SDM630-TCP

Three Phase Multifunctional Energy Meter



User manual

2025 V1.0

Statements

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Version History

Version	Date	Changes
1.0	2025-01-17	Initial Issue

Risk Information

Information for Your Own Safety

This manual does not contain all of the safety measures operating the equipment (module, device) for different conditions and requirements. However, it does contain information which you must know for your own safety and to avoid damages. These information are highlighted by a warning triangle indicating the degree of potential danger.



Warning

This means that failure to observe the instruction can result in death, serious injury or considerable material damage.



Caution

This means hazard of electric shock and failure to take the necessary safety precautions will result in death, serious injury or considerable material damage.

Qualified personnel

Operation of the equipment (module, device) described in this manual may only be performed by qualified personnel. Qualified personnel in this manual means person who are authorized to commission, start up, ground and label devices, systems and circuits according to safety and Regulatory standards.

Proper handling

The prerequisites for perfect, reliable operation of the product are proper transport, proper storage, installation and proper operation and maintenance. When operating electrical equipment, parts of this equipment automatically carry dangerous voltages. Improper handling can therefore result in serious injuries or material damage.

- ✧ Use only insulating tools.
- ✧ Do not connect while circuit is live (hot).
- ✧ Place the meter only in dry surroundings.
- ✧ Do not mount the meter in an explosive area or expose the meter to dust, mildew and insects.
- ✧ Make sure the wires are suitable for the maximum current of this meter.
- ✧ Make sure the AC wires are connected correctly before activating the current/voltage to the meter.
- ✧ Do not touch the meter connecting clamps directly with metal, blank wire and your bare hands as you may get electrical shock.
- ✧ Make sure the protection cover is placed after installation.
- ✧ Installation, maintenance and reparation should only be done by qualified personnel.
- ✧ Never break the seals and open the front cover as this might influence the function of the meter, and will cause no warranty.
- ✧ Do not drop, or allow strong physical impact on the meter as the high precisely components inside may be damaged.
- ✧ Designed to be mounted inside of switchboards or cabinet on DIN RAIL
- ✧ This device must have a suitable sized Circuit Breaker feeding the Multi Function Energy Meter so it does

not exceed the maximum rated current.

- ✧ The supply wiring of this device shall be suitable sized cable to match the installed circuit breaker.
- ✧ A Disconnection Device (Circuit Breaker) should be installed close to the Multi Function Energy Meter.
- ✧ The Disconnection Device shall be marked as the Disconnection Device for the Multi Function Energy Meter

Disclaimer

We have checked the contents of this publication and every effort has been made to ensure that the descriptions are as accurate as possible.

However, deviations from the description cannot be completely ruled out, so that no liability can be accepted for any errors contained in the information given. The data in this manual is checked regularly and the necessary corrections are included in subsequent editions. We are grateful for any improvements that you suggest.

Chapter 1. Introduction

1.1 Product introduction

SDM630-TCP is a new multi-function energy meter designed by EASTRON. The meter can work with 1p2w, 3p3w, 3p4w electricity grid. It provides all important electrical parameters: voltage, current, power, PF, THD, frequency, demand, energy etc. The meter supports Max.100A direct connection, saving the cost and avoiding the trouble to connect external CTs, giving the unit a cost-effective and easy operation.

The meter SDM630-TCP is equipped with a Ethernet communication port and MODBUS-TCP protocol is adopted for remote reading and programming. The meter has a big back-lighted LCD showing data and uses 4 touch keypads in front for data checking and programming.

