



An ITW Company

IQ Power™ BPS-C Power Supply For Conveyostat® In-Line Ionizer

INSTALLATION AND OPERATING INSTRUCTIONS

TABLE OF CONTENTS

1. SAFETY WARNINGS	1
2. DESCRIPTION	3
3. SPECIFICATIONS	4
4. INSTALLATION	5
Mounting and Grounding.....	5
Electrical Connection	6
Set Up with Control Station.....	16
5. OPERATION	18
Power Supply Indicators	18
Power Supply Operators	18
System Start-up	18
System Operation (with IQ Power Control Station)	19
6. MAINTENANCE	20
Cleaning the Static Bars.....	20
Calibration	21
7. TROUBLESHOOTING	22
8. PARTS AND ACCESSORIES	23
9. WARRANTY AND SERVICE	24

1. SAFETY WARNINGS

PLEASE READ THE INSTRUCTIONS COMPLETELY BEFORE STARTING THE INSTALLATION.

ALL INSTALLATION AND TROUBLESHOOTING OPERATIONS MUST BE PERFORMED BY QUALIFIED TECHNICAL PERSONNEL.

This instruction the manual uses symbols to identify dangerous situations as follows:



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



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

ATTENTION – Les déclarations identifiées avec **ATTENTION** indiquent des dangers potentiels pour la sécurité.



WARNING – Statements identified with **WARNING** indicate potential serious injury hazards.

AVERTISSEMENT – Les déclarations identifiées avec **AVERTISSEMENT** indiquent un risque de blessures graves.



NOTE – This equipment must be correctly installed and properly 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.
4. Turn off input power to unit before connecting or disconnecting other equipment.
5. Do not operate system in close proximity to flammable liquids.
6. Do not use standard Ethernet cables with IQ Power Systems.



CAUTION – This product is intended to be supplied by a Listed AC Adapter or Power Unit marked “Class 2” or “LPS” and rated output 24 VDC, 1.6A, as provided. Negative must be grounded.

ATTENTION – Ce produit est destiné à être alimenté par un adaptateur de courant alternatif ou transformateur listé “ classe 2 “ ou “ LPS “ et avec une puissance nominale 24 VDC , 1.6A. Le négatif doit être mis à la terre.

**CAUTION – Electrical Shock Hazard**

Disconnect input power to high voltage power supply before connecting or disconnecting static neutralizing bars or performing any maintenance to the system. Avoid touching static neutralizing bar when power supply is energized.

ATTENTION – Risque De Choc Électrique

Couper l'alimentation à l'alimentation électrique de haute tension avant de brancher ou de débrancher la barre de neutralisation statique ou d'effectuer un entretien au système. Évitez de toucher la barre de neutralisation statique lorsque l'alimentation électrique est sous tension.

**WARNING – Fire Hazard**

Do not install or operate power supply in close proximity to any flammable liquids or solvents.

AVERTISSEMENT – Risque d'incendie

Ne pas installer ou d'utiliser le l'alimentation électrique à distance à proximité de liquides ou de solvants inflammables.

2. DESCRIPTION

Simco-Ion's IQ Power BPS-C Power Supply is designed to power Simco-Ion's Conveyostat in-line ionizer for pneumatic conveyors. The BPS-C, used with the Conveyostat, generates both positive and negative ions in extremely high quantities. This allows the neutralization of static charges on materials moving through the Conveyostat.

The BPS-C provides monitoring for relative ion output levels and static bar condition. The BPS-C will indicate when routine static bar cleaning is needed and if a fault should occur in the system. The BPS-C also provides these indicators as an electrical output for facility monitoring use.

The BPS-C can be integrated into the more comprehensive IQ Power System by connecting it to an IQ Power Control Station. The Control Station is a centralized interface that provides power and communication for up to ten IQ Power or IQ Easy devices. The two-way digital communication provided by the Control Station enables monitoring and logging of system performance and allows access to enhanced features in the static neutralization system.

3. SPECIFICATIONS

BPS-C	
Input Power	24VDC, 1.6A, negative ground, from AC Adapter or Control Station
Output Voltage	±5 kV
Bar Lengths	Simco-Ion BPS-C or Dual Phase+ (legacy installations) Maximum Load (total maximum connected to the BPS-C) Total bar length 600" [15.25m] Total cable length 300' [91.44m]
Dimensions	7.95"L x 4.85"W x 4.17"H [202mmL x 123mmW x 106mmH]
Weight	4.28 lb [1.94 kg]
Operating Temp	110°F [43°C] max
Enclosure	Aluminum, blue epoxy powder coated
HV Connectors	2 proprietary IQ Power plug-in outlets
Replacement Fuse	5A, 250V, Type – 3AG, Time Delay
AC Adapter	
Type	"Universal" desktop
Input Power	100-240 VAC 50/60 Hz (IEC 320 inlet)
Output	24 VDC, 1.6A max
Dimensions	4.33"L x 2.05"W x 1.26"H [110 x 52 x 32]
Weight	5.3 oz [150g]
Enclosure	Thermoplastic, black

4. INSTALLATION



NOTE – DO NOT USE standard Ethernet cables with IQ Power systems. Avoid permanent equipment damage by using only Simco-Ion modular cables. (Refer to Section 8, Parts and Accessories).

