

**Operation Manual of
ZN4735 Series Digital Panel Meter
(AC/DC Voltmeter, Ammeter)**



Beijing Symore Technology Development Co., Ltd.

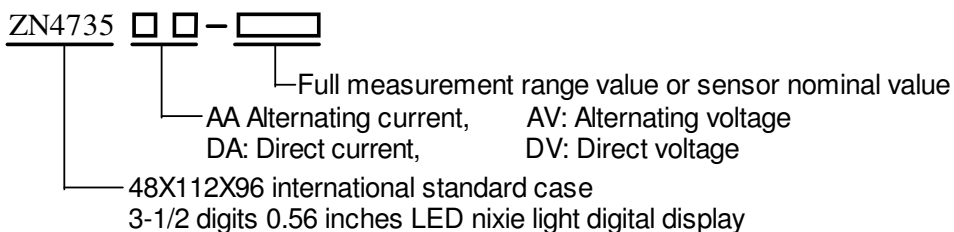
I. Product Introduction

ZN4735 Series Digital Panel Meter is digital type electronic measure meter. With 48X96X112mm international standard cases, 3-1/2 digits, 0.56 inches LED display, special large-scale integration (LSI) circuit, and reasonable element and components disposition, this kind of quality product has a features of high reliability and stability, excellent cost performance. It is very suitable to use as digital display for various digital types of instruments and devices.

ZN4735 series of digital panel meter can be used directly in measure alternating and direct voltage and current. If matches with inductance transformer it can measure 5-2000 A alternating current, matches current divider, it can measure 2-2000A direct current. Directly join with three-wire system Pt100 and Cu50 resistance sensor, measure temperature. Match standard signal transmitter to be used to measure temperature, humidity, acidity, pressure, liquid level, displacement etc. All measure signals can be converted to standard signal (4-20 mA, 0-10 mA, 1-5 V and 0-5 V) to transmit output.

For some models frequently use, for example the AC 5A, DC 75mA, DC4-20mA models, the measurement range can be customized by users.

II. The Product Denomination



III. Technical Specification

Upper Reading	±1999; effective value for AC type meter
Digital Display	4 digits 0.56 inches LED
Sampling Speed	DC type-1 Second, AC type-3 Seconds
Overflow Display	1 or -1
Isolation Voltage	AC1500V between Input and power source terminals
Power Source	AC220V±10% 50Hz
Power Consumption	less 3W
Weight	300g
Overall Size	48X96X112 mm
Mounting Hole Size	44 ^{+0.5} X92 ^{+0.7} mm
Ambient Temperature	0-50℃
Relative Humidity	小于 85%

IV. ZN4735 Series Product Specifications

1. AC Ammeter

Model	Measurement Range	Input Mode	Accuracy	Input Impedance	Remarks
4735AA-0.02	0-19.99mA	Direct Input	1%	10Ω	
4735AA-0.2	0-199.9mA			1Ω	
4735AA-2	0-1.999A			0.05 Ω	
4735AA-XX/5A	0- (199-1999)	Current Transformer		0.05 Ω	Measurement Range Customized

2. AC Voltmeter

Model	Measurement Range	Input Mode	Accuracy	Input Impedance	Remarks
4735AV-0.2	0-199.9mV	Direct Input	1%	100KΩ	
4735AV-2	0-1.999V			100KΩ	
4735AV-20	0-19.99V			1MΩ	
4735AV-200	0-199.9V			2MΩ	
4735AV-500	0-500V			2MΩ	
4735AV-XX/100V	0- (199-1999)	Voltage Transformer		1MΩ	Measurement Range Customized

3. DC Ammeter

Model	Measurement Range	Input Mode	Accuracy	Input Impedance	Remarks
4735DA-0.02	0-19.99mA	Direct Input	0.5%	10Ω	
4735DA-0.2	0-199.9mA			1Ω	
4735DA-2	0-1.999A			0.1 Ω	
4735DA-XX/75mA	0- (199-1999)	DC divider		100KΩ	Measurement Range Customized

4. DC Voltmeter

Model	Measurement Range	Input Mode	Accuracy	Input Impedance	Remarks
4735DV-0.02	0-199.9mV	Direct Input	0.5%	100MΩ	
4735DV-0.2	0-1.999V			100MΩ	
4735DV-2	0-19.99V			100MΩ	
4735DV-20	0-199.9V			1MΩ	
4735DV-200	0-200V			2MΩ	
4735DV-500	0-500V			2MΩ	
4735AV-XX/100V	0- (199-1999)	Voltage Transformer		1MΩ	Measurement Range Customized

