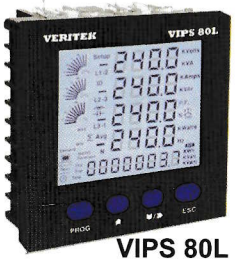
VERITEK

POWER ANALYZER



VIPS 80L

VIPS 80P

*VIPS 80LC/VIPS 80PC
With communication

TEST CERTIFICATE

Type : **POWER ANALYZER**
Accuracy : Class 0.5% for V & A
0.1% of FS for Hz

Accuracy Test :

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%	+/- 0.5%
OK	OK	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 : Mr. Dipesh

Date : 194026042

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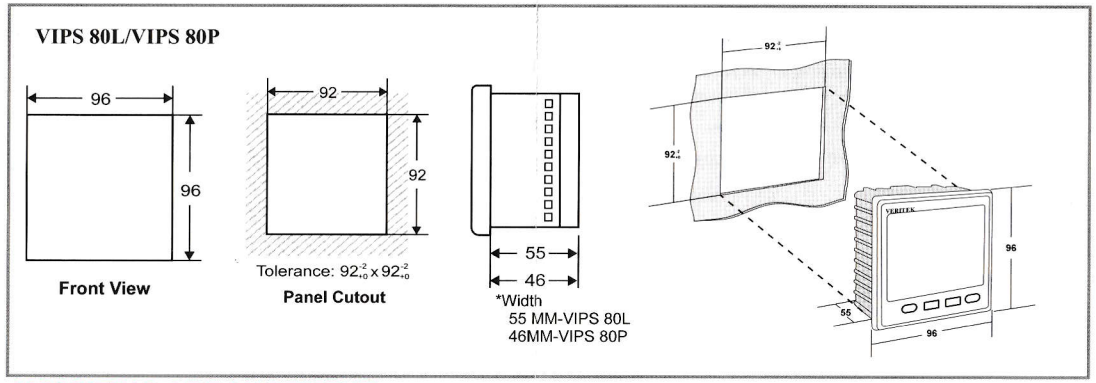
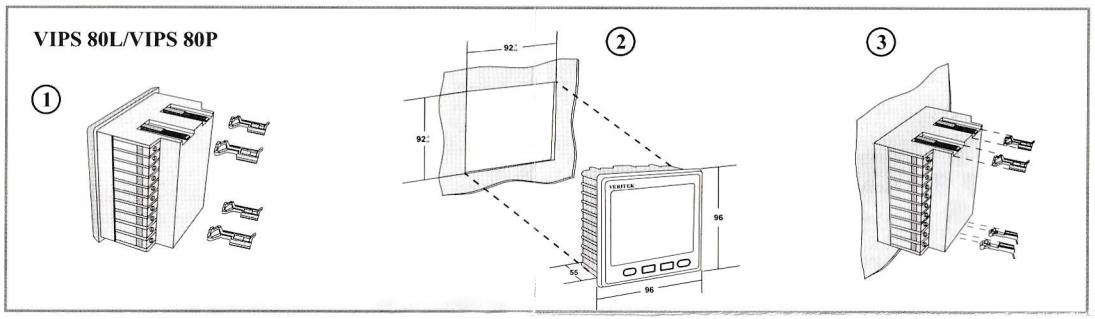
MECHANICAL DIMENSION



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.

FEATURES

(1) State of Art Micro controller Based Design

(2) 4X4 Line, 8X1 Line LCD Display with Bar Graph For VIPS 80L

4 Line 4 Digit Ultra Bright LED Display Module For VIPS 80P

(3) Site Programmable CT ratio (Primary & Secondary)

Site Programmable PT ratio (Primary & Secondary)

(4) True RMS Measurement

(5) Password Protection

(6) Maximum Demand With RTC

(7) RS485 Computer Interface (Optional)

(8) Harmonics (THDV, THDI)

(9) Auto Ranging

(10) Universal Aux. Supply

(11) Relay contact for maximum Demand
***Optional For VIPS 80LC Only NA For 80P**

