



VERITEK

1 PHASE POWER METER



VIPS 999

TEST CERTIFICATE

Type : 1 PHASE POWER METER

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

Accuracy Test :

1 Phase Power meter

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

| Power Factor | | Watts | | kVA |
|--------------|---------|---------|---------|---------|
| 10% | 100% | 10% | 100% | 100% |
| +/-0.5% | +/-0.5% | +/-0.5% | +/-0.5% | +/-0.1% |
| OK | OK | OK | OK | OK |

Note :

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

- Class 1.0 = $\pm 1\%$ of Full Scale ± 1 Count

- Class 0.5 = $\pm 0.5\%$ of Full Scale ± 1 Count

Tested By : Mr. Sumit

Date :

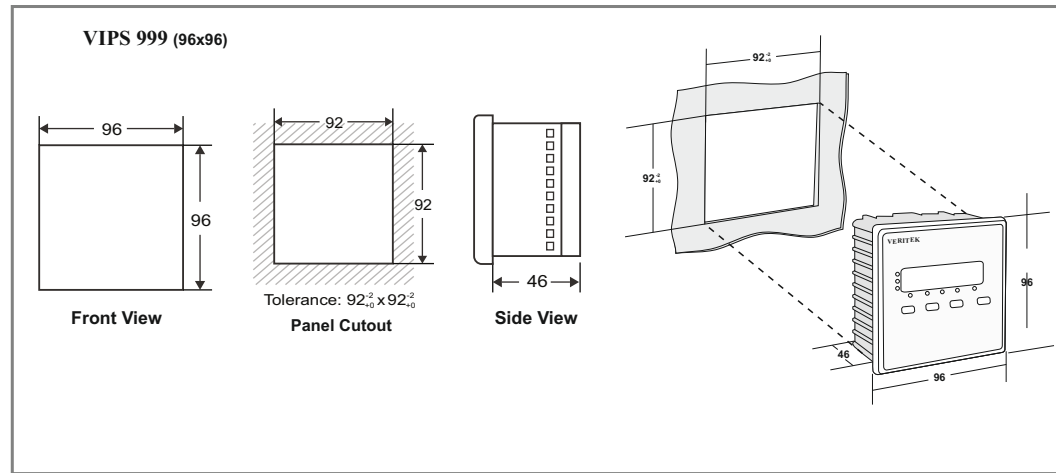
VERITEK ENGINEERING PVT. LTD.

Plot No. 222, EL-Electronic Zone, MIDC, TTC Industrial Area, Mahape, Navi Mumbai - 400701, India

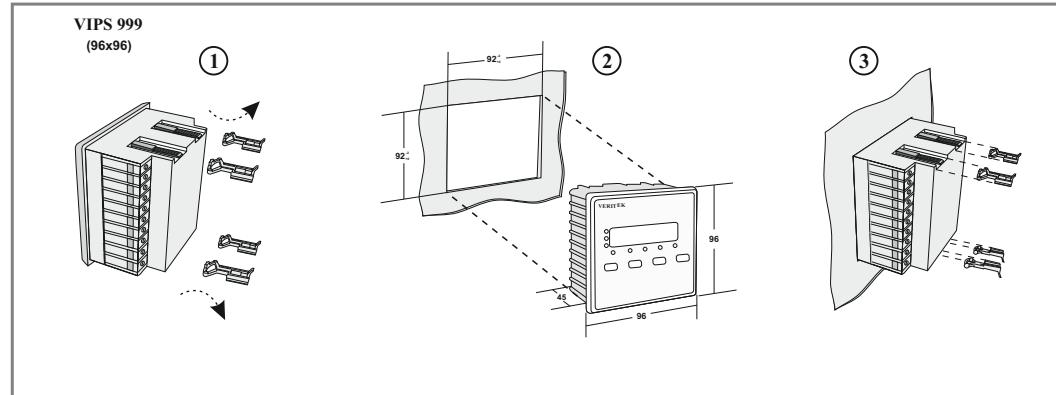
Tel. : +91 86557 47987

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MECHANICAL DIMENSION



MOUNTING ARRANGEMENT

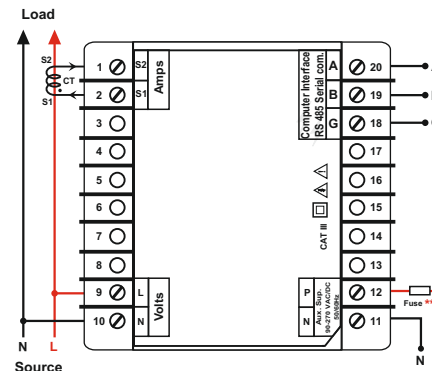


- 1) Remove the mounting clamps
- 2) Gently slide the Meter through the cut-out.
- 3) Put the mounting clamps back in the Meter.

