

**FLUKE**®

# **374 FC/375 FC/376 FC**

Clamp Meters

Users Manual

September 2015 Rev. 3, 4/23

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This Fluke product will be free from defects in material and workmanship for three years 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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## ***Introduction***

The Fluke 374 FC/375 FC/376 FC (the Product) measures true-rms ac current and voltage, dc current and voltage, inrush current, resistance, and capacitance. The 375 FC and 376 FC also measure frequency and dc millivolts. The detachable iFlex (Flexible Current Probe) that is included with the 376 FC (optional with the 374 FC and 375 FC) expands the measurement range to 2500 A ac. The Flexible Current Probe provides increased display flexibility and allows measurements of awkward sized conductors and improved wire access. The illustrations in this manual show the 376 FC.

## **Contact Fluke**

Fluke Corporation operates worldwide. For local contact information, go to our website:

[www.fluke.com](http://www.fluke.com)

To register your product, view, print, or download the latest manual or manual supplement, go to our website.

+1-425-446-5500

[fluke-info@fluke.com](mailto:fluke-info@fluke.com).

## **Safety Information**

A **Warning** identifies conditions and procedures that are dangerous to the user. A **Caution** identifies conditions and procedures that can cause damage to the Product or the equipment under test.

General Safety Information in the printed Safety Information document that ships with the Product. It can also be found online at [www.fluke.com](http://www.fluke.com). More specific safety information is listed in this manual where applicable.

## **Replacement Part List**

Table 1 lists the available replacement parts.

**Table 1. Replacement Parts**

<b>Item</b>	<b>Qty.</b>	<b>Fluke Part or Model Number</b>
Battery, AA 1.5 V	2	376756
Battery Door Assembly	1	4696918
Test lead set	1	TL75
Flexible current probe i2500-10	1	3676410
Flexible current probe i2500-18	1	3798105
Magnet strap	1	669952
STRAP 9 INCHES	1	669960
Soft Case	1	3752958



## The Product

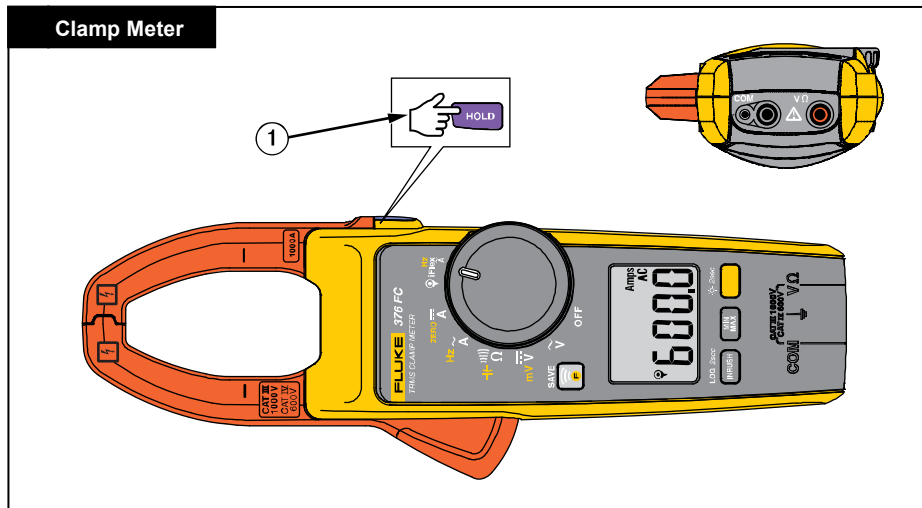
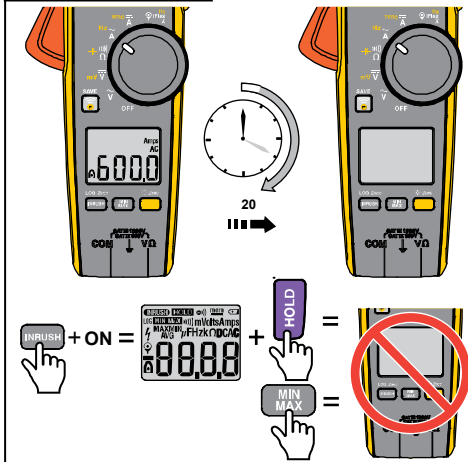


