DTSU666 Three-Phase Smart Meter
DSSU666 Three-Phase Smart Meter
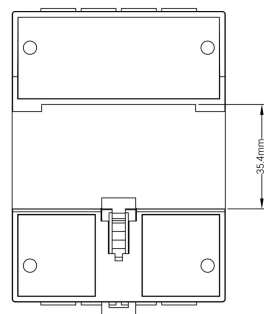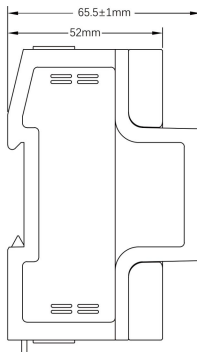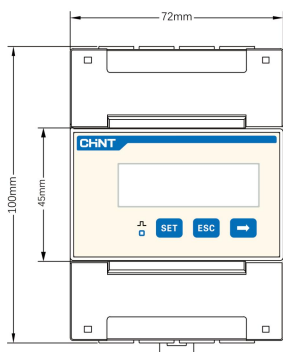# Quick Operation Guide

ZTW0.464.0058

1 Product introduction

1.1 Outline and mounting dimensions

Model	Module	Dimension (L*W*H) mm	Suttle (kg)	Rail dimension
DTSU666	4	100×72×65.5	About 0.285	DIN35 standard guide rail
DSSU666	4	100×72×65.5	About 0.285	DIN35 standard guide rail

Note: Supporting transformer net weight, 100A/40mA net weight is about: 0.38kg; 250A/50mA net weight is about: 0.60kg.

📖 NOTE The unnoted tolerance is ±1mm;
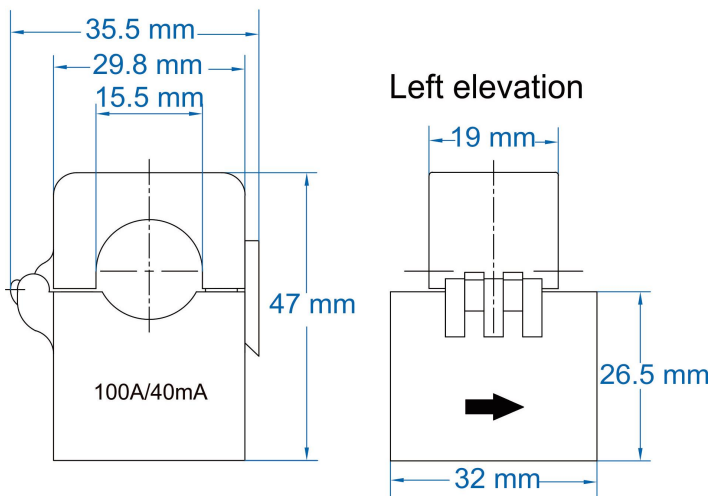The appearance, size and information are subject to actual objects.

1.2 Product performance specification

| Model	DTSU666	DSSU666
Current specification	100A/40mA, 250A/50mA	
Nominal voltage	3×220/380V…3×240/415V	3×380V…3×415V
Frequency	50/60Hz	
Current measuring range	0~100A, 0~250A	
Voltage measuring range	3×57.7/100V…3×288/500V	3×100V…3×500V
Accuracy class	Class B (Class 1)	
Power grid system	three-phase four-wire	three-phase three-wire
Baud rate	1200bps/2400bps/4800bps/9600bps (default 9600bps) /19200bps/38400bps/115200bps (customizable)	
Temperature	-25℃~+55℃(nominal),-40℃~+70℃(ultimate)	
Way to install	Rail mounting	
Authentication	CE,RCM,SAA	

The cable length of the current transformer is 6000±20mm. If the cable is too long, cut it properly. If the cable is too short, extend it (up to 15000mm).