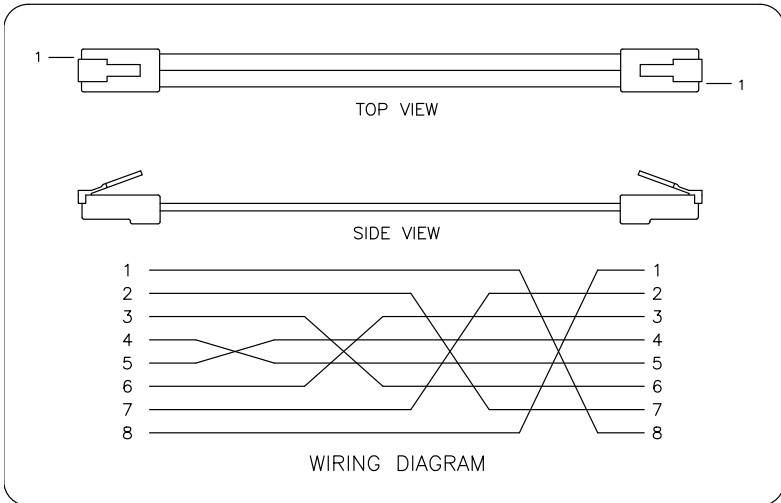


Figure 1. IQ Power Crossover Modular Cable (black)

Mounting and Grounding

1. Locate power supply at a convenient place within reach of the high voltage cable from the Conveyostat and visible to the machine operator. Power for the AC adapter (if used) and an electrical ground connection must be available for the BPS-C. The Conveyostat must be grounded for operation.
2. Secure power supply to the mounting surface (commonly a machine frame) using M5 or M4 [#10 or #8] hardware (not supplied).
3. Locate AC adapter (if used) at a convenient place within reach of the power supply.
4. Install AC Adapter (if used) by cleaning back of adapter and mounting surface with alcohol. Allow alcohol to dry. Secure AC adapter to mounting surface with two self-adhesive mounting pads.



NOTE – Do not apply line voltage to the AC adapter until installation is complete. Also, ensure that all input power switches are in the OFF (0) position.

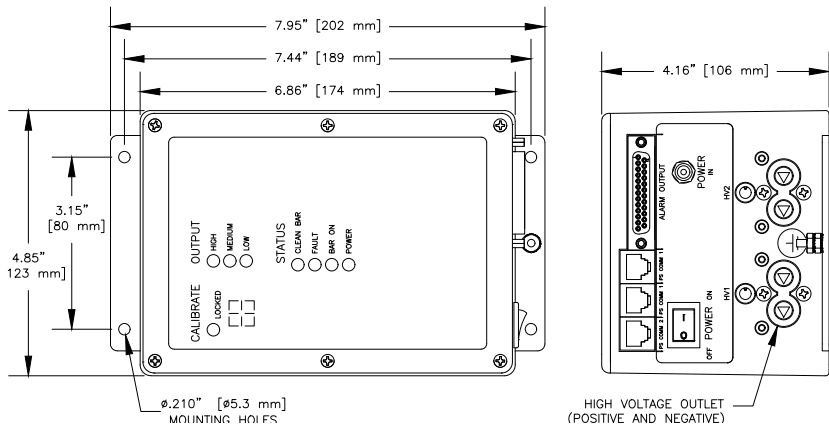


Figure 2. IQ Power BPS-C Dimensions

Electrical Connection

1. **Ground BPS-C** by connecting ground lead between ground terminal on flange of the power supply and a good electrical machine ground.
2. **Ground Conveyostat** by connecting ground lead between ground terminal on Conveyostat and ground stud on power supply or a good electrical machine ground.
3. **Connect BPS-C to Conveyostat** using an IQ Power Extension Cable. The Conveyostat must be equipped with a two-prong HV connector assembly. The connector assembly at the Conveyostat plugs into the receptacle end of the HV extension cable. Secure connection with (2) captive screws on connector, DO NOT over-tighten screws. HV extension cables may be chained together to a maximum of 300 feet {915 meters} per BPS-C. The plug-end of HV extension cable plugs into HV1 or HV2 on the BPS-C. Secure connection with (2) captive screws on plug, DO NOT over-tighten screws. See BPS-C and Conveyostat connection diagrams.



CAUTION – Electrical Shock Hazard

Do not connect static neutralizing bar with power supply energized. Disconnect input power or switch power off before connecting static bar.

ATTENTION – Risque de choc électrique

Ne branchez pas la barre de neutralisation statique avec alimentation sous tension. Couper l'alimentation ou coupez le courant avant de connecter la barre statique.



NOTE – Failure to fully seat the high voltage connectors into the power supply connectors may result in permanent damage to the bar, cable, or power supply.



NOTE – Maximum total bar length is 600 inches [15.25 meter] and maximum total cable length is 300 feet [91.44 meter]. The total bar length is the sum of the length of white static eliminating bars on all Conveyostat ionizers connected to the BPS-C (both HV1 and HV2 connectors). The total cable length is the sum of all IQ Power extension HV cables connected to the BPS-C power supply (both HV1 and HV2 connectors).

The exposed pin on the extension cable connector activates the BPS-C power supply. Secure the high-voltage cable between the BPS-C and Conveyostat. Route the flexible conduit clear of moving machine parts and other wiring. Bends in the conduit must not “kink”. Secure conduit using nylon wire ties (not supplied).

High voltage cable used with the BPS-C comes with flexible protective conduit. If additional protective conduit is required, it should be non-metallic.

Where the BPS-C is being used to replace a Dual Phase+ power supply, disconnect and remove the Dual Phase+ power supply. Prepare the existing HV wiring by installing spring-loaded cable connectors (SLCC). Follow instructions included in the adapter kit to install the SLCC connectors. Attach the SLCC connectors to the BPS-C to SLCC Adapter. Plug adapter into HV1 or HV2 on the BPS-C. Secure connection with (2) captive screws on plug, DO NOT over-tighten screws. See BPS-C instruction manual



NOTE – When retrofitting note that the BPS-C is designed to work with resistively coupled static eliminators. Conveyostat in-line ionizers with serial numbers beginning with “16” or greater have resistively coupled static bars. If the Conveyostat serial number begins with “15” or less, the static bars should be replaced.

