

Datasheet

- Measures kWh, kVAh, kW, kVA, PF, Hz, dmd, V, A, etc.
- Bi-directional measurement IMP & EXP
- RS485 Modbus RTU
- Din rail mounting 35mm
- 100A direct connection
- Better than class 1 accuracy
- MID certified

This document provides operating, maintenance and installation instructions of SDM18 Series. The meter measures and displays the characteristics of single phase two wires application. It can handle direct current connection up to 100A. The meter provides measurement for voltage, current, power, frequency, power factor and energy information. An RS485 Modbus or Mbus port was provided for remote communication and configuration.



Model Table

Model	Current Input	Communications	MID
SDM18-M	0.5~10(100)A	RS485 Modbus	•
SDM18-MB	0.5~10(100)A	M-Bus EN13757-3	•

Specification Table

Specification	
Voltage AC (Un)	230V
Voltage range	176~276V AC
Base Current (Ib/Iref)	10A
Max. Current (Imax)	100A
Mini Current (Imin)	0.5A
Starting current	0.4% of Ib
Power consumption	<2W/10VA
Frequency	50Hz (MID) ; 50/60Hz (non-MID)
AC voltage withstand	4KV for 1 minute
Impulse voltage withstand	6KV~1.2uS waveform
Overcurrent withstand	30Imax for 0.01s
Pulse LED	1000imp/kWh
Display	LCD with white backlight
Max. Reading	99999.9kWh
Accuracy	
Voltage	0.5% of range maximum
Current	0.5% of nominal
Frequency	0.2% of mid-frequency
Power factor	1% of Unity
Active power	1% of range maximum
Reactive power	1% of range maximum
Apparent power	1% of range maximum
Active energy	Class 1 IEC62053-21 / Class B EN50470-1/3
Reactive energy	Class 2 IEC 62053-23
Mechanics	
Din rail dimensions	18x90x66 (WxHxD) DIN 43880
Mounting	DIN rail 35mm
Ingress protection	IP51 (indoor)
Material	Self-extinguishing UL94V-0

Environment	
Operating temperature	-40°C to +70°C
Storage and transportation temperature	-40°C to +70°C
Reference temperature	23°C±2°C
Relative humidity	0 to 95%, non-condensing
Altitude	Up to 2000m
Warm up time	3s
Installation category	CAT III
Mechanical environment	M1
Electromagnetic environment	E2
Degree of pollution	2

Modbus	
Bus type	RS485(semi-duplex)
Protocol	Modbus RTU
Baud rate	1200/2400/4800/9600/19200bps
Address range	1-247
Max. Bus loading	64pcs
Communication distance	1000M
Parity	EVEN/ODD/NONE
Data bit	8
Stop bit	1

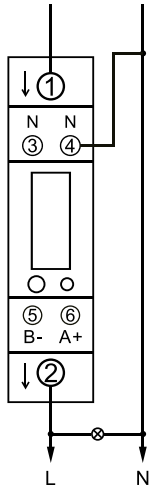
M-bus	
Bus type	M-bus
Protocol	EN13757-3
Baud rate	300/600/1200/2400/4800/9600bps
Parity	NONE/EVEN/ODD
Stop bits	1 or 2
Primary Address	1 to 250
Secondary Address	00 00 00 01 to 99 99 99 99

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

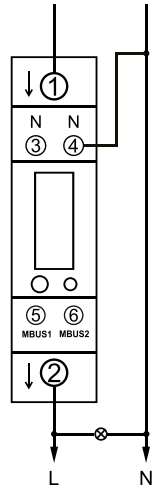
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Datasheet

Wiring Configuration

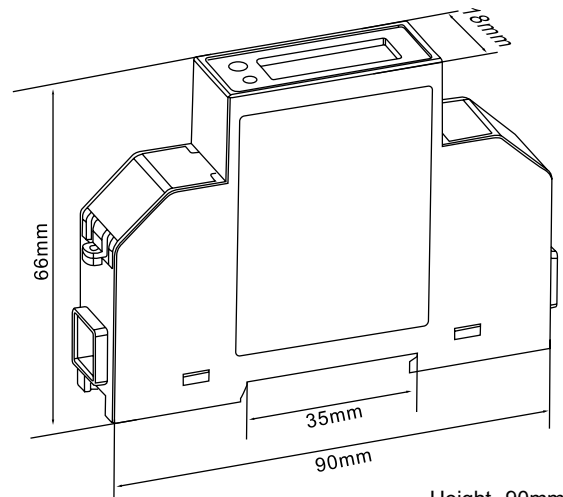


SDM18-M



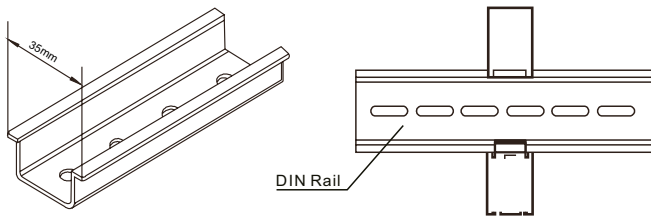
SDM18-MB

Dimension Drawing



Height 90mm
Width 18mm
Depth 66mm

Installation



Ordering Options

Meter Type	Description of Meter
SDM18-M	Total kWh, Import kWh, Export kWh, Voltage, Current, Active power, Frequency, Power factor, Address, Baudrate, Parity, Software version
SDM18-MB	Total kWh, Import kWh, Export kWh, Voltage, Current, Active power, Frequency, Power factor, Address, Baudrate, Parity, Secondary address high, Secondary address low, Software version

Conformity References

Electromagnetic Compatibility: EN61326-1:2013 & EN61326-2-3:2013

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

MID DIRECTIVE: 2014/32/EU

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