

# ELECTRONIC SINGLE PHASE 2-WIRE ENERGY METER

(WITH SINGLE WIRE OPERATION &  
DOOR OPEN FEATURE)

R283-C2



**R283-C2** Electronic Single Phase Energy Meter is developed for domestic and small commercial users. It is designed especially for those regions/areas where power theft is a major concern. This model comes up with comprehensive Anti-Tampering features. State of the art Digital Signal Processor and highly accurate Sigma Delta ADC integrated circuits have been incorporated to measure kWh. Current sensors are provided on both Neutral and Phase wires to record/measure the energy in case of different tampering conditions.

 **MicroTech**  
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## Features

- Seven digits (6 Digits + 1 Decimal) register showing energy consumption (kWh).
- Display all readings in case of power outage / failure.
- Indication of Main Power Failure (  $\Rightarrow$  ) on LCD.
- Low battery indication (  $\square$  ) when 25% life of the battery is left.
- Meter body opened Indication on LCD ( *OPENED* ).
- Error indication ( $\Delta$  1/ $\Delta$  2) in case of hardware/software faults.
- Self diagnostic test of memory.
- Reliable LCD with ultraviolet protection.
- No effect of tilt on meter accuracy.
- Protection against dust & moisture.
- Separate LEDs for Earth, Neutral Missing, Reverse Energy & Power Indication

## Anti-Tampering Features:

- **Earth:** When fan dimmer is used for tampering then Earth LED on meter name plate lights up and meter keeps on recording the energy accurately by measuring the load current (Accuracy within  $\pm 2\%$ )
- **Neutral:** When one of the input wire i.e. phase or neutral is disconnected for tampering then Neutral LED on meter name plate lights up and meter keeps on billing by measuring the Load current  $\geq 0.1$  lb (Accuracy within  $\pm 2\%$ )
- **Reverse:** When meter's input and output are interchanged/ reversed to tamper the meter, then Reverse LED on meter name plate lights up, which indicate that the connections of meter are reversed. However, in this case the meter records energy accurately.
- Protection against external influence such as strong Electromagnetic field, Radar magnet, CD drive, etc.

## General Specifications

- |  |                              |
|--|------------------------------|
| • Reference Standards                          | IEC 62053 -21                |
| • Reference Specifications                     | DDS - 65 : 2003              |
| • Model Number                                 | R283-C2                      |
| • Connection Wiring                            | 1-Phase, 2-Wire              |
| • Connection Configuration                     | Direct Connected             |
| • Display                                      | LCD type                     |
| • Display Resolution                           | 6 Digits                     |
| • Temperature                                  |                              |
| ✓ Operating                                    | -25°C to 60°C                |
| ✓ Limit Range of Operation (Extreme Condition) | -25°C to 80°C                |
| ✓ Limit Range of Storage                       | -25°C to 80°C                |
| • Relative Humidity                            | Up to 95 %                   |
| • Storage of Data                              | Non-Volatile Memory (EEPROM) |

## Electrical Specification

- |                         |  |
|-------------------------|--|
| • Operating Voltage     | 240 Volt                                   |
| • Basic/Max Current     | 10/40 Amp                                  |
| • Reference Frequency   | 50Hz                                       |
| • Accuracy Class        | 1.0  |
| • Meter Constant        | 3200 imp/kWh                               |
| • Starting Current      | Less than 40mA                             |
| • Power Consumption     |  |
| ✓ Voltage Circuit       | Less than 2W, 10VA                         |
| ✓ Current Circuit       | Less than 4VA (at basic current)           |
| • Initial Start up Time | After 5 seconds of supply of rated voltage |

## Weight and Dimensions:

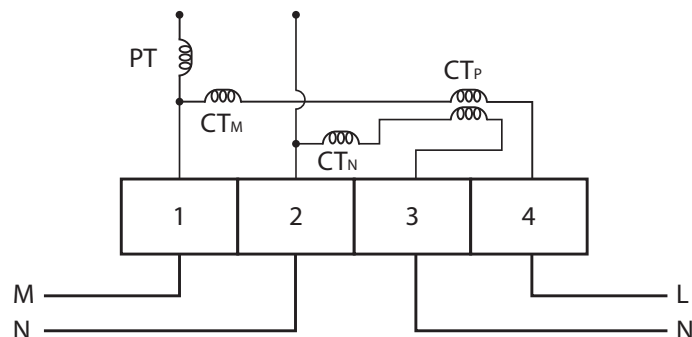
- |              |                          |
|--------------|--------------------------|
| • Weight     | 700 Grams                |
| • Dimensions | 14.10cm x 13.8cm x 5.9cm |

## Display Sequence of Windows

Each window displays for 5 seconds and scrolls automatically.

01. Meter Serial Number
02. Total kWh
03. Previous Month MDI (kW)
04. Current Month MDI (kW)
05. Instantaneous Power (kW)

## Connection Diagram



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BUREAU  
VERITAS

ISO 9001:2000 Standards