

# DFPM211 Multi-Channel AC Energy Meter

## Feature

- Application - Telecoms site energy management, data center
- Small size - Can be installed at the closest point, integrate in existing space-constrained installations
- Ultra-compact design - Consists of control unit and current sensors (with RJ12 port, split core)
- Wide measurement range - Max. support 60A
- Multi circuit - Support 45 single phase circuit or 15 three phase circuit AC measuring
- High accuracy - Voltage & current class 0.5s, kWh class 1.0
- Multi network type - 1P2W or 3P4W



## Function

### Real-time measurement

- Voltage, current, active power, reactive power, power factor, frequency

### Energy consumption

- Active energy, reactive energy

### Alarm function

- Overload, under load, over current, sensor fault

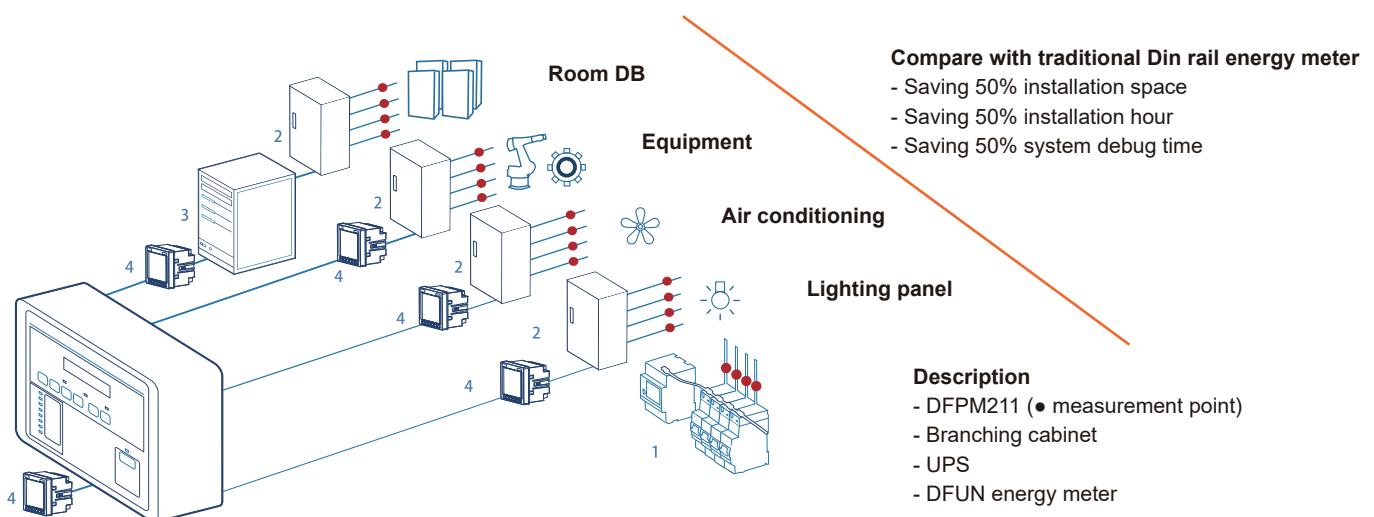
### Communication

- 1RS485 port, MODBUS-RTU protocol

### Optional function

- Temperature measur (4 channels)
- Leakage current measure (1 channel)

