## **MRJ385**



96 x 96mm

## Features :

- MID B+D Certified •
- 3Ø True RMS (Voltage, Current) •
- 3Ø 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 : MID CE

#### **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 1.2/50µS 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	
Accuracy		
Voltage	0.5% of full scale	
Current	0.5% of full scale	
Frequency	Frequency : ±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 Active energy	1% Class 1, Class B (IEC/EN62053-21, IEC/EN50470)	
Reactive energy	Class 2 (IEC/EN62053-23)	
Total harmonic distortion (THD - Upto 31⁵)	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	Network selection CT primary current PT primary voltage PT secondary voltage Communication address Communication speed (Baud) Communication Parity Communication number of stop bits Back-light time-out period Demand period (for integration) Pulse output (kWh) Pulse duration Reset to Factory Default Reset to Factory Default Reset to Factory Default Reset Energy and Maximum Demand Reset Active Energy Reset Reactive Energy Reset Maximum Current Reset Maximum Active Power Reset Maximum Reactive Power
	Reset Maximum 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 (±5%), Self Supplied (V1, N)
Operating frequency	47 to 65Hz
Power consumption	8 VA max



# **MRJ385**

# **Multifunction Meter**

#### 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	–10°C to +55°C
range	
Storage temperature	-20°C to +70°C
Relative humidity	0 to 85%, Non-condensing
Mechanical environment	M1
Electromagnetic environment	E2

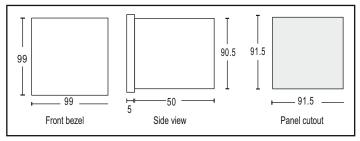
#### Mechanical

96
el mounted (Max panel thickness 6mm)
er housing (by means of a tamper evident Sealable terminal covers
extinguishing polycarbonate (UL94 V-0)
(terminals), IP54 (front of housing)
)g

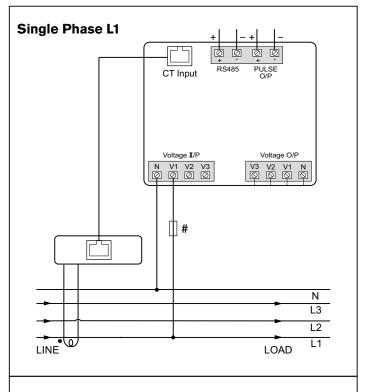
#### Termination

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>

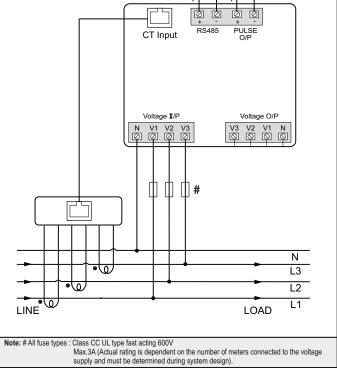
#### Dimensions (All are in mm)

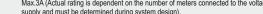


**Terminal connection** 



## 3 Phase 4 Wire





### Conformity

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

## **Ordering information**

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