

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.

THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. FLUKE IS NOT LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

Fluke Corporation
P.O. Box 9090
Everett, WA 98206-9090
U.S.A.

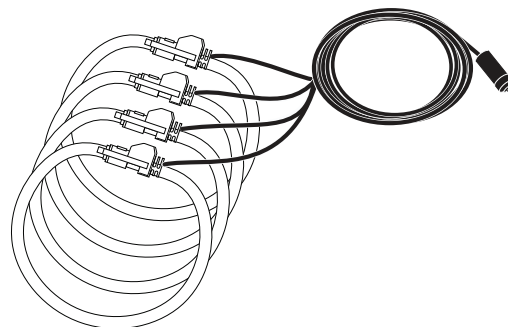
Fluke Europe B.V.
P.O. Box 1186
5602 BD Eindhoven
The Netherlands

11/99

FLUKE®

FS17XX/FS17XX IP65 AC Current Probes

Instruction Sheet



Introduction

The FS17XX/FS17XX IP65 current probe sets (the Probe) are for accurate non-intrusive measurement of ac currents and are used with Fluke 1735 and all 1740 products. The FS17XX IP65 can be used in more rugged environments than either the 1735 or 1745. Integrated memory for calibration data provides current ranges from 0.44 A up to 3000 A in a frequency range of 40 Hz to 5 kHz.

Contacting Fluke

- Technical Support USA: 1-800-44-FLUKE (1-800-443-5853)
- Calibration/Repair USA: 1-888-99-FLUKE (1-888-993-5853)
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31 402-675-200
- Japan: +81-3-3434-0181
- Singapore: +65-738-5655
- Anywhere in the world: +1-425-446-5500

Or, visit Fluke's website at www.fluke.com.

To register your product, visit <http://register.fluke.com>.

To view, print, or download the latest manual supplement, visit <http://us.fluke.com/usen/support/manuals>.

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.

August 2009

©2009 Fluke Corporation, All rights reserved. Specifications are subject to change without notice. All product names are trademarks of their respective companies.

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.
- 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.
- Equipment is considered to be used in 600 V CAT IV and 1000 V CAT III environment.
- CAT IV equipment is designed to be used at the source of distribution system up to the energy-meter within the installation. CAT III equipment is designed to be used in distribution panels, feeders and short branch circuits, and the lighting system in large buildings.
- Do not use Probe in damp or wet environments or in locations that hazardous gases exist.

Operating Instructions

1. Connect the Probe to the product current input jack.
2. Wear protective gloves or de-energize the circuit and place the Probe around the conductor under test. Re-energize the circuit.
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.
4. Wear protective gloves or de-energize the circuit before removal of 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.

Symbols

	Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.
	Do not apply around or remove from HAZARDOUS LIVE conductors, without using protective gloves.
	Product is protected by double insulation.
	Risk of Danger. Important information. See Instruction Sheet.
	Conforms to relevant Canadian Standards Association directives.
	Conforms to relevant European Union directives.

Electrical Characteristics

Input ranges I_1 , L1, L2, L3, N: 15 / 150 / 1500 / 3000 A AC

Measuring range: 0.44 A to 3000 A AC

Intrinsic error: $<2\%$ of I_1

Position influence: max. $\pm 2\%$ of m.v. for distance conductor to measuring head >30 mm (1.18 in)

Stray field influence: $<\pm 2$ A for $I_{ext} = 500$ A AC and distance to measuring head >200 mm (7.87 in)

Temperature coefficient: $<0.05\%$ / K

Current transformer: ratio : ≤ 999 kA / $\leq I_1$

Ratio selection: by job programming for 174x series; by setup menu for 1735

Connection: 3-phase, 3-phase + N; 2-phase L1 and L3 (2W-meter-method); 7-pole connector

Specifications

General Specifications

Cable length: 2 m (79 in)

Length of measuring head: 61 cm (24 in)

Operating temperature range: $-10\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$
($14\text{ }^{\circ}\text{F}$ to $158\text{ }^{\circ}\text{F}$)

Protection Class: FS17XX IP65-IP65, FS17XX- IP41

Operating Humidity: 10 % to 80 %, non- condensing

Storage temperature range: $-20\text{ }^{\circ}\text{C}$ to $+90\text{ }^{\circ}\text{C}$
($-4\text{ }^{\circ}\text{F}$ to $198\text{ }^{\circ}\text{F}$)

Weight: .92 kg (2.03 lb)

EMC Standards: IEC/EN 61326-1:2006

Reference Conditions

Environment temperature range: $+18\text{ }^{\circ}\text{C}$ to $+26\text{ }^{\circ}\text{C}$ ($64.4\text{ }^{\circ}\text{F}$ to $78.8\text{ }^{\circ}\text{F}$)

Humidity: 20 to 75 % rh

Altitude: max. 2000 m (1.24 mi) for 1000 V CAT III / 600 V CAT IV

max. 5000 m (3.107 mi) for 600 V CAT III / 300 V CAT IV

Current: upper value of selected range sinusoidal waveform, 48 Hz to 65 Hz, distortion factor: $<1\%$, no DC component, stray field <40 A/m, conductor centered within the Probe.

Safety Standards

IEC/EN61010-1:2001

IEC/EN61010-2-032:2002

IEC/EN61010-031:2002

Safety Specifications

Category Rating: 1000 V CAT III, 600 V CAT IV, pollution degree 2. The application of the Probe on **uninsulated conductors** is limited to 1000 V ac rms or dc to ground and frequencies below 1 kHz.