Energy Meter

EM306-C-CE



96 x 96mm

Features:

- Single pulse output
- 3Ø Power (kW, kVAr, kVA), PF
- 3Ø Energy (kWh, kVArh, kVAh)
- RS485 Communication MODBUS RTU protocol
- Import / Export energy

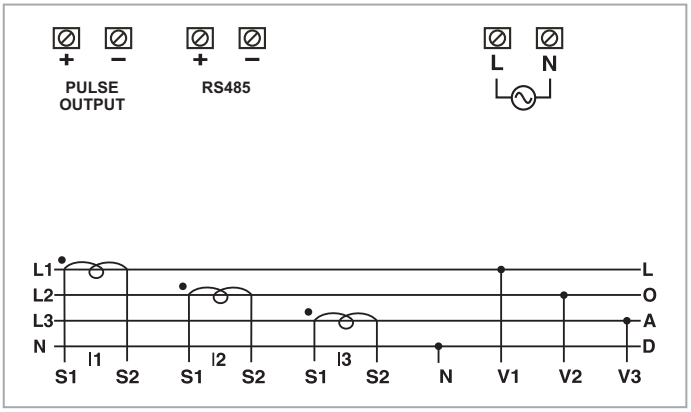
Certifications: CE

Technical specifications

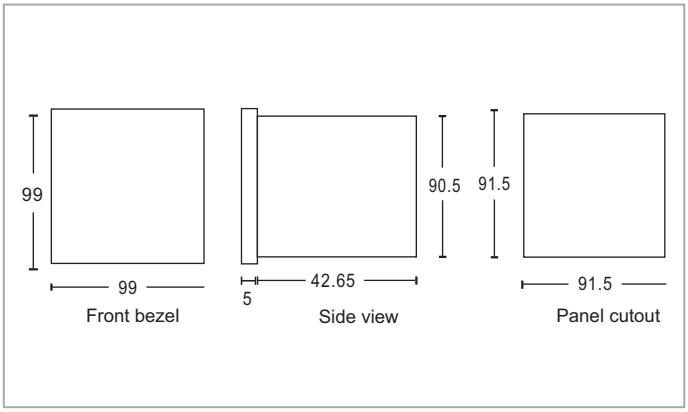
Display specifications	
Display	7 segments LED display
Digits	1 row of 9 digits
Digit height	0.39"
Resolution	For energy: 0.01k, 0.1k, 1k, 0.01M, 0.1M, 1M (depending upon CT ratio X PT ratio)
	For power: Auto resolution
	For power factor: 0.001
	For frequency: 0.01 Hz
Input specifications	
Type of measurement	True RMS
Sampling rate	64 Samples / Cycle
Electrical connections	3Ø - 3 wire (Delta), 3Ø - 4 wire (wye), 2Ø - 3 wire, 1Ø - 2 wire (L-N)
Data update rate	1 sec
Input - Voltage	
PT primary	100V to 500kV (programmable for any value)
PT secondary	100V to 500V (programmable for any value)
Voltage nominal	240V AC L-N / 415V AC L-L
Measured V with full range	19V to 480V AC L-L (277V AC L-N) (CAT III), 520V AC L-L (300V AC L-N) (CAT II)
Impedance	≥0.8MΩ
Frequency range	45-65Hz
VA burden	<0.5VA at 300V AC L-N / Phase
Input current	
CT ratings primary	1/5A to 10kA (programmable for any value)
CT ratings secondary	1/5A (programmable for any value)
Current nominal	5A AC
Measured current with over range	11mA to 6A AC
Short circuit withstand capacity	120A for 1sec
Frequency range	45-65Hz
VA burden	0.5VA at 5A / Phase
Measurement accuracy	
Accuracy	Voltage (L-N / L-L): ±0.5% of full scale
	Current: ±0.5% of full scale
	Power factor: ±0.01
	Frequency: ±0.1%, For L-N voltage >20V, For L-L voltage >35V
	Power (Active - ±1%, Reactive - ±2%, Apparent - ±1%)
	Energy (Active - Class 1, Reactive - Class 2, Apparent - Class 1)

Output specifications	
Pulse output	Voltage range: External 24V DC max
	Current capacity: 100mA max
	Configurable pulse width from 0.1s to 2.0s
	Configurable pulse weight from 0.01 to 99.99 kWh
Device ID & Parity	1 to 255 & None, Odd, Even
Protocol & Interface	RS485 and MODBUS RTU
Transmission mode	Half duplex
Data types	Float and Integer
Transmission distance	500 meter maximum
Transmission speed	300, 600, 1200, 2400, 4800, 9600, 19200 (in bps)
Stop bits	1 or 2
Isolation	2kV RMS
Mechanical specifications	
Weight	216 gm approx
Material	Polycarbonate
IP degree of protection	Front: IP65, Back: IP20
Torque at terminals	0.68 N-m to 0.79 N-m
Wire gauge at terminals	20 to 14 AWG; 75 °C
Mounting position	Panel mount
Auxiliary supply specifications	
Supply voltage	40 to 300V AC/DC, 50 / 60 Hz
Power consumption	<6VA/2W
Environmental specifications	
Operating temperature	-10 °C to 55 °C (14 °F to 131 °F)
Storage temperature	-20 °C to 75 °C (-4 °F to 167 °F)
Humidity	Up to 85% RH (non - condensing)
Altitude	Up to 2000 meters (6561 ft.)
Measurement category	CAT III
Pollution degree	2

Terminal connections



Dimensions (All are in mm)



Compliance

Applicable EMI / EMC Standards	
Product standard : IEC 61326-1 Edition 3.0	
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-11
Safety standards	
IEC61010 Edition 3.0 CAT III, Protection class II	

Ordering information

Product code	Supply voltage	Output		Certification
		Pulse output	Comm. (RS485)	
EM306-C-CE	40-300V AC/DC 50/60 Hz	Yes	Yes	CE