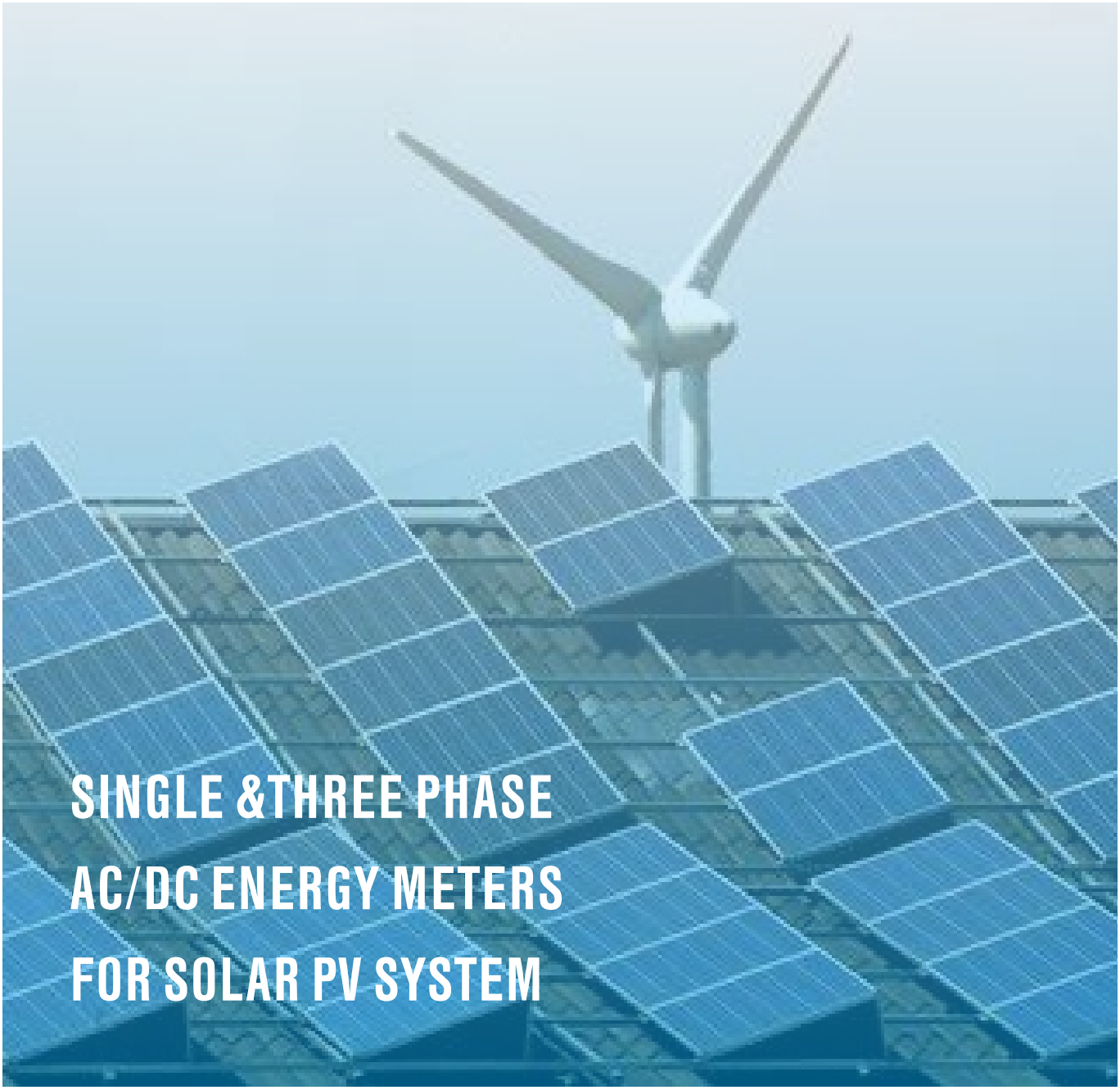
Eastron®



SINGLE &THREE PHASE AC/DC ENERGY METERS FOR SOLAR PV SYSTEM

We Measure Electricity

ABOUT US

Contents

Since 2012

Eastron Electronic Co.,Ltd.

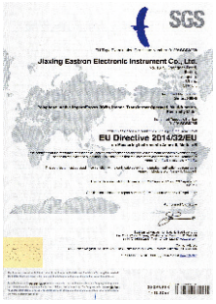
As a professional manufacturer with decades experience, Eastron designs and produces high quality and cost-effective electronic energy meters for apply in solutions of AMR/AMI both at residential and industrial application fields. With years of fast development, Eastron have grown to a leading manufacturer of energy meter especially the DIN rail meters. Eastron devoted to develop and design ideal electronic energy meters and solution applications for customers. We have energetic and innovative development teams in both China and UK, which help us keep the competitive edge in the market. The collaboration with leading universities and institutions also brings many cutting-edge technology into our products. To make sure the reliability of the products, Eastron has setup own professional lab that can performs EMC, LVD, accuracy and environment tests according to IEC, EN, GB, UL standards.

Our Mission

Our aim is to continue to develop and supply solutions that use the latest technology and offer benefits and features to the installers as well las the end client. 95% of our product range is fully MID certified and tested by a UK notified body, we also ensure that we comply with all the UK and EU regulatory standards. Our product facility isaudited annually by the notified body and operates a comprehensive resource planning and manufacturing execution systems. Giving full traceability and quality control on all our products.