CONNECTION DETAILS

Electrical Wiring / Connection Diagram

1 Phase Power Meter (96x96) - VIPS 999C



** Connect Fuse = 0.25 A

FEATURES

- (1) State of Art Micro controller Based Design
- (2) 1 Line 4 Digit Ultra Bright LED Display
- (3) Site Programmable PT ratio (Primary & Secondary)
- (4) Site Programmable CT ratio (Primary & Secondary)
- (5) True RMS Measurement
- (6) Password Protection
- (7) Harmonics THDV & THDI
- (8) Auto Ranging
- (9) Universal Aux. Supply
- (10) RS485 Computer Interface (Optional)

SPECIFICATION

| | |
|--------------------------|---|
| Input | 1 Phase 2 Wire Range 10-300 VAC (L-N) |
| Amps | : 0.015 to 6.00 Amp Direct 60 ampere 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 4 Digit { 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 |
| Weight | : 280 gms |
| Dimesions | : 96 x 96 x 46 mm (L x W x D) |
| Panel Cutout | : (90 ⁺³ ₋₀)mm x (90 ⁺³ ₋₀)mm |
| Mounting | : Flush Mounting with Side Clamps. |
| Protection Degree | : IP20 (Terminals) IP54 (Front of housing) |

MEASUREMENT RANGES

| | |
|-----------------------|--|
| Volts | : 10-300VAC L-N |
| Amp | : 0.015A - 6.00Amp AC |
| Display Update | : 1 Sec |
| Hz | : 45 to 65 Hz |
| Resolution | : 0.1 for Energy, auto ranging for other parameter. |
| Accuracy | : $\pm 0.5\%$ of full scale for voltage, current, power, power factor. |
| Frequency | : $\pm 0.1\%$ for Hz |
| Energy | : class 1.0 Active / Apparen class 1.0 Reactive |

DISPLAY PAGES

1 Phase Power Meter (VIPS 999) :



| Page | Symbol | Parameters |
|------|--------|---------------------------|
| 1 | V | Voltage (L-N) |
| 2 | A | Amps |
| 3 | Hz | Frequency |
| 4 | W | Watts (Active Power) |
| 5 | Var | Var (Reactive Power) |
| 6 | VA | VA (Apparent Power) |
| 7 | PF | Power Factor |
| 8 | RE | Active Energy |
| 9 | uthd | Harmonics - Voltage -THDV |
| 10 | lthd | Harmonics - Current -THDI |
| 11 | t | Load Hour |

PARAMETERS

1 PHASE POWER METER

Volts, Amps, Hz, PF, Active Power, Reactive Power, Apparent Power, Energy, THDV, THDI, Load Hours


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.

DISPLAY FREEZE MODE :













This mode can be activated by pressing  key during normal meter operation.






When this key is pressed the display will remain on the parameter it is currently displaying.






In this mode  key can be pressed to see the other parameters of this page only, but to scroll to next page parameters first you have to come out of freeze mode. Pressing  key once again will bring the meter out of freeze mode.






































































PROGRAMMING

| | | |
|--|---|--------------------------------------|
|  |  | Press Programming |
|  |  | |
|  |  | Set 2000 (Factory Set Password 2000) |

| | | | |
|--|--------------|---|------------------------|
|  | Unit Address |  | New Password |
|  | PT Primary |  | Baud rate |
|  | PT Secondary |  | Parity |
|  | CT Primary |  | Clear Load Hour |
|  | CT Secondary |  | Auto / manual Scroll |
|  | Clear Energy |  | Parameter update Speed |

| | | |
|--|---|--|
|  |  | To enter into address |
|  |  | To change value of address (Default value 001) |
| |  | To Save |

| | | |
|--|---|--|
|  |  | To enter into PT Primary |
|  |  | To change value of PT Primary (Default value 0001) |
| |  | To Save |

| | | |
|---|---|--|
|  |  | To enter into PT Secondary |
|  |  | To change value of PT Secondary (Default value 0001) |
| |  | To Save |
|  |  | To enter into CT Primary |
|  |  | To change value of CT Primary (Default value 0001) |
| |  | To Save |
|  |  | To enter into CT Secondary |
|  |  | To change value of CT Secondary (Default value 0001) |
| |  | To Save |
|  |  | To enter into Clear Energy |
|  |  | To not Clear Energy |
|  |  | |
|  |  | |
|  |  | |
|  |  | |
|  |  | |
|  |  | To enter into Change Password |
|  |  | To edit new password |
| |  | To Save |
|  |  | To enter into Baud Rate |
|  |  | To set baud rate (1200, 2400, 4800, 9600) |
| |  | To Save |
|  |  | To enter into Parity |
|  |  | To set parity (Even, Odd, None) |
| |  | To Save |
|  |  | To enter into Clear Load Hour Timer |
|  |  | To not Clear Load Hour Timer |
|  |  | |
|  |  | |
|  |  | |
|  |  | |
|  |  | |
|  |  | To enter into select Auto / Manual Scroll |
|  |  | To Disable / Enable Scrolling |
| |  | To Save |
|  |  | To enter into select next Parameter Update Speed |
|  |  | To set speed (average, slow, very slow, very fast, fast) |
| |  | 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.

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