

# PerforMAX® IQ HL Static Control System



Approved for Class 1, Division 1,  
Group D Environment

Efficient neutralization with ranges  
up to 18" inches max and web  
speeds to 3,000 feet per minute

Communication Module:  
with computer interface and  
software or fieldbus network  
capability for remote monitoring  
and performance logging

Web Monitor:  
for downstream static charge  
identification and closed-loop  
system control with multiple  
probe capability.

The PerforMAX IQ HL is an intelligent air ionization system that enables the user to be in charge of static electricity. It is designed to efficiently neutralize electrostatic charges on films, paper non-wovens and fabric in web or sheet form.



WORLDWIDE LEADERS IN STATIC CONTROL

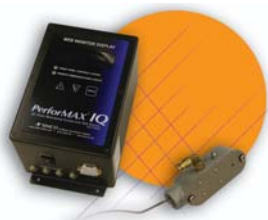
 **SIMCO®**  
An Illinois Tool Works Company



Static Bar and Power Supply



Communication Module



Web Monitor & Probe



Junction Block

## PerforMAX IQ HL Static Bar

The rugged PerforMAX IQ HL static bars are tailored to the application. Speed bars are optimized to operate on high speed webs at distances 2" to 9" [50mm to 230mm]. Hybrid bars are optimized to operate at 6" to 18" [150 to 460mm] on webs where the web path is somewhat variable. Each static neutralizing bar features current limiting at each individual ion emitting pin to minimize the risk of hazardous electrical shock if the bar is touched while in operation or to eliminate the risk of explosion in specific classified areas.

## PerforMAX IQ HL Power Supply

The Basic Power Supply (BPS) is the heart of the PerforMAX IQ HL system because it not only provides the high voltage output power producing ionization, but the BPS also processes all of the system intelligence to maintain and communicate complete static control. Patent Pending features include auto-calibration and dual-axis feedback control. Indicators on the power supply display system status, power, service status, and fault conditions.

## PerforMAX IQ Communication Module

The optional PerforMAX IQ Communication Module creates a remote computer interface link between the IQ system and a PLC or PC, to provide a comprehensive real-time summary of performance and system alarm data. Ideal for those users that require a historical record for lot control or customer review if requested. The module can be configured to utilize system supplied software or a number of fieldbus communication protocols such as Profibus, EtherNet or Modbus as examples.

## PerforMAX IQ Web Monitor

The optional PerforMAX IQ Web Monitor Module is an innovative tool used to install a closed-loop, total control, ionization system in a production environment. The downstream charge recognition enables the IQ to maintain maximum performance, and also display that performance to the end-user. The web monitor is capable of powering up to 4 sensor probes on each monitor, and has programming capabilities that allow the sensors to be mounted at 1", 2" or 3" from the surface. The web monitor also has a programmable alarm feature that allows the operator to set the alarm threshold for each individual probe. This truly innovative feature puts the operator in control of static electricity.

## Junction Block for the PerforMAX IQ HL

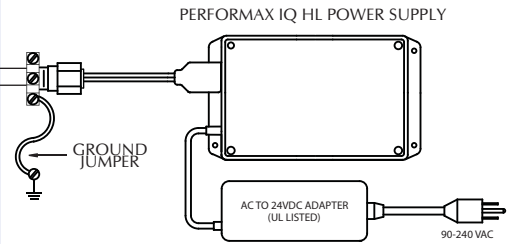
The junction block provides an intermediate connection point or hazardous location installations of the PerforMAX IQ HL. The junction box allows quick disconnect capability for equipment service or replacement, without having to remove the entire electrical wire/conduit installation.

The junction box is approved for Class 1, Division I, Group D; Class II, Division I, Groups F and G and Class III, Division I hazardous locations.

