



TBE

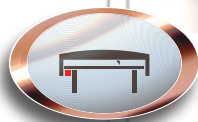
# E-LINE TBE



• Bridge Cranes



• Monorail Systems



• Textile Cutting and Spreading Tables



• AS/RS Storage Systems



• Moving Ceiling and Door Systems



• Assembly and Test Lines

## E-LINE TBE

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# E-LINE TBE

## Trolley Busbar Systems



- Bridge Cranes
- Monorail Systems
- Textile Cutting and Spreading Tables
- AS/RS Storage Systems
- Moving Ceiling and Door Systems
- Assembly and Test Lines

It consists of copper conductors and current collectors in the C-PVC body. The uninterrupted energy supply and movement of the system is provided by current collectors connected to the system mechanically.

The eliminates the possibilities such as accident, malfunction in energy distribution with suspended and reel cable in conventional systems. Conductors are enclosed in C-PVC housing and personnel safety is maximized.

There is no fixed connection between the conductor housings and the conductors and between the C-PVC housing and the sliding hangers, the necessary expansion opportunity is provided, therefore the expansion element is unrequired.

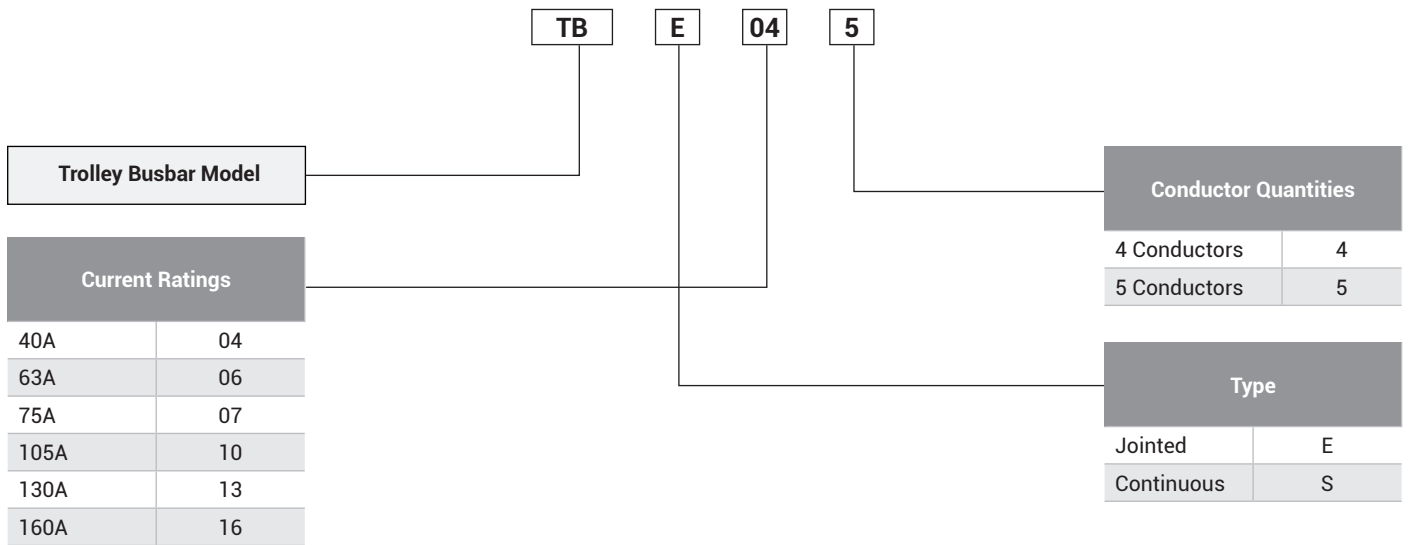
### Cautions:

If it is used in external environments exposed to rain, it is recommended to protect it with a cover such as a canopy.



