DTSU666-FE Smart Power Sensor

Quick Guide

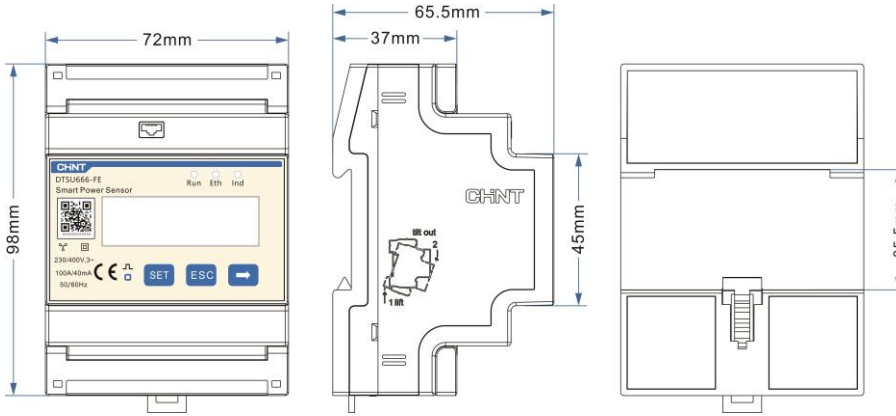
Issue: 02
Date: 2022-11-20

ZTY0.464.1568

1 Overview

1.1 Dimensions

DTSU666-FE

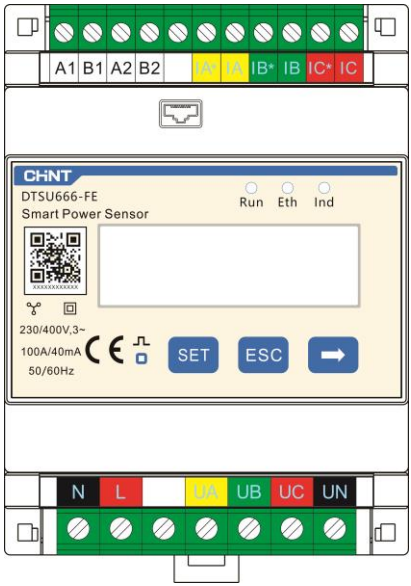


NOTE

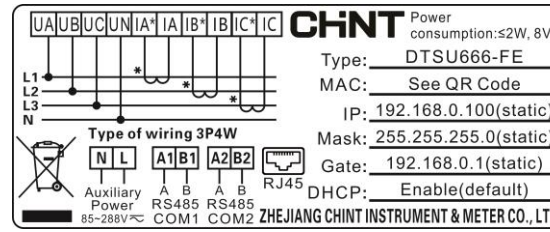
The dimensional tolerance is ± 1 mm .

1.2 Appearance

Specifications on the front panel



Nameplate



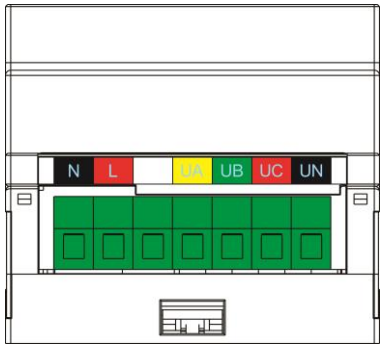
1.3 Key Specifications

Category	DTSU666-FE
Input voltage	230V AC / 400V AC, 50Hz/60Hz
Input current	External current transformer: 100A/40mA
Auxiliary power	85V ~288V AC/DC
Electricity metering accuracy	Class 1 (error within ±1%)
Power grid system	Three-phase four-wire /Three-phase three-wire /One-phase one-wire
Baud rate	1200 / 2400 / 4800 / 9600 / 19200 / 115200bps(default:9600bps)
Operating temperature	-25℃~+60℃
Installation mode	Guide rail-mounted
Certification	CE

