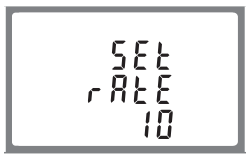
4.6.1 Pulse rate

Use this to set the energy represented by each pulse.
Rate can be set to 1 pulse per
dFt/0.01/0.1/1/10/100 kWh/kVarh.



(It shows 1 pulse = 10kWh/kVarh)

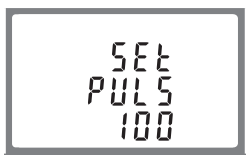
From the set-up menu, use MD/PF/HZ and P buttons to select the Pulse Rate option.

Press E to enter the selection routine. The current setting will flash. When it's dFt (default),it means 2.5Wh/Varh.

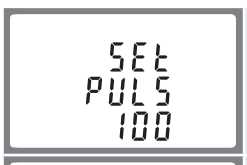
Use MD/PF/HZ and P buttons to choose pulse rate.
On completion of the entry procedure, press E to confirm the setting and press V/A ESC to return to the main set up menu.

4.6.2 Pulse Duration

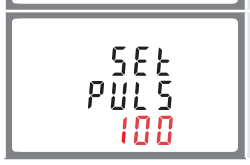
The pulse width can be selected as 200 (non-MID version meters only), 100 (default) or 60ms.



(It shows pulse width of 100ms)



From the set-up menu, use MD/PF/HZ and P buttons to select the Pulse width option.



Press E to enter the selection routine. The current setting will flash.

Use MD/PF/HZ and P buttons to choose pulse width.
On completion of the entry procedure press E to confirm the setting and press V/A ESC to return to the main set up menu.

4.7 Communication

***Not for SDM630-Pulse V2**

There is RS485/Mbus port can be used for communication Modbus RTU protocol. For Modbus RTU, parameters are selected from front panel.

4.7.1 RS485 Address

***For SDM630-MT/-Standard/-Modbus V2 only**

(The range is from 001 to 247)

From the set-up menu, MD/PF/HZ and P buttons to select the address ID.

Press E button to enter the selection routine. The current setting will be flashing.

Use MD/PF/HZ and P buttons to choose Modbus address (001 to 247).

On completion of the entry procedure, press E button to confirm the setting and press V/A ESC button to return the main set-up menu.

4.7.2 Mbus address

***For SDM630-Mbus V2 only**

Primary address: 001 to 250
Use MD/PF/HZ and P buttons to select the address value.

Press E to enter the selection routine. The current setting will flash.

Secondary address:
00 00 00 01 to 99 99 99 99

On completion of the entry procedure, press E to confirm the setting and press V/A ESC to return to the main set up menu.

4.7.3 Baud Rate

From the set-up menu, use MD/PF/HZ and P buttons to select the Baud Rate option.

Press E to enter the selection routine. The current setting will flash.

Use MD/PF/HZ and P buttons to choose Baud rate.

On completion of the entry procedure, press E to confirm the setting and press V/A ESC to return to the main set up menu.

4.7.4 Parity

From the set-up menu, use MD/PF/HZ and P buttons to select the parity option.

Press E to enter the selection routine. The current setting will flash.

Use MD/PF/HZ and P buttons to choose parity (EVEN / ODD / NONE).

On completion of the entry procedure, press E to confirm the setting and press V/A ESC to return to the main set up menu.

4.7.5 Stop bits

From the set-up menu, use MD/PF/HZ and P buttons to select the stop bit option.

Press E to enter the selection routine. The current setting will flash.

Use MD/PF/HZ and P buttons to choose stop bit (2 or 1)

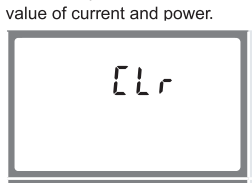
Note: Default is 1, and only when the parity is NONE that the stop bit can be changed to 2.

On completion of the entry procedure, press E to confirm the setting and press V/A ESC to return to the main set up menu.

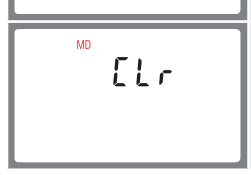
4.8 CLR

***Not for SDM630-Standard V2**

The meter provides a function to reset the maximum demand value of current and power.



From the set-up menu, use MD/PF/HZ and P buttons to select the reset option.



Press E to enter the selection routine. The MD will flash.

