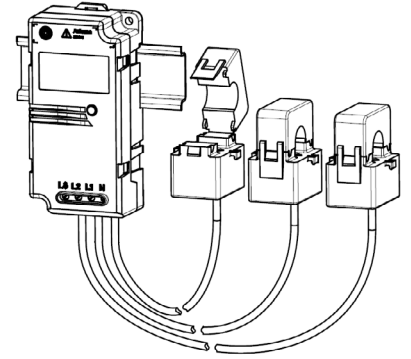




Sentinel Power 20 .. 100 – W4 (3 phase Wye 4 wires)

The Sentinel Power series is an AC energy sub-meter with an IEEE 802.11 Wi-Fi network communication output. The W4 is designed for three phase networks with a line-to-neutral voltage up to 300V rms.



Features

- Wide range of electrical parameters measurement
- Wireless communication on license free 2.4GHz using Standard IEEE-802.11 Wi-Fi
- Class 1 accuracy active energy

Advantages

- Fast & easy mounting :
 - Wireless communication
 - Split Core CT
 - Self powered from voltage line
- Compact
- Interfaces : Java API, XML/RPC
- Ideal for retrofit applications

Applications

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

Application domain

- Energy & Automation



Electrical data

Symbol	Description	Types	
		Sentinel Power 20 W4	Sentinel Power 100 W4
I_{PN}	Primary nominal current rms (A)	20 100	
I_{PM}	Primary current, measuring range (of I_{PN})	120	%
V_{PM}	Primary voltage, measuring range (neutral/phase) ¹	90 .. 300	V_{rms}
	Permanent overload voltage (neutral/phase)	300	V_{rms}
f	Frequency	50/60	Hz
S	Output signal : radio frequency communication ²	See User Guide	
	Power supply	Line powered between N-L1 inputs	
V_{PN}	Primary nominal, voltage (neutral/phase)	100 .. 272	V_{rms}
P_C	Maximum power consumption	2	W

Measurement values (refer to User Guide for complete list)

	Interval based values									Counter values				
	Configurable reading interval : 5 .. 30min													
	L1			L2			L3			SUM	L1	L2	L3	SUM
	Av	Min	Max	Av	Min	Max	Av	Min	Max					
Current (A)			○			○			○					
Voltage (V)		○			○			○						
Active Energy (KWh)										●	●	●	●	
Reactive Energy (KVArh)										○	○	○	○	
Apparent Energy (KVA)										○	○	○	○	

● Guaranteed transmission (stored on flash) ○ Best effort transmission only

f Frequency measured in phase 1 (L1)

Accuracy

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

General data

T_A	Ambient operating temperature (90 % rH)	- 10 .. + 55	°C
T_S	Ambient storage temperature	- 25 .. + 85	°C
m	Mass	400	g
IPxx	Protection index	P 2X	
	Standards	EN 50178 : 1997 IEC 61010-1 : 2001	

¹ See connection diagram

² RF Certification : CE, FCC (pending)

³ Class 1 guaranteed for Power Factor ≥ 0.65 .



Sentinel Power 20 .. 100 – W4 (3 phase Wye 4 wires)

Isolation characteristics



Isolation class II
IEC 61010-1 CAT III 300 V_{rms}
Pollution degree: PD2

Safety

CB test Certificate N° FR 583050 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 Sentinel Power – W4