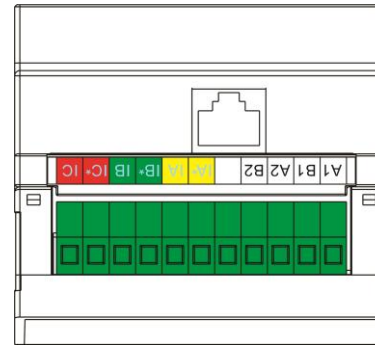
1.4 Port Definition

- Auxiliary power: 85V ~288V AC/DC
- Input voltage: 230V AC / 400V AC
- Input current: Current transformer 100A/40mA

Cable Inlet: Voltage

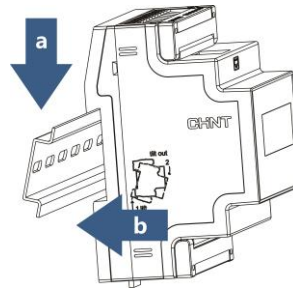


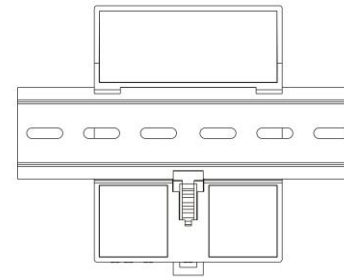
Cable Inlet: Current, RJ45, RS485



2 Installing the DTSU666-FE

1. Install the Smart Power Sensor on the standard guide rail of DIN 35mm.
2. Press the Smart Power Sensor downwards onto the guide rail, then push it in place along the guide rail.





3 Installing Cables

3.1 Preparing Cables

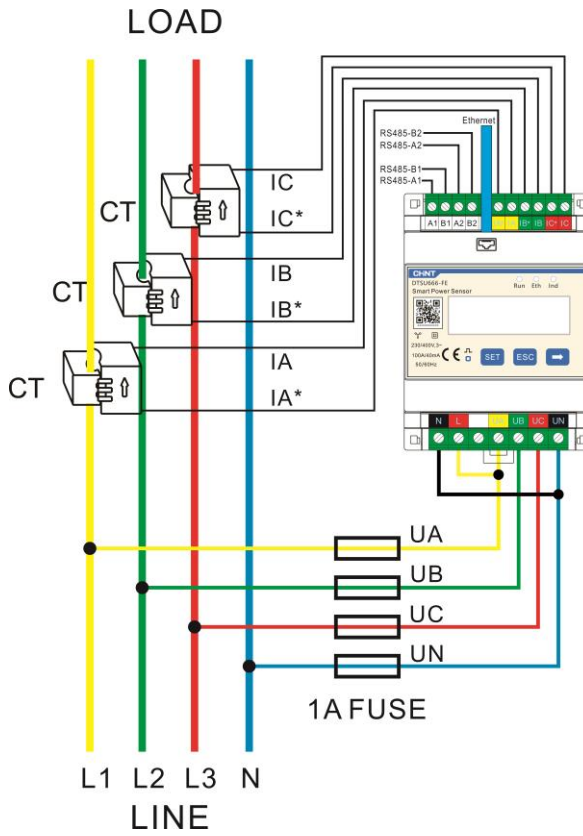
Cable	Port	Type	Cross-sectional Area Range of the Wire	Outer Diameter	Source
Voltage cable	UA	Single-core outdoor copper cable	2mm^2~4mm^2	3mm~5mm	Prepared by the customer
	UB				
	UC				
	UN				
Current transformer cable	IA*	Single-core outdoor copper cable	0.25mm^2~1mm^2	1mm~2mm	Supplied with current transformers
	IA				
	IB*				
	IB				
	IC*				
	IC				
Communications cable	A1	Two-core outdoor shielded twisted pair copper cable	0.25mm^2~1.5mm^2	4mm~11mm	Prepared by the customer
	B1				
Communications cable	A2	Two-core outdoor shielded twisted pair copper cable	0.25mm^2~1.5mm^2	4mm~11mm	Prepared by the customer
	B2				
Network cable	RJ45	Cat 5 or Cat 6	\	\	Prepared by the customer
Auxiliary power cable	L	Single-core outdoor copper cable	2mm^2~4mm^2	3mm~5mm	Prepared by the customer
	N				

NOTE

The maximum torque of L, N, UA, UB, UC, UN, IA*, IA, IB*, IB, IC*, IC, A1, B1, A2, B2 terminal screws is 0.4 N·m.