4. **Connect BPS-C Power** either from AC Adapter, Control Station, or a user-supplied source.
 - a. **Connect AC Adapter** (if used, AC adapter is not required if the BPS-C is connected to a Control Station). Make sure “POWER” switch on power supply is in the “OFF” (0) position. Route low voltage wire clear of moving machine parts and protect it from abrasion. Secure using nylon wire ties (not supplied). Do not over tighten. Insert barrel connector into “POWER IN” connector on the power supply. Hand-tighten barrel connector nut to secure.

Connect line voltage to input side of AC adapter. The AC adapter is a universal input type that accepts line voltage from 100 to 240 VAC 50/60 Hz. The AC adapter line voltage connector accepts a line cord with an IEC 320 connector (supplied). The line cord also provides electrical ground to the AC adapter. Check electrical ground integrity in the line voltage receptacle used for the AC adapter. This ground must not be defeated.

- b. **Connect Control Station** (if used). The Control Station supplies 24 VDC power for the IQ Power static eliminator power supplies. Cables must be IQ Power 8-conductor modular cables with RJ-45 connectors wired “crossover” (reference color: black, Figure 1). The modular cable plugs into one of the connectors labeled “POWER & COMM” on the Control Station and into either “PS COMM 1” connector on the BPS-C power supply. The modular cable should not be run parallel with static bar high voltage cable. Route modular cable clear of moving machine parts and protect it from abrasion. Secure using nylon wire ties (not supplied). Do not over-tighten wire tie. If there is an excess of modular cable, do not coil it in vicinity of static bar high voltage cable. If possible, cut modular cable to length and re-terminate using an RJ-45 connector installed with the same “polarization” as connector removed (note rib / wire color code to modular connector).

If multiple IQ Power supplies are connected to the Control Station, each power supply must have a unique Power Supply Number (address / device number). This is necessary to enable reliable digital communication. The Control Station can be used to automatically address the power supplies. The default Power Supply Number for a new unit is “1”. Plug the first power supply (only) into the Control Station and turn Control Station on. Allow Control Station to boot-up and begin operation. Plug second power supply into Control Station. The Control Station will re-address the second power supply to “2”. Plug third power supply into Control Station. The Control Station will re-address the third power supply to “3”. Repeat this process until all power supplies (or IQ Power / IQ Easy devices) are installed. Each power supply or device will be given a unique address (device number).

IQ Power BPS-C power supplies may also be manually re-addressed through the control station. See “Set Up with Control Station” (Address / Device Number) section.

- c. **Connect User Supplied Power** (if used). In cases where the user does not want to use the AC adapter but wants to supply 24 VDC power to the IQ Power BPS-C Power Supply, user supplied 24 VDC power may be applied two ways.

The “Power In” connector on end panel of IQ Power BPS-C Power Supply may be used to supply power to the system. This connector requires the use of a Switchcraft 760K barrel-type power plug. The plug should be wired +24 VDC to center and common (ground) to outer barrel. The common must be bonded to electrical ground. Wired in this fashion, the “Power” switch on end panel of power supply is in-circuit.

Alternatively, the “Alarm Output” connector on end panel of IQ Power BPS-C Power Supply may be used to supply power to the system. This connector requires the use of a standard DB25 connector. The connector should be wired:

- +24 VDC to pins 13 & 25
- Common (ground) to pins 12 & 24

To ensure current carrying capacity, two pins are used for each connection. The common must be bonded to ground. Wired in this fashion, the “Power” switch on end panel of power supply is bypassed.

Power supplied as above by user must have adequate current available to power BPS-C Power Supply (maximum 1.6A). Input power should be appropriately fused for safety purposes.