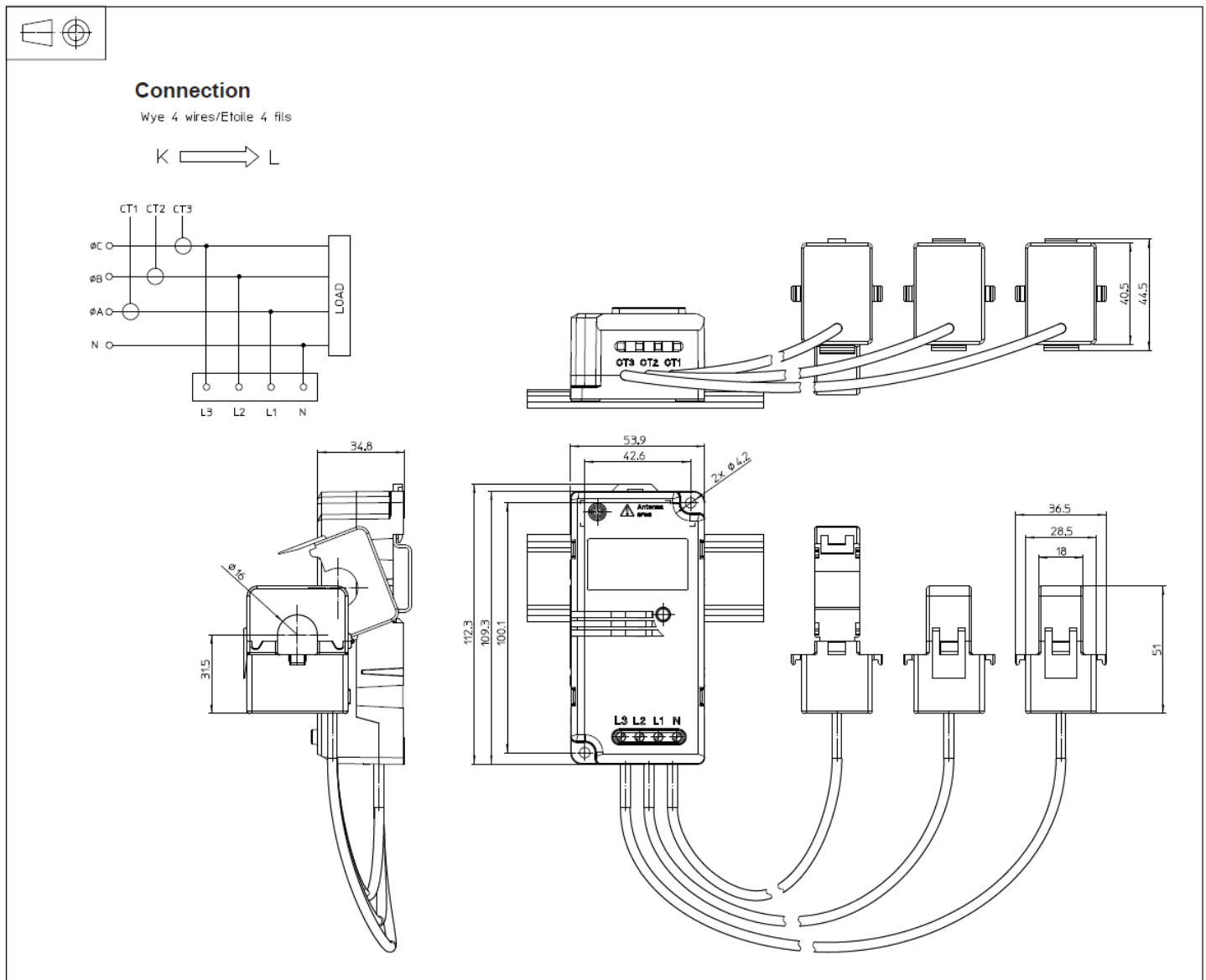


For current transformer (CT) mounting:

Make sure that the power cable on which the CT will be attached is powered off.



Dimensions - Sentinel Power 20 .. 100 – W4 (3 phase Wye 4 wires) (in mm. 1mm = 0.0394 inch)



Mechanical characteristics

- | | |
|--|--|
| • General tolerance | ± 1 mm |
| • Primary through-hole of current transducer | hole Ø 16 |
| • Current transformer output cable | length: 1 m |
| • Module fixing DIN rail rear box or | |
| • Module fastening | 2 slots Ø 4.2 mm
2 M4 steel nuts |
| • Recommended fastening torque | 2.8Nm or 2.07 Lb.Ft. |
| • Voltage terminal block | 4 M3 |
| • Recommended fastening torque | 0.5Nm or 0.37 Lb.Ft. |
| • Input voltage terminal | use cable max cross section 2.5mm ² |

Remarks

- Temperature of the primary conductor shall not exceed 65°C.
- Sentinel Power must be installed vertically as shown on the diagram above