1.2 Product characteristics

- 100A direct load
- Multi-parameters measurement
- Plug-in solution
- LCD with white backlit, adjustable backlit time

Measurements:

- Phase voltage: V1, V2, V3
- Line voltage: V1-2, V2-3, V3-1
- Current: I1, I2, I3
- Active power: P1, P2, P3, P_total (total active power)
- Reactive power: Q1, Q2, Q3, Q_total (total reactive power)
- Apparent power: S1, S2, S3, S_Total (total apparent power)
- Frequency: Hz
- Power factor: PF
- Active energy: Ep_imp (import active energy), Ep_exp (export active energy), Ep_total (total active energy)
- Reactive energy: Eq_imp (import reactive energy), Eq_exp (export reactive energy), Eq_total (total reactive energy)
- THD-I and THD-U
- Maximum demand: MD
- CO2 emission

Setup:

- Ethernet setup
- Demand interval time
- Backlit time
- Supply system 1p2w, 3p3w,3p4w
- CO2 rate
- Reset
- Password modification

1.3 Application

SDM630-TCP supports Modbus-TCP for easy integration with other I/O and SCADA system.

Chapter 2. Technical Parameters

2.1 Technical parameters

Voltage AC (Un)	3*230/400VAC
Voltage range	100 - 276V a.c. (not for 3p3w supplies)
Voltage between phase	172 to 480V a.c (3p supplies only)
Current input	*Ib/*Iref: 10A (Ib: Basic current; *Iref: Reference current)
Over current withstand	30Imax for 0.01s
Maximum current (Imax)	100A
Frequency rating value	50/60Hz
Frequency range	45 - 65Hz
AC voltage withstand	4KV/1min
Impulse voltage withstand	6kV – 1.2μS waveform
Power consumption	≤ 2W/10VA
Display	LCD with white backlit
Max. reading	9999999.9 kWh/kVArh

2.2 Accuracy

Voltage	0.5% of range maximum
Current	0.5% of normal
Frequency	0.2% of mid frequency
Power factor	1% of unity(0.01)
Active Power	±1% of range maximum
Reactive power	±2% of range maximum
Apparent power	±1% of range maximum
Active energy	Class1 IEC 62053-21/ Class 0.5S IEC62053-22(non-MID) Class B or C EN50470-3:2022(MID)
Reactive energy	Class2 IEC 62053-23

2.3 Ethernet Modbus TCP

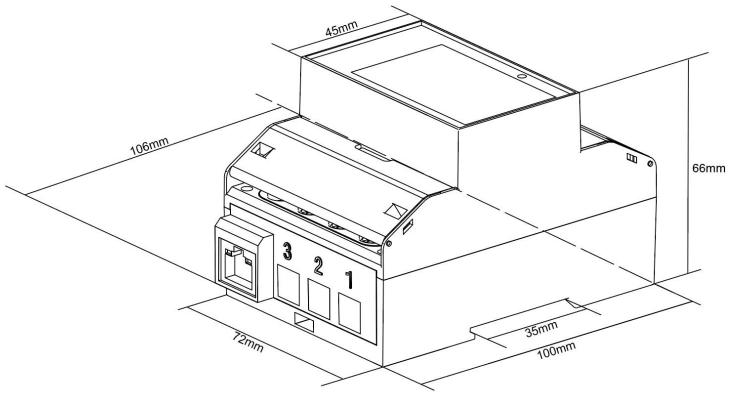
For Ethernet Modbus TCP, the following communication parameters can be configured from the Set-up menu:

Type	Ethernet
Protocol	Modbus-TCP
Modbus address range	1-247
IP	192.168.1.200 (default)
Port	502
MASK	255.255.255.0
Gateway	192.168.1.1
DHCP	Off (default)

2.4 Performance criteria

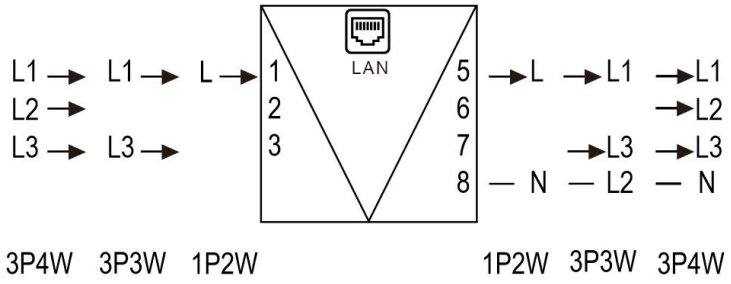
Operation humidity	≤90%(non-condensing)
Storage humidity	≤95%(non-condensing)
Operating temperature	-40℃~+70℃
Storage temperature	-40℃~+80℃
International standard	IEC62053-21
Installation category	CATIII
Protection against penetration of dust and water	front panel IP51 (indoor)
Insulating encased meter of protective class	II
Altitude	≤2000m

