Send measurements to your phone with Fluke Connect™ software

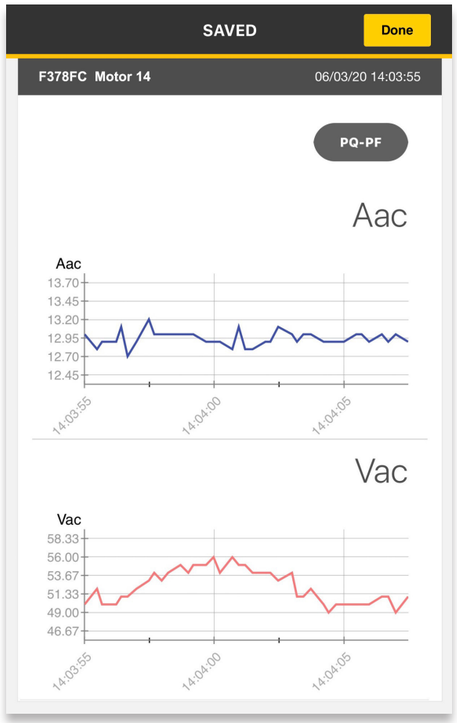
The Clamp supports the Fluke Connect™ Wireless System. Fluke Connect is a system that wirelessly connects your Clamp with an app on your smartphone or tablet. The app shows the measurements and calculations on your smartphone or tablet display. You can save these measurements, calculations, and images to Fluke Connect™ Cloud storage and share with your team.

The Fluke Connect™ app works with Apple and Android mobile products. The app is available for download to your smart device from the Apple App Store and Google Play.

To use Fluke Connect

1. Turn on the Clamp.
2. Push to activate the radio on the Clamp. shows on the display.
3. On your smartphone, go to Settings > Bluetooth.
4. Verify that Bluetooth is turned on.
5. Go to the Fluke Connect app and in the list of connected Fluke tools, select 377 FC/378 FC.

You can now take, save, and share measurements with the app. Go to www.flukeconnect.com for more information about how to use the app.





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

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Fluke 377 FC/378 FC Non-Contact Voltage True-rms AC/DC Clamp Meter with iFlex™



Voltage and current measurements with FieldSense™ technology

The Fluke 377 FC and 378 FC True-rms Clamp Meters use FieldSense™ technology to make testing faster and safer, all without touching 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.

Please put this meter to use

This demo guide will take you through the 4 unique capabilities offered by the 378 FC Clamp Meter:

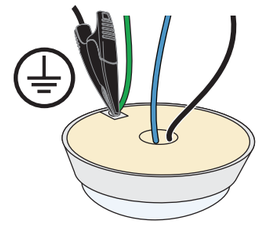
1. Measure voltage and current with your clamp jaw using FieldSense™ technology
2. Complete 3-phase voltage and current tests with fewer steps
3. Power quality indicator for power-related issues
4. Record, analyze, share results with Fluke Connect™ software

Please put this meter to the test, making real-world measurements. Then let us, and others, know what you found.

Measure voltage and current with your clamp jaw

FieldSense™ technology let you measure voltage and current simultaneously (or frequency and current) through the clamp jaw.

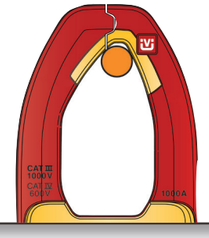
1 Insert the black ground lead into the COM input and attach the alligator clip to ground.



2 Rotate the control knob to . The display shows the icon.



3 Use the jaw release to open the jaw and position the Clamp around the conductor. Close the jaw and make sure the wire position is within the yellow portion of the jaw, as shown in the figure.



4 The display shows to indicate that the measurement is from the jaw. When the current measurement is < 0.5 A, the center dot in the icon flashes. For current measurements > 0.5 A, the center dot in the icon is steady.

5 Use yellow to toggle on/off the Hz function shown in yellow at the control knob position.

Complete 3-phase voltage and current tests with fewer steps

The Fluke 378 FC Clamp Meter is one of only two handheld clamps (Fluke 377 FC is the other) with FieldSense™ technology where voltage and current can be measured simultaneously with the clamp jaw. This allows these clamp meters to be used in making sequential phase-to-ground voltage measurements and current measurements that result in calculated phase-to-phase voltage measurements and phase rotation information. These measurements are an indication that the three-phase system is working as expected.

To setup

1. Turn the control knob to .
2. Connect the Clamp to ground with the ground lead.
3. Push MIN MAX for >2 seconds. The Clamp is in the line-to-line mode and **L1-L2-L3** shows on the display

To test

1. Position the Clamp jaw around the first conductor. Wait for the measurement on the display to settle. The screen will turn green, beep, and **L1** shows on the display.
2. Move the Clamp jaw to the second conductor within 10 seconds. Wait for the measurement on the display to settle. You will hear a beep and **L2** shows on the display.
3. Move the Clamp jaw to the last conductor within 10 seconds. Wait for the measurement on the display to settle. You will hear a beep and **L3** shows on the display.

