▶ Safety Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed. This is the safety alert symbol. It is used to alert you to personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol is not used with this signal word.

Follow all safety precautions provided in this bulletin and all safety label instructions on this equipment.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS-2011, or CSA Z462.
- This plug-in unit or busway systems must be installed and serviced only by qualified electrical personnel.
- Handle this equipment carefully and install, operate, and maintain it correctly in order for it to function properly. Neglecting fundamental installation and maintenance requirements may lead to personal injury, as well as damage to equipment or other property.
- Follow the safety label instructions on the equipment and inside this bulletin.
- Perform such work only after reading and understanding all of the instructions contained in this bulletin.
- Turn off power to busway before installing or removing plug-in unit.
- Do not install, operate, or remove plug-in unit with cover open or removed.
- Turn off power to busway before working on line side of plug-in unit.
- Turn off plug-in unit before opening or working inside enclosure.
- Always use a properly rated voltage sensing device at all line and load side fuse clips to confirm the plug-in unit is off.
- Before closing the door or replacing the cover-mechanism, carefully inspect the switch area to ensure no tools or objects have been left on or inside the equipment.
- The successful operation of this equipment depends upon proper handling, installation, operation, and maintenance.

Failure to follow these instructions will result in death or serious injury.

▶ General Danger Safety Label

NEMA Publication BU 1.1 is provided with each busway project as a guide for proper installation, operation, and maintenance of busway products. This publication addresses such areas as inspection of all electrical joints and terminals for tightness, preventing the entry of water and contaminants into the busway, instructions for what to do if water and contaminants do enter the busway, and other maintenance topics. EAE recommends to help ensure the highest quality of product performance are as follows:

— NFPA 70–National Electrical Code (U.S.)
— NFPA 70B–Maintenance of Electrical Equipment
— NEMA BU 1–Busway Standard published by the National Electrical Manufacturers Association
— CSA C22.1–Canadian Electrical Code, Part 1

1-Installation according to the project of the busway system, planning and coordination with other distribution systems (mechanical, heat, steam, air installation etc.) is crucial.

2-Operational Success of the Busway systems is ensured by adhering to the right transport, proper installation and design. Improper application may cause malfunction of the system, personal injury and damage to operating systems.

3-The installation, operation and maintenance of the busway system should only be carried out by qualified personnel who know the dangers associated with installation, construction and operation of electrical equipment for the purposes of this manual. Additionally, this personnel ;

* Knows the requirement of applicable electrical laws, other laws, safety standards and protocols.

* Be trained and authorized to test, energize, clean, ground, label and lock the system and equipment suitable for occupational safety applications.

* Be trained in the use and maintenance of personal protective equipment such as rubber gloves, helmets,protective goggles or face shields and gauze-resistant clothing in accordance with relevant work safety practices and potential hazard levels.

* Must be trained in first aid.

WARNING

Dangerous voltage levels in the electrical components may result in the hazardous injury and death.

Installation, monitoring and maintenance must be carried out on de-energized busway electrical equipment. In this way, unintentional contact to the equipment under the energy is prevented.must be followed all warnings and related instructions.

WARNING

Operation of the busway damaged by water or moisture can caused damage property, serious personal injury or death. To ensure proper installation resistance and to ensure that the moisture source is removed, observe the notes in section on page 17 item 13 you receive.

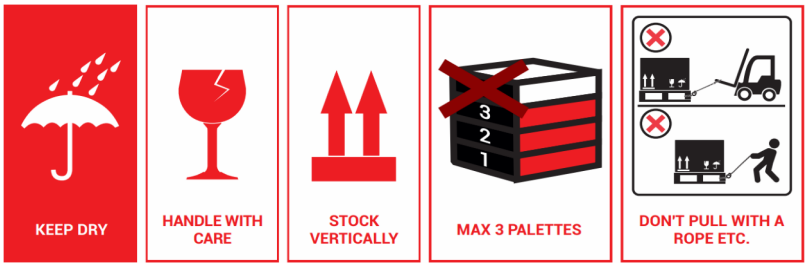


Table of Contents

Section 1: Product Specification

1. SUMMARY

1.1 This specification covers the electrical characteristics and general requirements for busways for use in electrical systems rated 1,000 V and below. The busway system allows users to distribute electrical energy safer and more efficiently within a smaller footprint.
Where designated, low-impedance busway systems of the indicated ratings shall be offered with all necessary fittings, power takeoffs, hanging devices and accessories.

1.2 Specification includes:

1.2.1 Three-phase busway system with the following features:

- Housing
- Conductor
- Insulation
- Joint Structure
- Accessories & Components

2. STANDARDS AND CERTIFICATIONS

2.1 The busway shall be designed and manufactured to the following standards:

2.1.1 Electrical Testing Laboratories (ETL) (US/Canada) Certified to UL 857. Each busway rating has been tested individually and complies with UL 857 Standards for all type tests and certified by an independent authorized UL testing laboratory.

2.1.2 Compliant – CUL Listing

2.1.3 Compliant – National Electric Code (NEC) Article 364 – Busways 19

2.1.4 Compliant – NEMA AB1, Molded Case Circuit Breakers and Molded Case Switches

2.1.5 NFPA 70 – National Fire Protection Agency

2.1.6 EAE has ISO 9001, ISO 14001, OSHAH 18001, ISO 27001 and ISO 17025 certifications.

2.1.7 All the required type tests for each rating shall be available according to IEC 61439-6 and certified with a 3rd party.

