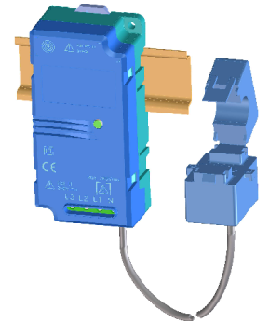


EMN - W2 (Single Phase)

The EMN series (Energy Meter Node) is an AC electricity sub-meter with wireless mesh network communication output. This module is working with the mesh gate MG-5424.



Provisional



Electrical data

I_{PN}	Primary nominal current (A)	Types		
	5	EMN 5 W2		
	20	EMN 20 W2		
	50	EMN 50 W2		
	100	EMN 100 W2		
I_P	Primary current measuring range (of I_{PN})		120	%
V_P	Primary voltage measuring range (neutral/phase) ¹⁾		90 .. 265	V_{rms}
	Permanent overload voltage (neutral/phase)		276	V_{rms}
f	Frequency		50/60	Hz
S	Output signal : radio frequency communication ²⁾	see MG-5424 datasheet		
	Power supply	Line powered between N-L1 inputs		
	Power consumption	Max	2	W

Measurement Values

	Configurable reading interval : 5 .. 30 mn			
	Internal base values			Cummulated values
	Av	Min	Max	
Current (A)				
Voltage (V)				
Active Energy (kWh)				
Reactive Energy (kVARh)				
Apparent Energy (kVA)				
Frequency				

Accuracy

X	Accuracy : @ $T_A = 25^\circ\text{C}$	Max	
	R.m.s Current @ I_{PN}	1.5	%
	R.m.s Voltage @ V_P	1.5	%
	Active Energy (refer to IEC 62053-21 class 1)	± 1	%
	Reactive Energy (refer to IEC 62053-23 class 3)	± 3	%

General data

T_A	Ambient operating temperature (90% RH)	- 10 .. + 55	$^\circ\text{C}$
T_S	Ambient storage temperature	- 25 .. + 85	$^\circ\text{C}$
m	Mass	400	g
IP	Protection index	IP 2X	
	Standards	EN 50178 : 1997	
		IEC 61010-1 : 2001	

Notes : ¹⁾ See connection diagram

²⁾ FCC, CE and TELEC certification pending.

Features

- Wide range of electrical parameters measurement
- Wireless communication on license free 2.4 GHz
- Class 1 accuracy active energy.

Advantages

- Fast & easy mounting:
 - Wireless communication
 - Split core CT
 - Self powered from voltage line.
- Compact
- Gateway interface : RS 232/485 Modbus RTU
- Ideal for retrofit applications.

Applications

- Energy sub-metering
- Network condition monitoring
- Energy audit & diagnostic
- Building energy management.

Application domain

- Industrial.

EMN - W2 (Single Phase)

