

42L20

Overall dimension:120x120mm Opening overall:111x111mm



## The manual of Jingying panel meters and electrical panel meters

### Uses and applications:

This series of meters is a direct imitation of power measurement display instruments, measuring DC current and voltage, AC current and voltage, frequency, power factor, phase sequence, power, synchronization instructions and other non-power measurements. It has been widely used in a variety of AC and DC transmission and distribution systems, power control panels and other electrical devices, in the industries of maritime shipping, rail transport, chemical flameproof, low voltage equipment, construction equipment, generators, machinery equipment, etc. Being able to make electrical measurement and non-power measurement, it is a high-end instrument applied in general environmental conditions.

### Standards and certifications:

The Jingying series of pointer meter is produced on the standard of GB/T7676-1998, and the digital meter is on the standard of GB/T22264-2008. Its safety performance is on the standard of GB4793 and IEC61010. The dial scale line and the pointer is designed to meet the German standards of DIN43790 and DIN43802. The shape and hole size of the meter is on the standards of GB/T1242 and IEC61554. All the products of Jingying meters Company have gone through the national CE certification, and have got ISO: 9001 certification.

### The outer casing of the panel meter:

The base of the series of JY meters is made of TBT flame-retardant plastic, and its vicat temperature is 130°C. The outer shell is made of ABS flame-retardant plastic, and its vicat temperature is 85°C.

### Changes caused by the temperature:

Temperature range for reference: 23°C±2°C, 13°C~23°C, and 23°C~33°C. The changes caused by the impact of temperature are not allowed to be out of the range of the level index ±100%.

### The installation:

Unless specified, the meter is usually installed in a vertical position. Other installation positions such as horizontal and inclined position can be installed according to the customer's requirements.

**JYINS<sup>®</sup>**

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The corresponding level of accuracy is only valid to the regulated installation position. The meter has two kinds of instruction angles: right angle 90° and wide angle 250°.

## **Anti-vibration and anti-shock:**

Anti-vibration: complies with the standard of IEC60068-2-6; frequency sweep range: 10-55-10Hz; displacement amplitude:  $\pm 0.15\text{mm}$ ,  $\pm 0.3\text{mm}$ ; frequency sweep cycles: 5 times; sweep rate: 10ct/min; maximum acceleration:  $147\text{m/s}^2$  (15g),  $490\text{m/s}^2$  (50g); RMS acceleration: 6.06g; vibration time: 15 min. Anti mechanical shock: complies with the standard of IEC60068-2-27.

## **Accuracy level:**

The JY series of pointer meter: AC and DC voltmeter and ammeter to the level of 1.5 or 2.5, power meter to the level of 2.5, frequency meter to the level of 2.5, and power factor meter to the level of 2.5.

## **Overload ammeter:**

The conventional overload multiple times should be once or twice, and it can be customized to once, twice, 3 times and so on according to the user's requirements. Its function is to indicate the approximate transient overload current value, such as the start-up current when the motor starts, and so on.

## **Extrinsic current shunt:**

The voltage specifications of the extrinsic current shunt of DC ammeters are 150mV、100mV、75mV、60mV and 50mV, which can be customized. The resistance of the conducting wire connecting the meter and the current shunt should be within the range of 15~25 $\Omega$ , to ensure the accuracy of the meter.

## **The surface of the dial:**

The surface of the dial uses aluminum alloy, white paint, black ink printing or laser printing. The dial can be customized according to the customer's sample dials (overprint colors can be customized). The luminous dial uses the PC panel.

## **Zero regulator:**

Except the reading meters without mechanical zero, all other meters have pre-positive zero regulator, used to adjust the meter's mechanical zero.

