

Datasheet

- Single phase 100A direct fed
- MID B+D certified
- Accuracy class 1 (Active Energy)
- Bi-directional measurement for kW and kWh (SDM230BI)
- Fixed pulse output (1000imp/kWh)
- Active energy and power measurement
- Low cost

The SDM230D/DR/BI is an entry level single-phase energy monitoring solution with a fixed pulse output. This product will only measure and display total active energy (kWh) (SDM230D) and power (Watts) with optional partial reset energy (SDM230DR) or the (SDM230BI) Bi-directional version which will read Import/Export and total active energy (kWh). Housed for DIN rail mounting, IP51 protection and direct connection up to 100A. Certified in the UK according to EU directive 2014/32/EU. MID certificate number 0120 / SGS0206.



Specification Table

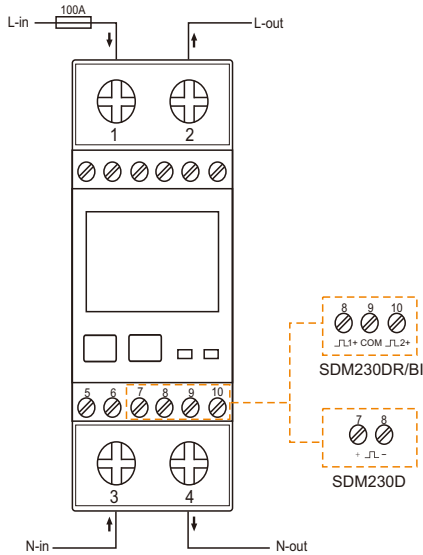
Specification	
Nominal voltage(Un)	120V or 230V ac
Operational voltage	80%~120% of Un
Insulation capabilities	
- AC voltage withstand	4KV for 1 minute
- Impulse voltage withstand	6KV-1.2μs
Basic current (Ib)	10A
Maximum rated current (Imax)	100A
Operational current range	0.4% Ib-Imax
Over current withstand	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(for SDM230DR/BI) 99999.9 kWh(for SDM230D)

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

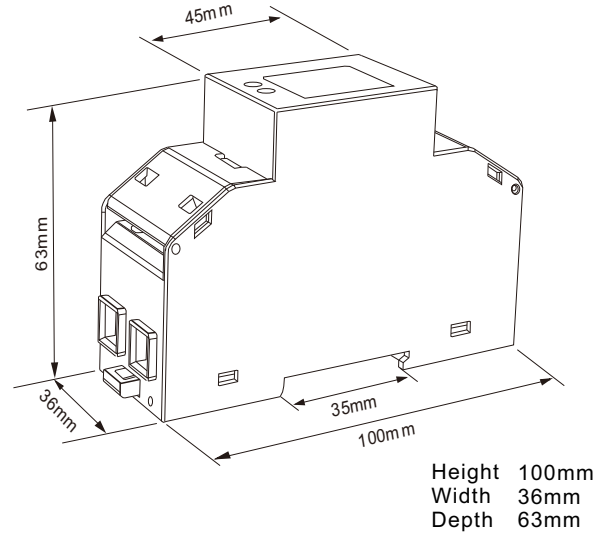
Performance criteria	
Operating humidity	≤ 90%, no condensing
Storage humidity	≤ 95%, no condensing
Operating temperature	-25°C - +55°C
Storage temperature	-40°C - +70°C
Reference temperature	23°C±2°C
International standard	IEC 62053-21 / EN50470-1/3
Accuracy class	Class1/Class B
Installation category	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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Pulse output	
Pulse outputs	2
Pulse output type	Passive
Pulse Output 1	Configurable
Pulse width	200/100(default)/60ms
Pulse output 2	1000imp/kWh(only for SDM230DR/BI)

Wiring Configuration



Dimension Drawing



Ordering Options

Meter Type	Description of Meter
SDM230D	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz, Backlighted LCD display, Pulse output, measures and display active energy
SDM230-DR	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz, Backlighted LCD display, 2 Pulse outputs, measures total active energy, resettable partial energy
SDM230-BI	Single phase two wires, 230V AC, 0.5~10(100)A, 50/60Hz, Backlighted LCD display, 2 Pulse outputs, resettable partial energy, Bi-directional measurement IMP & EXP Energy and Power

Conformity References

Electromagnetic Compatibility: EN 61326-1:2013 & EN 61326-2-3:2013

Low Voltage Directive: EN 61010_1:2010+A1:2019 & EN 61010-2-30:2010

MID DIRECTIVE: 2014/32/EU