

SDM630D-MDB

3 PHASE MULTIFUNCTION DIN RAIL MOUNTED METER WITH MODBUS – MID APPROVED



SDM630 Series Multifunction Power Meter

The SDM630 is a new generation modern design power monitor that will measure and display electrical power quality parameters. It has been engineered to cover most applications (Single Phase and Three Phase networks. There are also 4 models available depending on the output required, this ranges from a Pulsed Output (SDM630- Pulse), Modbus RTU (SDM630-Modbus), MBus (SDM630-MBus), and Multi-Tariff (SDM630-MT).

As the demand for MID certified meters has increased, we have obtained annex B and D of the EC Directive 2004/22/EC. This power meter has been tested and certified for single or three phase networks and import and export active energy (kWh).

The SDM630 is produced to the highest quality and utilizes the latest microprocessor and technology. It has a blue backlit display and 16 different measuring parameters. This meter supports a maximum 100A Direct connection. Available with built in pulsed outputs and RS485 Modbus RTU it is fully compatible for integration with BMS and remote monitoring systems.

Parameters

- Phase to Neutral Voltage (V)
- Phase Current (A)
- Voltage Total Harmonic Distortion (U%THD)
- Current Total Harmonic Distortion (I%THD)
- Frequency (Hz)
- Power Factor (PF)
- Current Max Demand (MD A)
- Power Max Demand (MD kW)
- Active Power (kW)
- Reactive Power (kVAr)
- Apparent Power (kVA)
- Import Active Energy (kWh)
- Export Active Energy (kWh)
- Total Active Energy (kWh)
- Import Reactive Energy (kVArh)
- Export Reactive Energy (kVArh)
- Total Reactive Energy (kVArh)

Specifications

Measured Parameters

The unit can monitor and display the following parameters of a Single Phase Two Wire (1P2W), Three Phase Three Wire (3P3W) or Three Phase Four Wire (3P4W) system.

Voltage and Current

- Phase to Neutral Voltages 190-280V AC (not for 3P3W supplies).
- Phase to Phase Voltages 173-500V AC (3 Phase supplies only).
- Percentage Total Voltage Harmonic Distortion (%THD) for each Phase to N | not for 3P3W supplies).
- Percentage Voltage Total Harmonic Distortion (%THD) between Phases (3 Phase supplies only).
- Percentage Current Total Harmonic Distortion (%THD) for each Phase.

Power factor and Frequency and Max. Demand

- Frequency in Hz
- Instantaneous power:
- Power 0-3600 MW
- Reactive Power 0-3600 MVAR
- Volt-Amps 0-3600 MVA
- Maximum Demand Power since last reset
- Power factor
- Maximum neutral Demand Current, since the last reset (for Three Phase supplies only)

Energy Measurements

Imported/Exported active energy	0 to 9999999.9 kWh
Imported/Exported reactive energy	0 to 9999999.9 kVAh
Total active energy	0 to 9999999.9 kWh
Total reactive energy	0 to 9999999.9 kVAh

Measured Inputs

Voltage inputs through 4 way fixed connector with 25mm² stranded wire capacity. Single Phase Two Wire (1P2W), Three Phase Three Wire (3P3W) or Three Phase Four Wire (3P4W) unbalanced. Line frequency measured from L1 Voltage or L3 Voltage

Nominal Voltage Input	100-280V AC (Ph+N) or 173-500V AC (Ph+Ph)
Max Continuous Voltage	120% of Nominal
Nominal Input Current	0.5-10(100)A AC
Max Continuous Current	120% of Nominal
Frequency	50Hz ±10%

Accuracy

Voltage	±0.5% of range maximum
Current	±0.5% of nominal
Frequency	±0.2% of mid-frequency
Power Factor	1% of unity (0.01)
Active Power (W)	±1% of range maximum
Reactive Power (Var)	±1% of range maximum
Apparent Power (VA)	±1% of range maximum
Active Energy (Wh)	Class 1 IEC 62053-21
Reactive Energy (kVAh)	±1% of range maximum
Total Harmonic Distortion	1% up to 31st harmonic
Response time to sleep input	Ts, typical, to >99% of final reading, at 50 Hz.

Reference Conditions of Influence Quantities

Influence Quantities are variables that affect measurement errors to a minor degree. Accuracy is verified under nominal value (within the specified tolerance) of these conditions.

Ambient temperature	23°C ±1°C
Input waveform	50 or 60Hz ±2%
Input waveform	Sinusoidal (distortion factor < 0.005)
Auxiliary supply voltage	Nominal ±1%
Auxiliary supply frequency	Nominal ±1%
Auxiliary supply waveform (f AC)	Sinusoidal (distortion factor < 0.05)
Magnetic field of external origin	terrestrial flux

Environment

Operating temperature	-25°C to +55°C*
Storage temperature	-40°C to +70°C*
Relative humidity	0 to 95%, non-condensing
Altitude	Up to 3000m
Warm up time	1 minute
Vibration	10Hz to 500Hz, IEC 60068-2-6, 2g
Shock	30g in 3 planes

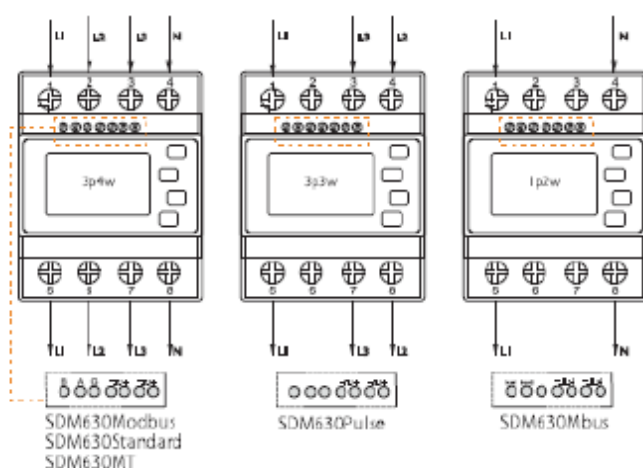
*Maximum operating and storage temperatures are in the context of typical daily and seasonal variation.

Mechanics

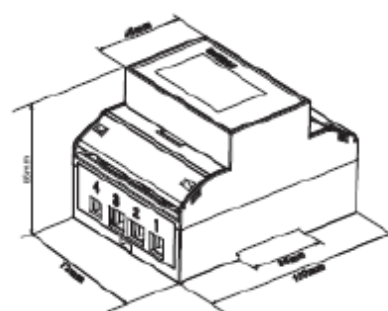
DIN rail dimensions	72mm x 100mm (W64) per DIN 43880
Mounting	DIN rail (DIN 43880)
Sealing	IP51 Indoor
Material	Self-extinguishing UL 94 V-0

Installation

Wiring diagram



Dimensions



Height 100mm
Width 72mm
Depth 66mm