

TECHNICAL DATA

# Fluke 377 FC Non-Contact Voltage True-rms AC/DC Clamp Meter with iFlex



## Key features

- Measure voltage and current with your clamp jaw
- Faster, safer testing - all without touching a live wire - using FieldSense™ technology
- Complete 3-phase voltage and current tests in 3 quick steps

## Product overview: Fluke 377 FC Non-Contact Voltage True-rms AC/DC Clamp Meter with iFlex

### Voltage and current measurements with FieldSense™ technology

The Fluke 377 FC true-rms clamp meter uses FieldSense™ technology to make testing faster and safer, all without contacting a live conductor. You get accurate voltage and current measurements through the clamp jaw. Simply clip the black test lead to any electrical ground, put the clamp jaw around the conductor and see reliable, accurate voltage and current values on the display.

### Measure extremely high current with iFlex® probe

Use the included iFlex flexible current probe to measure ac current as high as 2500 A. The iFlex probe provides access to large conductors in tight spaces.

## Complete 3-phase measurements in quick, easy steps

- Complete 3-phase voltage and current tests in 3 easy steps
- Full set of phase-to-ground and phase-to-phase values calculated and shown on the meter
- Values are also displayed on your smart phone and saved to the cloud via Fluke Connect software
- Phase rotation auto-calculated and shown on the Fluke Connect software
- No more hand-written notes or complicated math.

## Easy to see, easy to use with included tools

Your job will get easier when you use the 377 FC clamp meter. The display turns green when a stable FieldSense measurement is detected. Visual Continuity also provides a bright green screen for easy detection of continuity in noisy work areas.

## Record, analyze, share results with Fluke Connect® software

With Fluke Connect software you can remotely log, trend and monitor measurements to pinpoint intermittent faults. Fluke Connect also allows you to gather data as the basis for a preventive maintenance program.

# Specifications: Fluke 377 FC Non-Contact Voltage True-rms AC/DC Clamp Meter with iFlex

| General specifications  |  |                       |
|---|--|-----------------------|
| General Maximum Voltage between any Terminal and Earth Ground |  | 1000 V                |
| Battery   | Type   | 2 AA IEC LR6 alkaline |
|   | Life   | 200 hour              |
| Display   |  | Dual readout          |
| Automatic Power Off   |  | 20 minutes            |
| Electrical  |  |                       |
| AC Current: Jaw   |  |                       |
| Range   | 999.9 A  |                       |
| Resolution  | 0.1 A  |                       |
| Accuracy  | 2 % ±5 digits (45 Hz to 66 Hz)                                   |                       |
| Crest Factor (50/60 Hz)                                       | 3 @ 500 A<br>2.5 @ 600 A<br>1.42 @ 1000 A<br>Add 2 % for C.F. >2 |                       |
| AC Current: Flexible Current Probe                            |  |                       |
| Range   | 2500 A   |                       |
| Resolution  | 1 A (≤2500 A) 0.1 A (≤999.9 A)                                   |                       |
| Accuracy  | 3 % ±5 digits (5 Hz to 500 Hz)                                   |                       |

|                        |   |
|------------------------|---|
| Crest Factor (50/60Hz) | 3.0 at 1100 A<br>2.5 at 1400 A<br>1.42 at 2500 A<br>Add 2 % for C.F. >2 |
|------------------------|---|

**Position Sensitivity**

|  |                       |                  |                  |         |
|--|-----------------------|------------------|------------------|---------|
|  | Distance from Optimum | i2500-10 Flex    | i2500-18 Flex    | Error   |
|  | 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**

