

34	T3 04:00:03	Time segment 3 Format:Hour:Minute,Tariff Example:04:00 Tariff 3
35	T4 05:00:04	Time segment 4 Format:Hour:Minute,Tariff Example:05:00 Tariff 4
36	T5 07:25:01	Time segment 5 Format:Hour:Minute,Tariff Example:07:25 Tariff 1
37	T6 08:11:02	Time segment 6 Format:Hour:Minute,Tariff Example:08:11 Tariff 2
38	T7 15:40:03	Time segment 7 Format:Hour:Minute,Tariff Example:15:40 Tariff 3
39	T8 17:00:04	Time segment 8 Format:Hour:Minute,Tariff Example:17:00 Tariff 4
40	T9 19:00:01	Time segment 9 Format:Hour:Minute,Tariff Example:19:00 Tariff 1
41	T0 23:00:02	Time segment 10 Format:Hour:Minute,Tariff Example:23:00 Tariff 2

4	Prty N	Parity Default: None Option: None, Even, Odd
4-1	Prty N	Press the "Enter" button, the red part flash. Press the "Scroll" button to change the option. After choose the new Parity, the user need pressing the "Enter" button to confirm the setting.
5	PLS out kWh	Pulse Output 1 Default: kWh Option: kWh / kVarh / Imp. kWh / Exp. kWh / Imp. kVarh / Exp. kVarh
5-1	PLS out kWh	Press the "Enter" button, the red part flash. Press the "Scroll" button to change the option. After choose the new Pulse output option, the user need pressing the "Enter" button to confirm the setting.
6	PLS cSt	Pulse Constant Default: 1000 Option: 1000 / 100 / 10 / 1
6-1	cSt 1000	Press the "Enter" button, the red part flash. Press the "Scroll" button to change the option. After choose the new Pulse constant option, the user need pressing the "Enter" button to confirm the setting.
7	PLS t	Pulse duration Default: 100mS Option: 200 / 100 / 60ms
7-1	PLS t 200	Press the "Enter" button, the red part flash. Press the "Scroll" button to change the option. After choose the new Pulse duration option, the user need pressing the "Enter" button to confirm the setting.
8	dit SEt	Demand Integration Time Default: 15 minutes Option: 0 / 5 / 10 / 15 / 30 / 60
8-1	dit 15	Press the "Enter" button, the red part flash. Press the "Scroll" button to change the option. After choose the new DIT option, the user need pressing the "Enter" button to confirm the setting.
9	ScRL t	Automatic Scroll Time Interval Default: 0 S Option: 0 - 30S
9-1	t 30 S	Press the "Enter" button, the red part flash. Press the "Scroll" button to change the option. After choose the new "Scrl" option, the user needs to press the "Enter" button to confirm the setting.
10	SEt PRS	Password set-up Default: 1000
10-1	PRs 1000	Press the "Enter" button, the red part flash. Press the "Scroll" button to change the option. After choose the new "Scrl" option, the user needs to press the "Enter" button to confirm the setting.
11	SEt dAtE	Date set-up Press the "Enter" button to enter the date set-up page.
11-1	0 10 100	Press the "Scroll" button to change the value. After choose the new value, the user need pressing the "Enter" button to confirm the setting. Date format: Day, Month, Year
12	SEt rBt	Time set-up Press the "Enter" button to enter the time set-up page
12-1	00:04:33	Press the "Scroll" button to change the value. After choose the new value, the user need pressing the "Enter" button to confirm the setting. Time format: Hour:Minute:Second

2.4 Set-up Mode

To get into Set-up Mode, the user needs to press the "Enter" button,  for 3 seconds.

	Good	The setting is done correctly
	Err	The entering information is wrong. The operation fails.
1	PRs0000	Password To get into Set-up mode, it asks a password confirmation. Default password: 1000
2	AdD 00 1	Address For Modbus: Default ID is 001 Range: 001-247 For Mbus: Primary Address ID Default ID is 001 Range: 001-250
2-1	AdD 00 1	Press the "Enter" button, the first digit flash. Press the "Scroll" button to change the value. After choose the new address value, the user need pressing the "Enter" button to confirm the setting
2-2	1 dL 0000	High bit of MBUS Secondary address (Default 00 00)
2-2	1 dL 000 1	Low bit of MBUS Secondary address (Default 00 01) Example: if the Secondary address high bit is 0000, low bit is 000 1, that means the integral Secondary address is 00 00 00 01
2-3		Press the "Enter" button, the red part flash. Press the "Scroll" button to change the option. After choose the new value, the user need pressing the "Enter" button to confirm the setting.
3	bd 9600	Baud rate for Modbus Default value: 2400bps Range: 1200, 2400, 4800, 9600bps. Baud rate for Mbus: Default value: 2400bps Range: 300, 600, 1200, 2400, 4800, 9600bps.
3-1	bd 9600	Press the "Enter" button, the red digit flash. Press the "Scroll" button to change the value. After choose the new baud rate, the user need pressing the "Enter" button to confirm the setting.

