

# DTS722/DSS722

## DIN-RAIL THREE PHASE ELECTRONIC METER USER MANUAL

**Model DTS722/DSS722** three phase DIN-rail mount electrical meter is a totally electronic type of meter,using advanced digital sampling.

The meters conform to the relative requirements of National Standard GB/T17215 321-2008 and international Standard IEC61036.

The meter is used for measuring active energy power consumption at a frequency Of 50HZ or 60 HZ three phase alternating current. It can accurately measure forward and reverse active energy consumption.

Features: Reliability, Small size, Light weight, 35mm DIN rail mounting.

The meter should be installed indoors. The operational environment conditions should be as follow:

Ambient temperature is -25℃ TO 55℃ ,

Relative humidity not more than 95%.

Clear of corrosive gas or any influence of dust, mold and insects etc.

### Basic specifications and main technical parameters:

#### Specifications

| Name                                          | Model                          | Class of Precision | Rated Voltage UB      | Rated current (A)                                                                     |
|-----------------------------------------------|--------------------------------|--------------------|-----------------------|---------------------------------------------------------------------------------------|
| 3 phase 4 wire active energy electronic meter | <b>DTS722</b><br><b>DSS722</b> | 1                  | 57.7/100V<br>220/380V | 5CT 3(15),5(30),5(60)<br>5(65),5(100),10(30)                                          |
|                                               |                                | 2                  | 230/400V<br>240/425V  | 10(40),10(50),10(60)1<br>0(63),10(100),20(80),1<br>5((90),20(100),<br>25(100),30(120) |

**Remark:** In the column of Rated Current,the value before the bracket is demarcated current.

Value Ib,and the value in the bracket is the maximum current I max.

### Technical parameter

With balanced loads

| Current Value     |                       | Power factor ( COS) | Errors limits of ( percentage (%) |        |
|-------------------|-----------------------|---------------------|-----------------------------------|--------|
| Direct Connection | Connection Through CT |                     | Class1                            | Class2 |
| 0.05Ib            | 0.02Ib                | 1.0                 | ±1.5                              | ±2.5   |
| 0.1Ib             | 0.05Ib                | 0.5L                | ±1.5                              | ±2.5   |
|                   |                       | 0.8C                | ±1.5                              | —      |

|             |              |      |           |           |
|-------------|--------------|------|-----------|-----------|
| 0.1Ib-I max | 0.05Ib-I max | 1.0  | $\pm 1.0$ | $\pm 2.0$ |
| 0.2Ib-I max | 0.1Ib-I max  | 0.5L | $\pm 1.0$ | $\pm 2.0$ |
|             |              | 0.8C | $\pm 1.0$ | —         |

With single phase load

| Current value     |                       | Power factor<br>( $\cos \phi$ ) | Errors limits of percentage (%) |           |
|-------------------|-----------------------|---------------------------------|---------------------------------|-----------|
| Direct Connection | Connection Through CT |                                 | Class 1                         | Class 2   |
| 0.1Ib-I max       | 0.05Ib-I max          | 1.0                             | $\pm 2.0$                       | $\pm 3.0$ |
| 0.2Ib-I max       | 0.1Ib-I max           | 0.5L                            | $\pm 2.0$                       | $\pm 3.0$ |

### Starting

The dial runs continuously when the meter is in operation at the rated voltage /frequency and  $\cos \phi = 1.0$ , and when current load is as follows

| Connecting mode  | Class 1 | Class 2 |
|------------------|---------|---------|
| direct           | 0.004Ib | 0.005Ib |
| With transformer | 0.002Ib | 0.003Ib |

### Creeping

When the voltage is applied with no current flowing in the current circuit, the test output of the meter will not produce more than one pulse.

### Insulation Performance

- The meter can withstand impulse voltage waveform 1.2/50 $\mu$ s.  
Peak value 6KV.
- All circuit insulating earthing of the meter can withstand AC voltage 2KV /50Hz sine Wave / 1 minutes.

**Working voltage limit:** 70-130% UB

**Power consumption:**  $\leq 2W$  and 10VA/phase

### Installation and usage:

- The meter can be installed and operated if the letterpress seal is intact. If the seal is broken or missing or if the unit has been in storage for long periods re-calibration may be required.
- Care should be taken when removing the meter from package material.
- The meter should be installed by a qualified person after reading the user manual.
- The meter should be installed in a fire resistant, stable, well ventilated, dry environment.
- The meter must be installed in a protective box if mounted in a dusty environment.
- Wiring must be as per diagram on meter case body or the connecting drawing in the user manual. ensure all connections are secure and tight.
- When meter is correctly connected to the supply the meter power indication light will be on.

### Usage Explain

- In areas of thunderstorm activity protection against lightning is required.
- The load capacity of the meter is between 0.05lb-1max(Direct) or 0.02lb-1max(with transformer). If the capacity exceeds this then inaccuracy and overheating could occur.
- If the meter is connected with CT the total energy consumption will be the indicated reading multiplied by the CT ratio.
- Data display: Step type pulse counter display
- Phase present indication lights are fitted. If the phase is missing the associated light will be out
- Pulse indication: When connected and under load the pulse indicator light will flash.
- Reverse direction indication: If load is reversed the Reverse direction indicator light will be on
- Terminal 15 and Terminal 16(so)is pulse signal output.

