) Electro Galvanized | 500       | 0,245               | 5000172       |
| Threaded Rod (M10) Electro Galvanized | 1000      | 0,490               | 5000173       |
| Threaded Rod (M10) Electro Galvanized | 1500      | 0,735               | 5000174       |
| Threaded Rod (M10) Electro Galvanized | 2000      | 1,030               | 5000175       |
| Threaded Rod (M10) Electro Galvanized | 3000      | 1,571               | 5000301       |

| Description                   | Weight<br>(kg./pc.) | Order<br>Code |
|-------------------------------|---------------------|---------------|
| Extension Nut (M10) Lacquered | 0,070               | 1004312       |

M10 Rod



Extension Nut



\* Please contact us for special size.  
\* All dimensions in mm.

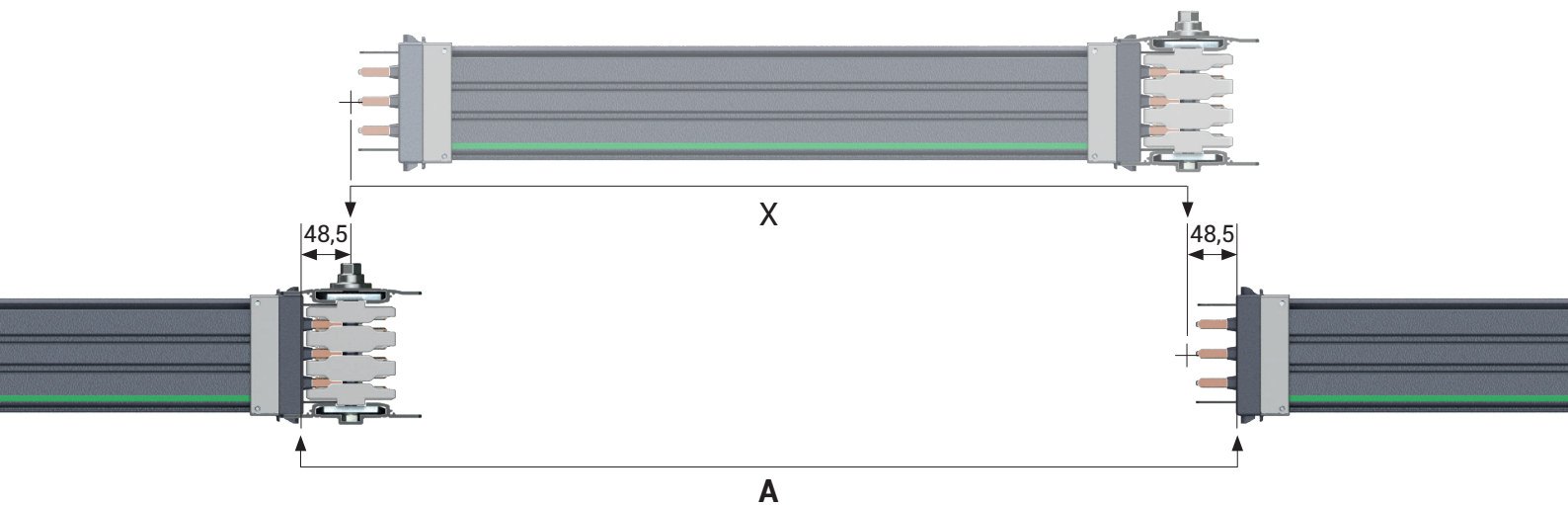
## ►►Measuring a Special Length

After installation of standard busbar 3000 mm lengths, you will be in need of special lengths which are smaller than 3000 mm. 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 mm. A. The special length is calculated by deducting 97 mm from this measured length.

$X = A - 97 \text{ mm}$

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



\* All dimensions in mm.



