

# DZ81-DZS300 Energy Meter User Manual



**Heyuan Intelligence Technology Co., Ltd**

## IMPORTANT DECLARATIONS

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Please read this manual carefully before the product is operated. And once you start operating the meter, you'll be considered to have read this manual and accept all our terms. Heyuan shall not be responsible or liable for any damages or injuries caused by improper meter installation and/or operation.

Attention: the following symbols in this manual refer to meanings as follows



**Electric Shock Symbol: Carries information about procedures which must be followed to reduce the risk of electric shock and danger to personal health**



**Safety Alert Symbol: Carries information about circumstances which if not considered may result in injury or death**

The meter must be installed and operated by one who has experience with high-voltage devices or has qualifications. Please connect the meter to correct voltage before operating the meter. Please install and use the meter according to the user manual. Heyuan shall not be responsible or liable for any damages or injuries caused without following the instructions in the user manual.

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## Chapter 1 Meter Overview

DZS300 is an advanced, smart DIN rail energy meter. It is widely used in energy distribution sites, energy management systems and intelligent on-line monitoring systems of different industries.

Main Functions:

- Measuring electrical parameters:

Current (average, phase), Voltage (L-N, L-L, average), Frequency; Power Factor (total, phase); kW, kvar, kVA (total, phase), kWh, kvarh, kVAh, THD-V THD-I(2~31<sup>st</sup>).

The value format of voltage, current, frequency and power are listed as below.

Example: U = 220.1V, f = 49.98Hz, I = 1.99A, P = 0.439kW

- Timing:

The meter has 2 time lists, and can be divided into 4 time zones per year. Each time list can be divided into 8 time periods and 4 tariff (F1、F2、F3、F4). The main purpose of multi-tariff is promote the energy efficiency and economic benefits.

- History data statistics

The meter can record last 48 months or last 90 days history energy in each tariff.

- Alarm on voltage loss and over-voltage; SOE record; 1\*DI 1\*DO.

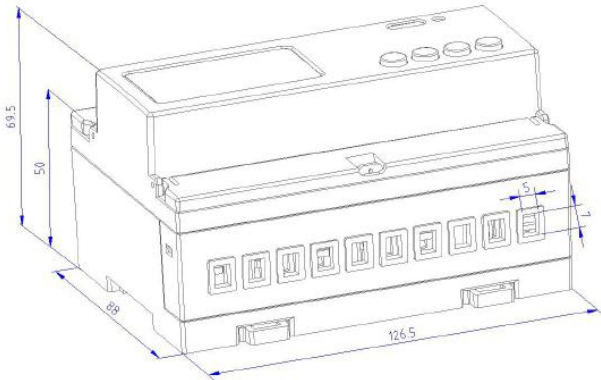
## Chapter 2 Specifications

Technical parameter		
Voltage	Reference voltage	3×100V, 3×380V, 3×57.7/100V, 3×220/380V
	Accuracy class	Error±0.2%
Current	Input current	3×1(6)A, 3×1(6)A(Outlay CTs); 3×10(80)A
	Accuracy class	Error±0.2%
Power	Active, reactive, apparent power, error±0.5%	
Frequency	45 ~ 65Hz, Error±0.2%	
Energy	Active energy(accuracy class:0.5), Reactive energy(accuracy class 2)	
Pulse constant	6400imp/kWh,400imp/kWh (Correspond with the basic current)	
Interface and communication	RS485 : Modbus RTU(1~247)	
Baud rate	1200bps~19200bps	
Working Temperature	-25℃~+55℃	
Relative humidity	≤95%(non-condensing)	

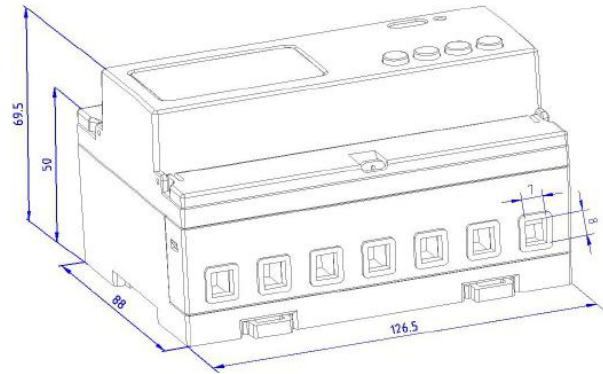
## Chapter 3 Dimensions & Installation

### 3.1 Overall Dimension (unit: mm)

**CT connection:**



**Direct connection**



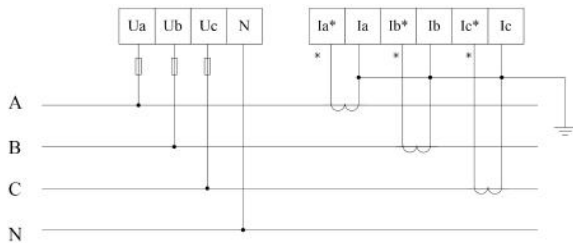
### 3.2 Installation Method

Installation Environment: DZS300 should be installed in a dry and dust free environment. Avoid exposing meter to excessive heat, radiation and high electrical noise sources.

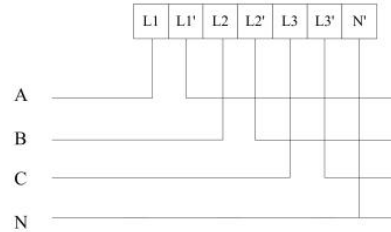
Install Method: DIN rail Mounting.