What is important to us is to insure we have created a reliable, enjoyable and friendly company to work for and to work with.

Our Certificates and Accredltations



Solar PV System

➢ Introduction to PV

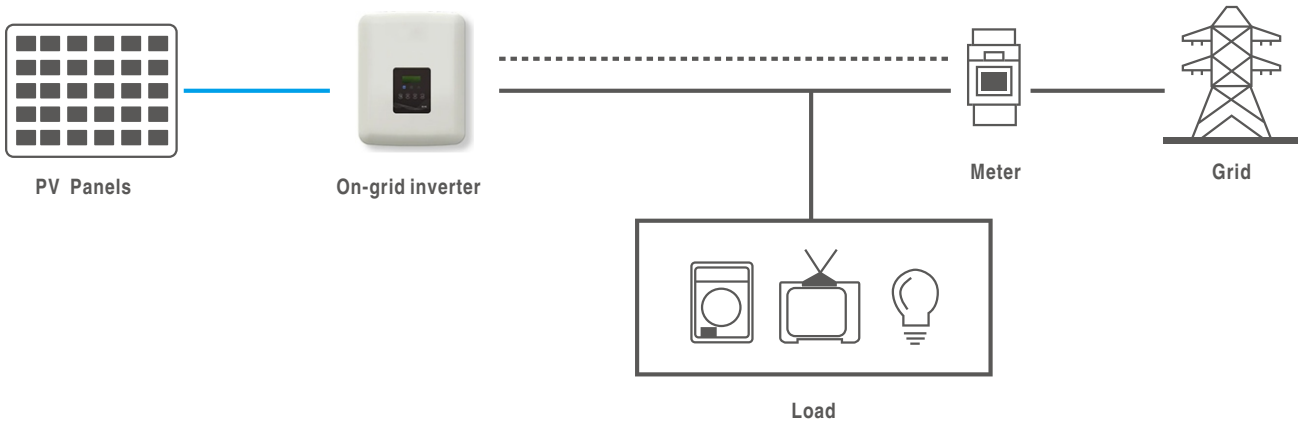
Solar photovoltaic systems, commonly referred to as solar PV systems, convert sunlight directly into electricity. A solar PV system can help reduce carbon emissions and your electricity bill by producing sustainable electricity from the sun instead of burning fossil fuels. Installing a PV power system allows you to create your own electricity to supply your entire home or business and can potentially eliminate the issues associated with large utility grids.

➢ Energy meters

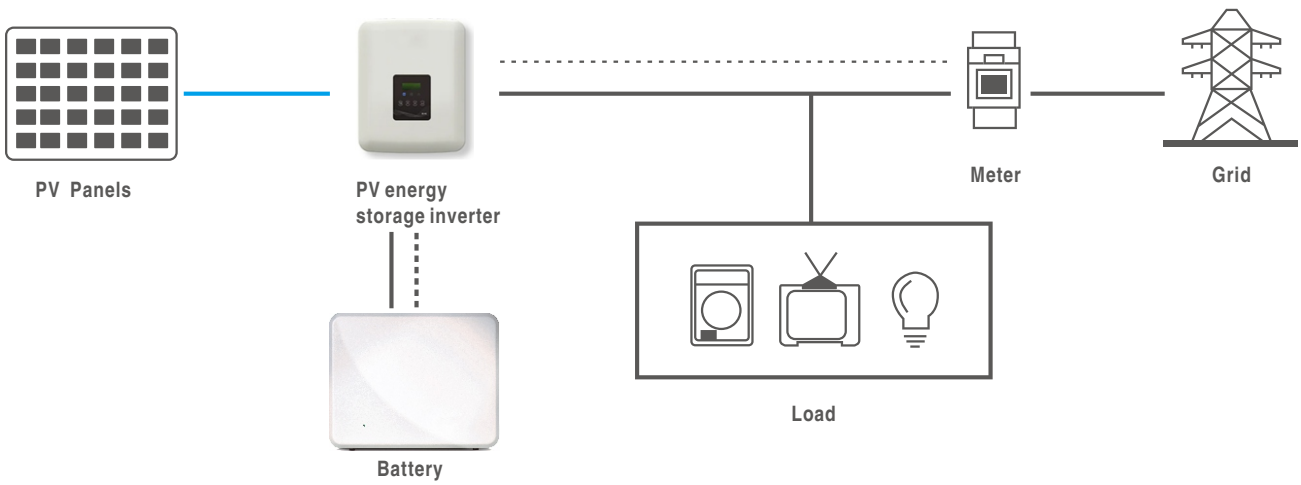
Eastron energy meter is a one-on-one solution for grid export limitation and self-consumption monitoring. It is compatible with most of the solar and storage inverters in the market. With RS485 communication and direct connection to the inverter, it is cost-effective and easy to install. Eastron provides a rich options of energy metering for single phase or three phase solar PV systems, helps you harness the power from the sun and the grid.

How Energy Meter works in PV Systems Work

➢ Grid-connected PV System - Anti-reflux



➢ Grid-connected PV System with Batteries - Anti-reflux



Eastron Solar PV energy meters have been MID, UL, SAA approved.