3.2 Connection Through Current Transformer and Direct Connection

- Three-phase four-wire(Set Net:n34)



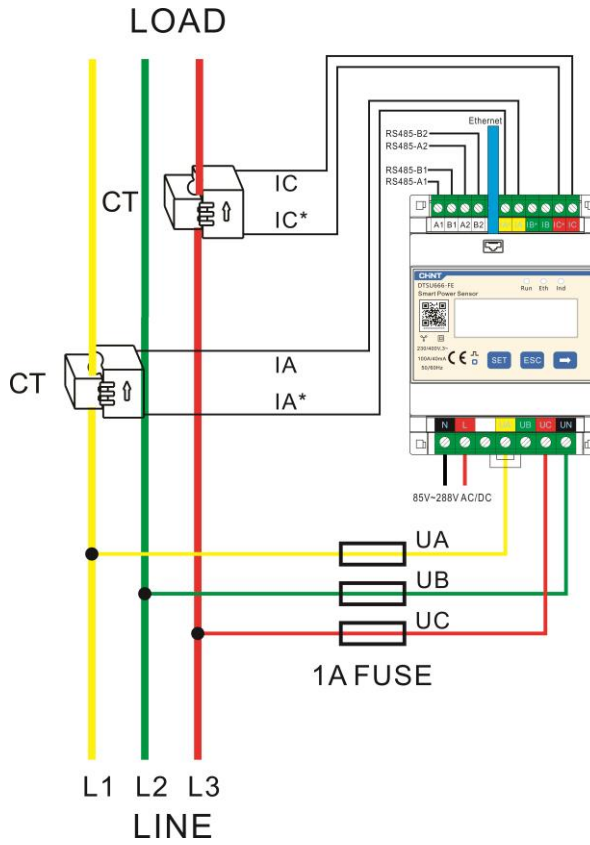
CAUTION

1. It is recommended to add a fuse on the voltage signal line.

NOTE

Please set the parameters after cable connections are complete. For details, see section 4 "Display and Parameter Settings".

- Three-phase three-wire(Set Net:n.33)



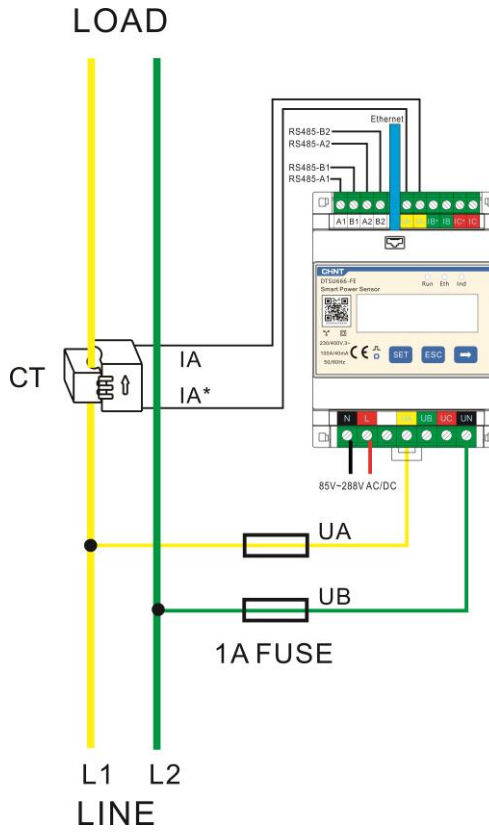
⚠ CAUTION

1. It is recommended to add a fuse on the voltage signal line.

NOTE

Please set the parameters after cable connections are complete. For details, see section 4 "Display and Parameter Settings".

