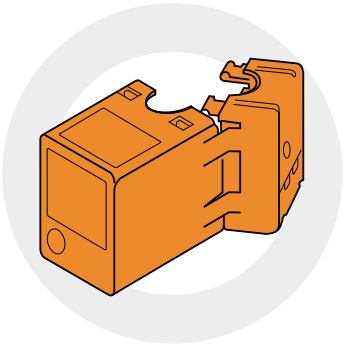
Panoramic Power Wireless sensor family

Overview

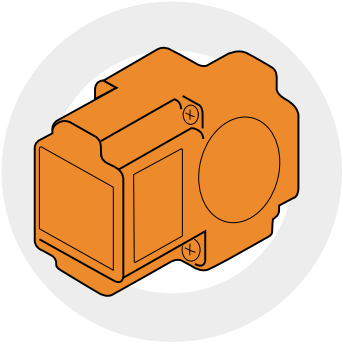
Panoramic Power's Enterprise Energy Management Solutions monitor an organisation's energy consumption at the circuit level. The solution detects energy usage via wireless, self-powered sensors that are easily attached to the circuits. The sensors transmit data through the bridge, and the energy information is delivered every 10 seconds to PowerRadar™, the solution's cloud-based analytics platform.

Two bridge variants are available: Gen3 (PAN-2-H-3G-US/EU V3) and Gen4 (PAN-2-H-3G-US/EU V4)

PAN-10



PAN-12



PAN-10 and PAN-12 sensor

Specifications	PAN-10 sensor	PAN-12 sensor
Physical dimensions	17 x 20 x 32 mm 0.67 x 0.79 x 1.26 inch	46.2 x 22.8 x 32.6 mm 1.82 x 0.90 x 1.28 inch
Max Hot-wire outer diameter (including insulation)	7 mm 0.28 inch	18.8 mm 0.74 inch
Current measurement range	0–63A	0–225A
Current measurement accuracy	Typically <2% at I > 3A	Typically <2% at I > 10A
Minimum operating current	0.5–1A (typical)	0.7–1.2A (typical)
AC frequency supported	50 Hz (EU version) 60 Hz (US version)	
Transmission frequency	434 MHz (EU version) 915 MHz (US version)	
Transmission power (ERP)	0 dBm (max)	
Transmission interval	10 seconds	

Key features

- Non-invasive, snap and fits without disconnection
- No maintenance; self-powered
- High accuracy
- Wireless–no wiring, unlike standard CT-based monitoring systems
- Real-time current data transmitted every 10 seconds

Panoramic Power
Wireless sensor family

PAN-10 and PAN-12 sensor

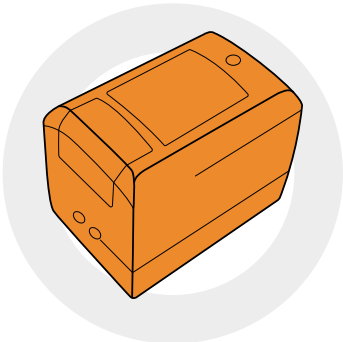
Specifications	PAN-10 sensor	PAN-12 sensor
Transmission interval	10 seconds	
Certification	USA & Canada Safety: UL-61010-1, UL 61010-2-030, CAN/CSA-C22.2 No. 61010-1 (ETL listed); EMC: FCC Part 15 subpart B, ICES-003; Radio: FCC Part 15 subpart C, RSS-210, RSS-Gen Europe Safety: EN-61010-1, EN 61010-2-030 (CE); EMC: EN-ETSI 301489-1, 301489-3, 61326-1; Radio: EN-ETSI 300220-1, 300220-2 CB Certification IEC 61010-1, IEC 61010-2-030 by Intertek Testing Services	
Flammability rating of external enclosure	UL94 V-0	
Operating temperature	0–50°C/32–122°F	
Storage temperature	-20–65°C/-4–149°F	

Panoramic Power's high current wireless sensor (PAN-14)

Specifications	PAN-14 sensor
Physical dimensions	33.8 × 29 × 42.5 mm 1.33 × 1.14 × 1.67 inch
Current input range	0–5A (up to 10A peak) (from external current transformer)
Current measurement range	Determined by external current transformer
Current measurement accuracy	Typically <2% at I > 0.1A (at input from external CT)
Minimum operating current	0.03–0.05A (at input from external CT)
AC frequency supported	50 Hz (EU version) 60 Hz (US version)
Transmission frequency	434 MHz (EU version) 915 MHz (US version)
Transmission power (ERP)	0 dBm (max)
Transmission interval	10 seconds

The PAN-14 high-current sensor attaches to any size standard 0-5 A current transformer, allowing measurements at any current range or wire gauge.

PAN-14



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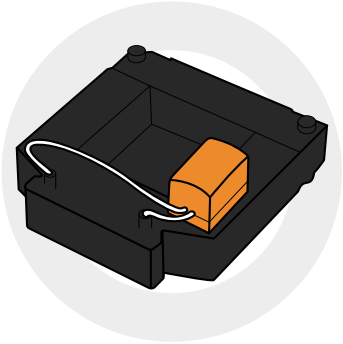
Wireless sensor family

Panoramic Power's high current wireless sensor (PAN-14)

Specifications	PAN-14 sensor
Certification	USA & Canada Safety: UL-61010-1, UL 61010-2-030, CAN/CSA-C22.2 No. 61010-1 (ETL listed); EMC: FCC Part 15 subpart B, ICES-003; Radio: FCC Part 15 subpart C, RSS-210, RSS-Gen Europe Safety: EN-61010-1, EN 61010-2-030 (CE); EMC: EN-ETSI 301489-1, 301489-3, 61326-1; Radio: EN-ETSI 300220-1, 300220-2 CB Certification IEC 61010-1, IEC 61010-2-030 by Intertek Testing Services
Flammability rating of external enclosure	UL94 V-0
Operating temperature	0–50°C/32–122°F
Storage temperature	-20–65°C/-4 –149°F