Meter for PV anti-backflow-Single Phase

➢ Single phase direct connection type

The single-phase direct type bi-directional energy meter can handle direct current connection up to 45A or 100A. The meters are in 1P/2P din module size. They can measure multi-parameters like voltage, current, frequency, power, power factor, etc. The Bi-directional measurement makes them a good choice for Solar PV System and for the anti-backflow function. Especially the SDM230-NMI series, which has higher sensitive to reverse flow and its power update rate can achieve 50mS real time. Measurements and configurations are transmitted via the RS485 Modbus RTU.

SDM120M
- 0.25~5(45)A
- 230V AC
- 18mm width
- Pulse/Modbus
- Up to 9600bps
- MID certified

SDM18-M
- 0.5~10(100)A
- 230V AC
- 18mm width
- Pulse/Modbus
- Up to 9600bps
- MID certified

SDM210-M
- 0.5~10(100)A
- 230V AC
- 36mm width
- Pulse/Modbus
- Up to 38400bps
- MID certified

SDM230-Modbus
- 0.5~10(100)A
- 230V AC
- 36mm width
- Pulse/Modbus
- Up to 38400bps
- MID/SAA certified

SDM230-NMI
- 0.5~10(100)A
- 230V AC
- 36mm width
- 50mS data update
- Pulse/Modbus
- Up to 38400bps

SDM230-NMI-2
- 0.5~10(100)A
- 230V AC
- 36mm width
- 50mS data update
- 2x RS485 Modbus
- Up to 38400bps

More+

➢ Single phase CT operated type

The single-phase CT operated type bi-directional energy meter can handle indirect current connection over 45A or 100A. The meters are in 1P din module size. They can measure multi-parameters like voltage, current, frequency, power, power factor, etc. The Bi-directional measurment makes them a good choice for Solar PV System and for the anti-backflow function. Measurements and configurations are transmitted via the RS485 Modbus RTU.

SDM120CTM-5A
- 5(6)A CT input
- 230V AC
- 18mm widths
- Pulse/ Modbus
- MID certified

SDM120CTM-40mA
- 40mA CT input
- 230V AC
- 18mm widths
- Pulse/ Modbus
- SAA certified

SDM120CTM-100mA
- 100mA CT input
- 230V AC
- 18mm widths
- Pulse/ Modbus
- SAA certified

More+

Meter for PV anti-backflow-Three Phase

➢ Three phase direct connection type

The three-phase direct type models can handle direct current connection up to 100A. The meter measures multi-parameters like current, voltage, power, power factor, frequency, etc. The Bi-directional measurment makes them a good choice for Solar PV System and for the anti-backflow function. The meter can operate with 3p3w or 3p4w supply systems. The measurements and configurations are transmitted via the RS485 Modbus communications port.

SDM630-Modbus V2 / V3

- 0.5~10(100)A,
- 100-276V 3~ L-N, 100-480V 3~ L-L
- 72mm width
- Pulse/ Modbus
- Up to 38400bps
- 3P3W/3P4W
- MID certified

SDM54-M

- 0.5~10(100)A
- 100-276V 3~ L-N, 100-480V 3~ L-L
- 54mm width
- Pulse/Modbus
- Up to 38400bps
- 3P3W/ 3P4W
- MID certified

More+

➢ Three phase CT operated type:

The three-phase CT operated type models can handle indirect current connection with split core current transformers. This solution is very friendly for retrofitting projects and more safe as there is no need to disconnect wires or interrupt power. The meter measures multi-parameters like current, voltage, power, power factor, frequency, etc. The Bi-directional measurment makes them a good choice for Solar PV System and for the anti-backflow function. The meter can operate with 3p3w or 3p4w supply systems. The measurements and configurations are transmitted via the RS485 Modbus communications port. What's more, the meter support CT reverse setting via both button or modbus when it was wrongly connected.

SDM630MCT

- 1/5A CT input
- 100-276V 3~ L-N, 100-480V 3~ L-L
- 72mm width
- Pulse/ Modbus
- Up to 38400bps
- 3P3W/3P4W
- MID certified

SDM630MCT 40mA

- 40mA CT input
- 100-276V 3~ L-N, 100-480V 3~ L-L
- 72mm width
- Pulse/Modbus
- Up to 38400bps
- 3P3W/ 3P4W
- SAA certified

SDM630MCT-ETL

- 1/5A CT input
- 100-276V 3~ L-N, 100-480V 3~ L-L
- 72mm width
- Pulse/ Modbus
- Up to 38400bps
- 3P3W/3P4W
- ETL certified

SDM630MCT-100mA-2

- 100mA CT input
- 100-276V 3~ L-N, 100-480V 3~ L-L
- 72mm width
- 2x RS485 Modbus
- Up to 38400bps
- 50mS data update
- 3P3W/ 3P4W

More+

SDM120M

- Single phase two wire load operation
- Direct Metering up to 45A, 1 din module compact size
- LCD display with 6 main digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2 pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21/ Class B EN50470-3
- Available with MID certification

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

Voltage & frequency

- Nominal values: 230V L-N ±20%
- Frequency: 50/60Hz

Current

- Starting current Ist: 20mA
- Minimum current Imin: 0.25A
- Reference current Iref(Ib): 5A
- Maximum current Imax: 45A

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 1200, 2400, 4800, 9600bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2
- Modbus Address: 1 to 247 Default: 001

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 1000/100/10/1 imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 1000imp/kWh
- Pulse width 2 : 60mS

