VOICE OF THE MACHINE™

Condition Monitoring and Diagnostic Solutions
SensoNODE™ Gold Sensors and Software

Sensors, Software, and Accessories
Catalog 3864 USA | April 2023
PDF Update: May 11, 2023

Parker

ENGINEERING YOUR SUCCESS.

Quick Coupling Division Locations

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⚠ WARNING

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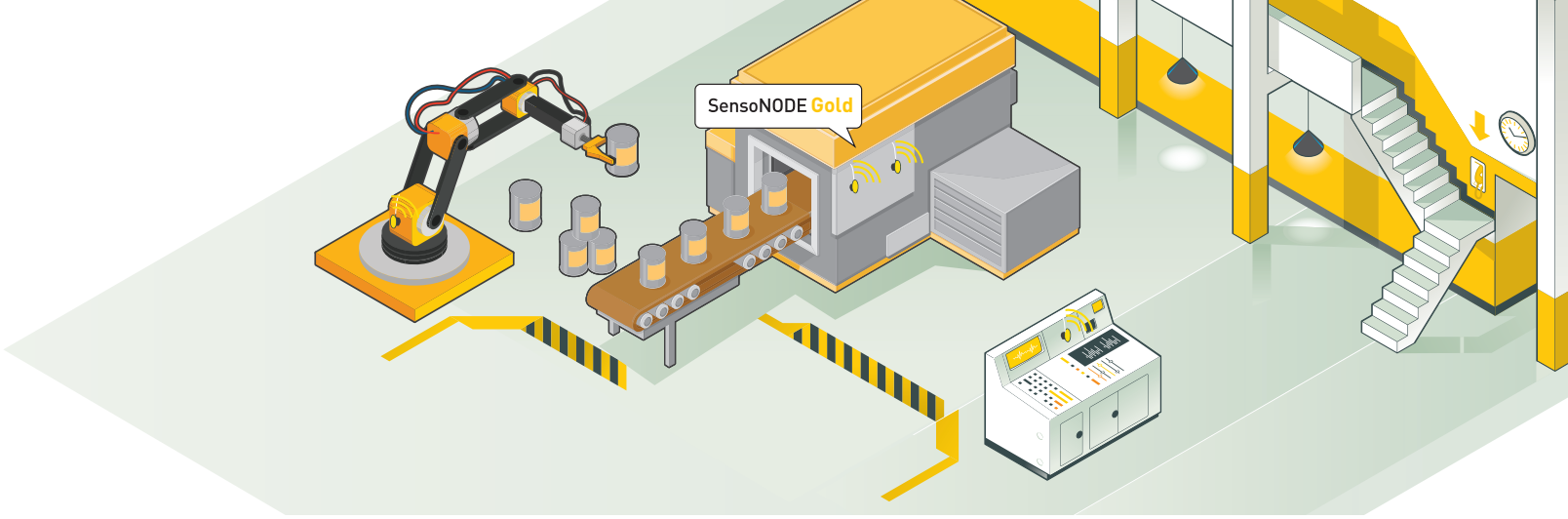
• The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

• To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the “Offer of Sale.”



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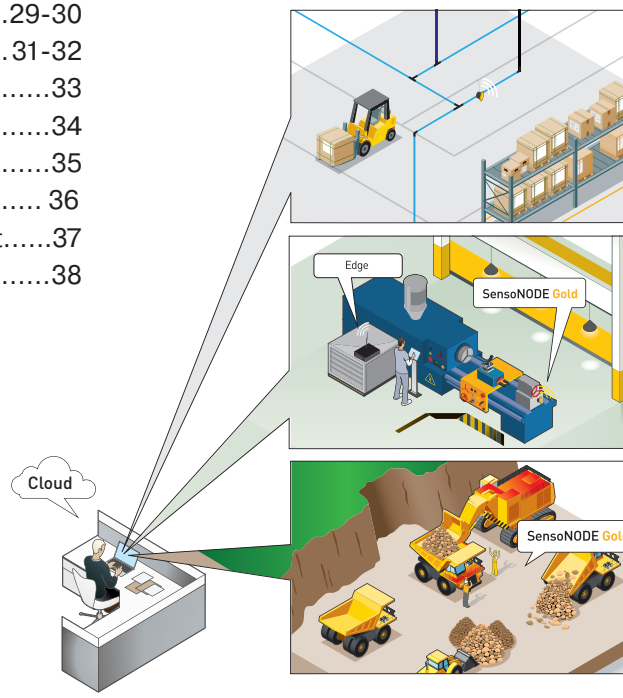

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Parker's IoT-Empowered Solutions

The Internet of Things (IoT) has changed the way manufacturing works, and you can't afford to be left behind. Global competitiveness drives companies to find new ways to improve efficiency and product quality, and incorporating IoT-enabled solutions into your operations ensures your company is moving forward.

