

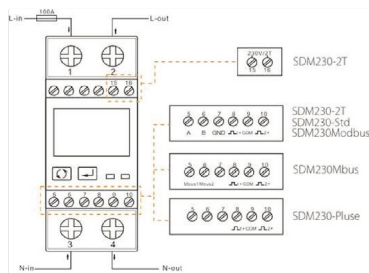
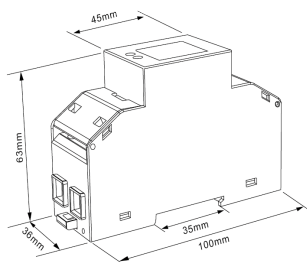
DIN Rail Mounted/Single Phase/ (100A) SDM230 M Series

The SDM230 series is an advanced multifunction single-phase digital energy meter, capable of measuring direct loads up to 100A. The unit measures active energy, reactive energy, current, voltage, power, power factor, frequency, power demand, etc.

Bidirectional measurement makes this unit the ideal choice for photovoltaic system metering. A remote communication port is available, either RS485 Modbus RTU or M-bus EN13757-3, and the communication parameters are password-protected in configuration mode.

The user can check the data and configure the meter using the buttons on the front panel. The SDM230-2T model can measure energy coming from two different power sources.

This series has been assessed and certified as complying with the requirements of EC Directive 2014/32/EU. The EC Type Examination Certificate number is 0120/SGS0206.



Wiring Configuration



KEY POINTS

1

Single-phase 100A, direct power supply

2

MID B+D Certification

3

2 modules, 36 mm width

4

Accuracy class 1 (active energy)

5

Bidirectional measurement for kW and kWh

6

Configurable pulse output (Import/Export/Net kWh)

7

Modbus/Mbus communication

8

Multi-parameter measurement

9

2 tariffs available (dual power source)

10

Free configuration software

TECHNICAL SPECIFICATIONS

Nominal voltage (Un)	120V or 230V AC
Operating voltage	80%~120% of Un
Power frequency withstand voltage	4KV for 1 minute
Impulse withstand voltage	6KV~1.2S
Base current (Ib)	10A
Maximum rated current (Imax)	100A
Operating current range	0.4% Ib-Imax
Overcurrent withstand	30 Imax for 0.01s
Operating frequency range	50 or 60Hz
Internal power consumption	≤2W/10VA
Pulse output 1	configurable
Pulse output 2	1000imp/kWh
Maximum reading	999999.9kWh
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
Mechanical environment	M1
Electromagnetic environment	E2
Pollution degree	2
Protection against penetration of dust and water	IP51
Meter with protective class insulating enclosure	II
Electrostatic discharges	8kV
High-frequency (HF) electromagnetic fields	IEC
Electrical fast transients	4kV
Surge	4kV
Radiated and conducted emissions	EN55022

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
Transmission speed	1200/2400/4800/9600bps
Address range	1-247
Maximum bus load	64pcs
Communication distance	1000M
Parity	EVEN/ODD/NONE

M-bus

Bus type	M-bus
Protocol	EN13757-3
Transmission speed	1200/2400/4800/9600bps
Parity	EVEN/ODD/NONE
Stop bits	1 or 2
Primary adress	1 to 250
Secondary	00000001 to 99999999

PULSE OUTPUT

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

ORDERING CODES

Ordering Codes	Description
SDM230-Modbus	Single phase 2 wire, 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	Single phase 2 wire, 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 2 wire, 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 2 wire, 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 2 wire, 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.

NORMS

EN61326-1: 2013 & EN61326-2-3:2013 (Electromagnetic Compatibility)
 EN61010-1:2010 & EN61010-2-30:2010 (Low Voltage Directive)
 2014/32/EU (Mid Directive)