

Datasheet

- Single phase 100A direct fed
- MID B+D certified
- ETL registered
- Accuracy class 0.5 (Active Energy)
- Bi-directional measurement for kW and kWh
- Configurable pulsed output
- Modbus (SDM230Modbus) or Mbus (SDM230Mbus)
- Multi-parameter measurement
- Multi-tariffs
- Free configuration software
- 2 digital inputs

The SDM230 series is an advanced multi-function single phase energy monitoring solution with optional outputs such as pulse, RS485 RTU Modbus and Mbus. Equipped with configuration and display buttons for ease of navigation through the various parameters and settings. Housed for DIN rail mounting, IP51 protection and direct connection up to 100A. Bi-directional measurement makes this unit an ideal choice for Solar PV measurement.

Certified in the UK according to EU directive 2014/32/EU. MID certificate number 0120 / SGS0206.



Specification Table

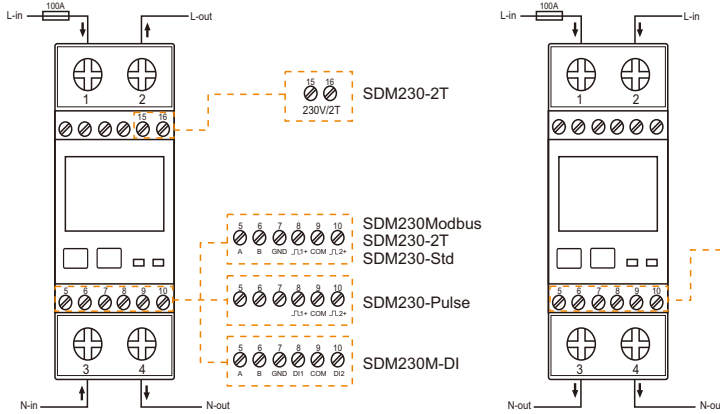
Specification	
Nominal voltage(Un)	120V or 230V ac
Operational voltage	80%–120% of Un
Insulation capabilities	
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV-1.2μS
Basic current (Ib)	10A
Maximum rated current (Imax)	100A
Operational current range	0.4% Ib–Imax
Over current withstand	30 Imax for 0.01s
Operational frequency range	50Hz for MID; 50/60Hz for non-MID
Internal power consumption	≤ 2W/10VA
Pulse output 1	1000imp/kWh
Pulse output 2	1000imp/kWh(only for SDM230DR/Bi)
Max reading	999999.9 kWh
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 62053-21 / EN50470-1/3
Accuracy class	Class1/Class B
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
Surge	4kV
Radiated & conducted emissions	EN 55022
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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
Modbus	
Bus type	RS485(semi-duplex)
Protocol	Modbus RTU
Baud rate	2400/4800/9600/19200/38400bps
Address range	1-247
Max. Bus loading	64pcs
Communication distance	1000M
Parity	EVEN/ODD/NONE
M-bus	
Bus type	M-bus
Protocol	EN13757-3
Baud rate	300/600/1200/2400/4800/9600bps
Parity	NONE/EVEN/ODD
Stop bits	1 or 2
Primary Address	1 to 250
Secondary Address	00 00 00 01 to 99 99 99 99
Pulse output	
Pulse outputs	2
Pulse output type	Passive
Pulse Output 1	Configurable
Pulse width	200/100(default)/60ms
Pulse output 2	1000imp/kWh

For more information on these products, please contact our sales team on 86 0573 83698881 or email sales@eastrongroup.com

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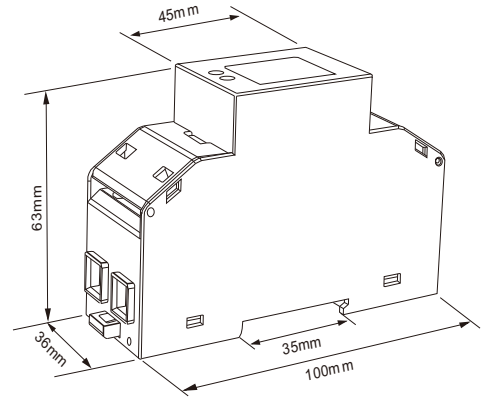
Wiring Configuration



V1 Configuration
(Live in and Live out located on the top / Neutral in and Neutral out located on the bottom)

V2 Configuration
(Live and Neutral in located on the top / Live and Neutral out located on the bottom)

Dimension Drawing



Height 100mm
Width 36mm
Depth 63mm

Ordering Options

Meter Type	Description of Meter
SDM230-Modbus - V1 (wiring configuration) SDM230-Modbus - V2 (wiring configuration)	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz. Backlighted LCD display, 2 pulse outputs, RS485 Modbus communication. Measures kWh, kVarh, W, Var, VA, V, A, PF, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.
SDM230-Mbus - V2 (wiring configuration)	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz. Backlighted LCD display, 2 pulse outputs, M-bus EN13757-3 communication. Measures kWh, kVarh, W, Var, VA, V, A, PF, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.
SDM230-2T	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz. Backlighted LCD display, 2 pulse outputs, RS485 Modbus communication, Multi-tariffs, Measures kWh, kVarh, W, Var, VA, V, A, PF, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.
SDM230-Std	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz. Backlighted LCD display, 2 pulse outputs, RS485 Modbus communication. Measures total kWh, Imp_kWh, Exp_kWh etc.
SDM230-Pulse	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz. Backlighted LCD display, 2 pulse outputs Measures kWh, kVarh, W, Var, VA, V, A, PF, Hz, Max.dmd, Imp_kWh, Exp_kWh etc.
SDM230M-DI	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz. Backlighted LCD display, RS485 Modbus communication. 2 digital inputs, Measures kWh, kVarh, W, Var, VA, V, A, PF, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.

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

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