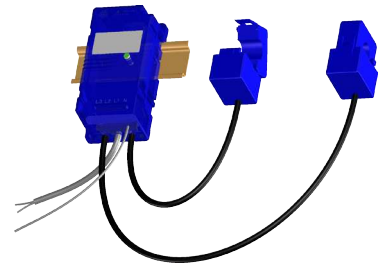


EMN 100-D3/SP2 (3 phase Delta)

The EMN (Energy Meter Node) series is an AC energy submeter with a wireless mesh network communications output. The D3/SP2 was designed for three phase networks without the neutral and with an inter-phase voltage up to 500V rms. This module is compatible with the Mesh Gate L or XL.



Electrical data

I_{PN}	Primary nominal current rms	100	A
I_{PM}	Primary current, measuring range (of I_{PN})	120	%
V_{PM}	Primary voltage, measuring range (phase/phase) rms ¹⁾	90 .. 520	V
f	Frequency	50/60	Hz
S	Output signal: radio frequency communication ²⁾ see Mesh Gate datasheet		
V_C	External DC supply voltage ($\pm 10\%$) ³⁾	+ 24	V
I_C	Current consumption @ + 24 V	< 50	mA

Measurement value

	Configurable reading interval: 5 .. 30 min Interval base values						Counter values		
	L1			L3			SUM	L1	L3
	Av	Min	Max	Av	Min	Max			
Current (A)									
Voltage (V)									
Active Energy (KWh)									
Reactive Energy (kVarh)									
Apparent Energy (kVA)									

f Frequency measured from phase 1 (L1)

Accuracy

X	Accuracy @ $T_A = 25^\circ\text{C}$	Max	
	Rms current @ I_{PN}	1.5	%
	Rms voltage @ V_P	1.5	%
	Active Energy (refer to IEC 62053-21 class 1) ⁴⁾	± 1	%
	Reactive energy (refer to IEC 62053-23 class 3)	± 3	%

General data

T_A	Ambient operating temperature (90 % RH max)	- 10 .. + 55	$^\circ\text{C}$
T_S	Ambient storage temperature	- 25 .. + 85	$^\circ\text{C}$
m	Mass	400	g
IP_{xx}	Protection index	IP 2X	
	Standards	EN 50178: 1997	
		IEC 61010-1: 2001	
	Range to Mesh Gate or Mesh Node (indoor, line of sight) 30	m	

Notes: ¹⁾ See connection diagram

²⁾ RF Certification: CE, FCC, IC, Japan (pending)

³⁾ Power supply must comply with limited-energy circuit criteria

⁴⁾ Class 1 guaranteed for power factor ≥ 0.65 .

Features

- Wide range of electrical parameters measurement
- Wireless communication on license free 2.4 GHz-transmit RF power max EIRP: 10 dBm(10mW)
- Uses external power supply
- Class 1 accuracy active energy.

Advantages

- Fast & easy mounting:
 - Wireless communication
 - High accuracy split core Rogowski coil
- 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

- Energy Solutions.

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Isolation characteristics



Isolation class I
IEC 61010-1 cat III 300 Vrms

This device must be connected to earth (ground),
use the green/yellow wire.

Safety

CB test Certificate N° FR 588764 IEC System for mutual recognition of test certificates for electrical equipment (IECEE) CB Scheme



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 - D3/SP2.



For current transformer (CT) mounting:
make sure that the power cable on which the CT will be attached is powered off.

