



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

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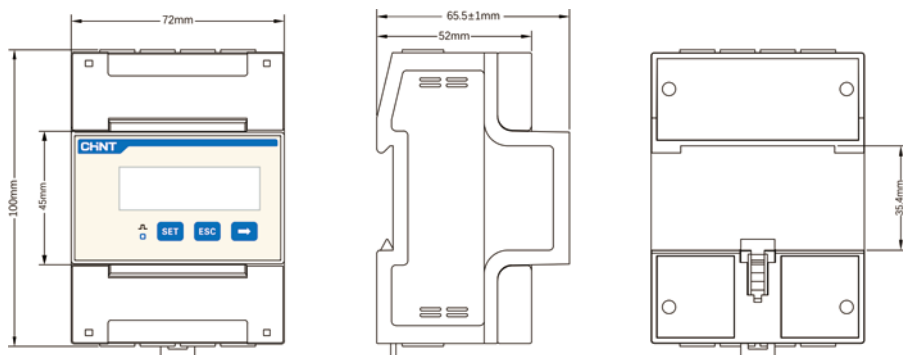


ZTW0.464.0049

1 Product introduction

1.1 Outline and mounting dimensions

Model	Module	Dimension (L*W*H) mm	Subtle (kg)	Rail dimension
DTSU666, DTSU666-CT	4	100×72×65.5	About 0.35	DIN35 standard guide rail
DSSU666, DSSU666-CT	4	100×72×65.5	About 0.35	DIN35 standard guide rail



The unnoted tolerance is $\pm 1\text{mm}$;

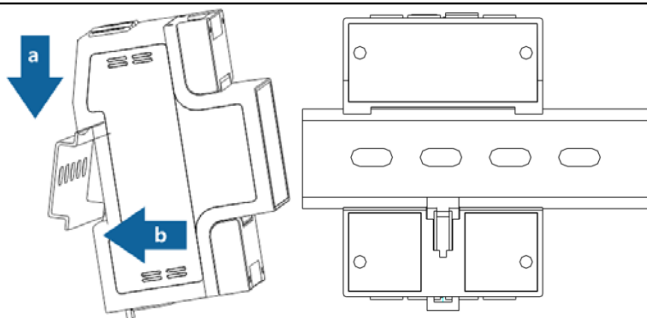
 **NOTE** The appearance, size and information are subject to actual objects.

1.2 Product performance specification

Model	DTSU666	DTSU666-CT	DSSU666	DSSU666-CT
Current specification	0.015-1.5(6)A,0.015-0.075(6)A			
Nominal voltage	3×220/380V...3×240/415V		3×380V...3×415V	
Frequency	50/60Hz			
Current measuring range	0~6A			
Voltage measuring range	3×57.7/100V...3×288/500V		3×100V...3×500V	
Accuracy class	Class C (0.5S)			
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			

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	2	Multi-core outdoor copper cable	1.5mm ² ~2.5 mm ²	3mm~5mm	Prepared by the customer
	L2 or UB	5				
	L3 or UC	8				
	N or UN	10				
current transformer cable	IA*	1	Multi-core outdoor copper cable	4mm ² ~25mm ²	5mm~10mm	Prepared by the customer or supplied with current transformers
	IA	3				
	IB*	4				
	IB	6				
	IC*	7				
	IC	9				
Communications cable (advise)	RS485_1 A	24	Two core outdoor twisted-pair shielded wire	0.25mm ² ~1.5 mm ²	4mm~11mm	Prepared by the customer
	RS485_1 B	25				
	RS485_2 A	11(selectable)				
	RS485_2 B	12(selectable)				

NOTE

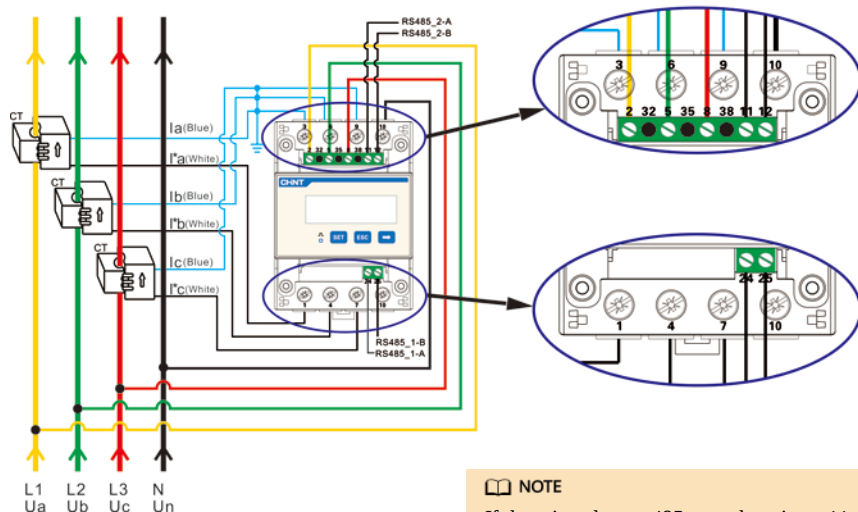
The maximum torque of terminal screws 1, 3, 4, 6, 7, 9, and 10 is 1.7N·m. The recommended torque is 0.9N·m~1.1N·m. The maximum torque of terminal screws 2, 5, 8, 11, 12, 24, and 25 is 0.4N·m. The recommended torque is 0.15N·m~0.25N·m.

