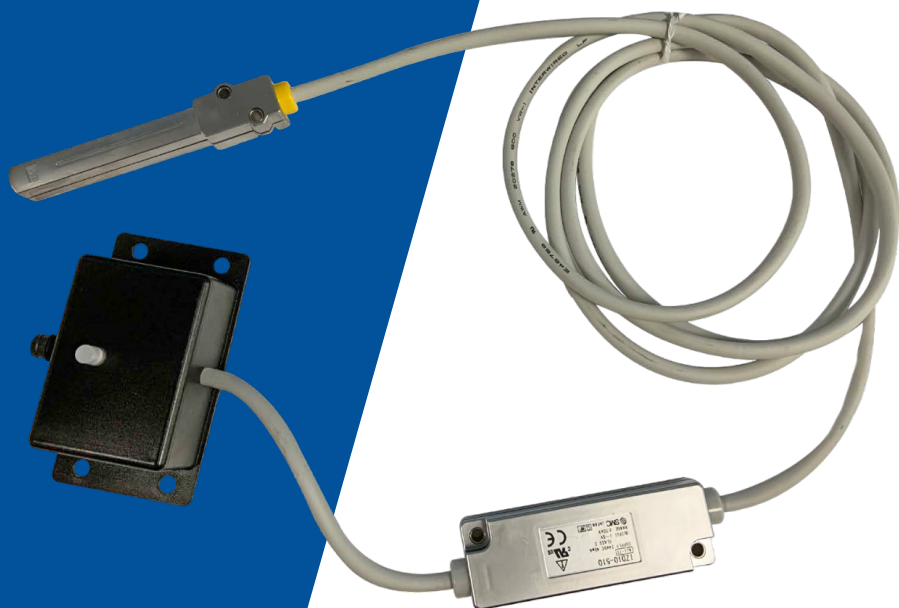


Operating Manual



HYPERION[™]
A Meech Innovation

900IPS-FBSEN-20
SmartControl Touch
Voltage Feedback Sensor

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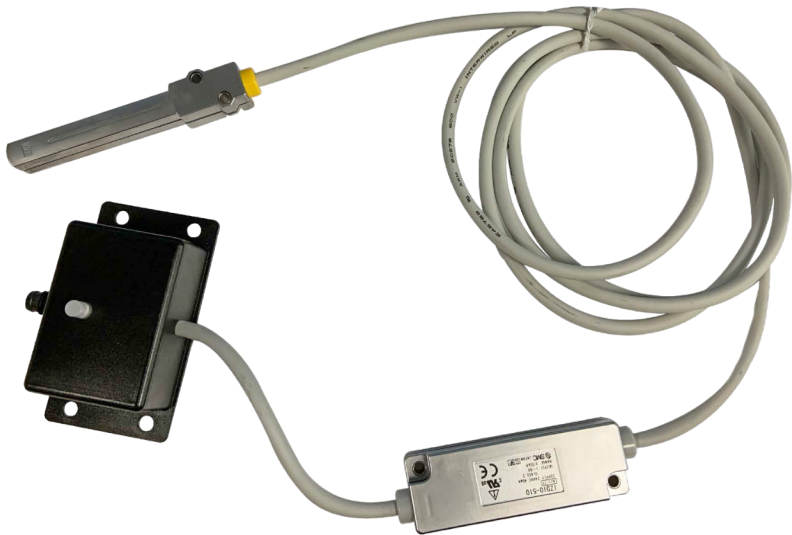
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1.0 Preface

This operating manual provides information necessary for the installation and operation of the SmartControl Voltage Feedback Sensor (510) and also includes technical characteristics.

The operating manual must be read and understood before using the feedback Sensor and should remain accessible to operators. This is important for safety, correct operation and for warranty cover.

2.0 Introduction



The Hyperion™ SmartControl Voltage Feedback Sensor (510) is to be used with the Hyperion™ SmartControl to detect voltages on a target surface and adjust the Balance parameter of the Hyperion product/s paired with the sensor allowing the user the optimal ionising performance autonomously. This sensor is capable of detecting voltages from +/- 20,000V.