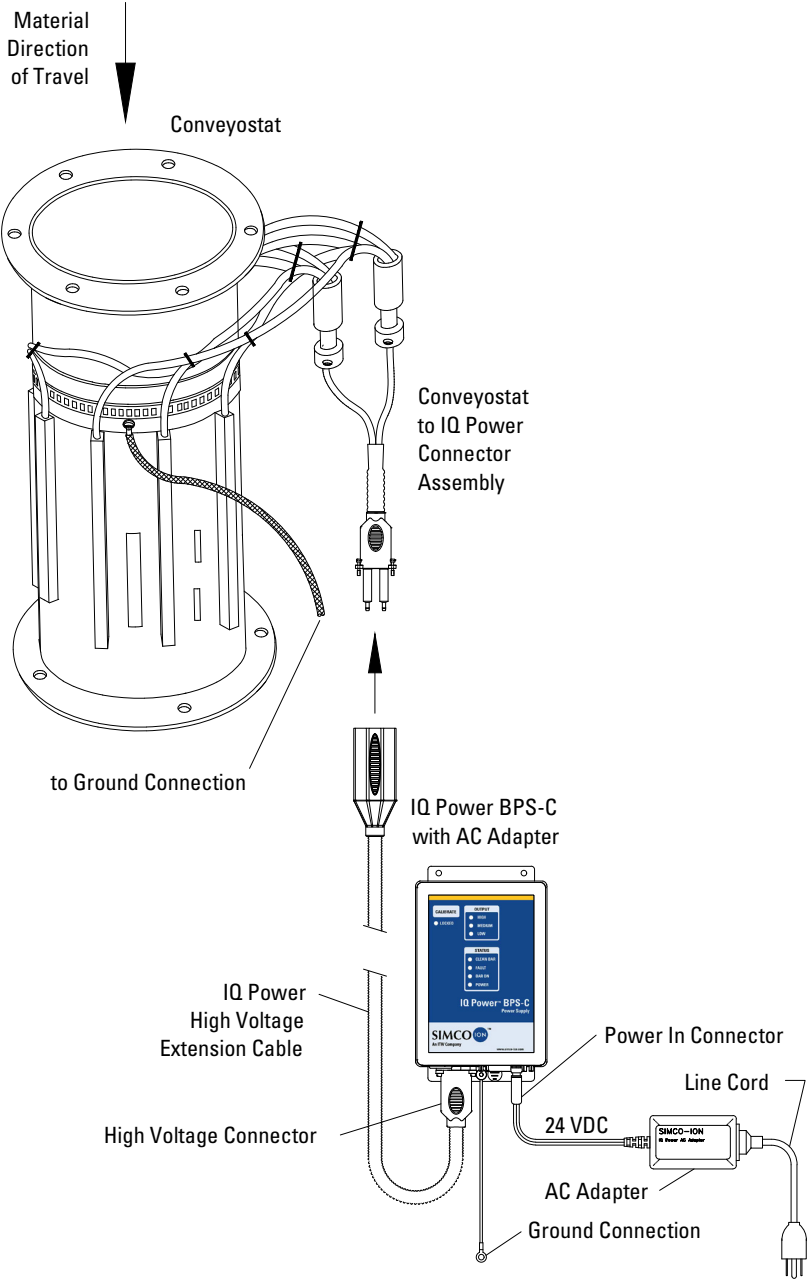
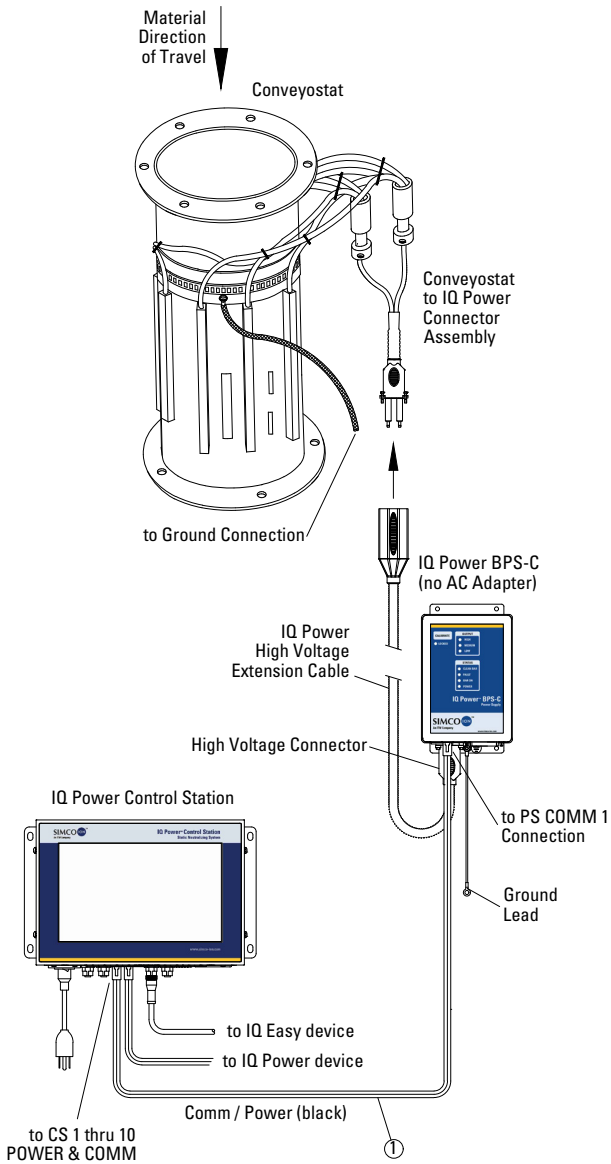
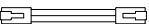



Figure 3. BPS-C and Conveyostat with AC Adapter



Comm / Data Cable Construction

① Crossover Wired   Reference color black

DO NOT USE standard Ethernet cables.

See Section 8 Parts and Accessories for available cable lengths and part numbers.