3.2 Wiring diagram

CT specification requirements: Accuracy class 0.5 or 0.5s, secondary side current 1A or 5A.

- **Three-phase four-wire, net set to 0**

3P4W

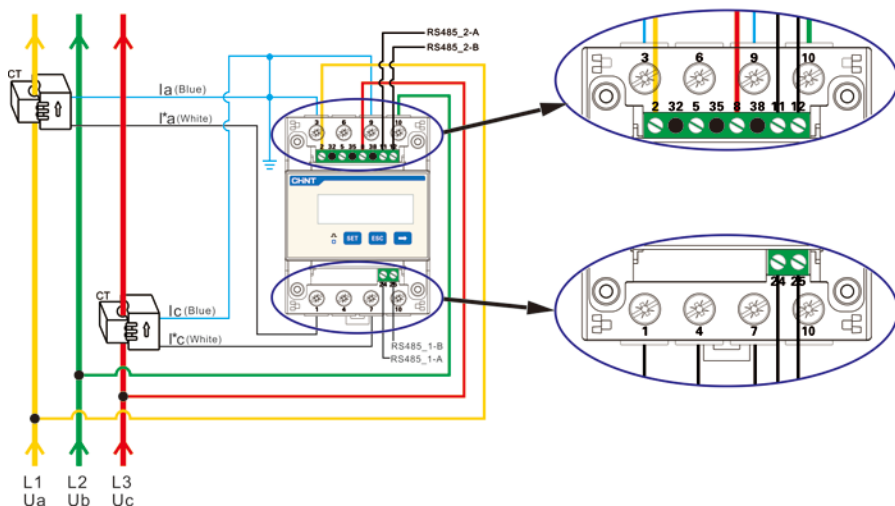


NOTE

If there is only one 485 port, there is no 11 or 12 terminal.

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

3P3W



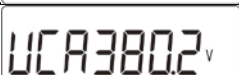
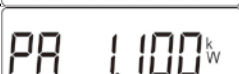
CAUTION

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.

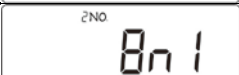
4 Displays project and parameter Settings

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		Total positive active energy = 10000.00kWh
2		Total inverse active energy =2345.67kWh
3		A-phase voltage =220.0V (no page for three-phase three-wire)
4		B-phase voltage =220.1V (no page for three-phase three-wire)
5		C-phase voltage =220.2V (no page for three-phase three-wire)
6		Line voltage Uab = 380.0V
7		Line voltage Ubc = 380.1V
8		Line voltage Uca = 380.2V
9		A-phase current = 5.000 A
10		B-phase current = 5.001A
11		C-phase current = 5.002A
12		Combined active power = 3.300kW
13		A-phase active power = 1.100 kW

Continue form

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

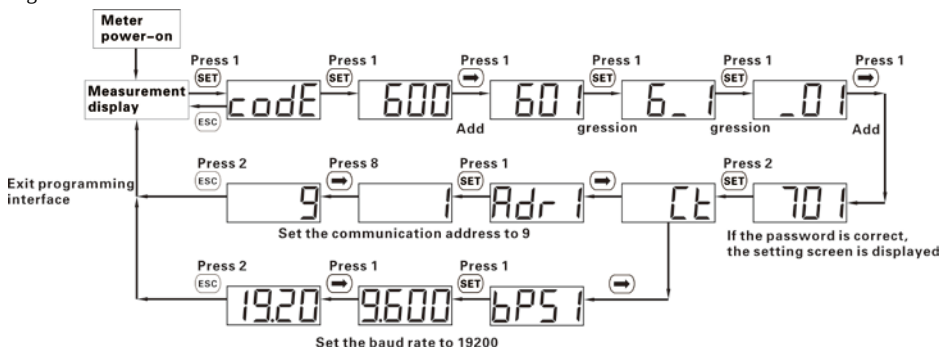
4.2 Key parameter display

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. $Ct * Pt \leq 250000.0$
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. $Ct * Pt \leq 250000.0$
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 codeE page. On the codeE 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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