3.0 Inspection

The SmartControl Feedback Sensor is carefully packed at our factory to protect it from accidental damage. Nevertheless, we recommend careful examination of the carton and contents for any damage. If damage is evident, do not destroy the carton or packing material and immediately notify the carrier of a possible damage claim. Shipping claims must be made by the consignee to the delivering carrier. In addition, please notify Meech International of any damage claims that may be made against the delivery carrier.

4.0 Installation

4.1 Electrical Installation

WARNING

ENSURE THE SENSORS AMPLIFIER BOX IS GROUNDED BEFORE CONNECTING TO THE SMARTCONTROL

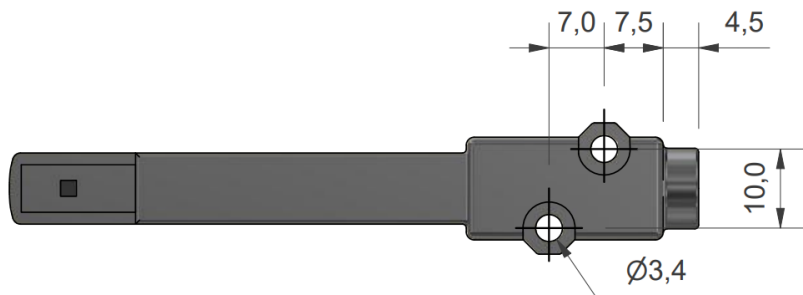
4.2 Sensor Mounting & Connection

Your Meech representative will have recommended the correct Hyperion IPS ionising bar for the application and will have recommended the position for both the bar and the sensor. [Bar and the sensor (see pages 5, 6 and 7)].

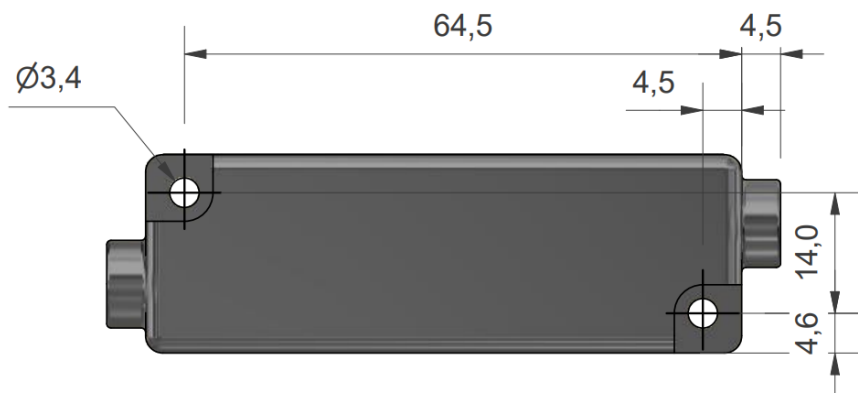
In general, the sensor is installed downstream of the bar in a position that is not directly acted upon by the ionising bar. We suggest that, where possible, the sensor should be at least 500mm from the ionising bar. The sensor is fitted with a total cable length of 5000mm. An amplifier stage is fitted 1500mm from the measuring head.

To achieve accurate voltage measurement over a suitable measurement range, we recommend that the sensor is mounted 50mm from the material surface. This must be input into the Sensor page on the SmartControl Interface. (See SmartControl manual for details on how to do this.) The range the sensor can be mounted at, is from 25mm-75mm. See diagram on page 6.

