# MFM376-C

# Multifunction Meter

96 x 96mm

## Features :

- 3Ø True RMS (Voltage, Current)
- 3Ø Power (Active, Reactive, Apparent)
- Import / Export Energy (Active, Reactive)
- Energy (Active, Reactive, Apparent)
- Max / Min Demand Power, Max Demand Current
- Programmable CT / PT Primary / Secondary
- Single Pulse Output
- Phase Angle Detection
- Run Hour
- Auxiliary Interrupts
- %THD Upto 31st level
- Instantaneous (Voltage, Current)

Certification : CE

### Display Specifications

| | |
|---|---|
| Display | 3 rows, 7 segments LED Display |
| Digits | 4 |

### 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)<br>19 to 519V AC (L - L) |
| Input Current Range | Nominal 5A AC (Min - 14mA, Max - 6A) |
| Frequency | 45 to 65Hz |
| Display Scrolling | Automatic / Manual / Default |
| Power Consumption | 8VA max |
| Display Reset | Programmable<br>(For energy, Auxiliary enterrupt, Run hour) |
| Resolution | For energy : 0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M<br>(depending upon CT ratio x PT ratio)<br>For Power, Voltage,<br>Current : Auto Resolution<br>For Power Factor : 0.001 |
| Accuracy | Voltage (L - N / L - L) : ±0.5% of F.S.<br>Current : ±0.5% of F.S.<br>Power Factor : ±0.01<br>Frequency : ±0.1% For L - N Voltage >20V<br>For L - L Voltage >35V<br>Power (Active, Reactive, Apparent) : 1%<br>Energy (Active, Reactive, Apparent) : Class 1 |
| Memory Retention | 10 years (For energy) |
| Measuring Parameters | Voltage (L - L / L - N) (Individual / Average),<br>Current (Individual / Average),<br>Max Demand Current (Individual), Frequency,<br>Power Factor (Individual / Total),<br>Active, Reactive & Apparent Power (Individual / Total), Active, Reactive & Apparent Energy (Total),<br>Phase Angle, Demand, Voltage Sequence Diagnostic, CT Polarity Error, Run Hour, Auxiliary Interrupts, Max / Min Demand Power, Import / Export Energy (Active / Reactive), Instantaneous Voltage (L - L / L - N), %THD upto 31st level |

### Output Specifications

| | |
|---|---|
| Pulse Output | Voltage Range : External 24V DC max<br>Current Capacity : 100mA max<br>Pulse Width : 100ms ±5ms |
| 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 | 40 to 270V DC, 85V 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) |

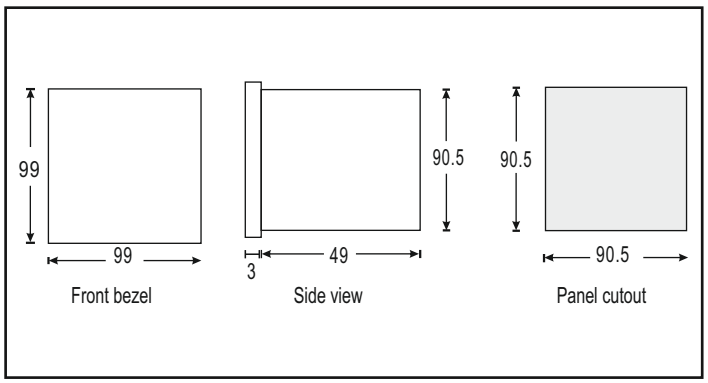
### Environmental Specifications

| | |
|---|---|
| Temperature | Operating : -10° to 55°C<br>Storage : - 20° to 75°C |
| Humidity (non - condensing) | Upto 85% RH |

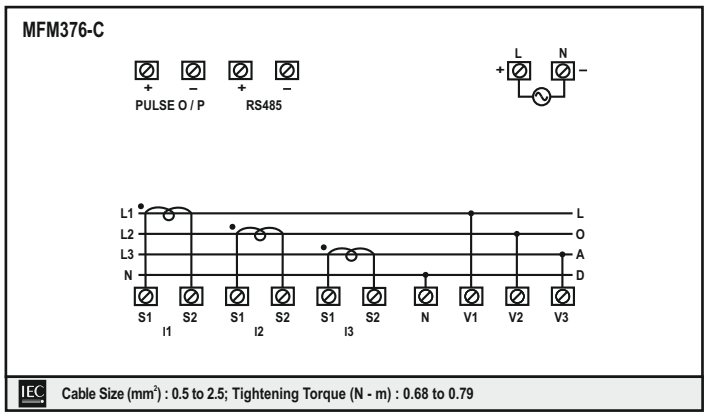
### Mechanical Specifications

| | |
|---|---|
| Mounting | Panel |
| Weight | 230gms |

### Dimensions




### 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)<br>+ / - 1kV Differential Mode, (Line to Line) |
| Radiated Susceptibility | IEC 61000 - 4 - 3 | Level III, 80 to 1000MHz (10V / m)<br>Level II, 1.4GHz to 2GHz (3V / m)<br>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)<br>**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 |
|---|---|---|---|---|
| **MFM376-C-CE** | 85V to 270V AC, 40 to 270V DC | Pulse Output | Comm. (RS485) | CE |