2.1.8 Compliant – IEC 60364-1 Low-voltage electrical installations

2.1.9 The busway shall have high flame resistance and circuit integrity properties under fire conditions according to IEC 60331, BS 6387, BS 8491 standards including joints and tap-off boxes

3. SYSTEM DESCRIPTION

3.1 Electrical Requirements

3.1.1 System voltage: Up to 600V

3.1.2 Operating frequency: 50/60 Hz

3.1.3 Ampacity and 3 cycle Symmetrical Short Circuit Rating shall be:

Aluminum conductors	*Copper conductors*
250A: 65kA	250A: 65kA
400A: 65kA	400A: 65kA
600A: 65kA	600A: 65kA
	800A: 65kA

3.1.4 Conductor: 4-conductor (L1/L2/L3/N1/PE housing)
5-conductors (L1/L2/L3/N1/CPE/PE housing)
6-conductors (L1/L2/L3/N1/N2/CPE/PE housing)

3.1.5 The Voltage drop of the busway shall follow the table below for the designated voltage and conductor type:

Amperage Rating (A)	Al Busway (V)	Amperage Rating (A)	Copper Busway (V)
250	3.50	**250**	3.23
400	4.16	**400**	3.98
600	4.64	**600**	4.61
		800	4.57

Note: Voltage drop calculated with power factor = 0.8, Frequency = 60Hz

Note: Voltage drop is per 100 ft. (3048 cm.)

Table 1: Voltage Drop by Amperage, Aluminum and Copper Busway

4. COMPONENTS

4.1 **Housing** – The busway system shall have an isolation layer around each conductor.

4.1.1 The housing shall have a minimum Ingress Protection (IP) of 23D, offering protection from touch with fingers or similar objects (greater than 0.49 inches (12.5 millimeters)). There shall be protection against a wire touching hazardous parts. The housing shall offer protection from contact with enclosed equipment. The housing shall have no harmful effect protecting from water falling as a spray at any angle up to 60 degrees from the vertical.

4.1.2 Conductors shall be packed and placed into the housing.

4.1.3 Housing shall be made of thermal processed, extruded aluminum, RAL7012-Electrostatic painted.

4.1.4 The busway housing shall be 100% aluminum construction to reduce hysteresis and eddy current losses.

4.1.5 When installed flatwise, 3.94 inches (100 millimeters) of clearance shall be allowed vertically, 5.91 (150 millimeters) horizontally and 11.81 inches (300 millimeters) between two parallel busways (horizontally).

4.1.6 A minimum of 3.94 inches (100 millimeters) shall be allowed when a busway crosses under a beam in the flatwise position.

4.1.7 The minimum distance between busway runs shall be 11.80 inches (300 millimeters).

4.2 Conductors

4.2.1 Straight sections of feeder busway shall be supplied in any length, from a 13.78 inch (350 millimeters) minimum to a 10 feet (3,048 millimeters) maximum.

4.2.2 Bus bars shall be suitably plated at all joints and contact surfaces.

4.2.3 4 Conductors shall have: (4 full-size conductors + housing).

4.2.4 5 Conductors shall have: (5 full-size conductors CPE (100% earth conductor + housing)).

4.2.5 6 Conductors shall have: (6 full-size conductors CPE (100% earth conductor + housing)).

4.2.6 The neutral conductors shall have the same cross-section and insulation properties as the phase conductors.

4.2.7 Aluminum conductors shall be EC grade aluminum.

4.2.8 The conductors shall be ordered in copper (98% conductivity), Aluminum (58% conductivity).

4.2.9 The Aluminum conductors shall be EC grade aluminum. Minimum conductivity shall be 34 $\Omega \cdot m/mm^2$.

4.2.10 The Copper conductors shall be composed of 99.95% electrolytic copper at a minimum. The minimum conductivity shall be 56 $\Omega \cdot m/mm^2$.

4.2.11 The conductors shall be whisker free to ensure better heat dissipation, higher short circuit values and longer operation life.

4.3 Insulation

4.3.1 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.

4.3.2 All insulators shall be recognized by UL.

4.4 Joint Structure

4.4.1 The Joint Pack shall be designed in such a way that both the male and female Joint Packs come pre-installed on the busway sticks, reducing field installation time. The Joint Pack shall be a single assembly that does not require multiple fit ups. The Joint Pack shall be of a bolt design which is able to disassemble the conductors, insulators and other components.

4.4.2 A Belleville spring shall be used to ensure contact pressure at the joint.

4.4.3 All parts of the joint structure shall be plated with Tin, protecting against contact losses due to corrosion, ensuring safe/reliable earth connections and very low resistance values throughout the entire busway run. The plating process shall not involve dipping of the conductor, the plating shall be applied in a powder coat to ensure higher accuracy and consistency of the plated material.

4.4.4 It shall be possible to make up a joint from one side in the event the busway is installed against a wall or ceiling. The joint shall be so designed as to allow removal of any length without disturbing adjacent lengths.

4.4.5 The fastening mechanism for the Joint Pack shall be designed to have over torque protection. When the torque is exceeded, a failsafe shall be deployed halting further torquing.

4.4.6 Installation of the Joint Pack shall be achieved with use of alignment pins, ensuring correct orientation.

4.5 Accessories & Components

4.5.1 All system components including Tees, Flanges, Reducers, Expansion Joints, Elbows, etc. shall be of the same material from the same manufacturer.

4.5.2 End pieces and end caps shall be provided to install at the ends of each line.

4.5.3 The busway system shall offer all necessary accessories. Special or custom accessories shall be available upon request to meet design parameters. Special busway shall have a minimum length of 13.78 inches (350 millimeters) and a maximum length of 10 feet (3048 millimeter).

4.5.4 Tap-off-box (TOB) – The TOB shall be designed so that all cable runs/connections do not exude excessive force to the contacts, reducing mechanical stress. The TOB shall have a simple installation design, plug-and-play, not requiring any special tools or processes.

4.5.4.1 The cable TOB shall be designed to have a small profile and direct connection to the busway, eliminating the need for transition or other modules.

4.5.4.2 The TOB shall be plug-n-play type.

4.5.4.3 Plug-n-play TOB shall be suitable to install or remove from busbars without switching off the power on the busbar.

4.5.4.4 Plug-n-play TOB shall be suitable to install or remove anywhere alongside the busbar.

4.5.4.5 The TOB contacts shall be protected with a cover.

4.5.4.6 The TOB contacts shall be heat cycle tested.

4.5.4.7 Contacts of plug-in TOB shall be silver plated. The contacts shall have constant contact pressure achieved with double sided spring system.

4.5.4.8 The special locking mechanism of the TOB shall ensure the weight of the plug-in box and cables can be maintained by the busbar housing.