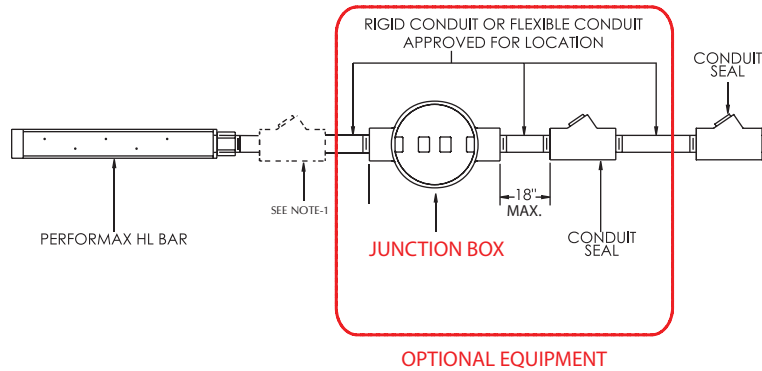
## HAZARDOUS (CLASSIFIED) LOCATION

## NON-HAZARDOUS (UNCLASSIFIED) LOCATION

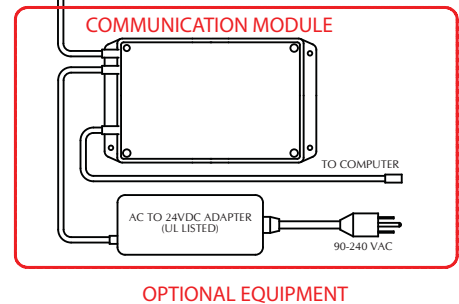
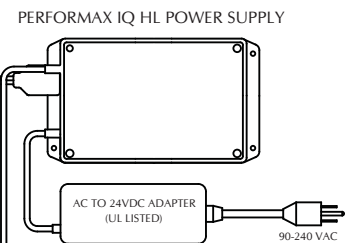
### BASIC INSTALLATION



### ALTERNATE INSTALLATION WITH COMMUNICATION MODULE & JUNCTION BOX

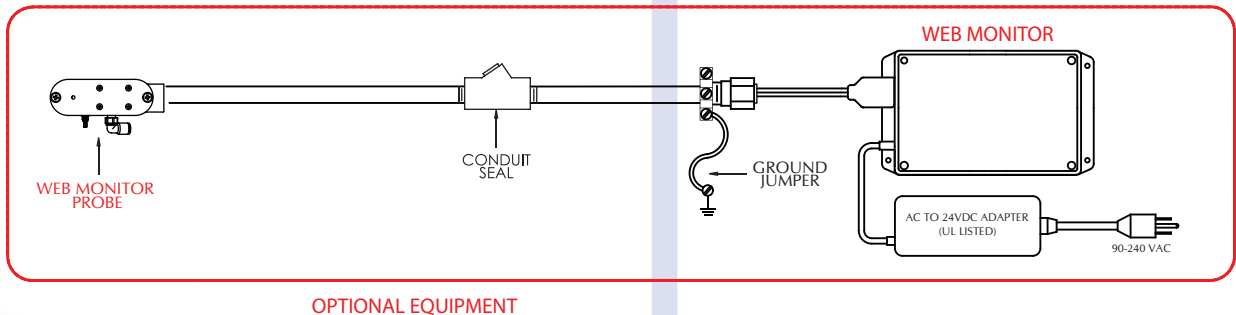


Hazardous Boundary



NOTE 1 - Installations with greater than 18" of conduit between Static Bar and HL Junction Block may require additional sealing fittings.

### WEB MONITOR INSTALLATION



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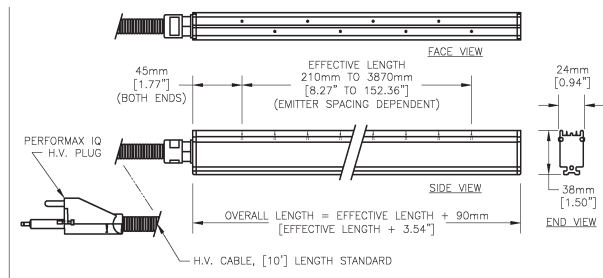
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## Specifications