Press E to confirm the setting and press V/A ESC to return to the main set up menu.

5.Specifications

5.1 Measured Parameters

The unit can monitor and display the following parameters of a single phase two wire (1p2w), three phase three wire (3p3w) or three phase four wire (3p4w) system.

5.1.1 Voltage and Current

***Not for SDM630-Standard V2**

- Phase to neutral voltages 176 to 276V a.c. (not for 3p3w supplies).
- Voltages between phases 304 to 480V a.c. (3p supplies only).
- Percentage total voltage harmonic distortion (THD%) for each phase to N (not for 3p3w supplies).
- Percentage voltage THD% between phases (three phase supplies only).
- Current THD% for each phase

5.1.2 Power factor and Frequency and Max. Demand

***Not for SDM630-Standard V2**

- Frequency in Hz
- Instantaneous power:
- Power 0 to 99999 W
- Reactive power 0 to 99999 Var
- Volt-amps 0 to 99999 VA
- Maximum demanded power since last Demand reset Power factor
- Maximum neutral demand current, since the last Demand reset (for three phase supplies only)

5.1.3 Energy Measurements

• Import active energy	0 to 999999.99 kWh
• Export reactive energy	0 to 999999.99 kVarh
• Import active energy	0 to 999999.99 kWh
• Export reactive energy	0 to 999999.99 kVarh
• Total active energy	0 to 999999.99 kWh
• Total reactive energy	0 to 999999.99 kVarh

5.2 Measured Inputs

Voltage inputs through 4-way fixed connector with 25mm² stranded wire capacity. single phase two wire (1p2w), three phase three wire (3p3w) or three phase four wire (3p4w) unbalanced. Line frequency measured from L1 voltage or L3 voltage.

5.3 Interfaces for External Monitoring

Three interfaces are provided:

- RS485/Mbus communication channel that can be programmed via protocol remotely. (not for SDM630-Pulse V2)
- Pulse output (pulse1) indicating real-time measured energy. (configurable)
- Pulse output (pulse2) 400imp/kWh (not configurable)

The Modbus/Mbus configuration (baud rate etc) and the pulse relay output assignments (kW/kVarh, import/export etc) are configured through the set-up screens.

5.3.1 Pulse Output

The pulse output can be set to generate pulses to represent kWh or kVarh.

Rate can be set to generate 1 pulse per:

dFt (default) = 2.5 Wh/Varh
0.01 = 10 Wh/Varh
0.1 = 100 Wh/Varh
1 = 1 kWh/kVarh
10 = 10 kWh/kVarh
100 = 100 kWh/kVarh

Pulse width 200/100/60 ms.
Pulse output 2 is non-configurable.It is fixed up with active kWh. Its constant is 400imp/kWh.

5.3.2 RS485/Mbus Output for Modbus RTU

***For SDM630-MT/-Modbus/-Standard V2 only**

For Modbus RTU, the following RS485 communication parameters can be configured from the set-up menu:

Baud rate 2400, 4800, 9600, 19200, 38400
Parity none / odd / even
Stop bits 1 or 2
RS485 network address nnn – 3-digit number, 001 to 247

***For SDM630-Mbus V2 only**

For Mbus, the following communication parameters can be configured from the set-up menu:

Baud rate 300,600,2400, 4800, 9600
Parity none/ odd / even
Stop bits 1 or 2
Mbus network primary address nnn – 3-digit number,001 to 250
Mbus network secondary address 00 00 00 00 to 99 99 99 99

***If the Modbus/Mbus protocol document is required, please contact us for it.**

5.4 Accuracy

• Voltage	0.5% of range maximum
• Current	0.5% of nominal
• Frequency	0.2% of mid-frequency
• Power factor	1% of unity (0.01)
• Active power (W)	±1% of range maximum
• Reactive power (VAr)	±1% of range maximum
• Apparent power (VA)	±1% of range maximum
• Active energy (Wh)	Class 1 IEC 62053-21 Class B EN50470-3
• Reactive energy (VARh)	±1% of range maximum
• Response time to step input	1s, typical, to >99% of final reading, at 50 Hz.

5.5 Reference Conditions of Influence Quantities

Influence Quantities are variables that affect measurement errors to a minor degree. Accuracy is verified under nominal value (within the specified tolerance) of these conditions.

