

1 Product Introduction

The HPA, HPZ606 digital ampere-meter and voltmeter are designed to meet the requirements of three-phase AC voltage and current measurement in power systems with active and passive loads. The meter is suitable for use in power systems with active and passive loads. The meter is suitable for use in power systems with active and passive loads. The meter is suitable for use in power systems with active and passive loads.

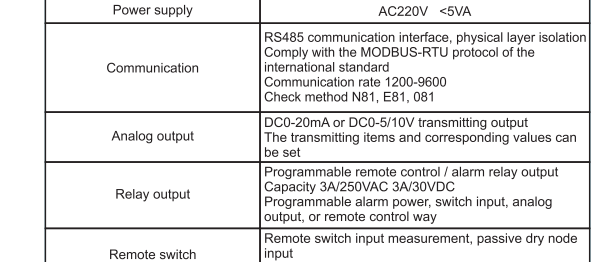
2 Function Introduction (see Table 1)

Measurement Item	Measurement Range	Resolution
Phase voltage	Three-phase voltage	0.01V
Phase current	Three-phase current	0.01A
Transmission index	0.00~1.00	0.01
Power factor	0.00~1.00	0.01
Power output	0.00~1.00	0.01
Communication	RS485 (GPIB)	Modbus-RTU

3 Technical parameters (see Table 2)

Item	Parameter	Value
Working voltage	Three-phase voltage	0~660V
Working current	Three-phase current	0~60A
Transmission index	0.00~1.00	0.01
Power factor	0.00~1.00	0.01
Power output	0.00~1.00	0.01
Communication	RS485 (GPIB)	Modbus-RTU

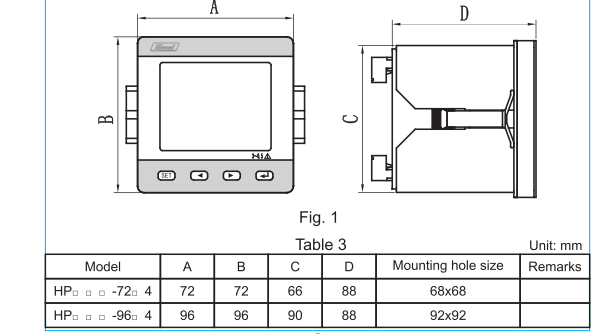
4 Installation diagram (see Fig. 2)



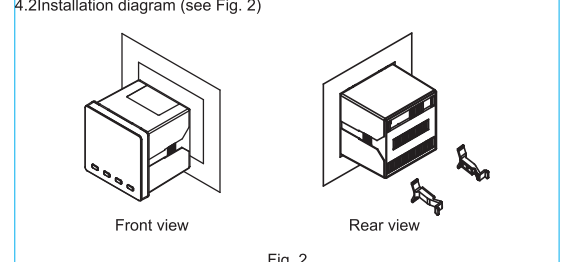
5 Terminal block function introduction (see Table 4)

Terminal	Function
1	Phase voltage
2	Phase current
3	Transmission index
4	Power factor
5	Power output

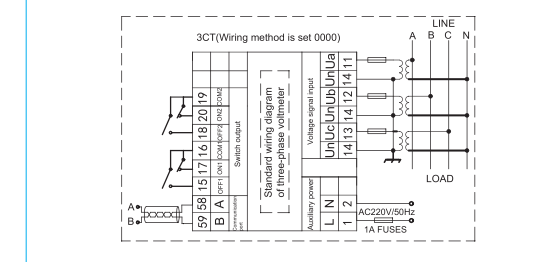
6 Basic current measurement + RS485 + Switch output (see Fig. 4)



7 Basic voltage measurement + RS485 + Switch output (see Fig. 5)



8 Basic current measurement + RS485 + Switch output (see Fig. 6)



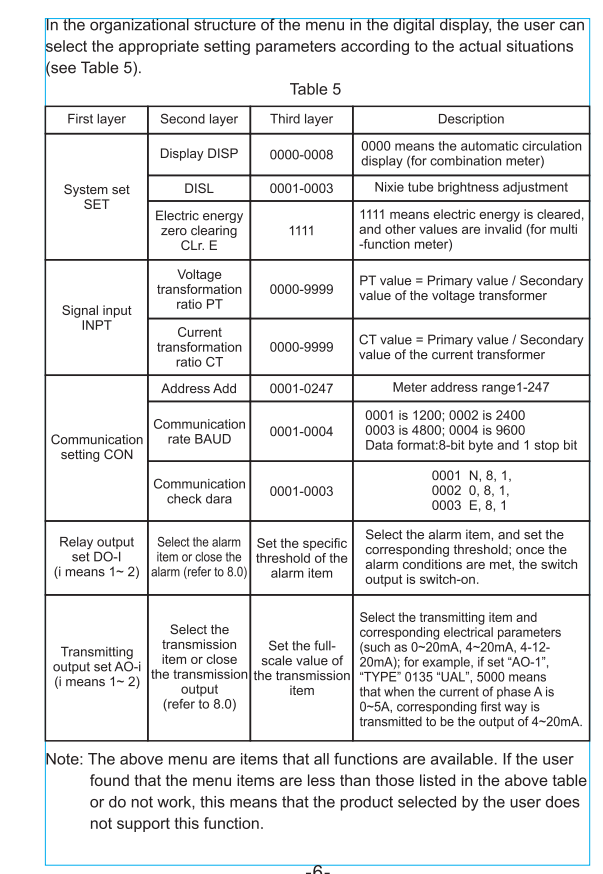
9 Programming operation

The programming operation is performed by the digital display. The meter provides three-digit display (see Fig. 7). The first two digits are the first layer of menu information. The second two digits are the second layer of menu information. For example, in Menu 1, Fig. 5, the first digit '00' is the first layer of menu information, and the second digit '00' is the second layer of menu information.