Figure 4. BPS-C and Conveyostat with Control Station

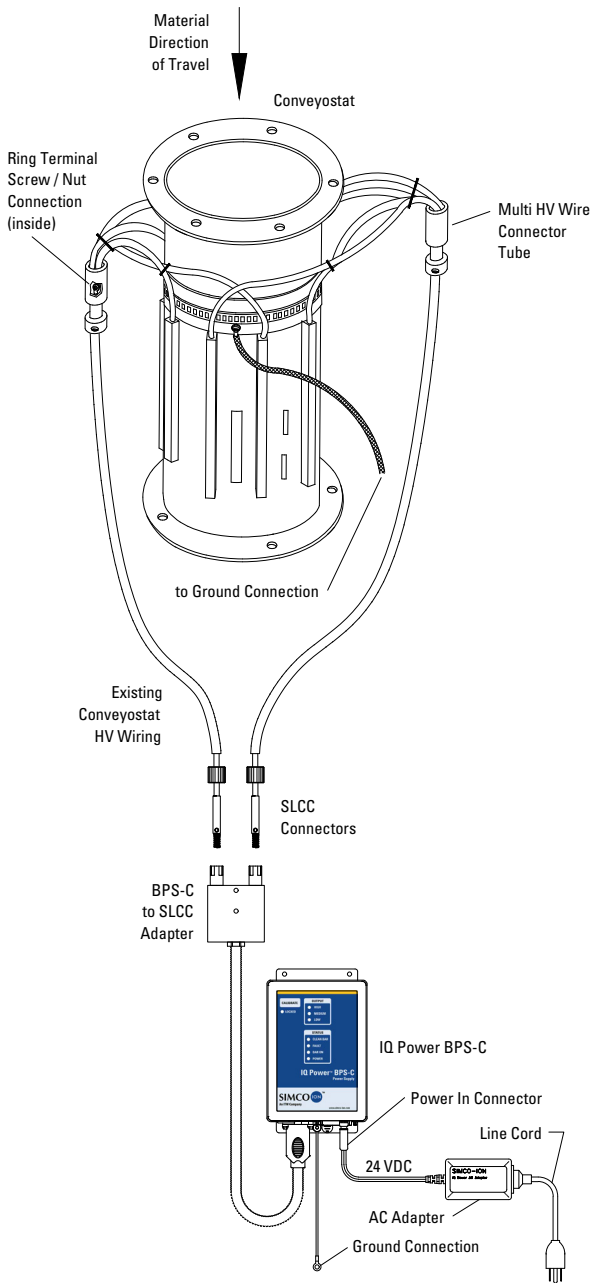


Figure 5. Conveyostat BPS-C with AC Adapter Retrofit

- Connect power supply alarm output (if used). The power supply “Alarm Output” is a standard DB25 pin connector located on the end of the IQ Power BPS-C Power Supply. A maximum length of 3 meters [10 feet] or less of cable is recommended.

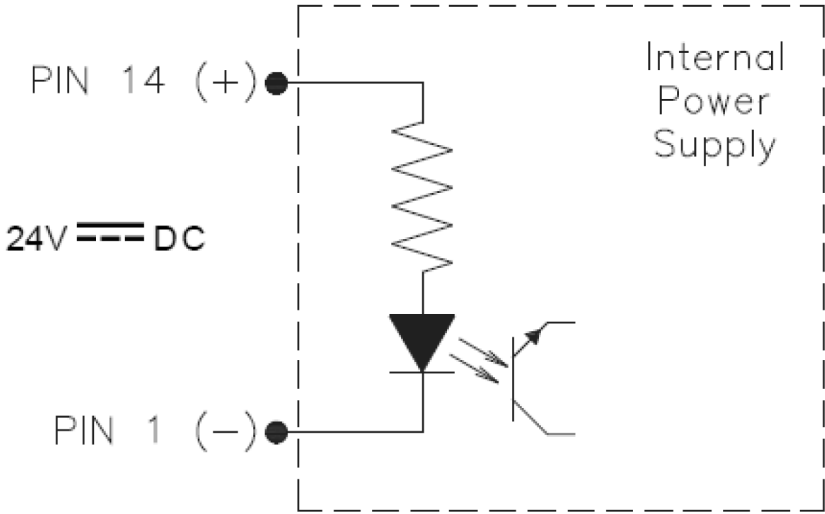


Figure 6. IQ Power BPS-C Alarm Output Connector

Alarm Output Connector Pin-out Table			
Pin	Description	Pin	Description
1	Remote on/off optocoupler (-)	10	No connection
14	Remote on/off optocoupler (+)	6	No connection
		19	No connection
2	Clean Bar Relay (common)*	11	Power Relay (common)*
3	Clean Bar Relay (normally closed)*	7	Power Relay (normally closed)*
16	Clean Bar Relay (normally open)*	20	Power Relay (normally open)*
8	Fault Relay (common)*		
4	Fault Relay (normally closed)*	12	Power in (ground)**
17	Fault Relay (normally open)*	24	Power in (ground)**
		13	Power in (+24VDC)**
9	Bar On Relay (common)*	25	Power in (+24VDC)**
5	Bar On Relay (normally closed)*		
18	Bar On Relay (normally open)*		
* 30V 1A Rating on Contacts. **1.6A Rating, connect pins 12 & 24 in parallel and 13 & 25 in parallel.			

The power supply alarm output provides a variety of relay contact outputs that indicate the status of the power supply. The relay contacts are rated for a maximum of 1A at 30 VDC. The alarm output connector also provides a means of remote power in.

6. Remote On/Off Control (if used). The power supply “Alarm Output” connector also provides for remote on/off control of the power supply. Remote on/off control is configured with a jumper on a pin header on the main power supply circuit board. The default configuration is with remote control disabled. The remote control can be configured “normally off” or “normally on” by the jumper setting (refer to Figure 6). To access the jumpers the cover will have to be removed from the power supply. Disconnect all input power from the power supply then remove the six screws securing the cover and slowly and carefully remove the cover.



