



## DM-II Plus Power Quality Recorder

Amprobe's DM-II PLUS is a full-featured three phase power quality recorder to maintain, diagnose and troubleshoot electrical systems. It measures and records a broad spectrum of power quality parameters. Easy to use, it's capable of measuring and recording voltage, current, voltage anomalies (sags or surges), harmonics, energy and power (active, reactive and apparent), power factor (true and displacement), and frequency. This unique product comes as a complete kit with current transducers and an increased memory size for data storage, larger display size, and real-time downloading using Amprobe's unique Download Suite software.

### No hassle warranty

*No waiting.*

*No shipping  
charges.*



Our commitment to high-quality products and customer service is demonstrated by our industry exclusive "No Hassle" warranty. In the unlikely event that an Amprobe Test Tool requires warranty service, any of our local dealers are authorized to replace it, on the spot.

(note: \$500 MSLP limit)

- AC Current up to 1000A, AC Voltage, Active, Reactive and Apparent Power, Energy, Peak Demand & Power Factor
- All readings are True RMS
- 5 built-in selectable languages: English, French, Italian, German and Spanish
- User selectable rates allow recording from one hour to several months
- Works with single & three phase systems (Y & delta)
- Readings and charts can be viewed on the DM-II LCD screen or downloaded to a PC
- Capable of recording all parameters (single or three phase) simultaneously
- Optional transducers available for 100A and 3000A (flexible) current capability.

## DM-II Plus Power Quality Recorder

## Data Sheet

### General Specifications

#### Mechanical Features

<b>Dimensions:</b>	444.5(L) x 273.05(La) x 190.5(H) mm 17.50"(L) x 10.75" (La) x 7.50"(H)
<b>Weight:</b>	11.5 Lb (5.2kg)
<b>Internal power supply:</b>	6 batteries 1.5V D size NEDA 13A, IEC L20R
<b>Battery Life:</b>	22 hours
<b>External power supply</b>	Use only Amprobe power supply Adapter code DMT-EXTPS.
<b>Display:</b>	dot matrix with backlight
resolution	128 x 128 dots (16384 dots)
dot size	0.5mm x 0.5mm
visible area	73mm x 73mm (2.9" x 2.9")
<b>No. of samples per period</b>	128
<b>Clamp:</b>	
Opening:	53 mm (2.15")
Maximum diameter of the cable:	50 mm (2.00")
<b>Reference temperature:</b>	23°C ± 1°C (73°F ± 2°F)
<b>Operating temperature:</b>	0°C to 50 °C (32°F to 122°F)
<b>Relative humidity:</b>	<70%
<b>Storage temperature:</b>	-10°C to 60 °C (14°F to 140°F)
<b>Storage humidity:</b>	<80%
<b>Location:</b>	Indoor operation, < 2000 m
<b>EMC/EMI/ESD</b>	EN61326-1:2006
<b>Safety</b>	
The instrument complies to the standards:	EN 61010-1 :2002
Insulation:	Class 2 / Pollution Degree 2
Over-voltage category:	CAT III 370V~ (Phase-Earth) CAT III 635V~ (Phase-Phase)
Clamps:	IEC 61010-2-032 Ed. 2.0
Phase Sequence Detection:	EN 61557-7:2003

### Specifications Accuracy 73°F± 2°F (23°C ± 1°C) with relative humidity < 75%

#### Voltage measurement (Autoranging)

Range	Accuracy	Resolution	Input impedance
15-370V	±(0.5% + 2 digit)	0.2V	300kΩ (phase-neutral)
310-635V	±(0.5% + 2 digit)	0.4V	600kΩ (phase-phase)

#### Voltage Anomalies Detection (Manual Selection of Range)

Range	Accuracy	Resolution	Input impedance
15-370V	±(0.5% + 2 digit)	0.2V	300kΩ (phase-neutral)
30-635V	±(0.5% + 2 digit)	0.4V	600kΩ (phase-phase)

#### Current measurement (DM-II Plus only)

Range	Accuracy	Resolution	Input impedance	Protection against overloads
0.005-0.26V	±(0.5%+2digit)	0.0001V	100kΩ 5V	0.26-1V 0.0004V

#### Current measurement (Using DM-CT-HTA)

Range	Accuracy	Resolution	Protection against overloads
5 to 1000 A	±(1.5% of range)	0.1 A	600 V

Minimal Current measurable is equal to 1.5% of Clamp Full Scale

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### Specifications, cont.