(12) Kwh with 6- Time Slots

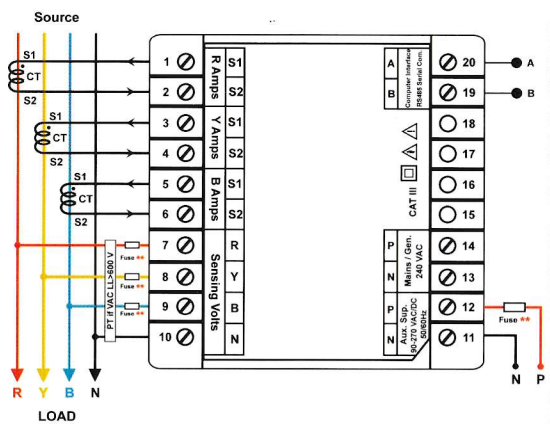
(13) Maximum demand block / sliding window programable

(14) Step / forecast Demand programable (Only In Relay Model)

CONNECTION DIAGRAM

Electrical Wiring / Connection Diagram

Power Analyzer - VIPS 80LC / 80PC



** Connect Fuse = 0.25 A

SPECIFICATION

Input	: 3 Phase 4 Wire / 1 Phase 2 Wire : Volts - Range 10 - 300 Volts (L-N) : Volts - Range 10 - 500 Volts (L-L) : Amps - Range 0.015 - 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	: 4x4 Line, 8x1 Line LCD Display with Bar Graph For VIPS 80L : 4 Line 4 Digit Ultra Bright LED Display Module For VIPS 80P
Computation	: True RMS
Relay Contact	: 4 Potential free Contact (COM & NO) (Optional) *Only For VIPS 80LC
Contact Rating	: 5Amp/230VAC/28VDC
Frequency	: 45 Hz - 65 Hz
Ambient	: -10 to 55°C
Storage	: -20 to 75°C
Humidity	: < 95% Non-Condensing
Weight	: 350 gms-VIPS 80L : 320 gms-VIPS 80P
Dimensions	: 96 x 96 x 55 mm (L x W x D) For VIPS 80L 96 x 96 x 46 mm (L x W x D) For VIPS 80P
Panel Cutout	: (92 +0.8 -0)mm x (92 +0.8 -0)mm
Mounting	: Flush Mounting with Side Clamps.

MEASUREMENT RANGES

Volts	: 10 - 300VAC (L-N) 10 - 500VAC (L-L)
Amp	: 0.015A - 6.00Amp AC Direct 60 Amps optional
Display Update	: 1 Sec
Hz	: 45 to 65 Hz
Resolution	: 0.1 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 0.5

PARAMETERS

V L-L & V L-N (Individual / Average),
Current (Individual / Average),
Power Factor (Individual / Average),
Active / Reactive / Apparent Power (Individual / Average),
Frequency / RPM,
Phasor Angle,
Phase Angle,
THD V (Phase vise),
THD I (Phase vise),
RTC,
Date,
Run Hour (Import / Export & Total),
Rising demand / forecast demand,
Maximum demand with date & time,
Active Energy, (Import & Export),
Apparent Energy (Import & Export),
Reactive Inductive Energy, (Import & Export),
Reactive Capacitive Energy. (Import & Export),

DISPLAY PAGES

Page	Symbol	Parameters
1	V L-N	Voltage (L-N) RN, YN, BN & Average
2	V L-L	Voltage (L-L) RY, YB, BR & Average
3	Amp	Amps R, Y, B & Average
4	PF	Power Factor R, Y, B & System
5	Watt	Watts (Active Power) R, Y, B & Total
6	VAr	VAr (Reactive Power) R, Y, B & Total
7	VA	VA (Apparent Power) R, Y, B & Total
8	Hz	Frequency / RPM
9	PHr °	Phasor Angle between Voltage in degrees
10	PHI °	Phase Angle Between Volt & Amps in degrees
11	uthd	Harmonics-Voltage-THDV Phase vise & Avg.
12	i thd	Harmonics-Current-THDI Phase vise & Avg.
13	tI hE	Real Time Clock
14	dAtE	Date
15	Ldt1	Load Hour (Timer) - Import
16	LdtE	Load Hour (Timer) - Export
17	Onht	ON Hour (Duration for which the meter is ON with/without load)
18	DMD	Rising Demand & forecast demand
19	MAX DMD	Peak Maximum Demand with date & time