# E-LINE TBE

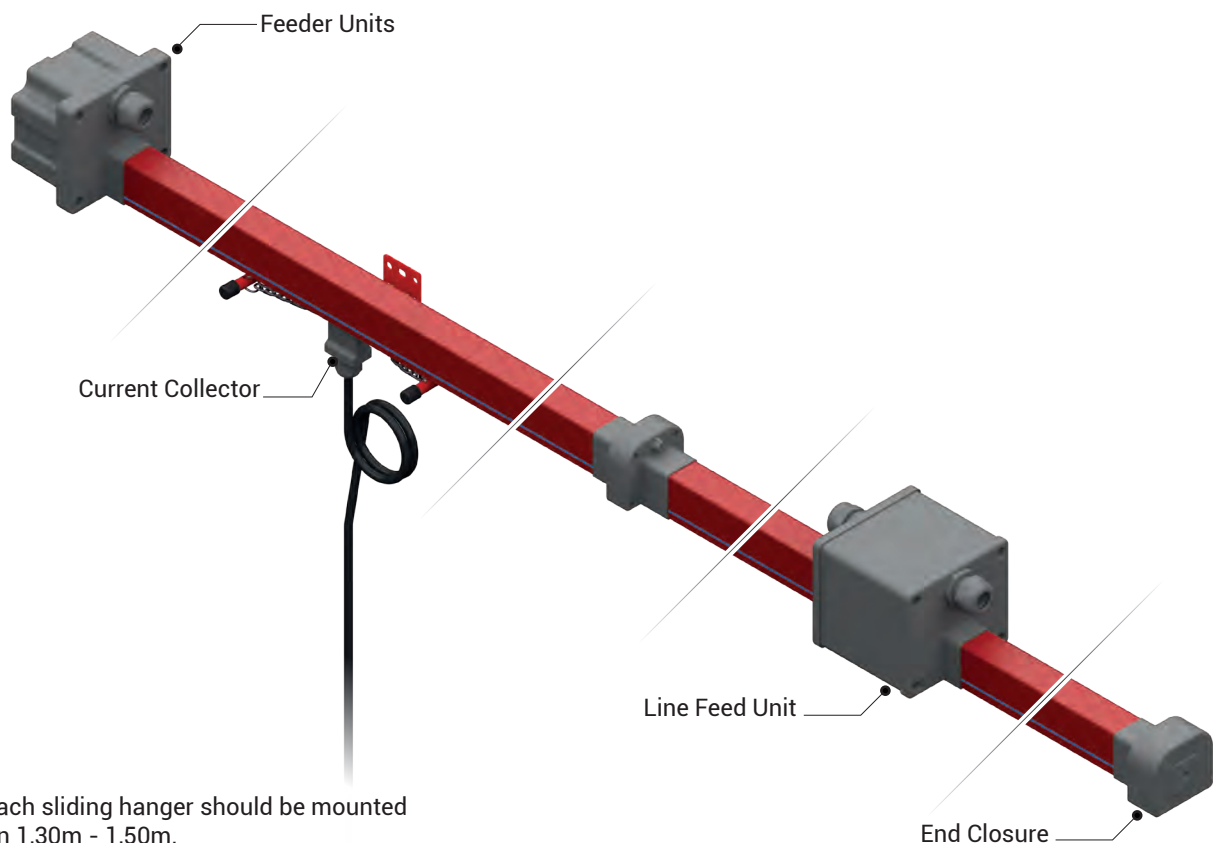
## Order Code System



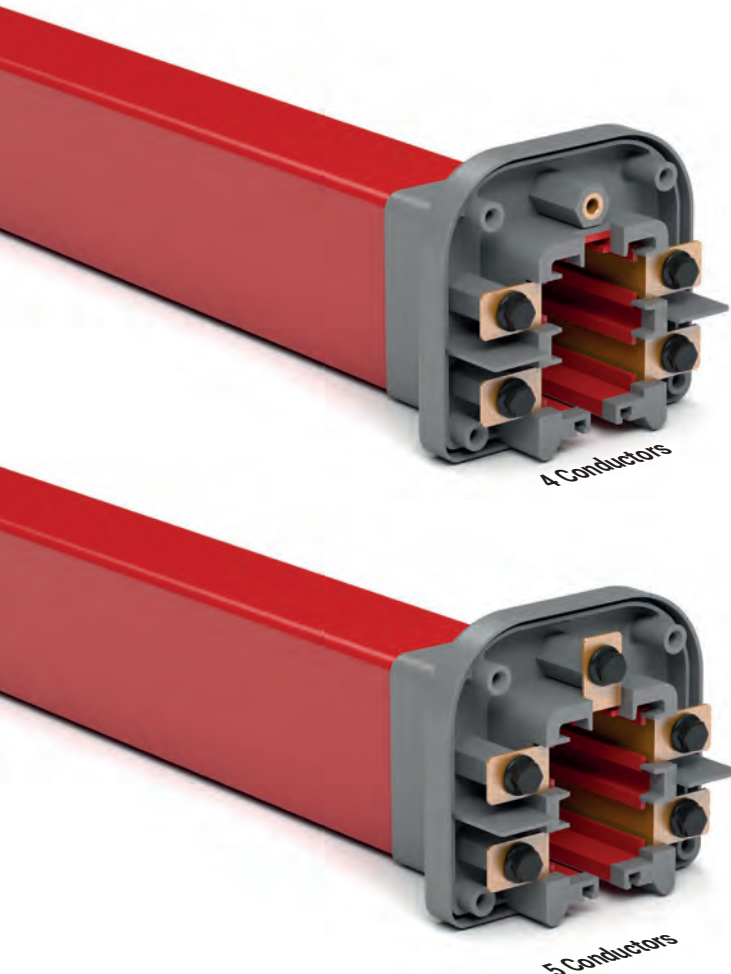
## Technical Features

| Rated Current         | (A)        | 40    | 63    | 75    | 105   | 130   | 160   |
|-----------------------|------------|-------|-------|-------|-------|-------|-------|
| Conductor Quantities  | (pcs)      | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   | 4-5   |
| Rated Voltage         | (AC) (V)   | 690   | 690   | 690   | 690   | 690   | 690   |
| Dielectric Properties | (kV/mm)    | 30    | 30    | 30    | 30    | 30    | 30    |
| Frequency             | (Hz)       | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Resistance (20°C)     | R20 (mΩ/m) | 1,300 | 1,240 | 1,150 | 0,780 | 0,600 | 0,450 |
| Resistance (35°C)     | R35 (mΩ/m) | 1,420 | 1,425 | 1,340 | 0,910 | 0,700 | 0,530 |
| Reactance             | X (mΩ/m)   | 0,160 | 0,130 | 0,110 | 0,130 | 0,130 | 0,110 |
| Impedance             | Z (mΩ/m)   | 1,429 | 1,431 | 1,35  | 0,919 | 0,712 | 0,541 |
| Standard Length       | (m)        | 4     | 4     | 4     | 4     | 4     | 4     |

TBE

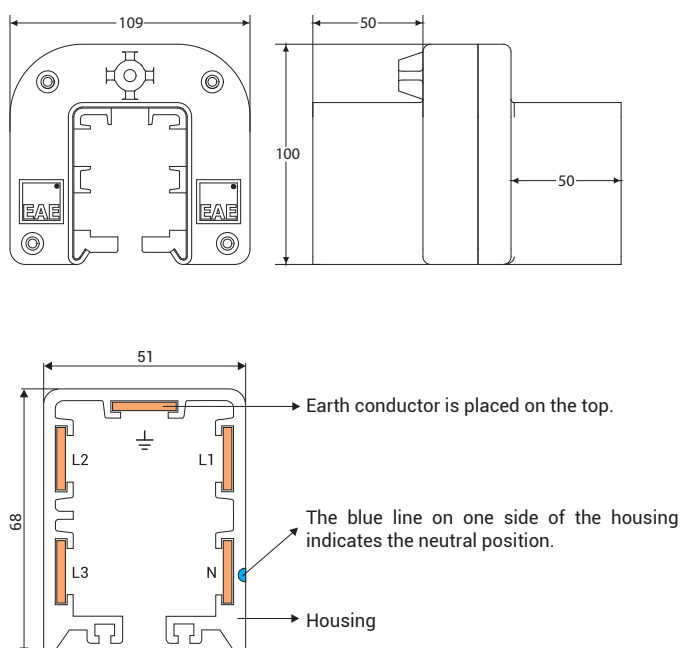


**Note:** Each sliding hanger should be mounted between 1,30m - 1,50m.



| Description        | Weight (gr/m) | Order Code |
|--------------------|---------------|------------|
| TB5 Trolley Busbar | 1250          | 2037290    |

The housing has a structure that can use maximum 5 conductors. There is safety system that prevents the current collector to be fixed inversely.



- **Number of Conductors:** 4 or 5 conductors
- **Colour:** Red.
- **Temperature range:** -40°C , +55°C.
- **Standard housing length:** 4 meters.
- **Protection:** IP24
- **Non-Flammable Characteristics:** UL 94 V0
- Housing is made of C-PVC and plastic accessories are made of PA6 raw material.
- There is a neutral line on the housing the neutral conductor.

### Standard 4 Meters

| Model   | Conductors Quantity-Current (A) | Weight (gr/m) | Conductor Cross Section (mm <sup>2</sup> ) | Order Code |
|---------|---------------------------------|---------------|--|------------|
| TBE 044 | 4P - 40A                        | 1950          | 4x11,20                                    | 3024446    |
| TBE 064 | 4P - 63A                        | 2000          | 4x12,80                                    | 3179770    |
| TBE 074 | 4P - 75A                        | 2100          | 4x16,00                                    | 3024449    |
| TBE 104 | 4P - 105A                       | 2250          | 4x24,00                                    | 3024447    |
| TBE 134 | 4P - 130A                       | 2650          | 4x32,00                                    | 3024448    |
| TBE 164 | 4P - 160A                       | 2900          | 4x40,00                                    | 3158671    |
| TBE 045 | 5P - 40A                        | 2100          | 5x11,20                                    | 3024435    |
| TBE 065 | 5P - 63A                        | 2150          | 5x12,80                                    | 3179771    |
| TBE 075 | 5P - 75A                        | 2200          | 5x16,00                                    | 3024436    |
| TBE 105 | 5P - 105A                       | 2550          | 5x24,00                                    | 3024437    |
| TBE 135 | 5P - 130A                       | 2950          | 5x32,00                                    | 3024438    |
| TBE 165 | 5P - 160A                       | 3250          | 5x40,00                                    | 3164949    |

