

## ENERGY METER

### TEST CERTIFICATE

Type : ENERGY METER

Accuracy : Class 0.5% For V & A; 0.1% of FS for Hz

Accuracy Test :

VOLTAGE	CURRENT	FREQUENCY
10%	10%	100%
+/-0.5%	+/-0.5%	+/-0.1%
OK	OK	OK

Power Factor	Watts	kVA
10%	10%	100%
+/-0.5%	+/-0.5%	+/-0.5%
OK	OK	OK

Note :

A) For Digital Readouts the error is Computed in Counts.

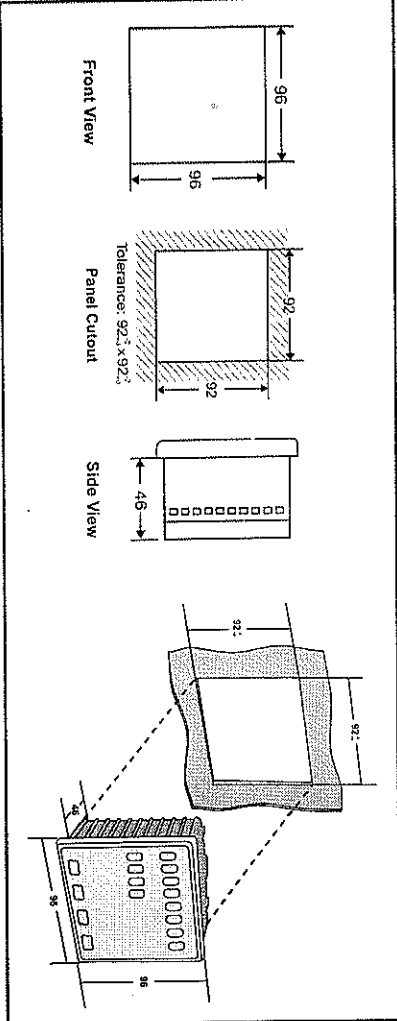
- Class 1.0 = ± 1% of Full Scale ± 1 Count

- Class 0.5 = ± 0.5% of Full Scale ± 1 Count

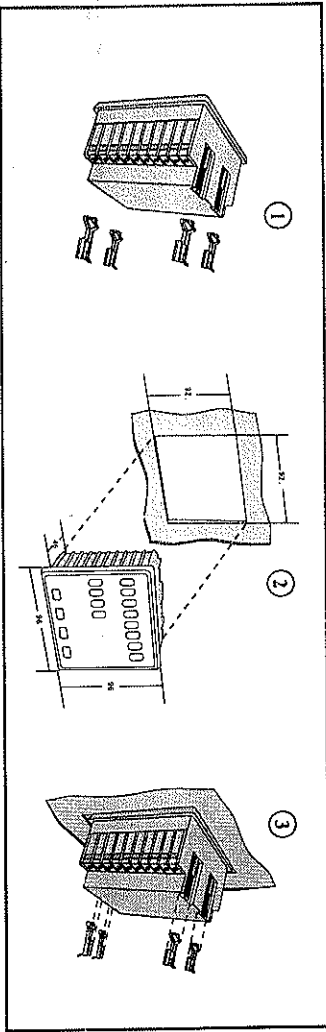
Tested By : Dipesh

Date : 26 FEB 2021

### MECHANICAL DIMENSIONS



### MOUNTING ARRANGEMENT



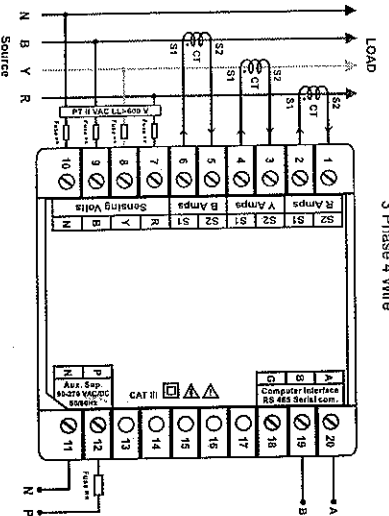
- 1) Remove the mounting clamps
- 2) Gently slide the Meter through the cut-out.
- 3) Put the mounting clamps back in the Meter.

### FEATURES

- (1) State of Art Micro controller Based Design
- (2) 1 Line 8 Digit Ultra Bright LED Display for Energy
- (3) 1 Line 4 Digit Ultra Bright LED Display for Other Parameters
- (4) Site Programmable PT ratio (Primary & Secondary) Site Programmable CT ratio (Primary & Secondary)
- (5) True RMS Measurement
- (6) Password Protection
- (7) RS 485 Computer Interface (optional)
- (8) Total Harmonic Distortion
- (9) Auto Ranging
- (10) Universal Aux. Supply