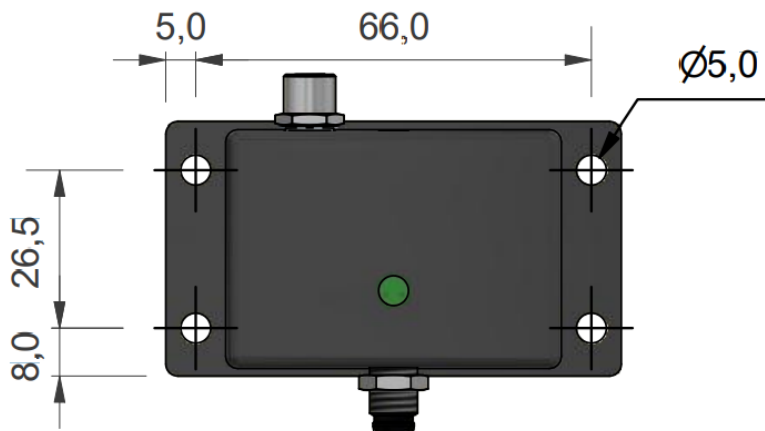
SMC Sensor Tip: Mounting Points



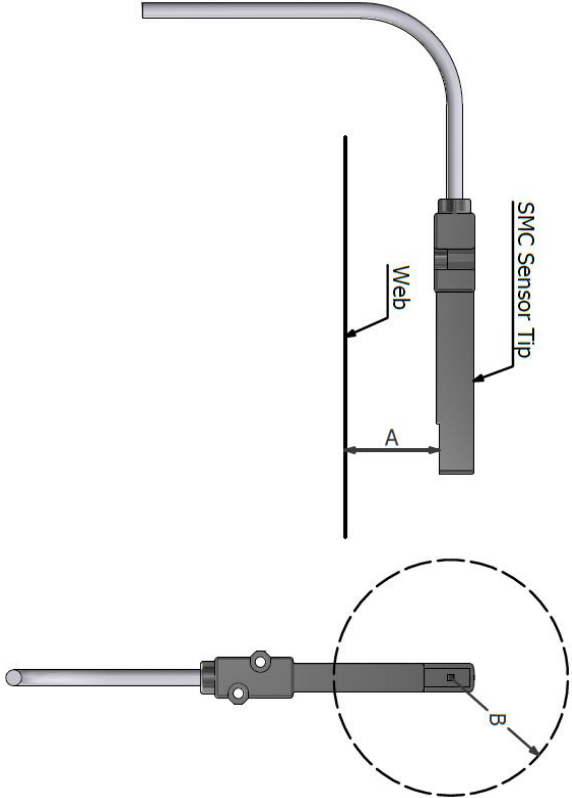
SMC Sensor Amplifier: Mounting Points



Junction Unit: Mounting Points



Installation Guide:



Distance From...	
Charged Material (A) (mm)	Obstacles (B) (mm)
10	20
20	40
25	45
30	55
40	65
50	75
60	90
70	100
75	105

Note: We recommend mounting the sensor 50mm from the target material surface. The range the sensor can be mounted is 25 - 75mm.

5.0 Operation

5.1 Pre Checks

Check the following before connecting the sensor into the SmartControl:

- **The SmartControl is secured correctly.**
- **Ensure sensor amplifier box is grounded.**
- **Ensure the sensors detection head is not within 75mm of anything other than the substrate being monitored.**

5.2 Introduction

The SmartControl Voltage (510) Feedback Sensor allows for standalone voltage measurement/monitoring. It can also be used for autonomous control and monitoring of the Balance parameter on Hyperion antistatic products to maintain a desired offset voltage on the target substrate.

5.3 Connecting & Disconnecting Sensors

Sensors are connected to any of the 6 ports on the SmartControl via an 8mm 4 pole connection cable. The maximum length of cable that can be used in total from SmartControl to the sensor junction box is 50m.

510 Model Sensor Parameters for use with SmartControl

5.4 Mounting Distance Parameter

The 510 sensors can be mounted from 25mm to 75mm away from the target distance parameter. To measure +/- 20kV the sensor should be mounted at 50mm.

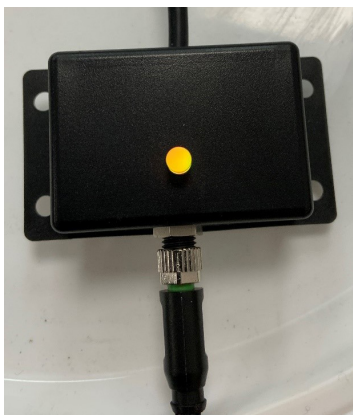
IMPORTANT: The mounting distance of each sensor must be set correctly on the relevant setup page on the SmartControl Touch (refer to SmartControl Touch operating manual)

At 50mm installation distance, the sensor has a measurement range of -20,000V to +20,000V.

To get accurate measurement avoid having objects within 75mm of the measuring head. See diagram on page 6 for more information.