PerforMAX IQ HL Static Bars	
<b>Max. Operating Voltage</b>	$\pm 9.5$ KV PEAK
<b>Nominal Bar Length:</b>	
<b>Speed Bar</b>	301mm to 3961mm [11.85" to 155.95"] Overall Length
<b>Hybrid Bar</b>	721mm to 3961mm [28.38" to 155.95"] Overall Length
<b>Profile Dimensions:</b>	24mm W x 38mm H [0.94" W x 1.50" H]
<b>Weight:</b>	1.2 g/mm [0.07 lb/in]
<b>Operating Temperature:</b>	Temp. Code T4 / Ta 0° - 80°C [32° - 176°F]
<b>Maximum Humidity:</b>	80% RH, no dewing permissible
<b>Housing:</b>	Glass -fiber -reinforced polyester
<b>Connection:</b>	1/2" NPT male thread at end of bar for metal conduit
<b>High Voltage Cable:</b>	3m [10'] standard / 27.43m [90'] maximum
<b>Emitter Material:</b>	Proprietary alloy specially selected to extend pin life
<b>Emitter Current:</b>	50uA maximum per emitter
<b>Emitter Spacing:</b>	
<b>Speed Bar</b>	30mm [1.18"]
<b>Hybrid Bar</b>	90mm [3.54"]
<b>Operating Distance:</b>	
<b>Speed Bar</b>	50mm to 230mm [2" to 9"]
<b>Hybrid Bar</b>	150mm to 460mm [6" to 18"]
<b>Installation Hardware:</b>	Plastic mounting brackets, metal perforated strips and stainless steel hardware (screws, nuts and washers).

## Dimension Drawing

### PerforMAX IQ Static Bar



## PerforMAX IQ HL Power Supply

<b>Input Power</b>	24VDC, 1.5A from AC adapter
<b>Output Voltage</b>	+/-7kV "Speed Bar" +/-7kV "Hybrid Bar"
<b>Dimensions</b>	202mm (L) x 123mm (W) x 106mm (H); [7.95" (L) x 4.84" (W) x 4.17" (H)]
<b>Weight</b>	1.94 kg [4.28 lbs.]
<b>Max Operating Temp</b>	43°C [4.28 lbs.]
<b>High Voltage Connectors</b>	2 proprietary PerforMAX IQ HL static Bar outlets

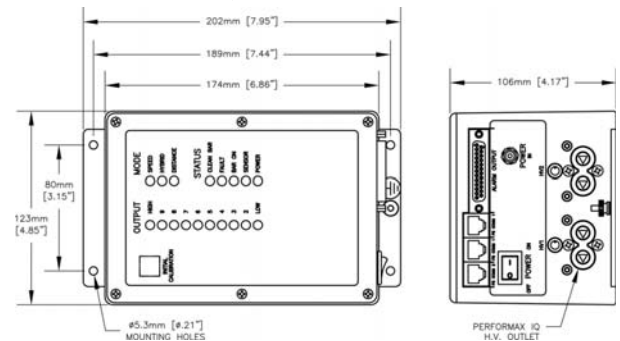
## Loading Capacity of the PerforMAX IQ HL Power Supply

Total Effective Length of Bars	Total Cable/Conduit Length
up to 50"	90'
51" to 100"	80'
101" to 125"	75'
126" to 150"	70'
151" to 200"	60'
201" to 250"	50'
251" to 275"	45'
276" to 300"	40'

<b>Hazardous (Classified) Location:</b>	Intrinsically Safe 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
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## Dimension Drawing

### PerforMAX IQ Power Supply



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## Specifications

### PerforMAX IQ HL Junction Block

**Dimensions:** 96mm W x 145mm L x 76mm H [3.8"W x 5.7"L x 3.0"H]

**Weight:** 0.72 kg [1.6 lb]

**Operating Temperature** 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

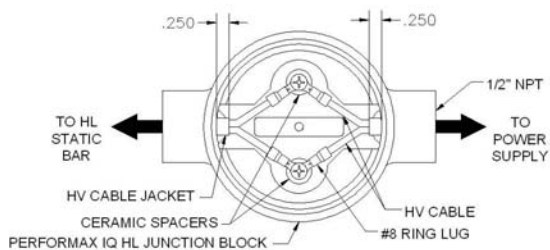
**Connection:** ½" NPT female threads in the body each side