Traditional condition monitoring means taking measurements on certain pieces of equipment or processes one at a time, either for diagnostics or performance analysis. While reliable, it can be an inaccurate, labor-intensive process that takes up valuable man-hours and creates potentially dangerous situations for workers…in short; it costs companies time and money.

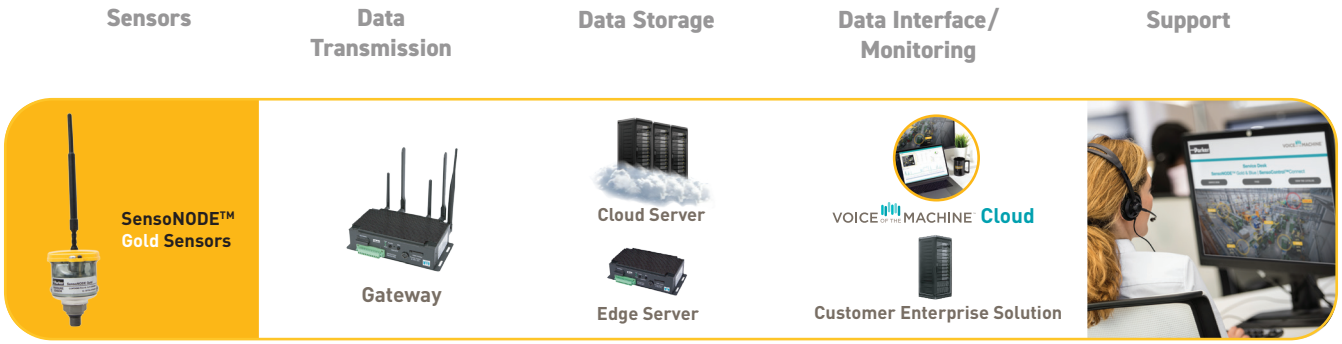
Parker's **SensoNODE™ Sensors** and **Voice of the Machine™ Software** are IoT-empowered solutions that create new, advanced condition monitoring possibilities to reduce downtime and decrease maintenance costs, helping you to maintain production and improve efficiency.

VOICE OF THE MACHINE™

Voice of the Machine is a centralized strategy to ensure standardization across all Parker IoT-empowered products. Voice of the Machine solutions assure you of component-level IoT that is interoperable, secure, scalable and easy-to-use.

Parker's advanced condition monitoring solutions listen to the Voice of the Machine, allowing you to:

- Reduce your risk, maintenance costs, and unplanned downtime
- Uncover operational and performance improvements
- Make informed, more confident decisions and enjoy greater peace of mind
- Leverage Parker's expertise to employ easy, cost-effective condition monitoring



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Streamline Your Work with Advanced Condition Monitoring and Diagnostics

Advanced condition monitoring replaces the laborious, time-consuming process of walking from asset to asset, checking manual gauges, taking hand-written notes, and then spending the time to crunch those numbers.

Wirelessly get measurements without interrupting production.

- Identify issues before they escalate
- Reduce downtime
- Decrease maintenance costs
- Avoid dangerous situations
- Make better, more informed decisions
- Improve labor efficiency

