

### 1. Overview

DTSU666 is a multi-function rail meter, it can accurately measure and display various power parameters in 3P3W/3P4W: voltage, current, power, frequency, active power, reactive power, forward power, reverse power, total harmonics, etc. The meter is suitable for real-time power monitoring system, with multi-function, multi-purpose, high stability and long life characteristics. The meter is connected with an external current transformer and is suitable for various high and low voltage power grids. The meter has RS485 communication interface, supports the highest communication rate of 38400bps, can realize remote communication.

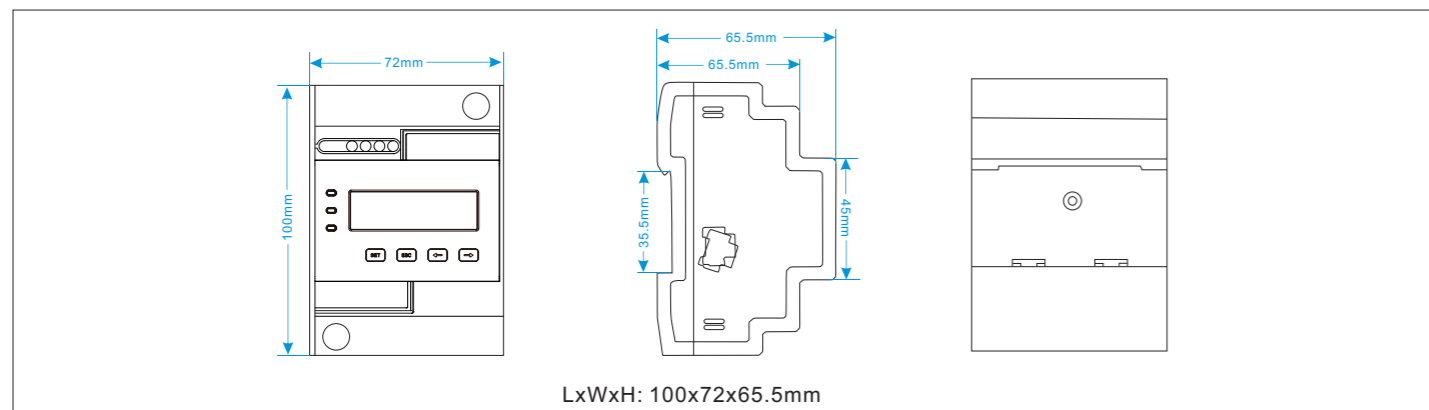
### 2. Technical Parameters

General Specifications		General Specifications	
Category	TPM-6CT-C(DTSU666)	Reactive power	1% of range maximum
Nominal voltage	3×57.7V/100V...3×240V/415V	Baud rate	1200bps / 2400bps / 4800bps / 9600bps (default 9600bps) / 19200bps/38400bps/115200bps (optional)
Nominal current	100A/40mA, 250A/50mA, 100A/333mV, 250A/333mV	Temperature	-25°C~+55°C (nominal), -40°C~+70°C(ultimate)
Frequency	50/60Hz	Way to install	DIN-Rail Mounting
Voltage range	0.8Un-1.15Un	Mounting dimensions	100x72x65.5mm(LxWxH)
Active power	0.5% of range maximum	Certification	CE, SAA, RoHS, REACH

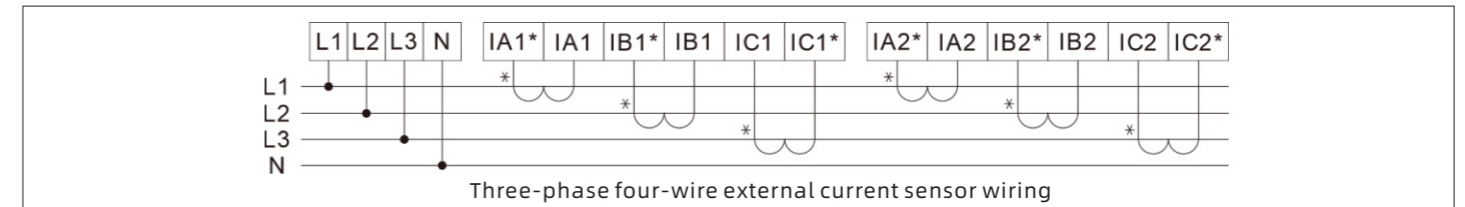
### 3. Unpacking

Item	Number	Description
A	1	Three-phase meter
B	1	User manual
C	1	Rs485 cable (standard length 15m)
D	6	Current transformer (length 6±0.02m)

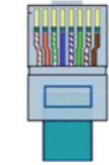
### 4. Dimension (Unit: mm)



### 5. Installation



LAN line 1-8 colors as below:



PIN	1	2	3	4	5	6	7	8
Color	White orange (485.B)	Orange	White green	Blue	White blue (485.A)	Green	White brown	Brown

- When Growatt inverter products are used in three-phase power grid system, please set "Sensor: Meter" of Growatt inverter as "Sensor: CT". More details, Please refer to the user manual of the corresponding model.
- Pay attention to distinguish the two groups of CT. The black terminal is connected to the first group of CT, and the green terminal is connected to the second group of CT. As shown in Figure 1 below.
- When connecting three-phase energy meter, the CTs on CT1 should be connected to Growatt inverter, and the CTs on CT2 are connected to the other inverter side. CT direction from grid to load. Please note that the length of the CT wire is 6m. The installation diagram is shown in Figure 2.