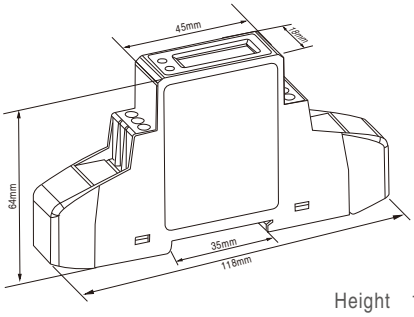
Accuracy

- Active energy: Class B/ Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Environment conditions

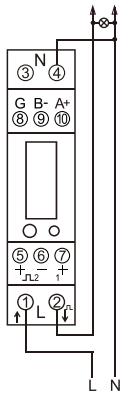
- Operating Temperature: -25°C… + 55°C (3K6) / -40°C…+70°C (3K7)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height 118mm
Width 18mm
Depth 64mm

Wiring



SDM18-M

- Single phase two wire load operation
- Direct Metering up to 100A, 1 din module compact size
- LCD display with 6 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21/ Class B EN50470-3
- Available with MID certification

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 1200, 2400, 4800, 9600bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2
- Modbus Address: 1 to 247 Default: 001

Accuracy

- Active energy: Class B/ Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Voltage & frequency

- Nominal values: 230V L-N ±20%
- Frequency: 50/60Hz

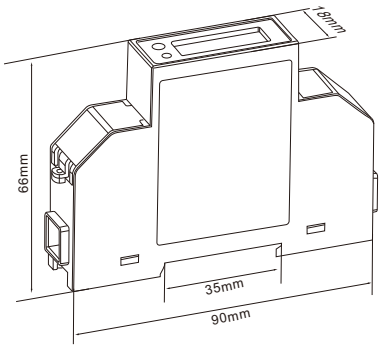
Current

- Starting current Ist: 40mA
- Minimum current Imin: 0.5A
- Reference current Iref(Ib): 10A
- Maximum current Imax: 100A

Environment conditions

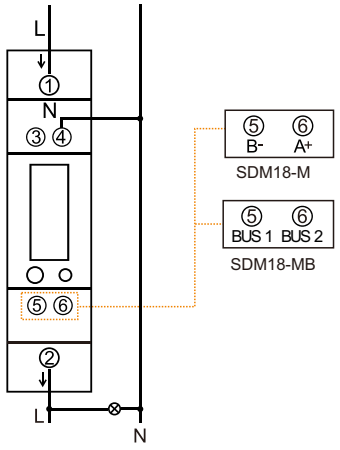
- Operating Temperature: -25°C… + 55°C (3K6) / -40°C…+70°C (3K7)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height	90mm
Width	18mm
Depth	66mm

Wiring



SDM230-Modbus

- Single phase two wire load operation
- Direct Metering up to 100A, 2 din module compact size
- LCD display with 7 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2 pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21/ Class B EN50470-3
- Available with MID/SAA certification

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 1200, 2400, 4800, 9600, 19200, 38400bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2

Accuracy

- Active energy: Class B/ Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Voltage & frequency

- Nominal values: 230V L-N ±20%
- Frequency: 50/60Hz

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 1000/100/10/1 imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 1000imp/kWh
- Pulse width 2 : 100mS

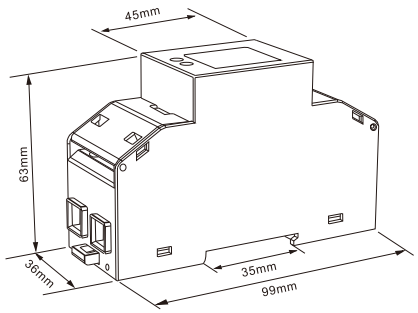
Environment conditions

- Operating Temperature: -25°C… + 55°C (3K6)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Current

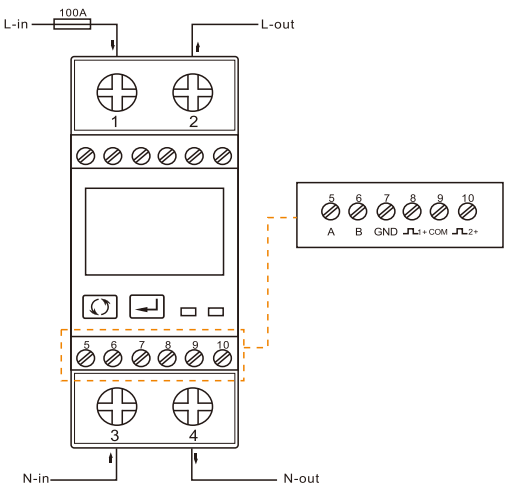
- Starting current Ist: 40mA
- Minimum current Imin: 0.5A
- Reference current Iref(Ib): 10A
- Maximum current Imax: 100A

Dimension



Height	99mm
Width	36mm
Depth	63mm

Wiring



SDM210-M

- Single phase two wire load operation
- Direct Metering up to 100A, 2 din module compact size
- LCD display with 7 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2 pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21/ Class B EN50470-3
- Available with MID certification

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

Voltage & frequency

- Nominal values: 230V L-N ±20%
- Frequency: 50/60Hz

Current

- Starting current Ist: 40mA
- Minimum current Imin: 0.5A
- Reference current Iref(Ib): 10A
- Maximum current Imax: 100A

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 2400, 4800, 9600, 19200, 38400bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2
- Modbus Address: 1 to 247 Default: 001

