



96 x 96mm

### Features :

- MID B+D Certified
- 3 $\emptyset$  True RMS (Voltage, Current)
- 3 $\emptyset$  Power (Active, Reactive, Apparent)
- Energy (Active, Reactive, Apparent)
- Max / Min Demand of Power
- Plug-n-Wire, RJ45 Connector Current Input
- Modbus RTU Communication (RS485)
- Single Pulse Output
- Self Powered

Certification :   

### Display Specifications

Display type	High definition white Backlight LCD
Digit height	11.2mm (displayed parameter) 6.35mm (lowest 8 digits)
Page scrolling	Manual / Auto scroll mode by front key
Energy maximum display	99999999
Resolution	For Energy : 0.01K, 0.1K, 1K, 0.01M, 0.1M, 1M (depending upon CT rating) For Power, Voltage, Current : Auto Resolution For Power Factor : 0.001

### Input Specification

Connection	Single phase (CT on L1 only), Three phase four wire
Certified voltage range	100 to 240V (L - N), 173 to 415V AC(L-L)
Voltage rated burden	<6VA (supplied from any Phase), <0.2VA (L2 and L3)
Nominal current input	RJ45 - 1A
Max current (Imax)	RJ45 - 1.2A (Nominal x 1.2)
Starting current	2mA (0.66mV)
Short time overcurrent	30 x Imax to IEC/EN62053-21 + 23
Impulse voltage withstand	6kV 1.2/50 $\mu$ S 0.5J
AC voltage withstand	4kV 50Hz for 1 min
CT primary current	1A to 6000A
PT primary voltage	100 to 600V
Frequency	50Hz
Current distortion factor	According to IEC/EN50470
Programming access	Password protected (user selectable)
Memory retention	Non volatile memory
<b>Accuracy</b>	
Voltage	0.5% of full scale
Current	0.5% of full scale
Frequency	Frequency : $\pm$ 0.1% For L - N Voltage >20V For L - L Voltage >35V
Power factor	1% of unity
Active power	1%
Reactive power	1%
Apparent power	1%
Active energy	Class 1, Class B (IEC/EN62053-21, IEC/EN50470)
Reactive energy	Class 2 (IEC/EN62053-23)
Total harmonic distortion (THD - Upto 31 <sup>st</sup> )	3%

Displayed parameters	Voltage – L-L, L-N and average Current – Phase, Total and Max. demand Power Factor – Per phase and average Total Harmonic Distortion – Current and Voltage. Neutral current. Frequency Hours Run – Hours & minutes Power – Active, Reactive and Apparent (per phase and total) Power Min./Max. demand – Active, reactive and apparent. Energy – Active, reactive and apparent (per phase and total) Import and export energy – Active, Reactive and Apparent (per phase and total)
Settable parameter	<b>Network selection</b> <b>CT primary current</b> <b>PT primary voltage</b> <b>PT secondary voltage</b> Communication address Communication speed (Baud) Communication Parity Communication number of stop bits Back-light time-out period Demand period (for integration) <b>Pulse output (kWh)</b> <b>Pulse duration</b> <b>Reset to Factory Default</b> <b>Reset Energy and Maximum Demand</b> <b>Reset Active Energy</b> <b>Reset Reactive Energy</b> <b>Reset Apparent Energy</b> Reset Maximum Current Reset Maximum Active Power Reset Minimum Active Power Reset Maximum Reactive Power Reset Minimum Reactive Power Reset Maximum Apparent Power

**NOTE:** Once Programming Mode Is entered The values in red will be locked out after 15 Mins. No further adjustment is possible without return to factory.

### Auxiliary supply specifications

Voltage range	60 to 300V AC, 50 / 60Hz ( $\pm$ 5%), Self Supplied (V1, N)
Operating frequency	47 to 65Hz
Power consumption	8 VA max

 APPROVED FOR BILLING APPLICATIONS  
Measuring Instruments Directive

**Communication**

Communication type	RS485
Communication protocol	Modbus
Address	1 to 255
Number of bits	8 bits
Parity	None, odd, even
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200
Required response time to request	≤100ms
Number of meters connected on the bus	32 (up to 255 with RS485 repeater)
Max distance from Master device	500M

**Insulation**

Installation category	III
Pollution degree	2
Insulation voltage rating	300V (L - N)

**Environmental Specifications**

Reference temperature	23°C ±2°C
Specified temperature operating range	-10°C to +55°C
Storage temperature	-20°C to +70°C
Relative humidity	0 to 85%, Non-condensing
Mechanical environment	M1
Electromagnetic environment	E2

