



An ITW Company

# HL Junction Block

## **Associated Equipment for the IQ POWER HL Static Bar Appareillage Connexe**

**For use in Class I, Division I, Group D, Class II, Division I,  
Groups F & G, Class III, Division I**

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### **INSTALLATION AND OPERATING INSTRUCTIONS**

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# 1. SAFETY WARNINGS

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**NOTE!** – Statements identified with a **NOTE** indicate precautions necessary to avoid potential equipment failure.



**CAUTION!** – Statements identified with a **CAUTION** indicate potential safety hazards.



**NOTE!** – This equipment must be correctly installed and maintained. Adhere to the following notes for safe installation and operation.

1. Read instruction manual before installing or operating equipment.
2. Only qualified service personnel are to perform installation and repairs.
3. All equipment must be properly grounded, including the machine frame to which the equipment is mounted.



**CAUTION! – ELECTRICAL SHOCK HAZARD** – Always disconnect power supply before connecting or disconnecting static neutralizing equipment. Avoid touching static neutralizing bar when power supply is energized.



**CAUTION! – FIRE HAZARD** – Do not install or operate equipment in close proximity to any flammable solvents.

## **2. INTRODUCTION**

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The HL Junction Block provides an intermediate connection point for hazardous location installations of the IQ POWER HL.

### **Receipt of Equipment**

1. Carefully remove the equipment from its carton.
2. Inspect contents for damage that may have occurred during shipment. If any damage has occurred, the local carrier should be notified at once. A report should be forwarded to Simco-Ion, 2257 North Penn Road, Hatfield PA 19440, and (215) 822-6401.
3. Empty the carton to ensure that small parts are not discarded.

### **Return Shipments**

Prior to returning goods, contact a Simco-Ion Customer Service Representative for a Return Authorization Number. This number should be included on the packing list. All correspondence should also reference the Return Authorization Number. Any item being returned should be shipped prepaid and packed to provide adequate protection.

### 3. SPECIFICATIONS

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Dimensions	96W x 145L x 76H mm [3.8W x 5.7L x 3.0H in.]
Weight	0.72 kg [1.6 lb]
Operating Temperature	Ta 0-80°C [32-176°F]
Housing	Copper-free Aluminum with epoxy powder coat
Connection	½" NPT female threads in the body each side
Installation Hardware	(4) # 8 insulated ring terminals, (2) #8 screws with internal lock washers and (2) #8 internal lock washers
"Y" Sealing Fitting	ADALET XY-2 25% Fill
Connection	½" NPT female threads in the body each side
Packing Fiber	ADALET ADACO XAF-6
Sealing Cement	ADALET ADACO No. 1



**CAUTION!** Intrinsically Safe, Sécurité Intrinsèque, Associated Equipment, Appareillage Connexe, for use in the following Hazardous Locations. (Class I, Division I, Group D, Class II, Division I, Groups F and G, Class III, Division I)

## 4. INSTALLATION

### Junction Block and “Y” Sealing Fitting Arrangements

#### Up to 18” of Conduit to Static Bar

1. Installations that have 18” or less of conduit between the static bar and HL Junction Block will require one (1) sealing fitting between the junction block and the power supply, see **Figure 1**.
2. A sealing fitting and 2” length of conduit are included with the HL Junction block kit for this purpose.
3. See **Wire Preparation for the “Y” Sealing Fitting** in this section.

