

17xx Clamp Adapter

BNC Adapter for Clamps

Instructions

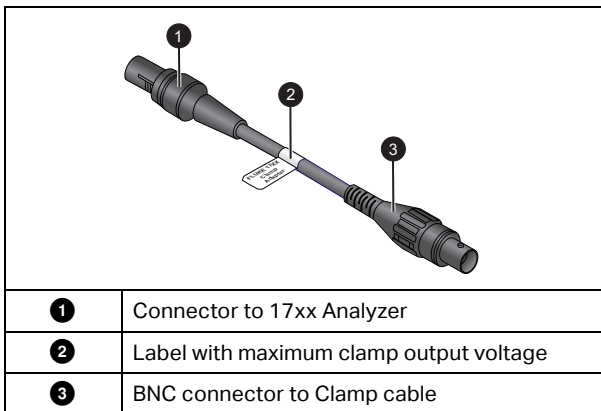
Introduction

The 17xx Clamp Adapter is an accessory for the 17xx-series of Power Quality Analyzers. Use the adapter to connect the current clamp with the BNC connector to the 17xx Analyzer.

This adapter is ready-to-use for all clamps with mV/A output. Select the adapter version depending on the voltage output of the clamp:

- Maximum 1 V: Supports clamps with a range from 0.2 A RMS to 1000 A RMS or up to ± 1500 A DC
- Maximum 2.8 V: Supports clamps with a range from 4 A RMS to 2800 A RMS or up to ± 4000 A DC

See [Supported Clamp Models](#) for the required measurement configuration on the 17xx Analyzer and a clamp with a ratio other than 1 mV/A.



Contact Fluke

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Safety Information

A **Warning** identifies hazardous 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.

Warning

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

- **Read all safety information before you use the Product.**
- **Do not alter the Product and use 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.**
- **Do not use the Product around explosive gas or vapor.**
- **Do not touch voltages >30 V ac rms, 42 V ac peak, or 60 V dc.**
- **Before each use, examine the Product. Look for cracks or missing pieces of the connectors or cable insulation. Also look for loose or weakened components.**
- **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.**
- **Have an approved technician repair the Product.**
- **Remove the input signals before you clean the Product.**
- **Do not apply more than 5 Vpk to the adapter**
- **Use the product only with compatible current clamps. See [Supported Clamp Models](#).**

Symbols

The table below lists the symbols that can be used on the Product or in this document.

Symbol	Description
	Consult user documentation.
	WARNING. RISK OF DANGER.
	WARNING. HAZARDOUS VOLTAGE. Risk of electric shock.
	This product complies with the WEEE Directive and its marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Do not dispose of this product as unsorted municipal waste. For information about take-back and recycling programs available in your country, see the Fluke website.

Instructions

The adapter is compatible only with clamps. Flexis, such as the i430-Flexi-TF-II, are not supported.

To use:

1. Connect the adapter to the clamp and attach the adapter to the 17xx Analyzer.
2. Apply the required scaling factor and range that is specific for the attached clamp.
3. Use the low range with the 2.8 V adapter. The high range may distort the signal.

DC Offset (177x only)

The BNC adapter is DC-coupled which may cause additional DC offset with the measurement signal from both dc and ac current clamps. This offset signal can affect the measurement accuracy. To remove the offset, you can auto-zero the currents on the 177x Analyzer. This auto-zero function eliminates the zeroing procedure on the DC clamp.

To autozero:

1. Turn on the DC Clamp.
2. Connect one or more probes to the Analyzer.
3. Make sure that the DC Clamp is not attached to any conductor with current.

4. Orient the DC Clamp during auto-zero as closely as possible to the orientation of the DC Clamp when in place at the conductor to measure.
5. Select the **Verify Meter** screen on the Analyzer.
The Analyzer recognizes that the clamp adapter is connected, turns on the autozero function, and shows a current close to zero on the display.
6. If this is not the case, touch the autozero target on the Analyzer.
The display shows current as zero.
7. Attach the clamp around the conductor to measure.
Do not press the auto-zero button now as this will set the dc current to 0. In this case, remove the clamp from the conductor and perform the auto-zero again.
8. Start the logging session.

The auto-zero remains set until the logging session stops. If power is lost during a logging session and the Analyzer powers down, the Analyzer continues to log data when the power is restored.

If you start a new logging session, it is necessary to repeat the auto-zero before the start of the session.



Supported Clamp Models

Sensitivity	Range	Adapter	Scale Factor	Range
i1000s AC				
100 mV/A	0.1 A to 10 A	2.8 V	0.01041:1	Auto
10 mV/A	0.1 A to 100 A		0.1041:1	
1 mV/A	1 A to 1000 A		1.041:1	
i3000s AC				
10 mV/A	1 A to 30 A	1 V	0.1013:1	Auto
1 mV/A	1 A to 300 A		1.013:1	
0.1 mV/A	1 A to 3000 A		10.13:1	
i310s AC/DC ^[1]				
10 mV/A	30 A ac/±45 A dc	1 V	0.1:1	Auto
1 mV/A	300 A ac/ ±450 A dc		1:1	
i400s AC				
10 mV/A	0.5 A to 40 A	2.8 V	0.1033:1	Auto
1 mV/A	5 A to 400 A		1.033:1	
80i-2010s AC/DC ^[1]				
1 mV/A	2000 A ac/ ±2000 A dc	2.8 V	1:1	Low
i200s AC				
100 mV/A	0.1 A to 24 A	2.8 V	0.0101:1	Low
10 mV/A	0.5 A to 200 A		0.101:1	
i30s AC/DC ^[1]				
100 mV/A	30 mA to 20 A ac ±30 mA to ±30 A dc	2.8 V	0.01:1	Low
i5s AC				
400 mV/A	50 mA to 5 A	2.8 V	0.00291:1	Low
i1010 AC/DC ^[1]				
1 mV/A	1 A ac to 600 A dc ±10 A dc to 1000 A dc	2.8 V	1.77:1	Auto
[1] Only DC is supported by the 177x PQ Analyzers.				

Specifications

Cable length	175 mm
Connectors.....	BNC female to 4-pin connector for current input of Fluke 17xx series
Temperature	-20 °C to 60 °C
Humidity	15 % to 85 %, noncondensing

Note

For the operating temperature range, see the Users Manual for the Analyzer.

LIMITED WARRANTY

This Fluke product will be free from defects in material and workmanship for 1 year 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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