



96 x 96mm

**Features :**

- 3Ø True RMS (Voltage, Current)
- 3Ø Power (Active, Reactive, Apparent), Energy (Active, Reactive, Apparent)
- Plug-n-Wire, RJ45 connector current input
- Programmable CT Primary, PT Primary / Secondary
- Modbus RTU communication (RS485)
- Pulse output
- Max / Min demand of power
- % THD up to 31<sup>st</sup> level for Voltage and Current

Certification : **Display specifications**

|              |                                                                                                                               |
|--------------|-------------------------------------------------------------------------------------------------------------------------------|
| Display      | LCD with Backlight, 4 rows                                                                                                    |
| Digits       | 4 digits (Lowest 8 digits for energy display)                                                                                 |
| Digit height | 0.45 inch                                                                                                                     |
| Bargraph     | For current representation                                                                                                    |
| Resolution   | For energy : 0.1k, 1k (depending upon CT rating)<br>For Power, Voltage, Current : Auto resolution<br>For Power factor : 0.001 |

**Input specifications**

|                                              |                                                         |
|----------------------------------------------|---------------------------------------------------------|
| Type of measurement                          | TRUE RMS                                                |
| Sampling rate                                | 100 Samples / Cycle                                     |
| Electrical connections                       | 3Ø - 4 wire (Wye), 1Ø - 2 wire (L-N)                    |
| Data update rate                             | 1 sec                                                   |
| <b>Input-voltage</b>                         |                                                         |
| PT primary                                   | 100V to 500kV (Programmable for any value)              |
| PT secondary                                 | 173V to 415V (Programmable for any value)               |
| Voltage nominal                              | 240VAC L-N / 415V AC L-L                                |
| Measured V with full range                   | 60 to 300V AC, 50 / 60Hz, Self- Supplied, (V1, N)       |
| Impedance                                    | ≥0.8MΩ                                                  |
| Frequency range                              | 45 - 65Hz                                               |
| VA burden                                    | <0.2VA at 300V AC L-N / Phase                           |
| <b>Input Current</b>                         |                                                         |
| CT ratings primary                           | 5A to 10kA (Programmable for any value)                 |
| CT ratings Secondary                         | 330mV                                                   |
| Current nominal                              | 330mV                                                   |
| Measured Amps with over range & Crest Factor | 3.3mV to 396mV                                          |
| <b>Measurement accuracy</b>                  |                                                         |
| Current                                      | ±0.5% of F.S.                                           |
| Voltage                                      | ±0.5% of F.S.                                           |
| Power Factor                                 | ±0.01                                                   |
| Power                                        | 1%                                                      |
| Frequency                                    | ±0.1% For L - N Voltage >20V,<br>For L - L Voltage >35V |
| Active Energy                                | 1%                                                      |
| Reactive Energy                              | 1%                                                      |
| THD & Individual Harmonic, V&A               | Up to 31 <sup>st</sup> Level                            |

**Output specifications**

|                       |                                                                                                                                 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Pulse output          | Voltage range : External 24V DC max<br>Current capacity : 100mA max<br>Configurable pulse weight from 1 to 9999000 pulses / kWh |
| Device ID & Parity    | 1 to 255 & None, Odd, Even                                                                                                      |
| Protocol & Interface  | RS485 and MODBUS RTU                                                                                                            |
| Baud rate             | 300, 600, 1200, 2400, 4800, 9600, 19200 baud                                                                                    |
| Transmission mode     | Half duplex                                                                                                                     |
| Transmission distance | 500 meter maximum                                                                                                               |
| Transmission speed    | 300, 600, 1200, 2400, 4800, 9600, 19200 baud                                                                                    |
| Stop bits             | 1 or 2                                                                                                                          |
| Response time         | 100ms (max and independent of baud rate)                                                                                        |
| Isolation             | 2kV RMS                                                                                                                         |

