



# PM172E

## POWER METER SERIES



## POWER METER

The **PM172E** is a compact, multi-function, three-phase AC powermeter and power quality analyzer, specially designed to meet the requirements of users ranging from electrical panel builders to substation operators. Bright 3-row LED display provides easy local meter readings. The display module is freely detachable and can be located at a distance of up to 1000 meters from device.

Two communication ports allow local and remote automatic meter reading and setup through the supplemental communication or user data acquisition software. Different communication options are available for remote communications with the meter including public telephone lines, LAN and the Internet.

## BENEFITS

- TOU Energy Measurement
- 1 M Memory
- 0.2S Accuracy
- Communication Platforms and Various Protocols:
  - Telephone Modem**
  - Cellular Modem**
  - TCP/IP**
  - Ethernet**
  - Profibus DP**

## Parameters Description

Dimensions	Height: 114 mm; Width: 127 mm; Length: 114 mm
Weight	1.23 kg / 2.7 lb.
Voltage Inputs	Operating range: 690 VAC line-to-line, 400 VAC line-to-neutral. Direct input and input via PT (up to 828 VAC line-to-line, up to 480 VAC line-to-neutral)
Current Inputs	5A secondary Operating range: continuous 10A RMS burden: <0.1 VA Overload withstand: 15A RMS continuous, 300A RMS for 1 second  1A secondary Operating range: continuous 2A RMS burden: <0.02 VA Overload withstand: 6A RMS continuous, 80A RMS for 1 second
Display	Bright 3-row LED display provides easy local meter readings. The display module is freely detachable and can be located at a distance of up to 1000 meters from the device. LCD color touch screen graphical display (optional)
Relay Outputs	2 relays rated at 3A/250 VAC; 3A/30 VDC, 2 contacts (SPST form A)
Optional Analog Inputs/Outputs	+/- 1mA 0-20 mA 4-20 mA 0-1 mA
Energy	Time-of-Use (TOU), 8 totalization and tariff energy/demand registers x 8 tariffs, 4 seasons x 4 types of days, 8 tariff changes per day, easy programmable tariff schedule Automatic daily profile for energy and maximum demand readings (total and tariff registers)
Frequency	15 Hz to 480 Hz
Real Time Clock	Accuracy: typical error 15 seconds per month @ 25°C
Accuracy	Class 0.2S, Class 0.2S IEC62053-22:2003
Burden	8 VA
Environmental Conditions	From -20°C to +60°C Humidity: 0 to 95% non-condensing
Communications	Modbus RTU and Modbus ASCII communication protocols 1. RS232 2. RS485 Up to 32 devices 3. TCP/IP Ethernet 10/100 BaseT 4. Modem 56K dial-up modem
Warranty	3 years
Warranty of accuracy	10 years

## PM172E

## Accuracy (Reading)

Voltage (10-120% FS)	0.2%
Current (10-200% FS), Starting Current 0.1% FS	0.2%
Neutral Current	0.4%
Frequency	0.02%
Power Factor	0.2%
Active Power (W)	0.2%
Reactive Power (Var)	0.3%
Apparent Power(VA)	0.2%
Active energy (W.h.)	Class 0.2S Class 0.2S IEC 62053-22:2003
Reactive Energy (War.h.)	Class 0.2S under conditions as per IEC 62053-22:2003, $ PF  \leq 0.9$
Apparent Energy (VA.h.)	Class 0.2S Class 0.2S IEC 62053-22:2003
Total Harmonic Distortion THD	0.1%
Total Demand Distortion TDD	1.5%
Temperature Coefficient	0.008% / °C
Input Circuit Consumption	Less than 0.1 VA
Measured Current Range	1% to 200%

## Standards Compliance

Accuracy per ANSI C12.20-1998

UL File #E129258

Directive complied with:

EMC: 89/336/EEC as amended by 92/31/EEC and 93/68/EEC

LVD: 72/23/EEC as amended by 93/68/EEC and 93/465/EEC

Harmonized standards to which conformity is declared:

EN55011: 1991

EN50082-1:1992

EN61010-1:1993

A2/1995

EN50081-2 Generic Emission Standard—Industrial Environment

EN50082-2 Generic Immunity Standard—Industrial Environment

EN55022: 1994 Class A

EN61000-4-2

ENV50140:1983

ENV50204:1995 (900MHz)

ENV50141: 1993

EN61000-4-4:1995

EN61000-4-8:1993