# E-LINE KD

## ►► Busbar Installation Applications

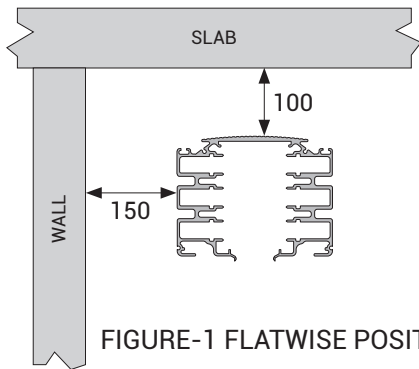


FIGURE-1 FLATWISE POSITION

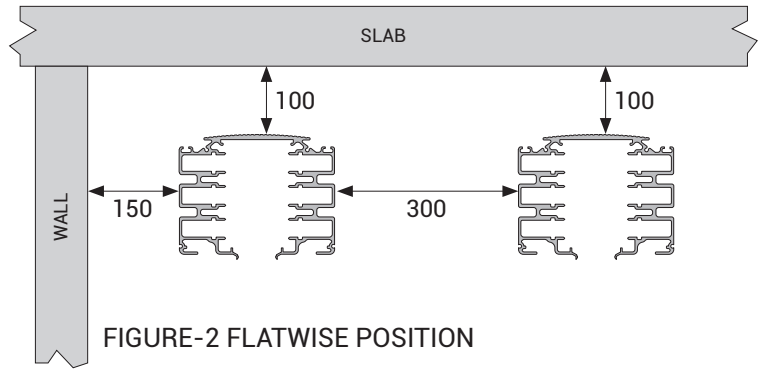


FIGURE-2 FLATWISE POSITION

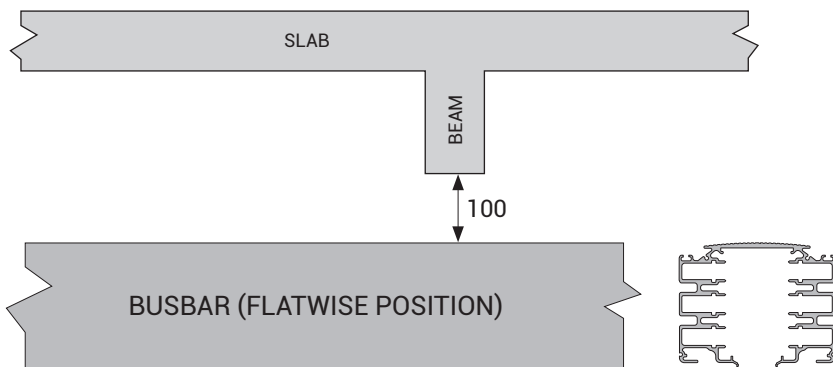


FIGURE-3 CROSSING UNDER A BEAM HORIZONTAL POSITION



FIGURE-4 MINIMUM DISTANCE BETWEEN BUSBAR RUNS

\* All dimensions in mm.



# CE DECLARATION OF CONFORMITY

**Product Group** E-Line KD Data Rack Busbar

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

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

IEC 61439-6  
Low-voltage switchgear and controlgear assemblies - Part 6: Busbar trunking systems (busways)

**CE - Directive:**

2014/35/EU "The Low Voltage Directive"

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

2011/65/EU "RoHS Directive"

**Technical Document Preparation Official:**

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

Emre GÜRLİYEN

**Date**

20.04.2019

**Document Authorized Signatory**

Elif Gamze KAYA OK  
Deputy General Manager





### 160A ... 1000A DATA RACK BUSBAR PRODUCT OVERVIEW (E-LINE KD)

#### 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- Short- circuit withstand strength, 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.

##### 2.1- Housing

- Conductors shall be packed and placed into the housing.
- Housing shall be made of thermal processed, extruded aluminium, RAL7012-Electrostatic painted.

##### 2.2- Conductors

- Aluminium or Copper conductors overall isolated and tin plated.
- Aluminium conductors between 160A – 630A.
- Copper conductors between 250A –1000A.
- Busbar system shall have the following number of conductors and wire configuration;
- 6 Conductors: (6 full size conductors CPE (100% earth conductor + double neutral + 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  $34\text{m/mm}^2 \cdot \Omega$ .
- Copper conductors shall be minimum 99,95% electrolytic copper. Minimum conductivity shall be  $56\text{m/mm}^2 \cdot \Omega$ .

##### 2.3- Insulation

- Insulation system shall be suitable for 1.000V continuous operation. Conductor size shall be designed so that temperature rise on the conductors shall not exceed 100°C degree at nominal current, which helps to global heating problem. With this reason, insulation class shall be selected as "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 IP23D.

##### 2.6-Acessories

- Busbar system shall have all necessary accessories (elbows, panel-transformer connections, etc.) Manufacturer shall supply special dimensioned units in short time, if the project conditions requires

#### 3-Tap Off Boxes

- The Tap off boxes shall be Plug-nPlay type.
- Plug-n-Play tap off boxes shall be suitable to install or remove from busbars without switching off the power on the busbar.
- Plug-n-Play tap off boxes shall be suitable to install or remove anywhere alongside the busbar.
- The Tap-Off Box contacts shall be protected with a cover
- The Tap-Off contacts shall be heat cycle tested
- Contacts of plug-in tap off box shall be silver plated.
- The special locking mechanism of the Tap-Off Boxes shall ensure to carry the weight of the plug-in box and cables by the busbar housing
- 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 manufactured of epoxy painted aluminium.
- The Tap-Off Boxes shall be equipped with a safe alignment mechanism to ensure correct installation and operation