- two-phase two-wire(Set Net:n.34)



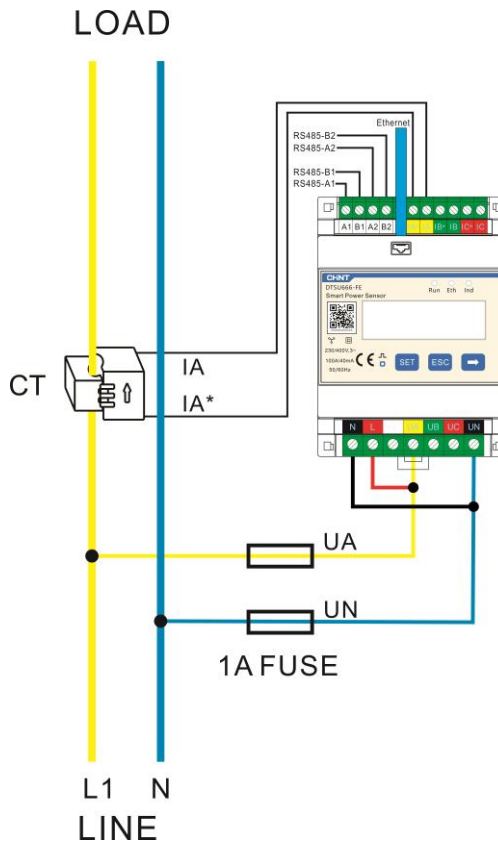
⚠ CAUTION

1. It is recommended to add a fuse on the voltage signal line.

NOTE

Please set the parameters after cable connections are complete. For details, see section 4 "Display and Parameter Settings".

- One-phase Two-wire (Set Net:n34)



⚠ CAUTION

1. It is recommended to add a fuse on the voltage signal line.

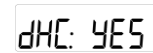
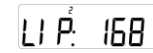
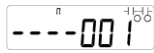
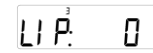
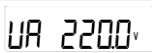
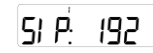
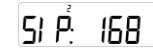
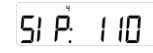
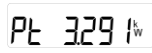
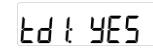
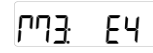
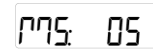
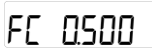
NOTE

Please set the parameters after cable connections are complete. For details, see section 4 "Display and Parameter Settings".

4 Display and Parameter Settings

4.1 Display

The button → is used to switch the displays. Set parameter **disp** to enable the rotation display function.

No.	Display interface	Instruction	No.	Display interface	Instruction
1		Imp. Active energy =10000.00kWh	19		DHCP service, Yes:Enable no: disable
2		Exp. Active energy =2345.67kWh	20		Sensor IP1:192
3		Serial communication protocol ModBus-RTU, n1:No check,One stop bit; 9.600:9600bps 001:Address	21		Sensor IP2:168
4			22		Sensor IP3:0
5		Phase A volatge =220.0V	23		Sensor IP4:100
6		Phase B volatge =220.1V	24		Server IP1:192
7		Phase C volatge =220.20V	25		Server IP2:168
8		Phase A current =5.000A	26		Server IP3:0
9		Phase B current =5.001A	27		Server IP4:110
10		Phase C current =5.002A	28		Modbus/TCP IP Port
11		Total active power =3.291kW	29		Connect server state:success
12		Phase A active power =1.090kW	30		Mac1
13		Phase B active power =1.101kW	31		Mac2
14		Phase C active power =1.100kW	32		Mac3
15		Total power factor PFt=0.500	33		Mac4
16		Phase A power factor PFa=1.000	34		Mac5
17		Phase B power factor PFb=0.500	35		Mac6
18		Phase C power factor PFc=0.500			