Remote Control Optocoupler Schematic

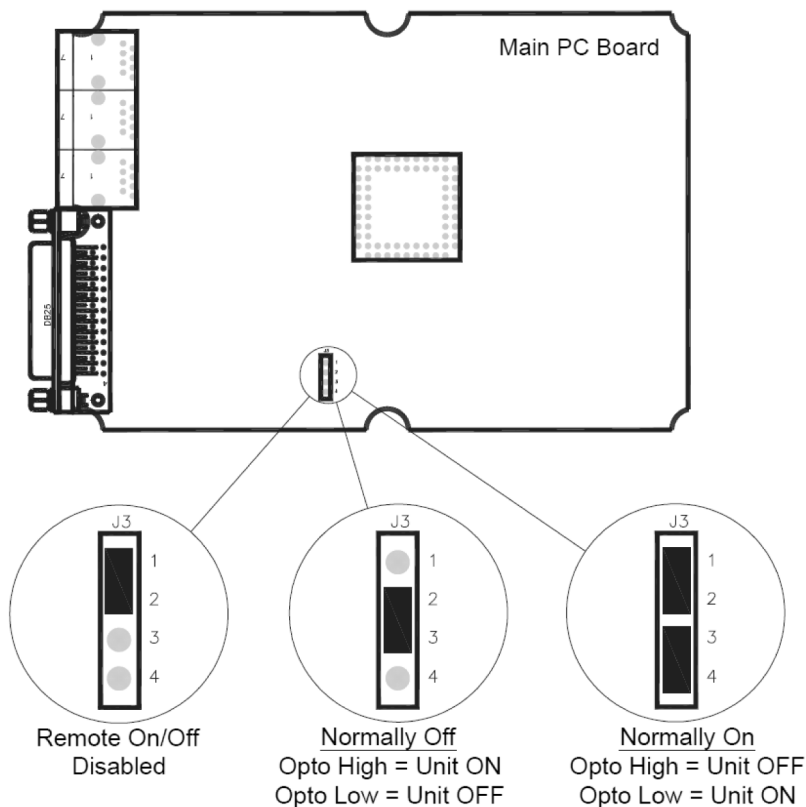


Figure 7. Jumper Position at J3 for Remote Control Operation

There is a ribbon cable connecting the face label on cover to the main circuit board. Use care not to disconnect this cable. If cable becomes disconnected, lift latches on sides of ribbon cable connector, insert ribbon cable fully into connector and press latches back down.

Reposition jumper to enable remote control either “normally on” or “normally off”, as desired (see Figure 6). Then replace cover and secure with six screws.

When operating a power supply using the remote-control circuit, power may be applied through the “Alarm Output” connector or the “Power In” connector on end panel. If the “Power In” connector on end panel is used, the “Power” switch must be set to ON (1) position.

Remote control is established by applying 24 VDC to the “Alarm Output” connector pins as specified in Figure 5. User-applied 24 VDC drives a low current optoisolator

on the IQ Power BPS-C Power Supply main circuit board, turning power supply on or off, depending on configuration of jumper J3.

Set Up with Control Station

Each IQ Power BPS-C power supply has an address (number) associated with it. These numbers serve to identify the power supply in digital communications. This address can be a number of 1 through 10 (the default is “1”).

The power supply address numbers may be manually adjusted or may be automatically set by the Control Station. Having multiple power supplies with the same address number connected to a Control Station is not permitted.

To manually adjust power supply address, connect unit by itself to a Control Station. Turn the Control Station on and allow the Control Station to begin running. Tap the device icon for the BPS-C power supply. Tap the Neutralizer tab. Tap the right arrow to get to page 2. Locate and tap the editing pencil icon for Device Address. You will be prompted to enter the Control Station password (default password is “PASSWORD”). A touch pad will appear that may be used to manually set the power supply address. The power supply will flicker its indicator lights to confirm setting of the power supply address. Navigate to the Control Station home page and refresh by tapping on the small refresh icon (circle / arrow) on the bottom right of the screen.

To automatically set power supply address, use the Control Station. The default Power Supply Number for a new unit is “1”. Plug first power supply (only) into Control Station and turn Control Station on. Allow Control Station to boot-up and begin operation. Plug second power supply into Control Station. The Control Station will re-address second power supply to “2”. Plug third power supply into Control Station. The Control Station will re-address third power supply to “3”. Repeat this process until all power supplies (or IQ Power / IQ Easy devices) are installed. Each power supply or device will be given a unique address (device number).

A variety of information can be checked, and operating parameters set, for the IQ Power BPS-C power supply through the IQ Power Control Station via the device page. Tap on the BPS-C device icon to access these pages. A summary tab will appear offering important information. A tab for neutralizer will also appear. Tapping on the neutralizer tab opens a page where operating parameters may be edited or selected. Typical parameters below.

Device Name: A user-editable name to identify specific device (14 character).

Bar Type: A fixed description for the type of bar connected to the BPS-C power supply.

Bar HV: Allows turning internal HV power supplies on / off.

Ion Output: Displays the ionization level, in percent, where Bar Calibration = 100% and the ionization level in terms of microamps for both positive and negative ionization.

Balance: A ratio of input power supplied to the high voltage power supplies that is related to ion balance. In Fixed modes this is a display-only and non-editable. The Balance may only be user adjusted in the Manual mode.

Operation Mode: A user selectable operating mode for the static bar (Manual, Fixed).

- **Fixed:** 50/50 balance standard operation (default factory setting). Fixed provides standard operation, with output voltage regulation.
- **Manual:** Allows manual control of ion balance. Manual mode includes voltage regulation and current monitoring found in the standard mode, plus manual control of the ion balance ratio. This mode of operation would only be selected where the web, or material to be neutralized, exhibited extreme and consistent charging of one polarity.

Device Address: The Power Supply Number (address / device number) assigned to the BPS-C power supply. The address may be edited, but duplicate address numbers are not permitted.

Device Version: The firmware revision in device.

Device Locator Utility: Causes indicator lights on device (power supply) to flicker for a brief time to aid in verifying location of a given device.

Alarm Test Utility: Causes an alarm output to aid in checking/troubleshooting alarm-sensing connections.

Device Calibration: Displays the time and date of last calibration and allows for calibration of the power supply and bar. Calibration is used to set the output level to 100% with the bar at maximum output (maximum output varies with bar length and operating conditions).

Clean Bar Threshold – Displays the threshold in output level percent used to set the clean bar alarm and allows for setting of the clean bar threshold.

5. OPERATION



NOTE – Before switching on power; ensure that units are properly grounded and that static eliminator is properly installed.

Power Supply Indicators

Power: Lights (green) to indicate power is on and the IQ Power BPS-C Power Supply is ready to operate.

Bar On: Lights (green) to indicate when static neutralizing is active.