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 1000/100/10/1 imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 1000imp/kWh
- Pulse width 2 : 60mS

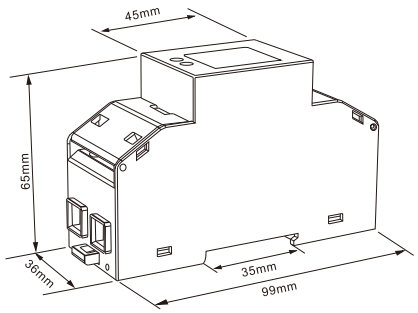
Accuracy

- Active energy: Class B/ Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Environment conditions

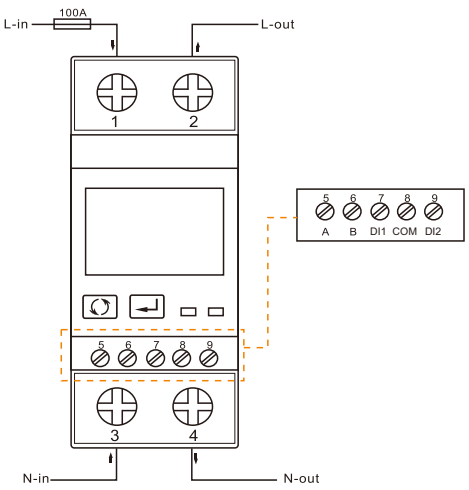
- Operating Temperature: -25°C… + 55°C (3K6)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height	99mm
Width	36mm
Depth	65mm

Wiring



SDM230-NMI

- Single phase two wire load operation
- Direct Metering up to 100A, 2 din module compact size
- LCD display with 7 digits
- True RMS metering provides accurate measurement, 50mS data update
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2 pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

Voltage & frequency

- Nominal values: 230V L-N ±20%
- Frequency: 50/60Hz

Current

- Starting current Ist: 40mA
- Minimum current Imin: 0.5A
- Reference current Iref(Ib): 10A
- Maximum current Imax: 100A

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 2400, 4800, 9600, 19200, 38400bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2
- Modbus Address: 1 to 247 Default: 001

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 1000/100/10/1 imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 1000imp/kWh
- Pulse width 2 : 60mS

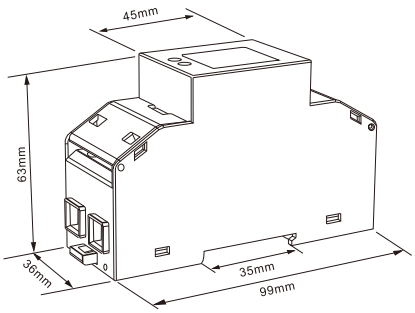
Accuracy

- Active energy: Class B/ Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Environment conditions

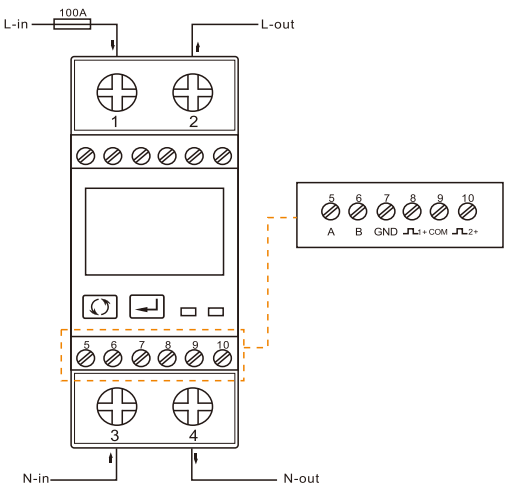
- Operating Temperature: -25°C… + 55°C (3K6)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height	99mm
Width	36mm
Depth	63mm

Wiring



SDM230-NMI-2

- Single phase two wire load operation
- Direct Metering up to 100A, 2 din module compact size
- LCD display with 7 digits
- True RMS metering provides accurate measurement, 50mS data update
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2 pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

RS485 Modbus RTU

- Port: 2x RS485 Ports
- RS485 port 1:
- Baud rate: 2400, 4800, 9600(default), 19200, 38400bps.
- Parity: None(default), Even, Odd
- Stop bits: 1 or 2
- Modbus Address: 1 to 247 Default: 001

- RS485 port 2:
- Baud rate: 2400, 4800, 9600(default), 19200, 38400bps
- Parity: NONE(default)/EVEN/ODD
- Stop bits: 1 or 2
- Modbus Address: 1 to 247 Default: 002

Voltage & frequency

- Nominal values: 230V L-N ±20%
- Frequency: 50/60Hz

Accuracy

- Active energy: Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

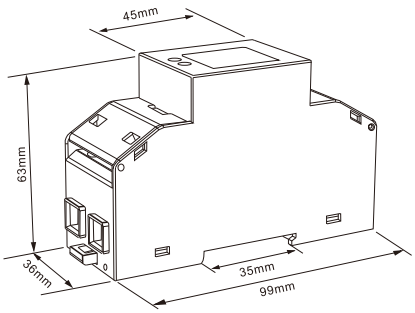
Current

- Starting current Ist: 40mA
- Minimum current Imin: 0.5A
- Reference current Iref(Ib): 10A
- Maximum current Imax: 100A