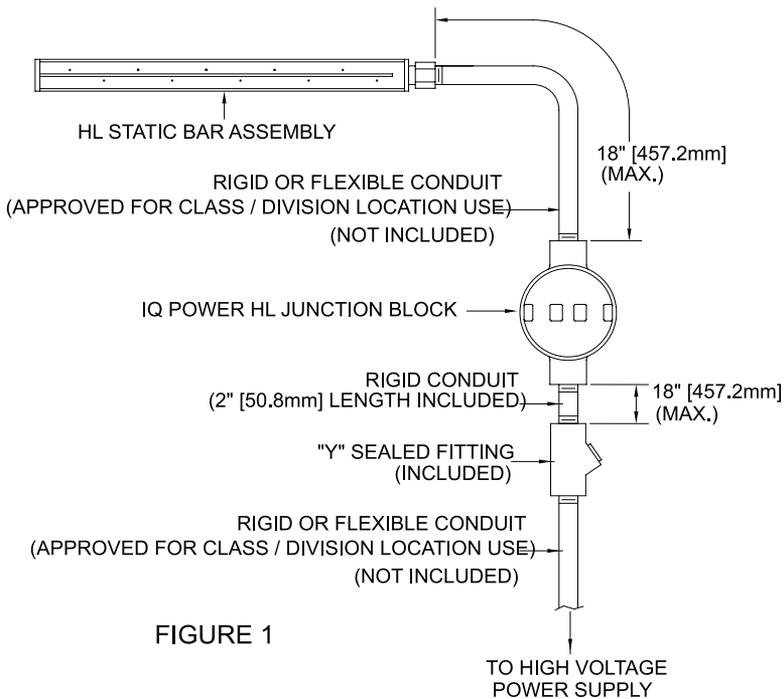


FIGURE 1



**CAUTION!** A “Y” sealing fitting is required between the HL Junction Blocks lower “Y” sealing fitting shown above and the boundary, (physical separation between the Class 1 location and the non-hazardous or unclassified area).

## Over 18" of Conduit to Static Bar

1. Installations that have greater than 18" of conduit between the static bar and HL Junction Block will require two (2) sealing fittings at the junction block, see **Figure 2**.
2. The second sealing fitting is not included and must be ordered separately.

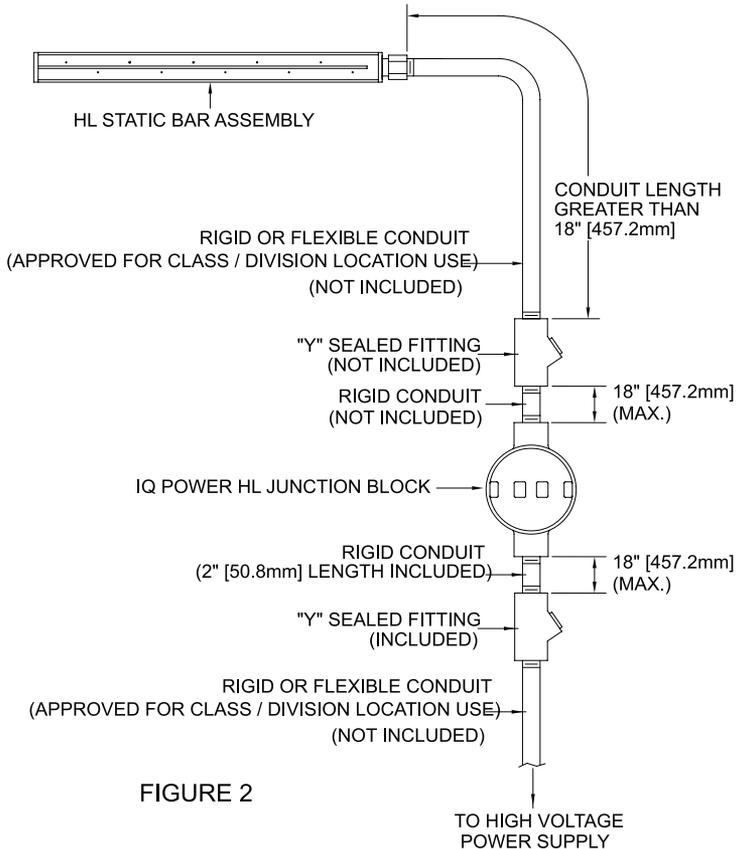


FIGURE 2



**CAUTION!** A "Y" sealing fitting is required between the HL Junction Blocks lower "Y" sealing fitting shown above and the boundary, (physical separation between the Class 1 location and the non-hazardous or unclassified area).

## IQ POWER HL Static Bar

1. After the conduit and HL Junction Block are installed, unscrew the metallic cover. Then remove the plastic screw and the plastic insulating cover to expose the terminal block. Insert both of the high voltage cables from the single static bar and power supply into the HL Junction Block.
2. Cut the high voltage cables to length and trim the black PVC jacket to expose 1 $\frac{3}{4}$ " (1.75" [44.45 mm]) of both high voltage cables insulation as shown in **Figure 3**. Use extreme care not to nick or cut the high voltage cable insulation when removing the black PVC jacketing.