Fault: Lights (red) to indicate faulty condition of static neutralizer, power supply or high voltage connections. Power will have to be turned off to clear the fault. When the fault is cleared and power is restored, the fault light will be extinguished.

Clean Bar: Lights (yellow) to indicate need to clean static bars. Clean Bar indicator may light with low ion output (dirt build-up on ion emitters) or high output current (conductive contamination on face of bar).

Output: The output indicators range Low, Medium, or High to indicate the system relative ion output. The output will normally be in the high range. Low output generally indicates the need to clean the static bar.

Locked: Lights to indicate calibration at the BPS-C is locked out. This occurs automatically when a Control Station is connected, where calibration is performed through the Control Station.

Power Supply Operators

Calibrate: Is a momentary push button switch located on the face label. Pressing the face label firmly on “Calibrate” initiates calibration sequence and sets relative nominal ion output for the system.

System Start-up

1. Apply power to, and activate the BPS-C.
2. The power supply indicators will briefly self-test during which all will light.
3. Immediately after self-test, the power supply indicators will settle to display the system status.

On new systems the Output indicator will settle to display low output, and initial calibration must be performed.



NOTE – Calibration should be performed when the system is first installed and may be performed after the static bars have been cleaned and the system verified as operating correctly.

4. If the system is new, perform an initial calibration. The initial calibration sets relative nominal ion output for the system. The calibration should only be performed on systems that are new or just cleaned and known to be in proper working order.

During calibration the Conveyostat must be clear of material, i.e. no material is to be flowing through the Conveyostat. If material is flowing in the Conveyostat (e.g. the machine is in operation) the calibration may be faulty.

The system should be “on” and in the operating mode (not in start-up mode). On units NOT connected to a Control Station: press the face label on power supply firmly on the word “Calibrate”. This will initiate the calibration sequence and set relative nominal ion output for the system. On units connected to a Control station, tap on the device icon, neutralizer tab. The Device Calibrate button may be found on page 2. Tapping on Device Calibration initiates the calibration sequence.

During calibration the system output will be cycled. At completion of calibration the indicator lights will flicker. The indicated ion output will be high. The calibration sequence takes less than one minute.

The calibration data is stored in non-volatile memory and used on subsequent power-ups.

System Operation (with IQ Power Control Station)

The operation of the IQ Power BPS-C Power Supply can be controlled through the IQ Power Control Station. In operation, a device icon appears on the Control Station Home Page. Tapping on the device icon opens a Summary page containing information about the BPS-C static neutralizer. More detailed information and user-editable parameters are available through device tabs. For information on these details see the Set Up (with IQ Power Control Station) section in this document.

6. MAINTENANCE



NOTE – Only qualified service personnel are to perform maintenance tasks.



CAUTION – Electrical Shock Hazard

Turn off power supply before cleaning bar or performing any maintenance on the system.

ATTENTION – Risque De Choc Électrique

Coupez l'alimentation électrique avant de nettoyer la barre ou d'effectuer un entretien sur le système.



WARNING – Fire Hazard

Do not turn on power supply with any trace of alcohol or mineral spirits on the equipment.

AVERTISSEMENT – Risque d'incendie

Ne pas installer ou d'utiliser la l'alimentation électrique à distance à proximité de liquides ou de solvants inflammables.

Occasionally check to make certain that all ground and electrical connections are clean and secure. Periodically inspect all cables to ensure that there are no cuts, abrasions, or damage that can lead to operator shock or equipment damage.

The accumulation of contamination on the ionization emitter points and static bar surfaces will reduce neutralizing efficiency of the Conveyostat, therefore it is recommended that maintenance of the system be performed when the Clean Bar indicator on the display illuminates. Dirty environments may require more frequent cleaning. Maintenance should be performed by qualified service personnel only.

Cleaning the Static Bars

A clean brush with nylon bristles should be used to keep the ionization emitter points of the static bar clean. Periodic use of the brush will prevent deposits from accumulating on the points. The emitter points must remain sharp for optimum operation.



NOTE – Do not scrape points with any hard or sharp object that may damage points.

1. Turn off power supply.
2. Remove dirt particles deposited on the static bars with a dry, stiff nylon bristle brush.
3. Blow off the static bars with clean, dry compressed air.

4. Remove resistant coatings deposited on static bars by wiping with isopropyl alcohol or mineral spirits applied to a clean cloth. Apply isopropyl alcohol or mineral spirits to a stiff nylon bristle brush and thoroughly scrub the ionization emitter channels of the bar.
5. Blow static bars dry with clean, dry compressed air and ensure the bars are completely dry before re-applying power to the bar.



NOTE – Do not soak static bar or related components in alcohol or mineral spirits. Do not use harsh solvents such as lacquer thinner, naphtha or acetone.



WARNING – Fire Hazard

Do not turn on power supply with any trace of alcohol or mineral spirits on the equipment. Allow all alcohol or mineral spirits to evaporate.

AVERTISSEMENT – Risque d’incendie

Ne pas installer ou d’utiliser le l’alimentation électrique à distance à proximité de liquides ou de solvants inflammables.

Calibration



NOTE – Calibration should be performed when the system is first installed and may be performed after the static bar has been cleaned and the system verified as operating correctly.

If the system is new, perform an initial calibration. The initial calibration sets relative nominal ion output for the system. The calibration should only be performed on systems that are new or just cleaned and known to be in proper working order.

During calibration the Conveyostat must be clear of material, i.e., no material is to be flowing through the Conveyostat. If material is flowing in the Conveyostat (e.g., the machine is in operation) the calibration may be faulty.

