Meech

Operating Manual

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 suffi cient 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 910	10mm	5mm
Model 914 Bar	120mm	100mm
Model 915 Bar	200mm	150mm
Model 935	Ionising blowers should be tested with the fan switched off. The test results will be similar to the 915 bar.	
DC Powered		
971 Bar	250mm	200mm
Model 241	170mm	140mm
Model 251 (no air) cap open	120mm	80mm
Model 261 (no air) cap off	120mm	80mm

929IPS		
Frequency	Smallest measuring distance with dirty pins	Clean pins
1 hz	120mm	200mm
5 hz	100mm	180mm
10 hz	100mm	180mm
15 hz	100mm	180mm
20 hz	100mm	160mm

971IPS -15kV		
Frequency	Smallest measuring distance with dirty pins	Clean pins
1 hz	70mm	220mm
5 hz	50mm	200mm
10 hz	35mm	160mm
15 hz	30mm	140mm
20 hz	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
0.5 hz	80mm	>300mm	25mm	>300mm	20mm	280mm
3.5 hz	70mm	>300mm	25mm	>300mm	20mm	250mm
6.5 hz	50mm	>300mm	20mm	300mm	15mm	210mm
9.5 hz	50mm	>300mm	20mm	270mm	15mm	200mm

924IPS						
Frequency	Smallest measuring distance with dirty pins 7.5kV	Clean pins set at 7.5 kV	Dirty pins set at 5 kV	Clean pins set at 5 kV	Dirty pins set at 3 kV	Clean pins set at 3kV
1 hz	110mm	150mm	60mm	60mm	*	25mm
5 hz	110mm	120mm	50mm	60mm	*	25mm
10 hz	100mm	120mm	50mm	60mm	*	25mm
15 hz	90mm	120mm	50mm	60mm	*	20mm
20 hz	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 f84v2 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

Meech International
2 Network Point
Range Road, Witney
OX29 0YN, UK

Tel: +44 (0)1993 706700
Fax: +44 (0)1993 776977
email: sales@meech.com

Meech Static Eliminators USA Inc
1298 Centerview Circle
Akron, OH 44321
USA

Tel: +1 330 564 2000 / 1 800 232 4210
Fax: +1 330 564 2005
email: info@meech.com

Meech Elektrostatik SA
Kaiserbaracke 166
B-4780 St.Vith
Belgium

Tel.: +49 (0)6555 3733 399
+32 (0)80 670 204
Fax: +32 (0)80 862 821
email: mesa@meech.com

Meech International (Singapore) Pte. Ltd.
7 Temasek Boulevard
#12 - 07 Suntec Tower One
Singapore
038987

Tel: +65 65918859
e-mail: singapore@meech.com

Meech CE
Gábor László utca 2
Budapest 1041
Hungary

Tel: +36 1 7977039
+36 30 2803334
email: ce@meech.com

Meech Static Eliminators (Shanghai) Co. Ltd
7G, 7F, LP Tower
#25 Xiangfeng Road
201103 Shanghai
China

Tel: +86 400 820 0102
Fax: +86 21 6405 7736
email: china@meech.com

Meech Shavotech
Shavo House, Survey No.21A / 10
B, Plot No.394
South Main Road, Koregaon Park,
PUNE 411 001
India

Tel: 020-26159641/ 26159642,
Fax: 020-26069644
e-mail: india@meech.com