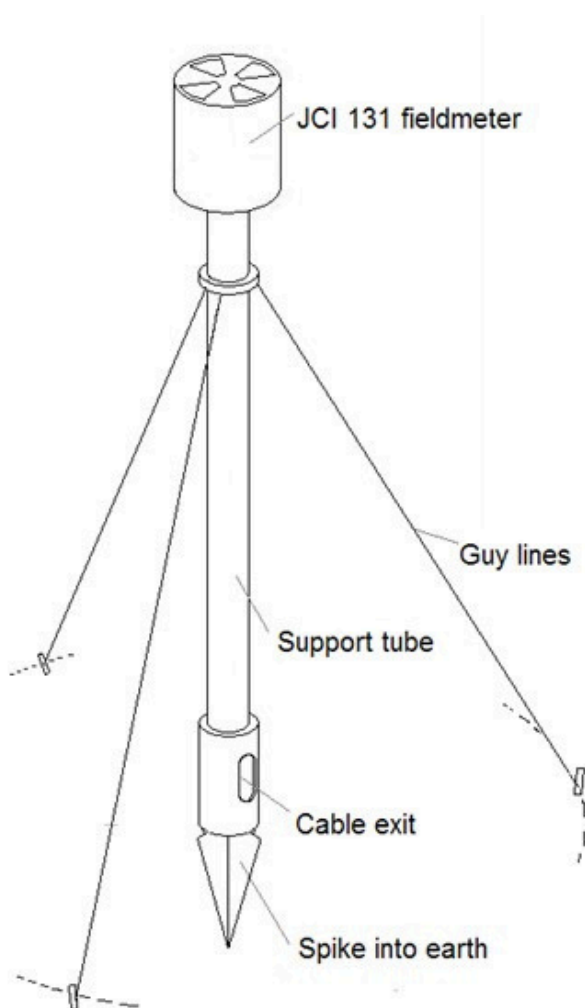


JCI131 Series Electrostatic Fieldmeter Data Sheet



The JCI 131 is a 'field mill' type Electrostatic Fieldmeter for precise, high resolution, continuous measurement of electric fields in adverse environmental conditions.

The JCI 131 Electrostatic Fieldmeter is particularly suitable for long-term continuous monitoring of atmospheric electric fields - such as those associated with thunderstorm and volcanic activity. Used as a potential probe, well away from nearby structures, the sensitivity is about 10 kV m^{-1} for 1 kV of local space. The JCI131 has a long and proven service record amongst British and European research establishments and Universities.



Benefits

- LCD displays the electrostatic field at the sensing aperture
- Resolution to 10 V/m (20 kV/m range)
- Ranges to 200 kV/m
- Analogue output for data capture
- Suitable for measuring 50-60Hz AC fields & DC fields

Specification features

SENSITIVITY RANGES	± 2 , ± 20 , ± 200 & ± 2000 kV.m-1 full scale output of ± 2 V
ACCURACY AND LINEARITY	JCI 131: Within 1.5 % of operating range fsd (DC). JCI 131F: Within 1.5 % of operating range fsd (DC). ~ 6.0 % in the range 50-60Hz (set at 50Hz) (AC). Suitable for use under Power Lines
ZERO STABILITY	Within ± 50 V.m-1 over extended periods. Within ± 10 V.m-1 over short periods.
ZERO NOISE	JCI 131: <10 mV pk-pk (<10 V.m-1 pk-pk on Range 1). (20Hz – 1MHz) Bandwidth JCI131F: <40 mV pk-pk (<40 V.m-1 pk-pk on Range 1) (20Hz – 1MHz) Bandwidth
ZERO ADJUSTMENT	External adjustment by potentiometer from ± 5 V regulated supply via zero adjust connection
CONTROLS	Auto-ranging sensitivity. External selection of range by holding range indicating signal lines low (earth) or high (+5 V) relative to signal earth or cable sheath.
SIGNAL OUTPUT	± 2.0 V for ± 2 , ± 20 , ± 200 or ± 2000 kV.m-1 FSD for ranges 1, 2, 3, 4.2 logic level indication of sensitivity range (0 V or 5 V LO/HI)
MOUNTING	47.5 mm diameter by 75 mm long plug on backplate of head unit provides mounting by socketing into 51 mm diameter (1.6 mm wall) support tube. (Cable connector on axis within 39mm dia.)
OPERATING ENVIRONMENT	0 – 40 °C, 0 – 100 % RH including direct rain precipitation
POWER SUPPLY	20 – 30 V 1.5 A capable power source. Running current ~450 mA.
EARTHING	Via mounting of sensing head unit and/or cable braid.
DIMENSIONS	102 mm dia. x 250 mm long.
WEIGHT	3.5kg
CALIBRATION	Sensitivity is set up in manufacture on the basis of measurements made with instruments whose accuracy is traceable to National Standards.



Power requirements

- The JCI 131 Head unit requires a regulated power supply of nominally 24V.

Optional extras

- Custom breakout box: permits the user to connect their own monitoring equipment, from simple portable dc voltmeters, to longer term data acquisition measuring equipment.
- Mounting pole (JCI 137): For monitoring atmospheric electric fields.

DEKRA Organisational & Process Safety

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DEKRA Organisational and Process Safety are a behavioural change and process safety consultancy company. Working in collaboration with our clients, our approach is to assess the process safety and influence the safety culture with the aim of making a difference.

In terms of behavioural change, we deliver the skills, methods, and motivation to change leadership attitudes, behaviours, and decision-making among employees. Supporting our clients in creating a culture of care and measurable sustainable improvement of safety outcomes is our goal. The breadth and depth of expertise in process safety makes us globally recognised specialists and trusted advisors. We help our clients understand and evaluate their risks, and we work together to develop pragmatic solutions. Our value-adding and practical approach integrate specialist process safety management, engineering, and testing. We seek to educate and grow client competence in order to provide sustainable performance improvement. Partnering with our clients, we combine technical expertise with a passion for life preservation, harm reduction and asset protection.

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We have offices throughout North America, Europe, and Asia.

For more information visit
www.dekra-uk.co.uk

+44 (0)23 8076 0722

instruments-uk@dekra.com

Would you like more information?

Contact