

## SOSODBBM TY310MCT DTSDU5885-100TYPE

# SOSODBBM TY310MCT DTSDU5885-100TYPE Integrated Three-Phase Multifunctional CT Meter User Manual

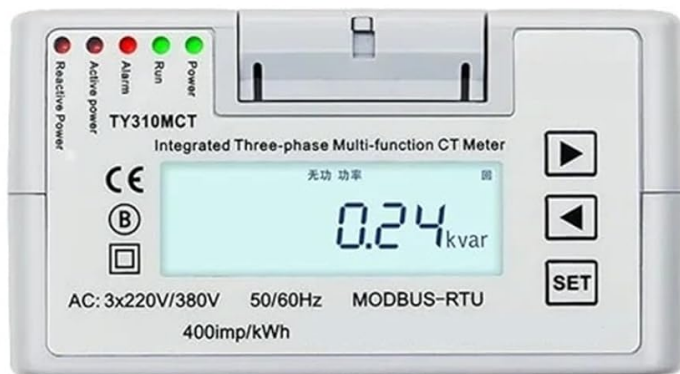
## 1. PRODUCT OVERVIEW

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The SOSODBBM TY310MCT DTSDU5885-100TYPE is an integrated three-phase multifunctional CT meter designed for accurate measurement of high current in industrial and scientific applications. This device provides precise energy measurement, features an LCD high-definition display, and supports RS485 communication for data integration.

### Key Features:

- **Integrated Design:** Combines current transformers and meter into a single unit.
- **Three-Phase Measurement:** Suitable for three-phase electrical systems.
- **High Measurement Accuracy:** Ensures reliable data for energy monitoring.
- **LCD High-Definition Display:** Clear and easy-to-read display of measured values.
- **RS485 Communication:** Enables remote data acquisition and system integration.



## Integrated Three-Phase Multifunctional CT Meter

- ✓ LCD High-definition Display Screen
- ✓ RS485 Communication
- ✓ High Measurement Accuracy



Figure 1: Front view of the Integrated Three-Phase Multifunctional CT Meter, highlighting the LCD display and RS485 communication capability.

## 2. INSTALLATION AND SETUP

Proper installation is crucial for the accurate and safe operation of the meter. Ensure all power is disconnected before proceeding with installation.

### 2.1 Mounting

The meter is designed for panel mounting or DIN rail mounting. Refer to the dimensions for appropriate space allocation.

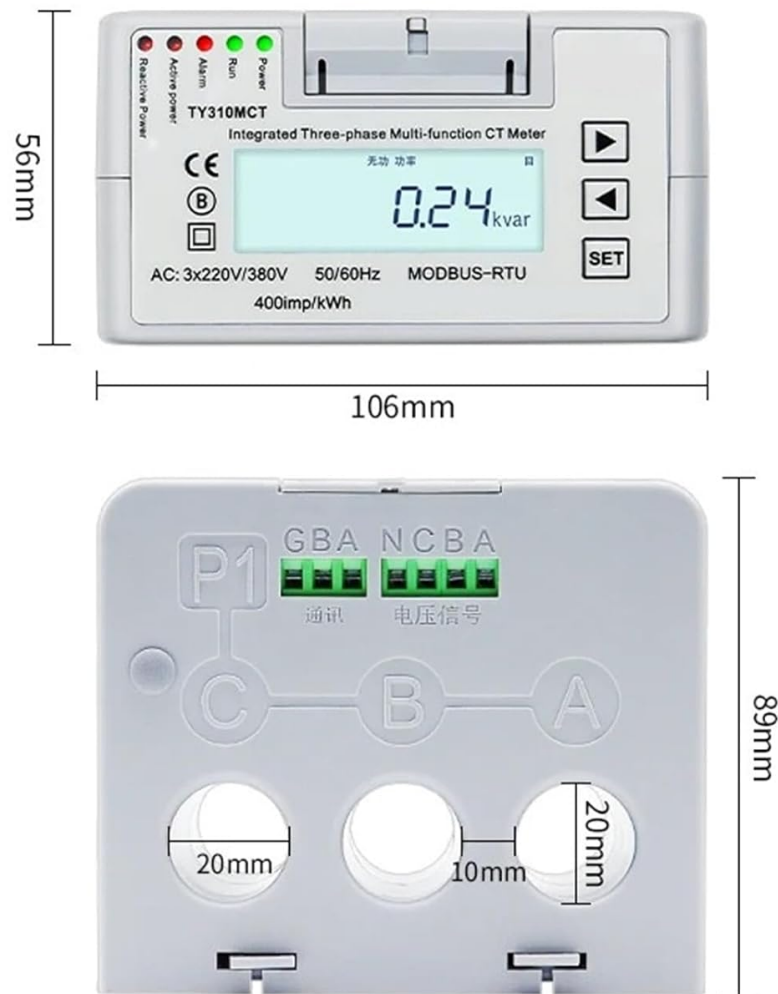


Figure 2: Dimensional drawing of the TY310MCT meter, showing overall dimensions (106mm x 56mm x 89mm) and CT aperture sizes (20mm and 10mm).

