

## LIMITED WARRANTY & LIMITATION OF LIABILITY

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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Since some countries or states do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If any provision of this Warranty is held invalid or unenforceable by a court of competent jurisdiction, such holding will not affect the validity or enforceability of any other provision.

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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**®

# i430-Flexi-TF-II

## 6000 A Flexible AC Current Probe

### Instruction Sheet

### Introducing the i430-Flexi-TF-II

The i430-Flexi-TF-II is a flexible AC current probe for use with the Fluke 430 series Power Quality Analyzers including Series II. The i430-Flexi-TF-II is optimized for current measurement on thick and hard to reach conductors.

### Unpacking

The following items should be included in the package:

- i430-Flexi-TF-II 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 prevent possible electrical shock, fire, or personal injury:

- Read all safety information before you use the Product.
- Carefully read all instructions.
- Use the Product only as specified, or the protection supplied by the Product can be compromised.
- Comply with local and national safety codes. Use personal protective equipment (approved rubber gloves, face protection, and flame-resistant clothes) to prevent shock and arc blast injury where hazardous live conductors are exposed.
- Limit operation to the specified measurement category, voltage, or amperage ratings.
- De-energize the circuit or wear personal protective equipment in compliance with local requirements before you apply or remove the Flexible Current Probe.
- Do not touch voltages >30 V ac, 42 V ac peak, or 60 V dc.
- Do not use the Product around explosive gas, vapor, or in damp or wet environments.
- Do not use the Product if it operates incorrectly.
- Before each use, examine the Product. Look for cracks or missing pieces of the clamp housing or output cable insulation. Also look for loose or weakened components. Carefully examine the insulation around the jaws.
- Do not use a current measurement as an indication that a circuit is safe to touch. A voltage measurement is necessary to know if a circuit is hazardous.
- Do not use the Product if it is damaged.


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## 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.
	Conforms to relevant European standards.
	Conforms to relevant North American Safety Standards.
	Conforms to relevant Australian standards.
	Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.

## Specifications

**SAFETY**  The i430-Flexi-TF-II complies with:  
IEC 61010-1: Pollution degree 2  
IEC 61010-2-032: 1000V CAT III/ 600V CAT IV  
IEC 61010-031

### ELECTRICAL SPECIFICATIONS

Measuring range	0.5 to 6000 A ac
Maximum non-destructive current	100 kA (50/60 Hz)
Output signal	86.6 mV at 1000A/50Hz (on 1 M $\Omega$ ) 85.0 mV at 1000A/50Hz (on 50 k $\Omega$ )
Basic accuracy	$\pm 1\%$ of reading at 25 °C, 50 Hz
Linearity	$\pm 0.2\%$ of reading at 10%...100% of range
Noise	<1 mV rms at 10 Hz ...10 kHz
Additional errors:	
• temperature coefficient over operating temperature range	0.05 % of reading /°C, 0.09 % of reading /°F
• with position of conductor in the probe window (see Figure 1):	
A = 12.7 mm (0.5 in)	$\pm 0.5\%$ of reading
B = 20.3 mm (0.8 in)	$\pm 1.0\%$ of reading
C = 35.6 mm (1.4 in)	$\pm 2.0\%$ of reading
• 0.5 to 30 A	$\pm 1$ count or 0.1 A (whichever is greater)
External magnetic field rejection in reference to external current	40 dB (with cable >100 mm from the head coupling and r-coil)
Phase shift (fundamental frequency)	< $\pm 1^\circ$
Bandwidth (-3 dB)	10 Hz to 10 kHz
Frequency derating	$I \times f \leq 385$ kA Hz
Working voltage	1000V CAT III, 600V CAT IV

### GENERAL SPECIFICATIONS

Weight	153 g
Transducer length	610 mm (24 in)
Transducer diameter	7.5 mm (0.3 in)
Minimum bending radius	38 mm (1.5 in)
Cable length from transducer to BNC	2.5 m (98.4 in)
Temperature, operating	-20 °C to +70 °C (-4 °F to +158 °F) Temperature of conductor under test shall not exceed 80 °C (176 °F)
Temperature, non-operating	-40°C to + 80 °C (-40 °F to +176 °F)
Relative Humidity, operating	15 to 85 %, non condensing
Altitude, operating	3000 m
Altitude, storage	12 km

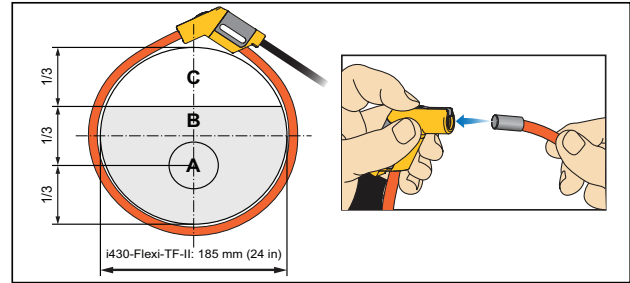
## Instrument Compatibility

The i430-Flexi-TF-II can only be used with the Fluke 433/434/435/434-II/435-II/437-II Power Quality Analyzers. Maximum measurement range on all models: 6000 A. Minimum measurement range on Fluke 433/434/435: 30 A.

## Using the i430-Flexi-TF-II

To use the i430-Flexi-TF-II, follow these instructions:

1. Connect the BNC connector of the i430-Flexi-TF-II 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  $\pm 2\%$  of reading can occur. See Electrical Specifications.
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. See also the setup screen of 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.
8. Observe the safety instructions when applying and using the i430-Flexi-TF-II.

### Warning

If the selected current probe of the Fluke 430 series Power Quality Analyzer is not the i430 Flex (on Fluke 430 series I) or i430-Flexi-TF-II (on Fluke 430 series II), 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 i430-Flexi-TF-II under warranty will be promptly repaired or replaced (at Fluke's discretion) and returned at no charge.

### Warning

To prevent possible electrical shock, fire, or personal injury:

- Remove the input signals before you clean the Product.
- Have an approved technician repair the Product.

## 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 i430-Flexi-TF-II with a damp cloth and a mild detergent. Do not use abrasives, solvents, or alcohol.

## If your i430-Flexi-TF-II does not work

If the i430-Flexi-TF-II 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 i430-Flexi-TF-II is the selected current probe on the Power Quality Analyzer (Clamp i430-Flexi-TF-II).
- Verify that the function and range selection on the Power Quality Analyzer is correct.