



# Deye inverter

## TECHNICAL BULLETIN

## Proper Powering and Connection of Energy Meters and Current Transformers (CTs) with Deye Inverters

### Purpose

This technical bulletin provides information about the proper installation and functioning of energy meters and CTs with Deye inverters. Adhering to these guidelines will help prevent communication faults and ensure accurate energy readings.

### Key Points

#### 1. Energy Meter Powering:

- **Load Side Connection:** Energy meters must be powered from the load side of the inverter. This ensures continuous communication with the inverter even during grid outages.
- **Grid Side Connection Issue:** Powering the meter from the grid side results in a loss of communication during grid outages, leading to faults/alarms.

#### 2. Current Transformers (CTs):

- **Direct Connection:** Whenever possible, use the CTs provided with the system directly connected to the inverter without passing through an energy meter. This is the easiest and most convenient solution.
- **Extension Limitation:** The CT cables provided with the system can be extended up to a maximum of 30 meters. Extending beyond this distance will affect the accuracy of the CT readings.
- **Use of External Energy Meter:** If an extension beyond 30 meters is necessary, we advise using the external energy meter we can provide, which comes with the appropriate 40mA CTs for accurate readings.
- **CT Specifications:** The system's CTs are rated at 50mA. It is important to note that the supported and recommended energy meters require 40mA CTs. A mismatch in CT ratios will result in reading inaccuracies.

#### 3. Supported Energy Meters:

- The currently supported and recommended energy meters are:
  - 1PH: SDM120CTM and SDM230MODBUS
  - 3PH: SDM630MCT

#### 4. RS485 Wiring:

- **8kW Inverter Specifics:** For the 8kW inverter, RS485 connections should be:
  - **A (D+):** Blue-White
  - **B (D-):** Blue
- **Other Inverter Models:** For all other models, RS485 connections should be:
  - **A (D+):** Brown-White
  - **B (D-):** Brown

By following these guidelines and ensuring proper installation practices, we can achieve accurate and reliable communication between the inverters and energy meters, thereby ensuring customer satisfaction and operational efficiency. Thank you for your attention to this important matter.