

Economy Digital Frequency Meter

Please read through the manual before installment and operation

Chapter 1. General Introduction

This series digital display meters are a new generation of frequency meters, which are mainly used in the real-time measurement and indication on frequency in an electric circuit. With features of high precision, good stability, calibration-free long-term operation, it is an idea substitute of traditional dial instrument or ordinary digital instrument.

This series of meter features a modular design by utilizing large-scale integrated circuit, high-performance single microprocessor, digital signal processing technology and SMT techniques. The calibrating potentiometer inside the meter is cancelled and soft calibration is adopted instead. The modular and uniform design mode substantially reduces the production costs of the meter, which makes it highly cost-effective.

Chapter 2. Technical parameters

1. Measuring range: 30~99Hz
2. Signal input: 30~500V
3. Accuracy rating: $\pm 0.5\%$ FS ± 1 digit
4. Sampling rate: about 1 times/s
5. Overload: consistent 1.2 times, instantaneous 2 times/30s
6. Measuring display mode: RMS measurement, four-digit LED nixietube display
7. Display resolution: Max. display resolution of frequency: 0.01Hz
8. Input circuit consumption: $< 0.5\text{VA}$
9. Auxiliary power supply: AC 220V $\pm 10\%$ 50/60Hz
10. Auxiliary supply consumption: $< 3\text{VA}$
11. Overflow indication: Displaying character "0000"
12. Operational environment: free of corrosive gas with temperature of $-10\sim 50^{\circ}\text{C}$, and humidity 85%RH.

Chapter 3. Installment and connection

1. Shape and cutout hole dimension (unit: mm)

Shape	Panel dimension		Case dimension			Cutout hole dimension	
	W	H	W	H	D	W	H
120×120square	120	120	110	110	80	112	112
96×96square	96	96	90	90	80	92	92
80×80square	80	80	74	74	80	76	76
72×72square	72	72	66	66	80	68	68
48×48square	48	48	44	44	70	45	45
96×48groove	96	48	44	44	80	92	45

2. Method of installation

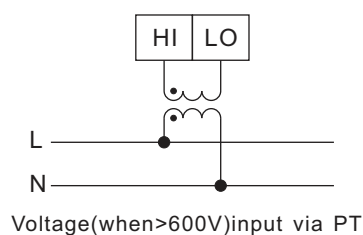
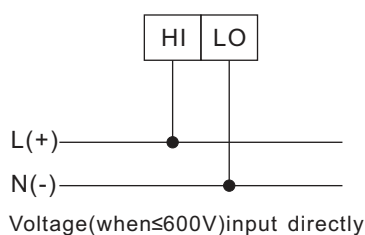
Choose the corresponding hole cutout dimension from the table above, make a hole in the installation screen, insert the instruments into the hole, place the two clamping pieces into the clamping holder and push and tighten them by hand.

3. Terminal arrangement and function declaration of instrument (please accord to the one of instrument case)

3.1 Auxiliary power supply (POWER): The voltage range of operation is AC 220V, 50/60Hz. It is suggested to install a fuse of 1A beside of the live wire when using the AC power supply to prevent damaging the instrument. In the areas with poor power quality, the surge suppressor and quick pulse group suppressor should be installed in the power supply circuit.

Electrical quantity signal input (I input): HI represents “+” port of DC input signal, live wire terminal of AC voltage input signal and inlet wire terminal of AC current input signal. Input voltage should not be higher than the maximum value (AC 600V, or you should consider of using PT and installing fuse of 1A on voltage input port. While the current is higher than AC 10A, you should consider of using CT)

3.2 Typical connection



Chapter 5. Cautions

1. Please confirm if the power supply, input signal and each terminal wiring of the meter are correct and reliable before applying the power.
2. The instrument must be preheated for 15 minutes to guarantee the precision of measurement.
3. The instrument should not be rapped, knocked and vibrate excessively and its using environment should meet the technical requirements.
4. The meter has been calibrated according to the measuring range required by the customer upon order. The user should check once again if the measuring range of the meter is fit with the specifications of the transformer and set the measuring range again if not.

Chapter 6. Packing and Storage

The instrument and accessories with packing should keep storage conditions cool and dry and free of wet and corrosive gas with temperature not more than 70°C and not less than -40°C, and relative humidity ≤ 85%RH.