



- Single Phase 100A direct connection
- MID certified
- High accuracy, Class 1 / Class 0.5s
- Multi-parameters measurement
- Bi-directional measurement for kW and kWh
- Configurable pulsed output
- Built-in LoRaWAN communication
- Confirmations of line detection available
- Support auto-upload mode for uploading data to back server actively.
- Support auto-resume mode for suddenly power off of the gateway when resume.
- Download/ Upload time interval can be set or adjusted.
- Wide range of LoRa frequency band (EU868/AS923/CN433/CN470/AU915/US902 MHz, etc.)



SDM230-Lora measures and displays the characteristics of single phase two wire(1p2w) supplies, including kWh, kVAh, kW, kVAR, kVA, PF, Frequency, Voltage, Current, dmd, THD etc. It support Max.100A direct connection, saving the cost to install external CTs. Maximum demand current can be measured over preset periods of up to 60 minutes. This unit has a built-in LoRaWAN module which allows long range wireless communication. Two pulse outputs are available for real time energy measurement.

Specification	
Nominal voltage(Un)	120V or 230V AC
Operational voltage	80%~120% of Un
Insulation capabilities	
-AC voltage withstand	4KV for 1 minute
-Impulse voltage withstand	6KV~1.2 <sub>u</sub> S
Basic current(Ib)	10A
Maximum rated current(Imax)	100A
Operational current range	0.4% Ib-Imax
Over current withstand	30 Imax for 0.01s
Operational frequency range	50 or 60Hz
Internal power consumption	≤2W/10VA
Pulse output 1	1000imp/kWh(configurable)
Pulse output 2	1000imp/kWh
Max reading	99999.99kWh

Performance criteria	
Operating humidity	≤90%
Storage humidity	≤95%
Operating temperature	-25°C~+55°C
Storage temperature	-40°C~+70°C
Reference temperature	23°C±2°C
International standard	IEC 62053-21/ EN50470-1/3
Accuracy class	Class 1/Class B
Installation category	CAT II
Mechanical environment	M1
Electromagnetic environment	E2
Degree of pollution	2
Protection against penetration of dust and water	IP51(indoor)
Insulation encased meter of protective class	II
Electrostatic discharges	8kV contact / 15kV air gap
Electromagnetic HF fields	IEC 6100-4-3
Electrical fast transients	4kV
Surge	4kV
Radiated & conducted emissions	EN55022
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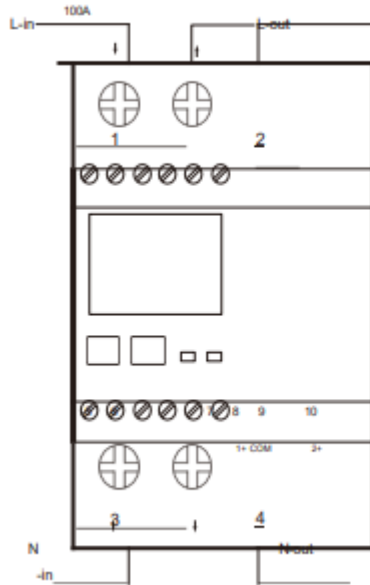
Accuracy	
Voltage, Current	0.5%
Frequency	0.2% of mid-frequency
Power factor	1% of unity(0.01)
Active power, Apparent power	±1% of range maximum
Reactive power	±1% of range maximum
Reactive energy(VArh)	Class 2
Active energy(Wh)	Class 1

Communications	
Interface standard and protocol	LoRaWAN Specification 1.0.2
Frequency	EU868/AS923/AU915/US902/CN470/CN433
LoRaWAN Classes	Class C
Auto-upload	Max. 20 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

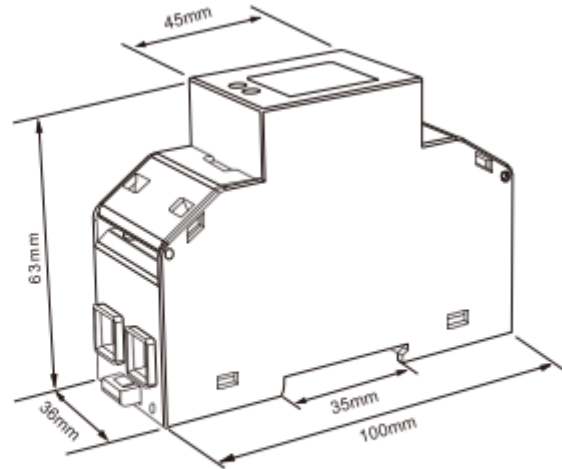
Pulse output	
Pulse output	2
Pulse output type	Passive
Pulse output 1	Configurable
Pulse width	200 / 100(default) / 60ms
Pulse output 2	1000imp/kWh



## Wiring Configuration



## Dimension Drawing



## Conformity References

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

Low Voltage Directive: EN61010-1:2010 & EN61010-2-30:2010

MID DIRECTIVE: 2014/32/EU