



GP-SDM 230 Modbus

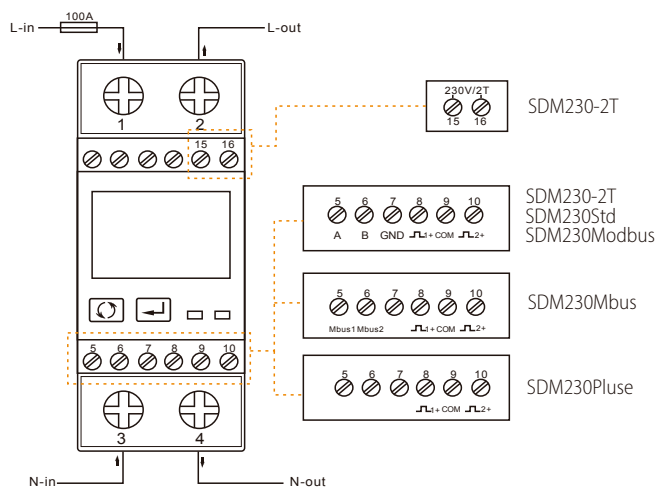
Single phase multi-function energy meter

Introduction

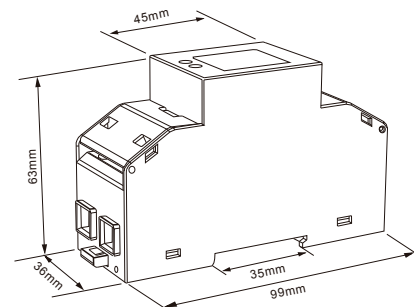
GP-SDM230 series is an advanced digital single phase multi-function energy meter, which measures up to 100A direct load. The unit measures active energy, reactive energy, current, voltage, power, power factor, frequency, demand, etc. Bi-directional measurement makes this unit an ideal choice for Solar PV measurement. A remote communication port is provided, RS485 Modbus RTU or M-bus EN13757-3 and Communication parameters are password protected in setup mode. User can check data and set up the meter via the buttons on the front panel. GP-SDM230-2T can measure energy from two different power supplies

- 100A direct load
- 2 module 36mm wide
- Multi-measurement:kWh,kVarh,W,Var,VA,PF,HZ,dmd,V,A,etc.
- Bi-directional measurement
- 2 Pulse outputs
- Rs485 Modbus or M-bus communication
- 2 Tariffs available

Wiring diagram



Dimensions



Height 99mm
Width 36mm
Depth 63mm

Specification	
Nominal voltage(Un)	120V
Operational voltage	80%~120% of Un
Insulation capabilities	
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV-1.2μS
Basic current (Ib)	5A
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
Pulse output 2	1000imp/kWh(only for SDM230DR/Bi)
Max reading	99999.9 kWh

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	Class1/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)
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% 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	1200/2400/4800/9600bps
Address range	1-247
Max. Bus loading	64pcs
Communication distance	1000M
Parity	EVEN/ODD/NONE
Data bit	8
Stop bit	1

M-bus	
Bus type	M-bus
Protocol	EN13757-3
Baud rate	300/600/1200/2400/4800/9600
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