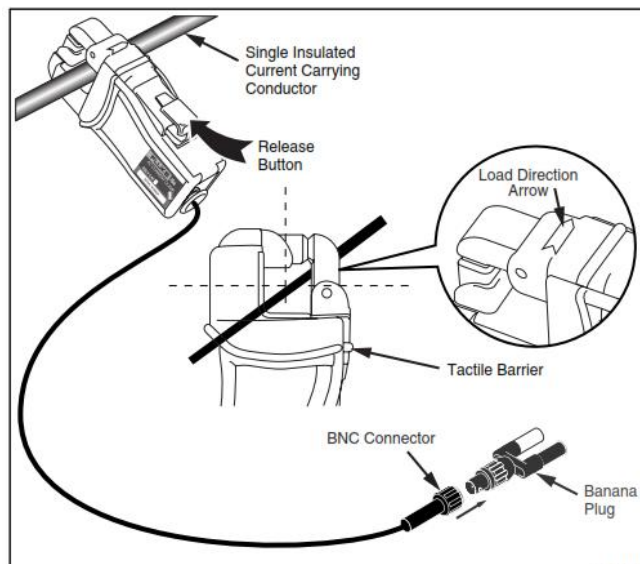


i5s

AC Current Clamp

Introduction

The i5s (hereafter called the “Current Clamp”) is compatible with any instrument that can accept a standard BNC connector and is capable of ac millivolt measurements; the Current Clamp can also be used with digital multimeters using a BNC-to-dual banana plug adapter. The Current Clamp produces an output of 400 mV ac per 1 A ac input level.



Instrument Compatibility

The Current Clamp is compatible with any Fluke Multimeter or any other current measurement device that has the following features:

- BNC or Banana inputs
- Input accuracy of 1 % or better to take full advantage of the accuracy of the Current Clamp.
- Input impedance of $> 1 \text{ M}\Omega$ in parallel with up to 47 pF

Note

Current input impedance on the Fluke 430 Series Three-Phase Power Quality Analyzer is $< 1 \text{ M}\Omega$, but it has a special calibration setting for the i5s to achieve full accuracy.

Electrical Specifications

Reference Conditions: 23 ± 5 °C, 20 to 75 % RH; conductor centered in jaw opening; no DC component; no adjacent conductor.

Measurement Range: 10 mA to 6 A

Output: 400 mV/A

Accuracy (48 Hz to 65 Hz):

10 mA to 1 A 1% + 5 mA

1 A to 5 A 1%

Phase Shift (48 Hz to 65 Hz):

10 mA to 100 mA Unspecified

100 mA to 5 A 4 °

Crest Factor: ≤ 3 , add 0.7 % to accuracy

Typical Bandwidth: 40 Hz to 5 kHz

Working Voltage: 600 V ac rms, in compliance with EN61010

Common Mode Voltage: 600 V ac rms from earth ground, in compliance with EN61010

Input Load Impedance (of host instrument): >1 M Ω in parallel with up to 47 pF

Maximum Non-destructive Current: 70 A

Duty Cycle: 0.01 A to 6 A continuous

Influence of Adjacent Conductor: ≤ 15 mA/A (@ 50/60 Hz)

Influence of Conductor Position in Jaw Opening: ± 0.5 % of reading (@ 50/60 Hz)

General Specifications

Output Cable Length: 2.5 m

Maximum Conductor Size: 15 mm

Storage Temperature: -20 °C to 60 °C

Operating Temperature: 0 °C to 50 °C

Relative Humidity: 10 °C to 30 °C: 85 %

30 °C to 40 °C: 75 %

40 °C to 50 °C: 45 %

Temperature Coefficient: 0.01 % X (specified accuracy)/ °C (< 18 °C or > 28 °C)

Altitude: Operating: 2000 m; Non-operating: 12000 m

Dimensions: 116 x 43 x 23 mm

Weight: 200 g