Environment conditions

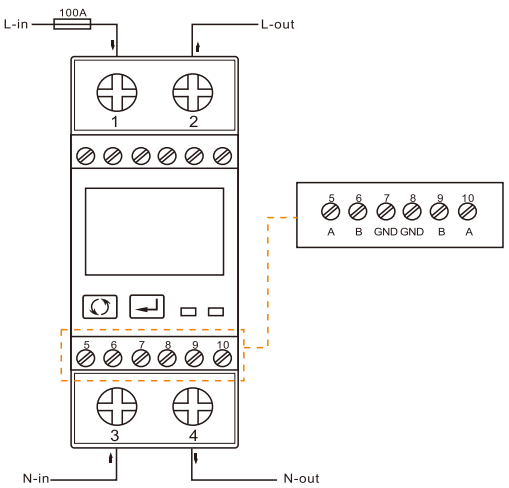
- Operating Temperature: -25°C… + 55°C (3K6)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height	99mm
Width	36mm
Depth	63mm

Wiring



SDM120CTM

- Single phase two wire load operation
- 1/5A CT input, 1 din module compact size
- LCD display with 6 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable via Modbus
- Support 2 pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21/ Class B EN50470-3
- Available with MID certification

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

Voltage & frequency

- Nominal values: 230V L-N ±20%
- Frequency: 50/60Hz

Current

- Starting current Ist: 20mA
- Minimum current Imin: 0.25A
- Reference current Iref(Ib): 5A
- Maximum current Imax: 6A

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 1200, 2400, 4800, 9600bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2
- Modbus Address: 1 to 247 Default: 001

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 1000/100/10/1imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 1000imp/kWh
- Pulse width 2 : 60mS

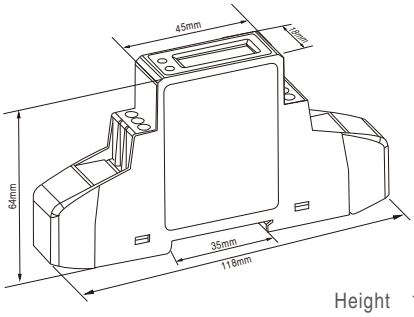
Accuracy

- Active energy: Class B/ Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Environment conditions

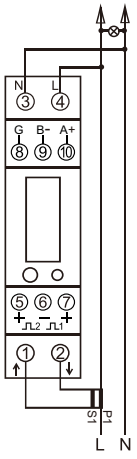
- Operating Temperature: -25°C… + 55°C (3K6)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height 118mm
Width 18mm
Depth 64mm

Wiring



SDM120CTM 40mA/100mA

- Single phase two wire load operation
- 40mA/100mA CT input, 1 din module compact size
- LCD display with 6 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable via Modbus
- Support 2 pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21
- Available with SAA certification

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

Voltage & frequency

- Nominal values: 230V L-N ±20%
- Frequency: 50/60Hz

Current

- CT Primary 1-9999A
- CT Secondary 40mA/100mA

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 1200, 2400, 4800, 9600bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2
- Modbus Address: 1 to 247 Default: 001

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 1000/100/10/1imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 1000imp/kWh
- Pulse width 2 : 60mS

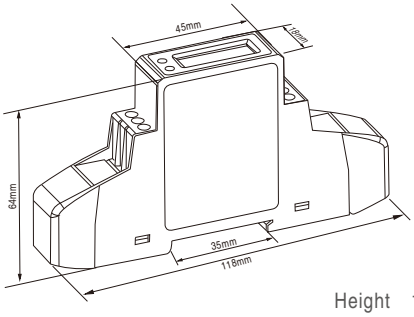
Accuracy

- Active energy: Class B/ Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Environment conditions

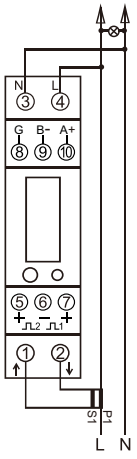
- Operating Temperature: -25°C… + 55°C (3K6)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height 118mm
Width 18mm
Depth 64mm

Wiring



SDM630-Modbus V2/V3

- 3P3W, 3P4W load operation
- Direct Metering up to 100A, 4 din module compact size
- LCD display with 8 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2 Pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21/ Class B EN50470-3
- Available with MID/ETL certification

Specifications

Power Supply

- Power supplied from the voltage circuit
- Nominal measurement voltage ±20%

Voltage & frequency

- Nominal values: 3x230/400V
- Operating voltage: 100 to 276V L-N, 173 to 480V L-L
- Frequency: 50/60Hz

Current

- Starting current Ist: 40mA
- Minimum current Imin: 0.5A
- Reference current Iref(Ib): 10A
- Maximum current Imax: 100A

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 2400, 4800, 9600, 19200, 38400bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2
- Modbus Address: 1 to 247 Default: 001

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 1000/100/10/1 imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 400imp/kWh
- Pulse Width 2: 100mS

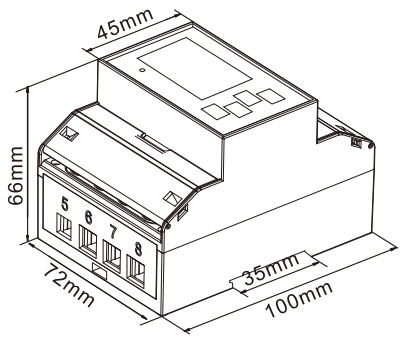
Accuracy

- Active energy: Class B/ Class 1
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Environment conditions

