



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.

- 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

| | |
|---|---|
| Dimensions: | 444.5(L) x 273.05(La) x 190.5(H) mm 17.50"(L) x 10.75" (La) x 7.50"(H) |
| Weight: | 11.5 Lb (5.2kg) |
| Internal power supply: | 6 batteries 1.5V D size NEDA 13A, IEC L20R |
| Battery Life: | 22 hours |
| External power supply | Use only Amprobe power supply Adapter code DMT-EXTPS. |
| Display: | 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") |
| No. of samples per period | 128 |
| Clamp: | |
| Opening: | 53 mm (2.15") |
| Maximum diameter of the cable: | 50 mm (2.00") |
| Reference temperature: | 23°C ± 1°C (73°F ± 2°F) |
| Operating temperature: | 0°C to 50 °C (32°F to 122°F) |
| Relative humidity: | <70% |
| Storage temperature: | -10°C to 60 °C (14°F to 140°F) |
| Storage humidity: | <80% |
| Location: | Indoor operation, < 2000 m |
| EMC/EMI/ESD | EN61326-1:2006 |
| Safety | |
| 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 | ±(1.5% 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 | ±(1.5% + 2 digit) | 0.1W |
| | 1kW – 999.9kW | ±(1.5% + 2 digit) | 0.1kW |
| | 1MW – 999.9MW | ±(1.5% + 2 digit) | 0.1MW |
| Reactive power | 0 – 999.9VAR | ±(1.5% + 2 digit) | 0.1VAR |
| | 1kVAR – 999.9kVAR | ±(1.5% + 2 digit) | 0.1kVAR |
| | 1MVAR – 999.9MVAR | ±(1.5% + 2 digit) | 0.1MVAR |
| Apparent power | 0 – 999.9VA | ±(1.5% + 2 digit) | 0.1VA |
| | 1kVA – 999.9kVA | ±(1.5% + 2 digit) | 0.1kVA |
| | 1MVA – 999.9MVA | ±(1.5% + 2 digit) | 0.1MVA |
| Active energy | 0 – 999.9Wh | ±(1.5% + 2 digit) | 0.1Wh |
| | 1kWh – 999.9kWh | ±(1.5% + 2 digit) | 0.1kWh |
| | 1MWh – 999.9MWh | ±(1.5% + 2 digit) | 0.1MWh |
| Reactive energy | 0 – 999.9VARh | ±(1.5% + 2 digit) | 0.1VARh |
| | 1kVARh – 999.9kVARh | ±(1.5% + 2 digit) | 0.1kVARh |
| | 1MVARh – 999.9MVARh | ±(1.5% + 2 digit) | 0.1MVARh |

Cos φ measurement

| Cos φ | 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 | ±(5.0% + 2 digit) | 0.1V |
| 26h – 33h | ±(10.0% + 2 digit) | 0.1V |
| 34h – 49h | ±(15.0% + 2 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 | ±(5.0% + 2 digit) | 0.1A |
| 26h – 33h | ±(10.0% + 2 digit) | 0.1A |
| 34h – 49h | ±(15.0% + 2 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 | ±(1.0% + 1 digit) |

Instrument set to 60Hz

| Range | Resolution | Accuracy |
|------------|------------|-------------------|
| 57 to 63.6 | 0.1Hz | ±(1.0% + 1 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 |