4.5.4.9 While inserting the contacts of plug-in TOB, earth contact shall make the first touch. While removing, it shall be disconnected last.

4.5.4.10 TOB shall be manufactured of epoxy painted aluminum.

4.5.4.11 The TOB shall be equipped with a safe alignment mechanism to ensure correct installation and operation.

4.5.4.12 The TOB shall have a snap-in suspension mechanism allowing for easy and fast structural mounting.

4.5.4.13 When mounting the bus, a clip shall be available which allows for simple toolset installation.

Section 2: Product Selection Guide

Refer to the following link for the latest Product Selection Guide, incorporated in the Catalog. This document is regularly updated it is highly suggested to only refer to following link.

https://www.eaeusa.us/catalogs/busbar-systems/e-line-kd-busbar.pdf

Page	Description
8	Order Code System
9-11	Sticks, Elbows & Other Standard Modules
9	End Closer (Included on all standard and special length Busways)
12-13	Feeder Boxes
14	Tap-Off Boxes
18-20	Fixing Elements

Note: Pages denote those in the Catalog, not the actual page number of the document.

Note: Non-standard components are available. EAE must be contacted for any specialized components to identify feasibility.

EAE USA website:

https://www.eaeusa.us/

Section 3: Receiving, Packaging & Storage

Step 1: Receive

Unloading

EAE suggests using an appropriately rated forklift to carefully remove the busway assemblies from the container or truck.

Storage

After receiving the material, compare the BOL to the received material. Verify the number of pallets match the packing list, the dimensions of the busbar or other components. Immediately advise your local EAE representative if there are any discrepancies.
If any equipment is damaged, immediately contact the logistics company.
All products must be stored in a **dry** environment away from the elements.
The casting materials, used for outdoor busway, must be stored at a temperature between **5°C-25°C** and never directly exposed to sunlight.

Handling

Note: Do not handle the materials with steel ropes or hooks.
When lifting KD-III busway, use a minimum of four points of contact (see Figure 2).
Small components may be lifted with a single strap, make sure to consider the center of mass and ensure the component is balanced when moved.
When moving busbars from the pallets to where they are being installed, use a hoist with metal rods or bars passing through the two sets of holes at each end of the housing body, stabilizing the load.
When shifting busway from one location to another, a sling is appropriate.
Do not exceed pulling **five busbars** at a time when they are stacked horizontally (see Figure 3).

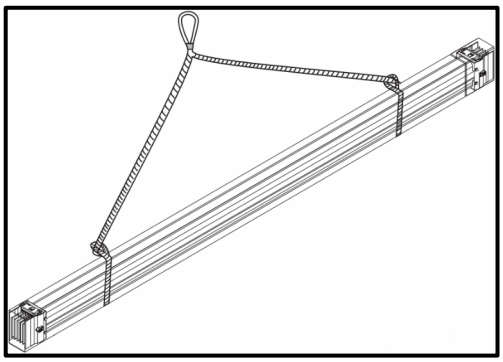


Figure 1: Lifting KD-III

Section 3: Receiving, Packaging & Storage

Step 1: Receive

Stacking

A wooden spacer should be used every **4.92 feet** (1.5 meters) when stacking busway (see Figure 4).
Note: Do not stack more than 5 busbars on one another.
Note: When receiving a pallet of busway, do not exceed stacking of **three pallets**.

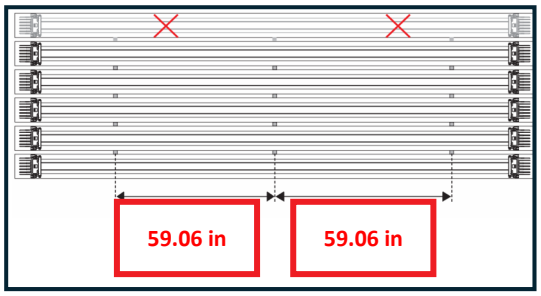


Figure 3: Stacks of Busway

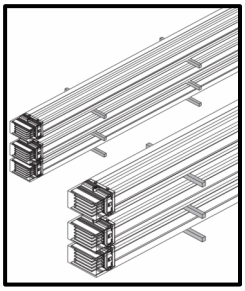


Figure 4: Stacking Busbar

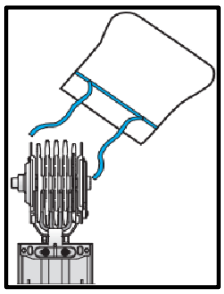


Figure 5: End Cover

Step 2: Repackage

Note: Remove and secure the Block Joint Assembly (BJA) before repackaging. Precautions need to taken when a busbar is unpackaged. If the protective packaging is removed from the end of the busbar, the following procedure should be followed.
1. Identify a suitable cover to protect the ends of the busbar. A plastic cover with a means of securing is appropriate (see Figure 5).
2. Verify that the cover will completely cover the end of the busway.
3. Place the cover over the busbar.
4. Conform the plastic cover ensuring again it completely covers the end of the busbar (see Figure 6).
5. Secure the cover by tightening or tying the securing material (see Figure 7).

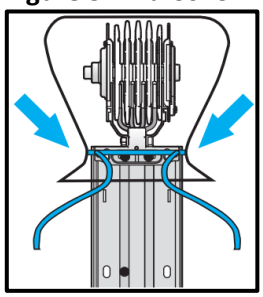


Figure 6: Conform Cover

Note: Make sure the cover meets the IP degree of the material.

Busbar Type	IP Rating
KD-III	23D
KX-III	55
CCR-II	68

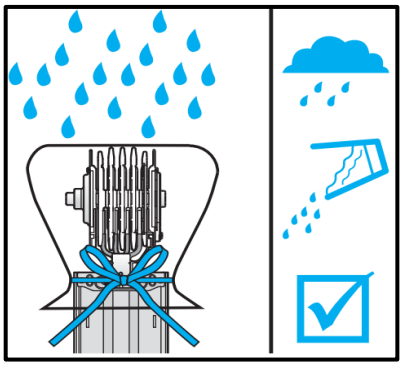


Figure 7: Secure Cover

Note: Field modifications of the enclosure are **not** allowed (excluding cable entrance holes).

