



## Multifunction Meter

### DISPLAY SPECIFICATION

|          |  |
|----------|--|
| Display  | 4 rows, LCD with backlight             |
| Digits   | 4 (Lowest 8 digits for energy display) |
| Bargraph | For Current representation             |

### INPUT SPECIFICATIONS

|                       |   |
|-----------------------|---|
| Electrical Connection | 3Ø-3 wire, 3Ø-4 wire, 2Ø-3 wire, 1Ø-2 wire  |
| Input Voltage Range   | 11 to 300V AC, (Phase to Neutral)<br>19 to 519V AC (Phase to Phase)   |
| Input Current Range   | Nominal 5A AC (Min-11mA, Max-6A)  |
| Frequency             | 45 to 65Hz  |
| Display Scrolling     | Automatic / Manual (Programmable)   |
| Power Consumption     | 8VA Max   |
| Display Reset         | Programmable (For energy)   |
| Resolution            | For energy :<br>0.01k, 0.1k, 1k, 0.01m, 0.1m, 1m<br>(depending upon CT ratio x PT ratio)<br>For Power, Voltage,<br>Current : Auto resolution<br>For Power factor : 0.001  |
| Accuracy              | Voltage (L-N / L-L) : $\pm 0.5\%$ of F.S.<br>Power Factor $\pm 0.01$ Current $\pm 0.5\%$ F.S.<br>Frequency : $\pm 0.1\%$ For L-N Voltage $> 20V$<br>For L-L Voltage $> 35V$<br>Power (Active, Reactive, Apparent) : 1%<br>Energy (Active, Reactive, Apparent) : Class 1   |
| Memory Retention      | 10 years (For energy)   |
| Measuring Parameters  | Voltage (L-L / L-N) (Individual / Average),<br>Current (I1, I2, I3) (Individual / Average),<br>Frequency, Power Factor (Individual / Total),<br>Active, Reactive & Apparent power<br>(Individual / Total),<br>Active, Reactive & Apparent Energy<br>(Total), Demand (Min / Max Active Power,<br>Min/Max Reactive Power,<br>Max Apparent Power), %THD up to 31st Level<br>Max Demand Current,<br>Neutral Current, Phase Sequence Detection |

### FEATURES

- 3Ø True RMS (Voltage, Current)
- 3Ø Power (Active, Reactive, Apparent), Energy (Active, Reactive, Apparent)
- Programmable CT/PT Primary/Secondary
- CT Polarity Error Detection
- Variable Pulse width Selection
- Single Phase Network with Phase Selection
- Modbus RTU Communication (RS485)
- Neutral Current Measurement
- THD up to 31st Level.
- Single Pulse Output / Demand Phase Sequence Detection

### OUTPUT SPECIFICATIONS

|                                      |  |
|--------------------------------------|--|
| Pulse Output                         | Voltage Range : External 24V DC max<br>Current Capacity : 100mA max<br>Pulse Width : 100 ms $\pm$ 5 ms |
| Communication Interface and Protocol | RS485 and MODBUS RTU   |
| Communication Address                | 1 to 255   |
| Transmission Mode                    | Half duplex  |
| Transmission Distance                | 500 meter maximum  |
| Transmission Speed                   | 300, 600, 1200, 2400, 4800,<br>9600, 19200 (in bps)  |
| Parity                               | None, Odd, Even  |
| Stop Bits                            | 1 or 2   |
| Response Time                        | 100 ms (max and independent of baud rate)  |

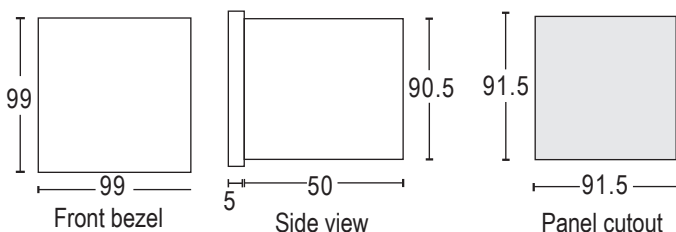
## AUXILIARY SUPPLY SPECIFICATIONS

Supply Voltage 100 to 240V AC, -15% +12%, 50/60 Hz, (±5%)

## SETTABLE PARAMETERS

CT Primary 1/5A to 10kA (Programmable for any value)  
 CT Secondary 1/5A (Programmable)  
 PT Primary 100V to 500kV (Programmable for any value)  
 PT Secondary 100V to 500V (Programmable for any value)

## DIMENSIONS



## ENVIRONMENTAL SPECIFICATIONS

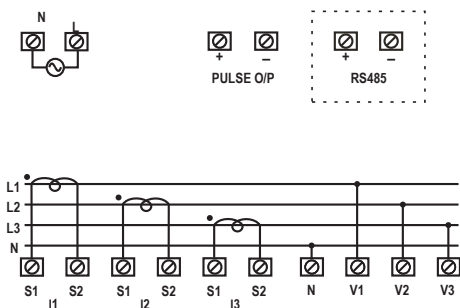
Temperature Operating Temperature : -10 to 55°C  
 Storage Temperature : -20 to 75°C

Humidity (non-condensing) Up to 85% RH

## MECHANICAL SPECIFICATIONS

Mounting Panel mount  
 Weight 318 gms

## TERMINAL CONNECTIONS



IEC Cable Size (mm<sup>2</sup>): 0.5 to 2.5 ; Tightening Torque (N-m): 0.68 to 0.79

## COMPLIANCE

Applicable EMI / EMC Standards

Product Standard : IEC 61326-1

| Category                       |                | Standards Compliance   |
|--------------------------------|----------------|--|
| ESD Immunity                   | IEC 61000-4-2  | Level IV (Air discharge : 15kV),<br>(Contact Discharge : -8kV)   |
| Surge Immunity                 | IEC 61000-4-5  | +/- 2kV common mode, (Line to ground)<br>+/- 1kV differential mode, (Line to Line)   |
| Radiated Susceptibility        | IEC 61000-4-3  | Level III, 80 to 1000MHz (10V/m)<br>Level II, 1.4GHz to 2GHz (3V/m)<br>Level I, 2GHz to 2.7GHz (1V/m)  |
| Conducted Susceptibility       | IEC 61000-4-6  | Level II (3V/m)  |
| Voltage Dips and Interruptions | IEC 61000-4-11 | Dips : 0% residual voltage /<br>1 cycle (Criteria B), 40% residual voltage /<br>10 cycles 50Hz / 12 cycles 60Hz (Criteria C)<br>70% residual voltage / 25 cycles<br>50Hz / 30 cycles 60Hz (Criteria C)<br>Interruptions : 0% residual voltage /<br>250 cycles 50Hz / 300 cycles 60Hz<br>(Criteria C) |
| Conducted Emission             | CISPR-11       |  |
| Radiated Emission              | CISPR-11       |  |
| Electrical Fast Transient      | IEC 61000-4-4  | Level III (2kV)  |

## ORDERING INFORMATION

Part Number: VCFP96M