To calculate

When the **L1-L2-L3** measurements are complete, use the Clamp to calculate the total voltage between each pair of conductors:

1. Push MIN MAX once. The displays shows the total voltage between **L1** and **L2**.
2. Push MIN MAX again to show the total voltage between **L2** and **L3**.
3. Push MIN MAX again to show the total voltage between **L3** and **L1**.

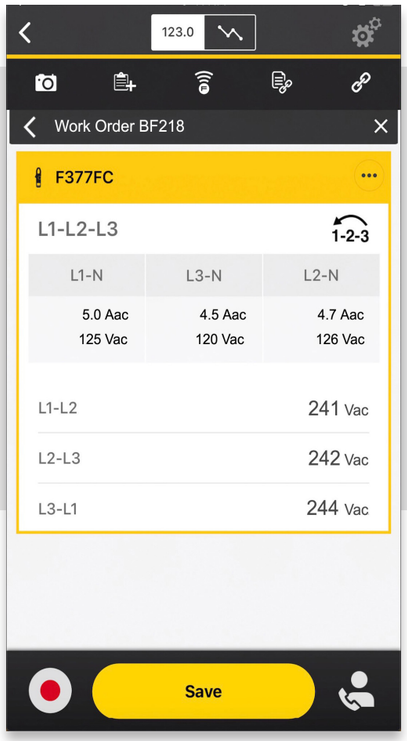
While in the line-to-line mode, you can review each line-to-ground measurement:

1. Push MIN MAX once. The displays shows the total voltage between **L1** and **L2**.
2. Push MIN MAX again to show the total voltage between **L2** and **L3**.
3. Push MIN MAX again to show the total voltage between L3 and **L1**.

To review **L1-L2-L3** measurements, continue to push MIN MAX and scroll through the measurements. To exit the phase-to-phase mode, push MIN MAX for >2 seconds.

Phase Rotation Indicator

One of the biggest needs when dealing with three-phase equipment is knowing the correct phase order and then ensuring work is done in the proper order during installation, maintenance, and troubleshooting. On top of simplifying the measurement process, the Fluke 377 FC and 378 FC also auto-calculates the phase rotation. All you have to do is make all three three-phase measurements while connected to the Fluke Connect (FC) app, then the phase rotation is auto-calculated and shown on the FC app as 1-2-3 or 3-2-1 (as shown on the right).



Power quality indicator for power-related issues

The Fluke 378 FC Clamp Meter is the first clamp meter with FieldSense technology and the ability to detect power quality problems. Industrial electricians and frontline technicians can now perform basic troubleshooting and/or maintenance rounds of single or 3-phase systems, discovering power quality problems that would not have been found otherwise. The 378 FC Clamp Meter will screen for power quality issues and helps technicians determine if a PQ analyzer or a PQ expert is required for further analysis.

The Fluke 378 FC empowers front line technicians to make basic power quality measurements and rule out power quality issues in these three categories:

PQ-Volts

PQ-Amps

PQ-PF (Power Factor)

PQ-Volts and **PQ-Amps** are based on Total Harmonic Distortion (THD) which is defined as the ratio of the sum of the powers of all harmonic components to the power of the fundamental frequency.

Power Factor (PF) is an expression of energy efficiency. It is usually expressed as a decimal value, with 1.0 being the most efficient. For values less than 1.0, the lower the value, the less efficient power usage is. Power factor is the ratio of working power, measured in kilowatts (kW), to apparent power, measured in kilovolt amperes (kVA).

The PQ Indicator is a background function which appears automatically when a power related issue is identified. The meter is continuously checking the THD% of voltage, current, and monitoring the power factor. If it exceeds a certain threshold, the enunciator shows a power quality problem.

To setup

1. Turn off the Clamp
2. Push and hold HOLD on the side of the instrument as you turn the control knob to . The Clamp goes into the option mode.
3. Press the yellow shift button four times to enter the Power Quality sensitivity option, where you can set the sensitivity level for the PQ detector and when it will trigger an alert. *Note – Anytime you release HOLD the Clamp exits the option mode but retains any changes to the settings.*

Option	Display	
PQ Level	<<lev hi>>	LEU HI
	<<lev med>>	LEU mnEd
	<<lev lo>>	LEU LO

4. Push MIN/MAX to go through the sensitivity options, selecting high, medium or low.
5. Release HOLD to exit the options mode.

To see a PQ indication

1. Turn the control knob to .
2. Connect the Clamp to ground with the ground lead.
3. If Total Harmonic Distortion (THD) for PQ volts or PQ current or the power factor (PQ PF) is outside the optimal range, the related indicator shows on the display.
   PQ-Amps PQ-Volts PQ-PF

Fluke Connect supports the Power Health indicator.

