

# User's Guide

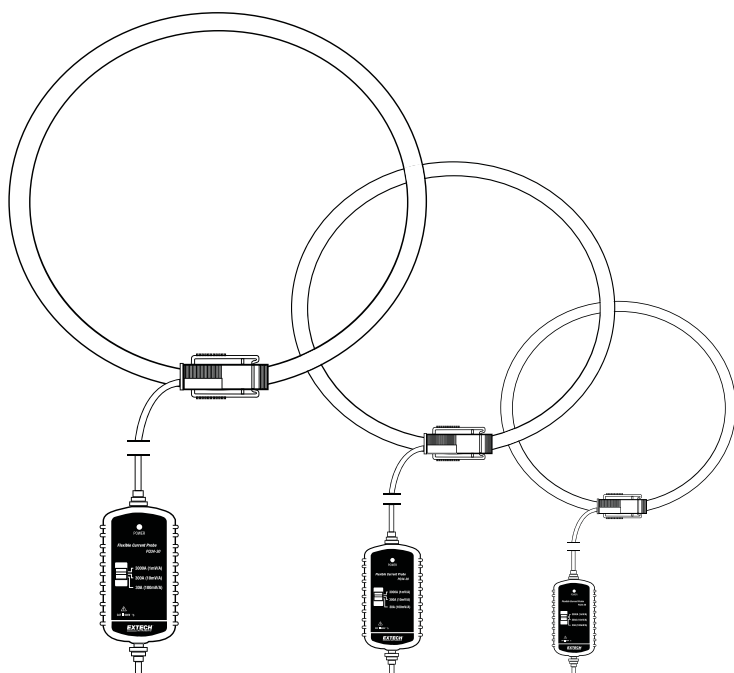
# **EXTECH**<sup>®</sup>

**INSTRUMENTS**

A FLIR COMPANY

## 3000A Current Probe Set

### Model PQ34-30



## Introduction

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Congratulations on your purchase of this Extech Current Probe Set. A set of three 3000A flexible current probes designed to be used with the Extech PQ3450 or PQ3470 Power Analyzers. These probes are shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

## Safety

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This symbol, adjacent to another symbol or terminal, indicates the user must refer to the manual for further information.



This symbol, adjacent to a terminal, indicates that, under normal use, hazardous voltages may be present



Double insulation

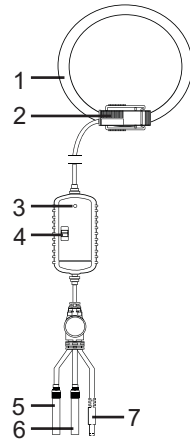
## Cautions

- Read and understand this user manual before operating the meter.
- Improper use of this meter can cause damage, shock, injury or death.
- Inspect the condition of the leads and the meter itself for any damage before operating the meter.
- Use great care when making measurements if the voltages are greater than 25VAC rms or 35VDC. These voltages are considered a shock hazard.
- Do not attempt to measure Current that exceeds specified limits
- Do not operate this instrument in wet or dusty environments.
- Do not operate this instrument in the presence of combustible or explosive gas
- Do not touch exposed metal parts or unused terminals.
- Use protective gloves near high current or voltage circuits.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

## Probe Description

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1. Flexible current probe
2. Probe latch
3. Power LED
4. 3000A-300A-30A range switch
5. Signal output plug ( +, red )
6. Signal output plug ( -, black )
7. DCV power plug



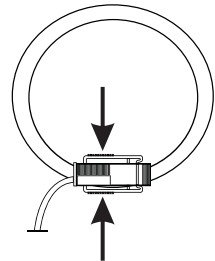
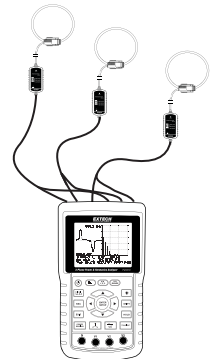
## Operation

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1. Connect the signal output cables from the first clamp to the "A1" input sockets on the top of the analyzer.
2. Connect the clamp's power cable to the "A1" power socket on the top of the analyzer.
3. Set the "3000A-300A-30A" range switch to the range appropriate for the application.

**Note: Make sure the range set on the clamp matches the range set in the analyzer.**

4. Connect the "A2" and "A3" clamps as above, if needed.
5. Squeeze the latch release to open the loop and clamp around a single conductor.
6. Power on the power analyzer



## Specifications

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Measurement ranges	30A, 300A and 3000A, switch selectable
Output sensitivity	100mV/A on the 30A range 10mV/A on the 300A range 1mV/A on the 3000A range
Output coupling	AC coupled.
Accuracy (50/60Hz)	$\pm 1\%$ F.S. @ $23 \pm 5^\circ\text{C}$ (50/60Hz)
Frequency range	45 to 400 Hz.
Max conductor size	Round: (177mm (7")), Oval: 216mm (8.5")
Phase error (50/60Hz)	$< \pm 1^\circ$
Minimum load	100 K ohm for specified accuracy
Linearity	$\pm 0.2\%$ of reading from 10% to 100% of range
Phase error	$< \pm 1.5^\circ$ (50/60Hz)
Conductor position sensitivity	$\pm 2\%$ F.S (conductor should be $>25\text{mm}$ (1") from the probe latch.
Enclosure material	UL 94-V0 rated
Safety	IEC 1010, Category III 600V
Power Supply	$8\text{V} \pm 1\text{V}$ (supplied from meter)
Operating Temperature	$0^\circ\text{C}$ to $50^\circ\text{C}$ ( $32^\circ\text{F}$ to $122^\circ\text{F}$ )
Operating Humidity	Less than 80% RH
Dimension	Circuit box: 105 x 56.5 x 33 mm. (4.1 X 2.2 X 1.3") Flexible probe: 600mm (23.6") (length), 14.5mm 0.57" (diameter)
Cable length :	3.4 meters (11.2 feet)
DC plug size :	5.5 mm x 2.5 mm DIA.
Weight	480 g (1.06 LB)

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