

# Three Phase Modular Smart Static Energy Meter

## M52S



## PRODUCT INFORMATION

This Three-Phase CT-Operated Modular Smart Meter is among the latest generation of Three-Phase Smart Meters in the industry.

M52S supports active & reactive energy measurement and instantaneous measurement. With an optional plug-and-play PLC/RF/GPRS communication module, the meter can be used in sophisticated AMI system.

## KEY FEATURES

- Full smart functionality
- Bidirectional measurement of instantaneous, energy and demand parameter
- Data logging for instantaneous parameters, billing parameters and block load profile
- Tamper events detection, recording and reporting
- Event logging available with active energy, voltage and current snap shots
- Power fail alerts (last gasp) and power resume information (first breath) available
- Communication options including Optical, RF, PLC & GPRS
- Bidirectional communication with push feature as well as on demand reading
- Remote firmware upgrade
- Net metering feature available
- Prepaid function as per IS 15959 Part-3 (Optional)

# M52S

## CLASS 0.5S

### THREE PHASE MODULAR SMART STATIC ENERGY METER



## SPECIFICATIONS

### MEASUREMENT

- Unidirectional or Bidirectional measurement
- Cumulative Energy
- Record Active & Reactive Energy (optional) in Tariffs

### INSTANTANEOUS VALUES

- Power, Voltage, Current
- Power Factor, Frequency

### DISPLAY

- Large digit LCD display with backlight
- Scrolling display and push button mode configurable
- Display Readable Without Main Power (RWP)
- Tamper and relay status shown as ICON
- Impulse LED available for kWh and kVArh

### TARIFF

- Single / TOU
- Up to 8 registers, configurable profiles and seasons

### DAILY PROFILE

- Daily profile for 35 days
- Energy

### BILLING PROFILE

- Billing profile for 6 months
- Energy, Average PF, Maximum Demand

### LOAD PROFILE

- Up to 1 Megabyte of Non-Volatile memory
- Max 35 days storage (30 minutes)
- Up to 16 Channel Load Profile (LP) Programmable
- Energy, Voltage, Current

### RTC

- Clock accuracy (daily deviation):  $\leq 0.5\text{sec.}$  (23°C)
- RWP (Read Without Power)
- Replaceable Lithium Battery

### ANTI-TAMPER

- 4 sealing positions (Terminal & Top Cover)
- Top cover and terminal cover open detection
- Bypass / reverse current
- Neutral missing / neutral disturbance
- Strong magnetic field detection

### EVENTS & ALARMS

- Load and Power grid On/Off events detection
- Under Voltage, Over Voltage, Over Current, and Over Load
- Power failure and Power resume
- 200 event records with date and time
- Alarms for events and tampers
- Alarms indication (LED & Buzzer) (optional)

### DEMAND MONITORING

- Block / slide mode (optional)
- Demand interval configurable
- Maximum Demand with time stamp
- Historical value (optional)

### SECURITY

- Multi-level password for data reading and programming for all available ports
- 2 data access levels (LLS and HLS)
- Encryption of data AES – 128 standard

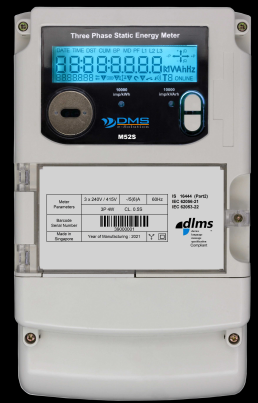
### COMMUNICATION

- Optional port for local communication
- RF / PLC / GPRS Plug and play communication module
- RF module with Wi-Sun Sub GHz transceiver
- PLC with G3-PLC band 150kHz–450kHz
- GPRS support 2G/3G/4G network
- Protocol: DLMS as per IS15959 Part3 Standard
- Push and remote firmware update available
- Prepaid function as per IS15959 Part3 Standard (optional)

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### THREE PHASE MODULAR SMART STATIC ENERGY METER



## SPECIFICATIONS

### APPLICATION

- CT-Operated Connection

### ACCURACY

- Active: Class 0.5
- Reactive: Class 1

### NOMINAL VOLTAGE

- 3P4W: 3 x 220V, 3 x 230V, 3 x 240V

### CURRENT RANGE

- $I_b$  /  $I_{ref}$ : -5A
- $I_{max}$ : 6A, 10A

### STARTING CURRENT

- 0.1%  $I_b$  & 0.2%  $I_b$

### FREQUENCY

- 50Hz / 60Hz

### POWER CONSUMPTION

- Voltage Circuit: <2W, <10VA
- Current Circuit: <4VA

### TEMPERATURE RANGE

- Operation: -25°C to +55°C
- Storage: -40°C to +70°C
- Limit: -40°C to +70°C

### HUMIDITY RANGE

- Up to 95%

### PROTECTION DEGREE

- IP 54

### EMC

- Electro static discharge
  - Contact discharge: 8kV
  - Air discharge: 15kV
- Fast transient burst: 4kV
- Surge immunity: 4 kV
- Electromagnetic RF Field
  - Frequency range: 80MHz to 2000MHz
  - With voltage: 10V/m
  - Without voltage: 30V/m
- Conducted disturbance
  - Frequency range: 150kHz to 80MHz
  - Voltage level: 10V

### INSULATED STRENGTH

- Impulse Voltage: 6kV 1.2/50  $\mu$ S
- AC Voltage: 4kV 1 min.

### STANDARDS

- IEC 62056-21
- IEC 62053-22
- IS 16444 Part2, IS15959 Part3, IS 14697

### DATA STORAGE

- Load Profile: Up to 16 Channels: Voltage, Current and Bidirectional Energy
- Billing Data: 6 billing periods

### PHYSICAL DIMENSION

- Dimension: 290mm x 170mm x 85mm
- Weight: Approx. 2 kg.
- Mounting Type: Projection type



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