Section 3: Receiving & Storage

Step 2: Storage

For long-term storage of the busbar, whether it's being stored at the site of shipment or being prepared for delivery to another location, the following should be considered, along with the repacking instructions.

1. Busbar must be stored in a dry location. Ideally, the location would be climate controlled. Never leave the busbar outdoors.
2. Create a barrier around the busbar to ensure forklifts and other machinery do not damage the busbar.
3. If the busbar or other material is placed back in the crate or container, EAE strongly advises placing a desiccant to protect against moisture intrusion (see Figure 10).

RIGID BARRIER (VOLUME) Moisture impervious containers made from metal, plastic, glass or combinations of different materials.			FLEXIBLE BARRIER (AREA) Laminated packaging materials made to prevent water and water vapor from penetrating through the combined layers.		CLAY
CU. IN.	CU. FT.	GALLONS	SQ. IN.	SQ. FT.	UNITS REQ.
237	0.14	1.1	15	0.1	1/6
476	0.28	2.1	30	0.2	1/3
715	0.42	3.2	45	0.3	1/2
1,429	0.83	6.2	90	0.6	1
2,857	1.67	12.5	180	1.3	2
4,286	2.50	18.7	270	1.9	3
5,714	3.33	25.0	360	2.5	4
7,143	4.17	31.2	450	3.1	5
8,571	5.00	37.4	540	3.8	6
10,000	5.83	43.6	630	4.4	7
11,423	6.67	50.0	720	5.0	8
12,857	7.50	56.1	810	5.6	9
14,286	8.33	62.3	900	6.3	10
17,143	10.00	74.8	1,080	7.5	12
20,000	11.67	87.3	1,260	8.8	14
22,857	13.33	99.7	1,440	10.0	16

Figure 10: Clay Desiccant Requirements

Figure 10 is provided by ULINE.

Note: Additional desiccants may be needed if packaged with dunnage.

Section 4: Install Instructions

Refer to the following link for the latest Installation Instructions, incorporated in the Catalog. This document is regularly updated it is highly suggested to only refer to following link.

https://www.eaeusa.us/catalogs/busbar-systems/e-line-kd-busbar.pdf

Section 5: Commissioning Check-Off Checklist

Step #1 - Equipment Received

Value **or** Y/N

☐ 1. Visual inspection:

Review all of the equipment received and that none is damaged?
If **yes**, please document the discrepancy and notify a EAE representative within 24-hours from the equipment delivery.
The following items should be reviewed:
- Busway Block Joint - conductors (tool can correct if bent) and insulators (cracked insulators requires replacing the block joint).
- Busway - enclosure, pallet, plug-ins (if applicable).
- Tap Off Boxes (TOB) - enclosure, actuator ON/OFF (ON position, actuator stays closed), contacts are intact.
- General packaging - The equipment is packaged to protect from moisture or debris intrusion, the equipment should come fully packaged from the elements.

☐ 2. Does the BOL match the expected equipment? Does the BOL and the received equipment match?

If **no**, please document the discrepancy and notify a EAE representative within 24-hours from the equipment delivery.

☐ 3. Did the installation crew or appropriate personnel verify that the conductors are dry and clean?

Section 5: Commissioning Check-Off Checklist

Step #2 - Block Joint Installation

Value **or** Y/N

☐ 1. When installing the block joint, was the bus married slowly, ensuring no damage to the conductor and insulators?

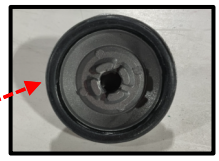
☐ 2. Verify the block joint and busway fall within manufacturing tolerance. Install the block joint cover and verify that that the bolt attaches correctly to the busway, ensuring the manufacturing tolerance is met.
Note: Refer to **Appendix A:** Block Joint Tolerances

☐ 3. Ensure that busway is installed on vertical edge with green indicator bar on bottom.

Note: Pay attention to locations where the run bends and offsets.
Note: Refer to **Appendix B:** Correct Neutral Location, this is best practice, follow the isometric run information, as stated in the previous note.

☐ 4.Verify the torque value for the joint cover bolts? ***11 ft.-lb.*** **15N-m** **(13 mm socket)**

☐ 5. Was white lithium grease applied to the gasket on the nut locking piece?
Note: Use a light application.



☐ 6. (i.) Verify the torque value for the joint nut? ***40 ft.-lb.*** **55 N-m** **(19 mm socket)**

☐ 7. (ii.) Verify the torque value for the nut locking piece? ***15 ft.-lb.*** **20 N-m** **(19 mm socket)**

Section 5: Commissioning Check-Off Checklist

Step #3 - Insulation Testing

Megger Testing

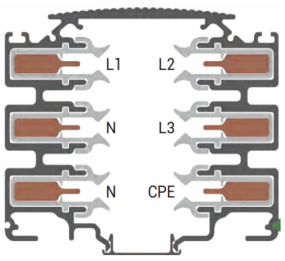
▸ Line Insulation Resistance Test Report

Customer:				**Date:**	...../ ...../ .....
Project:				**Order No:**	.....
Address:				**U_s :** V	**I_s :** A
Busbar Code:		**Material:**	AL ☐ CU ☐	**Conductor Section:**	..... x ..... mm^2
Line:				**Result by:**	..... V (DC)
Note: The tests have to perform only with calibrated devices.				**Calibration Date:**	...../ ...../ .....

Recommended Test Voltage 1000 V DC

Results

Note: Allow ±10% tolerance or refer to your equipment operational booklet
Note: Criteria for a PASS, reading **exceeds 1MΩ**



N - L1	=	..... /	MΩ
N - L2	=	..... /	MΩ
N - L3	=	..... /	MΩ
N - PE	=	..... /	MΩ
L1 - L2	=	..... /	MΩ
L1 - L3	=	..... /	MΩ
L1 - PE	=	..... /	MΩ
L2 - L3	=	..... /	MΩ
L2 - PE	=	..... /	MΩ
L3 - PE	=	..... /	MΩ

Witnesses

Name	Company	Date	Signature

Section 5: Commissioning Check-Off Checklist

Step #4 - Junction Resisting Testing

Junction Resistance Testing

Guidelines:

1. Joint transition resistance measurements are repeated at least twice to ensure the measurement result.
2. The difference in resistance value measured for L1, L2, L3 and N conductors in the same joint can **not** be more than 10 μΩ.
3. Joint transition resistance measured for PE conductor can **not** be more than 100mΩ.
4. Maximum joint transition resistance is 15 μΩ. All values **below** this value are considered acceptable.

