



DIN 70mm

Features :

- 3Ø True RMS (Voltage, Current)
- 3Ø Power (Active, Reactive, Apparent)
- Import / Export Active, Reactive Energy, Apparent Energy
- Programmable CT / PT Primary / Secondary
- Modbus RTU Communication (RS485)
- Max / Min Demand Power

Certification : **CE**

Display Specifications

| | |
|-----------------|---|
| Display | 3 rows, LCD with Backlight |
| Digits | 1 row of 4 digits 2 rows of 7 digits |
| LED Indications | Integration of Energy (1000 Pulses / kWh) |

Input Specifications

| | |
|-----------------------|---|
| Electrical Connection | 3Ø - 3 wire, 3Ø - 4 wire, 2Ø - 3 wire, 1Ø - 2 wire |
| Input Voltage Range | 11 to 300V AC (L - N) 19 to 519V AC (L - L) |
| Input Current Range | Nominal 5A AC (Min - 11mA, Max - 6A) |
| Frequency | 45 to 65Hz |
| Display Scrolling | Automatic / Manual / Default |
| Power Consumption | 8VA max |
| Display Reset | Programmable (For energy) |
| Resolution | For energy : 0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M (depending upon CT ratio x PT ratio) For Power, Voltage, Current : Auto Resolution For Power Factor : 0.01 |
| Accuracy | Voltage (L - N / L - L) : ±0.5% of F.S. Current : ±0.5% of F.S. Power Factor : ±0.01 Frequency : ±0.1% For L - N Voltage >20V For L - L Voltage >35V Power (Active, Reactive, Apparent) : 1% Energy (Active, Reactive, Apparent) : Class 1 |
| Memory Retention | 10 years (For energy) |
| Measuring Parameters | Voltage (L - L / L - N) (Individual / Average), Current (Individual / Average), Frequency, Power Factor (Individual / Total) Active, Reactive & Apparent power (Individual / Total), Active, Reactive, Apparent Energy (Import / Export), Demand (Min / Max Active Power, Min / Max Reactive Power, Max Apparent Power) |

Output Specifications

| | |
|--------------------------------------|--|
| Communication Interface and Protocol | RS485 and MODBUS RTU |
| Communication Address | 1 to 255 |
| Transmission Mode | Half duplex |
| Transmission Distance | 500 meter maximum |
| Transmission Speed | 300, 600, 1200, 2400, 4800, 9600, 19200 (in bps) |
| Parity | None, Odd, Even |
| Stop Bits | 1 or 2 |
| Response Time | 100ms (max and independent of baud rate) |

Auxiliary Supply Specifications

| | |
|----------------|----------------------------|
| Supply Voltage | 85 to 270V AC, (50 / 60Hz) |
|----------------|----------------------------|

Settable Parameters

| | |
|--------------|---|
| CT Primary | 1 / 5A to 10kA (Programmable for any value) |
| CT Secondary | 1 / 5A (Programmable) |
| PT Primary | 100V to 500kV (Programmable for any value) |
| PT Secondary | 100V to 500V (Programmable for any value) |

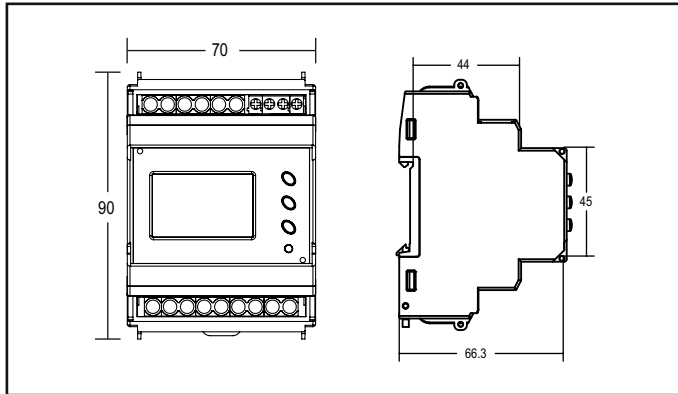
Environmental Specifications

| | |
|-----------------------------|---|
| Temperature | Operating Temperature : -5° to 60°C Storage Temperature : -20° to 75°C |
| Humidity (non - condensing) | Upto 85% RH |

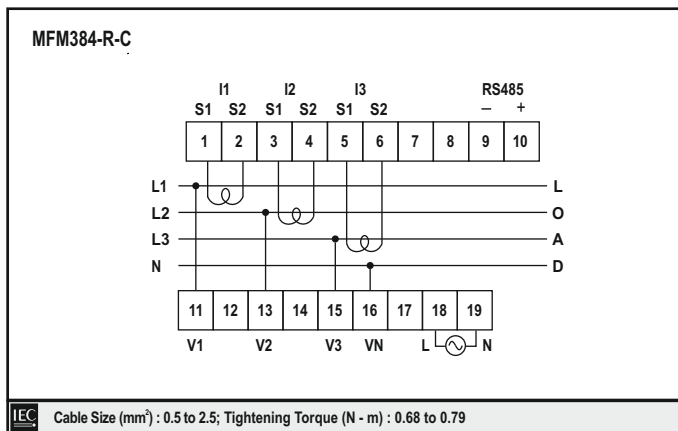
Mechanical Specifications

| | |
|----------|----------|
| Mounting | Din Rail |
| Weight | 208gms |

Dimensions (All dimensions are in mm)



Terminal Connection



Compliance

| Applicable EMI / EMC Standards | | |
|----------------------------------|--------------------|---|
| Product Standard : IEC 61326 - 1 | | |
| Category | | Standards Compliance |
| ESD Immunity | IEC 61000 - 4 - 2 | Level IV (Air Discharge : 15kV), (Contact Discharge : -8kV) |
| Surge Immunity | IEC 61000 - 4 - 5 | + / - 2kV Common Mode, (Line to Ground) + / - 1kV Differential Mode, (Line to Line) |
| Radiated Susceptibility | IEC 61000 - 4 - 3 | Level III, 80 to 1000MHz (10V / m) Level II, 1.4GHz to 2GHz (3V / m) Level I, 2GHz to 2.7GHz (1V / m) |
| Conducted Susceptibility | IEC 61000 - 4 - 6 | Level II (3V / m) |
| Voltage Dips and Interruptions | IEC 61000 - 4 - 11 | Dips : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C) 70% residual voltage / 25 cycles 50Hz / 30 cycles 60Hz (Criteria C) Interruptions : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C) |
| Conducted Emission | CISPR - 11 | |
| Radiated Emission | CISPR - 11 | |
| Electrical Fast Transient | IEC 61000 - 4 - 4 | Level III (2kV) |

Ordering Information

| Product Code | Supply Voltage | Output | Certification |
|---------------|----------------|---------------|---------------|
| | 85 to 270V AC | Comm. (RS485) | |
| MFM384-R-C | Yes | Yes | --- |
| MFM384-R-C-CE | Yes | Yes | CE |