5.5 Alarm Maximum & Minimum

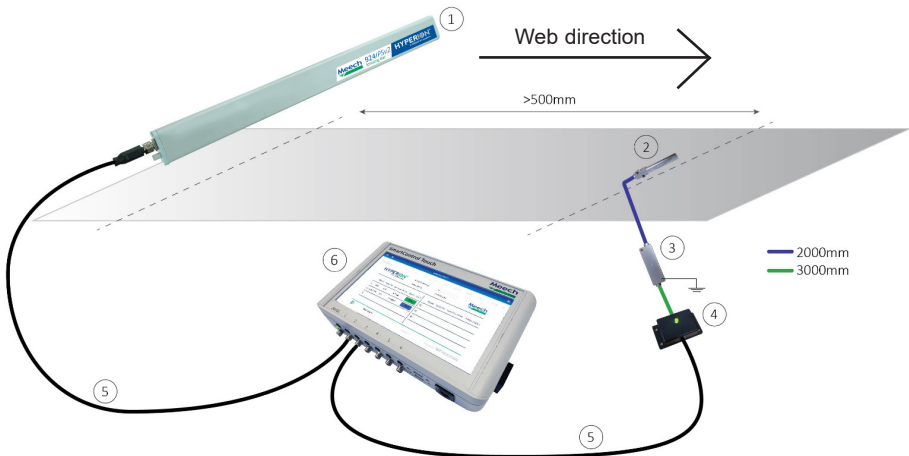
The minimum to maximum alarm range that can be input to the SmartControl is +/- 20000V. When within the window the LED will illuminate green. The LED will illuminate amber when outside of the set alarm window. The SmartControl port LED will also correspond to the state of the sensor. (Please refer to the SmartControl Touch Manual)



5.6 Feedback Parameters

The use of a Meech SmartControl Touch will allow Feedback control to be turned on/off and set to the desired offset voltage. By altering the balance parameter of the Hyperion device, the desired offset voltage can be maintained. (Please refer to the SmartControl Touch Manual)

Illustration to show Sensor setup with SmartControl touch and Meech ionising bar.



1. Hyperion Ionising bar (supplied separately)
2. Voltage sensor head
3. Amplifier box (must be grounded)
4. Sensor junction box
5. M8 4 pole cable male/female. Note that max. length is 50m (supplied separately)
6. SmartControl Touch (supplied separately)

6.0 Maintenance

The exterior of the SmartControl Voltage (510) Feedback Sensor should be cleaned regularly with a dry cloth to keep it free from dust and other contaminants.

7.0 Technical Characteristics

Dimensions (WxHxD)	Sensor Head- 87.5mm x 16mm x 13mm Junction Box- 76mm x 40mm x 24mm
Construction	ABS
Cable Length	Total 5000mm
Linearity	+/- 5% F.S. (25°C reference)
Installation Distance	(25-75mm) 50mm is recommended for +/-20kV
Durability 50 Hz Amplitude	1 mm X, Y, Z each 2 hour
Shock Resistance	100m/s ²
Electrical Connection	4 pin M8 Connector
Ambient Temperature	0 to 50 °C
Ambient Humidity	35 to 85% RH (with no condensation)
EN Standard Applicable Conditions	Protection Class: Class III equipment(according to EN60950-1) Environment: Pollution degree 3 CE marking: Low Voltage Directive:73/23/EEC,93/68/ EEC
EMC Directive	89/336/EEC,92/31/EEC,93/68/EEC,2004/108/EC
Enclosure rating	IP20