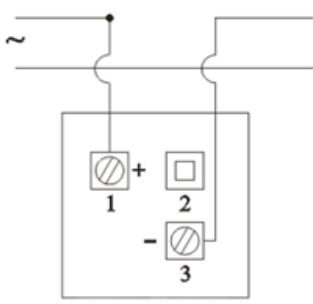
## **Benefits of the product (the dial can be replaced):**

For the JY series of pointer meter, you can open the sealing, insert or outer the dial. As for the AC ammeter, as long as the secondary current of the transformer is the same, you can replace the dial with the accuracy unchanged. As for the DC ammeter, as long as the shunt output signal or the meter input signal is the same, you can replace the dial even if the meter is of different specifications, with the accuracy unchanged.

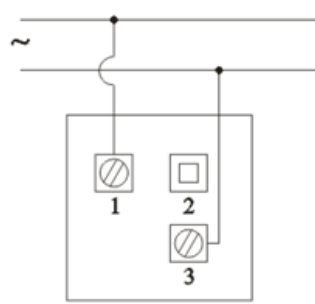
## The more technical data

Name		precision	normal specification	remark
AC ammeter	A	1.5	0.5-50A	can be directly connected
	A	1.5	10/5A-800/5A	secondary current passed by current transformer
	KA	1.5	1KA-10KA	secondary current passed by current transformer
AC voltmeter	V	1.5	10V-600V	can be directly connected
	KV	1.5	1KV-35KV	100V secondary voltage passed by voltage transformer
DC ammeter	$\mu$ A mA	2.5	50 $\mu$ A-500 $\mu$ A 1mA-500mA	can be directly connected
	A	1.5	1A-15A	can be directly connected
	A	1.5	15A-750A	outer attached shunt 75mV 60mV 50mV
	KA	1.5	1KA-3KA	outer attached shunt 75mV 60mV 50mV
DC voltmeter	V	1.5	3V-600V	can be directly connected
	KV	1.5	1KV-3KV	outer attached resistance value
Hz meter	Hz	2.5	45-55HZ 55-65HZ	36V.100V.127V.220V.380V
Power meter	KW.VAR	2.5	100V 380V 380-380KV	100V secondary voltage passed by voltage ; Secondary current passed by current transformer 5-10KA/5A
cos $\phi$ meter	cos $\phi$	2.5	COS $\phi$ =0.5-1-0.5	100V/5A 220V/5A 380V/5A

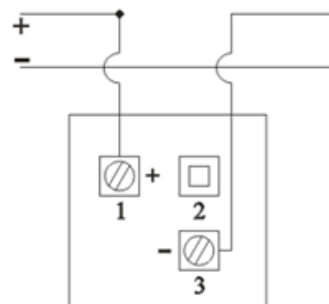
## Wiring scheme:



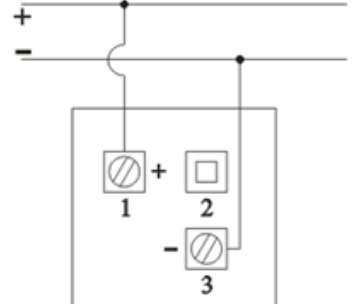
AC Ammeter



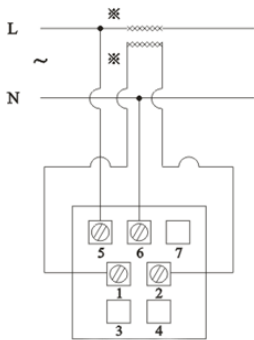
AC Voltage meter



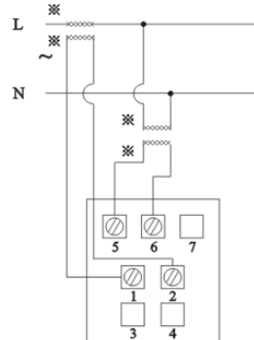
DC Ammeter



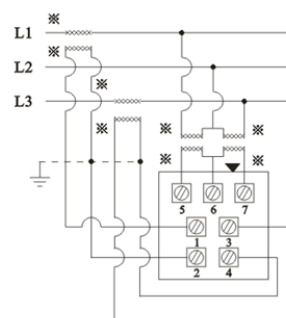
DC Voltage meter



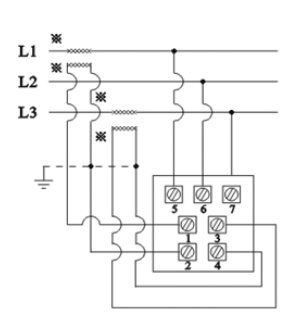
Single-phase Power Meter with Current transformers