- **100A/40mA**
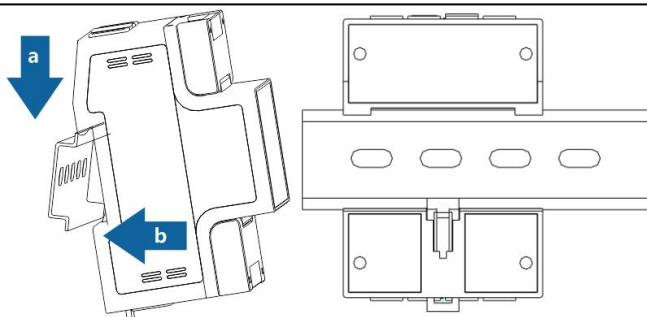

- **250A/50mA**
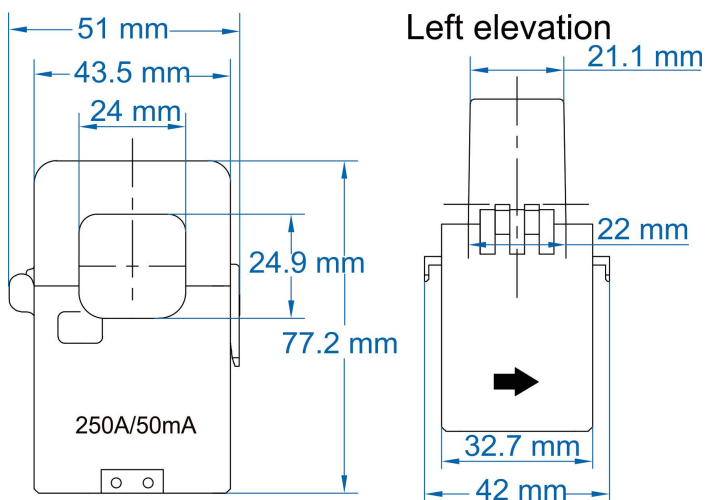
> The unnoted tolerance is ±1mm ;
> 📖 **NOTE** The appearance, size and information are subject to actual objects.

2 Install

Mount the Smart Meter to a 35 mm DIN rail. Hook it into the top edge of the rail and press down until it snaps into place.

3 Installing cables

3.1 Prepare cables

| Cables	Port	Port number	Type	Conductor Cross-sectional Area Range	Outer Diameter	Source
voltage cable	L1 or UA	3	Multi-core outdoor copper cable	4mm²~25 mm²	5mm~10 mm	Prepared by the customer
	L2 or UB	6				
	L3 or UC	9				
	N or UN	10				
current transformer cable	IA*	13	/	/	/	Prepared by the customer or supplied with current transformers
	IA	14				
	IB*	16				
	IB	17				
	IC*	19				
	IC	21				
Communications cable (advise)	RS485_1 A	24	Two core outdoor twisted-pair shielded wire	0.25mm²~1.5mm²	4mm~11 mm	Prepared by the customer
	RS485_1 B	25				
	RS485_2 A	11(selectable)				
	RS485_2 B	12(selectable)				

📖 NOTE

The maximum torque of terminal screws 3, 6, 9, and 10 is 1.7N·m. The recommended torque is 0.9N·m~1.1N·m. The maximum torque of terminal screws 11,12,13,14,16,17,19,21, 24, and 25 is 0.4N·m. The recommended torque is 0.15N·m~0.25N·m.
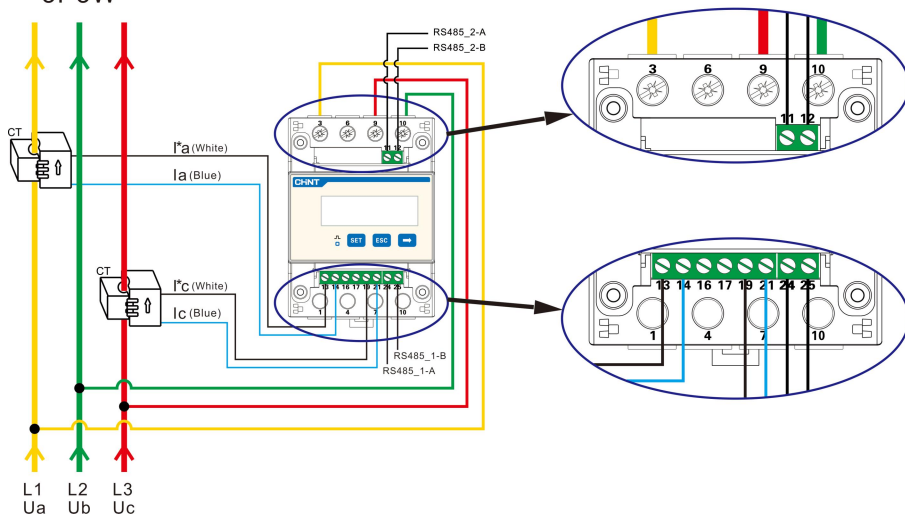
- **Three-phase four-wire , net set to 0**

