LIMITED WARRANTY & LIMITATION OF LIABILITY

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Each Fluke product is warranted to be free from defects in material and workmanship under normal use and service. The warranty period is one year and begins on the date of shipment. Parts, product repairs and services are warranted for 90 days. This warranty extends only to the original buyer or end-user customer of a Fluke authorized reseller, and does not apply to fuses, disposable batteries or to any product which, in Fluke's opinion, has been misused, altered, neglected or damaged by accident or abnormal conditions of operation or handling. Fluke warrants that software will operate substantially in accordance with its functional specifications for 90 days and that it has been properly recorded on non-defective media. Fluke does not warrant that software will be error free or operate without interruption.

Fluke authorized resellers shall extend this warranty on new and unused products to end-user customers only but have no authority to extend a greater or different warranty on behalf of Fluke. Warranty support is available if product is purchased through a Fluke authorized sales outlet or Buyer has paid the applicable international price. Fluke reserves the right to invoice Buyer for importation costs of repair/replacement parts when product purchased in one country is submitted for repair in another country.

Fluke's warranty obligation is limited, at Fluke's option, to refund of the purchase price, free of charge repair, or replacement of a defective product which is returned to a Fluke authorized service center within the warranty period.

To obtain warranty service, contact your nearest Fluke authorized service center or send the product, with a description of the difficulty, postage and insurance prepaid (FOB Destination), to the nearest Fluke authorized service center. Fluke assumes no risk for damage in transit. Following warranty repair, the product will be returned to Buyer, transportation prepaid (FOB Destination). If Fluke determines that the failure was caused by misuse, alteration, accident or abnormal condition of operation or handling, Fluke will provide an estimate of repair costs and obtain authorization before commencing the work. Following repair, the product will be returned to the Buyer transportation prepaid and the Buyer will be billed for the repair and return transportation charges (FOB Shipping Point).

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SERVICE CENTERS

To locate an authorized service center, visit us on the World Wide Web:

http://www.fluke.com

or call Fluke using any of the phone numbers listed below:

+1-888-993-5853 in U.S.A. and Canada

+31-40-267-5200 in Europe

+1-425-446-5500 from other countries

FLUKE®

i430flex

3000 A Flexible AC Current Probe

Instruction Sheet

Introducing the i430flex

The i430flex is a flexible AC current probe for use with the Fluke 430 series Power Quality Analyzers. The i430flex is optimized for current measurement on thick and hard to reach conductors.

Unpacking

The following items should be included in the package:

- i430flex Current Probe(s)
- Instruction Sheet (this paper)

Check the contents of the shipping box for completeness. If something in the box has been damaged or missing, contact your distributor or the nearest FLUKE sales or service office immediately.

Safety Information

Read First: Safety Information

To ensure safe operation and service of the current clamp, follow these instructions:

- Read the operating instructions before use and follow all safety instructions.
- Use the Current Probe only as specified in the operating instructions; otherwise the probe's safety features may not protect you.
- Adhere to local and national safety codes. Individual protective equipment must be used to prevent shock and arc blast injury where hazardous live conductors are exposed.
- Before each use, inspect the Current Probe and its latching system for any damage. Pay particular attention to the insulation surrounding the flexible measuring head. Look for cracks or missing portions of the probe housing or output cable insulation. Also look for loose or weakened components.
- Do not use a probe that is cracked, damaged, or has a defective cable.
- Never use the probe on a circuit with voltages higher than 1000 V CAT III or 600V CAT IV
  - CAT III equipment is designed to protect against transients in equipment in fixed equipment installations, such as distribution panels, feeders and short branch circuits, and lighting systems in large buildings.
  - CAT IV equipment is designed to protect against transients from the primary supply level, such as an electricity meter or an overhead or underground utility service.

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- De-energize the installation on which current will be measured or adopt safe operating procedures during application and removal of the current probe.
- Use extreme caution when working around bare conductors or bus bars.
- Do not use the Current Probe to measure bare conductors carrying a voltage from 30 V up to 1000 V unless you are wearing protective clothing suitable for high-voltage work. Contact with the conductor could result in electric shock. Always use appropriate equipment for personal protection.
- 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.

Symbols

	Do not apply around or remove from HAZARDOUS LIVE conductors.
	Product is protected by double insulation.
	Risk of Danger. Important information. See Instruction Sheet.
	Risk of Electric Shock.
CE	Conforms to relevant European standards.

