MCM SERIES MULTI-CHANNEL ENERGY METER




Introduction

The MCM series multi-channel power meter is designed for feeder circuit applications. Its multi-functional architecture enables electrical parameter measurement for three-phase and single-phase branch circuits, providing real-time metering, energy consumption analysis, and power quality monitoring.

It supports Modbus RTU via RS485 with optional Ethernet, and features multiple digital inputs for pulse acquisition from water, gas, and other utility meters.

Main Features

- Measurement accuracy class 0.5s;
- Current input: …/5 A or …/1 A;
- Multi-circuit metering capability;
- Harmonic analysis up to 21st;
- Optional 6 DI / 2 DO;
- Advanced electrical parameter measurement;
- Up to 5 configurable virtual alarms;
- SPDT relay output for alarm signaling;
- RS485/ Modbus RTU communication;
- Voltage and current unbalance measurement;
- Accept customization available;

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	MCM2603	MCM2601	MCM2403	MCM2401	MCM1000
Parameters					
Basic parameters (1)	●	●	●	●	●
Harmonic distortion	-	-	●	●	-
Individial harmonic	-	-	2-21st	2-21st	-
Time of use (TOU)	-	-	-	-	-
Max demand	-	-	-	-	-
SOE record	-	-	-	-	-
Curr./volt unbalance	-	-	●	●	-
Curr./volt deviation	-	-	●	●	-
Measurement signal access					
4 Channels (3P)	-	-	●	-	-
6 Channels (3P)	●	-	-	-	●
12 Channels (1P)	-	-	-	●	-
18 Channels (1P)	-	●	-	-	○
I/O port module					
DI	○	○	-	-	-
DO	○	○	○	○	○
PO (Pulse output)	●	●	-	-	○
Communication					
RS485	●	●	●	●	●
RJ45/ Ethernet	-	-	○	○	-
Profibus	○	○	○	○	○

●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]

- [4] Phase number
- [3] Reserved
- [2] Function code
- [1] Series type

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
Working power			
Power supply	90-240Vac/dc, ± 10 %		
Consumption	< 10 VA		
Current measurement (TRMS)			
CT secondary rated	Standard 1A/ 5A	1A, 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)			
Direct measurement	18 ... 300 VAC L-N		18 ... 400 VAC L-L(18…250VAC L-N)
PT secondary	100VAC / 400VAC		
Frequency	45 ... 65 Hz		
Overload	30 seconds for 2 times of the rated		
Input consumption	<0.2 VA		
I/O port (alarms / control)			
Quantity	2 Channel DO & 6 Channel DI	1 x SPDT DO	2 Channel DO & 6 Channel DI
Load capacity	5 A@230VAC, passive node		
Communication			
Interface	RS485 (2/3 wires half duplex)		
Protocol	Modbus RTU		
Modbus speed	4800/9600/19200bps		