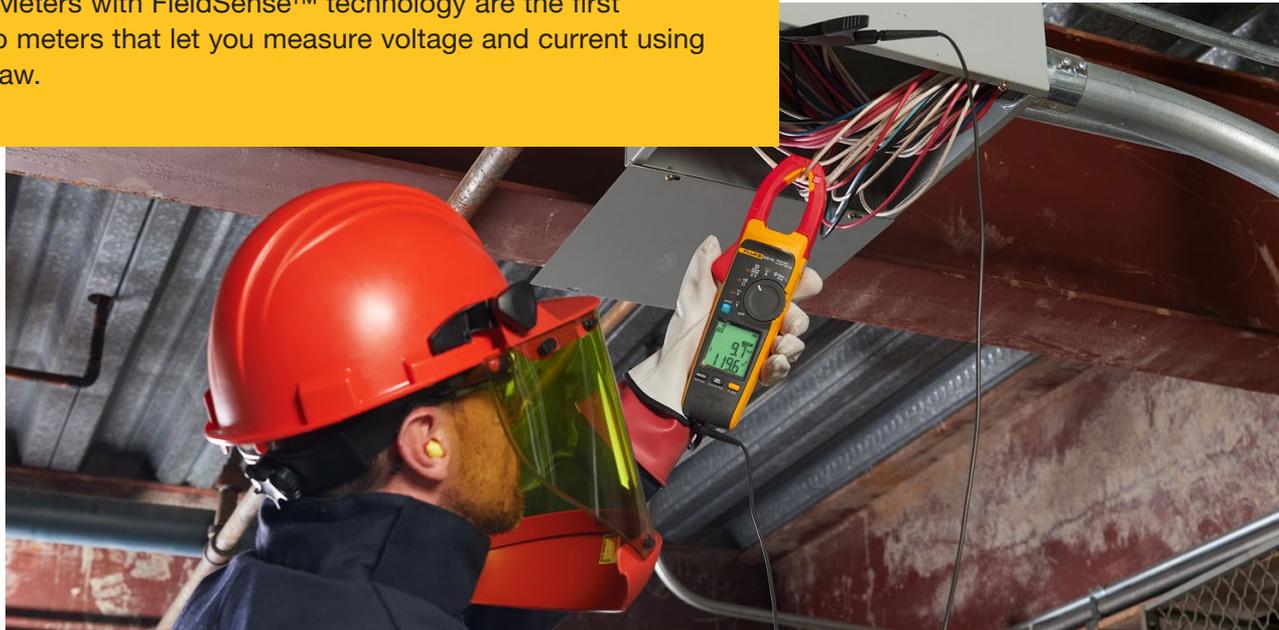


APPLICATION NOTE

Guide to using FieldSense in the 377 FC and 378 FC Clamp Meter

Wires in tight compact spaces. Panels out of reach. Extra-large conductors. We understand your workspace. The Fluke 377 FC and 378 FC Clamp Meters with FieldSense™ technology are the first handheld clamp meters that let you measure voltage and current using just the clamp jaw.



Fluke 378 FC Clamp Meter taking measurements in tight spaces

Applications

Tools with FieldSense are extremely versatile for troubleshooting and routine maintenance applications in industrial, residential, and commercial establishments.

	Residential	Commercial	Industrial
Check if a circuit is live before starting work	•	•	•
Measure individual voltages (either AC using FieldSense™ or DC using test leads)	•	•	•
Measure DC current through the jaw up to 1000 A	•	•	•
Measure AC Current up to 2500A through the iFlex accessory	•	•	•
Determine component resistances up to 60 kΩ	•	•	•
Check circuit continuity	•	•	•

Applications (continued)

	Residential	Commercial	Industrial
Measure loads on a branch circuit at a service panel	•	•	
Map outlets to breakers	•	•	
Measure the load of a pump, motor, or compressor	•	•	
Determine voltage and current on lighting systems	•	•	
Check circuit loading at panelboards (including feeder cables, branch circuits, and neutrals) and the integrity of a grounding circuit			•
Generator/motor/chiller maintenance and troubleshooting			•
Feed circuits coming into motors (up to 1000 amps)			•
Validate load measurements on motors and pumps			•
Confirm transformer load and line voltage			•

Why FieldSense in a clamp meter?

FieldSense is an award-winning, breakthrough technology in how voltage is measured. While regular clamps detect a magnetic field to derive an AC current measurement, FieldSense also detects an electrical field to measure voltage simultaneously. The result is that for the first time in a Fluke clamp meter, voltage and current can be measured at the same time using a clamp jaw:

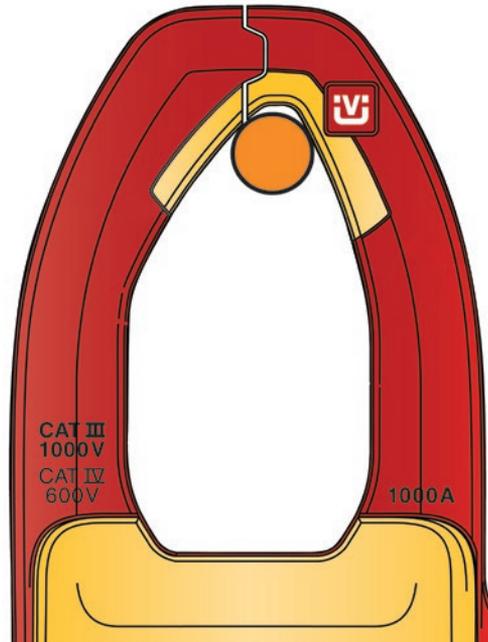
- Ability to take current and voltage measurements at the same time with dual display
- Safer voltage measurements without having to connect the clamp meter to a live conductor
- Rapid 3 phase measurements with auto calculation of phase to phase values and phase rotation
- Built in Power Quality (PQ) indicator in 378 FC to monitor power related issues
- Fluke Connect software to enable data logging, seamless data transfer and reporting

How to measure voltage or current with a FieldSense-enabled clamp meter

1. Separate individual hot and neutral wires.
2. Clip the black test lead to any unpainted electrical ground.
3. Clamp the jaw around the conductor. Ensure the conductor is placed in contact with the yellow colored portion of the jaw as shown in figure.
4. See reliable, accurate voltage and current values on the display.

The clamp jaw also makes it easier to isolate individual wires in a panel, which can be difficult when many wires are bundled. In many cases, the measurement can be made with one hand.

Please note that the Field Sense Technology will not work at the output of variable frequency drives (VFD). To take voltage measurements at the output of VFDs, please use the test leads included with the clamp.



Fluke 378 FC Clamp Meter taking measurements in a panel.

Fluke. *Keeping your world up and running.®*

Fluke Corporation

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