• Ambient temperature	23°C ± 2°C
• Input frequency	50 Hz(MID) 50 or 60Hz ±2%(non-MID)
• Input waveform	Sinusoidal (distortion factor < 0.005)
• Magnetic field of external origin	Terrestrial flux

5.6 Environment

• Operating temperature	−25°C to +55°C*
• Storage temperature	−40°C to +70°C*
• Relative humidity	0 to 95%, non-condensing
• Altitude	Up to 2000m
• Warm up time	1 minute
• Vibration	10Hz to 50Hz, IEC 60068-2-6, 2g
• Shock	30g in 3 planes

*** Maximum operating and storage temperatures are in the context of typical daily and seasonal variation.**

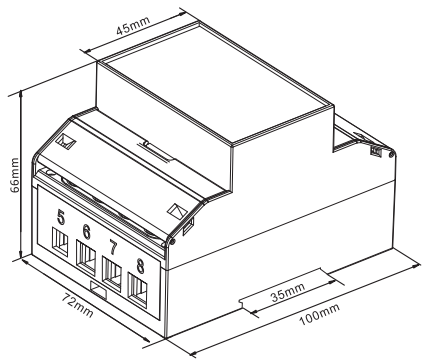
5.7 Mechanics

• DIN rail dimensions	72 x 100 mm (WxH) per DIN 43880
• Mounting	DIN rail (DIN 43880)
• Sealing	IP51 (indoor)
• Material	Self-extinguishing Ul94 V-0

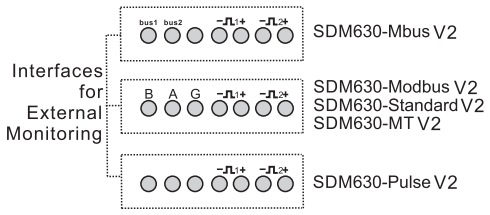
5.8 Declaration of Conformity(for the MID approved version meter only)

We Jiaxing Eastron Electronic Instruments Co.,Ltd.
Declare under our sole responsibility as the manufacturer that the poly phase multifuntion electrical meter "SDM630 100A V2 series" correspond to the production model described in the EC-type examination certificate and to the requirements of the Directive 2014/32/EU EC type examination certificate number 0120/SGS0151.
Identification number of the NB0120

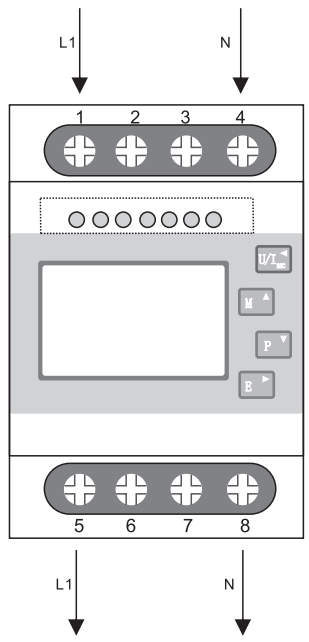
6.Dimensions



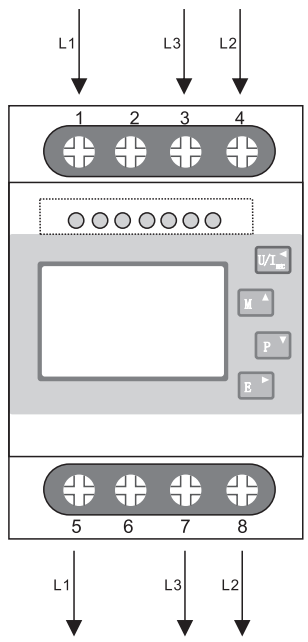
7.Wiring diagram



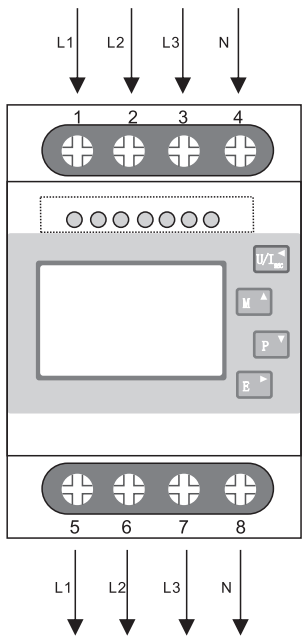
7.1 single phase two wires



7.2 three phase three wires



7.3 three phase four wires



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CE RoHS MID