

## Three Phase Power Source - P 301 (Three Phase Energy Meter Calibration Instrument)



### Description:

EDUCE TECH INSTRUMENTS has introduced Keyboard version of Three Phase Power Source (P 301). The instrument generates independent Voltage, Current, Frequency and Power factor.

The Parameters are entered through the keyboard provided.

Large LCD Display is provided for the logging & Measurement.

The data can also be Entered and read from the PC via RS 232 port.

Built-In Timer is provided with display.

The system operates on 230VAC Single Phase Power supply.

### Principle:

The System uses digitally synthesized sinusoidal waves with analog amplification for the lower Total Harmonic Distortion (THD) and for the higher accuracy. The Output waveform has 60dB fundamental frequency above the noise floor on the full-scale reading and the stability of better than 0.2%.

### Application:

The Instrument is designed for Calibration of Digital Panel Meters like Energy Meter, Watt-Hour Meter, Voltmeter, Ammeter, P.F Meter etc.

### Specifications:

## INPUT:

Voltage: 230VAC +/- 10% @ Max 2Amps.  
Frequency: 50Hz.

## OUTPUT:

### Source Specifications:

Voltage:

$V_R = 40\text{VAC to } 300\text{VAC @ } 50\text{VA.}$

$V_Y = 40\text{VAC to } 300\text{VAC @ } 50\text{VA.}$

$V_B = 40\text{VAC to } 300\text{VAC @ } 50\text{VA.}$

Resolution: 0.1V

Stability\*: 0.2% @ full Scale

Current:

$I_R = 10\text{mA to } 15\text{Amps @ } 30\text{VA.}$

$I_Y = 10\text{mA to } 15\text{Amps @ } 30\text{VA.}$

$I_B = 10\text{mA to } 15\text{Amps @ } 30\text{VA.}$

Resolution: 0.01A

Stability\*: 0.1% @ full Scale.

Power Factor:

$P.F_R = 0 \text{ to } 1 \text{ Lead/Lag.}$

$P.F_Y = 0 \text{ to } 1 \text{ Lead/Lag.}$

$P.F_B = 0 \text{ to } 1 \text{ Lead/Lag.}$

Resolution: 0.01

Stability\*: 0.1% @ full Scale.

Frequency:

40 to 60 Hz.

Resolution: 1Hz.

Distortion: <1% THD @ full scale.

### Measurement Specifications:

Parameters Measured are:

Three Phase Voltage, Three Phase Current,  
Three Phase Power Factor, Three phase kilo-Watt Hour.

Measurement Accuracy\*: 0.2 Class @ Full Scale

## PROTECTIVE CIRCUITS:

INPUT:

3Amps Fuse.

**OUTPUT:**

Short Circuit:

Short circuit electronically latches output open to protect load.

Thermal:

Internal temperature sensor prevents heat damage.

**CONTROLS/INDICATORS:**

**INPUT:**

Power ON/OFF Switch with RED Light Illumination.

**OUTPUT:**

4X4 Soft Touch Keypad.

One Start/Stop Button.

4X 20 Characters LCD Display.

Timer Display

Output Voltage Terminals.

Output Current Terminals.

**MECHANICAL SPECIFICATIONS:**

Dimensions: 405mmX430mmX250mm.. (LxWxH)

Weight: 25 Kgs.

**OPTIONAL:**

Measurement: kWh can be provided on the LCD display.

\*Note: The above mentioned Stability and the Accuracy is only after 5Seconds up on the start.

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