### Special Length 1 or 2, 3 Meters

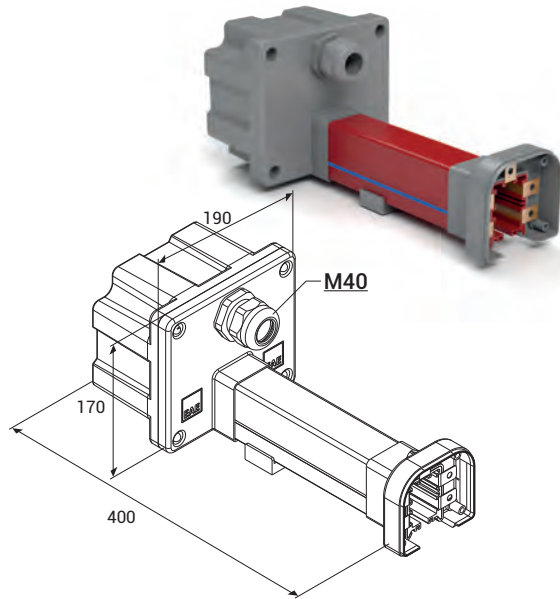
| Model   | Conductors Quantity-Current (A) | Weight (gr/m) | Conductor Cross Section (mm <sup>2</sup> ) | Order Code |
|---------|---------------------------------|---------------|--|------------|
| TBE 044 | 4P - 40A                        | 1950          | 4x11,20                                    | 3024473    |
| TBE 064 | 4P - 63A                        | 2000          | 4x12,80                                    | 3179774    |
| TBE 074 | 4P - 75A                        | 2100          | 4x16,00                                    | 3024475    |
| TBE 104 | 4P - 105A                       | 2250          | 4x24,00                                    | 3024477    |
| TBE 134 | 4P - 130A                       | 2650          | 4x32,00                                    | 3024479    |
| TBE 164 | 4P - 160A                       | 2900          | 4x40,00                                    | 3158668    |
| TBE 045 | 5P - 40A                        | 2100          | 5x11,20                                    | 3024474    |
| TBE 065 | 5P - 63A                        | 2150          | 5x12,80                                    | 3179775    |
| TBE 075 | 5P - 75A                        | 2200          | 5x16,00                                    | 3024476    |
| TBE 105 | 5P - 105A                       | 2550          | 5x24,00                                    | 3024478    |
| TBE 135 | 5P - 130A                       | 2950          | 5x32,00                                    | 3024480    |
| TBE 165 | 5P - 160A                       | 3250          | 5x40,00                                    | 3164946    |

Joint plastics are not included in the weight values.  
Total weight of the joint plastics and bolts is 0.27 Kg.

# E-LINE TBE

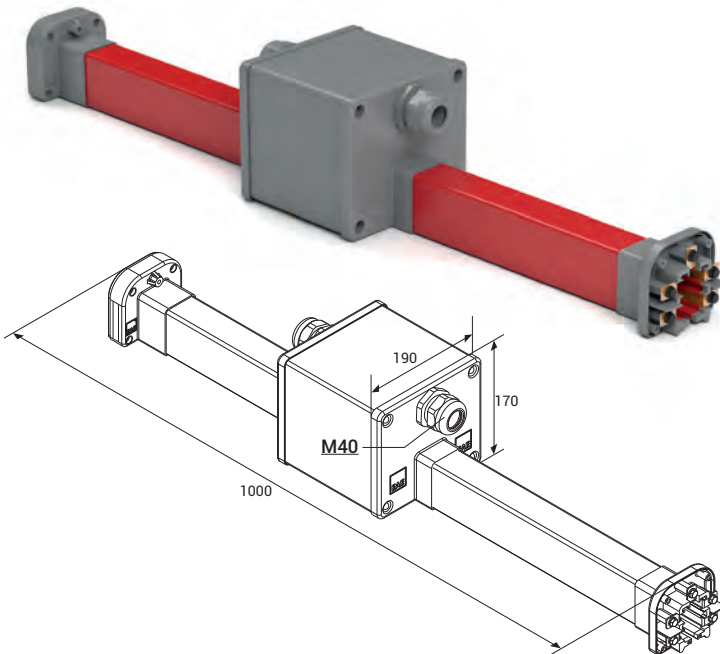


## TBE Feeder Units



| Model   | Conductors Quantity-Current (A) | Weight (gr/m) | Conductor Cross Section (mm <sup>2</sup> ) | Order Code |
|---------|---------------------------------|---------------|--|------------|
| TBE 044 | 4P - 40A                        | 1250          | 4x11,20                                    | 3024431    |
| TBE 064 | 4P - 63A                        | 1300          | 4x12,80                                    | 3179768    |
| TBE 074 | 4P - 75A                        | 1350          | 4x16,00                                    | 3024432    |
| TBE 104 | 4P - 105A                       | 1400          | 4x24,00                                    | 3024433    |
| TBE 134 | 4P - 130A                       | 1500          | 4x32,00                                    | 3024434    |
| TBE 164 | 4P - 160A                       | 1600          | 4x40,00                                    | 3158669    |
| TBE 045 | 5P - 40A                        | 1300          | 5x11,20                                    | 3024459    |
| TBE 065 | 5P - 63A                        | 1350          | 5x12,80                                    | 3179769    |
| TBE 075 | 5P - 75A                        | 1400          | 5x16,00                                    | 3024423    |
| TBE 105 | 5P - 105A                       | 1500          | 5x24,00                                    | 3024424    |
| TBE 135 | 5P - 130A                       | 1600          | 5x32,00                                    | 3024445    |
| TBE 165 | 5P - 160A                       | 1700          | 5x40,00                                    | 3164947    |

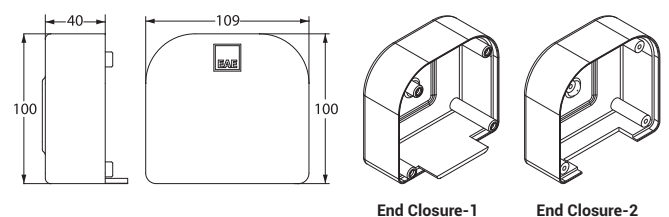
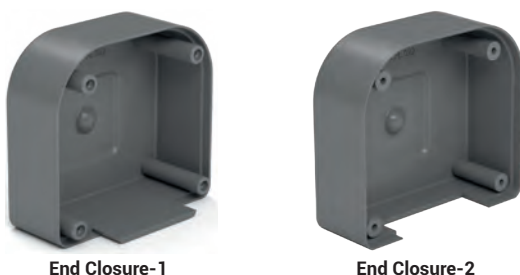
## TBE Line Feed Units



| Model   | Conductors Quantity-Current (A) | Weight (gr/m) | Conductor Cross Section (mm <sup>2</sup> ) | Order Code |
|---------|---------------------------------|---------------|--|------------|
| TBE 044 | 4P - 40A                        | 2750          | 4x11,20                                    | 3024439    |
| TBE 064 | 4P - 63A                        | 2800          | 4x12,80                                    | 3179778    |
| TBE 074 | 4P - 75A                        | 2900          | 4x16,00                                    | 3024440    |
| TBE 104 | 4P - 105A                       | 3200          | 4x24,00                                    | 3024441    |
| TBE 134 | 4P - 130A                       | 3450          | 4x32,00                                    | 3024442    |
| TBE 164 | 4P - 160A                       | 3750          | 4x40,00                                    | 3158670    |
| TBE 045 | 5P - 40A                        | 2850          | 5x11,20                                    | 3024460    |
| TBE 065 | 5P - 63A                        | 2900          | 5x12,80                                    | 3179779    |
| TBE 075 | 5P - 75A                        | 3000          | 5x16,00                                    | 3024425    |
| TBE 105 | 5P - 105A                       | 3350          | 5x24,00                                    | 3024426    |
| TBE 135 | 5P - 130A                       | 3750          | 5x32,00                                    | 3024427    |
| TBE 165 | 5P - 160A                       | 4100          | 5x40,00                                    | 3164948    |

Type of the feeding element is selected by calculating the voltage drop and the location of the power supply that shall provide power to the system.