Isolation characteristics



Isolation class II
IEC 61010-1 CAT III 300 Vrms

Safety

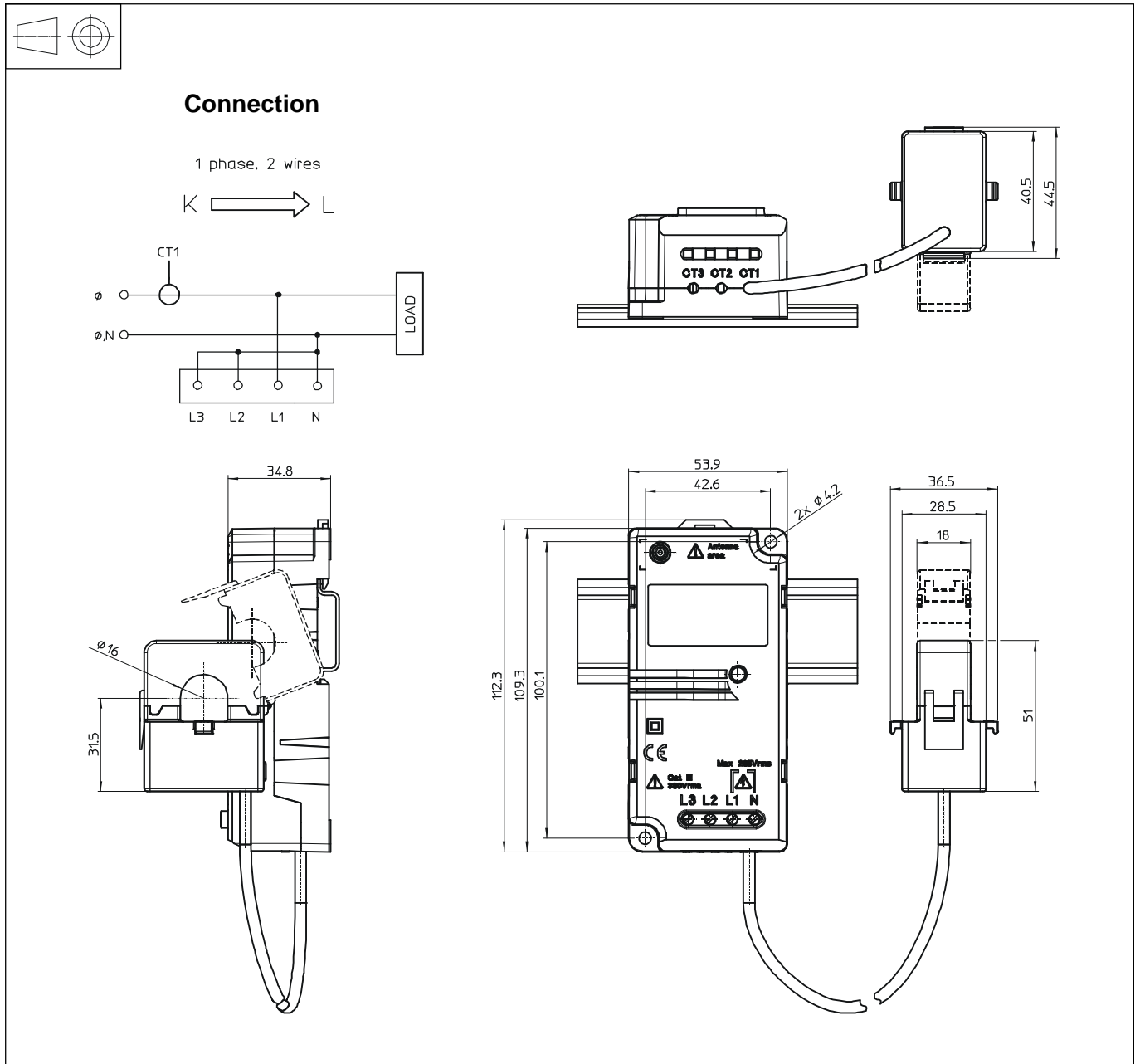


This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.



Caution, risk of electrical shock : Do not remove any parts of the EMN - W2.

Dimensions EMN - W2 (Single Phase) (in mm. 1mm = 0.0394 inch)



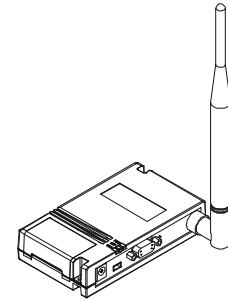
Mechanical characteristics

- General tolerance ± 1 mm
- Primary through-hole of current transformer hole $\varnothing 16$ mm
- Current transformer output cable length : 1m
- Module fixing DIN rail rear box or
- Module fastening 2 slots $\varnothing 4.2$ mm
2 M4 steel nuts
- Recommended fastening torque 2.8 Nm or 2.07 Lb.-Ft.
- Voltage terminal block 4 M3
- Recommended fastening torque 0.5 Nm or 0.37 Lb.-Ft.

Remark

- Temperature of the primary conductor should not exceed 65°C.

