

JCI 150 Faraday Pail Data Sheet



Compatible with JCI 178 Charge Measuring Unit

A compact Faraday Pail for measurement of electrostatic charge on components and small quantities of materials when connected to the JCI 178 Charge Measurement Instrument.

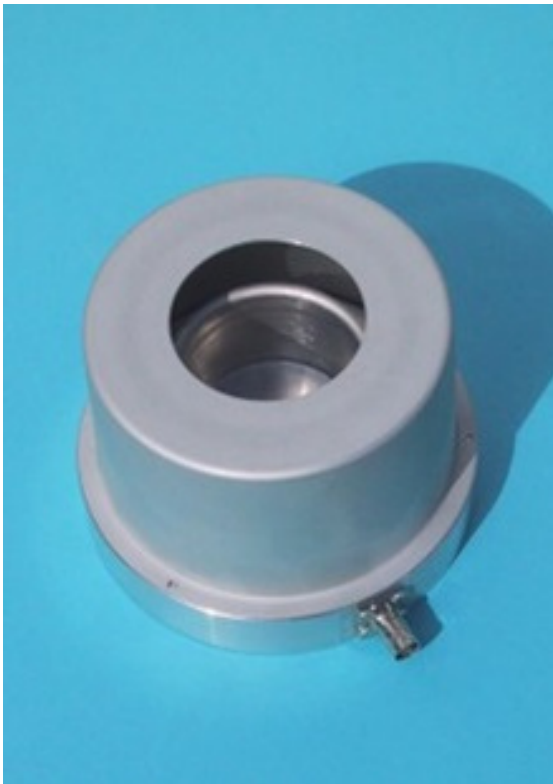
Many materials, in particular plastics, easily become electrostatically charged when rubbed against other materials. Such 'triboelectric' charging causes problems in many areas of industry. It can cause ignition of flammable gases and give shocks to personnel. It can make thin films and light fabrics cling, attract airborne dust and debris, damage semiconductor devices and upset the operation of microelectronic equipment.

The risks and problems arising from static electricity are best avoided by ensuring that static charge can dissipate over and through the surfaces of materials and away to earth more quickly than charge is generated

The JCI150



The JCI 150 Faraday Pail is a compact unit for reliable measurement of net electrostatic charge on powders, liquids and small items. Charge received into the pail is measured using a JCI 178 Charge Measuring Unit with 20 and 200nC ranges of sensitivity. The charge appearing on the outside of the pail is equal to the net quantity of charge placed into the pail. It is not necessary that the charge introduced actually conducts to the pail, so measurements are equally applicable to insulating materials and conducting components placed into the pail. The shield over the pail ensures that measurements are little affected by nearby static charges on people or surfaces. The sensitivity and performance of the JCI 150 Faraday Pail is not as high as the JCI 147 unit. It is however more suitable for measurements in confined spaces and where head height is limited, such as within a Controlled Humidity Test Chamber.



Benefits

- Range of net charge measurement 0-200nC
- Compact and easy to use
- Single coaxial connection to JCI 178 charge measurement device
- Suitable for powders, liquids & solids.
- Required Instrument JCI 178

Specification features

SENSITIVITY WITH JCI 178	20 and 200 nano-Coulombs full scale 10pC resolution •Sensitivity selected via on/off switch or by external control signal
ZERO STABILITY	Noise within +10pC. Zero stable +100 pC.
ACCURACY & LINEARITY	Within +5%FSD on JCI 178 display and analogue output
DISPLAY ON JCI 178	3½ digit liquid crystal display of charge directly in pico- coulombs with polarity and `LO BATT' indication
AUDIO ALARM	Pulsing audio signal when above user set level
JCI 178 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 178 POWER SUPPLY	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<p>130mm dia baseplate 95mm high</p> <ul style="list-style-type: none"> •60mm dia pail, 38mm high. 60mm aperture in shield •Weight: about 2 kg

DEKRA Organisational & Process Safety

Contact

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.

We are a service unit of DEKRA SE, a global leader in safety since 1925 with over 48,000 employees in 60 countries and five continents. As a part of the world's leading expert organisation DEKRA, we are the global partner for a safe world.

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

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