fig01.emf

### Auto Power Off



### Backlight

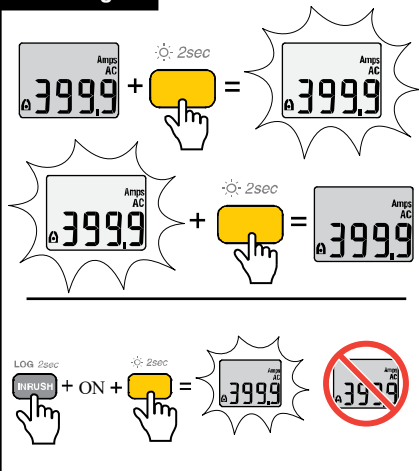
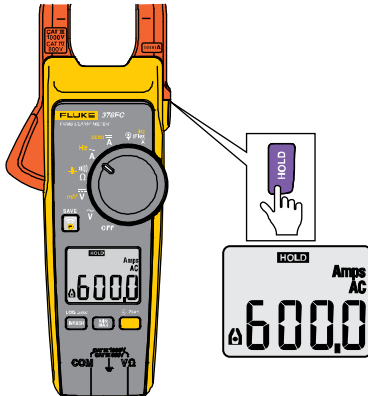


fig02\_3.emf

## Display Hold



## MIN MAX AVG

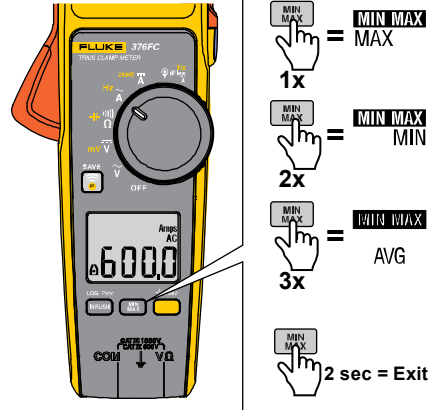
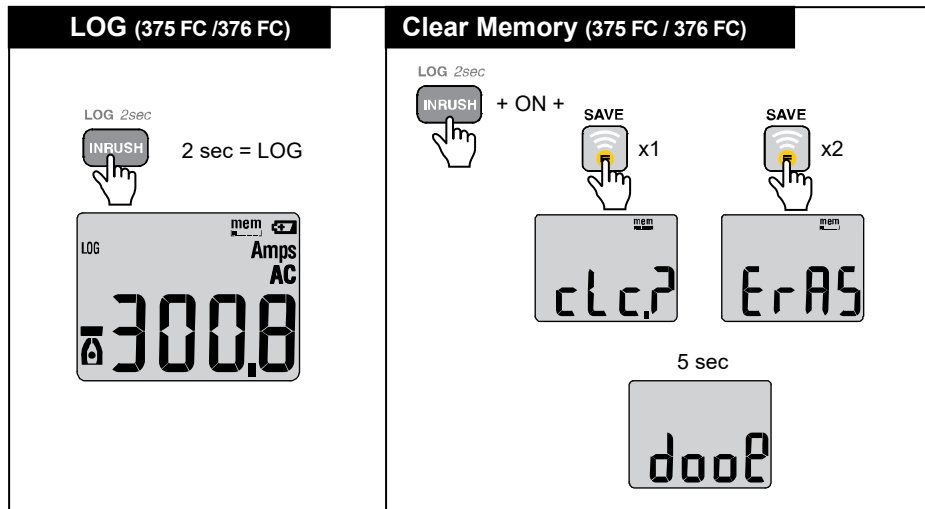