Section 5: Commissioning Check-Off Checklist

Step #4 - Junction Resisting Testing

Note: Generally, Junction Testing occurs at the same time as Megger Testing.

Junction Resistance Testing

► Junction Resistance Test Report

Note: Allow ±10% tolerance or refer to your equipment operational booklet
Note: Criteria for a PASS, reading **less than (equal to) 15 µΩ**

Customer:				**Date:**	...../ ...../ .....
Project:				**Order No:**	.....
Address:				**U_n :** V	**I_n :** A
Busbar Code:		**Material:**	AL ☐ CU ☐	**Conductor Section:**	..... x ..... mm²
Line:				**Required Torque:**	**M12** / **83Nm**
Note: The tests have to perform only with calibrated devices.				**Calibration Date:**	...../ ...../ .....

Results

Junction :		**Junction :**		**Junction :**		**Junction :**		**Junction :**	
Phase	R (µΩ)	Phase	R (µΩ)	Phase	R (µΩ)	Phase	R (µΩ)	Phase	R (µΩ)
N - N		N - N		N - N		N - N		N - N	
L1 - L1		L1 - L1		L1 - L1		L1 - L1		L1 - L1	
L2 - L2		L2 - L2		L2 - L2		L2 - L2		L2 - L2	
L3 - L3		L3 - L3		L3 - L3		L3 - L3		L3 - L3	
PE - PE		PE - PE		PE - PE		PE - PE		PE - PE	
Torque:	..... Nm	Torque:	..... Nm	Torque:	..... Nm	Torque:	..... Nm	Torque:	..... Nm
Max Value:	..... µΩ	Max Value:	..... µΩ	Max Value:	..... µΩ	Max Value:	..... µΩ	Max Value:	..... µΩ

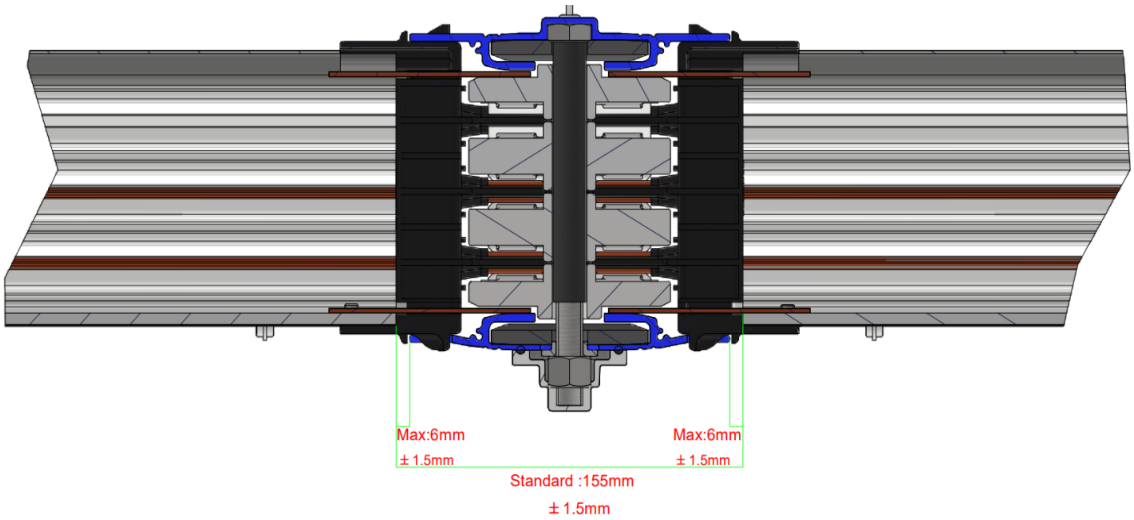
Junction :		**Junction :**		**Junction :**		**Junction :**		**Junction :**	
Phase	R (µΩ)	Phase	R (µΩ)	Phase	R (µΩ)	Phase	R (µΩ)	Phase	R (µΩ)
N - N		N - N		N - N		N - N		N - N	
L1 - L1		L1 - L1		L1 - L1		L1 - L1		L1 - L1	
L2 - L2		L2 - L2		L2 - L2		L2 - L2		L2 - L2	
L3 - L3		L3 - L3		L3 - L3		L3 - L3		L3 - L3	
PE - PE		PE - PE		PE - PE		PE - PE		PE - PE	
Torque:	..... Nm	Torque:	..... Nm	Torque:	..... Nm	Torque:	..... Nm	Torque:	..... Nm
Max Value:	..... µΩ	Max Value:	..... µΩ	Max Value:	..... µΩ	Max Value:	..... µΩ	Max Value:	..... µΩ

The maximum values per type and explanation to execute this test can be found in Annex A Electircal Site Tests of CR Manuel

