

DZS100-4P

Single-Phase 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.

Contents

Chapter 1 Meter Overview	1
Chapter 2 Specification & Technical Parameters	1
2.1 Specification	1
2.2 Technical Parameters	1
Chapter 3 Dimension & Wiring	2
3.1 Dimension	2
3.2 Terminals & Wiring	2
Chapter 4 Communication Interface	3
Chapter 5 Meter Display & Operation	3
5.1 Operation and Buttons	3
5.2 Digits and Symbols Display	4
Chapter 6 Installation	4
Chapter 7 After-sales service	5
Chapter 8 Contact Us	5

Chapter 1 Meter Overview

DZS100-4P is an advanced, smart single-phase DIN rail energy meter. It meters electric parameters of single-phase current, voltage, power, energy, frequency, power factor etc. with high accuracy. It is LCD display and also equipped with RS485 communication and pulse output.

Its main functions are as follows:

- ◆ Measure import active energy and export active energy;
- ◆ Measure combination of active energy, which is equal to the sum of import active energy and export active energy
- ◆ Measure all instantaneous values of electric parameters, including voltage, current, power, energy, frequency, power factor etc.;
- ◆ LCD displaying voltage, current, power etc..
- ◆ Automatically blocking and saving the blocked energy of last 12 months
- ◆ Timing Records with saving last 10 times of recording moments
- ◆ Loading data storage with recording data such as voltage, current, power, frequency, power factor and active energy;
- ◆ Compatible with DL/T645-2007, DL/T645-1997 and Modbus-RTU protocols.

Chapter 2 Specification & Technical Parameters

2.1 Specification (the following parameters are subject to marks on nameplate)

Reference Voltage: AC220V(Un)

Current Specification: 80A(direct connection), 5 A (CT connection)

Frequency: 50Hz

Pulse Constant: 6400/1600/800imp/kWh (in the light of marks on nameplate)

Accuracy Class: Class 1.0

2.2 Technical Parameters

Starting Current: 0.004I_b

Insulation Strength: input to output, 2.0kV/min·1mA

Power Consumption: < 2W, 10VA

Creeping: Equipped with anti-creep logic circuits, when the energy meter loads 115% of rated voltage and there is no current in current circuit, the energy meter shouldn't output more than one pulse in testing within the prescribed time.

Voltage Range: 0.9 ~ 1.1Un; limit range: 0.8 ~ 1.2Un

Communication Mode: RS485

Reference Temperature: 23C°±2C°;