PAN-14



Key features

- Connects to any standard 5A current transformer
- No maintenance; self-powered
- High accuracy
- Wireless sensor & CT are closed around the hot wire with no additional wiring
- Real-time current data transmitted every 10 seconds

Panoramic Power's wireless power sensor (PAN-42)

Specifications	PAN-42 wireless power sensor
Description	4-wire Wye, 3-wire Delta, single-phase 3-wire, single phase 2-wire, or dual-phase 3-wire • Voltage: [120/208 V], [240/416 V], or [277/480 V] • Frequency: 48–62Hz • Current input range: 0–5A (up to 10A peak) • Current measurement range: determined by external CT • Minimum measurable power: 0.025W at device inputs (per phase)
Outputs	• Active Energy (kWh)–accumulated, per phase • True RMS Voltage & Current–per phase • Active & Reactive Power–per phase • Power Factor–per phase • Line frequency

The PAN-42 wireless power sensor provides high-accuracy real-time power measurements and advanced power quality measurements for main power monitoring, sub-metering and for the metering of large devices.

Designed for demanding electrical applications, supporting industry accuracy standards, PAN-42 enables the metering of power, voltage, current, power factor and power quality measurement data.

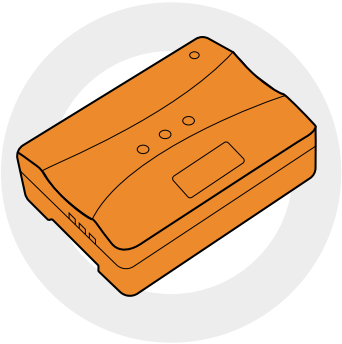
Panoramic Power
Wireless sensor family

Panoramic Power's wireless power sensor (PAN-42)

Specifications	PAN-42 wireless power sensor
Accuracy (for voltage, current and active energy)	According to ANSI C12.1 (Class 1)*
Transmission frequency	50 MHz (EU version) 60 MHz (US version)
Transmission power (ERP)	0 dBm (max)
Transmission interval	10 seconds
Transmission frequency	434 MHz (EU version) 915 MHz (US version)
Transmission power (ERP)	0 dBm (max)
Transmission interval	10 seconds
Certification	USA & Canada Safety: UL-61010-1, UL 61010-2-030, CAN/CSA-C22.2 No. 61010-1 (ETL listed); EMC: FCC Part 15 subpart B, ICES-003; Radio: FCC Part 15 subpart C, RSS-210, RSS-Gen Europe Safety: EN-61010-1, EN 61010-2-030 (CE); EMC: EN-ETSI 301489-1, 301489-3, 61326-1; Radio: EN-ETSI 300220-1, 300220-2 CB Certification IEC 61010-1, IEC 61010-2-030 by Intertek Testing Services
Flammability rating of external enclosure	UL94 V-0
Operating temperature	0–50°C/32–122°F
Storage temperature	-20–65°C/-4–149°F

*Assuming CT of class 0.2 or better

PAN-42



Key features

- Single, dual or 3-phase metering
- Accurate measurement of active and reactive power
- Real time monitoring of current, voltage, power and power quality
- Integrated within the Panoramic Power cloud-based energy management platform
- Fast and easy installation

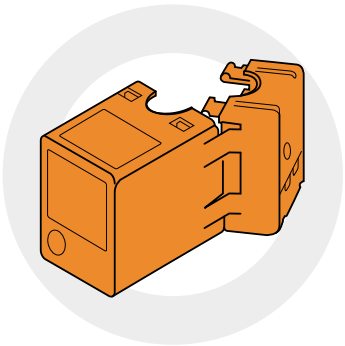
Panoramic Power
Wireless sensor family

The full portfolio of wireless sensors

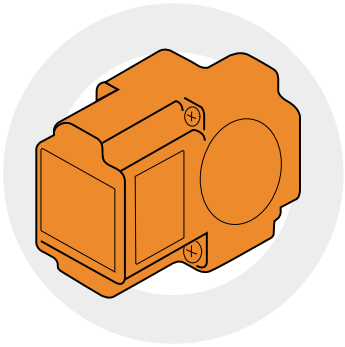
Panoramic Power provides a comprehensive range of cost-effective and easy-to-install metering and monitoring tools that transmit real-time energy data to its advanced cloud-based analytics platform

Granular monitoring of individual circuits and devices

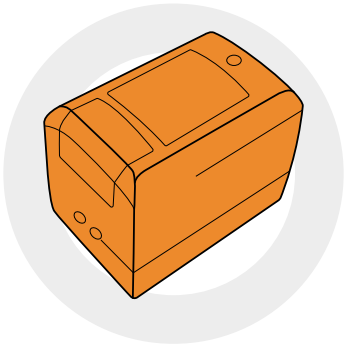
PAN-10



PAN-12

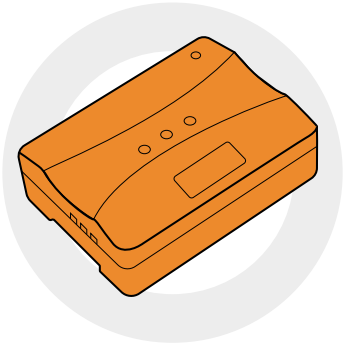


PAN-14



Sub-metering and monitoring of main powerlines and large devices

PAN-42



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