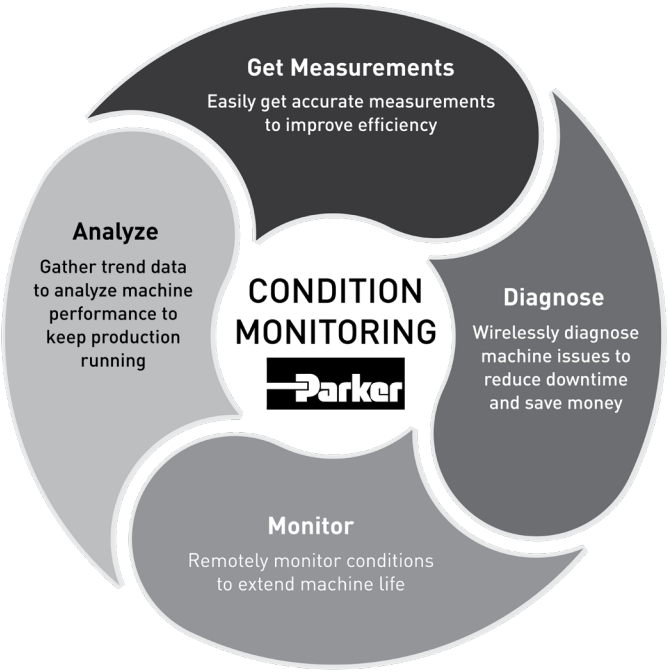
When used together, SensoNODE Sensors and Voice of the Machine Software create an advanced condition monitoring solution that delivers vital measurement data to help drive optimal tactical, operational, and strategic decisions, leading to maximum uptime.

Route-Based Monitoring - No network required **(SensoNODE Blue and Mobile App)**

- Short-term monitoring when you need it
- Aids diagnostic efforts
- Take measurements from individual machines
- Wireless solution for on-site monitoring
- Export recorded measurements

Continuous Remote Monitoring - Network-based **(SensoNODE Gold and Cloud/Edge)**

- Long-term and immediate health of machines and processes are viewable around the globe
- Ideal for environments where assets are mission critical, and shutdowns are costly
- User selectable measurement data storage
- Remote solution accessible anywhere, anytime
- Get notified automatically of discrepancies



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Condition Monitoring Solutions

	SensoNODE Gold and Cloud	SensoNODE Gold and Edge
Primary Application		
Wireless Continuous Remote Monitoring	√	√
Wireless Route-Based Monitoring		
Diagnostics		
Communication Method		
Sub-GHz Wireless	√	√
Cellular		
Bluetooth Low Energy (BLE)		
Wires		
Key Features		
Alert Notifications - Text, Email	√	√
In-Use Alarms	√	√
Export and Share Data	√	√
Recordings	√	√
View Historical Data	√	√
Configurable Dashboards	√	√
Functions or Calculations	√	√
Configurable Units of Measure	√	√
Multiple Visualizations	√	√
Viewable on Multiple Devices	√	√
Add Sensors Instantly	√	√
Fastest Measurement Rate	15 seconds	750 milliseconds
Pressure Spike and Drop Capturing		
Synchronization of Measurement Inputs		
Battery Life	Rate Dependent	Rate Dependent
FCC, IC, &/or CE Certified	√	√
Sensor IP Rating	See Product Technical Data	See Product Technical Data
Data Storage		
Cloud	√	√
Local Server		√
Mobile Device		
Handheld Meter		
Interface		
Desktop/Laptop	√	√
Mobile App		
Handheld Meter		
Other		
Software License		√
Cloud Subscription Required	√	
Optional Cellular Subscription	√	
Internet/WiFi/LAN Required	√	√
Gateway Required	√	√
Site Survey Required	√	√

*In Broadcast Mode Only **0.1ms Available on ServiceMaster+ ***Varies with Handmeters

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Continuous Remote Monitoring

