

JCI 148 Electrostatic Voltmeter Adapter Data Sheet



The JCI 148 Electrostatic Voltmeter Adapter is an accessory for use with the Standard JCI 140, for accurate measurement of voltages with negligible current drain.

The JCI 148 Electrostatic Voltmeter unit comprises a shielded, insulated enclosure which surrounds an electrode. This arrangement is aligned above the JCI140 Static Monitor which then displays the value that corresponds directly to the applied voltage in kilovolts. The electrode is connected by a cable to the desired input and provides a very stable reading with low-charge leakage. Analogue output signals are provided from the JCI 140 for separate display or recording - for example using a multimeter, oscilloscope, or other device. A USB data card and software (which can be supplied) provides direct display and data logging on a PC or laptop, enabling data processing via a spreadsheet.



Benefits

- Low charge leakage even at the maximum operating voltage.
- Negligible influence by any charge retained on the insulator surfaces.
- 'field mill' type fieldmeter is the near zero current drain (limited only by insulation leakage, 1014 ohms or more),
- High sensitivity (1 V resolution up to 2 kV),
- Low internal capacitance (approx. 7 pF)
- Linear response. The frequency response is -3dB at 120Hz when using the standard JCI 140. The JCI 140F option provides a faster response, -3dB at 400Hz.

Specification features

SENSITIVITY	2kV and 20kV full scale sensitivity selected via on/off switch or by external control signal.
ZERO STABILITY	Zero stable +10 volts, 2000v Range.
NOISE	Within 4mV pk-pk on analogue output (equivalent to 4V pk-pk at 100mm on 2000V range). 10-15mV pk-pk for fast response (JCI 140F) instruments.
ACCURACY & LINEARITY	Within +2%FSD.
HV CONNECTION	Special JCI HV connector with 2m HV cable.
MAXIMUM VOLTAGE	20Kv Maximum
RESPONSE	3dB at 120Hz. (-3dB at 400Hz for JCI 140 F).
INTERNAL CAPACITANCE	Approximately 7pF.
DISPLAY	3½ digit liquid crystal display of surface voltage directly in kilovolts at 100mm with polarity and 'LO BATT' indication.
AUDIO ALARM	Pulsing audio signal when above user set level.
CONTROLS	<ul style="list-style-type: none"> On/off slide switch: off - range 1 - range 2. Screwdriver set alarm threshold. Screwdriver zero setting adjustment.
JCI POWER SUPPLY	Replaceable PP3 battery via 8w mini-DIN from external floating 12V supply 2.1mm DC power connector for 12v 'Wall Cube' external floating power supply input.
EXTERNAL CONNECTIONS	Via 8w mini-DIN connector: <ul style="list-style-type: none"> analogue output signal (+2V FSD). sensitivity range indication and sensitivity external control. earth. external power supply inputs. 2.1mm DC power input.



EARTH BONDING	Earth connection terminal on side of mounting frame.
DIMENSIONS	180x180 baseplate 330mm high without connector.
WEIGHT	Approximately 3 kg.
OPTION F	Provides fast response (3ms) to enable rapidly changing events to be examined and observations made on 50/60Hz voltages.

DEKRA Organisational & Process Safety Contact

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