fig04\_5.emf



fig\_16.emf

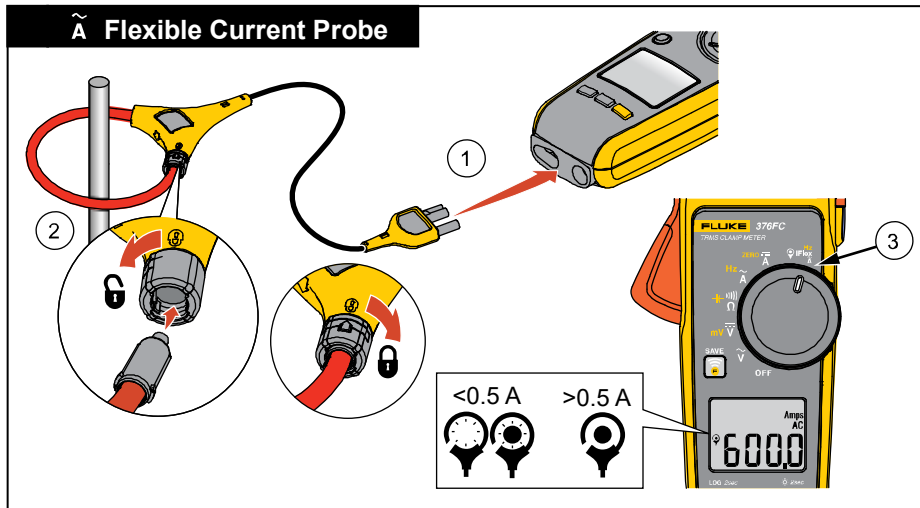


fig06.emf

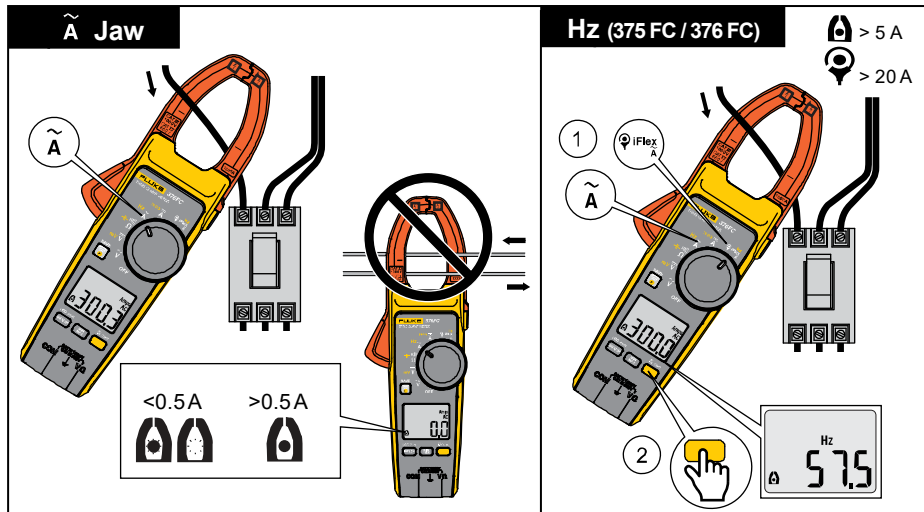


fig07.emf

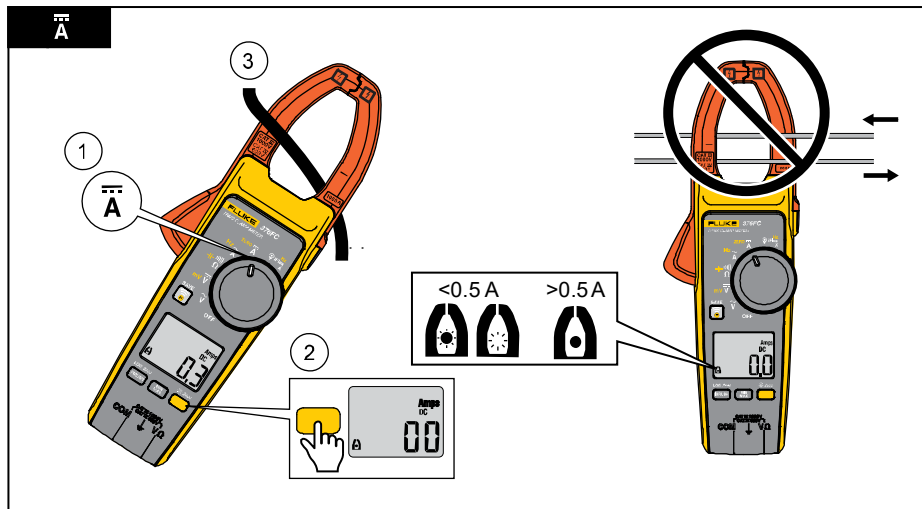


Fig08.emf

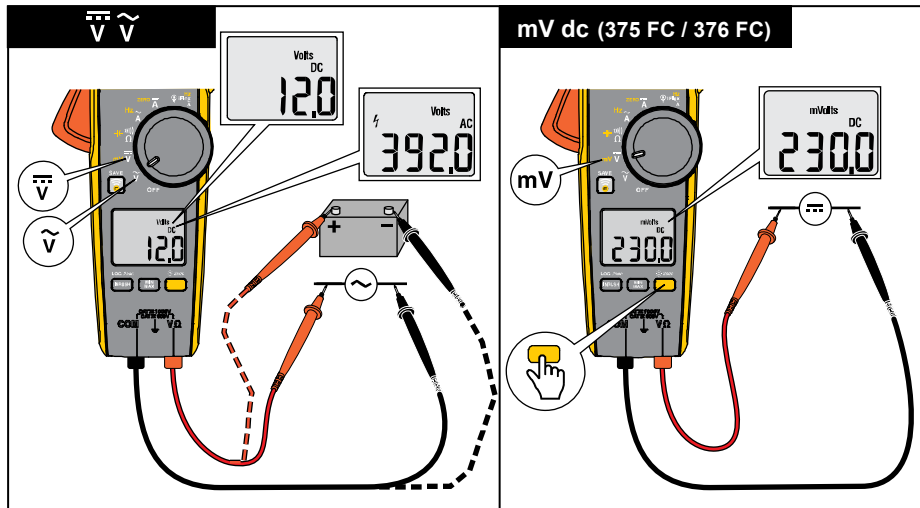


fig09\_10.emf



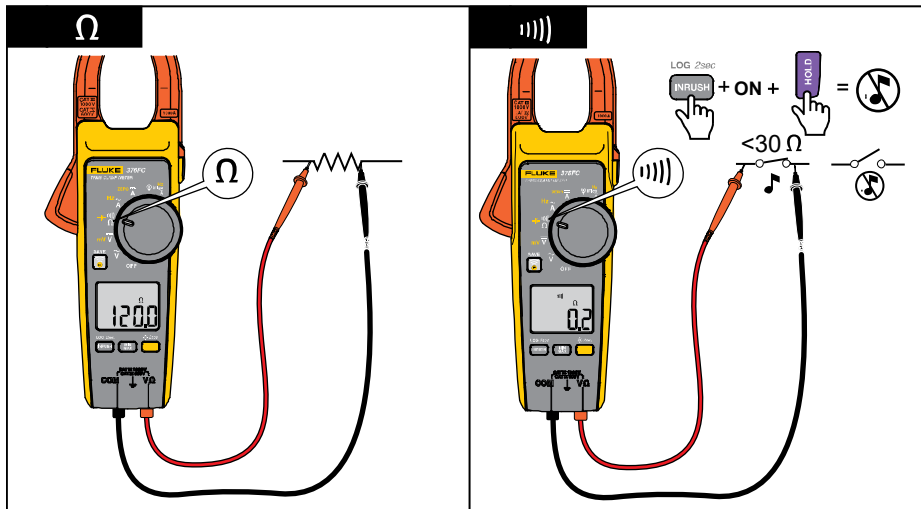


Fig15.emf

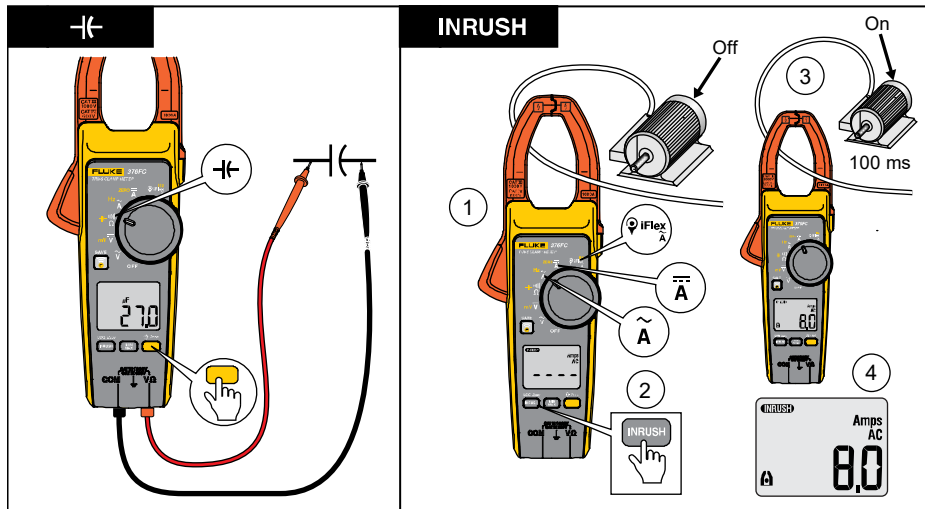


fig13\_14.emf

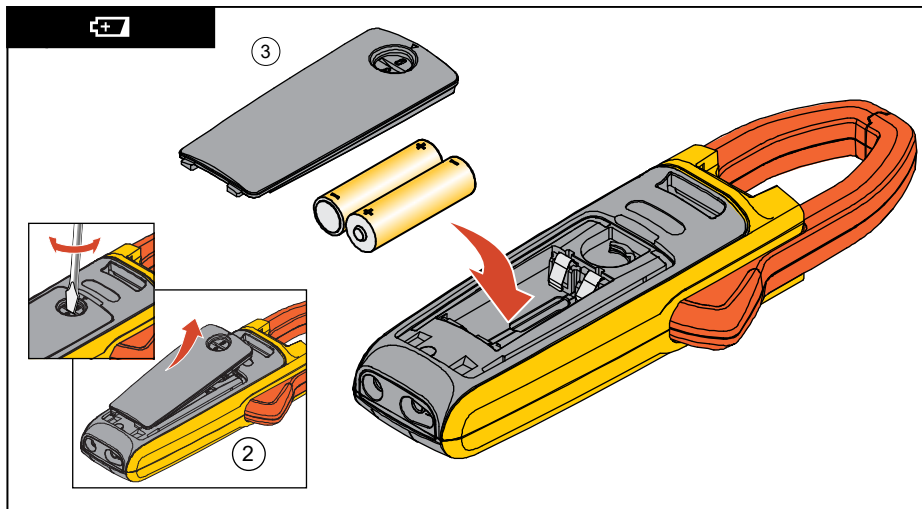


