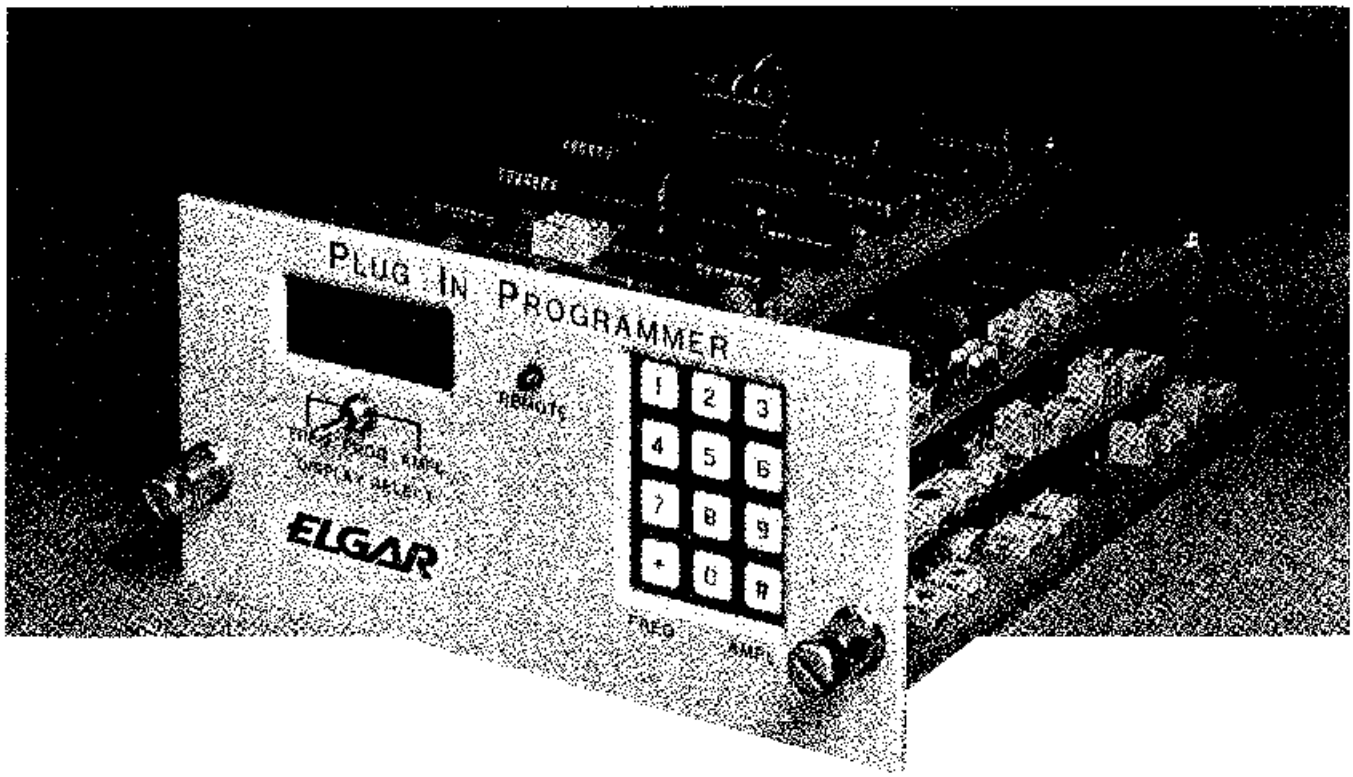
Programmable Plug-in Oscillator.



FEATURES

- ±.001% Frequency accuracy
- Single-, two-, or three-phase capability
- Front panel control and readout standard
- GPIB or BCD programming logic
- ±0.015% load regulation

PRODUCT DESCRIPTION

The PIP 9010 series of digital/analog programmable oscillators plug into the oscillator cavity of all the Elgar linear AC power sources except for the C series.

They are available as single-, two-, or three-phase configurations with either parallel BCD or IEEE 488 GPIB programming logic.

All versions of the PIP 9010 have a 12 key keyboard for local programming of amplitude and frequency, as well as a four-digit display which can be selected by the display select switch to show previously programmed frequency and amplitude or what is being programmed.

SPECIFICATIONS

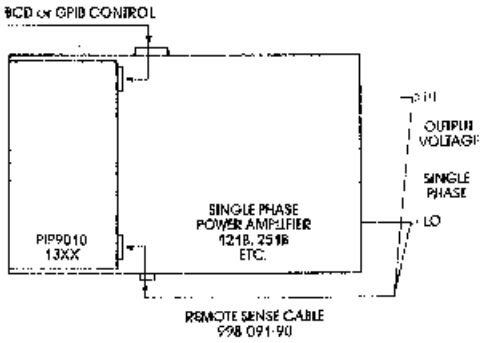
AMPLITUDE PROGRAMMING

Standard Programmable Voltage Range:
0-130 VAC in 0.1 V steps.

