



- Reliable
- Rugged
- Easy-to-use
- Battery-operated

Digital Phase Angle Meter

DESCRIPTION

The Multi-Amp Model PAM-275 Digital Phase Angle Meter was designed specifically for electrical system applications. It is a battery-operated (rechargeable) or line-powered instrument. Incorporating two identical isolated input circuits, the unit permits precision measurements to be made of the phase angle relationship between two currents, two voltages or a voltage and a current.

APPLICATIONS

Model PAM-275 is commonly used in testing and calibrating protective relays, phasing out circuits, checking differential relay schemes, checking polyphase watt-hour and var-hour meter installations and verifying the polarity of CTs and PTs.

FEATURES AND BENEFITS

- Direct digital reading
- Broadband current ranges
- Broadband potential ranges
- Excellent resolution
- Highly accurate
- Universal: measures I to I, E to E, E to I
- Long battery life
- Isolated input circuits
- Harmonic immunity: accurate reading with up to 30% harmonic distortion
- Not frequency-sensitive: accuracy not dependent on precise 50- or 60-Hertz inputs
- Rugged: Sturdy design provides years of typical field use.

- Out-of-range indication: automatic indication given when inputs are above or below rated ranges, eliminating need for instruments to monitor inputs
- Hold feature
- Not influenced by position

SPECIFICATIONS

Input (for battery recharging or line operation)

Nominal 115 or 230 V (switch-selected), 1ø, 25 VA. Instrument may be used while battery is being recharged.

Battery Capacity

Minimum 8 hours of continuous usage on a single full charge. Low-battery condition is indicated by flashing decimals. Recharge time is twice the time used on battery power. The battery charger is built-in.

Digital Display

0.0 to 359.9°

PAM-275R: Nonflickering, 0.6-in.
(15-mm) LED numerals

PAM-275B: 0.5-in. (12-mm)
LCD numerals

Current (both inputs)

Range	Accuracy	Resolution	Burden
0.05 – 2.0 A	$\pm 0.5\%$	0.1°	0.32 VA at 2 A
1.5 – 60 A			2.5 VA at 60 A

Useful down to 0.015 A and up to 120 A at reduced accuracy

Voltage (both inputs)

Range	Accuracy	Resolution	Burden
1 – 40 V	$\pm 0.5\%$	0.1°	4.7 k Ω
15 – 600 V			71 k Ω

Useful down to 0.25 V and up to 1200 V at reduced accuracy

Isolation

Each input circuit is isolated from the other and from ground.

Input Frequency Range (specify one)

58 to 62 Hz OR 48 to 52 Hz

Overload Capability

120 A for 1 min on high range
35 A for 1 min on low range
1200 V for 1 min c-range
120 V for 1 min on low range

Measurement Rate

Two measurements per second. Readings are held between measurements to avoid flickering.

Environmental

Temperature Range: 10 to 110° F
(–12 to +43° C)

Warm-Up Time: Approx 1 min**Enclosure**

The instrument is housed in a high-strength, molded suitcase-style case with carrying handle, removable hinged cover and lead compartment.

Dimensions (including removable cover)

8.5 H x 12 W x 90 D in.
216 H x 305 W x 229 D mm

Weight

12 lb (5.5 kg)

ORDERING INFORMATION

Item	Cat. No.	Item (Qty)	Cat. No.
Model PAM-275 with:			
LCD Display			
115-V, 60-Hz input	PAM-275B-115/60	Included Accessories	
LCD Display		Line cord (1)	6828
230-V, 50-Hz input	PAM-275B-230/50	Fuses, 0.125, 250 V MDL (5)	981
LED Display		Instructional manual (1)	9160
115-V, 60-Hz input	PAM-275R-115/60	Optional Accessories	
LED Display		Leads	
230-V, 50-Hz input	PAM-275R-230/50	5 ft [1.5 m] (1 pr)	7933
		Low-current, 5 ft [1.5 m] (1 pr)	7934
		High-current, 5 ft [1.5 m] (1 pr)	7935