## Typical Connection

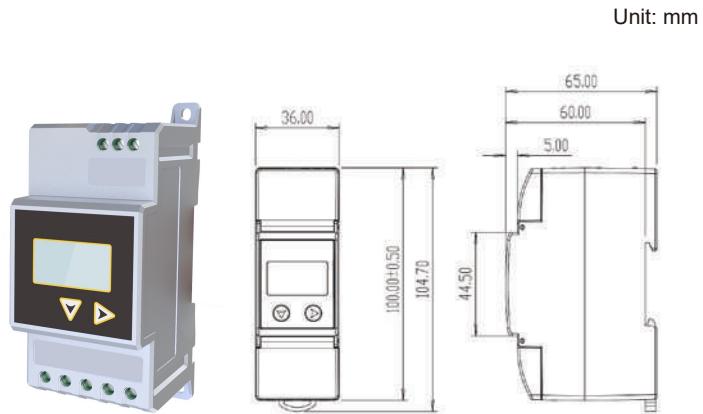


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## DFPM211 & Accessories

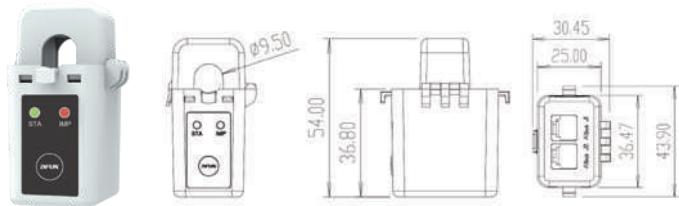
### DFPM211-M: Main Module

Connection mode	1P2W or 3P4W	
Power supply	Self-supply, by A phase	
Voltage input	1P2W	220V Range: 85%-120%
	3P4W	3x220/380V Range: 85%-120%
Frequency	45 ~ 65Hz	
Power consumption	$\leq 5\text{W}$	
Communication	RS485 serial, support Modbus-RTU Baud rate: 4800, 9600, 19200, 38400bps Address: 1 ~ 247	



### CTO: Split Core Sensor

Connection mode	Bus connection (2 x RJ12 port)
Rated current input	10(60)A
Installation	Split core
Open hole	$\Phi$ 9.5mm
Sampling rate	28k Hz



Parameter	Accuracy	Measuring range
Voltage	0.5%	85% ~ 120%
Current	0.5%	0-60A, 1% ~ 120%
Power factor	1.0%	-1 ~ 1
Active power	0.5%	Single phase: 0 ~ $\pm 16\text{kW/kvar}$ Total: 0 ~ $\pm 48\text{kW/kvar}$
Reactive power	2.0%	
Apparent power	2.0%	
Active energy	1.0%	0 ~ 9999999.9 kWh
Reactive energy	2.0%	0 ~ 9999999.9 kVarh
Frequency	0.01	45 ~ 65Hz

## Environment & Standard

Power frequency withstand voltage	2000VAC	Environment	Normal operating temperature: -25 °C ~ 55 °C
Insulation resistance	$\geq 100\text{M}\Omega$		Limit temperature: -25 °C ~ 70 °C
Impulse withstand voltage	6kV(peak)		Storage temperature: -30 °C ~ 80 °C
IP index	IP20		Humidity: <95%, non-condensing

# DFPM211 Multi-Channel AC Energy Meter

Standard (EMC)			
• Electrostatic discharge immunity test	IEC61000-4-2, Level 4	• Conduction disturbance rejection of radio frequency field induction	IEC61000-4-6, Level3
• Radiated radio-frequency electromagnetic field immunity (RFEMS)	IEC61000-4-3, Level4	• Electromagnetic emission limits	CISPR22: 2006, Pass
• Electrical fast transient test	IEC61000-4-4, Level4	• Voltage sag and short time interrupt immunity	IEC61000-4-11, Pass
• Surge immunity test (1,2/50μs ~ 8/20μs)	IEC61000-4-5, Level4	• Power frequency withstand voltage	IEC 62052-11 2003

## Solution



## Order Information

Module	Order code	Description
Main module	DFPM211- M	Suitable for 1P/2W & 3P/4W
Measure module	CTO	Split core sensor: 10(60)A, Φ 9.5mm, class 1.0
Optional module	T	Temperature measur (4 channels)
	LC	Leakage current measure (1 channel)

For example: DFPM211-M + 20pcs CTO indicates 1pcs DFPM211 main module and 20pcs CTO split core sensor.

### Note:

1. Standard 30cm RJ12 line (from main module to measure module) and 6cm RJ12 line (for connect each measure module), please mention for special requirement.

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