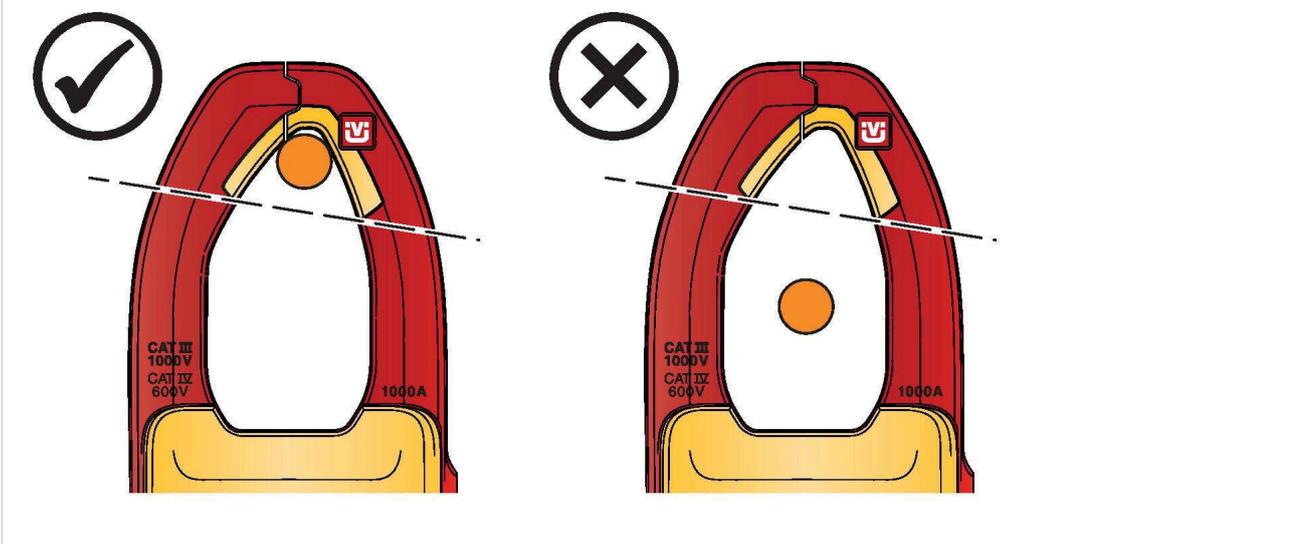
|            |                            |
|------------|----------------------------|
| Range      | 999.9 A                    |
| Resolution | 0.1 A                      |
| Accuracy   | 2 % ±5 digits <sup>1</sup> |

<sup>1</sup>When using the ZERO function to compensate for offsets

**AC Voltage: Field Sense**

|            |              |                                |
|------------|--------------|--------------------------------|
| Range      | 1000 V       |                                |
| Resolution | 1 V (≤1000V) |                                |
| Accuracy   | ≤4/0 AWG     | 3 % ±5 digits (45 Hz to 66 Hz) |
|            | ≥4/0 AWG     | 5 % ±5 digits (45 Hz to 66 Hz) |

Position wire as close as possible to jaw opening (see illustration).



| <b>AC Voltage: Test Leads</b>                 |  |
|---|--|
| Range   | 600.0 V 1000 V   |
| Resolution                                    | 0.1 V ( $\leq 600.0$ V)<br>1 V ( $\leq 1000$ V)  |
| Accuracy                                      | 1 % $\pm 5$ digits (20 Hz to 500 Hz)   |
| <b>DC Voltage</b>                             |  |
| Range   | 600.0 V<br>1000 V  |
| Resolution                                    | 0.1 V ( $\leq 600.0$ V)<br>1 V ( $\leq 1000$ V)  |
| Accuracy                                      | 1 % $\pm 10$ digits  |
| <b>mV dc</b>                                  |  |
| Range   | 500.0 mV   |
| Resolution                                    | 0.1 mV   |
| Accuracy                                      | 1 % $\pm 5$ digits   |
| <b>Amps Frequency: Jaw</b>                    |  |
| Range   | 45 Hz to 66 Hz   |
| Resolution                                    | 0.1 Hz   |
| Accuracy                                      | 0.5 % $\pm 5$ digits   |
| Trigger Level                                 | 5 Hz to 10 Hz, $\geq 10$ A<br>10 Hz to 100 Hz, $\geq 5$ A<br>100 Hz to 500 Hz, $\geq 10$ A                               |
| <b>Amps Frequency: Flexible Current Probe</b> |  |
| Range   | 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<br>20 Hz to 100 Hz, $\geq 20$ A<br>100 Hz to 500 Hz, $\geq 25$ A                              |
| <b>Resistance</b>                             |  |
| Range   | 60.00 k $\Omega$<br>6000 $\Omega$<br>600.0 $\Omega$  |
| Resolution                                    | 0.1 $\Omega$ ( $\leq 600.0$ $\Omega$ )<br>1 $\Omega$ ( $\leq 6000$ $\Omega$ )<br>10 $\Omega$ ( $\leq 60.00$ k $\Omega$ ) |
| Accuracy                                      | 1 % $\pm 5$ digits   |
| <b>Capacitance</b>                            |  |
| Range   | 1000 $\mu$ F   |

