NEW MCM SERIES MULTI-CHANNEL ENERGY METER

Introduction

Bluejay next generation multi-channel energy meter is engineered for accurate energy monitoring in residential and industrial applications. It features flexible configurations from 1 to 24 channels, supporting both single-phase and three-phase measurements.

Designed to stringent safety standards, it complies with CATIII 300 V and withstands up to 4 kV. It offers RS485 and RJ45/ Ethernet communications, with optional DI, DO, PO, and AO modules for enhanced system integration.

Main Features

- Accuracy class 0.5s energy measurement;
- Single-phase and three-phase measurement;
- Scalable multi-channel configuration (1–24 channels);
- Suitable for residential and industrial energy monitoring;
- CATIII 300V voltage safety rating;
- Voltage withstand capability up to 4 kV;
- RS485/ Modbus RTU communication, optional Ethernet interface;
- Expandable I/O modules: DI, DO, PO, AI, AO;

Application

- Power distribution monitoring systems;
- Energy storage and management industry;
- Renewable energy generation industry;
- Commercial and institutional building sector;
- Data center and IT infrastructure industry;
- Smart grid and intelligent energy industry;

Measurement Function

Model	MCM211D	MCM243d	MCM263T	MCM283D	MCM283R
Metering features					
Basic parameters	●	●	●	●	●
Volt. harmonic distortion	○	○	○	○	○
Curr. harmonic distortion	○	○	○	○	○
Individual harmonic	○	○	○	○	○
Time of use (TOU)	○	○	○	○	○
Curr. / Volt. unbalance	○	○	○	○	○
SOE record	○	○	○	○	○
Measurement signal access					
1A & 5A	○	○	●	○	○
100mA	○	○	○	○	○
333mV	○	○	○	○	○
277Vac L-N	●	●	●	●	●
480Vac L-L	-	●	●	●	●
Communications and I/O port					
RS-485/ Modbus RTU	●	●	●	●	●
Ethernet 10/100MB	○	○	○	○	○
Digital input	○	○	●	○	○
Digital output	○	○	○	○	○
Analog input/ output	○	○	-	○	○
Pulse output	○	○	●	○	○

●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

MCM2-[1][2][3]

- [3] Application areas
- [2] Phase type
- [1] Function code

Num.	Code	Description
[1]	1	1 Metering ICs built-in: for 3*single phase measurement only
	2	2 Metering ICs built-in: for 6*single phase/ 2*three phases
	4	4 Metering ICs built-in: for 12*single phase / 4*three phases
	6	6 Metering ICs built-in: for 18*single phase/ 6*three phases
	8	8 Metering ICs built-in: for 24*single phase / 8*three phases
[2]	1	Single phase
	3	Three phases
[3]	T	T: CT access, Default 5A CT, 1A CT optional, for industrial use t: CT access, 333 mV/100mA CT optional, for residential billing
	D	D: Direct access, for industrial use d: Direct access, for residential billing
	R	R: RJ45 interface for current input, for industrial use r: RJ45 interface for current input, for residential billing

Technical Characteristics

Model	MCM211D	MCM243d	MCM263T	MCM283D	MCM283R
Working power					
Power supply	90~240Vac/dc, ± 10 %, 50 / 60 Hz				
Consumption	<5W				
Measurement channels	Only for 3*1P	4*3P/ 12*1P	6*3P/ 18*1P	8*3P/ 24*1P	8*3P/ 24*1P
Current measurement (TRMS)					
CT secondary	100mA, 333mV optional		5A,1A, 100mA, 333mV optional	100mA, 333mV optional	
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 / 400VAC				
Overload	30 seconds for 2 times of the rated				
Input consumption	<0.2 VA				
Safety					
Voltage level	/		CATIII-300V		
Withstand voltage	2.5KV		4KV		
Communication					
Interface	RS485/ Ethernet optional				
Protocol	Modbus RTU/ TCP,IP				