

## Basic Function



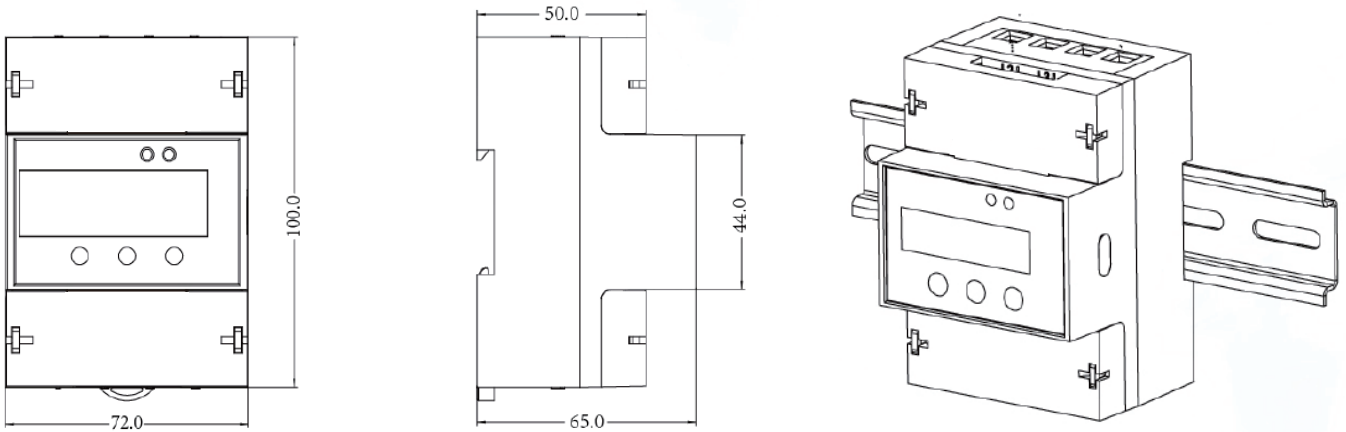
- Suit for 110V, 120V, 220V, 230V, 240V AC low voltage system
- 7 +1 digits LCD display (9999999.9 kWh)
- Measure U, I, P, Q, S, PF, F, kWh, kvarh, Multi-tariff energy value
- Record freeze energy for per 15 min/day
- kWh accuracy: 5(6)A class 0.5s, 5(6)A class 1.0
- Support over-voltage timing, under-voltage timing, over-load timing function
- 2 LED indicates pulse (Settable for kWh or kvarh)
- LCD display prompt for phase sequence error
- 3 keys for programming, 35mm DIN rail installing, standard DIN ED5002
- One RS485 port, MODBUS or DL/T645 protocol (selectable)
- Standard: IEC62053-21/ 23
- Record historical energy for latest 31 days, latest 12 months

## Technical Specification

|                          |   |                         |   |
|--------------------------|---|-------------------------|---|
| <b>Rated current</b>     | Direct: 5(6)A<br>Or 5(6)A via CT  | <b>Connection mode</b>  | 3P/4W   |
| <b>Rated voltage</b>     | AC 220V ph-N or 120V ph-N (Optional)  | <b>Pulse output</b>     | 2 channels (Settable for kWh or kvarh)  |
| <b>Frequency</b>         | 50/60Hz (Optional), range: 47~65Hz  | <b>Starting Current</b> | 0.4%Ib (direct connect), 0.2%Ib (via CT)  |
| <b>Power consumption</b> | <2W   | <b>AC voltage tests</b> | 4kV   |
| <b>Power supply</b>      | Self supply (Note: RS485 won't work, when connect 1 phase, )<br>For 220VAC (L-N), range: 184~276VAC<br>For 120VAC (L-N), range: 96~144VAC | <b>Accuracy</b>         | kWh accuracy: class 0.5s or class 1.0   |
| <b>Communication</b>     | RS485 serial, MODBUS-RTU or DL/T645 Protocol<br>Baud rate: 2400, 4800, 9600<br>Address: 1~247   | <b>Pulse constant</b>   | 400imp/kWh for 5(6)A<br>6400imp/kWh for 5(6)A   |
| <b>Environment</b>       | Operating temperature: -20°C~+55°C<br>Storage temperature: -40°C~+70°C<br>Humidity: 5%~95% non-condensing                                 | <b>Dimension</b>        | 72*100*65mm (4 module)  |
|                          |   | <b>Wire Diameters</b>   | 7mm x 7mm ( 16mm <sup>2</sup> )   |
|                          |   | <b>Standard (EMC)</b>   | Electrostatic discharge immunity test IEC 61000-4-2, Level 4<br>Radiated immunity test IEC 61000-4-3, Level 3<br>Electrical fast transient/burst immunity test IEC 61000-4-4, Level 4<br>Surge immunity test (1, 2/50μs ~ 8/20μs) IEC 61000-4-5, Level 4<br>Conducted emission EN55022, Class B<br>Radiated emission EN55022, Class B |

| Parameter                                 |                 | Accuracy                                  | Resolution | Measuring Range   |
|---|-----------------|---|------------|---|
| Display data, can also be read via MODBUS | Voltage         | 0.5%                                      | 0.01V      | For 220Vac (L-N), range: 184~276Vac<br>For 120Vac (L-N), range: 96~144V |
|   | Current         | 0.5%                                      | 0.001A     | Direct: 5(6)A,<br>Via CT: 5(6)A   |
|   | Active power    | 0.5%                                      | 0.1W       | 0~1MW   |
|   | Power factor    | 0.5%                                      | 0.001      | -1.000~+1.000   |
|   | Frequency       | 0.01                                      | 0.01Hz     | 47~65Hz   |
|   | Active energy   | Class 1 for 5(6)A<br>Class 0.5s for 5(6)A | 0.1kWh     | 0~9999999.9 kWh   |
|   | Reactive energy | Class 2                                   | 0.1kvarh   | 0~9999999.9 kvarh   |
| Only can be read via MODBUS               | Reactive power  | 1.0%                                      | 0.1var     | 0~1Mvar   |
|   | Apparent power  | 0.5%                                      | 0.1VA      | 0~1MVA  |

## Dimension & Installation



## Order Information

**DFPM93** -- ① -- ② -- ③

|   |          |   |
|---|----------|---|
| Rated input current<br>(Max. Input current) | 63<br>5  | 5(63)A direct (class 1.0)<br>5(6)A via CT (class 0.5s)  |
| Rated input voltage                         | V1<br>V2 | 220/380V (Direct) (Suit for 220, 230, 240VAC ph-N)<br>120/208V (Direct) (Suit for 110, 120VAC ph-N) |
| Frequency                                   | 50<br>60 | 50Hz<br>60Hz  |

**For example:** DFPM93-63-V1-50, which indicates the device providing basic function, accuracy class 1, rated current is 5(63)A, TOU (Multi-tariff) function and rated voltage input is 220/380V, 50Hz.