MRJ4M

Multifunction Meter

selec
MRJ4M
Current Input
240.0
5.000
50.0
1.00
Avg
L-N
PAGE
PRG
INT

DIN 70mm

Features :

- **3Ø True RMS (Voltage, Current)**
- **Plug-n-Wire, RJ45 Connector Current Input**
- **Energy (Active, Reactive)**
- **3Ø Power (Active, Reactive, Apparent)**
- **Programmable CT Primary, PT Primary / Secondary**
- **Modbus RTU Communication (RS485)**
- **Single Pulse Output**
- **Max Demand power**
- **Self Powered**

Certification : CE

Display Specifications

Display	3 rows, LCD with Backlight
Digits	2 rows of 4 Digits, 1 row of 7 Digits
LED Indications	Integration of Energy

Input Specifications

Electrical Connection	3Ø - 4 wire, 1Ø - 2 wire
Input Voltage Range	60 to 300V AC (L - N) 104 to 520V AC (L - L)
Frequency	45 to 65Hz
Display Scrolling	Automatic / Manual
Power Consumption	8VA max
Display Reset	Programmable (For energy)
Resolution	For energy : 0.01k, 0.1k, 1k, 0.01M, 0.1M (depending upon CT ratio x PT ratio) For Power, Voltage, Current : Auto Resolution For Power Factor : 0.01
Accuracy	Voltage (L - N / L - L) : ±0.5% of F.S. Current : ±0.5% of F.S. Power Factor : ±0.01 Frequency : ±0.1 For L - N Voltage >20V For L - L Voltage >35V Power (Active, Reactive, Apparent) : ±1 Energy (Active, Reactive) : ±1
Memory Retention	10 years (For energy)
Measuring Parameters	Voltage (L - L / L - N) (Individual / Average), Current (Individual / Average), Frequency, Power Factor (Individual / Average), Active, Reactive & Apparent power (Individual / Total), Active and Reactive Energy, Demand (Max Active Power, Max Apparent Power)

Output Specifications

Pulse Output	Voltage Range : 24V DC max Current Capacity : 100mA max Pulse Duration : Selectable between 0 .1 to 2.0 sec. Pulse Weight : Selectable between 0.01 to 9.99 kWh
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	60 to 300V AC, 50 / 60Hz (±5%), Self Supplied (V1, N)

Settable Parameters

CT Primary	5A to 10kA (Programmable for any value)
CT Secondary	330mV
PT Primary	100V to 10kV (Programmable for any value)
PT Secondary	100V to 500V AC (L - L) (Programmable for any value)

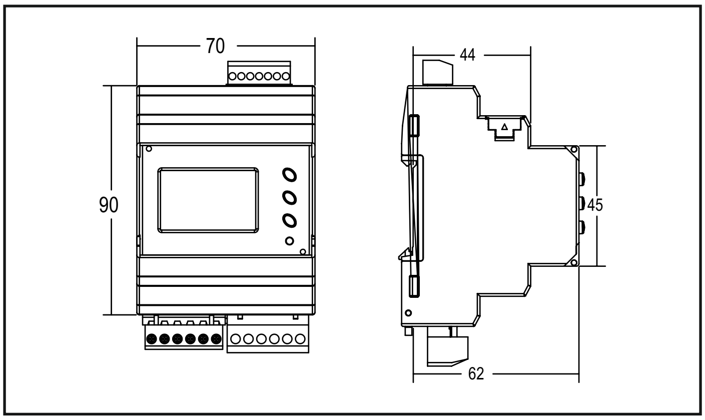
Environmental Specifications

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

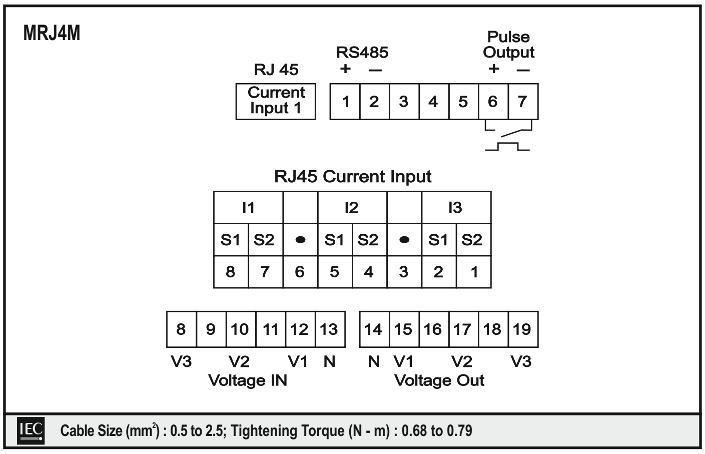
Mechanical Specifications

Mounting	Din Rail
Weight	191gms

Dimensions (All dimensions are in mm)


70
90
44
45
62

Terminal Connection


MRJ4M
RJ 45
Current Input 1
RS485
+ –
Pulse Output
+ –
1 2 3 4 5 6 7
RJ45 Current Input
I1
I2
I3
S1 S2 ● S1 S2 ● S1 S2
8 7 6 5 4 3 2 1
8 9 10 11 12 13
14 15 16 17 18 19
V3 V2 V1 N
N V1 V2 V3
Voltage IN
Voltage Out

IEC Cable Size (mm^2) : 0.5 to 2.5; Tightening Torque (N - m) : 0.68 to 0.79

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) + / - 1kV Differential Mode, (Line to Line)
Radiated Susceptibility	IEC 61000 - 4 - 3	Level III, 80 to 1000MHz (10V / m) Level II, 1.4GHz to 2GHz (3V / m) 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) **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
MRJ4M	Self Supplied (V1, N) 60 to 300V AC	Pulse Output	Comm. (RS485)	CE