### CONNECTION DETAILS

Electrical Wiring / Connection Diagram



### SPECIFICATION

- System : 3 Phase 4 Wire / 1 Phase 2 Wire
- Voltage : Range 10-300 VAC (L-N)  
Range 10-500 VAC (L-L)
- Amp : 0.015A - 6.00Amp AC  
Direct 60 Amps Optional
- Burden : 3VA Max. for Aux. Supply, 0.2VA for Voltage & Current input
- Aux. Supply : 90 - 270 VAC / DC, 50/60 Hz
- Display : 1 Line x 8 Digit for energy  
1 Line x 4 Digit for parameter display (0.56 inches 7 Segment LED Display )
- Computation : True RMS
- Frequency : 45 Hz - 65 Hz
- Ambient : -10 to 55°C
- Storage : -20 to 75°C
- Humidity : < 95% Non-Condensing
- Dimensions : 96 x 96 x 46 mm (L x W x D)
- Panel Cutout : (92.3)mm x (92.3)mm
- Mounting : Flush Mounting with Side Clamps.
- Weight : 280 gms

### MEASUREMENT RANGES

- Voltage : Range 10-300 Volts (L-N)  
: Range 10-500 Volts (L-L)
- Amp : 0.015A - 6.00Amp AC  
Direct 60 Amps Optional
- Display Update : 1 Sec
- Frequency : 45 to 65 Hz
- Resolution : 0.1kWh For Energy, auto ranging for other parameter.
- Accuracy : ± 0.5% of full scale for voltage, current, power, power factor.
- Frequency : ± 0.1% for Hz
- Energy : class 1.0

## DISPLAY PAGES

Page	Symbol	Parameters
1	V-L-●	Voltage (L-L) RY, YB, BR
2	V-L-N-●	Voltage (L-N) RN, YN, BN
3	A-●	Amps R, Y, B
4	Hz-●	Frequency
5	W-●	Watts (Active Power) R, Y, B
6	Var-●	Var (Reactive Power) R, Y, B
7	VA-●	VA (Apparent Power) R, Y, B
8	PF-●	Power Factor R, Y, B
10	V-●	Harmonics - Voltage - THDV (V led / flashes)
11	A-●	Harmonics - Current - THDI (I led / flashes)
12	t	Load Hour

### NOTE:

When the V or A LED flashes the reading are of THDV or THDI when V or A LED is steady ON it indicates voltage or current reading.

### MANUAL SCROLL MODE:

In this mode the display shows parameter of the selected page one after another.

The parameter of next / previous page can be viewed by pressing or keys.

### AUTO SCROLL MODE:

In this mode the display shows parameter of page 1 then scroll to page 2 and so on.

## PROGRAMMING

<p><b>U5-</b> Press Programming</p> <p><b>PR55</b> Set 2000 (Factory Reset Password 2000)</p> <p><b>0000</b></p>	<p><b>BADR</b> Unit Address</p> <p><b>PR5C</b> PT Primary</p> <p><b>PR5B</b> PT Secondary</p> <p><b>PR5A</b> CT Primary</p> <p><b>CL5C</b> CT Secondary</p> <p><b>CL5B</b> Clear Energy</p> <p><b>PR5D</b> New Password</p> <p><b>BR5D</b> Baud rate</p> <p><b>CL5E</b> Reset Timer</p> <p><b>SC5L</b> Auto / manual Scroll</p>
<p><b>Rdd-</b> To enter into address</p> <p><b>001</b> To change value of address (Default value 001)</p> <p>To Save</p>	<p><b>PR5P</b> To enter into PT Primary</p> <p><b>0001</b> To change value of PT Primary (Default value 0001)</p> <p>To Save</p>
<p><b>PR5S</b> To enter into PT Secondary</p> <p><b>0001</b> To change value of PT Secondary (Default value 0001)</p> <p>To Save</p>	<p><b>CL5P</b> To enter into CT Primary</p> <p><b>0001</b> To change value of CT Primary (Default value 0001)</p> <p>To Save</p>
<p><b>CL5S</b> To enter into CT Secondary</p> <p><b>0001</b> To change value of CT Secondary (Default value 0001)</p> <p>To Save</p>	<p><b>CL5E</b> To enter into Clear Energy</p> <p><b>CL5E</b> To not Clear Energy</p>
<p><b>PR5S</b> To enter into Change Password</p> <p><b>2000</b> To edit new password</p> <p>To Save</p>	<p><b>BR5D</b> To enter into Baud Rate</p> <p><b>3600</b> To set baud rate (1200, 2400, 4800, 9600)</p> <p>To Save</p>
<p><b>PR-</b> To enter into Parity</p> <p><b>EN</b> To set Parity (Even, Odd, None)</p> <p>To Save</p>	

**CL5E** To enter into Clear Load Hour Timer

**CL5E** To not Clear Load Hour Timer

**CL5E** To enter into select Auto / Manual Scroll

**CL5E** To Disable / Enable Scrolling

To Save

To come out of program mode

### SAFETY PRECAUTIONS:

All safety related conditions, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If the equipment is not used in a manner specified by the manufacturer it might impair the protection provided by the equipment.

If there is physical damage to the unit then do not use it.

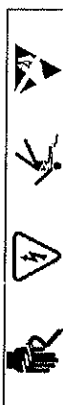
Read complete instruction prior to installation and operation of the unit.

### WIRING GUIDELINES:

#### Warning

- 1) To Prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement.
- 2) Wiring shall be done strictly according to the terminal layout with shortest connection. Confirm that all connection are correct.

#### CAUTION:



- 1) To ensure the safe operation of unit, check the wiring and connections.

The Document are Subject to change Without notification