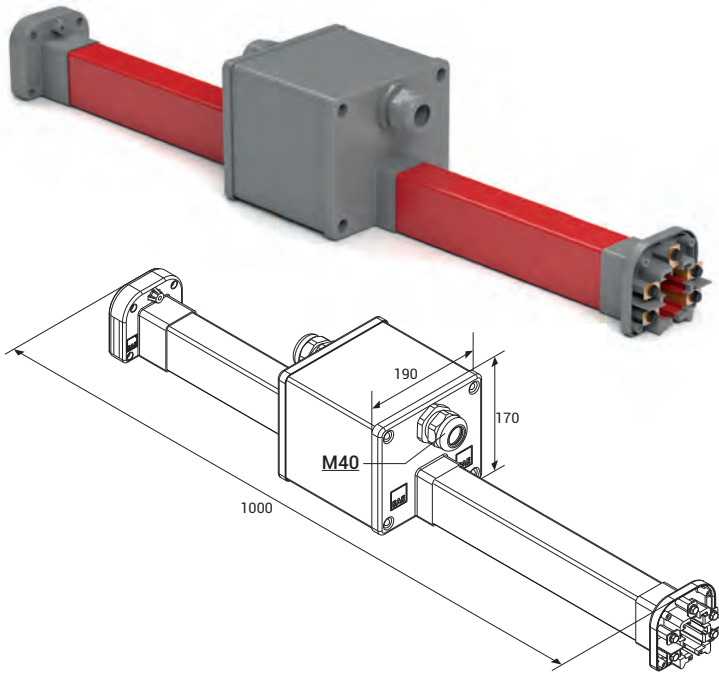
## TBE End Closure



The end closure placed on the end of the busbar line prevents the exposure of the conductors, and protects the system.

| Description                | Weight (gr) | Order Code |
|----------------------------|-------------|------------|
| TBE End Closure-1 (Female) | 100         | 3024420    |
| TBE End Closure-2 (Male)   | 100         | 3241448    |

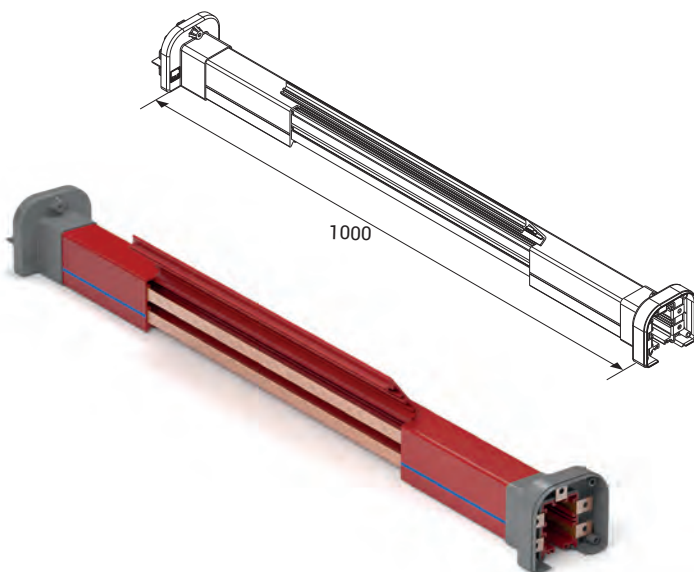
## TBE Repair Zone Unit



| Model   | Conductors Quantity-Current (A) | Weight (gr/m) | Conductor Cross Section (mm <sup>2</sup> ) | Order Code |
|---------|---------------------------------|---------------|--|------------|
| TBE 044 | 4P - 40A                        | 3500          | 4x11,20                                    | 3066688    |
| TBE 064 | 4P - 63A                        | 3550          | 4x12,80                                    | 3179780    |
| TBE 074 | 4P - 75A                        | 3600          | 4x16,00                                    | 3066689    |
| TBE 104 | 4P - 105A                       | 3900          | 4x24,00                                    | 3066690    |
| TBE 134 | 4P - 130A                       | 4200          | 4x32,00                                    | 3066691    |
| TBE 164 | 4P - 160A                       | 4450          | 4x40,00                                    | 3164950    |
| TBE 045 | 5P - 40A                        | 3600          | 5x11,20                                    | 3066692    |
| TBE 065 | 5P - 63A                        | 3650          | 5x12,80                                    | 3179781    |
| TBE 075 | 5P - 75A                        | 3750          | 5x16,00                                    | 3066693    |
| TBE 105 | 5P - 105A                       | 4100          | 5x24,00                                    | 3066694    |
| TBE 135 | 5P - 130A                       | 4500          | 5x32,00                                    | 3066695    |
| TBE 165 | 5P - 160A                       | 4800          | 5x40,00                                    | 3164952    |

Current supply shall be cut off when a machine working on the line shall be maintained or repaired. Repair zone module is used to create a currentless area on the busbar so that the other machines operating on the same line may continue to work.

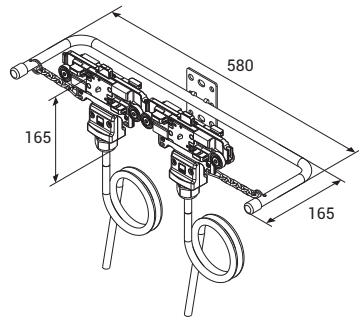
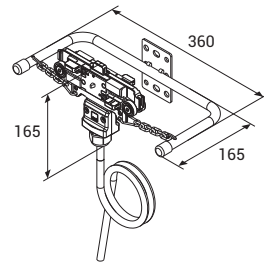
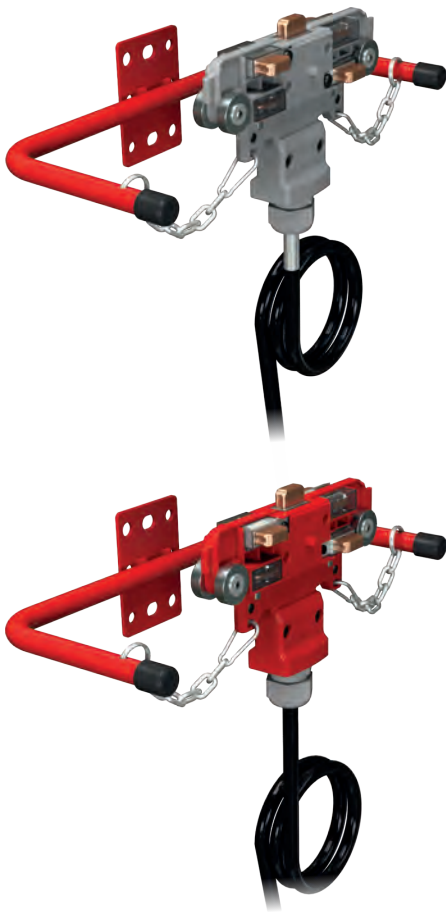
## TBE Current Collector Replacement Module