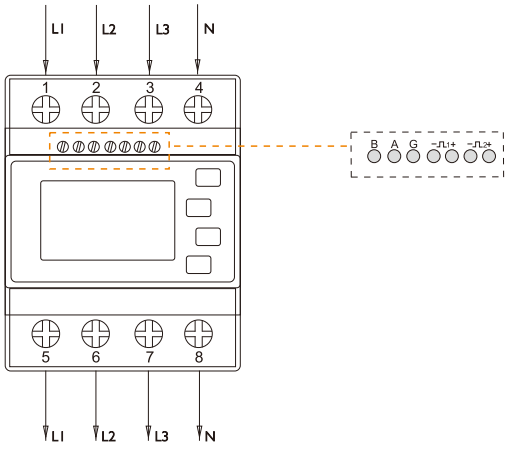
- Operating Temperature: -25°C… + 55°C (3K6) / -40°C…+70°C (3K7)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height	100mm
Width	72mm
Depth	66mm

Wiring



SDM630MCT/ SDM630MCT-ETL

- 3P3W, 3P4W load operation
- 1/5A CT operated, 4 din module compact size
- LCD display with 8 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2 Pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21/ Class B EN50470-3
- Available with MID/ETL certification

Specifications

Aux. Power Supply

- 85 to 275V AC or 120 to 380V DC
- 2.5mm² stranded wire capacity

Voltage & frequency

- Nominal values: 3x230/400V
- Operating voltage: 100 to 276V L-N, 173 to 480V L-L
- Frequency: 50/60Hz

Current

- Starting current Ist: 10mA
- Minimum current Imin: 0.05
- AReference current Iref(Ib): 5A
- Maximum current Imax: 6A

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 2400, 4800, 9600,19200, 38400bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2
- Modbus Address: 1 to 247 Default: 001

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 100/10/1/0.1/0.01/0.001 imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 3200imp/kWh
- Pulse Width 2: 90mS

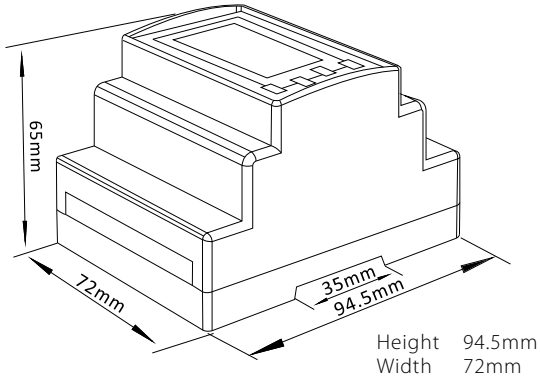
Accuracy

- Active energy: Class B or C/ Class 1 or 0.5S
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Environment conditions

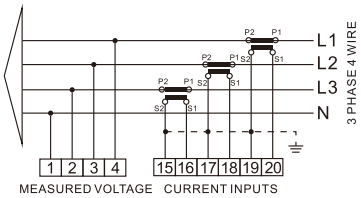
- Operating Temperature: -25°C… + 55°C(3K6) / -40°C…+70°C (3K7)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

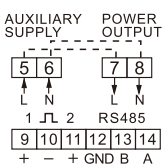
Dimension



Height 94.5mm
Width 72mm
Depth 65mm

Wiring





SDM630MCT 40mA

- 3P3W, 3P4W load operation
- 40mA CT operated, 4 din module compact size
- LCD display with 8 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2 Pulse outputs and RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21
- Available with SAA certification

Specifications

Aux. Power Supply

- 85 to 275V AC or 120 to 380V DC
- 2.5mm² stranded wire capacity

Voltage & frequency

- Nominal values: 3x230/400V
- Operating voltage: 100 to 276V L-N, 173 to 480V L-L
- Frequency: 50/60Hz

Current

- CT Primary 1-9999A
- CT Secondary 40mA

RS485 Modbus RTU

- Port: RS485
- Protocol: Modbus RTU
- Baud rate: 2400, 4800, 9600,19200, 38400bps
- Parity: None, Even, Odd
- Stop Bit: 1 or 2

S0 Pulse output

- Passive optoisolated
- Contact range: 5-27V DC
- Maximum current input: 27mA DC
- Pulse output 1: 100/10/1/0.1/0.01/0.001 imp/kWh (configurable)
  (The measuring unit changes according to the assigned counter(kWh/ kVArh)
- Pulse output 2: 3200imp/kWh
- Pulse Width 2: 90mS

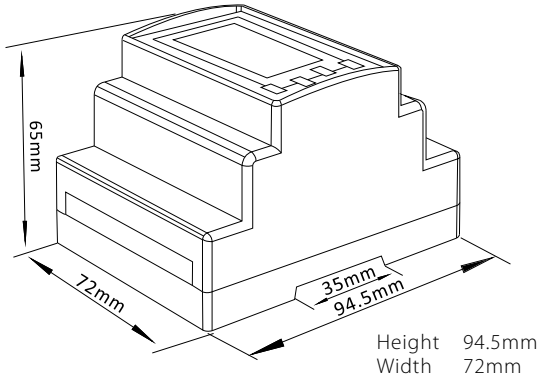
Accuracy

- Active energy: Class B or C/ Class 1 or 0.5S
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