2.5 Dimensions



Height (including Ethernet Port): 106mm
Height (excluding Ethernet Port): 100mm
Width: 72mm
Depth: 66mm

2.6 Wiring diagram

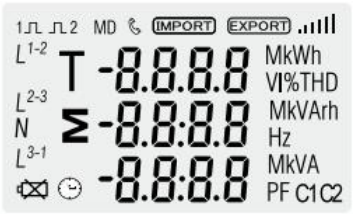


Wiring Guide

Terminal ①②③④ ⑤⑥⑦⑧	Measurement Connection	Screw Connection	Diameter 5.0mm*PH2 
	Strip Length	14-15mm	
	Screw	M5	
	Rigid/supple	4-25mm²	
	Tightening torque	2.5Nm	
	Model	PZ2	

Chapter 3. Operation

3.1 Installation display

	The first screen lights up all display segments and can be used as a display check.
	The second screen indicates the firmware installed in the unit. Note： the actual display might be different with the left on here.
	Program number
	The interface performs a self-test and indicates the result if the test passes.

3.2 Button functions:

Button	Short click		Long press (3s)	
	Display mode	Setup mode	Display mode	Setup mode
	V1 V2 V3 V1-2 V2-3 V3-1 I1 I2 I3 V %THD I %THD	Return to previous menu		
	Hz PF PF1 PF2 PF3 MD of I1 I2 I3 MD of Power	Previous page or increase value	Address IP-High address IP-Low address Software version CRC Full Screen Display	
	P1 P2 P3 Q1 Q2 Q3 S1 S2 S3 P-t Q-t S-t	Next page or decrease value		
	Active E-t Reactive E-t Imp Active E Exp Active E Imp Reactive E Exp Reactive E CO2 emission	Move to right side	Get into Setup mode	Confirm setting

3.3 Measurements

3.3.1 Voltage and current

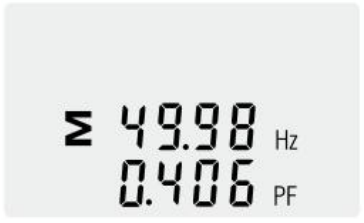
Each successive pressing of the  button selects a new range:

	Phase to neutral voltage *Not available under 3P3W
	Phase to phase voltage *Not available under 1P2W

	Current on each phase
	Phase to neutral voltage THD% *Phase to phase voltage THD% showed under 3P3W
	Phase to neutral current THD%

3.3.2 Frequency, power factor and demand

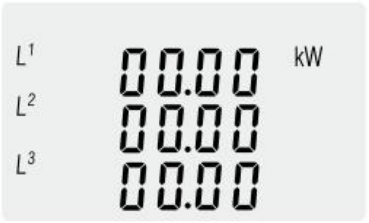
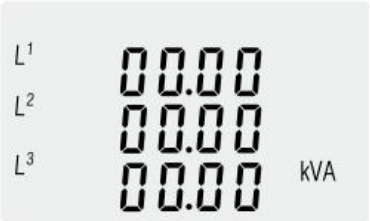
Each successive pressing of the  button selects a new range:

	Frequency and Power Factor (total)
	Power Factor of each phase *Not available under 3P3W & 1P2W
	Maximum current demand on each phase

	Maximum total power demand

3.3.3 Power

Each successive pressing of the  button select a new range:

	Instantaneous Active Power in kW
	Instantaneous Reactive Power in kVAr
	Instantaneous Volt-amps in kVA
	Total W, VArh, VA

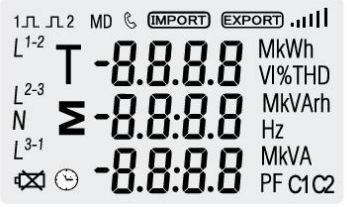
3.3.4 Energy

Each successive pressing of the  button shows following measurements:

	Total active energy in kWh
	Total reactive energy in kVArh
	Imported active energy in kWh
	Exported active energy in kWh
	Imported reactive energy in kVArh
	Exported reactive energy in kVArh
	Carbon Emission (unit: kg)

3.3.5 Auxiliary information

Long press the button  to enter into the auxiliary information interface. Short press the button  and  to select the previous interface or the next interface.

