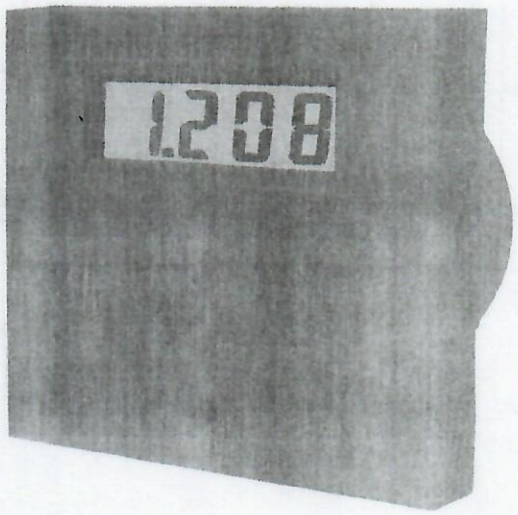
AC PHASE POWERLESS ANALOG METER REPLACEMENT DPM
No Power Supply Required!

MODEL 596

U.S. Patent No. 4,908,569

TRUE RMS AC

Features
- Direct Reading in Degrees
- 0.1° Accuracy & Resolution
- 3½" Standard Meter Case
- .5"High LCD Display
- Rugged • Low Cost
- Same Connections as most Analog Meters
- Optional Backlight
- MTBF: 80,000 Hours



DESCRIPTION: Model **596** works in the zero crossing and lead-lag principle of two signals (V & I). If the load is too inductive, the voltage will lead the current during the zero crossing. If the load is to capacitive, the current will lead the voltage while crossing zero. This condition is measured by the **596** and displayed directly in degrees (±) so you can adjust your load for maximum efficiency.

Since the **596** is powerless (meaning that no power supply is required) and the phase is measured from the zero crossing of two signals, 3 connections are required. The "high" or V_V is the line voltage internally attenuated. The "low" is the AC common line and the V_I is the voltage developed across the external current resistor in series with the load or the shunt resistor across the current transformer (CT), (see Typical Connections (on back) and C.T. section of catalog).

BACKLIGHT: Standard display is reflective black digits over silver background. An optional backlight is available at time of ordering. When ordered, the digits are black over an illuminated green background. The intensity is not adjustable, (see Typical Connections).

LIGHT SOURCE: Electroluminescent. It's powered by the signal requiring only 2mA at 120-500VAC. The E.L. has uniform light output, and its life expectancy is in excess of 15,000 hours.

DECIMAL POINTS: Installed at Otek and must be specified at the time of ordering.

ORDERING INFORMATION (1/1/97)

MODEL 5 9 6-1 ☐ ☐-☐

OPERATING VOLTAGE RANGE
- 00 ..... 12-60VAC
- 01 ..... 60-200VAC
- 02 ..... 200-500VAC

BACKLIGHT & DECIMAL POINT
- 0 ..... No and No D.P.
- 1 ..... No and 1.XXX D.P.
- 2 ..... No and 1X.XX D.P.
- 3 ..... No and 1XX.X D.P.
- 4 ..... Backlight and No D.P.
- 5 ..... Bklt and 1.XXX D.P.
- 6 ..... Bklt and 1X.XX D.P.
- 7 ..... Bklt and 1XX.X D.P.

(1) The backlight is powered by the line voltage. See Specs.

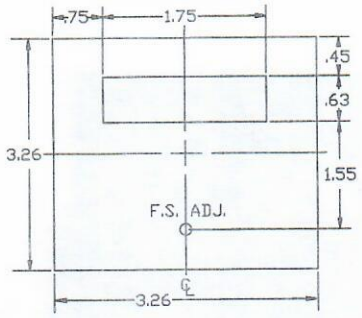
SPECIFICATIONS AT 25°C

Accuracy and Linearity	±0.1% of F.S. ±1 digit
Resolution	±0.1°
Maximum Input Voltage	High range
Zero Adjustment	Factory set
Full Scale Adjustment	±30°
Input Type	(sine wave) 3 wire (AC)
Temperature Coefficient	100PPM/°C
Power Consumption	100mW
Input Signal Detection Range	±180.0°
Operating Frequency Range	50-60Hz
Backlight Operating Range	60-200 & 200-500V 20-400Hz
Operating/Storage Temperature	-10° to +60°C/-20° to +70°C
Display	.5" Reflective LCD
MTBF	80,000 Hours

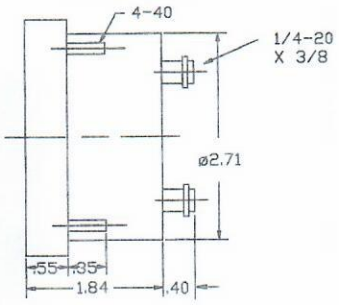
CASE MATERIAL: U.L. approved ABS Polycarbonate 94VO rated. Black matte with clear window.

MECHANICALS

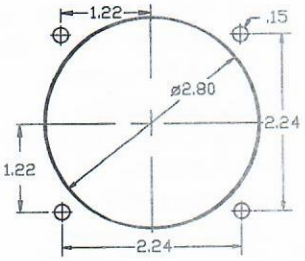
FRONT VIEW



SIDE VIEW

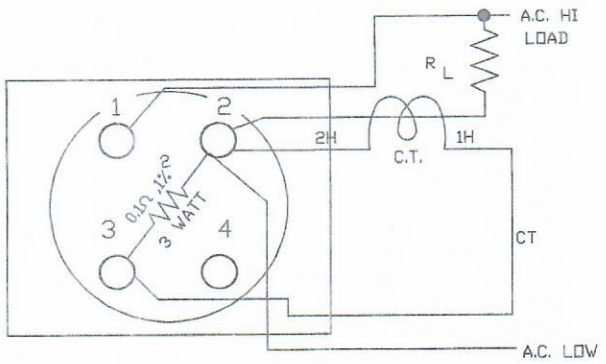


PANEL CUT-OUT



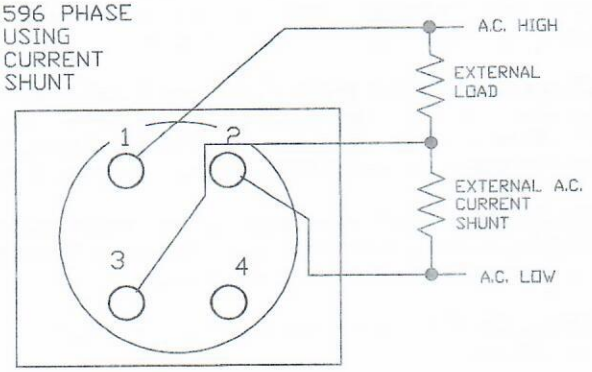
MOD. 596 AC PHASE POWERLESS TYPICAL CONNECTIONS (REAR VIEW)

596 PHASE USING CURRENT TRANSFORMER



DO NOT CONNECT TO TERMINAL 4
USE INCLUDED 0.1 Ω RESISTOR
AVOID ADDITIONAL RESISTANCE AT THE SHUNTS CONNECTIONS

596 PHASE USING CURRENT SHUNT



NOTE: AVOID ADDITIONAL RESISTANCE AT THE SHUNTS CONNECTIONS

F#87MC596.DWG

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