### Test mode:

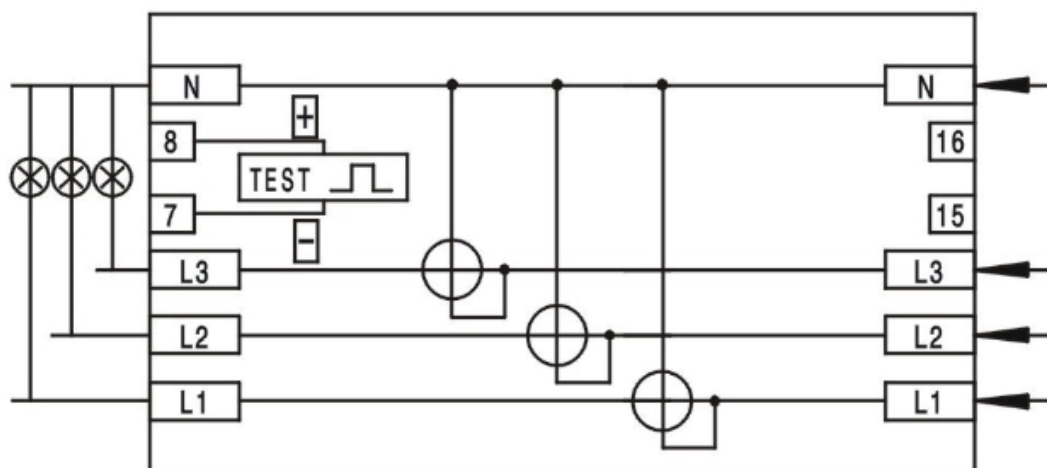
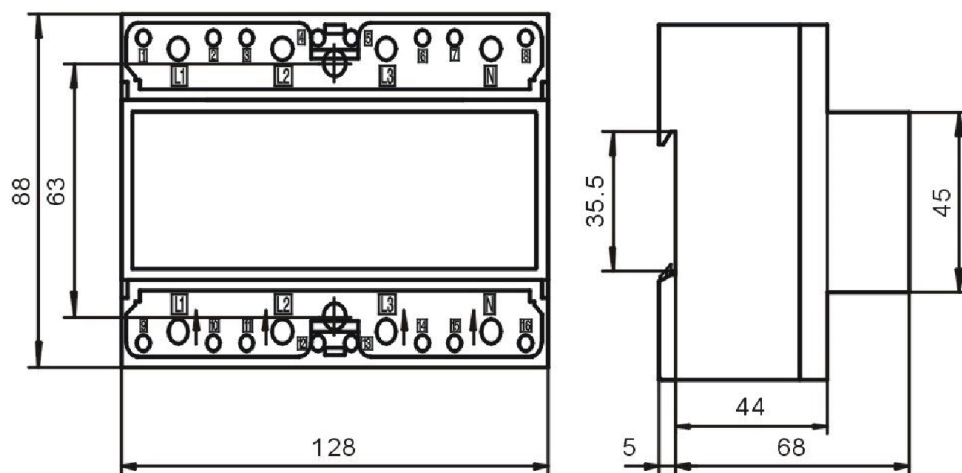
The meter has an energy impulse output port located on terminal 7 & 8, connect test device +5V DC terminal 8 (Anode) ,connect signal wire to terminal 7 (cathode)

### Transport and storage:

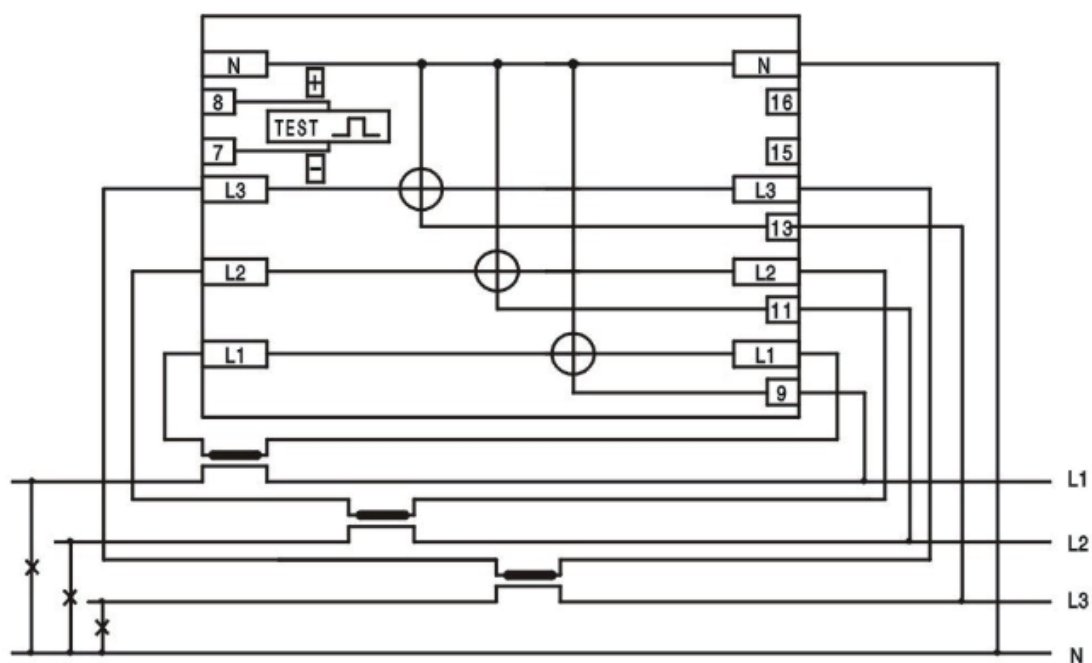
- The meter should not be shaken or dropped.
- The meter must be stored in the original packing box and the environmental temperature should be between -30°C- +65°C. Relative humidity should not exceed 95%. free from any corrosive substances.

### Guarantee:

Guarantee period is 18 months from the date of manufacture provided the user has complied with all of the above.



Direct (Drawing 1)



Connect by CT( Drawing 2)