	Meter address
	IP-High address 192.168(default)
	IP-Low address 001.200(default)
	Software version
	CRC value
	Full Screen

3.4 Setup mode

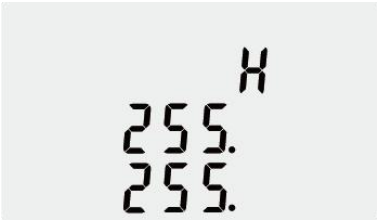
The meter's settable parameters are password protected. By long pressing the 4th button "E", the user can get into the setup mode.

3.4.1 Password Validation	
	Press button M and P to enter password. Long press button E for password confirmation. If the password is wrong, the display will show "Err". If the password is correct, the unit will show the setup menu. Password: default 1000
3.4.2 Communication Address	
	Communication address setup Long press E to enter the setup interface Address range 001~247
	Communication address setup Long press button E to enter the setup mode.
	Press button M and P to set the addresses. Long press button E to confirm. Address range：001 ~ 247, default 001.
3.4.3 Demand Interval Time setup	
	Long press button E to enter the setup.

	Press button M and P to set the demand period value. Long press button E to confirm. Option: 0,5, 8, 10, 15, 20, 30, 60(default) Unit: min.
3.4.4 Backlit Power Time Setup	
	Long press button E to enter the setup.
	Press button M and P to set the value. Long press button E to confirm. Option: ON, OFF, 5, 10, 30, 60(default), 120 mins ON means backlit always on, OFF means backlit always off.
3.4.5 System Type Setup	
	Long press button E to enter the setup.
	Press button M and P to setup the supply system. Option: 3P4W, 3P3W, 1P2W or 1P3W. Long press button E to confirm. Option: 3P4W(default), 3P3W, 1P2W.
3.4.6 Password Modification Setup	
	Long press button E to enter the setup mode.

	Press button M and P to enter the new password. Long press button E to confirm. Range：0000~9999, default 1000.
3.4.7 Ethernet Information setup	
3.4.7.1 DHCP Function setup	
	Long press button E to enter the setup mode of TCP IP information.
	Press button M and P to choose DHCP on or off. Default: off * Once turn on the DHCP, all other TCP parameters can only be checked, not able to be configured.
3.4.7.2 TCP IP Address Setup	
	Long press button E to set IP address.
	Press button M and P to choose IP-High address. Long press button E to confirm the setting. IP-High 192.168 (default)
	Press button M and P to choose IP-Low address. Long press button E to confirm the setting. IP-Low 001.200 (default)

3.4.7.3 Subnet Mask Address Setup

	Long press button E to enter the setup mode.
	Press button M and P to choose subnet mask-High. Long press button E to confirm the setting. Subnet mask-High 255.255 (default)
	Press button M and P to choose subnet mask-Low. Long press button E to confirm the setting. Subnet mask-Low 255.0 (default)

3.4.7.4 TCP Gateway Address Setup

	Long press button E to enter the setup mode of IP address of TCP gateway
	Press button M and P to choose TCP gateway address - High. Long press button E to confirm the setting. TCP gateway address - High: 192.168 (default)
	Press button M and P to choose TCP gateway address - Low. Long press button E to confirm the setting. TCP gateway address - Low: 001.001 (default)

3.4.7.5 TCP IP Port Setup

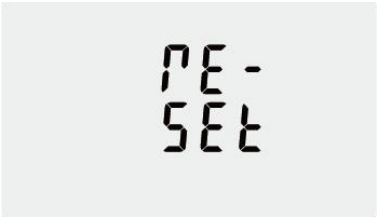
	Long press button E to enter the setup mode of TCP IP port
	Press button M and P to choose TCP IP port. Long press button E to confirm the setting. TCP IP port: 502(default)

3.4.8 CO2 Setup

	Long press button E to enter the CO2 factor mode.
	Press button M and P to set the CO2 rate. Long press button E to confirm. CO2 rate: 0.5703(default)

3.4.9 Reset

This function allows user to reset the demand information.