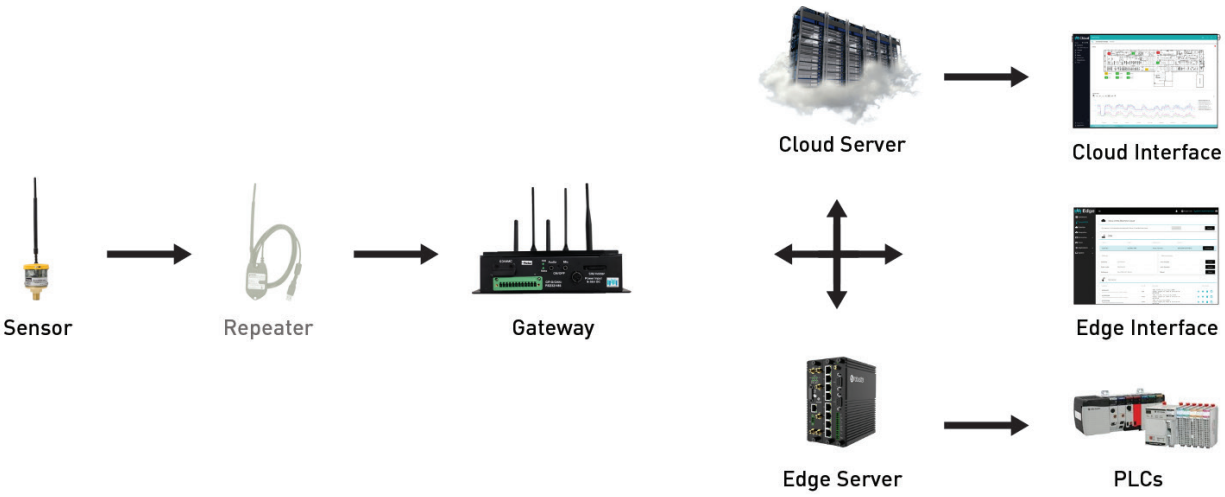
Eliminating the downtime of value-generating assets is the most productive method for increasing profit margins. This simplistic concept is the greatest challenge facing manufacturers in the age of Factory of the Future. Freeing labor resources to perform tasks which require a human touch is vital to maintain a competitive edge.

Accessing machine data through live dashboards, receiving alerts of impending failures, performing triage through historical data inspection are high-value actions made possible through cloud computing.

Communicating bi-directionally with controls network devices, customized cloud interfaces, and time series databases through a vast choice of communication protocols is how further integration and value are derived from edge computing.

Wireless communication has made collecting machine data significantly more cost effective. Without the need to run cables and conduit, budgetary resources can be allocated to data collection hardware, further increasing the intelligence of facility operations. Secure data transmission is capable via a rapid installation process which creates minimal demand on maintenance and engineering departments.

SensoNODE Gold and Voice of the Machine Software



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SensoNODE™ Gold Sensors and Voice of the Machine™ Software

Voice of the Machine Cloud

Cloud-based software interface provides flexible organizational structure. Easy enough to visualize a single sensor. Robust enough to present unlimited customers, locations, assets, sensors, and signals in an easily digestible format.

- Customizable dashboards
- Email / SMS alerts
- Gateway statistics
- Historical graphing
- Kiosk display mode
- Live measurements
- OEM cloud instances
- Sensor battery levels
- Templating capabilities
- Wireless signal strengths

Voice of the Machine Edge

Gateway software which speaks numerous IoT protocols to communicate with existing in-plant infrastructure using a topic structures. Node-RED style graphical programming interface enables sophisticated data manipulation and formatting.

- 3rd party cloud connectivity
- 3rd party controller connectivity
- Easily scalable
- FTP server
- JSON configurable functions
- Marketplace for 3rd party applications
- No internet connection needed
- OPC server and client
- Parsable data strings
- Remotely accessible

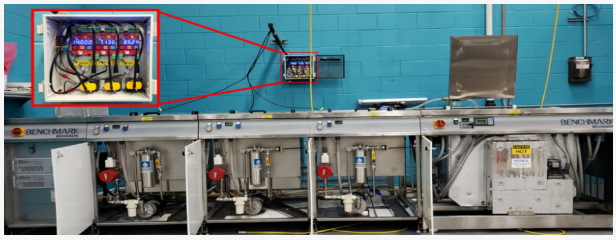
SensoNODE™ Gold

Our wireless sensors talk with our (required) gateway to collate measurements and send the data to the desired location. Our gateway can receive data from any SensoNODE Gold sensor, most third-party wired sensors with a 4-20mA or a 0-24V output with the help of our transmitters, or other controls network equipment (e.g. Programable Logic Controllers (PLCs)) via TCP, RTU, or other communication protocols. Each gateway can communicate with up to 250 of our sensors wirelessly.

The wireless sensors (centered at 908MHz) communicate directly to the gateway only. The sensors are IP65 rated. They require a CR123A battery, which typically last 3-5 years, dependent on report rate and environmental conditions. Their wireless range is up to 1,000 ft (line of sight). The antenna emits a omni-directional signal, in the shape of a donut.

Repeaters may be inserted into the system to extend the range of the sensors. The repeaters can operate in parallel, but not in series with each other. Repeaters require a 120V / 60Hz power supply. Repeaters can extend the range of up to 500 sensors.

