

Single Phase DIN Rail Energy Meter with RS485

This three-phase rail-mounted energy meter is suited for residential billing, room rental billing, and industrial use. It can use external current transformers to extend the current measurement range up to 999A.



ADDITIONAL IMAGES



Overview

Advanced Energy Monitoring Solution

The DEM-4MC series is a versatile DIN-rail mounted energy meter designed for residential energy metering and smart energy projects. It offers seamless integration with data acquisition systems via Modbus-RTU and pulse output communication, supporting both 4G/5G and LoRa wireless transmissions. This highly integrated device provides comprehensive AC parameter measurement, including harmonic analysis and demand measurement, making it ideal for industries ranging from petrochemicals to transportation.

Key Features

Core Functionalities

- 35mm DIN rail mounting for easy installation
- Optional 2-channel relay control output
- 4-channel switch input functions
- Harmonic and unbalance analysis
- Multi-rate energy and maximum demand measurement
- Optional prepaid billing (IC card) support

Technical Performance

Measurement Accuracy

0.5 %

Voltage/Current Accuracy

1 %

Active Power Accuracy

2 %

Reactive Power Accuracy

Electrical Specifications

Input & Power Data

| Parameter | Specification |
|------------------------|--------------------|
| Rated Voltage | AC 220V |
| Rated Current Options | 10A, 20A, 40A, 80A |
| Frequency Range | 40~65Hz |
| Auxiliary Power Supply | AC 85-465V |
| Pulse Constant | 1600 imp/kWh |

Communication & Connectivity

Communication Interfaces

RS485, Modbus-RTU, DL/T645, 4G/5G, LoRa, Pulse Output

Physical & Environmental

Build & Environment

| Feature | Value |
|-------------------|------------------------------|
| Display | LCD with white backlight |
| Protection Rating | IP40 (Front) / IP20 (Casing) |
| Module Width | 4 modules (70mm) |
| Weight | 230g |
| Operating Temp | -10°C to 55°C |

Compliance

International Standards

IEC 62053-21 Class 1.0 • IEC 62053-22 Class 0.5 • IEC 61557-12 • Utility Revenue Grade

Application Areas

Target Industries

Electric Power, Railway, Telecommunications, Petrochemical, Steel Production, Transportation