**Packing Fiber** ADALET ADACO XAF-6

**Sealing Cement** ADALET ADACO No.1

### Dimension Drawing

#### PerforMAX IQ Junction Block



### PerforMAX IQ Communication Module

**Input Power** 24VDC, 1.0A from PerforMAX IQ (BPS) system/AC adapter

**Communication Module** Anybus CompactCom, see Replacement Parts/Additional Items section of manual for protocols available

**Dimensions** 202mm (L) x 123mm (W) x 55mm (H); [7.95" (L) x 4.84" (W) x 2.16" (H)]

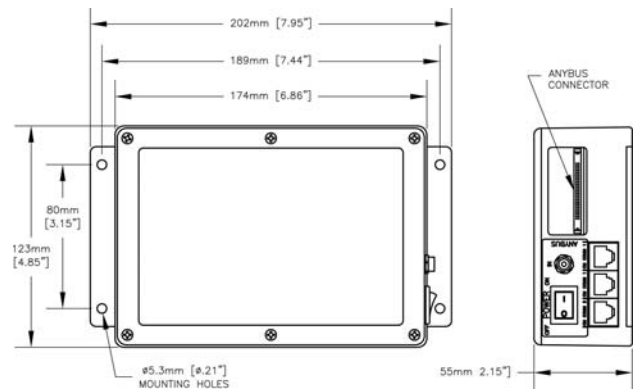
**Weight** 0.77 kg [1.70 lbs.]

**Max Operating Temp** 43°C [110°F]

**Housing** Aluminum, black epoxy powder coated

### Dimension Drawing

#### PerforMAX IQ Communication Module





## Specifications

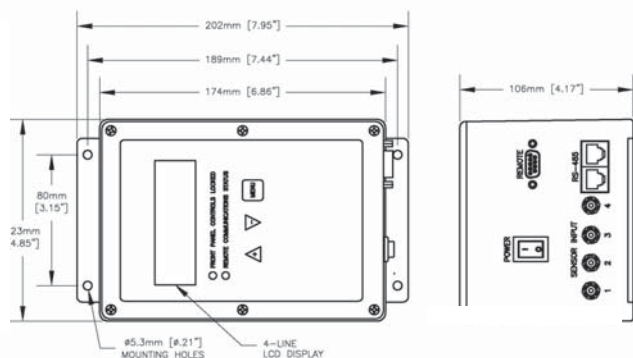
### PerforMAX IQ Web Monitor

#### Web Monitor Module

<b>Input Power</b>	24VDC, 0.25A from PerforMAX IQ (BPS) system
<b>Probe Quantity</b>	Total 4 probes maximum
<b>Dimensions</b>	202mm (L) x 123mm (W) x 106mm (H); [7.95" (L) x 4.84" (W) x 4.17" (H)]
<b>Weight</b>	1.12 kg [2.48 lbs.]
<b>Max Operating Temp</b>	43°C [110°F]
<b>Housing</b>	Aluminum, black epoxy powder coated

### Dimension Drawing

#### PerforMAX IQ Web Monitor



### PerforMAX IQ Probe

#### Probe

<b>Operating Distance</b>	25mm [1"], 50mm [2"], 75mm [3"] firmware selectable
<b>Installation Location</b>	Downstream of IQ static bar
<b>Input Power</b>	from PerforMAX IQ Web Monitor
<b>Purge Connection</b>	¼" tube quick connect
<b>Purge Flow</b>	0.85 m <sup>3</sup> /h [0.5 cfm] to 5.0 m <sup>3</sup> /h [3.0 cfm], (1 psi max) clean, dry air
<b>Dimensions</b>	110mm (L) x 35mm (W) x 37mm (H); [4.33" (L) x 1.38" (W) x 1.46" (H)]
<b>Weight</b>	0.22 kg [0.48 lbs.]
<b>Max Operating Temp</b>	43°C [110°F]
<b>Housing</b>	Aluminum and Stainless Steel
<b>Communication Cable Length</b>	50 ft., can be cut to length during installation

### Dimension Drawing

#### PerforMAX IQ Web Monitor Probe