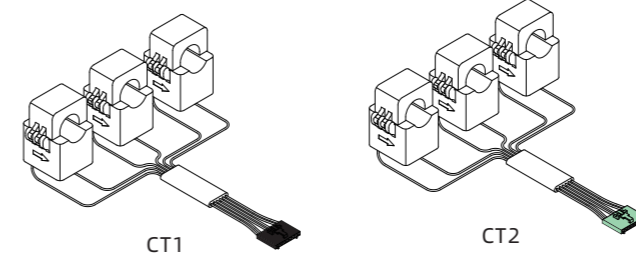


Figure 1

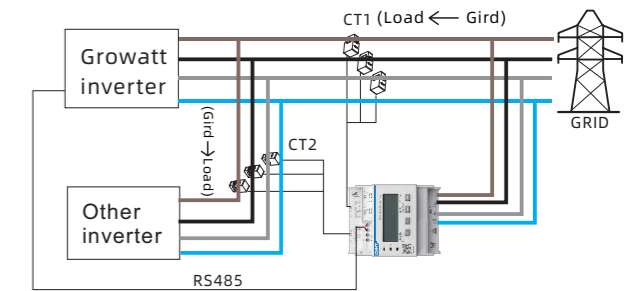
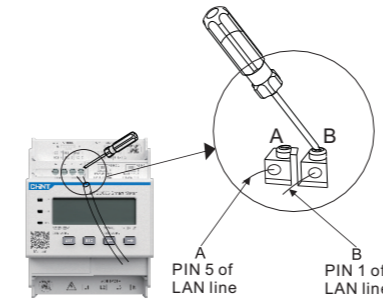
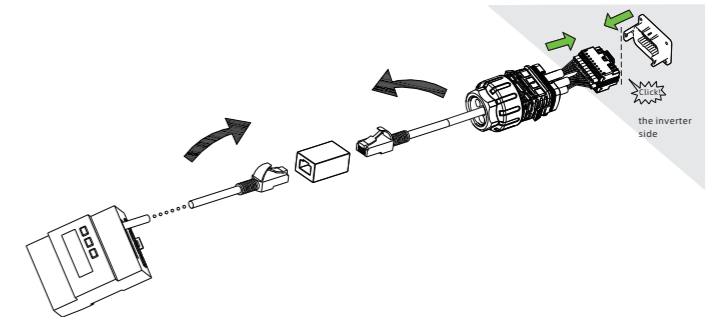


Figure 2

- Connect the RS485A of the LAN line (White-Blue) to the A terminal labeled RS485-1 on the meter and RS485B of the LAN (White-Orange) to the B terminal.



- The standard RS485 cable length is 15m. If the length is not enough, please add another cable to extend the length. The following figure shows the connection between the meter and the MID-XH/MOD-XH(BP) inverter quick plug terminal.

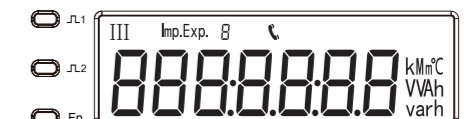


Note:

- Be careful the wire of L/N and the range of input voltage or current, if the data is out of range, it may destroy the meter.
- Be careful where the two CTs are connected. CT1 is connected to the grid side of the Growatt inverter, and CT2 is connected to other inverter. Also pay attention to the phase sequence of the CTs. If the CT is connected incorrectly or the phase sequence is wrong, the system will work in a wrong way.
- Be careful the phase sequence of the voltage sampling side of the meter should correspond to the AC phase sequence of the inverter.
- If there is no communication (Growatt inverter shows warning 401 or meter communication, indicator is don't display), please check the communication cable, baud rate, and address.