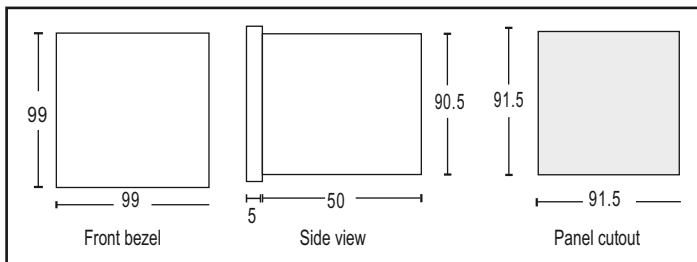
**Mechanical**

Housing	DIN96
Mounting	Panel mounted (Max panel thickness 6mm)
Tamper sealing	Meter housing (by means of a tamper evident seal) Sealable terminal covers
Housing material	Self-extinguishing polycarbonate (UL94 V-0)
Protection degree (IEC/EN60529)	IP20 (terminals), IP54 (front of housing)
Weight	<240g

**Termination**

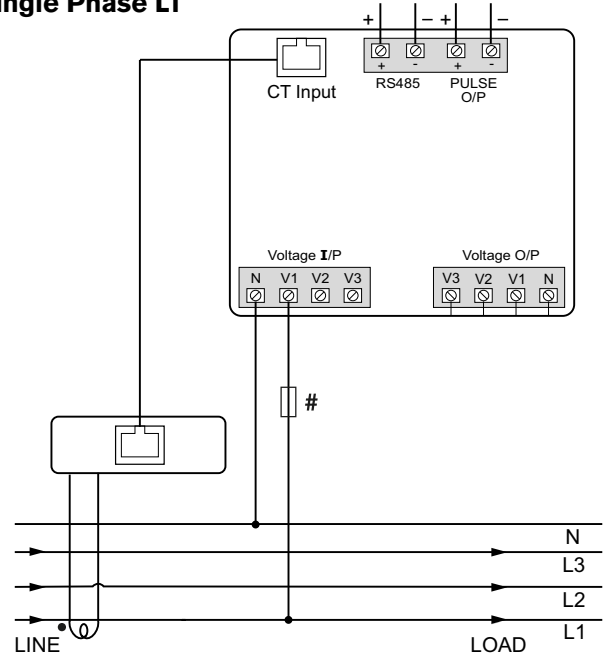
Current input terminal type	RJ45
Max. wire size	N/A
Voltage input terminal type	Pluggable terminal block - Rising clamp
Max. wire size	2.5mm <sup>2</sup>
Voltage output terminal type	Pluggable terminal block - Rising clamp
Max. wire size	2.5mm <sup>2</sup>
Communication output (RS485 and Pulse)	Pluggable terminal block - Rising clamp
Max. wire size	1.5mm <sup>2</sup>

**Dimensions (All are in mm)**

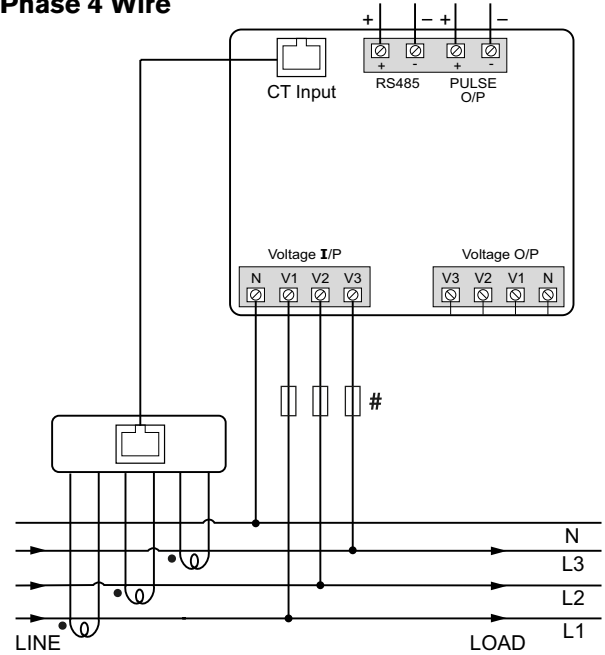


**Terminal connection**

**Single Phase L1**



**3 Phase 4 Wire**




**Note:** # All fuse types : Class CC UL type fast acting 600V  
Max.3A (Actual rating is dependent on the number of meters connected to the voltage supply and must be determined during system design).

## Conformity

Applicable EMI / EMC Standards
Product Standard : IEC 61326 - 1
<b>Electromagnetic compatibility</b>
IEC/EN61326-1, IEC/EN55011 Class A
IEC/EN61000-4-2, -3, -4, -5, -6, -8, -11
IEC/EN50470-1/3
<b>Accuracy and functionality</b>
IEC/EN50470-1/3
IEC/EN62053-21
IEC/EN62053-23
DIRECTIVE 2014/32/EU
IEC/EN62053-31
<b>Safety</b>
IEC/EN61010

## Ordering information

Product code	Supply Voltage	Certification
MRJ385-G-PNW-MID	Self Supplied (V1, N) 60 to 300V AC	 CE