The system should be “on” and in the operating mode (not in start-up mode). On units NOT connected to a Control Station: press the face label on power supply firmly on the word “Calibrate”. This will initiate the calibration sequence and set relative nominal ion output for the system. On units connected to a Control station, tap on the device icon, neutralizer tab. The Device Calibrate button may be found on page 2. Tapping on Device Calibration initiates the calibration sequence.

During calibration the system output will be cycled. At completion of calibration the indicator lights will flicker. The indicated ion output will be high. The calibration sequence takes less than one minute.

The calibration data is stored in non-volatile memory and used on subsequent power-ups.

7. TROUBLESHOOTING



NOTE – Only qualified service personnel are to perform troubleshooting tasks.



CAUTION – Electrical Shock Hazard

Do not troubleshoot high-voltage components with power supply energized. Disconnect input power or switch power off before troubleshooting

ATTENTION – Risque De Choc Électrique

Ne pas faire de dépannage des composantes de haute tension avec alimentation sous tension. Couper l'alimentation ou coupez l'alimentation électrique avant le dépannage

PROBLEM	CAUSE	SOLUTION
Power indicator NOT illuminated	Power not on at power supply	Turn on Power switch on end of power supply case
	Poor electrical connections	Check input power connections, both 24 VDC and line voltage; check modular cable if used with a Control Station
	Defective AC adapter	Replace AC adapter
	Blown device fuse in Control Station	Try another modular connector on Control Station
Clean Bar indicator illuminated	Process material fouling static bar ion emitters	Remove process material from static bar
	Dirt build-up on ion emitters or conductive contamination on face of bar	Clean ion emitters and static bar See Maintenance section for details
Bar ON indicator NOT illuminated	No static bar connected	Install static bar and connect to power supply
	High voltage connector is not connected	Turn off power, reconnect high voltage cable and secure plug with captive screws
	High voltage connector missing bar type sense pin at BPS-C	Replace high voltage connector plug at BPS-C
	Bar power off at Control Station	Turn bar power on through device page on Control Station
Fault indicator illuminated	Static bar shorted to grounded metal	Clear debris shorting static bar to grounded metal
	Damage to high voltage connector	Replace high voltage connector
	Damage to high voltage cable	Replace defective cable
	High voltage module inside power supply faulty	Replace high voltage module
Locked indicator NOT illuminated	Power supply operating stand-alone	Locked indicator only illuminates if Control Station connected
	Poor electrical connection	Check connections of modular cable at power supply and Control Station



NOTE – Device power input is protected by an internal fuse identified as F1 that is replaceable only by qualified service personnel. Use cartridge-type slow blow 0.25 x 1.25” fuses rated 250V, 5A only (such as Little Fuse 0313005.HXP or equivalent).

8. PARTS AND ACCESSORIES

Part Description	Part Number
IQ Power BPS-C (no AC adapter)	4017325
IQ Power BPS-C with AC Adapter and Line cord for 120 North American VAC	4017326
Line Cord, North American / Japan 120 VAC	4106272
Line Cord, North American 230 VAC	4106274
Line Cord, Continental Europe 230 VAC	4106273
Line Cord, UK / Ireland 230 VAC	4107957
Line Cord, China 230 VAC	4110508
Ground Lead (90" with ring terminals)	4108926
DB25 Connector (for Alarm Output)	4612203
DB25 Back Shell (for Alarm Output)	4612204
Modular Cable (RJ-45 to RJ-45, IQ Power 8-conductor, crossover wired) for use between Control Station and IQ Power BPS-C "COMM 1" DO NOT USE Standard Ethernet Cables (see Figure 1)	
3 foot [0.91 meter] black	4520785
7 foot [2.13 meter] black	4520786
14 foot [4.27 meter] black	4520787
25 foot [7.62 meter] black	4520784
50 foot [15.24 meter] black	4520844
75 foot [22.86 meter] black	4520845
100 foot [30.48 meter] black	4520832
IQ Power Extension HV Cable	
10 foot [3.05 meter]	4017051
30 foot [9.14 meter]	4017052
50 foot [15.24 meter]	4017053
Connector Assembly, Conveyostat to IQ Power	4110893
Multi HV Wire Connector Tube with Nylon Screw	4100442
Adapter Kit, BPS-C to SLCC (for retrofitting legacy systems)	5052096
Static Bar Cleaning Brush	4670204

9. WARRANTY AND SERVICE

This product has been carefully tested at the factory and is warranted to be free from any defects in materials or workmanship. Simco-Ion will, under this warranty, repair or replace any equipment which proves, upon our examination, to have become defective within one year from the date of purchase.

The equipment being returned under warranty should be shipped by the purchaser to Simco-Ion, 2257 North Penn Road, Hatfield, PA 19440, transportation prepaid and insured for its replacement cost. Prior to returning any goods for any reason, contact Simco-Ion Customer Service at 215-822-6401 for a Return Authorization Number (RMA). This number must accompany all returned items.

This warranty does not apply when the equipment has been tampered with, misused, improperly installed, altered, has received damage through abuse, carelessness, accident, connection to improper line voltage, or has been serviced by anyone other than an authorized factory representative.

The warranty does not apply when Simco-Ion parts and equipment have been energized by other than the appropriate Simco-Ion power supply or generator, or when a Simco-Ion power supply or generator has been used to energize other than Simco-Ion parts and equipment. Simco-Ion makes no warranty, expressed or implied, nor accepts any obligation, liabilities, or responsibility in connection with the use of this product other than the repair or replacement of parts stated herein.

Information in this publication supersedes that in all previous published material. Specifications are subject to change without notice.

Simco-Ion

2257 North Penn Road

Hatfield, PA 19440

(215) 822-6401

(800) 203-3419

www.simco-ion.com

customerservice@simco-ion.com

© 2022 Simco-Ion. Printed in the U.S.A.