

Datasheet

- Single phase 100A direct fed
- MID B+D certified
- UL listed
- Accuracy class 0.5 / C (Active Energy)
- Bi-directional measurement for kW and kWh
- Configurable pulsed output
- Modbus or Mbus communication
- Multi-parameter measurement
- Dual power source measurement / 2 tariffs(optional)
- Free configuration software
- 2 digital inputs(optional)

The SDM230 series is an advanced multi-function single phase energy monitoring solution with optional outputs such as pulse, RS485 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, EV charger, residential, utility, industrial application, etc.

The meter is Netherlands certified in the UK according to EU directive 2014/32/EU.

MID certificate number T12800.

UL certificate number UL-US-2555352-1.



Specification Table

Nominal voltage(Un)	230V ac
Operational voltage	100-277V AC
Insulation capabilities	
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV-1.2 / 50μs waveform
Minimum current (Imin)	0.15A
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	50/60Hz
Internal power consumption	≤ 2W/10VA
Pulse output 1	Configurable
Pulse output 2	1000imp/kWh
Max reading	999999.9 kWh / kVAh

Performance criteria	
Operating humidity	≤ 90%, no condensing
Storage humidity	≤ 95%, no condensing
Operating temperature	-40°C - +70°C
Storage temperature	-40°C - +80°C
Reference temperature	23°C± 2°C
International standard	EN IEC 62052-11:2021/A11:2022 / EN50470-3:2022
Accuracy class	Class 0.5 / Class C
Installation category	CAT III
Mechanical environment	M1
Electromagnetic environment	E2
Degree of pollution	2
Protection against penetration of dust and water	IP51 front display; IP20 whole meter
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

Accuracy	
Voltage, Current	±0.5%
Frequency	±0.2%
Power factor	±0.01
Active power , Apparent power	±1%
Reactive power	±1%
Reactive energy(Varh)	Class 2 IEC 62053-23
Active energy (Wh)	Class 0.5 IEC62053-21 / Class C EN50470-3:2022

Modbus	
Bus type	RS485(semi-duplex)
Protocol	Modbus RTU
Baud rate	2400/4800/9600/19200/38400bps (SDM230-DI: up to 115200bps)
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	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

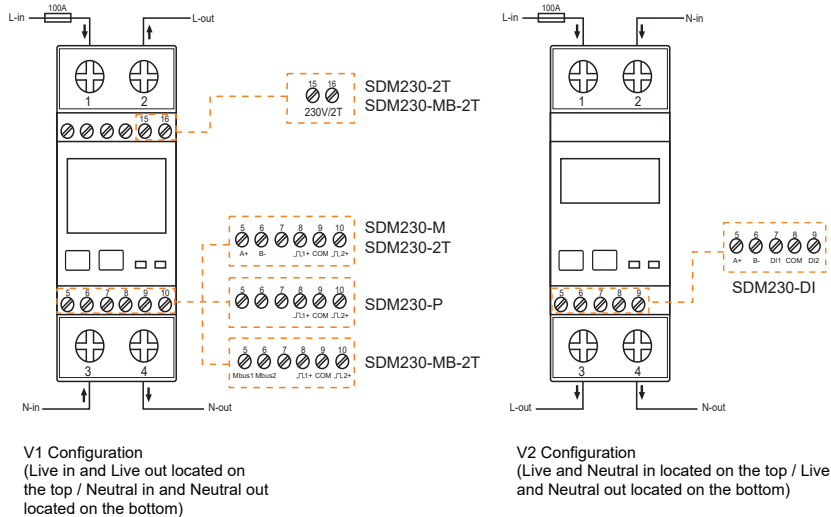
Pulse output	
Pulse outputs	2
Pulse output type	Passive
Pulse Output 1	Configurable
Pulse width 1	200/100(default)/60ms
Pulse output 2	1000imp/kWh
Pulse width 2	100mS

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

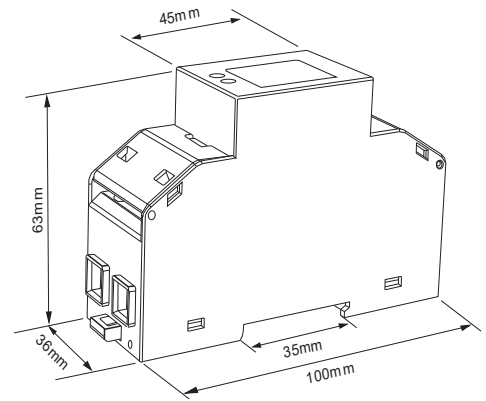
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Datasheet

Wiring Configuration



Dimension Drawing



Height 100mm
Width 36mm
Depth 63mm

Ordering Options

Meter Type	Description of Meter
SDM230-M	Single phase two wires, 230V AC, 0.15~10(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-MB-2T	Single phase two wires, 230V AC, 0.15~10(100)A, 50/60Hz. Backlighted LCD display, 2 pulse outputs, M-bus EN13757-3 communication. 2 tariffs, 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, 0.15~10(100)A, 50/60Hz. Backlighted LCD display, 2 pulse outputs, RS485 Modbus communication. 2 tariffs, Measures kWh, kVarh, W, Var, VA, V, A, PF, Hz, Max.DMD, Imp_kWh, Exp_kWh etc.
SDM230-P	Single phase two wires, 230V AC, 0.15~10(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.
SDM230-DI	Single phase two wires, 230V AC, 0.15~10(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

Measurement category: IEC 61010-1 CAT III

Current input: Direct connect

Over-voltage category: CAT III

Dielectric withstand: IEC 61010-1 double insulated, IEC 62052-31:2015

Protective class: II

EMC: EN 61326-1:2021 & EN 61326-2-3:2021, EN IEC 62052-11:2021/A11:2022

Low Voltage Directive: EN 61010-1:2010+A1:2019 & EN IEC 61010-2-030:2021+A11:2021, IEC 62052-31:2015

MID Std: EN 50470-3:2022 and IEC / EN IEC 62052-11:2021/A11:2022, IEC 62052-31:2015

UL Std: UL 61010-1, UL 61010-2-030

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