

SDM530C

Three Phase Multi-Function Energy Meter



- Direct connection up to 100A
- Support load control
- Support abnormal power consumption monitoring
- Support lo-lo power alarm
- Multi-measurement
- S0 output for energy pulse emission
- RS485 Modbus communication
- Class 0.5S
- LCD display with 8 main digits
- MID B+D certified



Introduction

SDM530C Series is Eastron's new generation of three phase multi-function remote control energy meter. It measures all important electrical parameters, such as active energy (kWh), current (A), voltage (V), frequency(Hz), power factor, power demand, import and export energy etc. It fully complies with the class 0.5S level accuracy technical requirements of the IEC62053-22 standard for energy meters. With built-in relay inside, the meter can be remotely controlled to turn on or off the electricity supply via RS485.

The user can also set alarm objects and alarm level, once the alarm is activated the relay will be turned off automatically.

Certified in the UK according to EU directive 2014/32/EU. MID certificate number 0120 / SGS0368.

Multi-measurement

- Current-instantaneous : I1,I2,I3
- Voltage & Frequency-instantaneous : V1,V2,V3,F
- Power-instantaneous : P1,P2,P3,ΣP
- Power Factor-instantaneous : PF
- Active energy : kWh
- Reactive energy : kVarh

Conformity to Standards

- Active energy Class 0.5s according to IEC 62053-22
- Active energy Class 1.0 according to IEC 62053-21
- Reactive energy Class 2.0 according to IEC 62053-23

Applications

- Measurement of energy generated by renewable source such as solar, eolic etc.
- Accounting and billing of consumptions in camp sites, mails, residential areas, naval ports, etc.
- Realization of energy monitoring systems.
- Accounting of the consumption in buildings with executive office services.
- Internal allocation of the consumption in timeshare civilian and industrial buildings.
- Totalization of the electric consumption in hotel, congress centers, exhibition fairs.

Specification

Nominal voltage(Un)	3x230/400 V 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
Operational current range	0.4% Ib-I _{max}
Over current withstand	30 I _{max} for 0.01s
Operational frequency range	50 or 60Hz
Power consumption per phase	≤ 2W/10VA
Display	LCD
Max reading	999999.99 kWh/kVarh

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 62053-22
Accuracy class	Class0.5S
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

Accuracy

Voltage, Current	0.2%
Frequency	0.2% of mid-frequency
Power factor	1% of unity (0.01)
Active power, Apparent power	±0.5% of range maximum
Reactive power	±1% of range maximum
Reactive energy(Varh)	Class 2
Active energy (Wh)	Class 0.5s / Class 1.0

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

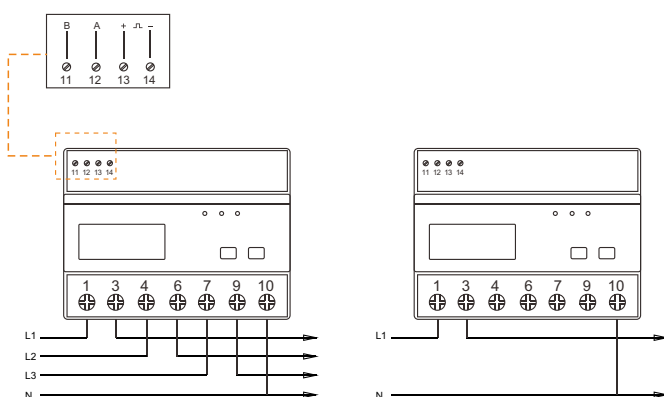
Communication

Terminal wire area	0.5-1mm ²
Recommended tightening torque	0.25Nm

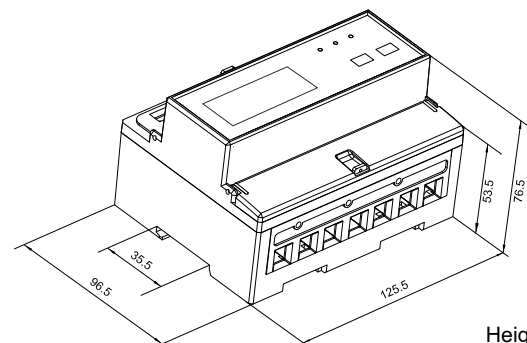
Pulse Output

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

Wiring diagram



Dimensions



Height	125.5mm
Width	96.5mm
Depth	76.5mm