	Long press button E to enter the reset interface.
	When the current 'dmd' flashing, long press E to confirm the reset of demand information.

Chapter 4. Declaration of Conformity (For MID meter only)

We Zhejiang Eastron Electronic Co., Ltd. Declares under our sole responsibility as the manufacturer that the three phase multi-function electrical energy meter SDM630-TCP correspond to the production model described in the EU-type examination certificate and the requirements of the Directive 2014/32/EU.
Type examination certificate number MID T 12801.
Identification number of the NB0122.

Chapter 5. Communication Protocol

5.1 Input register

Function code	Description
04	Read Input Register

Input registers are used to indicate the present values of the measured and calculated electrical quantities. Each parameter is held in two consecutive 16 big register. The following table details the 3X register address, and the values of the the address bytes within the message. A (*) in the column indicated the parameter is valid for the particular wiring system, Any parameter with a cross (X) will return the value zero. Each parameter is held in the 3X registers. Modbus Protocol function code 04 is used to access all parameters.
For example, to request: Amps 1 Start address = 0006
No.of registers = 0002
Amps 2 Start address = 0008
No. Of register = 0002
Each request for data must be restricted to 30 parameters or less. Exceeding the 30 parameter limit will cause a Modbus Protocol exception code to be returned.

Address (Register)	Input Register Parameter				Start Address Hex		3 Ø	3 Ø	1 Ø
	Description	Length	Data format	Units	Hi Byte	Lo Byte	4 W	3 W	2 W
30001	Phase 1 line to neutral volts.	4	Float	V	00	00	√	X	√
30003	Phase 2 line to neutral volts.	4	Float	V	00	02	√	X	X
30005	Phase 3 line to neutral volts.	4	Float	V	00	04	√	X	X
30007	Phase 1 current.	4	Float	A	00	06	√	√	√
30009	Phase 2 current.	4	Float	A	00	08	√	√	X
30011	Phase 3 current.	4	Float	A	00	0A	√	√	X
30013	Phase 1 power.	4	Float	W	00	0C	√	X	√
30015	Phase 2 power.	4	Float	W	00	0E	√	X	X
30017	Phase 3 power.	4	Float	W	00	10	√	X	X
30019	Phase 1 volt amps.	4	Float	VA	00	12	√	X	√
30021	Phase 2 volt amps.	4	Float	VA	00	14	√	X	X
30023	Phase 3 volt amps.	4	Float	VA	00	16	√	X	X
30025	Phase 1 volt amps reactive.	4	Float	VAr	00	18	√	X	√
30027	Phase 2 volt amps reactive.	4	Float	VAr	00	1A	√	X	X
30029	Phase 3 volt amps reactive.	4	Float	VAr	00	1C	√	X	X
30031	Phase 1 power factor (1).	4	Float	None	00	1E	√	X	√
30033	Phase 2 power factor (1).	4	Float	None	00	20	√	X	X
30035	Phase 3 power factor (1).	4	Float	None	00	22	√	X	X
30037	Phase 1 phase angle.	4	Float	Degrees	00	24	√	X	√