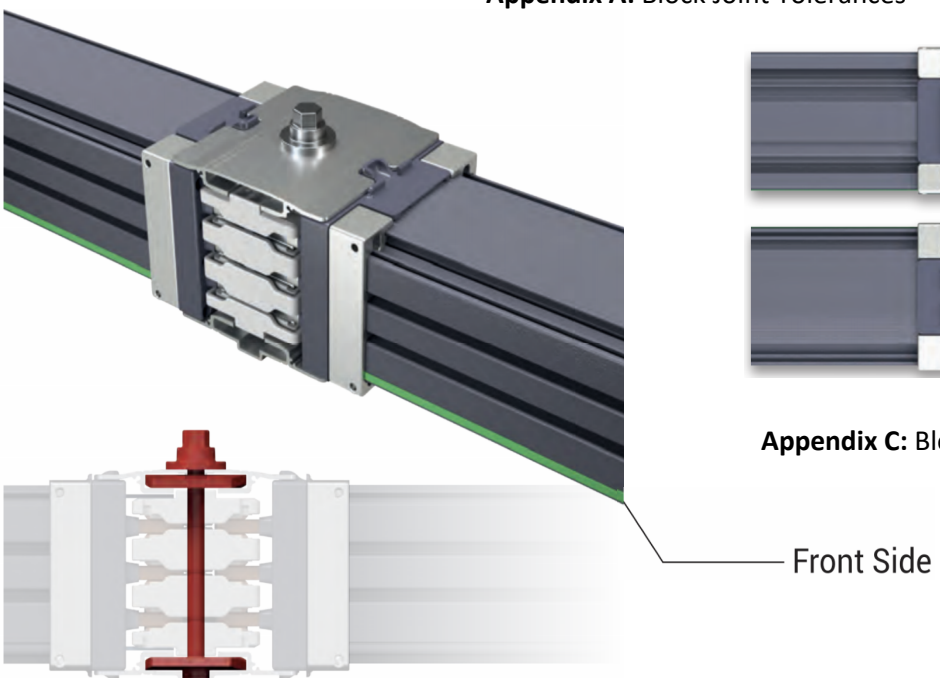
Remarks

Witnesses

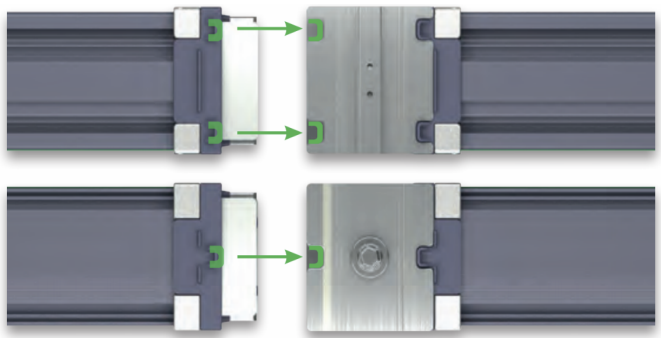
Name	Company	Date	Signature



Appendix A: Block Joint Tolerances



Appendix B: Block Joint Alignment Mechanism

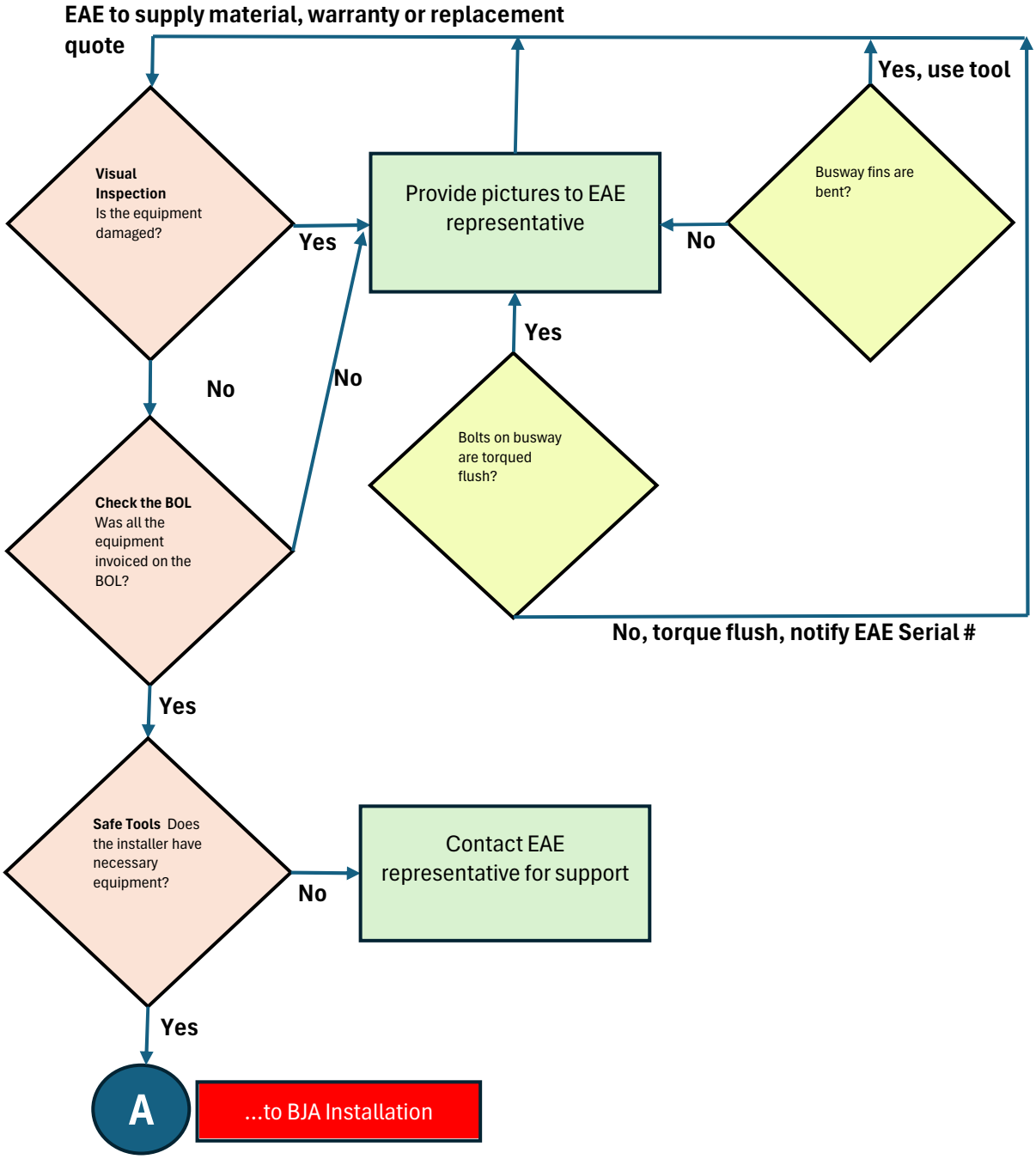


Appendix C: Block Joint Alignment

Section 6: Troubleshooting Flow Chart

Step #1 - Equipment Received

Note: Torquing must be completed with the use of hand tools. The use of power tools leads to over torquing, stripping, and deformation of material that can lead to failures.



