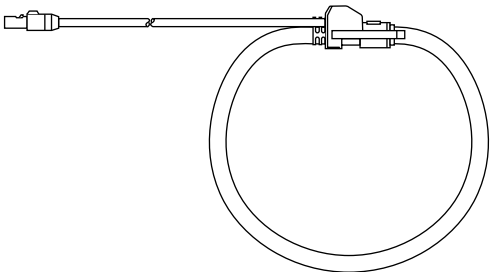


# FLUKE®

## 3110-PR

### *Flex Current Probe*

### *Instruction Sheet*











### ***Introduction***

The Fluke 3110-PR Flex Current Probe (the Probe) is an ac current probe utilizing the Rogowski principle. After appropriate signal conditioning, it can be used with the Fluke 1750 to measure current from very low frequencies up to 15 kHz. The flexible and lightweight measuring head allows quick and easy installation in hard to reach areas and with large conductors.

The Probe is designed for use with the Fluke 1750 Power Recorder.

## Symbols

The table below lists the symbols used on the Probe and/or in this instruction sheet.

Symbol	Description
	Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.
	Risk of Danger. Important Information. See manual.
	Hazardous Voltage. Risk of electric shock.
	Double insulation.
	Do not apply to or remove from hazardous, live conductors.
	Canadian Standards Association: Conforms to relevant Canadian and U.S. standards.
	Complies with the relevant European standards.
	Conforms to relevant Australian standards.

## Safety Instructions

Please read this section carefully. It will familiarize you with the most important safety instructions for handling the Probe. In this instruction sheet, a **Warning** identifies conditions and actions that pose hazard(s) to the user. A **Caution** identifies conditions and actions that may damage the calibrator or the test instruments.

### **Warning**

**The Probe may only be used and handled by qualified personnel. To avoid electric shock or personal injury, follow these precautions:**

- **Do not apply to or remove from hazardous live conductors without taking additional protective measures.**
- **De-energize circuit during installation and removal of Probe.**
- **High voltages and currents may be present in adjacent circuits under test.**
- **Do not use the Probe if damaged. Always connect to display device before it is installed around the conductor.**

- Use the Probe only as specified in the operating instructions; otherwise the safety features may not protect you.
- Adhere to local and national safety codes. Individual protective equipment must be used to prevent the shock and arc blast injury where hazardous live conductors are exposed.
- Before each use, inspect the Probe. Look for cracks or missing portions of the housing or output cable insulation. Also look for loose or weakened components.
- Use caution when working with voltages above 60 V dc, 30 V ac rms or 42 V ac peak. Such voltages pose a shock hazard.
- Use of this equipment is designed to 600 V CAT IV or 1000 V CAT III standards. 600 V CAT IV or 1000 V CAT III equipment is designed to protect against the transients in the equipment in fixed equipment installations, such as distribution panels, feeders and short branch circuits, and the lighting systems in large buildings.
- Do not use Probe in wet environments or in locations that hazardous gases exist.

## Operating Instructions

1. Connect the Probe to the 1750 via the 1750 current input jack.
2. De-energize the circuit and place the Probe around the conductor under test.
3. Observe and take measurements as required. Positive output indicates that the current flow is in the direction shown by the arrow on the Probe.

## Cleaning

Clean the Probe periodically by wiping it with a damp cloth and detergent. Do not use abrasive cleaners or solvents. Do not immerse the Probe in liquids.

## Specifications

### Electrical Characteristics

Output Sensitivity @ 60 Hz (@ output of the integrator)	20 mV/A
Accuracy (@ 25 °C)	±1 % of reading
Linearity (10 % to 100 % of range)	±0.2 % of reading
Temperature Coefficient	±0.05 % of reading per °C
Position Sensitivity (with cable >25 mm from the coupling)	±2 % of reading
External Field (with cable >200 mm from the head)	±1 % of reading
Working Voltage (see Safety Standards)	1000 V under CAT III conditions and 600 V under CAT IV conditions. (V ac rms or dc)

## General Characteristics

Probe and Cable Material	Alcryn 2070NC, reinforced insulation, UL94 V0, Color: RED
Couplings Material	Lati Latamid 6H-V0 Nylon
Probe Cable Length	24 in. (610 mm)
Probe Cable Diameter	0.49 in. (12.4 mm)
Transducer Bend Radius (min)	1.5 in. (38.1 mm)
Output Cable	2 core screened, 3 meters long
Output Connector	LEMO 6 pin male connector
Operating Temperature Range	-4 to +194 °F (-20 to +90 °C)
Storage Temperature Range	-40 to 221 °F (-40 to +105 °C)
Operating Humidity	15 % to 85 % (non condensing)
Degree of protection	IP40

## Safety Standards

- EN/IEC 61010-1 2001
- EN/IEC 61010-032
- Pollution Degree 2

Use of the Probe on uninsulated conductors is limited to 1000 V ac rms or dc and frequencies below 1 kHz.

Please note that the safety rating for the output to ground is limited to 30 V ac rms or dc by the connector specified.

## LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for one year from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

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