Optional Programmable Voltage Range:
0-260 VAC in 0.1 V steps.

Extra Cost Programmable Ranges:
Dual Range: 0-130 VAC/0-260 VAC in 0.1 V steps. 0-32 VAC in 0.01 V steps

Amplitude Programming Accuracy:
±0.15% of full scale from 45 Hz to 2 kHz from 5% of full scale to full scale. Add ±0.02% per kHz above 2 kHz.



FREQUENCY PROGRAMMING

Standard Programmable Frequency Range: 45 Hz to 5 kHz in 1 Hz steps.

Optional Programmable Frequency Ranges: 45 Hz to 99.99 Hz in 0.01 Hz steps. 45 Hz to 999.9 Hz in 0.1 Hz steps.

Frequency Accuracy: ±0.001% of set value.

GENERAL

Total Harmonic Distortion: 1% maximum within range of associated power amplifier.

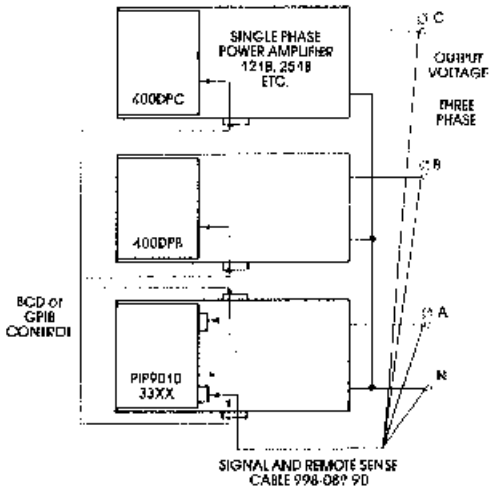
Phase Angle Accuracy: ±1° from 45 Hz to 2 kHz. Add ±0.5° per kHz above 2 kHz.

Load Regulation: ±0.015% no load to full load at point of sense (output of associated power amplifier or at load).

Line Regulation: ±0.01% for a 10% line change within the associated power amplifier operating line range.

Operating Temperature Range: 0°C to +50°C.

Storage Temperature Range: -40°C to +75°C.



Humidity: Zero to 95% non-condensing.

Amplitude Temperature Coefficient: ±0.025% per °C. Average, 0°C to 50°C.

Frequency Temperature Coefficient: ±0.0003% per °C. Average, 0°C to 50°C.

Note: All amplitude accuracies and measurements are based on full wave average.

MULTI-PHASE SYSTEMS

All phase amplitudes are always programmed equally and simultaneously.

Two-phase systems are 90° separation. Three-phase systems are 120° separation.

OTHER FEATURES

The PIP 9010 features automatic shutdown for frequency programs above or below the normal 45 Hz to 5 kHz power amplifier range. Shutdown causes display to blink. Voltage returns with soft start with an in-range frequency program.

The keyboard is inhibited while in remote control. The PIP uses a remote sense loop around the associated power amplifier back to the oscillator to provide accurate programming at the load if desired.

An overshoot limit of about 10% of the programmed value is incorporated to protect the load from opened sense leads or recovery from overload and short circuits.

ELGAR CORPORATION

Elgar Corporation, founded in 1965, has earned international recognition as a producer of reliable, high-quality products that solve difficult AC power problems.

Elgar develops and manufactures precision, high-speed AC Line Conditioners, a wide variety of AC Power Sources, Uninterruptible Power Systems, Regulating Line Conditioners, and High Isolation Transformers. The company also provides complete backup service and technical assistance to customers around the world.

PIP MODEL 9010 NUMBER DESCRIPTION

9 0 1 0 - 1 1 1 . 1

PIP Series Number

Number of Phases (1, 2, or 3)

1 for BCD
3 for GPIB*

Amplitude Range
1 - 0 to 130 VAC
2 - 0 to 260 VAC
3 - Dual Range 0-130 VAC 0-260 VAC**
4 - 0-32 VAC**

Frequency Range
1 - 45 Hz to 5000 Hz with 1 Hz Steps
2 - 45 Hz to 999.9 Hz with 0.1 Hz Steps
3 - 45 Hz to 99.99 Hz with 0.01 Hz Steps
4 - Fixed at 400 Hz
5 - Fixed at 50 Hz
6 - Fixed at 60 Hz

*NOTE 1: Elgar's standard programming format for GPIB (IEEE) requires the four data BYTES first followed by the function identifier BYTE. For example 4000I for 400.0 Hz or 115.0A for 115.0 volts.
**NOTE 2. These options are special order with an additional charge.

ELGAR

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