

DIN-RAIL ENERGY METER



Introduction

The Din-rail energy meter, an energy meter for DIN rail mounting, used for residential energy metering and smart energy project, and measuring energy usage in industrial environments. High performance DIN rail energy meters can provide cost-effective power and energy metering solutions.

Majority of meters have LCD display and certification approved. Besides, as a leading din rail energy meter manufacturer in China, we support OEM and DOM service for these din rail energy meters.



Reference Standards

Measurement standard

Basic electricity	IEC 61557-12:2007
Active energy	IEC 62053-22:2003
Reactive energy	IEC 62053-23:2003

LVD test standard

IEC/EN 61010-1	2017, CATIII-300V
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EMC test

Discharge immunity	IEC 61557-12:2007
Fast transient burst immunity	IEC 62053-22:2003
Surge (Shock) immunity	IEC 62053-23:2003

Measurement Parameter

Basic parameter	Voltage(U), Current (I)@0.2% Power (P, Q, S)@0.5% Power factor (H)@ 0.1% Frequency (Hz)@0.1%
Active energy	Consumed (Ep+)@0.5% Generated (Ep-)@0.5%
Reactive energy	Consumed (Eq+)@2.0% Generated (Eq-)@2.0%

Application

- Replace mechanical meters.
- Tenant sharing, cost sharing.
- Commercial, industrial, utility.
- Middle and low voltage systems.
- Calculation and settlement of household electricity bills.
- Metering of distribution feeders, transformers, generators, capacitor banks and motors.

MCM SERIES MULTI-CHANNEL ENERGY METER

DIN-RAIL ENERGY METER



Introduction

MCM series multi-channels power meter is special designed metering device for feeder loops. Multi-function design to provide electrical parameter measurement for three-phases or single phase branch circuits, it performs a real-time metering, measures energy consumption and monitors power quality.

Advanced communications options including Modbus via RS485, optional Ethernet port; Multiple digital input ports can collect pulse signal from water meters and gas meters etc.

Main Features

- Measurement accuracy class 0.5.
- Current measuring.../5 or.../1 A.
- Multi-circuits metering.
- With harmonic analysis.
- Optional 6DI, 2DO ports.
- 1.6 inch dot matrix LCD display.
- Advanced electrical parameter measurement.
- Provide 5 virtual alarm triggers.
- With SPDT relay output for alarm output.
- With RS485 modbus RTU communications.
- Optional multi-tariffs ratio.
- Optional max 99 lists SOE record.
- Accept customization designs.

Measurement Function

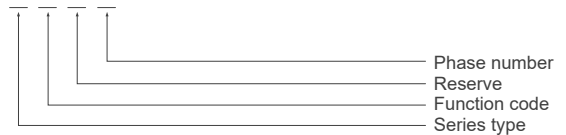
Model	MCM2603	MCM2601	MCM2403	MCM2401	MCM1000
Parameters					
Basic parameters ⁽¹⁾	●	●	●	●	●
Volt.harmonic distortion	○	○	●	●	-
Curr.harmonic distortion	○	○	●	●	-
Individual harmonic	2-31th	2-31th	2-15th	2-15th	-
Time of use (TOU)	○	○	-	-	-
Voltage imbalance	○	○	○	○	-
Current imbalance	○	○	○	○	-
Max demand	○	○	○	○	-
Voltage deviation	○	○	○	○	-
SOE record	○	○	-	-	-
Measurement signal access					
4 Channels (3P)	-	-	●	-	-
6 Channels (3P)	●	-	-	-	●
12 Channels (1P2W)	-	-	-	●	-
18 Channels (1P2W)	-	●	-	-	○
Communications and I/O port					
Ethernet port	-	-	○	○	-
Profibus	○	○	○	○	○
6*Digital inputs	○	○	-	-	○
2*Digital outputs	○	○	●	●	○

●With this function ○Optional function -Without this function

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

Ordering Information

MCM- 1 2 3 4



Num.	Code	Description
1	1	First generation
	2	Second generation
2	4	4 Metering ICs built-in
	6	6 Metering ICs built-in
3	0	Reserved item
4	1	Single-phase
	3	Three-phases (Only for second generation)

Technical Characteristics

Model	MCM2600	MCM2400	MCM1000
Current measurement (TRMS)			
CT secondary rated	Standard 1A/5A	100mA,333mV optional	Standard 1A/5A
Measurement range	0 ... 9999A		
Overload	1.2 times rated continuous; 5 seconds for 10 times of the rated		
Input consumption	<0.2 VA		
Voltage measurement (TRMS)			
PT secondary	100VAC	100VAC / 400VAC	
Frequency	45 ... 65 Hz		
Overload	30 seconds for 2 times of the rated		
Input consumption	<0.2 VA		
Direct measurement	18 ... 300 VAC L-N	18 ... 400 VAC L-L(18...250VAC L-N)	
Power supply			
AC voltage	DC/AC 85~265 ± 10 %, 50 / 60 Hz		
Consumption	< 10 VA		
I/O port (alarms / control)			
Number of relays	2 Channel DO & 6 channel DI	1 x SPDT relay	2 Channel DO & 6 Channel DI
Type	5 A@230VAC, passive node		
Communication			
Link method	RS485 (2/3 wires half duplex)		
Protocol	Modbus RTU		
MODBUS speed	4800/9600/12800/19200bps		