

DEM SERIES DIN-RAIL ENERGY METER

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Introduction

DEM series design for DIN-Rail mounting, suit for residential energy metering and smart energy project. DEM series has Modbus-RTU and pulse output communication, and also supports wireless functions (WiFi, 4G, LoRa, IoT etc.), allowing seamless integration with data acquisition systems.

Various sub-models available, expansion modules are available in built-in and external versions. Combines high performance smart energy meter, ease of integration to provide a cost-effective power and energy metering solution. Featuring a LCD display designed to simplify setup and local reading of meter data.

Main Features

- 35mm DIN-rail installation.
- 0.5s high precision measurement.
- Large LCD screen with backlight.
- RS485 with Modbus-RTU protocol.
- Wireless functions: WiFi, 4G, LoRa, IoT etc.
- 80A current direct input, 0.04A start current.
- Built-in energy pulse output and alarm output.
- Compatible with both 50Hz and 60Hz systems.
- 10-400VAC direct voltage input, optional VTs connect.
- Tamper-proof design approved for revenue applications.
- Wide range power supply (85-265VAC/DC).

Measurement Function

Model	DEM-2M1D	DEM-3M1C	DEM-4M1D	DEM-7M3D	DEM-4MC	DEM-6MC
Parameters						
Basic para. ⁽¹⁾	●	●	●	●	●	●
4-quad. energy	●	●	●	●	●	●
Built-in CT(80A)	●	-	●	●	-	-
External CT(5A)	-	●	-	-	●	●
Harmonic distortion	-	-	-	○	●	●
Individual harmonic	-	-	-	2-31st	2-31st	2-63rd
Time of use (TOU)	-	-	○	○	○	○
Max demands	-	-	○	○	○	○
SOE record	-	-	-	○	-	○
Curr./volt unbalance	-	-	-	○	○	○
Curr./volt deviation	-	-	-	○	○	○
I/O module						
DI/DO	-	-	-	○	○	●
PO (Pulse output)	-	-	●	●	●	●
Communication						
RS485 modbus	●	●	●	●	●	●
Remote control	-	-	○	○	○	○
Wireless function (WiFi, 4G, LoRa, IoT...)	-	-	○	○	○	○

●With this function ○Optional function -Without this function

⁽¹⁾ Basic parameters: Voltage, Current, Frequency, Total power factor, Active power, Reactive power.

Ordering Information



Num.	Code	Description
1	2M	2 Modules width Din-rail
	3M	3 Modules width Din-rail
	4M	4 Modules width Din-rail
	6M	6 Modules width Din-rail
	7M	7 Modules width Din-rail
2	Blank	Both Single-phase and Three-phases
	1	Single-phase
	3	Three-phases
3	D	Direct access
	C	Use external CT

Technical Characteristics

Model	DEM-2M1D	DEM-3M1C	DEM-4M1D	DEM-7M3D	DEM-4MC	DEM-6MC
Basic parameter						
Wiring method	Single-phase,1P2W			Three-phases,3P3W/ 3P4W		
Power supply	Self-powered	85-265 VAC/DC	Self-powered	Self-powered	85-265 VAC/DC	
Display capacity	9,999,999 KWh	9,999,999 MWh	99,999,999 KWh	99,999,999 KWh	99,999,999 MWh	
Voltage rating	18...250 VAC (L-N)					
Current	0.04-10(80)A	5A or.../1A CTs	0.04-10(80)A	0.04-10(80)A	5A or.../1A CTs	
Electrical power measurement (IEC 61557-12)						
Current, voltage	0.5s%	0.5s%	0.5s%	0.5s%	0.5%	0.2%
Power	0.5%	0.5%	0.5%	0.5%	0.5s%	0.2%
Energy accuracy (IEC 62053-22/ 23)						
Active energy	Class 1.0	Class 0.5s	Class 1.0 Class 2.0			Class 0.5s
Reactive energy	Class 2.0	Class 1.0				Class 1.0
Others						
Module number	2	3	4	7	4	6
Weight	130g	170g	230g	310g	250g	300g
Temperature	-25°C to 55°C					
IP protection	IP40 front panel and IP20 casing					
Dielectric strength	2 kV at 50Hz for 1 min					