5. Specifications

3.1 Accuracy

Voltage	0.5% of range maximum
Current	0.5% of nominal
Frequency	1% of mid-frequency
Active power	1% of range maximum
Reactive power	1% of range maximum
Apparent power	1% of range maximum
Class 1 IEC62053-21	
Class B EN50470-3	
Reactive energy	1% of range maximum

3.2 General Specifications

Voltage AC (Un)	230V
Voltage Range	176-276V AC
Base Current (Ib/Iref)	5A
Max. Current (Imax)	100A
Mini Current (Imin)	0.25A
Starting current	0.4% of Ib/Iref
Power consumption	<2W/10VA
Frequency	50/60Hz (for MID version) 50/60Hz±2% (for non-MID version)
AC voltage withstand	6KV-1.2uS wavform
Over current withstand	30Imax for 0.01s
Pulse 1 output rate	configurable, default 1000kWh
Pulse 2 output rate	non-configurable, 1000kWh
Display	LCD with backlight
Max. Reading	99999.99kWh

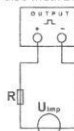
3.3 Environment

Operating temperature	-25°C to +55°C
Storage/transportation temperature	-40°C to +70°C
Reference temperature	23°C ±2°C
Relative humidity	0 to 95%, non-condensing
Installation category	CAT II
Mechanical Environment	M1
Electromagnetic environment	E2
Degree of pollution	2

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

3.4 Pulse Output

The pulse output 1 can be set to generate pulses to represent total kWh, total kVarh, import kWh, export kWh, import kVarh, export kVarh.
Constant can be set to 1000/100/10/1 impulse per kWh or kVarh. Pulse width 200/100/60mS.



ATTENTION: Pulse output must be fed as shown in the wiring diagram below. Scrupulously respect polarities and the connection mode. Opto-coupler with potential-free SPST-NO Contact. Contact range: 5-27VDC Max. current Input: 27mA DC

3.5 RS485 output for Modbus RTU

The meter provides a RS485 port for remote communication. Modbus RTU is the protocol applied. For Modbus RTU, the following RS485 communication parameters can be configured from the Set-up menu.
Baud rate: 1200, 2400, 4800, 9600
Parity: NONE/EVEN/ODD
Stop bits: 1 or 2
Modbus Address: 1 to 247

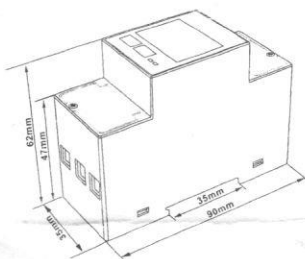
3.6 Mbus

The meter provides a M-bus Port for remote communication, the meter adopts EN1434-3 Mbus communication protocol. The communication parameters can be configured via the SET-UP mode
Baudrate: 300, 600, 1200, 2400, 4800, 9600
Parity: None/Odd/Even
Stop bit: 1 or 2
Primary address: 001-250
Secondary address: 00000001-99999999

3.7 Mechanics

Din rail dimensions	35x92x65 (WxHxD) Per DIN 43880
Mounting	DIN rail 35mm
Sealing	IP51 (indoor)
Material	self-extinguishing UL94V-1

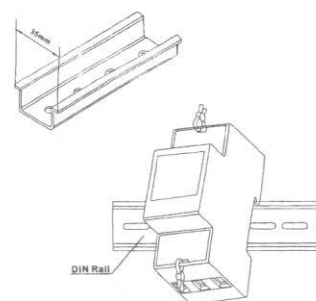
4. Dimensions



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

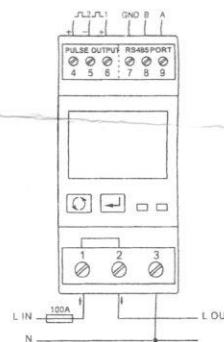
We Jiaying Eastron Electronic Instruments Co., Ltd. Declare under our sole responsibility as the manufacturer that the poly phase multifunction electrical energy meter "SDM220 series" correspond to the production model described in the EC-type examination certificate and to the requirements of the Directive 2004/22/EC EC type examination certificate number 0120/SGS0172. Identification number of the NB0120

6. Installation and sealing

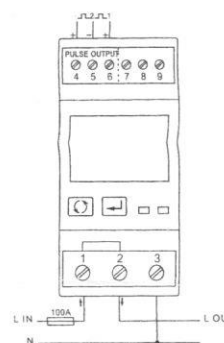


6. Wiring diagram

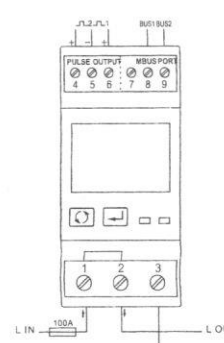
6.1 SDM220-Modbus / MT



6.2 SDM220-Pulse



6.3 SDM220-Mbus



Jiaying Eastron Electronic Instruments Co., Ltd.
Building 2, No 1369, Chengnan Rd.
Jiaying, Zhejiang, CHINA
Tel: 86 573 8369881/8369882
Tel: 86 573 8369883
Email: sales@eastrongroup.com
Web: www.eastrongroup.com