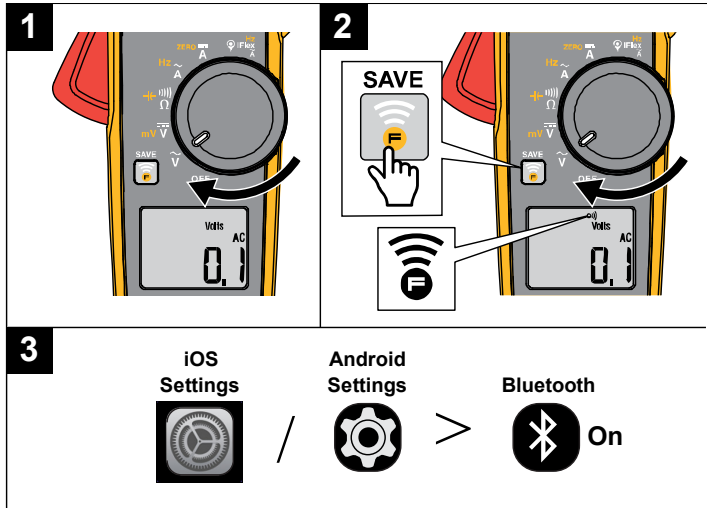
fig11\_12.emf

## Install Fluke Connect® App

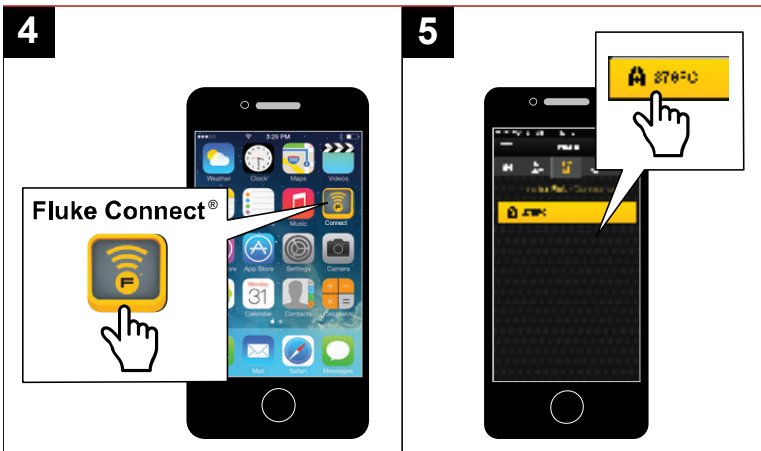


Install\_Flukeconnect\_App.jpg

## Wireless Radio Setup



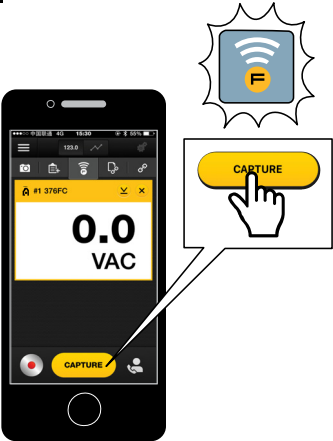
WirelessRadioSetup1-3.emf




WirelessRadioSetup4-5.emf

**6**

Blink = 4-5 s



**7**



**SAVE**

Go to [www.flukeconnect.com](http://www.flukeconnect.com)