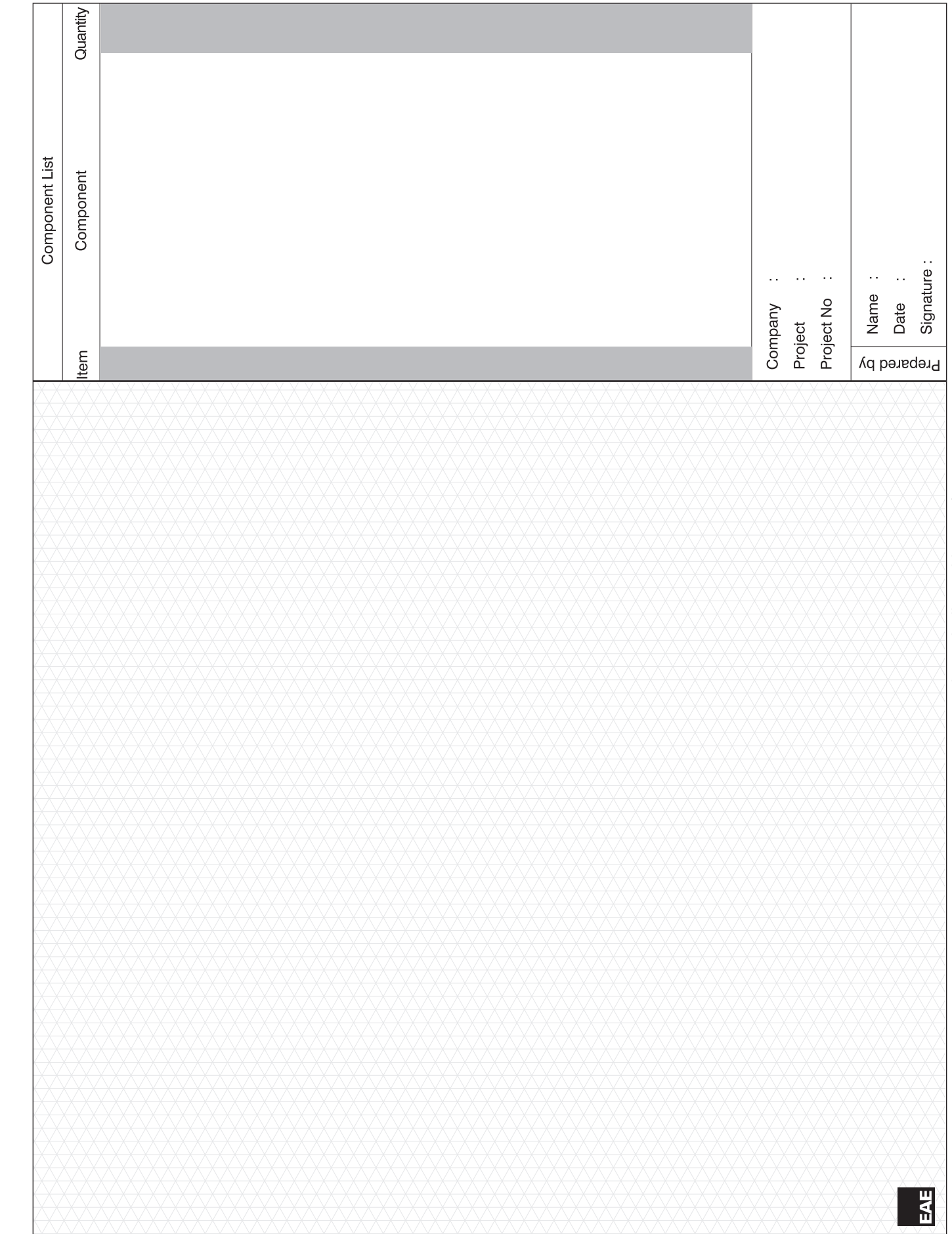
#### 4-Busbar Fixing&Mounting System

- The Busbars shall be easily installed and positioned through their entire lengths with the "Snap-In Fixing Units" by inserting into the guiding slots on top of the housing.
- To ensure flexible positioning of the Busbars, each single busbar length shall easily slide independently on the "Snap-In Fixing Units" through the guiding slots.
- To maintain the mounting security, the "Snap-In Fixing Unit" clamps shall be lockable.
- For various mounting practices the "Snap-In Fixing Units" shall be available with threaded rod, ceiling support and/or with tray brackets options