30039	Phase 2 phase angle.	4	Float	Degrees	00	26	√	X	X
30041	Phase 3 phase angle.	4	Float	Degrees	00	28	√	X	X
30043	Average line to neutral volts.	4	Float	V	00	2A	√	X	X
30047	Average line current.	4	Float	A	00	2E	√	√	√
30049	Sum of line currents.	4	Float	A	00	30	√	√	√
30053	Total system power.	4	Float	W	00	34	√	√	√
30057	Total system volt amps.	4	Float	VA	00	38	√	√	√
30061	Total system VAr.	4	Float	VAr	00	3C	√	√	√
30063	Total system power factor (1).	4	Float	None	00	3E	√	√	√
30067	Total system phase angle.	4	Float	Degrees	00	42	√	√	√
30071	Frequency of supply voltages.	4	Float	Hz	00	46	√	√	√
30073	Import Wh since last reset (2).	4	Float	kWh	00	48	√	√	√
30075	Export Wh since last reset (2).	4	Float	kWH	00	4A	√	√	√
30077	Import VArh since last reset (2).	4	Float	kVArh	00	4C	√	√	√
30079	Export VArh since last reset (2).	4	Float	kVArh	00	4E	√	√	√
30081	VAh since last reset (2).	4	Float	kVAh	00	50	√	√	√
30083	Ah since last reset(3).	4	Float	Ah	00	52	√	√	√
30085	Total system power demand (4).	4	Float	W	00	54	√	√	√
30087	Maximum total system power demand(4).	4	Float	W	00	56	√	√	√
30101	Total system VA demand.	4	Float	VA	00	64	√	√	√
30103	Maximum total system VA demand.	4	Float	VA	00	66	√	√	√
30201	Line 1 to Line 2 volts.	4	Float	V	00	C8	√	√	X
30203	Line 2 to Line 3 volts.	4	Float	V	00	CA	√	√	X
30205	Line 3 to Line 1 volts.	4	Float	V	00	CC	√	√	X
30207	Average line to line volts.	4	Float	V	00	CE	√	√	X
30255	Total system power factor (5).	4	Float	Degrees	00	FE	√	√	√
30259	Phase 1 current demand.	4	Float	A	01	02	√	√	√
30261	Phase 2 current demand.	4	Float	A	01	04	√	√	X
30263	Phase 3 current demand.	4	Float	A	01	06	√	√	X
30265	Maximum phase 1 current demand.	4	Float	A	01	08	√	√	√
30267	Maximum phase 2 current demand.	4	Float	A	01	0A	√	√	X
30269	Maximum phase 3 current demand.	4	Float	A	01	0C	√	√	X
30343	Total kwh	4	Float	kWh	01	56	√	√	√
30345	Total kvarh	4	Float	kVArh	01	58	√	√	√
30347	L1 import kwh	4	Float	kWh	01	5A	√	√	√
30349	L2 import kwh	4	Float	kWh	01	5C	√	√	X
30351	L3 import kWh	4	Float	kWh	01	5E	√	√	X
30353	L1 export kWh	4	Float	kWh	01	60	√	√	√
30355	L2 export kwh	4	Float	kWh	01	62	√	√	X
30357	L3 export kWh	4	Float	kWh	01	64	√	√	X
30359	L1 total kwh	4	Float	kWh	01	66	√	√	√
30361	L2 total kWh	4	Float	kWh	01	68	√	√	X
30363	L3 total kwh	4	Float	kWh	01	6A	√	√	X
30365	L1 import kvarh	4	Float	kVArh	01	6C	√	√	√
30367	L2 import kvarh	4	Float	kVArh	01	6E	√	√	X
30369	L3 import kvarh	4	Float	kVArh	01	70	√	√	X
30371	L1 export kvarh	4	Float	kVArh	01	72	√	√	√
30373	L2 export kvarh	4	Float	kVArh	01	74	√	√	X
30375	L3 export kvarh	4	Float	kVArh	01	76	√	√	X
30377	L1 total kvarh	4	Float	kVArh	01	78	√	√	√
30379	L2 total kvarh	4	Float	kVArh	01	7A	√	√	X
30381	L3 total kvarh	4	Float	kVArh	01	7C	√	√	X
310021	Total active Energy	8	Int64	Wh	27	24	√	√	√
310025	Total reactive Energy	8	Int64	Varh	27	28	√	√	√
310029	L1 import active Energy	8	Int64	Wh	27	2C	√	X	√
310033	L2 importactive Energy	8	Int64	Wh	27	30	√	X	X
310037	L3 import active Energy	8	Int64	Wh	27	34	√	X	X
310041	L1 export active Energy	8	Int64	Wh	27	38	√	X	√
310045	L2 export active Energy	8	Int64	Wh	27	3C	√	X	√
310049	L3 export active Energy	8	Int64	Wh	27	40	√	X	√
310053	L1 total active Energy	8	Int64	Wh	27	44	√	X	√
310057	L2 total active Energy	8	Int64	Wh	27	48	√	X	√
310061	L3 total active Energy	8	Int64	Wh	27	4C	√	X	√
310065	L1 import reactive energy	8	Int64	Varh	27	50	√	X	√
310069	L2 import reactive energy	8	Int64	Varh	27	54	√	X	√
310073	L3 import reactive energy	8	Int64	Varh	27	58	√	X	√
310077	L1 export reactive energy	8	Int64	Varh	27	5C	√	X	√
310081	L2 export reactive energy	8	Int64	Varh	27	60	√	X	√