Section 6: Troubleshooting Flow Chart
Step #2 - Block Joint Assy (BJA) Installation

A

Visual Inspection Conductors/ insulators dirty or damaged?

Yes

Soft brush, vacuum cleaner or clean lint free rag, **Note:** No compressed air or blower

Corrected issue

No

Provide pictures to EAE representative of the BJA

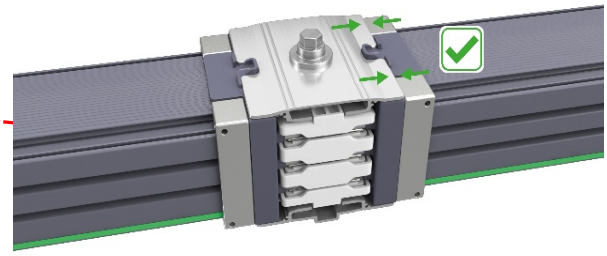
EAE to supply material, warranty or replacement quote

No

The BJA is not aligning correctly, it is not fitting correctly?

Yes

Use hand clamps to secure the BJA, then attach/torque hardware



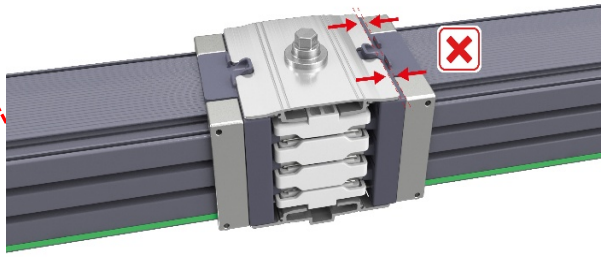
Note: Correct block joint alignment

No

Can the BJA be installed normal?