Should you not see a pressure range which satisfies your needs, do not see a port configuration which you require, or foresee a unique use-case which requires insight and experience to achieve success, please contact us. We are happy to work with your team to create custom configurations.



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Voice of the Machine Cloud Interface

The cloud interface is ideal for continuously remotely monitoring crucial applications for long periods of time. The web-based console allows users to remotely retrieve data from anywhere. Dashboards with live and historical data provide insight into previously hidden processes, and staff can be alerted to impending failure events.

Wireless sensors integrated into assets collect vital measurement data and send it to the on-site gateway, which pushes the desirable data to the cloud. Users access that data by logging in through a web browser anywhere they have an internet connection. The interface allows users to monitor and collect data from multiple assets and receive alerts of predetermined deviations.

Increased awareness of processes and assets frees users from being on-site to review data to optimize machine performance, extend service life, maintain production quality and reduce downtime.

Applications:

- Robot joints (vibration)
- Baghouse filters (differential pressure)
- Material conveyance motors (current)
- Material conveyance feeders (proximity)
- Facility ambient conditions (temperature)
- Process gasses (pressure)
- Accumulators (pressure)
- Raw material hoppers (humidity)
- Compressed air systems (various)
- Existing wired sensors (4-20mA, 0-24V)
- Fluid condition monitoring (4-20mA)
- Particle counting (4-20mA)
- Hydraulic power units (various)
- Rotational equipment (vibration)
- PLC integration (gateway)

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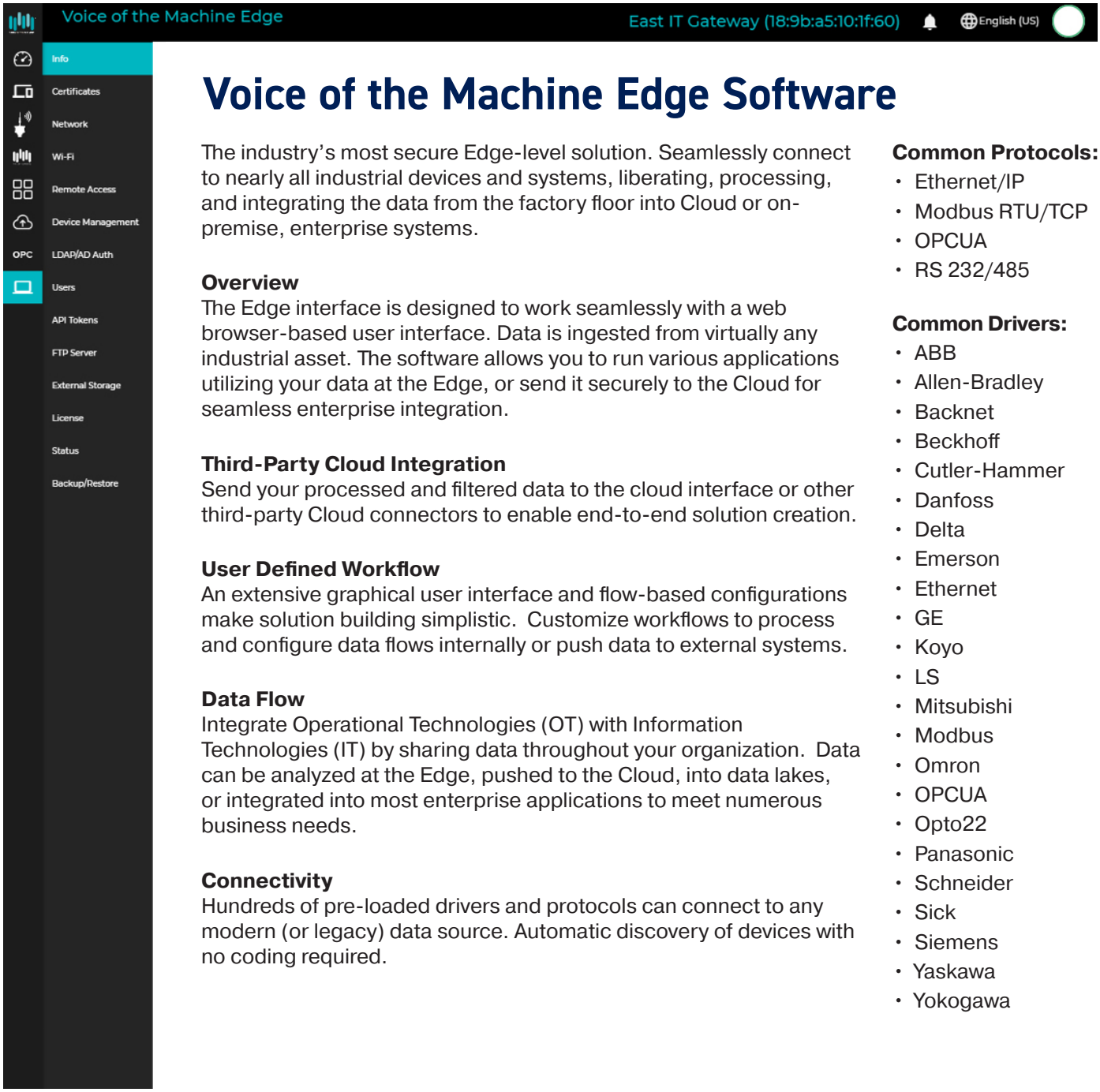

