

Datasheet

- Direct connection up to 100A
- Built-in relay for remote control
- Confirmations / Offline detection available
- Support auto-upload mode for uploading data to back server actively
- Built-in LoRa module, compliant with multiple gateway & server suppliers.
- Download/ Upload time interval can be set or adjusted.
- Wide range of LoRa frequency band (EU868/AS923/CN433/CN470/AU915/US902 MHz, etc.)
- High accuracy, class 0.5s
- MID B+D certified



Introduction

SDM530-LoRa is an advanced multi-function three phase energy monitoring solution with built-in LoRaWAN module. It measures all important electrical parameters, such as active energy (kWh), current (A), voltage (V), frequency(Hz), power factor, power demand, import and export energy etc. It measures and displays the characteristics of single phase two wires(1p2w) and three phase four wires(3p4w) supplies, including active energy (kWh), current (A), voltage (V), frequency(Hz), power factor, power demand, import and export energy etc. With built-in relay inside, the meter can be remotely controlled to turn on or off the electricity supply via LoRaWAN. The user can also set alarm objects and alarm level, once the alarm is activated the relay will be turned off. The relay of each phase can be controlled together or separately. Certified in the UK according to EU directive 2014/32/EU. MID certificate number 0120 / SGS0368.

Multi-measurement

- Current-instantaneous : I1,I2,I3
- Voltage & Frequency-instantaneous : V1,V2,V3,F
- Power-instantaneous : P1,P2,P3,ΣP
- Power Factor-instantaneous : PF
- Active energy : kWh
- Reactive energy : kVarh

Conformity to Standards

- Active energy Class 0.5s according to IEC 62053-22
- Active energy Class 1.0 according to IEC 62053-21
- Reactive energy Class 2.0 according to IEC 62053-23

Applications

- Measurement of energy generated by renewable source such as solar, eolic etc.
- Accounting and billing of consumptions in camp in camp sites, mails, residential areas, naval ports, etc.
- Realization of energy monitoring systems.
- Remote survey of the consumptions and compute of the costs.
- Accounting of the consumption in buildings with executive office services.
- Internal allocation of the consumption in timeshare civilian and industrial buildings.
- Totalization of the electric consumption in hotel, congress centers, exhibition fairs.

Conformity References

Electromagnetic Compatibility: EN61326-1:2013 & EN61326-2-3:2013

Low Voltage Directive: EN 61010_1:2010+A1:2019 & EN 61010-2-30-2010

MID DIRECTIVE: 2014/32/EU

Datasheet

Specification

Nominal voltage(Un)	3x230/400 V ac
Operational voltage	80%~120% of Un
Insulation capabilities	
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV-1.2μS
Basic current (Ib)	10A
Operational current range	0.4% Ib-Imax
Over current withstand	30 Imax for 0.01s
Operational frequency range	50 or 60Hz
Power consumption per phase	≤ 2W/10VA
Display	LCD
Max reading	999999.99 kWh/kVarh

Performance criteria

Operating humidity	≤ 90%, no condensing
Storage humidity	≤ 95%, no condensing
Operating temperature	-25°C - +55°C
Storage temperature	-40°C - +70°C
Reference temperature	23°C± 2°C
International standard	IEC 62053-22
Accuracy class	Class0.5S
Installation category	CAT III
Mechanical environment	M1
Electromagnetic environment	E2
Degree of pollution	2
Protection against penetration of dust and water	IP51 (indoor)
Insulating encased meter of protective class	II
Electrostatic discharges	8kV contact / 15kV air gap
Electromagnetic HF fields	IEC 61000-4-3
Electrical fast transients	4kV

Accuracy

Voltage, Current	0.2%
Frequency	0.2% of mid-frequency
Power factor	1% of unity (0.01)
Active power, Apparent power	±0.5% of range maximum
Reactive power	±1% of range maximum
Reactive energy(Varh)	Class 2
Active energy (Wh)	Class 0.5s / Class 1.0

LoRa

Interface standard and protocol	LoRaWAN Specification 1.0.2
Frequency	EU868/AS923/AU915/ Us902/ CN470/CN433
LoRaWAN Classes	Class C
Auto-upload	Max. 30 parameters
Auto-upload Interval	Configurable
Activation Way	OTAA or ABP
Output Power	13dBm in transmission
Coding Format	ASCII
Communication Distance	1500M in an open area

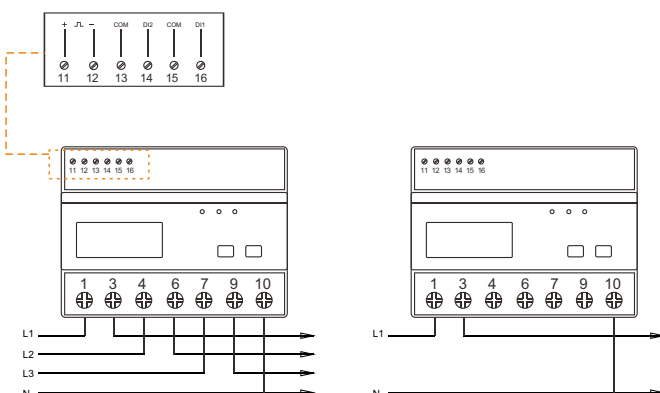
Communication

Terminal wire area	0.5-1mm²
Recommended tightening torque	0.25Nm

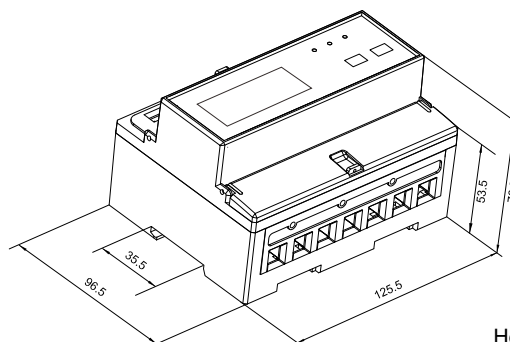
Pulse Output

Pulse outputs	1
Pulse output type	Passive
Pulse output 1	Configurable
Pulse width	200/100(default)/60ms

Wiring diagram



Dimensions



Height 125.5mm
Width 96.5mm
Depth 76.5mm