#### Current measurement (Using AM-FLEX 33)

Range	Accuracy	Resolution	Protection against overloads
15 to 3000 A	$\pm(1.5\% \text{ of range})$	0.1 A	600 V

Minimal Current measurable is equal to 1.5% of Clamp Full Scale

#### Power measurement (cos : 0.5c[positive] – 0.5i[negative])

Value	Ranges	Accuracy	Resolution
Active power	0 – 999.9W	$\pm(1.5\% + 2 \text{ digit})$	0.1W
	1kW – 999.9kW	$\pm(1.5\% + 2 \text{ digit})$	0.1kW
	1MW – 999.9MW	$\pm(1.5\% + 2 \text{ digit})$	0.1MW
Reactive power	0 – 999.9VAR	$\pm(1.5\% + 2 \text{ digit})$	0.1VAR
	1kVAR – 999.9kVAR	$\pm(1.5\% + 2 \text{ digit})$	0.1kVAR
	1MVAR – 999.9MVAR	$\pm(1.5\% + 2 \text{ digit})$	0.1MVAR
Apparent power	0 – 999.9VA	$\pm(1.5\% + 2 \text{ digit})$	0.1VA
	1kVA – 999.9kVA	$\pm(1.5\% + 2 \text{ digit})$	0.1kVA
	1MVA – 999.9MVA	$\pm(1.5\% + 2 \text{ digit})$	0.1MVA
Active energy	0 – 999.9Wh	$\pm(1.5\% + 2 \text{ digit})$	0.1Wh
	1kWh – 999.9kWh	$\pm(1.5\% + 2 \text{ digit})$	0.1kWh
	1MWh – 999.9MWh	$\pm(1.5\% + 2 \text{ digit})$	0.1MWh
Reactive energy	0 – 999.9VARh	$\pm(1.5\% + 2 \text{ digit})$	0.1VARh
	1kVARh – 999.9kVARh	$\pm(1.5\% + 2 \text{ digit})$	0.1kVARh
	1MVARh – 999.9MVARh	$\pm(1.5\% + 2 \text{ digit})$	0.1MVARh

#### Cos $\varphi$ measurement

Cos $\varphi$	Resolution	Accuracy (expressed in degrees)
0 to 0.20	0.01	0.6
0.21 to 0.50	0.01	0.7
0.51 to 0.80	0.01	1

#### Measurement of Harmonics

##### Voltage

Range	Accuracy	Resolution
DC – 25h	$\pm(5.0\% + 2 \text{ digit})$	0.1V
26h – 33h	$\pm(10.0\% + 2 \text{ digit})$	0.1V
34h – 49h	$\pm(15.0\% + 2 \text{ digit})$	0.1V

The voltage harmonics will be null under the following threshold:

- DC: if <1V or <2% of 1st harmonic
- 1st harmonic: if <2V
- 2nd to 49th: if <1V or <2% 1st harmonic

##### Current

Range	Accuracy	Resolution
DC – 25h	$\pm(5.0\% + 2 \text{ digit})$	0.1A
26h – 33h	$\pm(10.0\% + 2 \text{ digit})$	0.1A
34h – 49h	$\pm(15.0\% + 2 \text{ digit})$	0.1A

The current harmonics will be null under the following threshold:

- DC: if <2% of 1st harmonic or < 0.2% of clamp full scale
- 1st harmonic: if < 0.2% of clamp full scale
- 2nd to 49th: if <2% 1st harmonic or < 0.2% of clamp full scale

Setting the FLEX option the DC component will be ignored.

#### Frequency Measurement

##### Instrument set to 50Hz

Range	Resolution	Accuracy
47 to 53	0.1Hz	$\pm(1.0\% + 1 \text{ digit})$

##### Instrument set to 60Hz

Range	Resolution	Accuracy
57 to 63.6	0.1Hz	$\pm(1.0\% + 1 \text{ digit})$

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### Included Accessories

DMT-EXTPS	External power supply 12VDC
DM-CT-HT	(code 1 pcs) 3 clamp meters 1000A/1V
KITENERGY3	4 cables and alligators for voltage measurement
Download Suite 2.2	1 Amprobe Custom Software CD
C232NG1	Serial Cable

### Optional Accessories

AM-FLEX33	Flexible current transducer, 3000 A
DM-CT-100	Current transducer, 100A



### Amprobe® Test Tools

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