Environment conditions

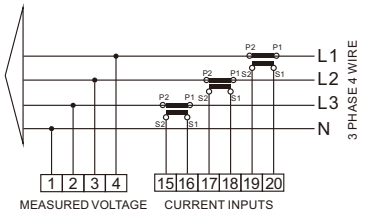
- Operating Temperature: -25°C… + 55°C(3K6) / -40°C…+70°C (3K7)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

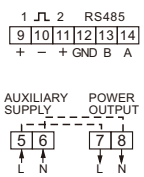
Dimension



Height 94.5mm
Width 72mm
Depth 65mm

Wiring





SDM630MCT-100mA-2

- 3P3W, 3P4W load operation
- 100mA CT operated, 4 din module compact size
- LCD display with 8 digits
- True RMS metering provides accurate measurement
- Multi-parameters measurement (voltage, current, power, frequency, power factor, kWh, etc.)
- Bi-directional measurement (import and export kWh/kVArh)
- RS485 setting configurable by button on the nameplate or via Modbus
- Support 2x RS485 Modbus RTU
- Accuracy Class 1 IEC62053-21

Specifications

Aux. Power Supply

- 85 to 275V AC or 120 to 380V DC
- 2.5mm² stranded wire capacity

RS485 Modbus RTU

- Port: 2x RS485 Ports
- RS485 port 1:
- Baud rate: 2400, 4800, 9600(default), 19200, 38400bps.
- Parity: None(default), Even, Odd
- Stop bits: 1 or 2
- Modbus Address: 1 to 247 Default: 001

- RS485 port 2:
- Baud rate: 2400, 4800, 9600, 19200(default), 38400bps
- Parity: NONE(default)/EVEN/ODD. Default: Non
- Stop bits: 1 or 2
- Modbus Address: 1 to 247 Default: 002

Voltage & frequency

- Nominal values: 3x230/400V
- Operating voltage: 100 to 276V L-N, 173 to 480V L-L
- Frequency: 50/60Hz

Accuracy

- Active energy: Class B or C/ Class 1 or 0.5S
- Reactive energy: Class 2 according to IEC/EN 62053-23
- Voltage/ Current: 0.5%
- Frequency: 0.2%
- Power: 1% of range maximum

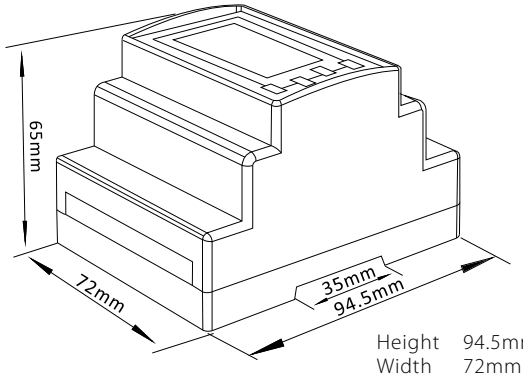
Current

- CT Primary 1-9999A
- CT Secondary 100mA

Environment conditions

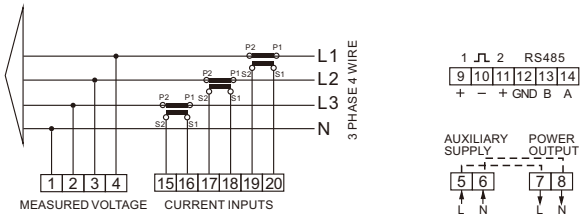
- Operating Temperature: -25°C… + 55°C(3K6) / -40°C…+70°C (3K7)
- Storage Temperature: -40°C…+70°C
- Humidity: ≤95% non-condensing
- Protection degree: IP51 on front, IP 20 on terminals
- Altitude: 2000m

Dimension



Height	94.5mm
Width	72mm
Depth	65mm

Wiring



Accessories

➢ Model Choice

Direct connection type

Product code	Single phase	Three phase	Current Input	Voltage	RS485 Modbus	Certificate
SDM120M	√		45A	230V L-N AC	√	MID
SDM18-M	√		100A	230V L-N AC	√	MID
SDM210-M	√		100A	230V L-N AC	√	MID
SDM230-Modbus	√		100A	230V L-N AC	√	MID/ETL
SDM230-NMI	√		100A	230V L-N AC	√	CE
SDM230-NMI-2	√		100A	230V L-N AC	2xRS485	CE
SDM54-M		√	100A	230V L-N AC	√	MID
SDM630-Modbus		√	100A	100-277V L-N AC	√	MID

CT connection type

Product code	Single phase	Three phase	Current Input	Voltage	RS485 Modbus	Certificate
SDM120CTM	√		1/5A	230V L-N AC	√	MID
SDM120CTM 40mA/100mA	√		40mA/100mA	230V L-N AC	√	MID
SDM630MCT		√	1/5A	100-277V L-N AC	√	MID/ETL
SDM630MCT 40mA		√	40mA	100-277V L-N AC	√	MID
SDM630MCT-100mA-2		√	100mA	100-277V L-N AC	2xRS485	CE

Accessories

<table>
<tr><td>RS485 Cable
  </td><td colspan="3">Length: 10m(default), other length can be customized</td></tr>
<tr><td>Current Transformer</td><td>∅16</td><td>∅24</td><td>∅36</td></tr>
<tr><td rowspan="2">  </td><td>50A-150A</td><td>50-300A</td><td>300-600A</td></tr>
<tr><td colspan="3">Output 5A / 40mA/ 100mA optional</td></tr>
</table>