#### 5-Installation and Commisioning

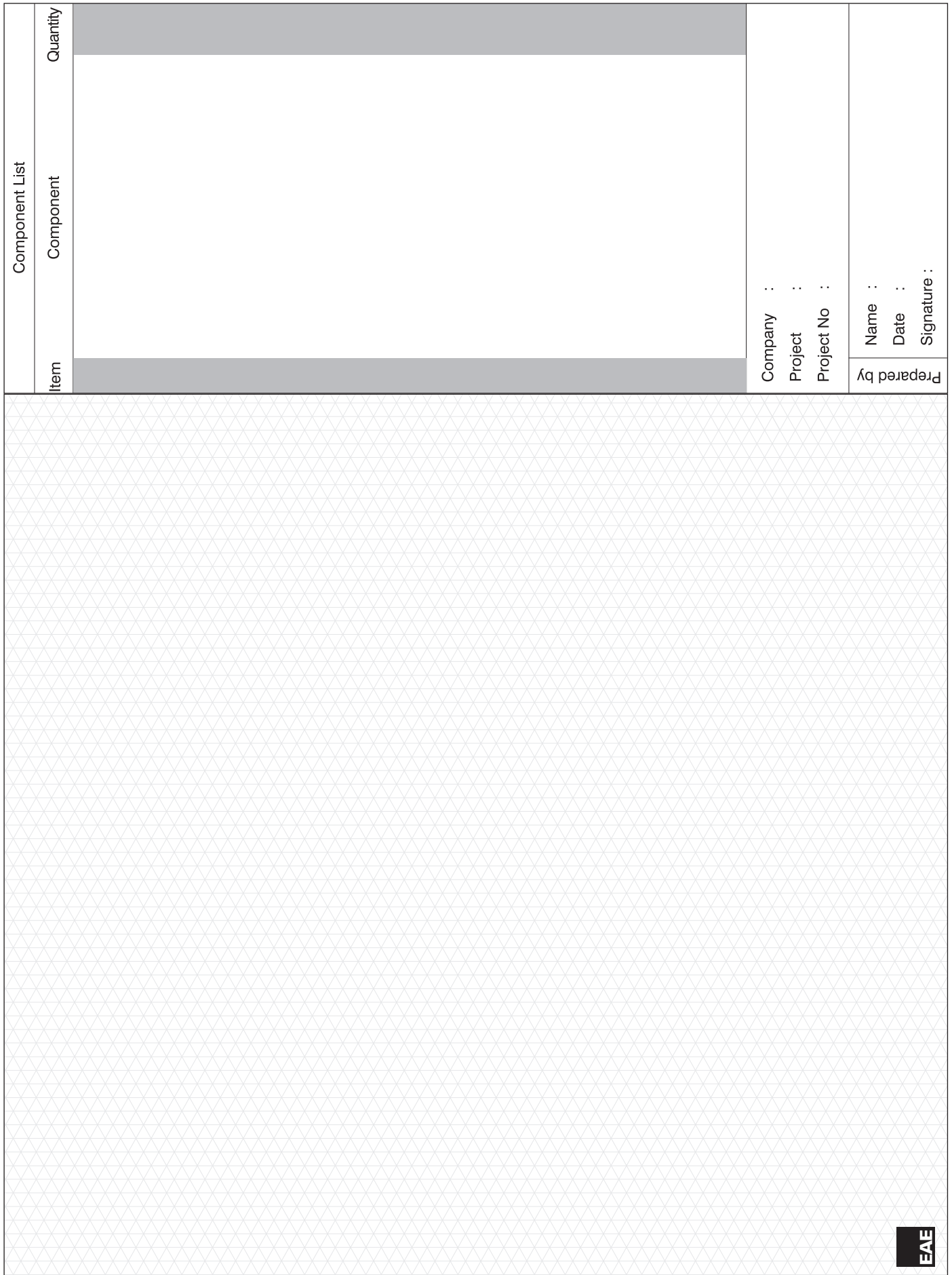
- Busbar systems shall be installed as per Single-Line drawings respect to required ampere rates and manufacturer installation guide (torque values, lockers, etc.). Electrical installer shall run an insulation test after installation, according to manufacturer's test procedures. The results of the test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

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# PRODUCT TYPES

BUSBAR ENERGY DISTRIBUTION SYSTEMS



CABLE TRAYS



TROLLEY BUSBAR ENERGY DISTRIBUTION SYSTEMS



INDOOR SOLUTIONS



SUPPORT SYSTEMS





**EAE Elektrik A.S.**  
**Head Office**  
Akcaburgaz Mahallesi,  
3114. Sokak, No:10 34522  
Esenyurt - Istanbul - TURKEY  
Tel: +90 (212) 866 20 00  
Fax: +90 (212) 886 24 20

**EAE DL 3 Factory**  
**Busbar**  
Gebze IV Istanbul Makine ve Sanayicileri  
Organize Bolgesi, 6. Cadde,  
N: 6 41455 Demirciler Koyu,  
Dilovası - Kocaeli - TURKEY  
Tel: +90 (262) 999 05 55  
Fax: +90 (262) 502 05 69

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