

DIN Rail Mounted / Three Phase/ (100A) SDM54 Series (3K7)

Datasheet

- Three phase 100A Direct Fed
- MID B+D Certified (3K7)
- Class B Accuracy
- Bi-Directional Measurement for Active Energy and Power
- Configurable pulsed output (Import/ Export and Nett kWh)
- Modbus and Mbus serial output options
- Multi Parameter measurement
- Dual Tariff
- 3 Module DIN rail mounted

The SDM54 measures and displays the characteristics of single phase two wires (1p2w) and three phase four wires(3p4w) supplies, including voltage, frequency, current, power, power factor, active and reactive energy, imported or exported. Energy is measured in terms of kWh and kVAh. Maximum demand on power and current can be measured over pre-set periods of up to 60 minutes. SDM54 supports max.100A direct loads per phase, with dual tariff management availability. The meter is designed for DIN-rail mounting, with IP51 front protection. The meter is optionally equipped with pulse outputs, RS485 Modbus port or M-bus port. Configuration can also be done via keypad, which is password protected.



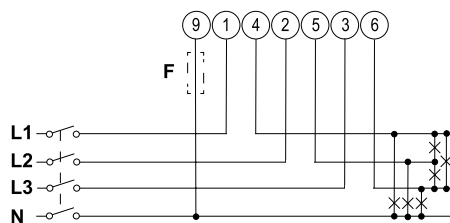
Specification Table

Specifications		Modbus RS485 port output	
Power:	self power supply (via measured voltage)	Baud rate:	2400, 4800, 9600(default), 19200, 38400
Consumption:	<1W, 8VA	Parity:	none /odd/even
Basic current:	10A	Stop bits:	1 or 2
Max. current :	100A	RS485 address:	001 to 247
Min. current:	0.5A	Response time:	<80mS
Starting current :	0.02A	Transmission distance:	1000m
Over-current:	30 x I _{max} for 0.01s	M-Bus port output	
L-N voltage:	100 to 289V a.c. (not for 3p3w supplies)	Baud rate:	300, 600, 1200, 2400, 4800, 9600
L-L Voltage:	173 to 500V a.c. (3p supplies only)	Parity:	even/odd
Frequency:	50Hz (MID version) 50/60Hz (non-MID version)	Stop bits:	1 or 2
Accuracy:		M-Bus primary address:	001 to 250
Active energy	Class 1 (IEC62053-21)/Class B (EN50470-3)	M-Bus Secondary address:	same as the serial number of the meter
Reactive energy	Class 2 (IEC62053-23)	Pulse Output	
Voltage	0.5% of range maximum	The unit provides two pulse outputs indicating real-time measured energy. Pulse output 1 is configurable; Pulse output 2 is fixed with constant 400imp/kWh. Both pulse outputs are passive type.	
Current	0.5% of nominal	Pulse output 1	is configurable. Default setting is exp-kWh; 100mS, constant 400imp/kWh
Frequency	0.2% of mid-frequency	Pulse output 2	is non-configurable. It is fixed up with active kWh. The constant is 400imp/kWh.
Power factor	1% of unity (0.01)	Mechanics specifications	
Active power (W)	±1% of range maximum Reactive power (VAr) ±1% of range maximum	DIN rail dimensions	54x100x67.5mm(WxHxD)
Apparent power (VA)	±1% of range maximum	Mounting	DIN Rail 35mm
Environmental specifications		Ingress protection	IP51 front panel (indoor)
Operating temperature	-25°C to +55°C	Material	Self-extinguishing UL94 V-0
Storage temperature	-30°C to +80°C	Weight	265g
Relative humidity	0 to 90%, non-condensing @40°C		
Altitude	Up to 2000m		
Mechanical environment	M2		
Electromagnetic environment	E2		
Output specifications Three interfaces are available:			
Modbus RS485 port output	(SDM54-M, SDM54-2T, SDM54-DI)		
M-Bus port output	(SDM54-MB, SDM54-MB-2T)		
two Pulse outputs			

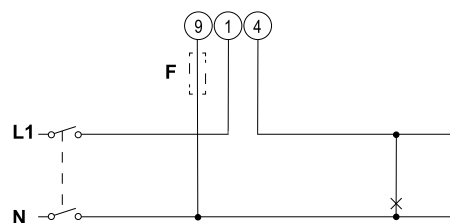
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Wiring Configuration

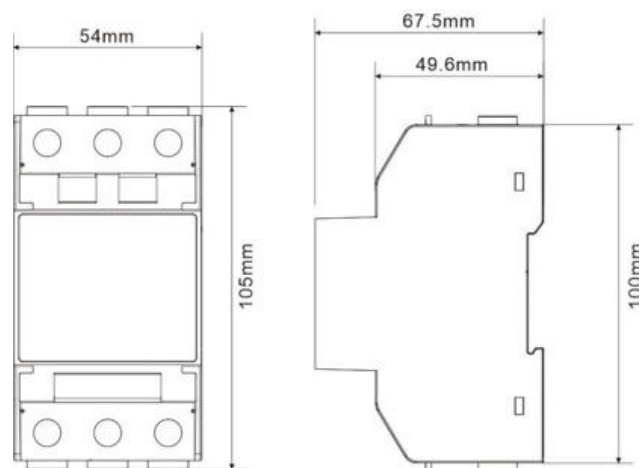


Three Phase Four Wires:



Single Phase Two Wires:

Dimension Drawing



Ordering options

The SDM54 Series are smart three phase energy meters, covering 3 models with following features and differences:

Model	Measurements	Outputs	Tariff Control
SDM54--2T	kWh, kVarh, W, Var, VA, PF, Hz, V,	2x Pulse outputs; RS485 Modbus	Double tariffs
SDM54-M	A, Max.dmd. Etc.	2x Pulse outputs; RS485 Modbus	Single tariff
SDM54-DI	kWh, kVarh, W, Var, VA, PF, Hz, V,	2x Digital inputs; RS485 Modbus	Single tariff
SDM54-MB-2T	A, Max.dmd. Etc.	2x Pulse outputs; M-Bus	Double tariffs
SDM54-MB	kWh, kVarh, W, Var, VA, PF, Hz, V,	2x Pulse outputs; M-Bus	Single tariff
SDM54-P	A, Max.dmd. Etc.	2x Pulse outputs	Single tariff

Safety and EMC

- Measurement category IEC 61010-1 CAT III
- Current input Direct connect
- Over-voltage category CAT III
- Dielectric withstand IEC 61010-1 double insulated
- Protective class II
- EMC IEC 61326-1:2013 ; IEC 61326- 2-3:2013

Other terminals

