# DFPM971 IoT Multifunction Power Meter

## Feature

**Combine Measuring and Electricity Monitoring Into One**

- Full Parameter Measuring and Power Quality Monitoring
- Measure and alarm for residual current and cable temperature

**Reliable Data Transfer**

- 7 days Data Cache & Retransmit
- 10 sec. keep working to posting POWER-OFF alarm
- 1 sec. real-time data upload

**Multiple Communication Protocol**

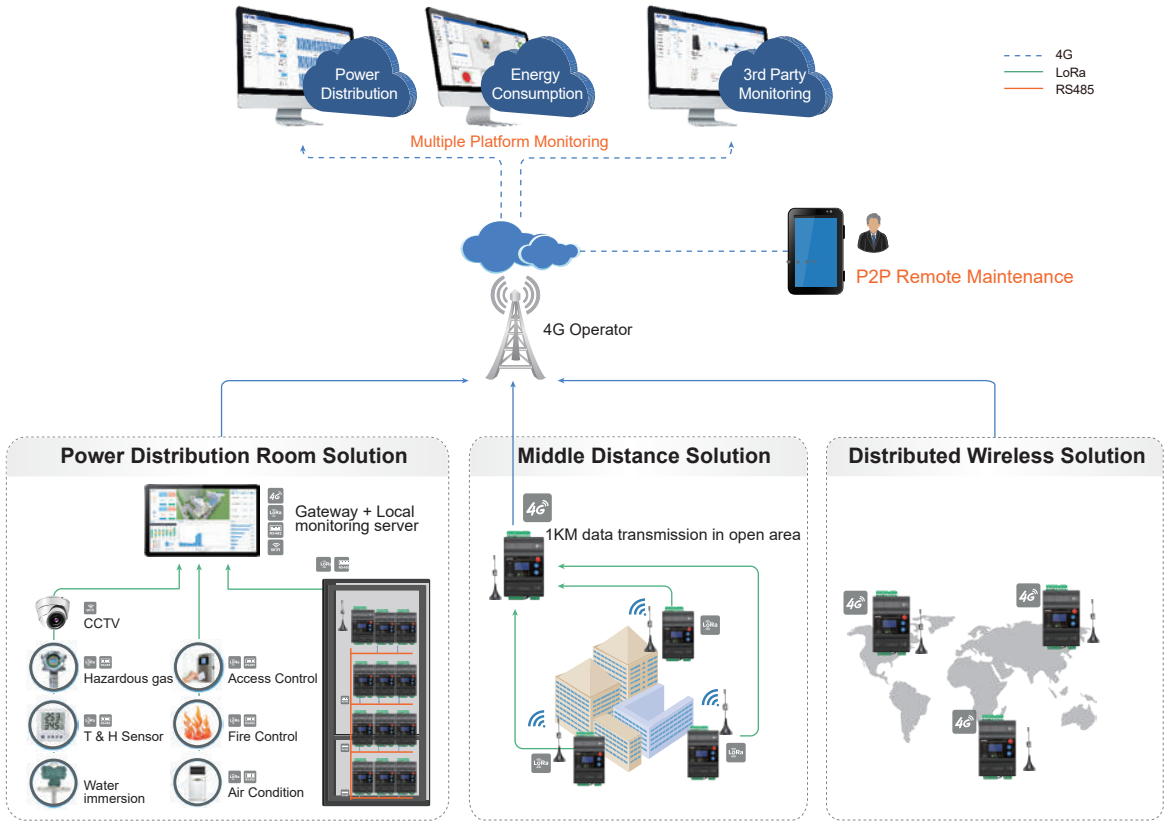
- 4G / LoRa / RS485

**Remote Support and Engineering Simplification**

- P2P remote configuration & free maintenance
- Phase-sequence auto adjustment
- Split core CT for easy installtion


Meter + Gateway
ALL IN ONE

## System Structure



# DFPM971 IoT Multifunction Power Meter

## Function

### Measurememt

- voltage, current, active power, reactive power, apparent power, power factor, frequency, active energy, reactive energy, apparent energy, voltage and current phase angle, cable temperature, residual current, switch detection
- Latest 10 years, 12 months, 31 days historical energy

### Power Quality Analysis

Three phase voltage/current, 63rd harmonic analysis, voltage/current unbalance

### Demand Calculation

- Maximum and real-time demand of power and current
- Real-time demand, daily and monthly max. demand

