SINGLE PHASE SMART ENERGY METER
DLMS/COSEM COMPLIANT

R283_DTGC2M

R283 is an advanced single phase energy meter with built-in GSM / GPRS communication module. It is a unique product that comes with DLMS/COSEM certification enabling it to be an ideal candidate for a multi-vendor environment. To resolve energy theft prevalent in local market, R283 is carefully designed with stringent anti-tampering features. To offer highest level of flexibility, it can operate as a standalone product or be integrated with various data collection and energy management tools.

MicroTech
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Redefining Technological Horizons

Features

- Complies to DLMS/COSEM Communication Protocol (Device Language Message Specification/Companion Specification for Energy Metering).
- Active Energy Accumulation.
- Active Power Measurement.
- On Demand and Scheduled Meter Reading.
- Customized Automatic Meter Reading Options i.e. Hourly, Daily, Weekly, Monthly, etc.
- Long Life, Clear, Wide and High Contrast Display with Broad Viewing Angle.
- Symbol (⇌) on LCD indicates data communication is in progress.
- Impulse Output Display on LED for kWh for Field Testing
- Display scrolling button (Up & Down).
- kWh Reading Display in Case of Power Outage/Failure.
- Records Energy Accurately at Low/High Voltage.
- Billing Data available:
  - ✓ Total kWh
  - ✓ Previous Month MDI (kW)
  - ✓ Current Month MDI (kW)
- Display Auto Scroll After 5 Seconds.
- Indication of Events on LCD and Server:
  - ✓ Meter Open (Door Open Feature)
  - ✓ Power Failure
  - ✓ Reverse Energy Flow
  - ✓ Earth / One Wire Operation
  - ✓ Low Battery Indication

Anti Tampering Features

- When one of the input wires i.e. phase or neutral is disconnected or fan dimmer used to tamper the meter then Alarm LED on meter name plate lights up and segment of Earth Fault Detection "Erth" appears on LCD. In this condition meter keeps on billing by measuring the current flow (Current => 1 Amp) with reference voltage and unity power factor.
- When meter's input and output are interchanged/reversed to tamper the meter, then Alarm LED on meter name plate lights up and segment of Reverse Energy Flow "Rev" appears on LCD, which indicate that the connection of meter are reversed. However, in this case the meter keeps on recording energy accurately.
- Protection against external influence such as strong Electromagnetic field, Radar magnet, CD drive, etc.

Alarms

- Power Fail
- MDI Exceed
- Login
- MDI Reset
- Parameterization
- Battery Low/Off
- Anti-Tampering
- Earth /One Wire Operations/Fan Dimmer
- Reverse Energy Flow
- Door Open
- etc.

General Specifications

Reference Standards	IEC 62053 -21
Reference Specifications	DDS – 65 : 2003
	DDS - 98 : 2011
Model Number	R283_DTGC2M
Connection Wiring	1-Phase, 2-Wire
Connection Configuration	Direct Connected
Display	LCD type
Display Resolution	6 digits
Storage of Data	Non-Volatile Memory (EEPROM)
Supported Protocols	DLMS/COSEM IEC 62056-21
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 %

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)

Dielectric Strength:

Power Frequency Withstand	4 KV for One Minute
Impulse Voltage Withstand	8 KV: 1.2/50 Micro Sec
Short Time Over Current	1200 Amp for 10ms
Insulation Resistance	More than 5 Mega Ohms
Creepage Distance	20mm Minimum
DC Magnetic Field	1000 Amp/Turns
AC Magnetic Field	400 Amp/Turns

Contactor for Remote Disconnect and Reconnect

- Meter will Accept Disconnect / Reconnect Command by Backend System Remotely in Case of Non Payment as and when required.
- Two numbers of Load Thresholds can Program against Different Time Slots for Load Limit.
- Meter can also Disconnect and Reconnect the Electricity in Case of Exceeding Sanction Load.
- Load Limit, Sanction Load and Time Interval between Disconnect and Reconnect Period is Programmable Remotely.