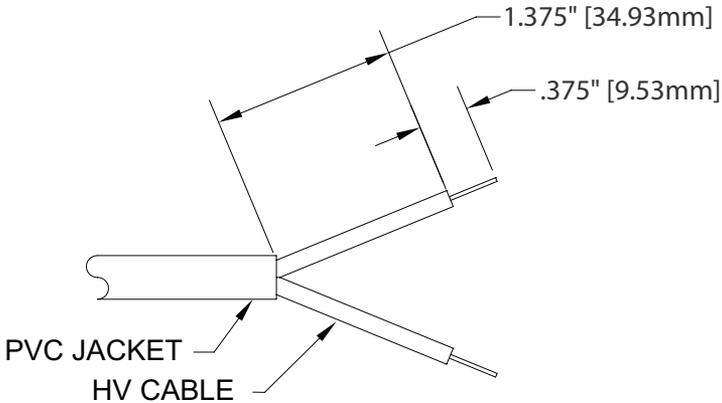


FIGURE 3

3. Strip the insulation of both high voltage cables 3/8" (0.375" [9.53 mm]) to expose the conductor.
4. Insert and firmly crimp the #8 ring lug supplied with the HL Junction Block onto each of the four cables as shown on **Figure 4** using Panduit tool CT-1550 or equivalent. For a superior connection, consider soldering lugs to conductors.

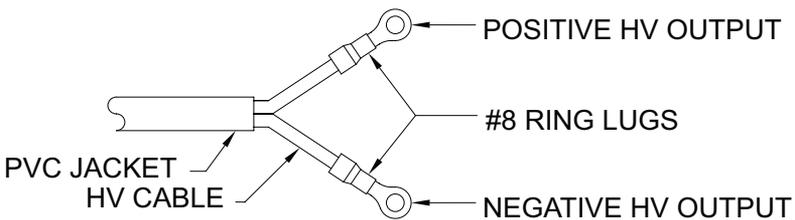
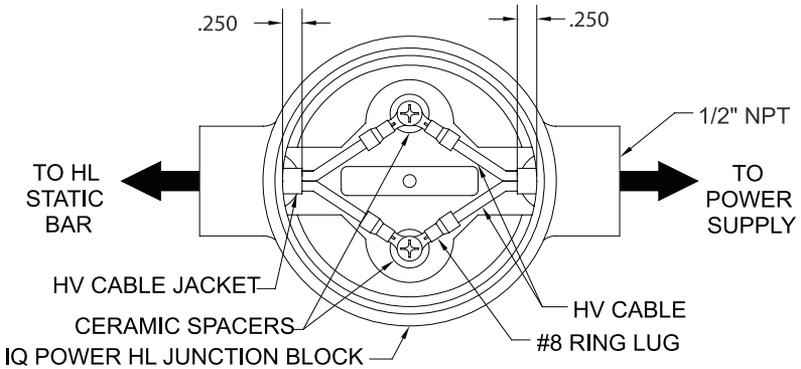


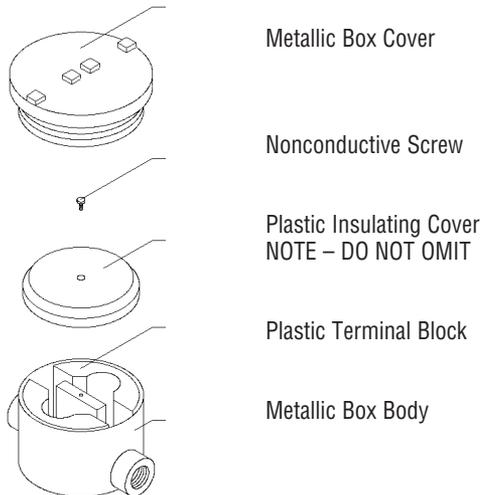
FIGURE 4

- Carefully attach both high voltage cables with ring lugs to the ceramic spacers using the #8 screws provided with the HL Junction Block kit.
- Ensure that there is at least  $\frac{1}{4}$ " (0.250" [6.35 mm]) of the black PVC jacket protruding beyond the input ports of the HL Junction Block as shown in **Figure 5**.



**FIGURE 5**

- The plastic insulating cover must be re-installed over the terminal block and secured with the plastic screw **BEFORE** the metallic cover is screwed back on as shown in **Figure 6**.



**FIGURE 6**

## Wire Preparation for the “Y” Sealing Fitting

The IQ POWER HL static bar requires the use of the conduit sealing fitting. A “Y” type sealing fitting for hazardous locations is supplied with the kit. The high voltage wiring from the IQ POWER HL static bar must be properly prepared to ensure the sealing at the “Y” fitting(s).