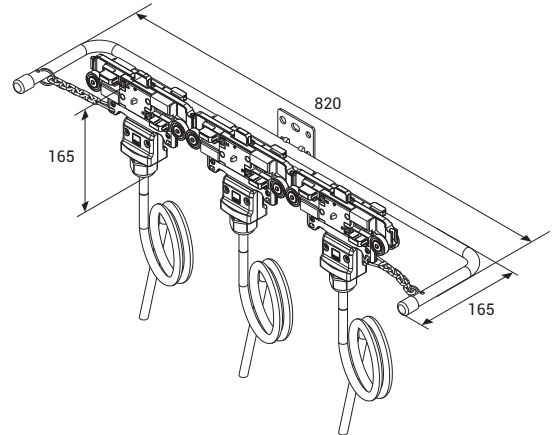
| Model   | Conductors Quantity-Current (A) | Weight (gr/m) | Conductor Cross Section (mm <sup>2</sup> ) | Order Code |
|---------|---------------------------------|---------------|--|------------|
| TBE 044 | 4P - 40A                        | 2000          | 4x11,20                                    | 3024558    |
| TBE 064 | 4P - 63A                        | 2050          | 4x12,80                                    | 3179784    |
| TBE 074 | 4P - 75A                        | 2100          | 4x16,00                                    | 3024897    |
| TBE 104 | 4P - 105A                       | 2400          | 4x24,00                                    | 3024898    |
| TBE 134 | 4P - 130A                       | 2700          | 4x32,00                                    | 3024899    |
| TBE 164 | 4P - 160A                       | 3000          | 4x40,00                                    | 3164951    |
| TBE 045 | 5P - 40A                        | 2100          | 5x11,20                                    | 3024421    |
| TBE 065 | 5P - 63A                        | 2150          | 5x12,80                                    | 3179785    |
| TBE 075 | 5P - 75A                        | 2250          | 5x16,00                                    | 3024428    |
| TBE 105 | 5P - 105A                       | 2600          | 5x24,00                                    | 3024429    |
| TBE 135 | 5P - 130A                       | 3000          | 5x32,00                                    | 3024430    |
| TBE 165 | 5P - 160A                       | 3350          | 5x40,00                                    | 3164953    |

This unit is used to remove an existing current collector or to add extra trolleys. The unit is obtained by cutting a 50cm section from the PVC housing.

## TB5 Current Collectors With Cable

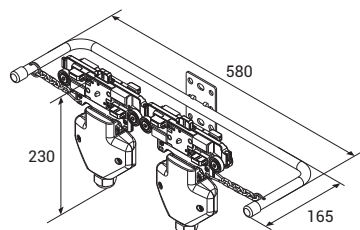
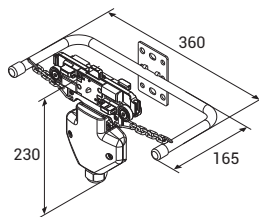
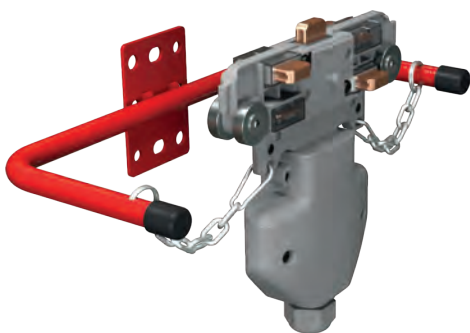


| Model | Brushes Number-Current (A) | Weight (gr) | Order Code |
|-------|----------------------------|-------------|------------|
| TB5   | 4P - 35A (Single)          | 1700        | 3024385    |
|       | 4P - 70A (Double)          | 2950        | 3024386    |
|       | 4P - 105A (Triple)         | 4450        | 3024387    |
|       | 5P - 35A (Single)          | 1900        | 3024376    |
|       | 5P - 70A (Double)          | 3250        | 3024377    |
|       | 5P - 105A (Triple)         | 4700        | 3024378    |



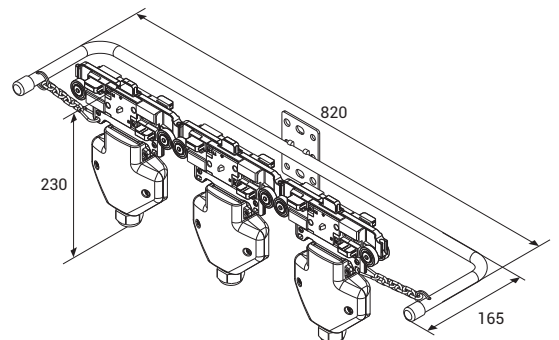
| Model | Brushes Number-Current (A) | Weight (gr) | Order Code |
|-------|----------------------------|-------------|------------|
| TB5   | 4P - 60A (Single)          | 2000        | 3203193    |
|       | 4P - 120A (Double)         | 3550        | 3269558    |
|       | 5P - 60A (Single)          | 2200        | 3203194    |
|       | 5P - 120A (Double)         | 3850        | 3269559    |

## TB5 Current Collectors With Clip



| Model | Brushes Number-Current (A) | Weight (gr) | Order Code |
|-------|----------------------------|-------------|------------|
| TB5   | 4P - 35A (Single)          | 1350        | 3024388    |
|       | 4P - 70A (Double)          | 2050        | 3024389    |
|       | 4P - 105A (Triple)         | 3050        | 3024390    |
|       | 5P - 35A (Single)          | 1350        | 3024379    |
|       | 5P - 70A (Double)          | 2250        | 3024380    |
|       | 5P - 105A (Triple)         | 3200        | 3024381    |

\*Produced with standard M40 cable gland and 4mm<sup>2</sup> clip.