Specifications

SAFETY

i430flex (INPUT and OUTPUT)	Complies with American industry standards UL61010B-1 & UL61010B-2-032 & European standards EN/IEC 61010-1 2nd Edition & EN/IEC 61010-02-032.

ELECTRICAL SPECIFICATIONS

Measuring range	30 to 3000 A ac
Maximum non-destructive current	100 kA
Output signal	85 mV at 1000 A rms, 50 Hz
Basic accuracy	±1% of reading at 25 °C, 50 Hz
Linearity	±0.2% of reading at 10%...100% of range
Noise	< 1 mV rms at 10 Hz…7 kHz
Additional errors: • with temperature (0 to +70 °C, 32 to 158 °F) • with position of conductor in the probe window	 0.08% of reading /°C, 0.144% of reading /°F ±2% of reading (bus ≥ 2.5 cm or 1 inch from coupling)
Phase shift 45 to 65 Hz	< ±1°
Bandwidth (-3dB)	10 Hz to 7 kHz

GENERAL SPECIFICATIONS

Weight	250 g
Transducer length	610 mm (24 in)
Transducer diameter	12 mm (0.49 in)
Minimum bending radius	40 mm (1.57 in)
Cable length from transducer to BNC	2.5 m (98.4 in)
Temperature, operating	-20 to +90°C (-4 to +194°F)
Temperature, non-operating	-40 to + 105°C (-40 to +221°F)
Relative Humidity, operating	15 to 85%, non condensing
Altitude, operating	3000 m Derate to 1000 V CAT II / 600 V CAT III / 300 V CAT IV above 2000 m
Altitude, storage	12 km

Instrument Compatibility

The i430flex can only be used with the Fluke 430 series Power Quality Analyzers.

Using the i430flex

To use the i430flex, follow these instructions:

1. Connect the BNC connector of the i430flex to the desired input on the Fluke 430 series Power Quality Analyzer.

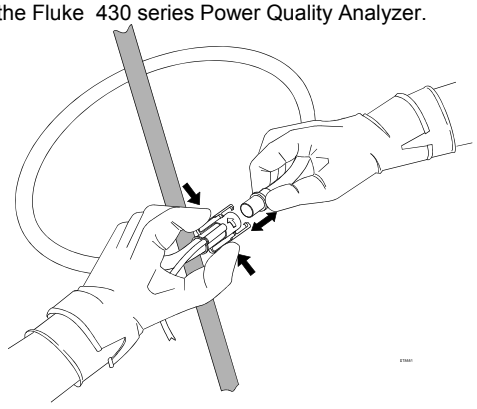

Figure 1. Connecting the flexible probe around the conductor.

2. Connect the flexible probe around the conductor (See Figure 1.)
3. Center the conductor perpendicularly inside the flexible probe area. If this is not possible, an additional measurement error of ±2% of reading can occur.
4. Avoid taking measurements close to other current-carrying conductors if possible.
5. Make sure that the arrow marked on the probe coupling points toward the correct orientation for correct phase display on the instrument.
6. Keep the probe coupling more than 2.5 cm (1 inch) away from the conductor.
7. Observe the current value and waveform on the instrument's display.

⚠ Warning

If the selected current probe of the Fluke 430 series Power Quality Analyzer is not the i430flex, the Fluke 430 will display false and misleading readings.

Maintenance

Before each use, assure continued safety by inspecting the flexible probe and its latching system for any damage. Pay particular attention to the insulation surrounding the flexible probe. An i430flex under warranty will be promptly repaired or replaced (at Fluke's discretion) and returned at no charge.

Cleaning and Storage

- The flexible probe and its latching system require no special care. Ensure that no foreign body obstructs the latching mechanism.
- Clean the i430flex with a damp cloth and a mild detergent. Do not use abrasives, solvents, or alcohol.

If your i430flex does not work

If the i430flex does not perform properly, use the following steps to help isolate the problem:

- Inspect the coupling system for any damage. If any foreign material is present, the coupling system will not close properly and errors will result.
- Inspect the cable between the flexible probe and the Power Quality Analyzer for any damage.
- Check if the i430flex is the selected current probe on the Power Quality Analyzer (Clamp i430flex).
- Verify that the function and range selection on the Power Quality Analyzer is correct.