## Direct connected credit meter







# Compact, accurate and reliable

Saral is compact single phase direct connected intelligent credit' meter for domestic, small commercial metering applications including net metering. Its enhanced revenue protection features coupled with inter-operable communication protocol makes it an ideal choice for distribution companies. The meter offers an accurate and reliable metering solution for measurement of electrical energy in a single phase 2-wire network and ensures revenue assurance.



 Saral sets a benchmark for metrology in its class and exhibits stable metrological characteristics in diverse field conditions



#### **Revenue protection**

- Advanced anti-tamper capability-prevention, detection and deterrence
- Ensures revenue protection even in case of wrong connections such as reversal, interchange of earth and neutral, partial earthing
- Immune to abnormal magnetic interference and electric discharge
- Extensive forensic information for detection and analysis of tamper

# End to end data security

- · Security against manipulating meter data
- Authenticated billing and metering data with time stamp



## Highlights

- · Meter reading in absence of mains
- · Logs energy even when connected using a single wire
- · Load profile recording
- Registers historic billing data
- · Records power factor
- · Integrated base and cover
- Current and temperature profile to help analyse loose connections, attempts to burn

#### Cost of owenership

- Robust power supply designed to withstand harsh electrical and environmental conditions
- · Designed to serve a long life in the field
- Meter is sealed for life
- Burden is low

#### **Simplicity**

- Smallest footprint in its class
- · Compact and light weight
- User friendly display
- · Intuitive display actuator without an opening

### **Benefits**

- Advanced anti tamper capabilities-prevention, detection and deterrence
- Quality of supply information
- · Peak and off-peak tariff management
- Stringent ingress protection/outdoor
- · Low cost of ownership



# Saral



# Technical specifications

#### **Electrical**

Connection type Direct connected
Wiring configuration Single phase, two wire

 Voltage range
 230/240 V (P-N)

 Current range
 5-30A, 10-60A, 10-100A

Accuracy class 1.0

Mains frequency 50 Hz  $\pm$  5%

Burden

Voltage circuit: < 0.5W and 1 VA

Current circuit: < 0.1 VA

Compliance

 Standards
 IS 13779, IEC 62052-11, IEC 62053-21, IS 15959

 Meter constant
 6400 imp/kWh, 3200 imp/kWh, 1280 imp/kWh

**Mechanical** 

Dimensions (W x H x D) 95 x 130 x 60mm (approx.)

Weight 0.3 kg (approx.)
Enclosure Engineering plastic

**Environmental** 

Ingress protection IP 54
Surge withstand 10 kV

Temperature  $-20 \,^{\circ}\text{C}$  to  $+60 \,^{\circ}\text{C}$  (operating)  $-25 \,^{\circ}\text{C}$  to  $+70 \,^{\circ}\text{C}$  (storage)

Humidity 95% non-condensing

Measurement

Energy types Active and apparent

Energy registration Forwarded, import and export

**Tariff** Up to 8 rate registers

Up to 8 time zones

Seasons, weekdays, and holidays

Maximum demand

Configurable in 6 rate registers

Data storage

Midnight energy 35 days for 2 parameters

Load survey More than 150 days (30min. IP) upto 5 parameters

Events Up to 300 events, compartment wise

History 12 billing periods

**Communication** IEC 62056-21 physical port for local communication

Optional RS 232 port over micro USB for remote communication

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