10 Communication Protocol

10.1 RS485 communication protocol: The meter uses RS485 communication protocol. The communication rate is 9600 baud. The communication distance is up to 1200m. The communication is half-duplex. The communication is asynchronous. The communication is serial. The communication is 8-bit data, parity (N), 1 stop bit. The communication is 19200 baud. The communication is half-duplex. The communication is asynchronous. The communication is serial. The communication is 8-bit data, parity (N), 1 stop bit.

11 Program setting steps (RS485, RS485, RS485) (see Fig. 8)



12 Operation instructions

12.1 Power on: Press the power key to power on the meter. The meter will display '0000'. 12.2 Power off: Press the power key to power off the meter. The meter will display '0000'. 12.3 Menu operation: Press the menu key to enter the menu. The meter will display the menu information. 12.4 Data operation: Press the data key to enter the data. The meter will display the data information.

13 Data query

13.1 Data query: Press the data key to query the data. The meter will display the data information. 13.2 Data query: Press the data key to query the data. The meter will display the data information.

14 Power Introduction and Wiring Information Display

14.1 Power Introduction: The meter provides three-phase voltage and current measurement. The meter is suitable for use in power systems with active and passive loads. 14.2 Wiring Information Display: The meter provides three-digit display. The first two digits are the first layer of menu information. The second two digits are the second layer of menu information.

15 Communication Protocol

15.1 RS485 communication protocol: The meter uses RS485 communication protocol. The communication rate is 9600 baud. The communication distance is up to 1200m. The communication is half-duplex. The communication is asynchronous. The communication is serial. The communication is 8-bit data, parity (N), 1 stop bit.

16 Data query

16.1 Data query: Press the data key to query the data. The meter will display the data information. 16.2 Data query: Press the data key to query the data. The meter will display the data information.

17 Data query

17.1 Data query: Press the data key to query the data. The meter will display the data information. 17.2 Data query: Press the data key to query the data. The meter will display the data information.

18 Communication parameter address table (see Table 15)

Address	Parameter	Value
0000	Phase voltage	0.01V
0001	Phase current	0.01A
0002	Transmission index	0.01
0003	Power factor	0.01
0004	Power output	0.01

19 Communication parameter address table (see Table 16)

Address	Parameter	Value
0000	Phase voltage	0.01V
0001	Phase current	0.01A
0002	Transmission index	0.01
0003	Power factor	0.01
0004	Power output	0.01

20 Function introduction

20.1 Phase voltage: The meter provides three-phase voltage measurement. The meter is suitable for use in power systems with active and passive loads. 20.2 Phase current: The meter provides three-phase current measurement. The meter is suitable for use in power systems with active and passive loads.

21 Data query

21.1 Data query: Press the data key to query the data. The meter will display the data information. 21.2 Data query: Press the data key to query the data. The meter will display the data information.

22 Power Introduction and Wiring Information Display

22.1 Power Introduction: The meter provides three-phase voltage and current measurement. The meter is suitable for use in power systems with active and passive loads. 22.2 Wiring Information Display: The meter provides three-digit display. The first two digits are the first layer of menu information. The second two digits are the second layer of menu information.

23 Communication Protocol

23.1 RS485 communication protocol: The meter uses RS485 communication protocol. The communication rate is 9600 baud. The communication distance is up to 1200m. The communication is half-duplex. The communication is asynchronous. The communication is serial. The communication is 8-bit data, parity (N), 1 stop bit.

24 Data query

24.1 Data query: Press the data key to query the data. The meter will display the data information. 24.2 Data query: Press the data key to query the data. The meter will display the data information.

25 Data query

25.1 Data query: Press the data key to query the data. The meter will display the data information. 25.2 Data query: Press the data key to query the data. The meter will display the data information.

26 Power Introduction and Wiring Information Display

26.1 Power Introduction: The meter provides three-phase voltage and current measurement. The meter is suitable for use in power systems with active and passive loads. 26.2 Wiring Information Display: The meter provides three-digit display. The first two digits are the first layer of menu information. The second two digits are the second layer of menu information.

27 Communication Protocol

27.1 RS485 communication protocol: The meter uses RS485 communication protocol. The communication rate is 9600 baud. The communication distance is up to 1200m. The communication is half-duplex. The communication is asynchronous. The communication is serial. The communication is 8-bit data, parity (N), 1 stop bit.

28 Data query

28.1 Data query: Press the data key to query the data. The meter will display the data information. 28.2 Data query: Press the data key to query the data. The meter will display the data information.

29 Data query

29.1 Data query: Press the data key to query the data. The meter will display the data information. 29.2 Data query: Press the data key to query the data. The meter will display the data information.