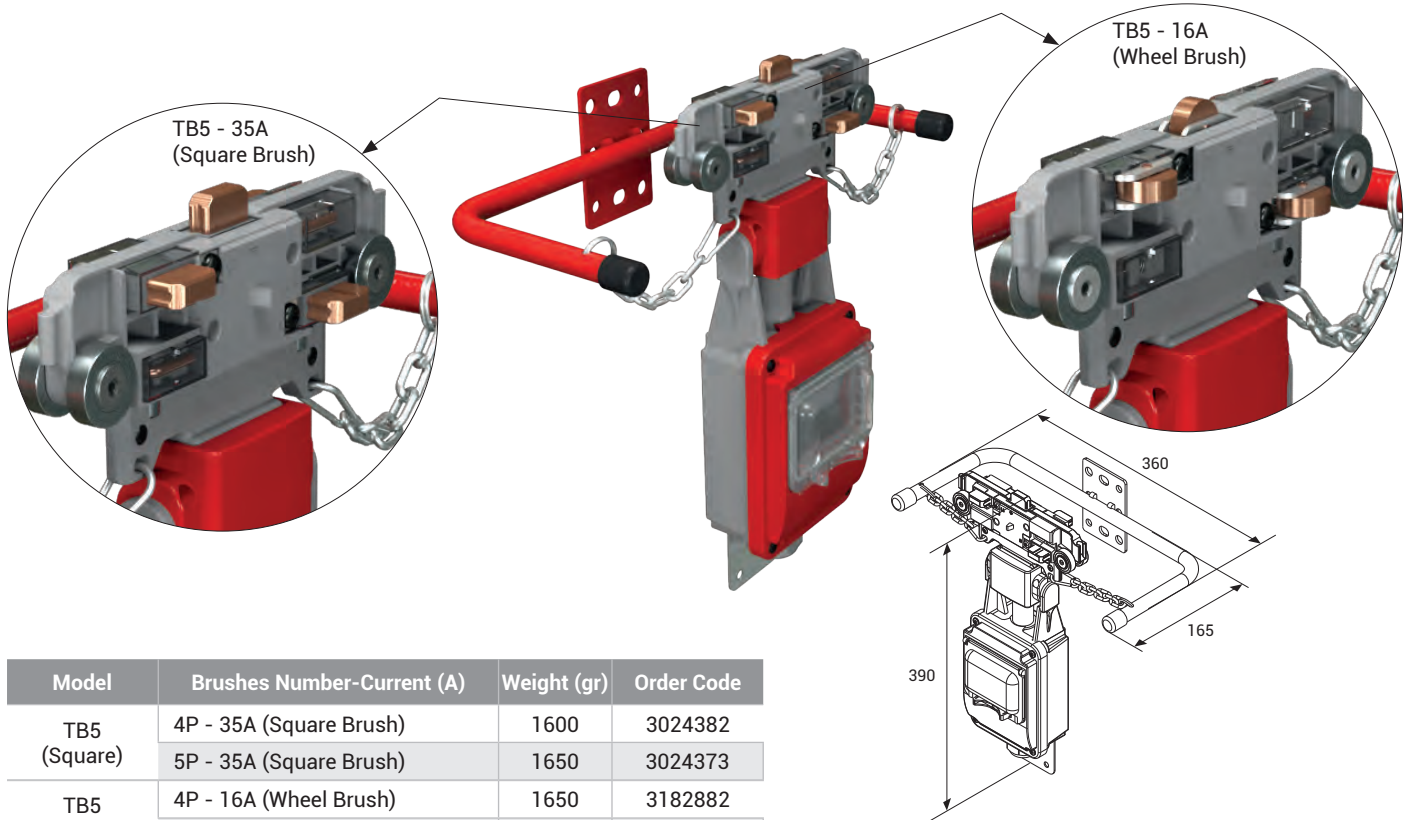
Current collector with clips allow the customers to perform cabling as they desire with the clips they include.

Current collector are the moving elements of the trolley busbar systems. Current collector brushes rub against the conductors and draw continuous current while they move through the busbar line. They adapt to shaky and vibrant conditions thanks to the moving brushes. As current collecting and transfer systems are included in the C-PVC housing, they are protected against human contact.

# E-LINE TBE



## TB5 Current Collector With Fuse Box



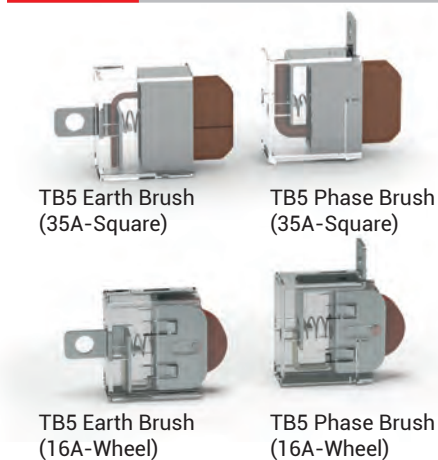
| Model        | Brushes Number-Current (A) | Weight (gr) | Order Code |
|--------------|----------------------------|-------------|------------|
| TB5 (Square) | 4P - 35A (Square Brush)    | 1600        | 3024382    |
|              | 5P - 35A (Square Brush)    | 1650        | 3024373    |
| TB5 (Wheel)  | 4P - 16A (Wheel Brush)     | 1650        | 3182882    |
|              | 5P - 16A (Wheel Brush)     | 1700        | 3182883    |

Fuse boxed with both staff and current receiving area carts current machine's safety can be raised to a higher level. In addition, when it is desired to cut the power of one of the machines on a line, the current is cut off through the fuse, other machines on the line can continue to operate.

Current collector with Wheel Brush simplify the movement of the current collectors inside the busbar by reducing the time at the installation tables when movement is provided by the personnel.

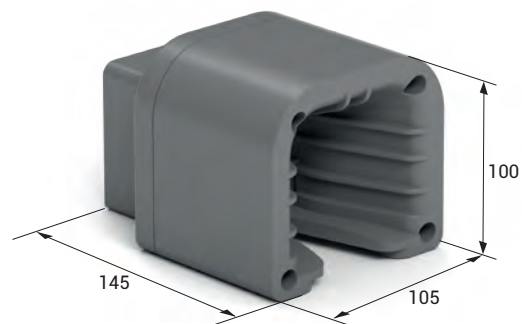
TB5 Current collector models operating speed is max. 100m/min.

## TBE Current Collector Brushes



| Description                  | Weight (gr) | Order Code |
|------------------------------|-------------|------------|
| TB5 Phase Brush (35A-Square) | 40          | 3024371    |
| TB5 Earth Brush (35A-Square) | 40          | 3024372    |
| TB5 Phase Brush (16A-Wheel)  | 40          | 3165078    |
| TB5 Earth Brush (16A-Wheel)  | 40          | 3165080    |

## TB5 Trolley Transfer Tool

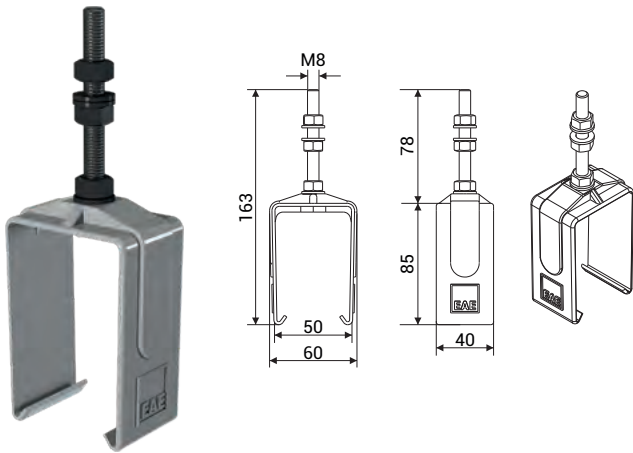


| Description               | Weight (gr) | Order Code |
|---------------------------|-------------|------------|
| TB5 Trolley Transfer Tool | 250         | 3179189    |