### Procedure

1. Determine the location of the “Y” sealing fitting.
2. The high voltage wire from the IQ POWER HL static bar should be located in the conduit as it will be installed. This will prevent unnecessary twisting of the cable when the static bar is screwed to the conduit which could cause a failure of the cable.
3. Strip 1¾” (1.75” [45 mm]) length of the black PVC jacket to expose the two high voltage cables. Be careful not to nick the white plastic insulation on the high voltage cables.

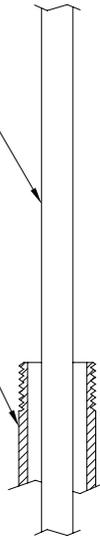


**NOTE!** It is recommended to practice stripping off the jacket on the waste end of the high voltage cable prior to preparing the cable. This will minimize the risk of nicking or cutting the white high voltage insulation.

BLACK PVC JACKETED  
2-WIRE CABLE FROM  
IQ POWER HL  
STATIC BAR

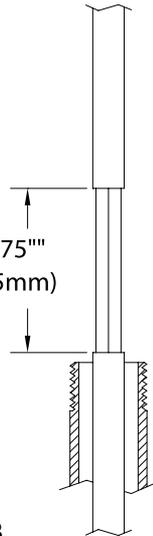
CONDUIT FOR  
IQ POWER HL  
STATIC BAR

FIGURE 7



1.75" (45mm)

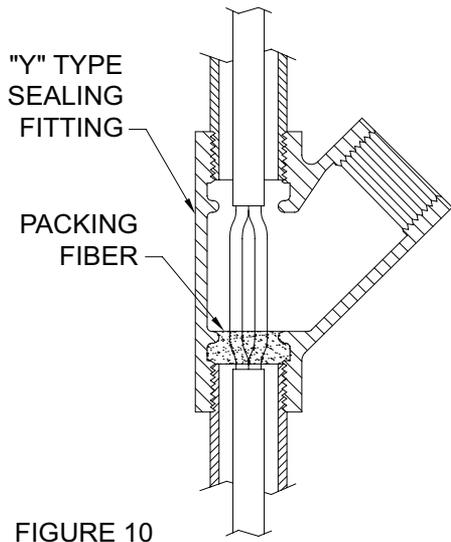
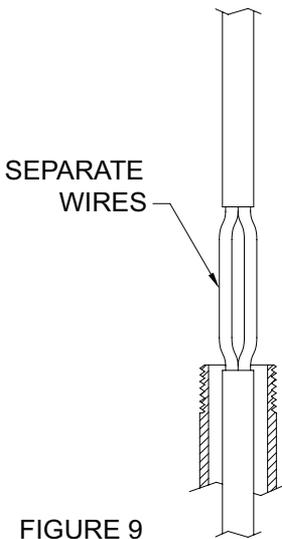
FIGURE 8



4. Separate the high voltage wires as shown in **Figure 9**.
5. Install the “Y” sealing fitting onto the conduit and tighten.

**NOTE!** The “Y” sealing fitting must be secured to the conduit with a minimum of 5 full turns.

6. Install the packing fiber generally following the “Y” sealing fitting manufacturers’ instructions while maintaining the high voltage wire separation. Refer to **Figures 9 and 10**.
7. Continue assembling the “Y” sealing fitting using the fitting manufacturers’ instructions regarding the sealing compound preparation, installation and curing.
8. Install the close-up plug and tighten completely.



**NOTE!** The “Close-Up” plug must be secured to the “Y” sealing fitting with a minimum of 5 full turns.

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## 5. Warranty

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Simco-Ion warrants its products to be free of defects in components, workmanship, or materials for a period of one year from date of purchase. This warranty does not apply to any physical or electrical damage caused by misuse, abuse or negligence (such as any modifications made to the unit or service work done by any other than Simco-Ion authorized technicians). Any unit with altered or removed serial number is ineligible for warranty.

Simco-Ion will not be liable for loss or damage due directly or indirectly to an occurrence or use for which the product is not designed or intended. In no event shall Simco-Ion be liable for incidental or consequential damages except where state or regional laws override.

This warranty extends to the original purchaser and is not transferable. No person, agent, distributor, dealer or company is authorized to change, modify, or amend the terms of this warranty in any manner whatsoever.

All products returned must have an “RA” (Return Authorization) number regardless of warranty status. Call Simco-Ion for an assigned RA number.

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