Operating Manual

Meech

Model 984v2
Ion Sensor

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Introduction

The Meech Model 984v2 has been developed for inspection and maintenance engineers. It is an easy to use tool to verify the operation of both AC and DC powered static elimination bars. The Model 984v2 features a series of indicator lights to show whether ions are being emitted from a static eliminator bar.

Operation

A sensor in the end panel of the 984v2 detects ions given off by the emitter pins of an ionising bar. The performance of the bar can then be verified by the distance at which the indicator lights of the 984v2 operate. Repeated measurements over a number of months will give an indication of when the static eliminator bar requires cleaning.

1. Hold the 984v2 away from the ionising bar and any other sources of ionisation.
2. Press and hold down the Power On button.
3. The power indicator will illuminate RED and the “No Ions” LED will illuminate and
   flash RED.
4. Approach the ionising bar slowly. The 984v2 sensor should be facing the emitter pins.
5. Record the distance at which the “No Ions” indicator extinguishes and ions are detected.

AC MODE

When a sufficient intensity of ions is detected the central Ion Polarity LED will illuminate YELLOW and the “No Ions” indicator will extinguish.

DC MODE

When a sufficient intensity of positive or negative ions are detected the relevant LED will illuminate and the “No Ions” indicator will extinguish.
The distance at which the Ion Indicator LED extinguishes and the Ion Polarity LED’s illuminate should be recorded and held on file for future reference. By comparing readings over a period of time a maintenance programme can be established based on the operating distances. A reduced distance is an indication that the bars should be cleaned to optimise performance. Typical operating distances for Meech bars when new and after 3 months’ usage (measured in a clean environment) are:

AC Powered	Clean	Dirty
Model 914 Bar	120mm	100mm
Model 915 Bar	200mm	150mm
DC Powered		
971 Bar	250mm	200mm
Model 261 (no air) cap off	120mm	80mm
Model 936	Ionising blowers should be tested with the fan switched off. The test results will be similar to the 924IPS bar.	

945IPS		
Frequency	Smallest measuring distance with dirty pins	Clean pins
1hz	70mm	220mm
5hz	50mm	200mm
10hz	35mm	160mm
15hz	30mm	140mm
20hz	20mm	120mm

971IPS -30kV						
Frequency	Smallest measuring distance with dirty pins 30kV	Clean pins at 30kV	Dirty pins at 25kV	Clean pins at 25kV	Dirty pins at 20kV	Clean pins at 20kV
0.5hz	80mm	>300mm	25mm	>300mm	20mm	280mm
3.5hz	70mm	>300mm	25mm	>300mm	20mm	250mm
6.5hz	50mm	>300mm	20mm	300mm	15mm	210mm
9.5hz	50mm	>300mm	20mm	270mm	15mm	200mm

924IPS						
Frequency	Smallest measuring distance with dirty pins 7.5kV	Clean pins set at 7.5kV	Dirty pins set at 5kV	Clean pins set at 5kV	Dirty pins set at 3kV	Clean pins set at 3kV
1hz	110mm	150mm	60mm	60mm	*	25mm
5hz	110mm	120mm	50mm	60mm	*	25mm
10hz	100mm	120mm	50mm	60mm	*	25mm
15hz	90mm	120mm	50mm	60mm	*	20mm
20hz	90mm	110mm	40mm	50mm	*	*

*could not get the ion sensor to read both positive and negative at the same time

Technical and Construction

Dimensions (mm):	142 x 60 x 25
Weight:	168g (including batteries)
Battery:	2x 1.5V AA
Case:	Plastic

Maintenance:

The sensing of the ions is through a hole at the front of the unit. Make sure this area is clean and unobstructed.

Repairs and Warranty

The 984v2 Ion Sensor 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 bar 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 bar 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.

CE Approval

An EC Declaration of Conformity for this product exists in respect of the Low Voltage Directive:72/23/EEC (“LVD”) & Electromagnetic Compatibility Directive: 89/336/EEC (“EMCD”)

CE

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