3P4W
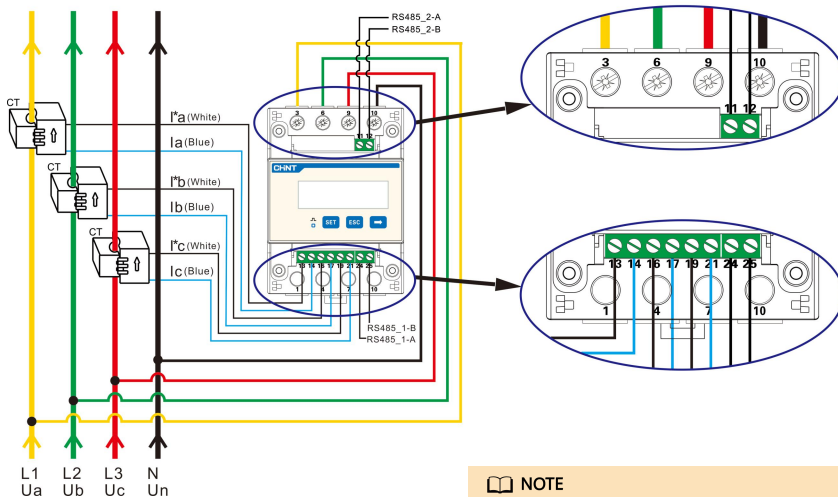
- **Three-phase three-wire , net set to 1**

3P3W

⚠ **CAUTION**

The following conditions may result in electric shock or fire. 1.Before connecting cables, ensure that the Smart Meter is not damaged in any way. 2.Please ensure that the grounding wire is securely installed. 3.Before powering on, please ensure that the wiring is correct.

4 Displays project and parameter Settings

4.1 Display

To switch to the screen, press ESC or ⇨. Press ESC to the previous page and ⇨ to the next.

No.	Display interface	Instruction
1	Imp. 1000000 kWh	Total positive active energy = 10000.00kWh
2	Exp. 0234567 kWh	Total inverse active energy =2345.67kWh
3	UA 220.0 V	A-phase voltage =220.0V (no page for three-phase three-wire)
4	Ub 220.1 V	B-phase voltage =220.1V (no page for three-phase three-wire)
5	UC 220.2 V	C-phase voltage =220.2V (no page for three-phase three-wire)
6	UAb 380.0 V	Line voltage Uab = 380.0V
7	UbC 380.1 V	Line voltage Ubc = 380.1V
8	UCA 380.2 V	Line voltage Uca = 380.2V
9	I A 5.000 A	A-phase current = 5.000 A
10	I b 5.001 A	B-phase current = 5.001A
11	I C 5.002 A	C-phase current = 5.002A
12	Pt 3.300 kW	Combined active power = 3.300kW
13	PA 1.100 kW	A-phase active power = 1.100 kW

No.	Display interface	Instruction
14	Pb 1.100 kW	B-phase active power = 1.100 kW
15	PC 1.100 kW	C-phase active power = 1.100 kW
16	Ft 1.000	Power factor PFt=1.000 (direction consistent with active power)
17	FA 1.000	A-phase power factor PFa=1.000 (for three phases and three wires, "———" is displayed)
18	Fb 1.000	B-phase power factor PFb=1.000 (for three phases and three wires, "———" is displayed)
19	FC 1.000	C-phase power factor PFc=1.000 (for three phases and three wires, "———" is displayed)
20	F 50.001	Frequency =50.001Hz
21	1NO. ii-011	The first communication serial port is Modbus, and the communication address is 11
22	2NO. ii-011	The second serial port for communication is Modbus, and the communication address is 11
23	1NO. 9600	The baud rate of the first communication serial port is 9600bps
24	2NO. 9600	The baud rate of the second communication serial port is 9600bps
25	1NO. 8n1	The first communication serial port has 8 data bits, no check bit, and 1 stop bit
26	2NO. 8n1	The second communication serial port has 8 data bits, no check bit, and 1 stop bit