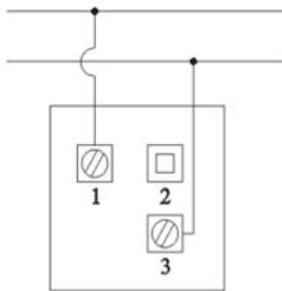
Single-phase Power Meter with Current and Voltage transformers



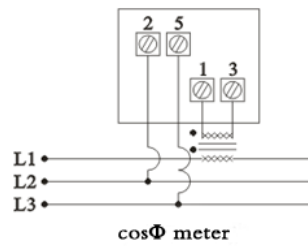
Three phase three wire Active Power and Reactive Power Meter with Current and Voltage transformers



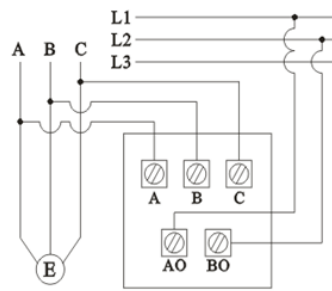
Three phase three wire Active Power and Reactive Power Meter without current and voltage transformers



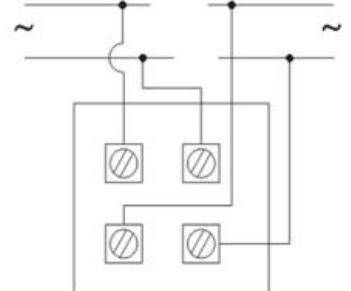
Hz meter



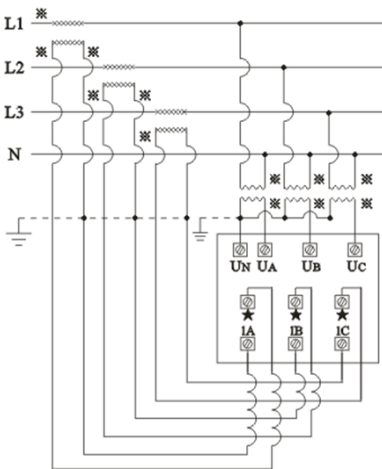
cosΦ meter



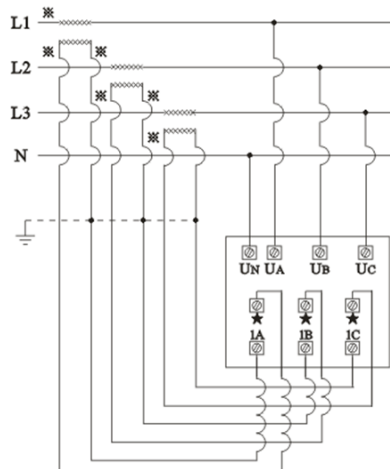
Synchronoscope



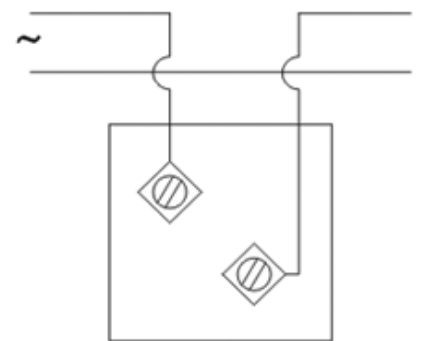
Two rows frequency meter



Three phase three wire power meter with current and voltage transformers



Three phase three wire power meter without current and voltage transformers



Maximum demand meter

**Outline and Installation Dimensions:**