|   |  |  |
|---|--|--|
| Resolution  | 0.1 $\mu\text{F}$ ( $\leq 100.0 \mu\text{F}$ )<br>1 $\mu\text{F}$ ( $\leq 1000 \mu\text{F}$ )  |  |
| Accuracy  | 1 % $\pm 4$ digits   |  |
| <b>Mechanical</b>   |  |  |
| Size (L x W x H)  | 274 mm x 86 mm x 47 mm   |  |
| Weight (with Batteries)   | 463 g  |  |
| Jaw Opening   | 34 mm  |  |
| Flexible Current Probe Diameter                                     | 7.5 mm   |  |
| Flexible Current Probe Cable Length (head to electronics connector) | 1.8 m  |  |
| Rogowski Coil Length  | 450 mm   |  |
| <b>Environmental</b>  |  |  |
| Operating Temperature   | -10 °C to 50 °C  |  |
| Storage Temperature   | -40 °C to 60 °C  |  |
| Operating Humidity (without condensation)                           | Non condensing (<10 °C)<br>$\leq 90$ % RH (10 °C to 30 °C)<br>$\leq 75$ % RH (30 °C to 40 °C)<br>$\leq 45$ % RH (40 °C to 50 °C)   |  |
| Temperature Coefficients  | Add 0.1 x specified accuracy for each degree C >28 °C or <18 °C  |  |
| Ingress Protection  | IEC 60529: IP30 (jaw closed)   |  |
| Operating Altitude  | 2000 m   |  |
| Storage Altitude  | 12 000 m   |  |
| Electromagnetic Compatibility (EMC)                                 | International  | IEC 61326-1: Portable Electromagnetic Environment<br>IEC 61326-2-2, CISPR 11: Group 1, Class B   |
|   | <i>Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the internal function of the equipment itself.</i>   |  |
|   | <i>Class B: Equipment is suitable for use in domestic establishments and in establishments directly connected to a low voltage power supply network which supplies buildings used for domestic purposes. Emissions that exceed the levels required by CISPR 11 can occur when the equipment is connected to a test object.</i> |  |
|   | Korea (KCC)  | Class A equipment (Industrial Broadcast & Communications Equipment)  |
|   |  | <i>Class A: Equipment meets requirements for industrial electromagnetic wave equipment and the seller or user should take notice of it. This equipment is intended for use in business environments and not to be used in homes.</i> |
| USA (FCC)   | 47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.  |  |
| <b>Safety</b>   |  |  |
| General   | IEC 61010-1: Pollution degree 2  |  |

|  |   |
|--|---|
| Measurement                                    | IEC 61010-2-032: CAT III 1000 V / CAT IV 600 V<br>IEC 61010-2-033: CAT III 1000 V / CAT IV 600 V  |
| Current Clamp for Leakage Current Measurements | IEC 61557-13: Class 2, ≤30 A/m  |
| <b>Wireless Radio</b>                          |   |
| Radio Frequency Certification                  | FCC ID: T68-FBLE IC:6627A-FBLE  |
| Frequency Range                                | 2405 MHz to 2480 MHz  |
| Output Power                                   | <100 mW   |
| Radio Frequency Data                           | <a href="#">Radio Frequency Data For Class A Devices</a><br>SIMPLIFIED EU DECLARATION OF CONFORMITY<br>Hereby, Fluke declares that the radio equipment contained in this Product is in compliance with Directive 2014/53/EU. The full text of the EU declaration is available at the following internet address:<br><a href="https://media.fluke.com/ef664f31-68ef-40d9-9ca7-b10800bf192b_original%20file.pdf">https://media.fluke.com/ef664f31-68ef-40d9-9ca7-b10800bf192b_original%20file.pdf</a> . |

## Ordering information



### FLUKE-377 FC

FLUKE-377 FC

Includes:

- Fluke 377 FC Non-Contact Voltage True-RMS AC/DC Clamp Meter
- TL224 Test Leads
- TP175 TwistGuard™ Test Probes
- AC285 black grounding clip (1 only)
- i2500-18 iFlex® Flexible Current Probes 18 inch (48 cm)
- TPAK ToolPak™ Magnetic Meter Hanger
- Premium carrying case
- Quick reference guide

#### Optional accessories

##### Fluke TL175 TwistGuard™ Test Leads

#### Description

Simply twist to change the exposed probe tip length.

##### Fluke Pack30 Professional Tool Backpack

The Fluke Pack30 tool backpack gives you a comfortable hands-free experience vs. traditional tool belts that put all the weight on your lower back.

##### Fluke TL220 SureGrip™ Industrial Test Lead Set

This test lead set with test probes works in multiple electrical applications. SureGrip™ feature is designed to do your work with comfort.

##### Fluke AC220 SureGrip™ Alligator Clips

SureGrip™ accessories are designed to improve steadiness in slippery hands.



### Preventive maintenance simplified. Rework eliminated.

Save time and improve the reliability of your maintenance data by wirelessly syncing measurements using the Fluke Connect® system.

- Eliminate data-entry errors by saving measurements directly from the tool and associating them with the work order, report or asset record.
- Maximize uptime and make confident maintenance decisions with data you can trust and trace.
- Access baseline, historical and current measurements by asset.
- Move away from clipboards, notebooks and multiple spreadsheets with a wireless one-step measurement transfer.
- Share your measurement data using ShareLive™ video calls and emails.

Find out more at [flukeconnect.com](http://flukeconnect.com)



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