### Communication

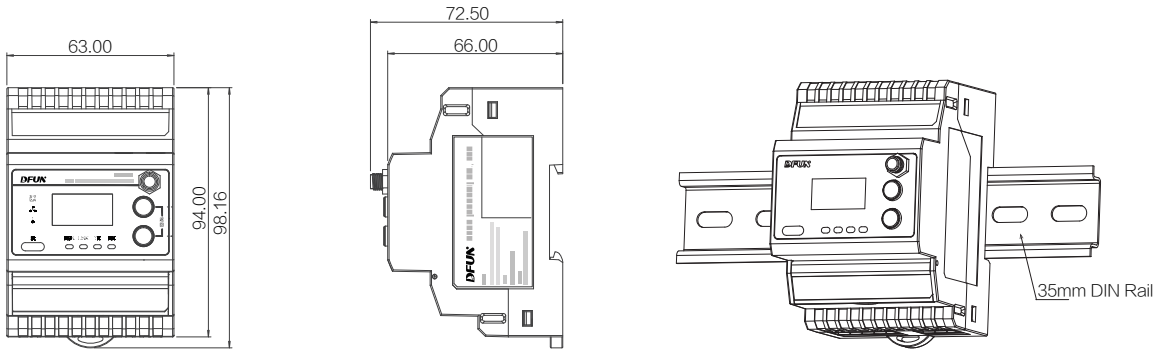
- Standard 1 RS485 and 1 infrared communication
- 4G / LoRa optional, support Modbus, Http, Mqtt communication etc, support Modbus-RTU and Modbus-TCP, register is definable
- Support break-point transfer

### Setpoint Alarm

Support alarming of over-voltage, under-voltage, over-current, under-current, lost phase, power over limit, over temperature, leakage current and power failure with SOE time record.

## Dimension & Installation

Unit: mm




## Technical Specification

| | |
|---|---|
| **Power supply** | AC 85~265V /<br>DC 100~300V |
| **Rated Current** | 1.67mA,<br>5A/1.67mA (Standard CT) |
| **Rated Voltage** | 3x57.7/100V, 3x220/380V |
| **Digital Input** | Wet contact, external power supply: 220V, when＜60V, open, when＞140V, closed, Max. Input: 300V |
| **Connection Mode** | 3 Phase 4 Wire |
| | 3 Phase 3 Wire |
| **LTE Wireless Communication** | LTE-FDD B1/B3/B5/B8 |
| | LTE-FDD B34/B38/B39/B40/B41 |

| | |
|---|---|
| **Residual Current** | 1 x 0-8000mA |
| **Cable Temperature** | 4 x 0-150℃ |
| **LoRa** | 470-510Mhz, 1KM open area |
| **RS485** | 1200-57600bps |
| **Break-point transfer** | 7 days data cache (1 sampling point / 5min.) |
| **Break-point transfer** | Operation Temperature: -25℃～+70℃<br>Storage Temperature: -40℃～+85℃<br>Operation Humidity: 5% ~ 95% Non-condensing |

| | | |
|---|---|---|
| **EMC Standard** | Electrostatic Discharge Immunity Test | IEC61000-4-2:2001 |
| | RF Electromagnetic Field Immunity testing | IEC61000-4-3:2002 |
| | Electrical fast transient immunity test | IEC61000-4-4:2006 |
| | Surge immunity test | IEC61000-4-5:2005 |
| | Injected Current Immunity Test | IEC61000-4-6:2006 |
| | Electromagnetic emission limit | CISPR22：2006 |
| | Voltage sag and short-time interruption Immunity testing | Passed |

| Parameter | Measurement Range | Accuracy |
|---|---|---|
| **Voltage** | Phase Voltage: 10V~400V<br>Line Voltage: 10V~500V | 0.2% |
| **Primary Voltage** | Max. 1000kV | -- |
| **Current** | 5mA~6.5A | 0.2% |
| **Primary Current** | Max. 100000A | -- |
| **Frequency** | 40~70Hz | 0.1% |
| **Active Energy** | 0~99999999.9 kWh | 0.5% |
| **Reactive Energy** | 0~99999999.9 kvarh | 2% |
| **Active Power** | Single Phase: 0 ~ ±9999MW/Mvar<br>Total: 0 ~ ±9999MW/Mvar | 0.5% |
| **Reactive Power** | | 1.0% |
| **Harmonic Ratio** | 0%~100% | B Level |

## Current Transformer

| Model | | Typical Connecting Scheme | Application |
|---|---|---|---|
| CTO |  |  | Applied to renovation project with CT, Installation without power off |
| CTC |  |  | Applied to additional large CT of 5A access scheme |

## Order Information

**DFPM971--①-②--③**

| | |
|---|---|
| **Extension** | T —— 4 channels cable temperature measurement |
| **CT** | CTO —— External 5A Split core CT<br>CTC —— External 5A Solid core CT |
| **Communication** | RS485 — 1 x RS485<br>LoRa — LoRa、RS4845<br>4G — Lte(4G)、RS485<br>All — Lte(4G)、LoRa、RS485 |