

Features:

- Portable, Self-contained
- Battery-powered
- Easy to operate
- Large LCD display
- Two ranges
- Interchangeable cups
- Analog output
- Meets requirements of EIA-541 Standard
- Point contact measurement of small areas

Applications:

- Direct charge measurement
- Component testing
- Materials qualification
- Triboelectric studies
- Static monitoring
- IC handlers

Benefits:

- Low cost
- Simple operation
- Minimal training required
- Uses ordinary oscilloscope probe for contact measurement of small objects
- Measures performance of ESD materials

The Model 284 NanoCoulombmeter by Monroe Electronics, Inc. offers the ability to make direct measurements of charge on materials. The material is either dropped into the optional Faraday Cup where the charge is transferred to the cup and then measured by the meter, or the operator can use an oscilloscope probe to take charge measurements on smaller objects outside the Faraday Cup.

The Model 284 is the only battery-powered nanocoulombmeter to offer two ranges: 200nC & 20nC



General information:

Monroe Electronics Model 284 NanoCoulomb Meter enables the user to easily and accurately measure the charge generated on items such as electronic components by triboelectric charging processes. Static charges can build up on ICs as they vibrate and slide in shipping tubes or on PC boards as they move around in contact with protective packaging materials. Model 284 aids in the selection and evaluation of packaging materials when performing triboelectric charge testing as outlined in the Electronics Industries Association Standards for ESD sensitive Items (EIA-541).

Two available interchangeable standard sizes of Faraday Cups serve most needs. Inner dimensions of these are 2⁵/₈" dia. x 2³/₄" deep and 5³/₄" dia. x 7" deep. Custom sizes are available on special order. In addition, individual areas of semiconductor components, MR heads or other small static-sensitive devices may be examined to evaluate manual or automatic handling techniques. Contact is made to individual leads via the tip of an ordinary 1X passive oscilloscope probe.

NanoCoulomb Meter model 284

Specifications:

Display:	1/2"x3 1/2" digit LCD
	Range: Resolution:
	200nC 0.1nC
	20nC 0.01nC
Optional Ranges Available:	Range: Resolution:
	2000nC 1.0nC
	2.0nC 0.001nC
Accuracy:	2% of reading, + zero offset, +/- 1 lsd.
Output:	0 to ±2 volt analog
Drift:	0.1pC/sec. Typical
Battery:	9 volt Eveready #216 or equivalent NEDA #1604. Battery life over 400 hours.
Dimensions:	6"x3 1/2"x2 1/8" (15 cm x 9 cm x 5.5 cm)
Weight:	8 1/2 oz. (0.24kg) with battery

Calibration:

Monroe Electronics instruments are factory-calibrated prior to shipment. Recalibration should be performed annually, or more frequently if specified by contract or company policy. Your instrument should also be recalibrated any time it has been repaired or tampered with. We will be happy to perform the calibration for you or refer you to one of our Authorized Service Organizations.

Warranty:

Monroe Electronics, Inc., warrants that each instrument and sub-assembly manufactured by them shall be free from defects in material and workmanship for a period of two years after shipment from the factory. This warranty is applicable to the original purchaser only.

Compatible accessory cups and probes:

Faraday Cup, Model 284/22A:

Outer dimensions (nominal)—
4" dia. x 5 3/4" tall (10 cm x 15 cm)
Inner dimensions (nominal)—
2 5/8" dia. x 2 3/4" deep (6.5 cm x 7 cm)

Faraday Cup, Model 284/22B:

Outer dimensions (nominal)—
8" dia. x 9 1/2" tall (20 cm x 24 cm)
Inner dimensions (nominal)—
5 3/4" dia. x 7" deep (15 cm x 18 cm)

Faraday Cups are equipped with BNC connectors and furnished with a 3 foot mating cable to connect to Model 284 instrument. Can be used to measure powders and liquids as well as solid objects.

Point contact probe:

Various—contact factory

The Monroe Electrostatic & ESD product line is now owned by Advanced Energy and managed by TREK in Lockport, NY.

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