310085	L3 export reactive energy	8	Int64	Varh	27	64	√	X	√
310089	L1 total reactive energy	8	Int64	Varh	27	68	√	X	√
310093	L2 total reactive energy	8	Int64	Varh	27	6C	√	X	√
310097	L3 total reactive energy	8	Int64	Varh	27	70	√	X	√
310251	Phase 1 line to neutral volts.	4	Int32	0.1V	28	0A	√	X	√
310253	Phase 2 line to neutral volts.	4	Int32	0.1V	28	0C	√	X	X
310255	Phase 3 line to neutral volts.	4	Int32	0.1V	28	0E	√	X	X
310257	Phase 1 current.	4	Int32	0.001A	28	10	√	√	√
310259	Phase 2 current.	4	Int32	0.001A	28	12	√	√	X
310261	Phase 3 current.	4	Int32	0.001A	28	14	√	√	X
310263	Phase 1 active power.	4	Int32	0.1W	28	16	√	X	√
310265	Phase 2 active power.	4	Int32	0.1W	28	18	√	X	X
310267	Phase 3 active power.	4	Int32	0.1W	28	1A	√	X	X
310269	Phase 1 apparent power.	4	Int32	0.1VA	28	1C	√	X	√
310271	Phase 2 apparent power.	4	Int32	0.1VA	28	1E	√	X	X
310273	Phase 3 apparent power.	4	Int32	0.1VA	28	20	√	X	X
310275	Phase 1 reactive power.	4	Int32	0.1VAR	28	22	√	X	√
310277	Phase 2 reactive power.	4	Int32	0.1VAR	28	24	√	X	X
310279	Phase 3 reactive power.	4	Int32	0.1VAR	28	26	√	X	X
310281	Phase 1 power factor	4	Int32	0.01	28	28	√	X	√
310283	Phase 2 power factor	4	Int32	0.01	28	2A	√	X	X
310285	Phase 3 power factor	4	Int32	0.01	28	2C	√	X	X
310287	Phase 1 phase angle.	4	Int32	0.01Degrees	28	2E	√	X	√
310289	Phase 2 phase angle.	4	Int32	0.01Degrees	28	30	√	X	X
310291	Phase 3 phase angle.	4	Int32	0.01Degrees	28	32	√	X	X
310293	Average line to neutral volts.	4	Int32	0.1V	28	34	√	X	X
310295	Average line current.	4	Int32	0.1A	28	36	√	√	√
310297	Sum of line currents.	4	Int32	0.1A	28	38	√	√	√
310299	Total system power.	4	Int32	0.1W	28	3A	√	√	√
310301	Total system volt amps.	4	Int32	0.1VA	28	3C	√	√	√
310303	Total system VAr.	4	Int32	0.1Ar	28	3E	√	√	√
310305	Total system power factor .	4	Int32	0.01	28	40	√	√	√
310307	Total system phase angle.	4	Int32	0.01Degress	28	42	√	√	√
310309	Frequency of supply voltages.	4	Int32	0.01Hz	28	44	√	√	√
310311	CO2	8	Int64	0.001kg	28	46	√	√	√
320131	CO2	4	Float	kg	4E	A2	√	√	√

Notes:

1. The power factor has its sign adjusted to indicate the direction of the current. Positive refers to forward current, negative refers to reverse current.
2. The power sum demand calculation is for import – export.
3. Total active energy / reactive energy equals to Import + export.

