



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 31<sup>st</sup> level (MFM376-C-30V)
- MODBUS RTU Communication (RS485) (Optional)

### Display Specifications

|                   |                                                             |
|-------------------|-------------------------------------------------------------|
| Display           | 3 rows, 7 segments LED Display                              |
| Digits            | 4                                                           |
| Display Scrolling | Automatic / Manual / Default                                |
| Display Reset     | Programmable<br>(For energy, Auxiliary interrupt, Run hour) |

### 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)<br><b>Note :</b> Product to be used only with external CT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Frequency             | 45 to 65Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Power Consumption     | 8VA max                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 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) : $\pm 0.5\%$ of F.S.<br>Current : $\pm 0.5\%$ of F.S.<br>Power Factor : $\pm 0.01$<br>Frequency : $\pm 0.1\%$ For L - N Voltage >20V<br>For L - L Voltage >35V<br>Power (Active, Reactive, Apparent) : 1%<br>Active Energy : Class 0.5S (IS : 14697-1999)<br>Reactive & Apparent Energy : Class 1                                                                                                                                                                                                                                                           |
| Memory Retention      | 10 years (For energy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Measuring Parameters  | Voltage (L - L / L - N) (Individual / Average),<br>Current (Individual / Average), Frequency,<br>Power Factor (Individual / Total),<br>Active, Reactive & Apparent Power (Individual / Total),<br>Active, Reactive & Apparent Energy (Total),<br>Phase Angle, Demand, Voltage Sequence<br>Diagnostic, CT Polarity Error, Run Hour, Auxiliary<br>Interrupts, Max / Min Demand Power, Energy (Active / Reactive), [ Instantaneous Voltage (L - L / L - N),<br>%THD upto 31 <sup>st</sup> level, Max Demand Current<br>(Individual), Import / Export ] (only valid for<br>MFM376-C-30V) |

### Output Specifications

|                                      |                                                                                                       |
|--------------------------------------|-------------------------------------------------------------------------------------------------------|
| Pulse Output                         | Voltage Range : External 24V DC max<br>Current Capacity : 100mA max<br>Pulse Width : 100ms $\pm 5$ ms |
| 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<br>(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 | 18 to 42V DC, 18V to 28V 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)   |

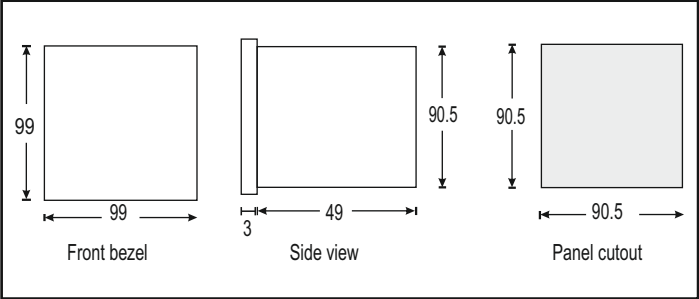
### Environmental Specifications

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

### Mechanical Specifications

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

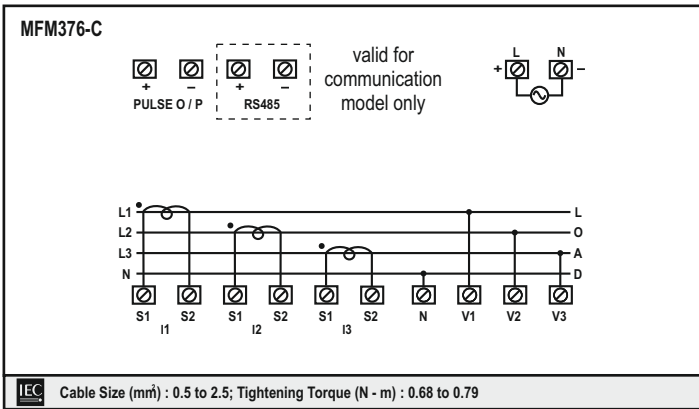
Dimensions



Ordering Information

| Product code | Supply Voltage              | Output       |               |
|--------------|-----------------------------|--------------|---------------|
| MFM376-30V   | 18V to 42V DC, 18 to 28V AC | Pulse Output | ---           |
| MFM376-C-30V | 18V to 42V DC, 18 to 28V AC | Pulse Output | Comm. (RS485) |

Terminal Connection



IEC Cable Size (mm<sup>2</sup>) : 0.5 to 2.5; Tightening Torque (N · m) : 0.68 to 0.79