**Mechanical specifications**

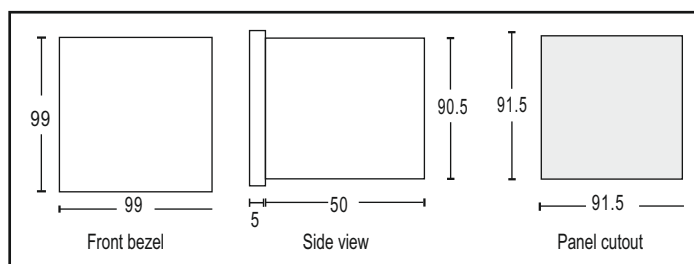
|                         |                             |
|-------------------------|-----------------------------|
| Weight                  | 230gms (8Oz)                |
| Material                | LEXAN 923-7035 GRAY         |
| IP degree of protection | (IEC 60529) IP51 Front Only |
| Torque at terminals     | 0.68N-m to 0.79 N-m         |
| Mounting position       | Din Rail                    |

**Auxiliary supply specifications**

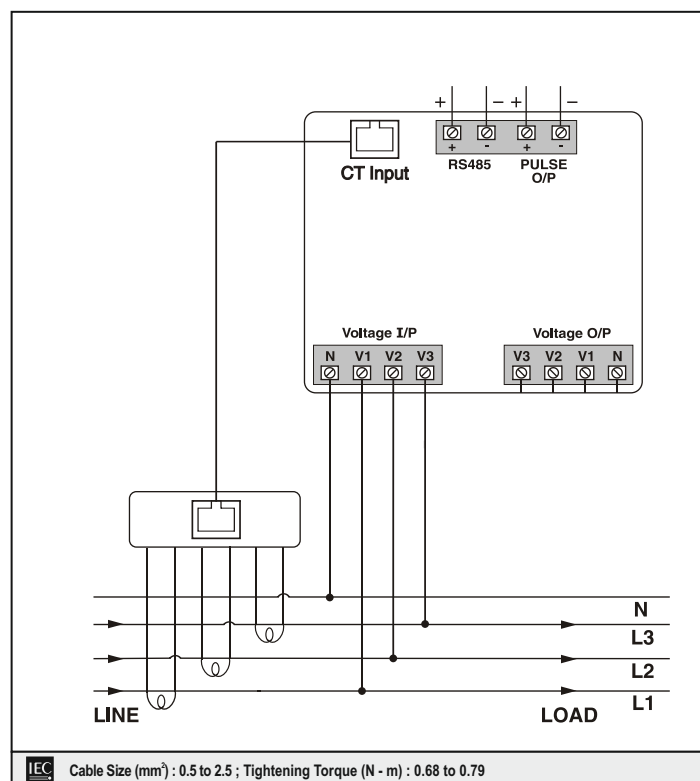
|                |                                                    |
|----------------|----------------------------------------------------|
| Supply voltage | 60 to 300V AC, 50 / 60Hz, Self - Supplied, (V1, N) |
|----------------|----------------------------------------------------|

**Environmental specifications**

|                       |                                       |
|-----------------------|---------------------------------------|
| Operating temperature | Meter 0°C to +50°C (32°F to +122°F)   |
| Storage temperature   | Meter -20°C to +75°C (-4°F to +167°F) |
| Humidity              | 85% non-condensing                    |
| Altitude              | Up to 2000 meters (6561 ft.)          |
| Measurement category  | CAT III                               |
| Pollution degree      | 2                                     |

**Dimensions (All are in mm)**

## Terminal connection



## Compliance

## Applicable EMI / EMC Standards

Product Standard : IEC 61326 - 1

| Category                                   | Standards compliance |
|--------------------------------------------|----------------------|
| Electrostatic discharge                    | IEC 61000 - 4 - 2    |
| Immunity to electromagnetic RF fields      | IEC 61000 - 4 - 3    |
| Conducted immunity                         | IEC 61000 - 4 - 6    |
| Immunity to magnetic fields                | IEC 61000 - 4 - 8    |
| Immunity to voltage dips and interruptions | IEC 61000 - 4 - 11   |
| Fast transient                             | IEC 61000 - 4 - 4    |
| Immunity to surge waves                    | IEC 61000 - 4 - 5    |
| Conducted and radiated emissions           | CISPR-22 / CISPR-11  |

## Safety and Standards

IEC61010 Edition 3.0 CAT III, Protection class II

IEC 61326 - 1

## Ordering information

| Product code | Supply voltage                         | Output       |               | Certification |
|--------------|----------------------------------------|--------------|---------------|---------------|
| MRJ385-G-PNW | Self Supplied (V1, N)<br>60 to 300V AC | Pulse output | Comm. (RS485) | CE            |