VIPS 80L:Press ESC Key to display following Energy Parameter
VIPS 80P:Press ESC Key & Press & Button to Scroll the Energy pages

1	KWh IMP	Import Active Energy
2	KVAh IMP	Import Apparent Energy
3	KVArh IMP LAG	Import Reactive - Inductive Energy
4	KVArh IMP LEAd	Import Reactive - Capacitivie Energy
5	KWh EXP	Export Active Energy
6	KVAh EXP	Export Apparent Energy
7	KVArh IMP LAG	Export Reactive - Inductive Energy
8	KVArh IMP LEAd	Export Reactive - Capacitive Energy
9	tOd	Onwards TOD slot 1 import & export Energies upto slot (n) .(n is no of slots define)

BAR GRAPH *Only For VIPS 80L

I1%,I2% & I3% TO Display the % of current in R, Y, B, phases respective.

PROGRAMMING

Press Programming Button Twice
Set 1000 (Factory Set Password 1000)

- Meter Type (1PH/3P4W/3P3W)
- PT Primary
- PT Secondary
- CT Primary
- CT Secondary
- RTC Year
- RTC Month & date
- RTC Time
- MD Type(Fixed / Sliding window)
- MD Parameter (KW,KVA,Amp,KVAr)
- MD Integration time
- Forecast demand Integration time
- Energy Slot(1-6)
- TOD Slot(Time setup)
- Baud Rate
- Parity
- Address RS 485
- No. Of poles for RPM calculation
- Change Password
- Backlight Control
- Auto / Manual Scroll
- Reset MD
- Reset Timers
- Reset Energy

To enter into Meter type (1PH/3P4W/3P3W)
To change of Meter type (Default 3P4W)
To Save

To enter into PT Primary & Secondary
To change value of PT Primary & Secondary (Default PTP 0415 PTS 0415)
To Save

To enter into CT Primary & Secondary
To change value of CT Primary & Secondary (Default CTP 0005 CTS 0005)
To Save

To enter into set year / month / time
To Set year / month / time
To Save

To enter into MD Type
To change MD Type (Block / Sliding window) (Default Block)
To Save

To enter into MD Parameter
To change MD Parameter (KW,KVA,Amp,KVAr) (Default Watt)
To Save

To enter into MD Integration time
To change MD Integration time (01.00-30.00) (Default 05.00)
To Save

To enter into Forecast demand Integration time
To change Forecast demand Integration time (01.00-30.00) (Default 07.00)
To Save

To enter into Energy Slot
To change Energy Slot(1-6) (Default 1)
To Save

To enter into TOD slot (Time setup)
To change TOD slot (Time setup)
To Save

To enter into Baud Rate
To set baud rate
To set baud rate (1200,2400,4800,9600) (Default 9600)
To Save

To enter into Parity
To set Parity (Even, Odd, None) (Default None)
To Save

To enter into Address RS 485
To set Address RS 485 (Default 001)
To Save

To enter into No. Of poles for RPM calculation
To change No. Of poles for RPM calculation (Default 04.00)
To Save

To enter into Change Password
To edit new password
To Save

To enter into back light option (Only For VIPS 80L)
To set back light OFF time (00.00-99.00 sec) (Default 00.00) **00.00** Means continous **ON** Backlight
To Save

To enter into Select Auto / Manual Scroll
To set Scrolling time (00.00-99.00 sec) (Default 10.00) **00.00** Means Manual scrolling
To Save

To enter into Reset MD
Press Twice (Display show Enter Then
Press button to Reset MD & display show done)

To enter into Reset All Timers
Press Twice (Display show Enter Then
Press button to Reset all timers & display show done)

To enter into Reset all energies
Press Twice (Display show Enter Then
Press Button to Reset All Energies & Display show done)

To come out of program mode

NOTE

1) Ensure S1, S2, CT connectors & R, Y, B sequence is correct. In case S1, S2 is reverse watt reading will appear with a negative sign.

2) When M/G input is available watt readings will become negative to indicate now DG / Export mode is active.

3) 230VAC input has to be given across terminal marked M/G to put the meter in Export / DG mode for dual source operators.

⚠ SAFETY PRECAUTIONS :

All safety related codifications, 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