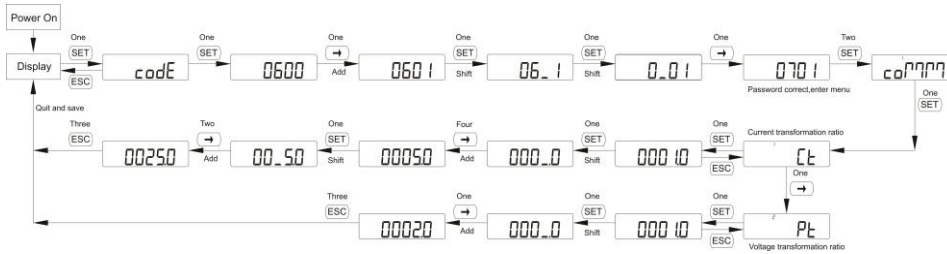
4.2 Parameter Settings

No.	Parameters	Value range	Indcation
1	CT	0.1～6553.5	Current transformation ratio, used to set the current transformation ratio of input circuit: When connected through current transformer, CT= primary current / secondary current; When directly connected, CT shall be set to 1.
2	Pt	0.1～6553.5	Voltage transformation ratio, used to set the voltage transformation ratio of input circuit: When connected through voltage transformer, PT= primary voltage / secondary voltage; When directly connected, Pt shall be set to 1.0.
3	Prot	2:n.2; 3:n.1; 4:E.1; 5:O.1.	Settings for communication stop bit and Parity bits： 2: None parity, 2 stop bits, n.2; 3: None parity, 1 stop bit, n.1; 4: Even parity, 1 stop bit, E.1; 5: Odd parity, 1 stop bit, O.1.
4	bAud	0:1.200; 1:2.400; 2:4.800; 3:9.600; 4:19.20; 5:115.2.	Communication baud rate: 0:1200bps; 1:2400bps; 2:4800bps; 3:9600bps; 4:19200bps;5:115200bps.
5	Addr	1～247	Modbus communication address.
6	nEt	0:n.34 1:n.33	Wiring mode: 0:n.34:Three phase four wire or One phase one wire. 1:n.33:Three phase three wire.
7	d ISP	0～30	Loop time（Second） 0:Fixed display; 1～30:Loop time.
8	bLCd	0～30	Backlight time（Minute） 0:Long bright; 1～30:Backlight time without key operation.
9	SPEC	0:ct	Current input mode 0:transformer input
10	Ct SELE	1:100A	Transformer specification

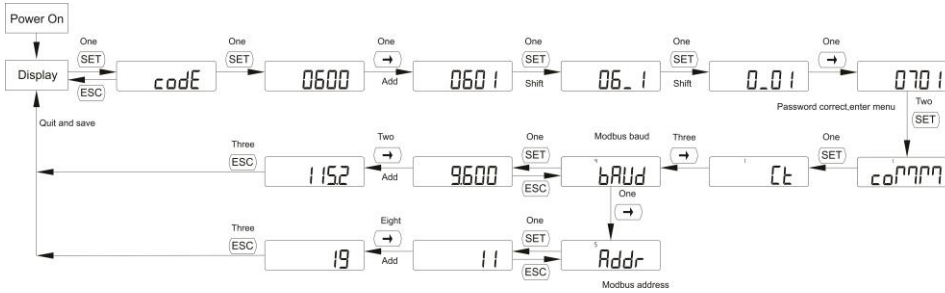
4.3 Parameter settings

Button description: SET means "confirm" or "cursor move" (when inputting numbers or parameters), ESC means "exit", and → means "add".The default user password is 701.