Voice of the Machine Edge Software

The industry's most secure Edge-level solution. Seamlessly connect to nearly all industrial devices and systems, liberating, processing, and integrating the data from the factory floor into Cloud or on-premise, enterprise systems.

Overview
The Edge interface is designed to work seamlessly with a web browser-based user interface. Data is ingested from virtually any industrial asset. The software allows you to run various applications utilizing your data at the Edge, or send it securely to the Cloud for seamless enterprise integration.

Third-Party Cloud Integration
Send your processed and filtered data to the cloud interface or other third-party Cloud connectors to enable end-to-end solution creation.

User Defined Workflow
An extensive graphical user interface and flow-based configurations make solution building simplistic. Customize workflows to process and configure data flows internally or push data to external systems.

Data Flow
Integrate Operational Technologies (OT) with Information Technologies (IT) by sharing data throughout your organization. Data can be analyzed at the Edge, pushed to the Cloud, into data lakes, or integrated into most enterprise applications to meet numerous business needs.

Connectivity
Hundreds of pre-loaded drivers and protocols can connect to any modern (or legacy) data source. Automatic discovery of devices with no coding required.

Common Protocols:
- Ethernet/IP
- Modbus RTU/TCP
- OPCUA
- RS 232/485

Common Drivers:
- ABB
- Allen-Bradley
- Backnet
- Beckhoff
- Cutler-Hammer
- Danfoss
- Delta
- Emerson
- Ethernet
- GE
- Koyo
- LS
- Mitsubishi
- Modbus
- Omron
- OPCUA
- Opto22
- Panasonic
- Schneider
- Sick
- Siemens
- Yaskawa
- Yokogawa

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Features:

- Available in a variety of pressure ranges from -14.5 psi to 8700 psi
- User-definable measurement units (psi/bar) for convenient and familiar data readings
- Port options: Male NPT or SAE thread and EMA or PD quick couplers for fast and easy connecting
- Corrosion resistant materials for challenging environments
- Sensor also provides ambient temperature values
- Configurable measurement and broadcast intervals*. Refer to Voice of the Machine Cloud for more information about capabilities and modalities.

