EM2M-1P-C-100A

Energy Meter



DIN 35mm

Features :

- **1Ø True RMS (Voltage, Current)**
- **1Ø Power (Active, Reactive, Apparent)**
- **Self Powered, 100A Direct Connection**
- **Bi - Directional Measurement IMP & EXP**
- **Max Demand Power**
- **Modbus RTU Communication (RS485)**
- **Two Pulse Outputs**
- **LED Pulse Indication**
- **LCD Display with Backlight**

Certification : CE

Display Specifications

Display	1 row, LCD with Backlight
Digits	7
LED Indications	Integration of Energy

Input Specifications

Electrical Connection	1Ø - 2 wire
Input Voltage Range	176 to 276V AC (L - N)
Input Current Range	Ib: 10 A (Min - 0.5A, Max - 100A)
Frequency	45 to 65Hz
Display Scrolling	Automatic / Manual (Programmable)
Power Consumption	8VA max
Display Reset	Programmable (For energy)
Resolution	For energy : 0.01k For Power, Voltage, Current : Auto Resolution For Power Factor : 0.01
Accuracy	Voltage (L - N) : ±0.5% of F.S. Current : ±0.5% of Nominal Power Factor : ±0.01 of F.S. Frequency : ±0.1% of F.S. Power (Active, Reactive, Apparent) : 1% Energy (Active, Reactive, Apparent) : Class 1
Memory Retention	10 years (For energy)
Measuring Parameters	Voltage (L - N) Current I1, Frequency, Power Factor, Power (Active, Reactive & Apparent), Energy (Active, Reactive & Apparent) Active, Reactive (Import / Export) & Max Demand Power

Output Specifications

Pulse Output	Voltage Range : 5 to 24V DC@100mA Pulse Duration : 0.05 to 2.0 Sec. settable Pulse Width : 1 / 10 / 100 / 1000 (**First Pulse Output is fixed 1000 pulses per 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	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	176 to 276V AC (Self - Powered)

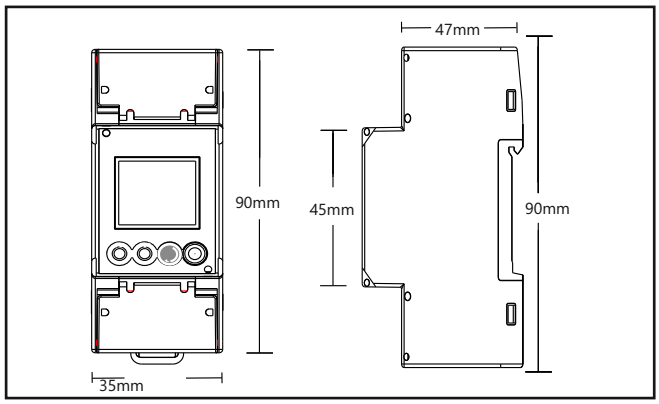
Environmental Specifications

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

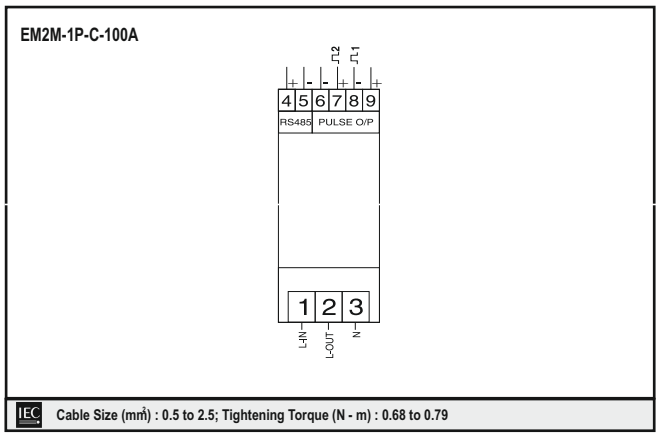
Mechanical Specifications

Mounting	Din Rail
Weight	150gms

Dimensions (All dimensions are in mm)



Terminal Connection



Cable Size (mm²) : 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	+ / - 4kV Common Mode, (Line to Ground)
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 IV (4kV)

Ordering Information

Product Code	Supply Voltage	Output		Certification
		Pulse Output	Comm. (RS485)	
EM2M-1P-C-100A	176 to 276V AC (Self - Powered)			CE