5.2 Holding register

Function code	Description
10	Write parameter holding register
03	Read parameter holding register

Holding register are used to store and display instrument configuration settings. All holding registers not listed in the table below should be considered as reserved for manufacturer use and no attempt should be made to modify their values.

The holding register parameters may be viewed or changed using the Modbus Protocol. Each parameter is held in two consecutive 4X registers. Modbus Protocol Function Code 03 is used to read the parameter and Function code 10 is used to write. Write only to one parameter per massage.

Address Register	Parameter	Start Address Hex		Valid range	Mode
		High Byte	Low Byte		
40003	Demand Period	00	02	Write demand period: 0, 5,8, 10, 15, 20, 30 or 60 minutes, default 60. Setting the period to 0 will cause the demand to show the current parameter value, and demand max to show the maximum parameter value since last demand reset.	r/w

				Length : 4 byte **Data Format : Float**	
40011	System Type	00	0A	Write system type: 3p4w = 3, 3p3w = 2, 1p2w= 1 **Length : 4 byte** **Data Format : Float** (KPPA is asked)	r/w
40015	Key Parameter Programming Authorization (KPPA)	00	0E	Read: to get the status of the KPPA 0 = not authorized；1 = authorized Write the correct password to get KPPA, enable to program key parameters. Length : 4 byte Data Format : Float	r/w
40021	Network Node	00	14	Write the network port node address: 1 to 247 for MODBUS Protocol, default 1. Requires a restart to become effective. **Length : 4 byte** **Data Format : Float**	r/w
40025	Password	00	18	Read: to get the password of the meter Write: to program the new password of the meter Default 1000 **Length : 4 byte** **Data Format : Float**	r/w
40061	Backlight	00	3C	default 0,unit min Set the range from 0 to 121, where 0 represents the backlight always on. 121 represents turning off the LCD **Length : 4byte** **Data Format : Float**	**r/w**
40071	CO2 rate	00	46	Carbon emissions per kWh of electricity 00.0000~60.0000 kg Example:0x01 = 0.0001 **Default:0.5703(0X00001647)** **Length : 4 byte** **Data Format : hex**	**r/w**
40097	Indicated frequency	00	60	Scintillation frequency Range 0.1-10Hz (100-10000) Default 1Hz(1000) **Length : 2 byte** **Data Format : Uint16**	**r/w**
40099	Indicated time	00	62	Duration time Range 0-600 s Default 0s(no indication) **Length : 2 byte** **Data Format : Uint16**	**r/w**
461447	Ethernet communication Parameter	F0	06	Ethernet communication parameter includes: IP address (4byte)，subnet mask (4byte)，default gateway (4byte)，IP port(2 byte) Data format：IP Address-Subnet mask-default gateway-IP port，High byte first. Default：IP Address = 192-168-1-200 Subnet mask = 255-255-255-0 Gate way = 192-168-1-1 IP Port = 502 **Length : 14byte** **Data Format: Hex**	r/w
461455	DHCP	F0	0E	Function Setting Register for Automatic IP Address Acquisition. 00 00 = Turn off automatic IP address acquisition function 00 01 = Turn on automatic IP address acquisition function **Length : 2byte** **Data Format: Hex** (KPPA is asked)	r/w
464513	Serial number	FC	00	Serial number **Length : 4 byte** **Data Format : unsigned int32** **Note: Only read**	r

If you have any question, please feel free to contact our sales team.

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