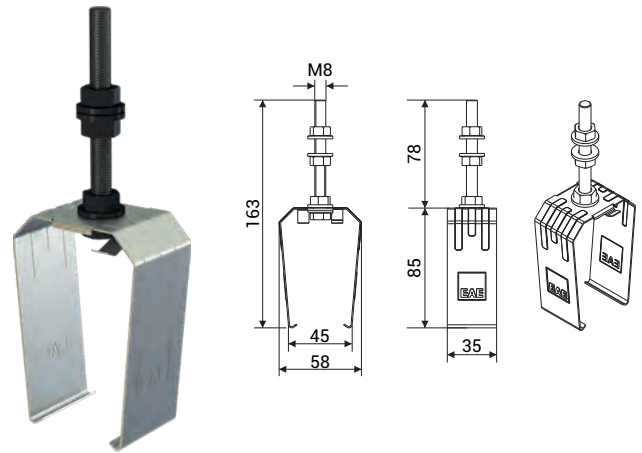
# E-LINE TBE



## TB5 Plastic Sliding Hanger



## TB5 Steel Sliding Hanger

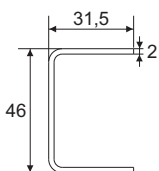
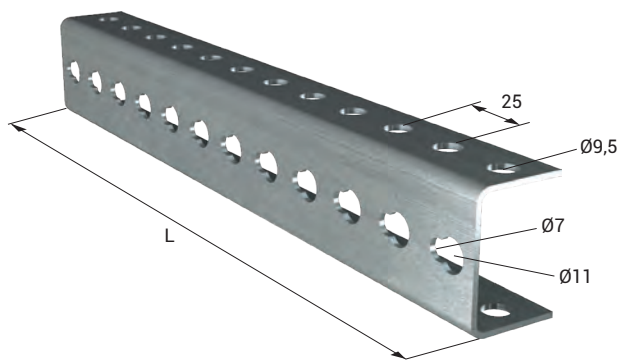


Trolley busbar should be mounted with sliding hangers and each hangers should be between 1,30m - 1,50m. Distance between sliding hanger and other units (joint unit, feeder etc.) should be minimum 300mm.

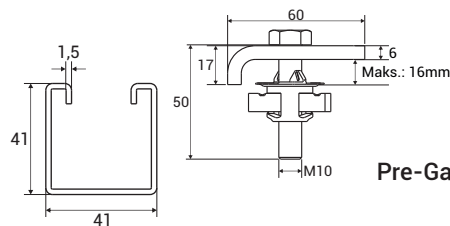
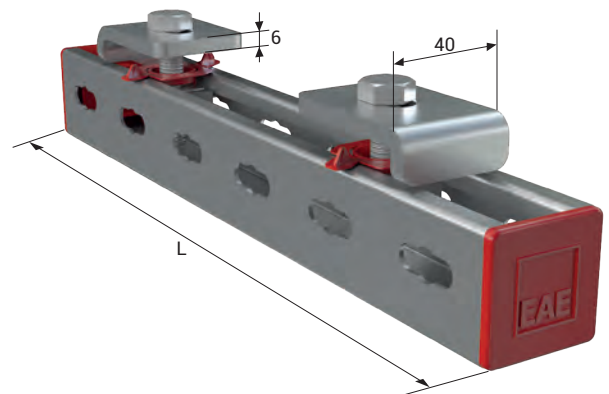
| Description                | Weight (gr) | Order Code |
|----------------------------|-------------|------------|
| TB5 Plastic Sliding Hanger | 85          | 1003664    |

| Description              | Weight (gr) | Order Code |
|--------------------------|-------------|------------|
| TB5 Steel Sliding Hanger | 100         | 1005954    |

## TB Hanger Bracket



HRP Sheet Metal



Pre-Galvanized Sheet Metal

| Description            | L (mm) | Weight (gr) | Order Code |
|------------------------|--------|-------------|------------|
| TB Hanger Bracket      | 250    | 350         | 3025153    |
| URC-C/S Hanger Bracket | 500    | 700         | 3034560    |
| URC-A Hanger Bracket   | 750    | 1050        | 3025382    |

| Description                   | L (mm) | Weight (gr) | Order Code |
|-------------------------------|--------|-------------|------------|
| TB BR Hanger Bracket Set      | 300    | 800         | 3178916    |
| URC-C/S BR Hanger Bracket Set | 600    | 1250        | 3178917    |
| URC-A BR Hanger Bracket Set   | 800    | 1550        | 3178918    |

• Please browse the MFIX catalog to see our various support solutions.

## Voltage Drop

The voltage drop in the busbar lines shall be inspected as per the busbar type selected according to the total current calculated based on the ambient temperature and operating period of the system. Maximum acceptable value for voltage drop is 3%.

### For Direct Current

$$\Delta U = 2 \cdot L_t \cdot I_G \cdot R$$

$\Delta U$  = Voltage Drop [V]

### For Mono-Phase Alternative Current

$$\Delta U = 2 \cdot L_t \cdot I_G \cdot Z$$

$I_G$  = Total current [A]

$R$  = Resistance of the busbar [ $\Omega/m$ ]

### For Three-Phase Alternative Current

$$\Delta U = \sqrt{3} \cdot L_t \cdot I_G \cdot Z$$

$Z$  = Impedance of the busbar [ $\Omega/m$ ]

$L_t$  = Calculated Hole Length [m]

**Note :** Calculation of the current drawn during first start in various motor types;

$I_A$  = Total current drawn in the first start of the motors [A]

For the starting current; Three-phase asynchronous drive in direct start

Slip ring rotor motor

Frequency converter

$I_A$  =  $I_G$  x calculated as 5 to 6

$I_A$  =  $I_G$  x calculated as 2 to 3

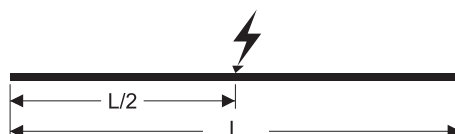
$I_A$  =  $I_G$  x 1,20 to 1,50 calculated between.

## Calculation Of Feeding Points

When we take  $L_t$  as the length of the line, feeding points may be selected as shown in the diagrams below to keep the L voltage drop at minimum and it may be used as the hole length for the calculation of  $L_t$  voltage drop.



1 feeding point from the start,  $L_t=L$



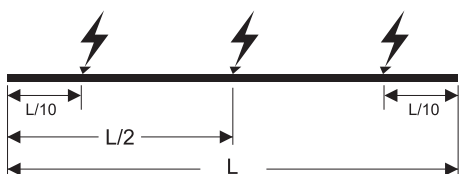
1 feeding point from the center,  $L_t=L/2$



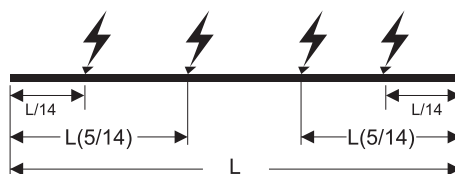
2 feeding points from the start points,  $L_t=L/4$