| Parameter	Value range	Instruction
Ct	1~9999	Current ratio, used for setting the input loop current ratio: When the current is connected to the line via the transformer, Ct=the rated current of the primary loop / the rated current of the secondary circuit; When the current is directly connected to the line, Ct shall be set as 1. Ct * Pt ≤ 250000.0
Pt	0.1~999.9	Voltage ratio, used for setting the voltage ratio of the input loop; When the voltage is connected to the line via the transformer, Pt= the rated voltage of the primary loop / the rated voltage of the secondary circuit; When the voltage is directly connected to the line, Pt shall be set as 1.0. Ct * Pt ≤ 250000.0
Adr1	1~247	First communication serial port Modbus protocol communication address
Adr2	1~247	Second communication serial port Modbus protocol communication address
bPS1	1.200; 2.400; 4.800; 9.600; 19.20; 38.40; 115.2	Baud rate of the first communication serial port 1.200:1200bps; 2.400:2400bps; 4.800:4800bps; 9.600:9600bps; 19.20:19200bps; 38.40:38400bps; 115.2:115200bps
bPS2	1.200; 2.400; 4.800; 9.600; 19.20; 38.40; 115.2	Baud rate of the second communication serial port 1.200:1200bps; 2.400:2400bps; 4.800:4800bps; 9.600:9600bps; 19.20:19200bps; 38.40:38400bps; 115.2:115200bps
nEt	n.34; n.33;	Option for wiring mode: n.34:represents three phase four wire; n.33:represents three phase three wire;

> 📖 **NOTE** If there is only one RS485 port, only one communication parameter is displayed on the menu. The Adr1 and Adr2 Settings range can be customized according to customer requirements.

4.3 Parameter setting operation example

Key description: The following figure will set the first communication parameters as an example to explain the key operation. After the meter is powered on, press SET to enter the codE page. On the codE screen, enter the correct password (701 by default) and press SET to enter the setting screen. On the setting screen, press ⇨ to find the parameter to be SET and press SET to enter, press ⇨ to set the parameter, press Set to proceed forward, and press ESC to exit after parameter setting. If you need to set parameters, follow the following logic.
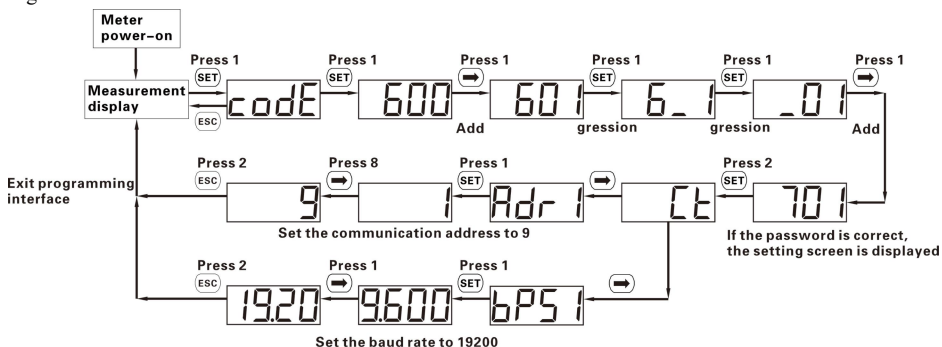
> **NOTE**
> If the communication is abnormal, check and set parameters.

5 Diagnosis , analysis and elimination for common faults

Fault phenomenon	Reason analysis	Elimination
No display when powered on	1. Incorrect wiring. 2. Abnormal voltage for the instrument.	1. If it is wrongly connected, please reconnect based on the right wiring mode (see the wiring diagram). 2. If the supplied voltage is abnormal, please choose the specified voltage.

6 Manufacturer information

Manufacturer	Zhejiang Chint IoT Technology Co.,Ltd.
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