No

Provide pictures to EAE representative of the BJA



Note: Incorrect block joint alignment will not permit joint pack assembly

Yes

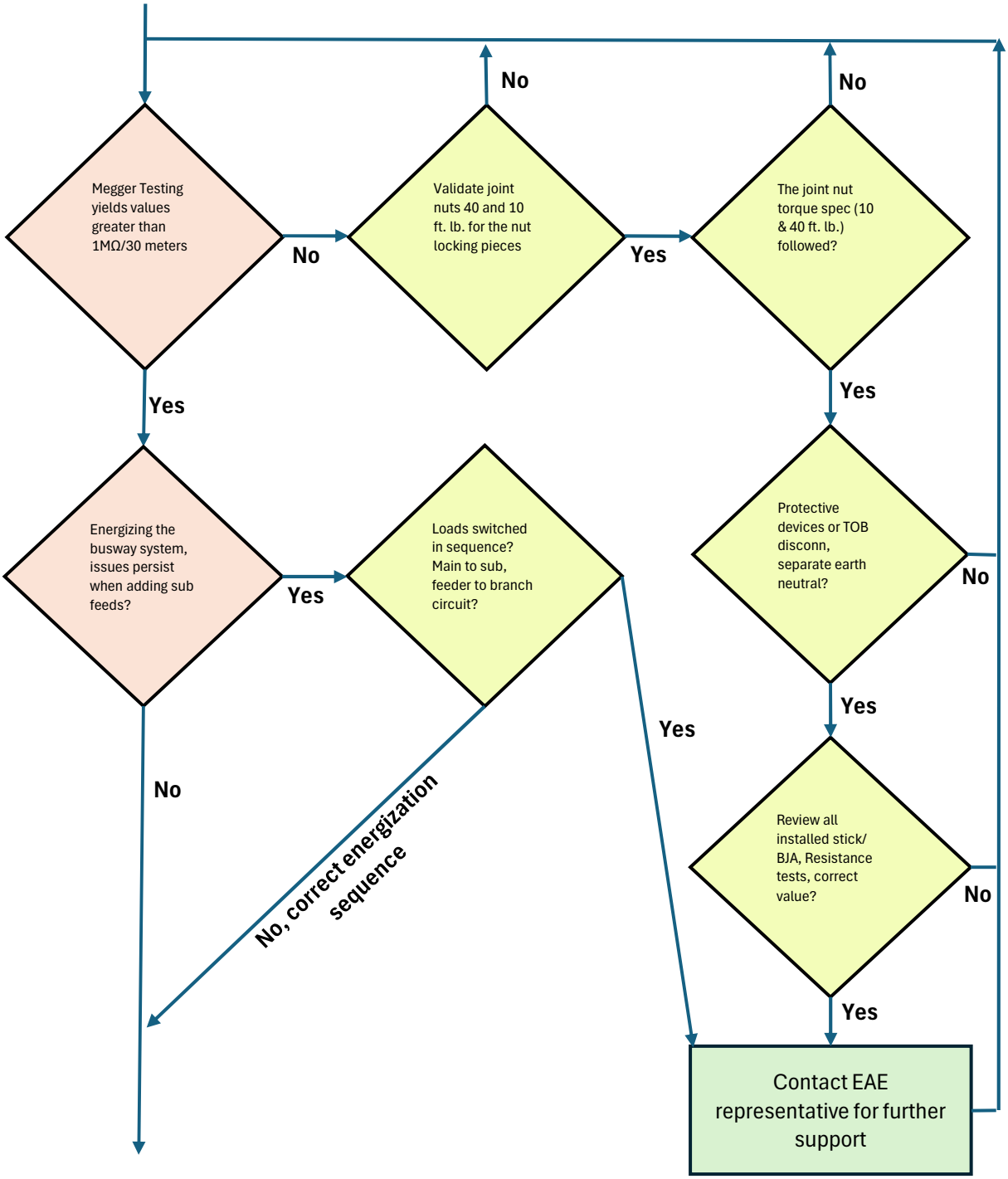
Normal install, used guiding pins

B

...to Energizing the Equipment

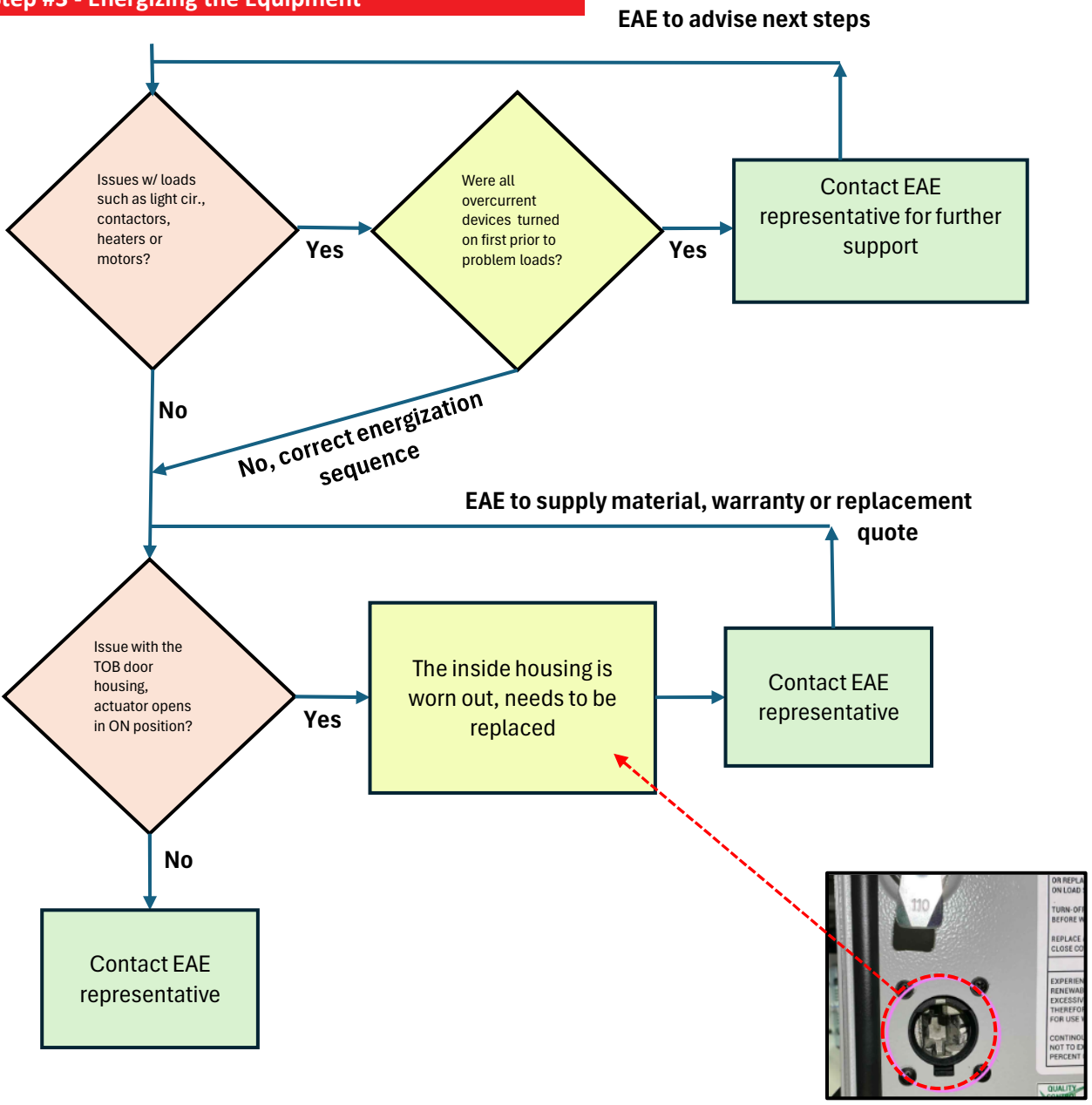
Section 6: Troubleshooting Flow Chart
Step #3 - Energizing the Equipment

B



Section 6: Troubleshooting Flow Chart
Step #3 - Energizing the Equipment

B



Section 7: Maintenance & Warranty

Maintenance

EAE recommends conducting a visually inspected periodically for irregularities or damage. If an event occurs or substantial modifications are done to the busway, facility or any coordinating system, EAE advises performing analysis to ensure correct operation.

Proper installation of all components is critical to the long term functionality of the busway system. EAE requires insulation resistance (Megger) testing of the block joint during the installation in order to ensure the block joint was installed correctly. Junction resistance (micro-Ohm) testing is strongly suggested by EAE.

EAE products are designed and manufactured to be user friendly, plug and play. If the equipment is installed properly, no mandatory maintenance is required. Minimal to no maintenance is required throughout the product's lifespan under normal operating conditions.

Warranty

Seller warrants that all products sold by EAE are free from defects in material and workmanship for a period of 18 months from the shipping date. EAE strongly suggests inspecting all received material within 48 hours of being received. In the event of material or any other issue contact your local EAE representative immediately.

The Seller’s liability under this warranty is limited to the repair or replacement of any product that is returned within 18 months of delivery and determined by the Seller to be defective in material or workmanship. Prior to returning any material to EAE, the Buyer must obtain written authorization. The Buyer is responsible for all costs associated with the removal and reinstallation of a defective part or its replacement, including labor, materials, and any other related expenses.

If the Buyer uses plug-ins, parts, or components not manufactured by EAE with the Products, or if any services or warranties are provided by an unauthorized third party without EAE's prior written consent, all warranties for the Products will immediately terminate and be void.

In the event of a warranty claim, a Return Material Authorization (RMA) will be issued which includes all the information to return the material. All warranty claims will be filled by EAE's Quality Assurance department. The warranty process includes failure mode analysis, if warranted. The results of this analysis can be shared, if requested. Verify the material is packaged correctly prior to shipment, refer to Section 3 for clarification.

Revision History

Version	Date	Notes
1.0	8/19/2025	Initial release