2 feeding points,  $L_t=L/6$



3 feeding points,  $L_t=L/10$

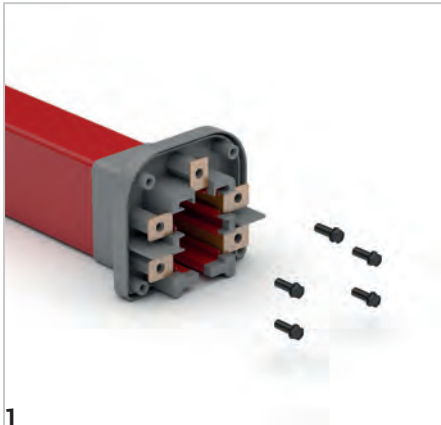


4 feeding points,  $L_t=L/14$

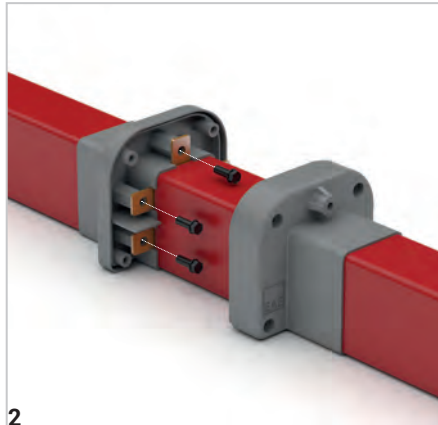
# E-LINE TBE

## Installation Manual

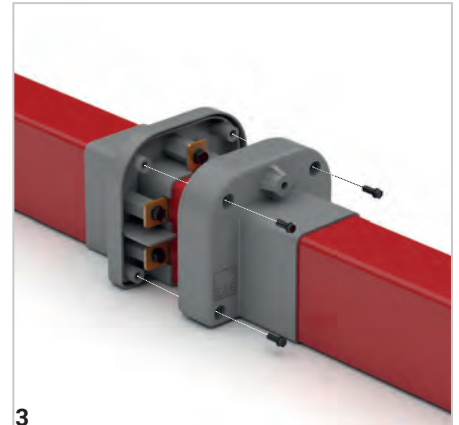
### TBE - Installation Of Joint Unit



1 Remove the screws on the end of the busbar.

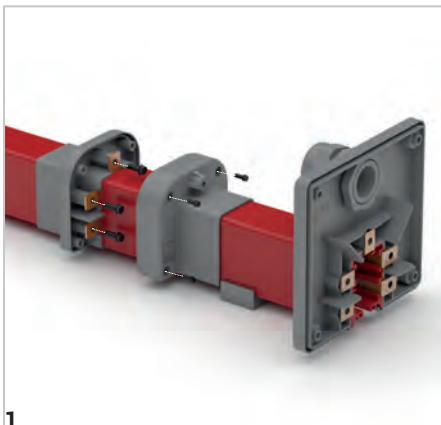


2 Join it with the other busbar and screw it.

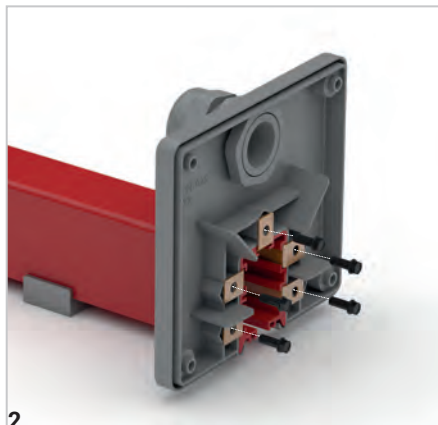


3 Close the joint cover and screw it.

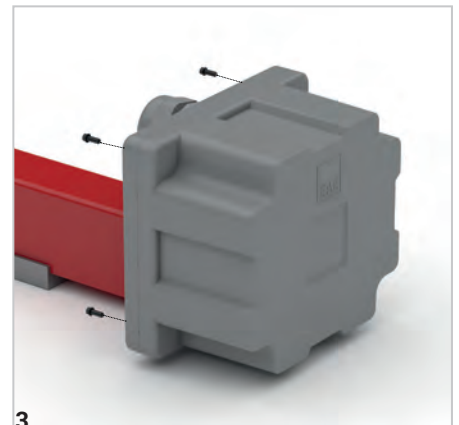
### TBE - Feeder Unit



1 Install it on the line as you do while installing the extension.

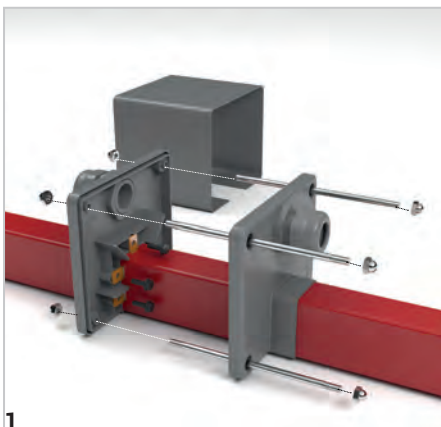


2 Put the feeding cables through the cable gland and connect them to the conductors.

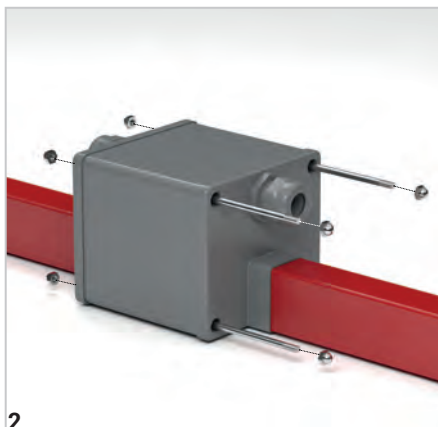


3 Place the cover part and screw it.

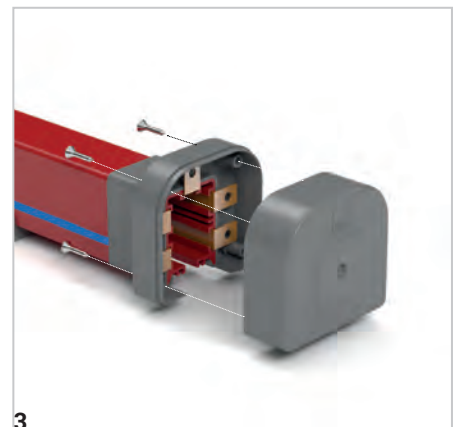
### TBE - Line Feeder Unit



1 Open the cover by removing the screws. Put the feeding cables through the cable gland connect them.



2 Put the feeding cables through the cable gland and connect them to the conductors.



3 Install the end closure to the end of the housing and screw it.

### TBE - End Closure

## DECLARATION

# CE DECLARATION OF CONFORMITY

**Product Group** E-Line TB Trolley Busbar Systems  
**Manufacturer** Akcaburgaz Mahallesi, 3114. Sokak,  
No:10 34522 Esenyurt-Istanbul

The objects of the declaration described below is in conformity with the relevant Cable gland 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 "(EMC) Electromagnetic Compatibility Directive"

2011/65/EU "RoHS Directive"

**Technical Document Preparation Official:**

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Mustafa AKÇELİK

**Date**

20.03.2026

**Document Authorized Signatory**

Elif Gamze KAYA OK  
Deputy General Manager

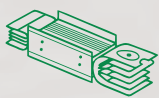


# SUSTAINABLE FUTURE

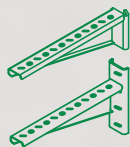
## Sustainability Management at EAE Elektrik



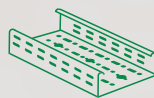
As part of our goal to support sustainable development and green transformation, measuring, evaluating, and managing all economic, environmental, and social impacts resulting from our sustainability practices is a key governance priority for EAE Elektrik. We act with great care in analyzing, monitoring, and managing the economic, environmental, and social impacts and risks that arise throughout our value chain in both our national and global operations.



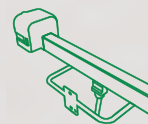
Busbar Systems



Support Systems



Cable Tray Systems



Trolley Busbar Systems



Fit-Out Solutions

*"We are working together with all our stakeholders to develop the electrical technologies that will build the future."*

You can visit our sustainability website at [sustainability.eaeelectric.com](https://sustainability.eaeelectric.com)



#FutureTogether

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