8.0 Repairs And Warranty

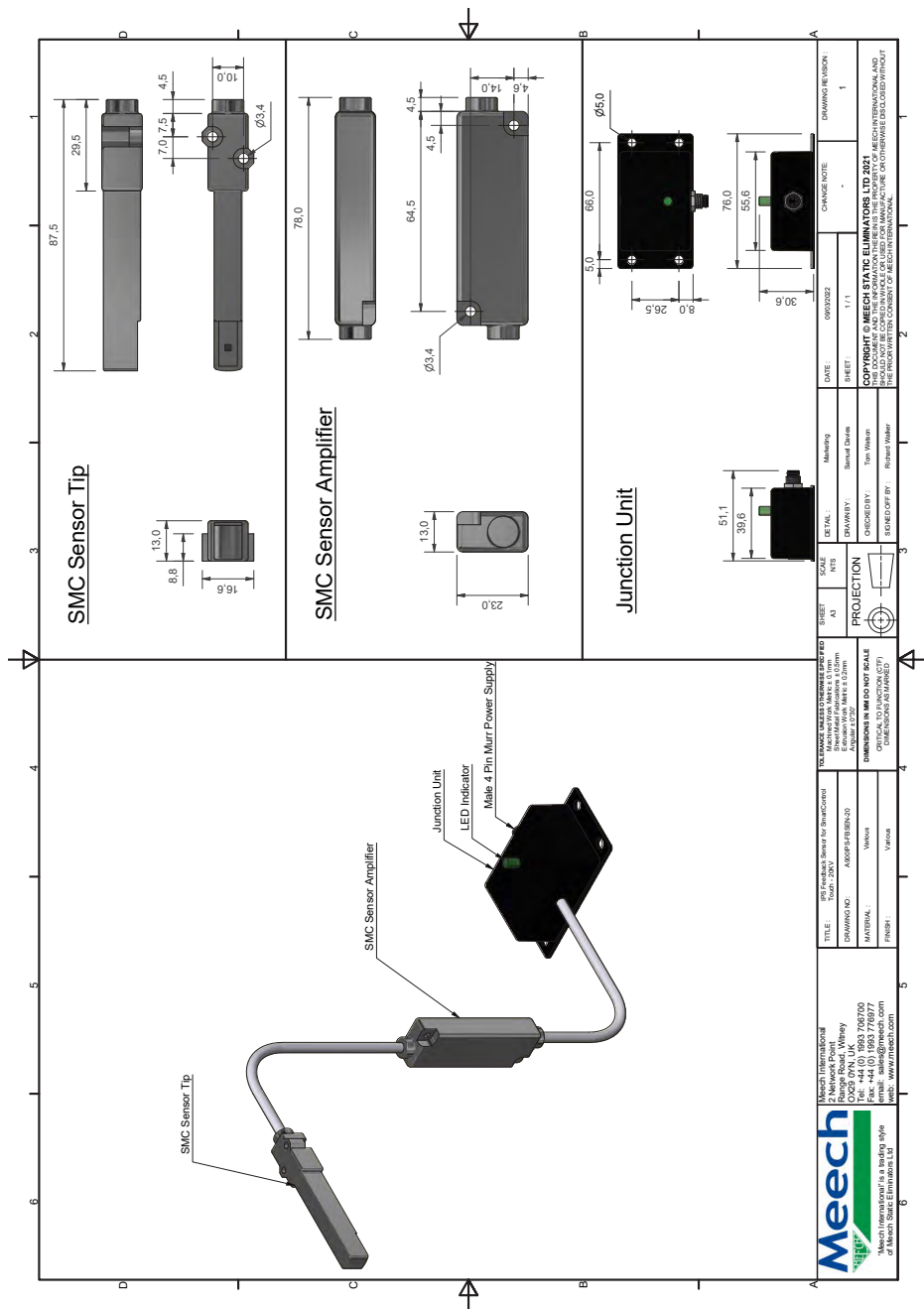
The SmartControl Voltage Feedback Sensor (510) is warranted by Meech Static Eliminators Ltd to the original purchaser against defects in material and workmanship for one year after purchase. Should any malfunction occur, please return the sensor directly to Meech Static Eliminators or your local distributor.

All products returned to the factory **MUST** be accompanied by a return authorisation number and must be shipped prepaid. For prompt service, ship the unit to the factory with the return authorisation number shown clearly on the label. Be sure it is well packed in a sturdy carton with shock absorbing material.

Include a note stating the nature of the problem as specifically as possible, and also include instructions for returning the SmartControl to you. We will pay one-way return surface shipping costs on any repairs covered under the warranty.

Field repairs should not be undertaken during the warranty period. Repair attempts by unqualified personnel will invalidate the warranty.

9.0 Technical Drawing



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