## **General Specifications**

Safety specifications are in the printed Safety Information that shipped with the Product.

Size (L x W x H) ..... 249 mm x 85 mm x 45 mm

Weight..... 410 g

Jaw Opening ..... 34 mm

Flexible Current Probe Diameter ..... 7.5 mm

Flexible Current Probe Cable Length  
(head to electronics connector) ..... 1.8 m

Temperature

Coefficients ..... Add 0.1 x specified accuracy for each degree C >28 °C  
or <18 °C

### **AC Current via Jaw**

Range

374 FC and 375 FC ..... 600.0 A

376 FC..... 999.9 A

Resolution ..... 0.1 A

Accuracy ..... 2 %  $\pm$ 5 digits (10 Hz to 100 Hz)  
2.5 %  $\pm$ 5 digits (100-500 Hz)



Crest Factor (50 Hz/60 Hz)

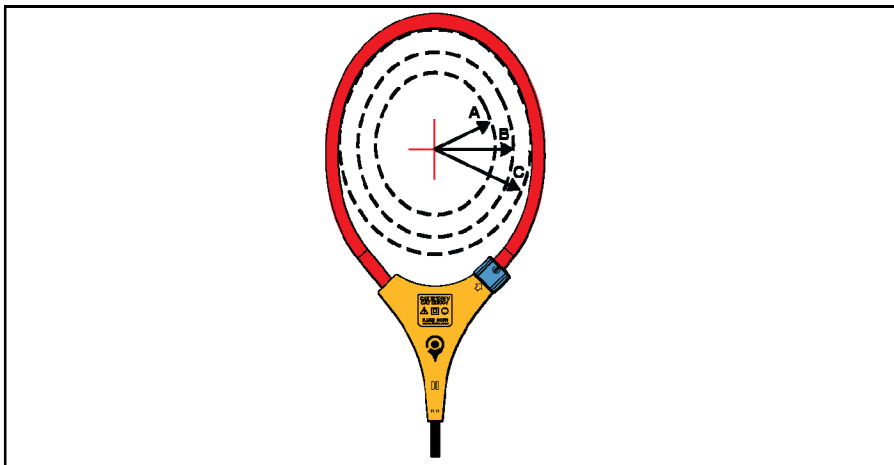
376 FC .....	3 @ 500 A
	2.5 @ 600 A
	1.42 @ 1000 A
374 FC and 375 FC .....	2.5 @ 350 A
	1.42 @ 600 A