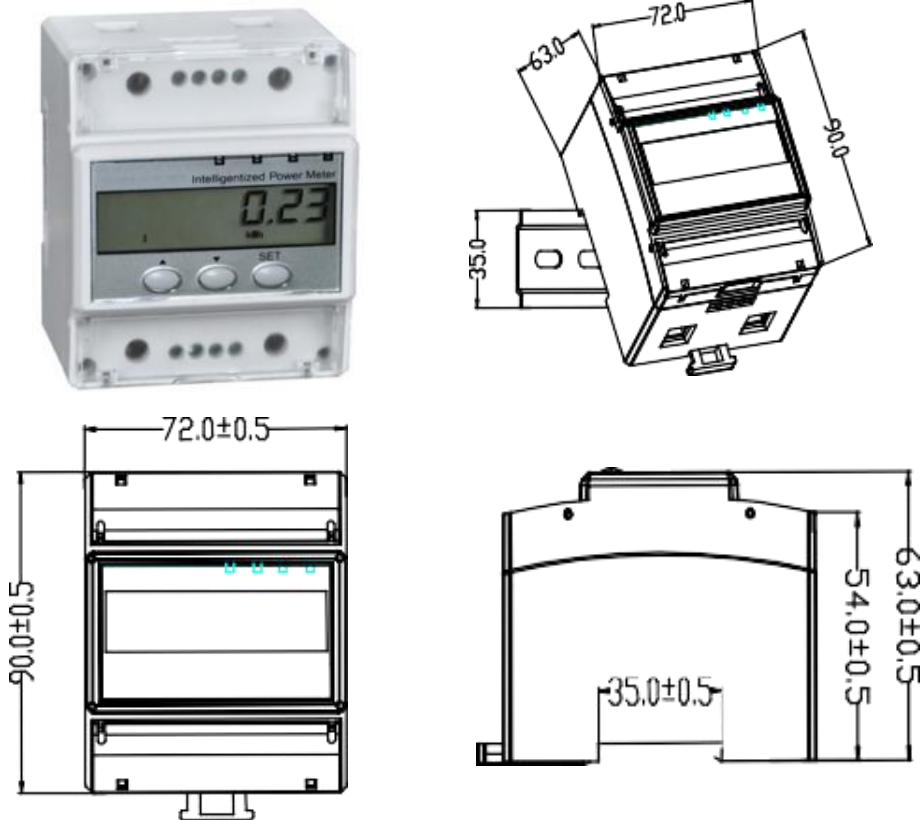
Reference Humidity: 40% ~ 60%RH

Working temperature: -20C°~50C°

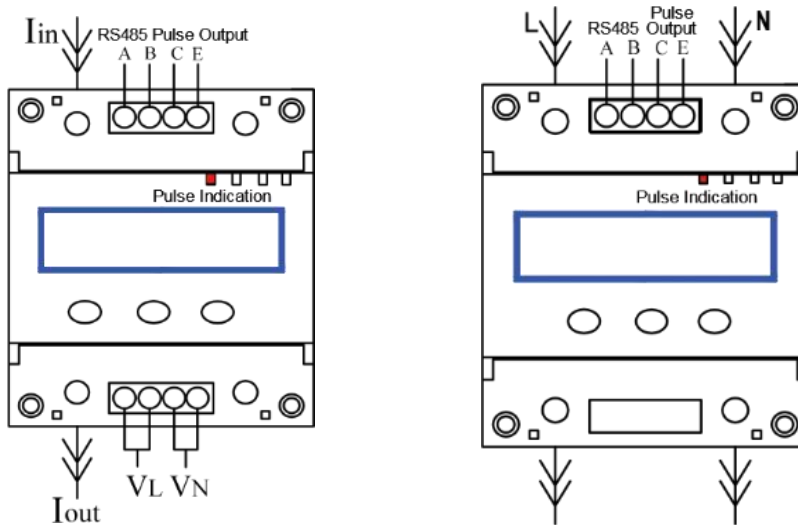
Storage Temperature: -40C°~70C° with relative humidity less than 85% and no corrosive harmful substances in the air

Chapter 3 Dimension & Wiring

3.1 Dimension (Unit: mm)



3.2 Terminals & Wiring



1.5(6)A wiring diagram (CT operated) 5(40)A, 10(80)A wiring diagram(directly connected)

Chapter 4 Communication Interface

The meter is equipped with one communication interface. The settable baud rates of RS485 communication are 1200bps, 2400bps, 4800bps, 9600bps, 19200 bps. The default is 2400bps. The programming parameter settings and data reading can be completed with PC with RS485 communication interfaces.

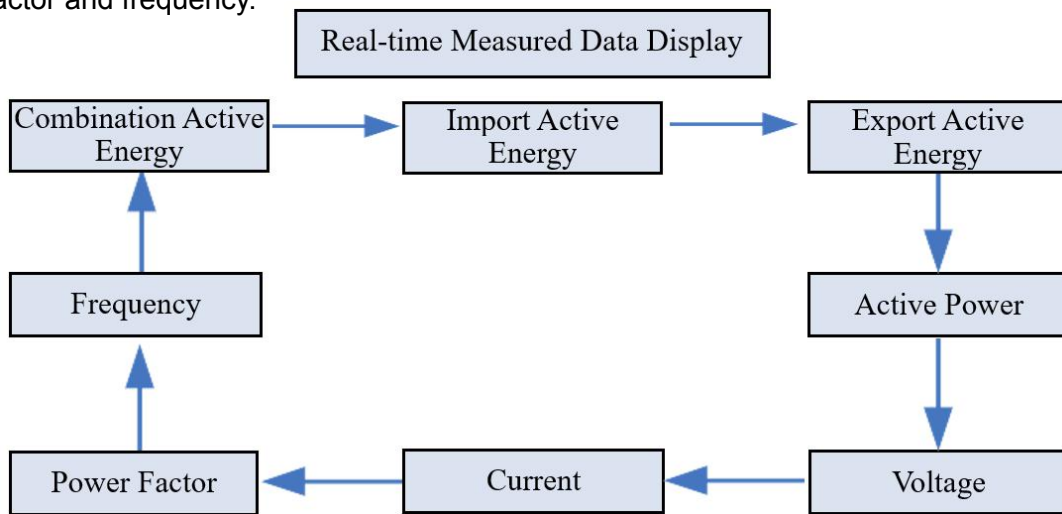
For Modbus Communication Protocol, when the last three digits of the bar code are less than 256(decimal), the last three digits are the communication protocol address for the meter. For example, if the bar code is 170510201023, the communication protocol address is 023.

While when the last three digits of the bar code are more than or equal to 256(decimal), the last three digits of the bar code should be converted into hexadecimal, whose last two digits are the Modbus communication protocol address. For example, if the bar code is 170510300920, the communication protocol address is 98(hexadecimal)/152(decimal).

