

# DIN Rail Mounted / Single Phase / (100A) SDM230-LoRa Series

## Datasheet

- **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/ Offline 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, 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.

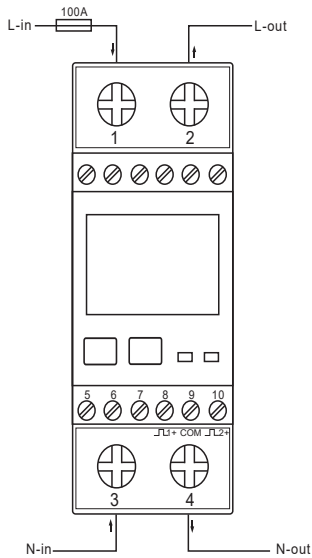


## Specification Table

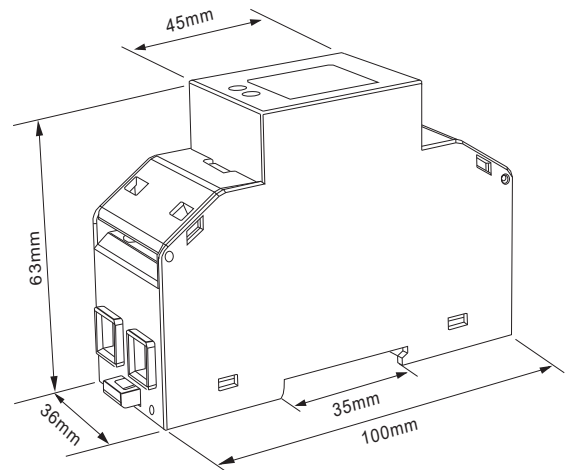
Specification		Performance criteria	
Nominal voltage(Un)	120V or 230V AC	Operating humidity	≤ 90%
Operational voltage	80%~120% of Un	Storage humidity	≤ 95%
Insulation capabilities		Operating temperature	-25°C~+55°C
- AC voltage withstand	4KV for 1 minute	Storage temperature	-40°C~+70°C
- Impulse voltage withstand	6KV-1.2μS	Reference temperature	23°C± 2°C
Basic current (Ib)	10A	International standard	IEC 62053-21/ EN50470-1/3
Maximum rated current (Imax)	100A	Accuracy class	Class 1/Class B
Operational current range	0.4% Ib-Imax	Installation category	CAT II
Over current withstand	30 Imax for 0.01s	Mechanical environment	M1
Operational frequency range	50 or 60Hz	Electromagnetic environment	E2
Internal power consumption	≤ 2W/10VA	Degree of pollution	2
Pulse output 1	1000imp/kWh(configurable)	Protection against penetration of dust and water	IP51(indoor)
Pulse output 2	1000imp/kWh	Insulating encased meter of protective class	II
Max reading	999999.99 kWh	Electrostatic discharges	8kV contact / 15kV air gap
Accuracy		Electromagnetic HF fields	IEC 61000-4-3
Voltage,Current	0-5%	Electrical fast transients	4kV
Frequency	0-2% of mid-frequency	Surge	4kV
Power factor	1% of unity (0.01)	Radiated & conducted emissions	EN55022
Active power , Apparent power	±1% of range maximum	Radiated & conducted emissions	EN55022
Reactive power	±1% of range maximum	Communication	
Reactive energy(Varh)	Class 2	Interface standard and protocol	LoRaWAN Specification 1.0.2
Active energy (Wh)	Class 1	Frequency	EU868/AS923/AU915/ US902/CN470/CN433
Pulse output		LoRaWAN Classes	Class C
Pulse outputs	2	Auto-upload	Max. 20 parameters
Pulse output type	Passive	Auto-upload Interval	Configurable
Pulse Output 1	Configurable	Activation Way	OTAA or ABP
Pulse width	200/100(default)/60ms	Output Power	13dBm in transmission
Pulse output 2	1000imp/kWh	Coding Format	ASCII
		Communication Distance	1500M in an open area

Please contact our Sales team at [sales@eastroneurope.com](mailto:sales@eastroneurope.com) or reach out to our technical experts at [technical@eastroneurope.com](mailto:technical@eastroneurope.com) Alternatively, you can call us at (+44) 0203 758 3494.

## 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