

# OM-PQR1010 Power Line and Environmental Monitor



- ✓ Measures All Types of Disturbances Including Spikes, Sags, Surges, Common Mode Noise, High Frequency Noise, Dropouts, Power Failures
- ✓ Datalogging - Stores Average Reading Every Minute for Up to 11 Days on Each Channel
- ✓ 1500 Event Storage Per Input, 9000 Events Total for 6 Channels
- ✓ Records Magnitude, Time and Date of Each Disturbance

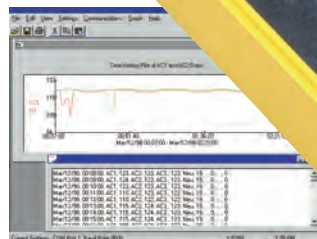
Electronic equipment is damaged more often by power disturbances than by fire, theft and vandalism combined. Intermittent power problems are the most expensive hidden expense to users of microprocessor-based equipment. The OM-PQR1010 power quality recorder is a state-of-the-art, fully integrated instrument that measures, records and reports power disturbances, aiding in the analysis of power quality in medical, commercial and industrial applications.

The OM-PQR1010 monitor unit will detect a wide range of power disturbances including spikes, sags, surges, common mode noise, dropouts and high frequency noise on two phases of AC voltage and one DC voltage channel; it will also test the temperature, humidity and ac current. For ac current measurement, the OM-PQR1010 is equipped with a pair of banana jacks designed to accept a 10 mV/A output current transducer (CT). Disturbances detected on multiple channels are recorded by their time, date, magnitude and duration in a non-volatile RAM memory. Stored data can then downloaded and analyzed by connecting the OM-PQR1010 to your PC's serial port and running the included



Model OM-PQR1010, shown with included temperature probe, AC voltage test leads, DC voltage test leads, RS-232 cable, power cord and Windows software CD.

Shown smaller than actual size.



OM-PQR1010 software

OM-PQR1010, shown smaller than actual size

Windows data analysis software. Input connections to the OM-PQR1010 are made between the safety connectors on the back of the unit and the circuit panel to be tested. The OM-PQR1010 operates on standard 110 Vac/220 Vac power. Once plugged in, the OM-PQR1010 immediately begins testing the signals on the input connectors.

## Specifications

### GENERAL

**Summary Event Count:** 56,000 of each event type  
**Detail Storage:** 1500 events per channel

### Data Retention:

5 years without power

### Datalogging Sample Rate:

Programmable from 1 reading per second to 1 reading per 4 minutes

### Impulse Detection:

500 nanoseconds  
**Communications:** RS-232, 1200 to 19,200 baud (programmable), 8 data bits, 1 stop bit, no parity

**Input Connections:** ac voltage, safety banana jacks; dc voltage, BNC; current (CT), banana jacks; temperature, phone jack; humidity, mini-DIN

**Operating Temperature:** 0 to 50°C (32 to 122°F), 10 to 80% RH non-condensing

**Operating Voltage:** 12 to 30 Vdc, 80 to 260 Vac

**Operating Current:** 0.1 A

**Operating Line Frequency:** DC to 400 Hz

**Weight:** 1.8 kg (4 lb)

**Dimensions:**

203 mm H x 254 mm W x 51 mm D (8 x 10 x 2")

**Power Cord:** 1.8 m (6')

**AC/DC VOLTAGE CHANNELS**

**DATA LOGGING**

**Range:** ac voltage, 80 to 520 Vac RMS; dc voltage,  $\pm 1$  to  $\pm 52$  Vdc

**Accuracy:**  $\pm 1.5\%$

**SAGS/SURGES**

**Threshold:** 5% and 10%

of average, or user programmed levels

**Duration Limits:** 1 cycle or 20 ms

**Accuracy:**  $\pm 1.5\%$

**DROPOUTS**

**Threshold:** AC voltage, less than 10 V RMS; DC voltage, less than 10% of avg

**Duration Limits:** longer than 8 ms, shorter than 80 ms

**POWER FAILURES**

**Threshold:** ac voltage, less than 10 V RMS; dc voltage, less than 10% of avg

**Duration Limits:** Longer than 80 ms

**IMPULSES**

**Resolution:** 2 channels: 20 V to > 2500 V peak

**Threshold:** 20, 70, 140, 300, 850, 2.5 kV

**Duration Limits:** 500 nanoseconds above threshold

**Accuracy:**  $\pm 10\%$

**HIGH FREQUENCY NOISE**

**Range:** 2 volts peak, 10 kHz to 10 MHz

**Accuracy:**  $\pm 10\%$

**Response Time:** 1 ms

**AC VOLTAGE LINE FREQUENCY**

**Range:** 40 to 400 Hz

**Accuracy:**  $\pm 1\%$

**Response Time:** 1 AC cycle

**Threshold:**  $\pm 2\%$  deviation from average

**HUMIDITY CHANNEL**

**DATA LOGGING**

**Range:** 10 to 90% RH non-condensing

**Accuracy:**  $\pm 5\%$

**SAGS/SURGES**

**Threshold:** 5% and 10%

of average, or user programmed levels

**Duration Limits:** 2 seconds

**Accuracy:**  $\pm 5\%$

**CURRENT CHANNEL**

**DATA LOGGING**

**Input:** Current transducer (CT), 10 mV/A output

**Range:** 0.2 A to 1000 A RMS

**Accuracy:**  $\pm 1.5\%$

**SAGS/SURGES**

**Threshold:** 5% and 10%

of average, or user programmed levels

**Duration Limits:** 20 ms

**Accuracy:**  $\pm 1.5\%$

**DROPOUTS**

**Threshold:** Less than 10% of average

**Duration Limits:** Longer than 8 ms, shorter than 80 ms

**POWER FAILURES**

**Threshold:** Less than 10% of average

**Duration Limits:**

Longer than 80 ms

**TEMPERATURE CHANNEL**

**DATALOGGING**

**Sensor:** Semiconductor transistor

**Range:**  $-7$  to  $121^{\circ}\text{C}$  (20 to  $250^{\circ}\text{F}$ ) (0.02 to 2.5 Vdc)

**Accuracy:**  $\pm 1\%$

**Sample Rate:** Programmable from 1 reading per second to 1 reading per 4 minutes

**SAGS/SURGES**

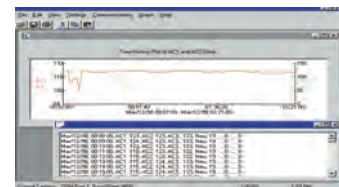
**Threshold:** 5 and 10% of average, or user programmed levels

**Duration Limits:** 2 seconds

**Accuracy:**  $\pm 1.5\%$



OM-PQR1010, shown smaller than actual size



OM-PQR1010 software

**AVAILABLE FOR FAST DELIVERY!**

### To Order (Specify Model Number)

Model No.	Description
OM-PQR1010	Power line and environmental monitor
OM-PQR-HUMIDITY	Humidity probe for OM-PQR1010

Each OM-PQR1010 is supplied with 1.8 m (6') power cord, RS-232 communications cable with DB9F termination, Windows 2000/XP data analysis software, temperature probe, one set of ac voltage test leads and one set of dc voltage test leads. Humidity probe must be ordered separately.

**Ordering Example:** OM-PQR1010 power line and environmental monitor