*Note: Add 2 % for C.F. >2*

**AC Current via Flexible Current Probe**

Range .....	2500 A
Resolution .....	0.1 A ( $\leq 999.9$ A)
	1 A ( $\leq 2500$ A)
Accuracy .....	3 % $\pm 5$ digits (5 – 500 Hz)
Crest Factor (50 Hz/60 Hz).....	3.0 @ 1100 A
	2.5 @ 1400 A
	1.42 @ 2500 A
	Add 2 % for C.F. >2

## Position Sensitivity



ghn12.png

Figure 1. Position Sensitivity

<b>Distance from Optimum</b>	<b>i2500-10 Flex</b>	<b>i2500-18 Flex</b>	<b>Error</b>
A	0.5 in (12.7 mm)	1.4 in (35.6 mm)	±0.5 %
B	0.8 in (20.3 mm)	2.0 in (50.8 mm)	±1.0 %
C	1.4 in (35.6 mm)	2.5 in (63.5 mm)	±2.0 %
Measurement uncertainty assumes centralized primary conductor at optimum position, no external electrical or magnetic field, and within operating temperature range.			

### **DC Current**

#### Range

374 FC and 375 FC ..... 600.0 A

376 FC ..... 999.9 A

Resolution ..... 0.1 A

Accuracy ..... 2 % ±5 digits

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#### **AC Voltage**

Range .....	1000 V
Resolution .....	0.1 V ( $\leq 600.0$ V)
	1 V ( $\leq 1000$ V)
Accuracy .....	(374 FC/375 FC) 1.5 % $\pm 5$ digits (20 Hz to 500 Hz)
	(376 FC) 1 % $\pm 5$ digits

#### **DC Voltage**

Range .....	1000 V
Resolution .....	0.1 V ( $\leq 600.0$ V)
	1 V ( $\leq 1000$ V)
Accuracy .....	1 % $\pm 5$ digits

#### **mV dc (375 FC and 376 FC)**

Range .....	500.0 mV
Resolution .....	0.1 mV
Accuracy .....	1 % $\pm 5$ digits

**Frequency via Jaw**

Range

375 FC and 376 FC ..... 5.0 Hz to 500.0 Hz

Resolution ..... 0.1 Hz

Accuracy ..... 0.5 %  $\pm$ 5 digits

Trigger Level ..... 5 Hz to 10 Hz,  $\geq$ 10 A

10 Hz to 100 Hz,  $\geq$ 5 A

100 Hz to 500 Hz,  $\geq$ 10 A

**Frequency via Flexible Current Probe**

Range

375 FC and 376 FC ..... 5.0 Hz to 500.0 Hz

Resolution ..... 0.1 Hz

Accuracy ..... 0.5 %  $\pm$ 5 digits

Trigger Level ..... 5 Hz to 20 Hz,  $\geq$ 25 A

20 Hz to 100 Hz,  $\geq$ 20 A

100 Hz to 500 Hz,  $\geq$ 25 A

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#### Resistance

##### Range

374 FC ..... 6000  $\Omega$

375 FC and 376 FC ..... 60 k $\Omega$

##### Resolution

374 FC ..... 0.1  $\Omega$  ( $\leq 600 \Omega$ )

1  $\Omega$  ( $\leq 6000 \Omega$ )

375 FC and 376 FC ..... 0.1  $\Omega$  ( $\leq 600 \Omega$ )

1  $\Omega$  ( $\leq 6000 \Omega$ )

10  $\Omega$  ( $\leq 60 \text{ k}\Omega$ )

Accuracy ..... 1 %  $\pm 5$  digits

#### Capacitance

Range ..... 1000  $\mu\text{F}$

Resolution ..... 0.1  $\mu\text{F}$  ( $\leq 100 \mu\text{F}$ )

1  $\mu\text{F}$  ( $\leq 1000 \mu\text{F}$ )

Accuracy ..... 1 %  $\pm 4$  digits

## ***Product Disposal***

Dispose of the Product in a professional and environmentally sound manner:

- Delete personal data on the Product before disposal.
- Remove batteries that are not integrated into the electrical system before disposal and dispose of batteries separately.
- If this Product has an integral battery, put the entire Product in the electrical waste.

