Fluke Norma 4000/5000 Power Analyzers

FLUKE®

Fluke Norma Series Power Analyzers

Fluke Norma 4000

Fluke Norma 5000

Reliable, highly accurate measurements for the test & development of power electronics

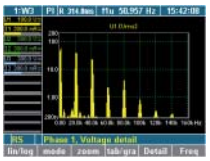
The compact Fluke Norma Series Power Analyzers provide the latest measurement technology to assist engineers with the development and testing of motors, inverters, lighting, power supplies, transformers and automotive components.

Based on a patented, high-bandwidth architecture, the instruments deliver high-precision measurements of single or three-phase current and voltage, harmonics analysis, Fast Fourier Transformation (FFT) analysis, as well as calculations of power and other derived values.

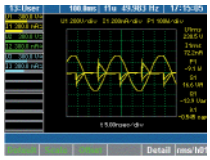
A unique user-configurable system design with plug-in power phases and other optional modules provides the flexibility to meet a variety of application measurement requirements. Recorded data and waveforms can be viewed clearly in the large color display and easily downloaded to a PC for analysis and report writing.

The Series consists of the Fluke Norma 4000 Three-Phase Power Analyzer and the Fluke Norma 5000 Six-Phase Power Analyzer. These rugged analyzers provide unmatched price performance for easy and reliable use in the field, or as a bench unit in laboratories and on test benches.

- Simple user interface ensures easy, intuitive operation
- Unique user-configurable modular design
- Simultaneous parallel acquisition of all phases
- Voltage, current and power harmonics up to the 40th
- Includes FFT analysis, vector diagram display, recorder function, and Digital Oscilloscope (DSO) mode
- User selectable average time – from 15ms to 3600s
- Expandable on-board memory for storage of measured values

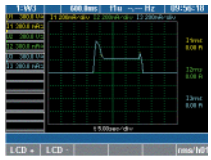


Fast Fourier Transformation (FFT) analysis



Digital Oscilloscop (DSO) mode

Vector Display



Recorder function

Specifications

(Check the Fluke web for detailed specifications)

	Fluke Norma 4000	Fluke Norma 5000
Number of Phases	1 or 3	3, 4 or 6
Weight	Approx. 5 kg	Approx. 7 kg
Size (HxWxD)	15 cm x 23.7 cm x 31.5 cm	15 cm x 44.7 cm x 31.5 cm
On-board Printer	No	Yes (optional)
Display	Color, 5.7" / 144 mm - 320 x 240 pixel	
Bandwidth	dc to 3 MHz or dc to 10MHz depending on input module	
Basic Accuracy	0.2%, 0.1% or 0.03% depending on input modules	
Sampling Rate	0.33 MHz or 1 MHz depending on input modules	
Voltage Input Range	0.3 V to 1000 V	
Current Input Range (direct, not via shunt)	0.03 mA – 20 A depending on input module	
Memory for Configurations	4 MB	
Memory for Settings	0.5 MB	
Fast Fourier Transformation (FFT)	To the 40th harmonic	
RS232 Interface	Standard	
PI1 Process Interface (8 analog/impulse inputs and 4 analog outputs)	Optional	
IEEE 488.2 /GPIB Interface (1 MBit/s Ethernet / 10 MBit/s or 100 Mbit/s)	Optional	
Fluke NormaView PC Software (for data download, analysis & report writing)	Standard	

Operating temperature:
+ 5 °C to 35 °C
Storage temperature:
- 20 °C to 50 °C
Climatic class: KYG DIN 40040, maximum 85% relative humidity, non-condensing.

Housing: Solid metal case
Safety: EN 61010-1 / 2nd Edition, 1000 V CAT II (600 V CAT III)
Two Year Warranty

Included Accessories

Power Supply Cable, RS232 Interface and USB adaptor for Data Download, Fluke NormaView PC Software, User's Manual, Test Certificate, and Calibration Values.

Ordering Information

Fluke Norma 4000	Three-Phase High Precision Power Analyzer
Fluke Norma 5000	Six-Phase High Precision Power Analyzer

Fluke Norma 4000/5000 Power Analyzer Accessories

Fluke Norma 4000 (rear view)

Fluke Norma 5000 (rear view)

Power Phases

The Fluke Norma 4000 Power Analyzer can be equipped with up to three power phases and the Fluke Norma 5000 Power Analyzer can be equipped with up to six power phases. Users can select the power phase best suited for their application. Specifications vary depending on the model of the power phase.

Each plug-in power phase consists of a voltage and a current measurement channel. Each measuring channel is available for each basic unit.

Power Phase Overview

	3024770	3024812	3024820	3024835
Channel	PP42	PP54	PP50	PP64
Accuracy	0.2% (0.1% rd + 0.1% rg)	0.1% (0.05% rd + 0.05% rg)		0.03% (0.02% rg + 0.01% rg)
Current range	20 A	10 A	10 A	10 A
Sampling rate	341 kHz	1 MHz	341 kHz	341 kHz
Bandwidth	3 MHz	10 MHz	3 MHz	3 MHz

Shunts

The input modules can take up to 10 A or 20 A directly or measure current via wideband precision shunts. The available range of shunts enables measurements up to 1500 A and can be used in conjunction with all of the available input modules.

Optional shunts for Fluke Norma Series Power Analyzers

3024677	32 A Planar Shunt
3024689	Cables for 32 A Planar Shunt
3024886	10 A Triaxial Shunt with Cables (0.333 Ω, 0 to 0.5 MHz)
3024899	30 A Triaxial Shunt with Cables (0.010 Ω, 0 to 0.5 MHz)
3024847	100 A Shunt with Cables (0.001 Ω, 0 to 0.5 MHz)
3024858	150 A Shunt with Cables (0.5 mΩ, 0 to 0.5 MHz)
3024864	300 A Shunt with Cables (0.1 mΩ, 0 to 1 MHz)
3024873	500 A Shunt with Cables (0.1 mΩ, 0 to 0.2 MHz)
3024692	LG Shunt Cables for High Current Shunts

32 A Planar Shunt

Cables & Adaptors

3024661	Measurement Cable Set (for one power phase)
3024704	Fluke Norma WYE Adaptor (external accessory box)

Printer Accessories

3024650	Printer Cable for Fluke Norma 5000 (RS232-Centronics)

All accessories have a two-year warranty.