Field Equipment

Catalog No.

P02-0802

Fiber Optic Coupled Ammeter



The TESCO Fiber Optic Coupled Ammeter was developed using current sensor technology. It is a two-piece, True RMS ammeter with a fiber optic link between the high voltage sensor and the readout at ground potential. The sensor is mounted on a hot-stick and slipped over a high voltage line.





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Functionality

A fiber optic cable connects the sensor to a receiver unit at ground potential, which contains the digital readout and an analog output. The instrument has no moving parts and does not require clamping onto the wire. The molded urethane housings are water resistant and will withstand high physical impact.

The analog output is the unique feature of this instrument. It is a reproduction of the high voltage current waveform, accurate to approximately the 50th harmonic, but available as a 0-2 volt AC signal at ground. This allows the use of many sophisticated low voltage instruments, such as scopes, waveform acquisition recorders, analyzers, and other analysis instruments which would previously not be usable at high voltage.







Specifications*

Range of Operation

- Current: 1-2000 True RMS Amps
- Voltage Environment up to 150 kV
- Accuracy: ±0.75 ±1mV (1-2000A)
 - Phase: ±1 Degree (1-2000A)

Amp Sensor Opening

Wide Sensor Opening Width: 3.86 in, 9.84 cm

Resolution: ± 0.1 mV

- 20 Ampere Measurement
 - Range: 1-19.99 A, 100 mV RMS per amp
- 200 Ampere Measurement
 Range: 20-199.9 A, 10 mV RMS per amp
- 2,000 Ampere Measurement
 Range: 200- 2,000 A, 1 mV RMS per amp

Output Impedance

50 ohms, minimum

Frequency Response

• 3000 Hz or to the 50th Harmonic

Fiber Optic Cable

- Length 40', 12.19 m
- Isolation 100 kV per foot, 500 kV max

Mechanical

- Wide Sensor Weight: 6.0 lbs, 2.73 kg
- Housing: Shock & water resistant molded urethane
- Hot stick Mounting: Universal chuck adapter (hot stick not included)
- Battery: Two each 9V alkaline or lithium; one per unit
- Battery Life: Minimum 4 hours of continuous use
- Operating temperature: -22° to +140° F, -30° to +60° C
- Lithium battery required for use below -4°F, -20° C

^{*} Specifications and design are subject to change without any notice or obligation on the part of the manufacturer.