

SPECIFICATIONS

PHASE

Ranges: Two Ranges 0° to 360° and -180° to 180° . Range switching is accomplished automatically when operation approaches within 10° of the range limits.

Resolution: 10m° (0.01°)

Repeatability: $\pm 10\text{m}^{\circ}$ or better

Accuracy:
(Sine Waves) $\pm 200\text{m}^{\circ}$ from 5Hz to 10Hz
 $\pm 50\text{m}^{\circ}$ from 10Hz to 50kHz
 $\pm [50 + 2(f_{\text{kHz}} - 50)]\text{m}^{\circ}$ from 50kHz to 100kHz
 $\pm [150 + 3.5(f_{\text{kHz}} - 100)]\text{m}^{\circ}$ from 100kHz to 500kHz

Accuracy:
(Square Waves) $\pm [50 + (f_{\text{kHz}})]\text{m}^{\circ}$ (Equal Amplitudes)
 $\pm [50 + 4.4(f_{\text{kHz}})]\text{m}^{\circ}$ (Unequal Amplitudes at Range Limits)

Offset: The OFFSET toggle subtracts the current phase reading from all subsequent phase readings. The range about the Offset point is $\pm 180^{\circ}$ which is independent of phase autoranging.

INPUT CHARACTERISTICS—EITHER CHANNEL

Amplitude Range: 10mV RMS to 350V RMS in three ranges: 10mV to 500mV RMS, 500mV to 12.5V RMS and 12.5V to 350V RMS. Range switching is accomplished automatically when operation approaches within approximately 10% of the range limits. (From 10mV to 20mV derate phase accuracy by a factor of 2.)

Input Impedance: 1Mohm in parallel with less than 50pF. Front Panel BNC

Input Waveforms: Sine, Triangle, Trapezoidal or Square. The Phase Meter provides a reading proportional to the average of the difference between the positive zero crossings and the difference between the negative zero crossings of the inputs. These zero crossings are determined after the waveforms are AC coupled.

Maximum DC Input: The DC component of either input waveform should be 200V or less.

Frequency Range: 5Hz to 500kHz

RESPONSE TIME

Less than 6 seconds to specified accuracy

DISPLAY

0.5" High Efficiency LED Display for Phase. Small High Efficiency LED Lamps to indicate Phase Range, REMOTE, Phase OFFSET ON, and OVERRANGE and UNDERRANGE for both input channels.

CONTROLS

Front Panel: Phase OFFSET key switch, LOCAL key switch and Phase RANGE toggle key switch

Rear Panel: Five position IEEE-488 Address switch

ANALOG OUTPUT

+1.80 to -3.60V DC with a sensitivity of $-10\text{mV}/^\circ$ and an accuracy of $\pm 0.5\%$ + phase accuracy. 250ohm output impedance. Rear Panel BNC

IEEE-488 SUBSETS

SH1, AH1, T6, L4, SR1, RL1, PP0, DC1, DTO

WARMUP TIME

Less than 30 minutes for all specifications

TEMPERATURE RANGE

Specified Accuracy: $23^\circ\text{C} \pm 5^\circ\text{C}$
Safe Operation: 0°C to 50°C

RELATIVE HUMIDITY

Specified Accuracy: 20% to 50% RH
Safe Operation: 15% to 80% RH

LINE VOLTAGE, FREQUENCY AND POWER CONSUMPTION

100V $\pm 10\%$, 120V $\pm 10\%$, 220V $\pm 10\%$, 240V $\pm 10\%$ (Rear Panel switch selectable), 50Hz - 60Hz
Power Consumption less than 20W

PHYSICAL

Rack or bench mount. Bail allows 10° upward tilt.
Weight: 11 pounds (5.1kg)
Size: 19" x 3.5" x 13" (48.3cm x 8.9cm x 33.0cm)