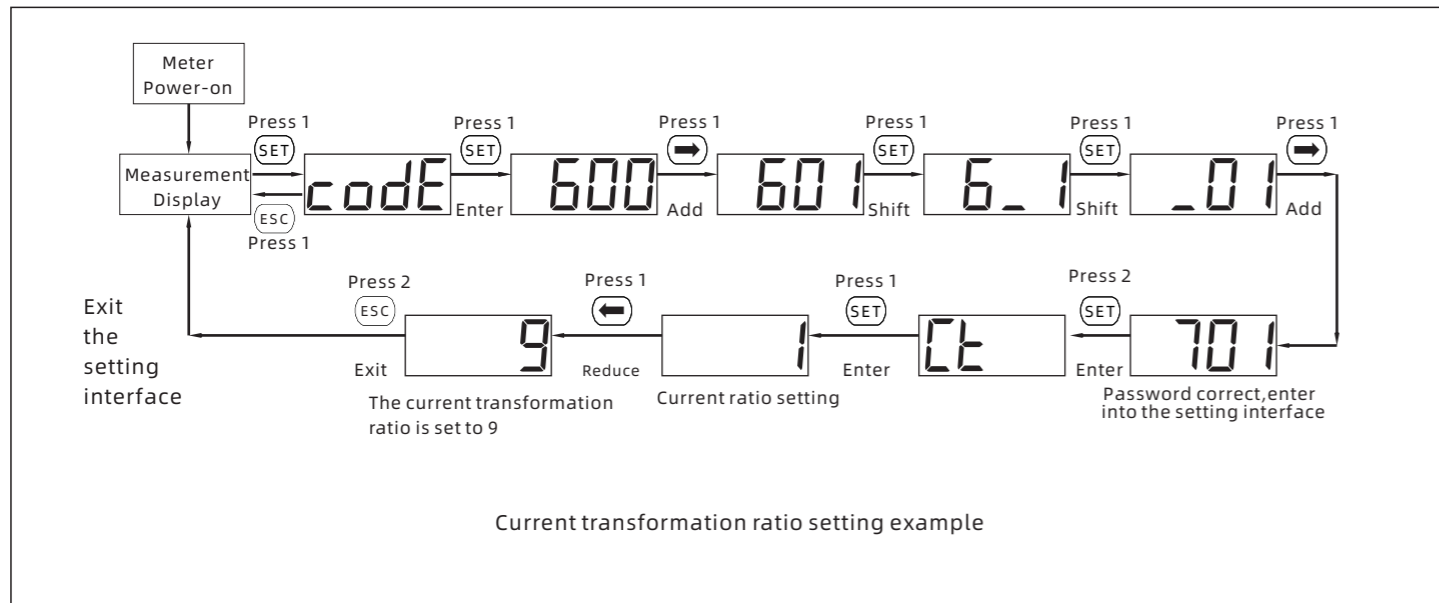
### 6. Display

From the displayed interface, the electrical parameter and energy data are all primary side data (that is, the multiplied by current and voltage ratios). The energy measuring value will be displayed seven bits, with the displaying range 0.00kWh to 9999999MWh.



NO	Display interface	Instruction	NO	Display interface	Instruction
1		Positive active energy of CT1 =10000.00kWh	10		Phase C current of CT1 =5.002A
2		Reserve active energy of CT1 =2345.67kWh	11		Combined phase active power of CT1 =3.291kW
3		Communication protocol is ModBus-RTU.N1 indicates that there are 1 stop bits without parity. 9600 indicates that the baud rate is 9600bps. 004 indicates that the meter default address is 04.	12		Phase A active power of CT1=1.1kW
4			13		Phase B active power of CT1=1.1kW
5		Phase A voltage =220.0V	14		Phase C active power of CT1=1.1kW
6		Phase B voltage =220.1V	15		Combined phase power factor Pft = 0.5
7		Phase C voltage =220.2V	16		Phase A power factor Pfa =1
8		Phase A current of CT1 =5A	17		Phase B power factor Pfb =1
9		Phase B current of CT1 =5.001A	18		Phase C power factor Pfc =1

Note:  
1. The "II" on the display screen indicates the data of CT2.  
2. This meter and Growatt inverter default communication address is 04. the baud rate is 9600 if the meter and Growatt inverter communication is not on. You can confirm the communication address and baud rate is accurate, view and modify the path as follows: Button description: "SET" button represents "confirmation", or "cursor shift" when input digits), "ESC" button represents "exit", "→" (↵) button represents "add". The input code is (default 701).



## 7. Trouble shooting

Fault phenomenon	Reason analysis	Elimination
Big deviation between electric energy measurement and actual value.	1. If it is wrongly connected, please reconnect based on the right wiring mode (see the wiring diagram). 2. If not the above problems, please contact with the local supplier.	1. Wiring error, voltage and current corresponding phase sequence is correct? 2. Check that the arrow direction of the CT is from the grid to the load.
The downstream power data and the upstream power data are not displayed in the Growatt inverter	1. The inverter sensor mode may be set incorrectly or there may be a problem with the 485 communication. 2. If not the above problems, please contact with the local supplier.	1. Check whether the Sensor mode is CT. 2. Check the voltage between A+ and B- is within the range of +4.4~4.5V; 3. Check whether the 485 communication line of the meter and the inverter is correctly connected.

## 8. Service and contact

Find contact info for worldwide after-sales service at <https://en.growatt.com/support/contact>.

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