## 2.2 Wiring Connections

Connect the meter according to the following guidelines. It is a three-phase device requiring careful wiring.

1. **Power Supply:** Connect the rated voltage (3\*220/380V AC, 50Hz) to the designated terminals.
2. **Current Transformer (CT) Connections:** Route the primary conductors through the integrated CT apertures (labeled A, B, C). Ensure correct phase sequence.
3. **RS485 Communication:** Connect the RS485 communication lines (A and B) to your communication network.

**Caution:** All wiring should be performed by qualified personnel. Incorrect wiring can lead to damage to the device or electrical hazards.

## 3. OPERATION

Once installed and powered, the meter will begin displaying measurement data on its LCD screen.

## 3.1 LCD Display

The LCD displays various parameters such as active power, reactive power, voltage, current, and energy consumption (kWh). Use the navigation buttons to cycle through different display modes and parameters.

## 3.2 Button Functions

- **SET Button:** Used to enter configuration menus or confirm selections.
- **Navigation Buttons (Up/Down/Left/Right):** Used to scroll through display pages or adjust settings within menus.

## 3.3 RS485 Communication

The meter supports MODBUS-RTU protocol over its RS485 interface. Refer to the MODBUS communication protocol documentation for details on register addresses and data formats for integration with supervisory control systems.

## 4. MAINTENANCE

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The TY310MCT meter is designed for minimal maintenance. Regular checks can help ensure its longevity and accurate performance.

- **Cleaning:** Keep the meter's exterior clean and free from dust. Use a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature range (-10°C to +45°C) and humidity levels.
- **Connection Checks:** Periodically inspect wiring connections for tightness and signs of corrosion.

## 5. TROUBLESHOOTING

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If you encounter issues with your meter, refer to the following common problems and solutions:

- **No Display:**
  - Check power supply connections.
  - Verify the rated voltage is applied correctly.
- **Incorrect Readings:**
  - Ensure CT wiring is correct and conductors are properly routed through the apertures.
  - Verify phase sequence.
  - Check for external electromagnetic interference.
- **RS485 Communication Failure:**
  - Check RS485 wiring (A and B lines).
  - Verify communication settings (baud rate, parity, stop bits) match the master device.
  - Ensure the meter's MODBUS address is unique on the network.

If the problem persists, contact customer support for further assistance.

## 6. TECHNICAL SPECIFICATIONS

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Detailed specifications for the SOSODBBM TY310MCT DTSDU5885-100TYPE Integrated Three-Phase Multifunctional CT Meter:



Figure 3: Back label of the meter showing model, input current, accuracy, working voltage, communication, connection type, and date of manufacture.

| Parameter             | Value                                              |
|-----------------------|----------------------------------------------------|
| Product Name          | Integrated Three-phase Multi-functional Instrument |
| Model Number          | TY310MCT / DTSDU5885-100TYPE                       |
| Rated Voltage         | 3*220/380V AC                                      |
| Operating Frequency   | 50Hz                                               |
| Max Operating Current | 60A (variant) / 80A - 99A (general)                |
| Input Current         | AC3Φ 0.1-5 (100) A                                 |
| Current/Volt Accuracy | ±0.2%                                              |

| Parameter                      | Value                                                   |
|--------------------------------|---------------------------------------------------------|
| Energy Accuracy Class          | 0.5 ( $\pm 0.5\%$ )                                     |
| Measuring Energy Range         | 0~100 million kWh                                       |
| Phase                          | Three Phase                                             |
| Display Type                   | LCD                                                     |
| Communication Interface        | RS485 (MODBUS-RTU)                                      |
| Operating Temperature          | -10°C ~ +45°C                                           |
| Product Dimensions (L x W x H) | 106mm x 56mm x 89mm (approx. 0.39 x 0.39 x 0.39 inches) |
| Item Weight                    | 1.76 ounces                                             |
| Specification Met              | UL                                                      |

## 7. WARRANTY INFORMATION

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This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. The specific terms and duration of the warranty may vary by region and retailer. Please retain your proof of purchase for warranty claims. For detailed warranty information, refer to the documentation provided with your purchase or contact the seller directly.

## 8. CUSTOMER SUPPORT

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For technical assistance, troubleshooting, or inquiries regarding your SOSODBBM TY310MCT DTSDU5885-100TYPE meter, please contact your point of purchase or the manufacturer's customer service. Have your product model number and purchase details ready when contacting support.