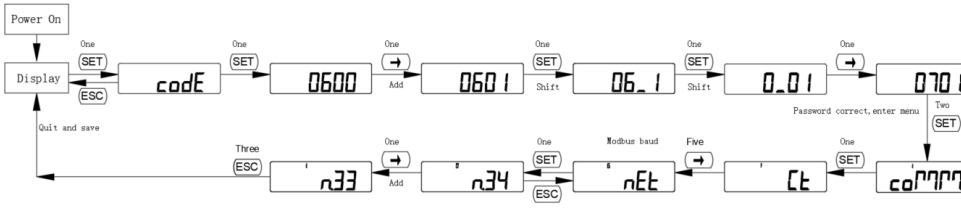
- Set the current or voltage transformation ratio :



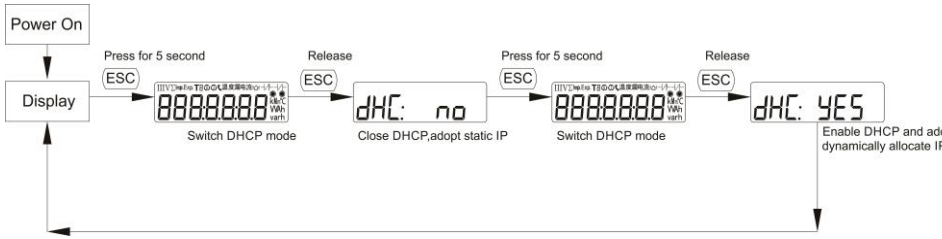
- Set communication address or baud rate :



- Set wiring mode:



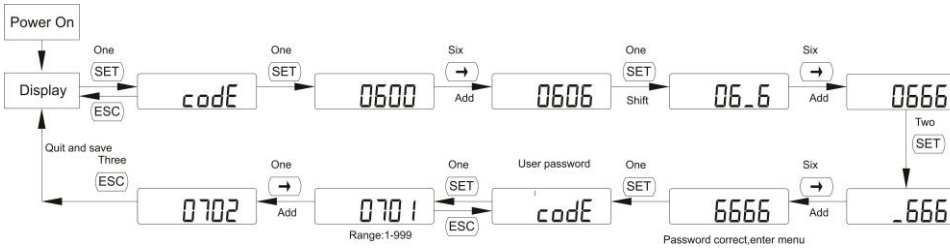
- Switch IP allocation mode:



NOTE

The communication parameters are set for the Smart Power Sensor before delivery. If the communication is abnormal, please check and set the parameters.

- Modify user password :



5 Troubleshooting

Symptom	Cause Analysis	Troubleshooting Method
No display after power-on	1. The voltage supplied to the sensor is abnormal.	1. Supply the correct voltage based on the specifications.
Abnormal ethernet communication	1. The network cable is not plugged in properly. 2. Sensor DHCP mode error.	1. Check the network cable is plugged in and the network port indicator light is on. 2. Switch DHCP to the right mode.
Abnormal RS485 communication	1. The RS485 communication cable is disconnected, short-circuited, or reversely connected. 2. The communication address, baud rate, data bit, and parity bit of the meter do not match those of the inverter.	1. If the communication cable is faulty, replace it. 2. Set the communication address, baud rate, data bit, and parity bit of the meter to be the same as those of the inverter by pressing buttons. For details, see "Parameter Settings".
Inaccurate metering	1. The cable connection is incorrect. Check whether the corresponding phase sequence of voltage and current is correct. 2. Check whether the high and low ends of the current transformer inlet are reversely connected. If the values Pa, Pb, and Pc are negative, the high and low ends are connected incorrectly.	1. Connect the cables correctly (see wiring diagrams). 2. If a negative value is displayed, change the cable connection for the current transformer to ensure that the high and low ends are connected correctly.

6 Installation Verification

1. Check that all mounting brackets are securely installed and all screws are tightened.
2. Check that all cables are reliably connected in correct polarity without short circuit.

7 Customer Service Contact

Customer Service Contact			
Region	**Country**	**Email**	**Tel**
Europe	France	hongys@chintglobal.com	0039 3896692658 0086 15000770865
	Germany		
	Spain		
	Italy		
	UK		
	Netherlands		
	Other countries		