## Chapter 4 Typical Wiring

### 5.1 Wiring (3P4W)

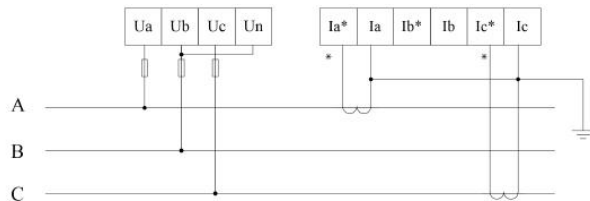


**CT connection**

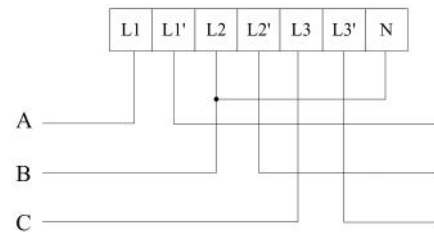


**Direct connection**

### 5.2 Wiring (3P3W)

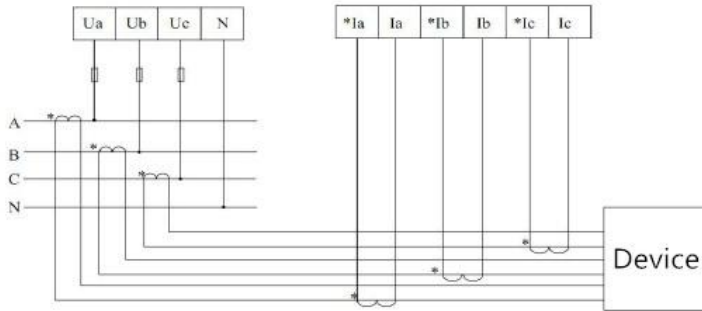


**CT connection**

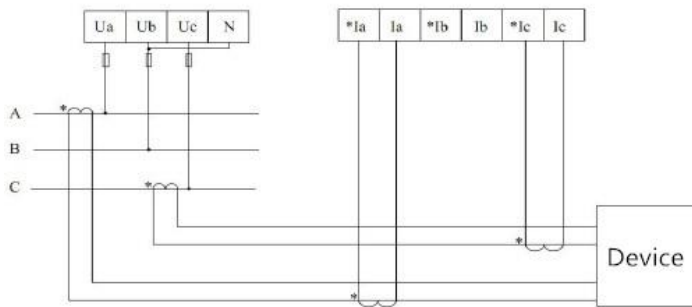


**Direct connection**

### 3P4W-3CT(high-voltage)

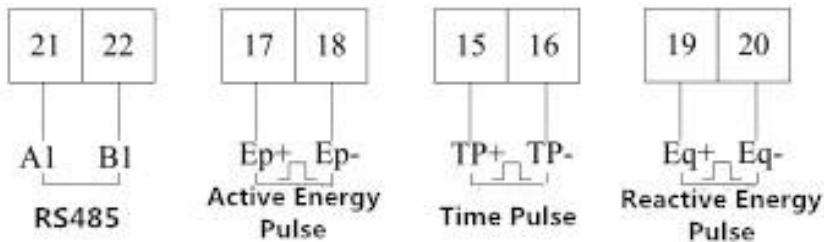


### 3P3W-2CT(high-voltage)



Note: The method of wiring is: input downward and output downward.

### 5.3 Communication & Energy Pulse



## Chapter 6 Parameters Display Interfaces

The meter will show the import active energy after powering. You can change the information showing by pressing the buttons. The operation description is listed as below:

Button Symbol	Function
SET	Menu: Enter/quit menu
▲	Up: Check the parameters of voltage, current, frequency, address, date, time; Leftward; Change flash in setting interface; +1
▼	Down: Check the parameters of kW, kvar, k VA, cosΦ; Rightward; Change the value on flash
↩	Enter: Check the parameters of kWh, kvarh; Enter in setting interface

### System Parameter Setting

Press button "SET" on any interface of electrical parameters can enter the "PASS" interface, then press button "←", it will display "0000", please input the correct password. (the default password is 0001), then press "←" to enter the interfaces of system parameter setting.

After setting all parameters, please press "SET" to enter the "SAVE" interface. Then press ← to confirm "yes" or "no" and quit.

LCD Display	Description	LCD Display	Description
BUS1/BUS2	Communication settings	ADDR	Address setting: 1~247
		Buad	Baud rate: 1200, 2400, 4800, 9600, 19200
		Parity	None, Even
		Hi	
		Lo	
SyS	System settings	PL	Wiring Mode: 3P4L, 3P3L
		EF.E	EF: Multi-tariff rate; E: No multi-tariff rate
		CodE	Code setting: 1-9999
		LCD	Time of back light: 1-9999
		PULSE	
		CLEAR	Input 6401 for energy clear
In.	Transformer settings	Pt	Voltage Transformer: 1-9999
		Ct	Current Transformer: 1-9999

## Chapter 7 After-sales Service

### Product Warranty

1. The product warranty period is one year.
2. The company is responsible for free maintenance or exchange within one-year warranty period.
3. The cost of the components and freight shall be charged for improper meter installation and/or operation.
4. Over the warranty period, part of the maintenance cost according to actual situation will be charged.

## **Service Guarantee**

1. Product technical consulting and quality complaints will be replied within 12 hours.
2. Solutions for quality complaints will be provided within 24 hours.
3. Except statutory holidays and force majeure.

## **Chapter 9 Contact Us**

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