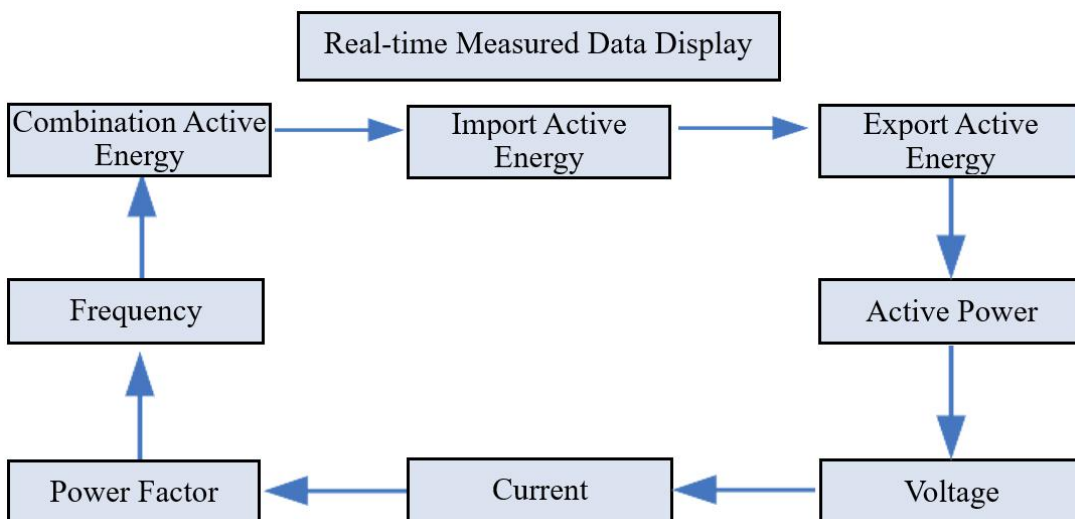
Chapter 5 Meter Display & Operation

5.1 Operation and Buttons

The display interface is composed of LCD display screen, 3 buttons and 1 LED pulse light indicator. Press buttons “▲” and “▼” to cyclically switch interfaces of active energy, power, voltage, current, power factor and frequency.



Press button “SET” to enter setting interfaces, in which PT/CT settings can be saved. But the display data of voltage, current etc. does not make the appropriate multiplication.



Press button “▲” to increase values of passwords, baud rates, baud rate, PT/CT etc. Press button “▼” to shift digits.

5.2 Digits and Symbols Display

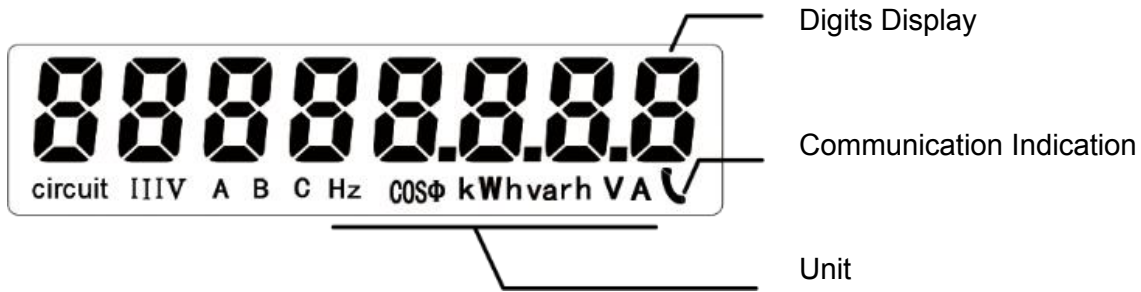









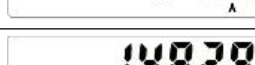

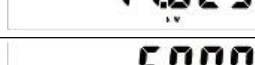




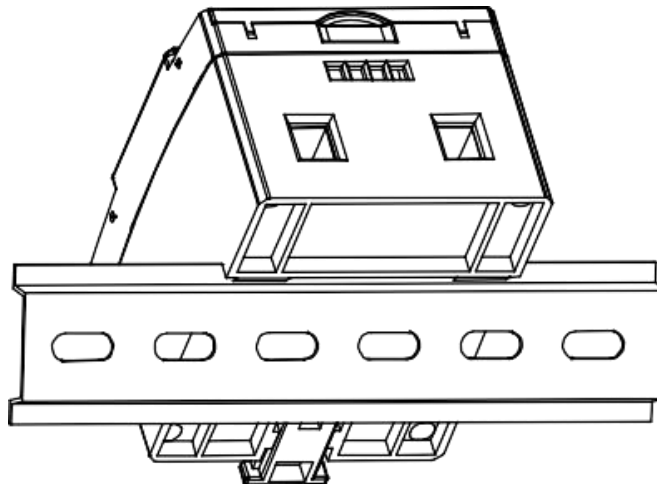
Figure 1 LCD Display Interface Reference Diagram

LCD Display	Description	LCD Display	Description
	Password 3366		Import Energy
	High 6-digit for DL/T645		Export Energy
	Low 6-digit for DL/T645		Voltage
	Baud Rate and Parity		Current
	PT Voltage Ratio		Active Power
	CT Current Ratio		Frequency
	Combination Energy		Power Factor

Chapter 6 Installation

Installation Methods:

Standard DIN 35mm installation.



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 8 Contact Us

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