Mesh Gate (MG-5424) & Mesh Node (MN - 5424)



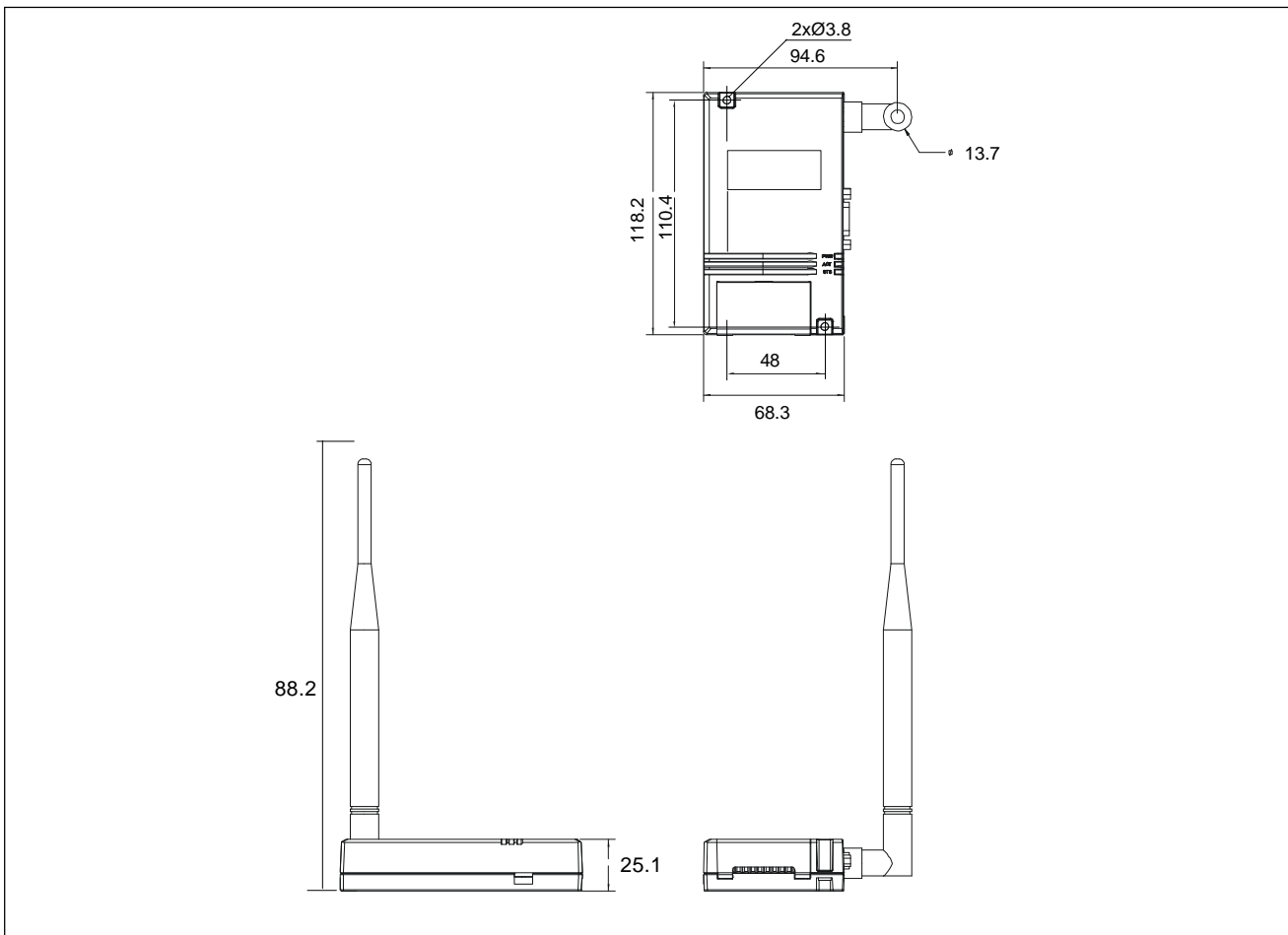
Features

- Mesh, Star and Star-Mesh Network topologies
- Interface RS 232/485 Modbus RTU (Gateway only)
- RF frequency range ¹⁾

2400 .. 2483.5	MHz
802.15.4	

 - ◆ Programmable in 16.5 MHz channels
 - ◆ Unlicensed ISM band worldwide
- Range to Router (indoor, line of sight) 30 m
- Range to EMN (indoor, line of sight) 20 m
- Data rate 250 kbps
- Power supply voltage (terminal block) 4.5 to 30 V DC
- Power consumption 200 mA
- Operating temperature - 10 .. + 55 °C
- Storage temperature - 25 .. + 85 °C

Dimensions Mesh Gate & Mesh Node (in mm. 1mm = 0.0394 inch)



Note : ¹⁾ FCC, CE and TELEC certification pending.