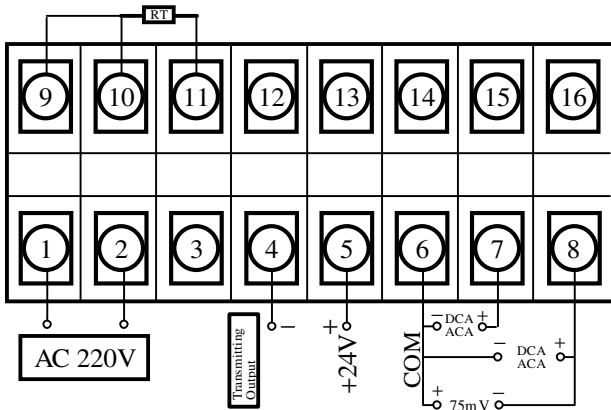
5. Standard Signal Meter

Model	Measurement Range	Input Mode	Accuracy	Input Impedance	Remarks
4735DA- (4-20mA)	0- (199-1999)	Connect to Transmitter	0.2%	10Ω	Measurement Range Customized
4735DA- (0-10mA)				10Ω	
4735DV- (1-5V)				1MΩ	
4735DV- (0-5V)				1MΩ	

6. Temperature

Model	Measurement Range	Input Mode	Accuracy	Input Impedance	Remarks
4735Pt100- (X-X°C)	-200.0-+600.0°C	Direct	0.2%	lead wire <20Ω	Three Wire System
4735Cu50- (X-X°C)	-50.0-+150.0°C	Input			

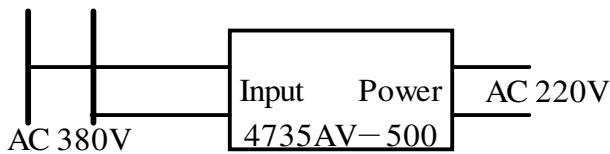
V. Products Wiring Diagram



VI. Application Illustrations

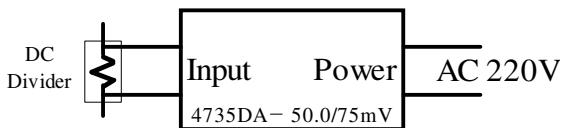
1. Measurement of the AC voltage: 0-380V

Use model 4735 AV-500 meter with its measurement range of 0-500V to direct measure (see picture).



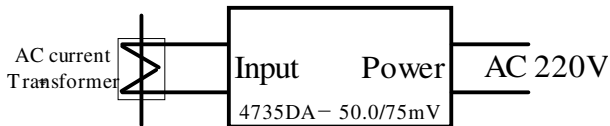
2. Measurement of the DC current: 0-50A

Select the model 50A/75mV DC current divider and the model 4735DA-XX/75mA customized measurement range meter (nominal range is 50.0A) to measure. (See picture);



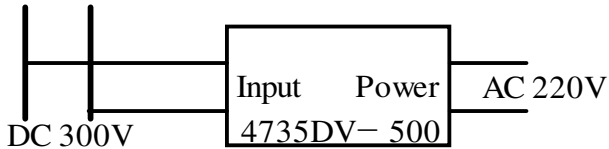
3. Measurement of the AC current: 0-130A

Select the model 150A/50A AC current transformer and the model 4735AA-XX/5A customized measurement range meter (nominal range is 150.0A) to measure. (See picture);



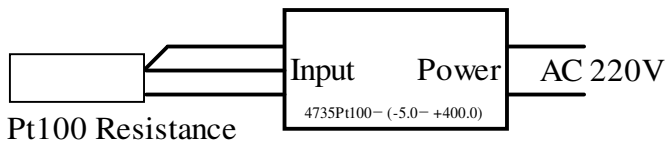
4. Measurement of the DC voltage: 0-300V

Use model 4735 DV-500 meter with its measurement range of 0-500V to direct measure (see picture).



5. Measurement of the Temperature: -50°C--+400°C

- (1) Use Pt100 platinum resistance sensor.
- (2) Select the model 4735 Pt100-(-50.0--+400.0) meter;
- (3) Connect the Pt100 platinum resistance sensor directly to the three-wire system input terminals (see picture)



VII. Notes:

1. Don't connect the AC 220V power source to other terminals
2. Should avoid strong electromagnet interference, the measurement wires must use the shielding wires or twisted wires.
3. Avoid the exquisite impact and vibration.

VIII. Trouble Shooting

1. Nixie tubes no lights, should inspection:
 - A. AC power connected to the terminals ①, ②;
 - B. The voltage is normal or not.
2. The digit numbers unstable, should inspection:
 - A. strong electromagnet interference;
 - B. Power supply stability
3. Only display digits 1 or -1, others no light, should inspection:
 - A. Whether the input terminals is open for voltmeter;
 - B. Whether the input voltage or current signal is over maximum range.