Sensor Technical Data

							
Housing Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Port	1/4" Male NPT	1/4" Male NPT	1/4" Male NPT	-4 SAE	-4 SAE	-4 SAE	-4 SAE
Wetted Parts Material	17-4 Stainless	17-4 Stainless	17-4 Stainless	17-4 Stainless and Nitrile	17-4 Stainless and Nitrile	17-4 Stainless and Nitrile	17-4 Stainless and Nitrile
Measurement Range (pressure)	-14.5 to 14.5 psi [-1 to 1 bar]	0-150 psi [10 bar]	0-232 psi [16 bar]	0-1500 psi [100 bar]	0-3625 psi [250 bar]	0-5800 psi [400 bar]	0-8700 psi [600 bar]
Max. Overload Pressure	29 psi	225 psi	350 psi	2250 psi	5440 psi	8700 psi	13,050 psi
Burst Pressure	3x	4x	4x	4x	4x	4x	4x
Accuracy (at 77°F/ 25°C)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Resolution	.01 psi	.1 psi	.1 psi	1 psi	1 psi	1 psi	1 psi
Response Time (min)	1 sec	1 sec	1 sec	1 sec	1 sec	1 sec	1 sec
Ambient Temperature (battery limited)**	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]
Fluid Media Temperature Range	-40°F to 185°F [-40°C to 85°C]	-40°F to 185°F [-40°C to 85°C]	-40°F to 185°F [-40°C to 85°C]	-40°F to 185°F [-40°C to 85°C]	-40°F to 185°F [-40°C to 85°C]	-40°F to 185°F [-40°C to 85°C]	-40°F to 185°F [-40°C to 85°C]
Full Range Life Cycles	> 1 million	> 1 million	> 1 million	> 1 million	> 1 million	> 1 million	> 1 million
Certifications	FCC, IC, CE	FCC, IC, CE	FCC, IC, CE	FCC, IC, CE	FCC, IC, CE	FCC, IC, CE	FCC, IC, CE
Battery (Panasonic is recommended brand)	CR123A	CR123A	CR123A	CR123A	CR123A	CR123A	CR123A
IP Rating	IP65	IP65	IP65	IP65	IP65	IP65	IP65

Note: Consult QCD for other port options, pressure ratings, and port seal materials.
*Consult Subscription Agreement and Order Form or Parker QCD for any changes regarding data rates.
**Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-2)

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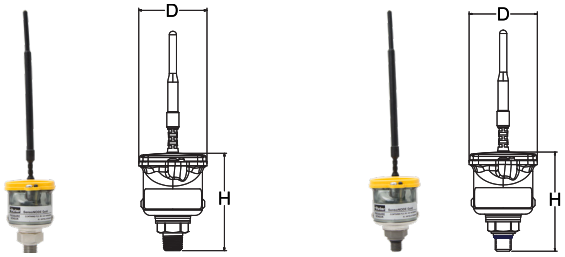
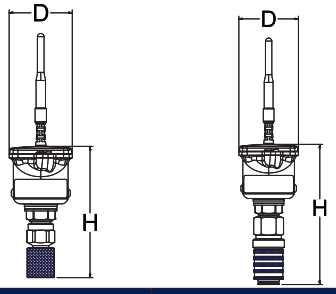
Pressure Sensors



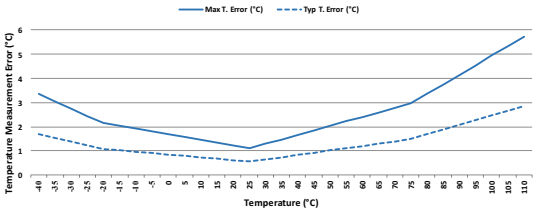
Part Number	Pressure Rating psi [bar]	Port	D	H
SNPT2-1-2-4MP	-14.5 to 14.5 [-1 to1]	1/4" Male NPTF	ø1.88" [48mm]	2.66" [68mm]
SNPT2-10-2-4MP	0-150 [10]	1/4" Male NPTF	ø1.88" [48mm]	2.66" [68mm]
SNPT2-16-2-4MP	0-232 [16]	1/4" Male NPTF	ø1.88" [48mm]	2.66" [68mm]
SNPT2-100-2-4MO	0-1500 [100]	-4 SAE	ø1.88" [48mm]	2.72" [69mm]
SNPT2-250-2-4MO	0-3625 [250]	-4 SAE	ø1.88" [48mm]	2.72" [69mm]
SNPT2-400-2-4MO	0-5800 [400]	-4 SAE	ø1.88" [48mm]	2.72" [69mm]
SNPT2-600-2-4MO	0-8700 [600]	-4 SAE	ø1.88" [48mm]	2.72" [69mm]

Quick Couplers



Part Number	Pressure Rating psi [bar]	Port	D	H
SNPT2-100-2-4MO-EMA	0-1500 [100]	EMA	ø1.88" [48mm]	4.00" [101mm]
SNPT2-250-2-4MO-EMA	0-3625 [250]	EMA	ø1.88" [48mm]	4.00" [101mm]
SNPT2-400-2-4MO-EMA	0-5800 [400]	EMA	ø1.88" [48mm]	4.00" [101mm]
SNPT2-600-2-4MO-EMA	0-8700 [600]	EMA	ø1.88" [48mm]	4.00" [101mm]
SNPT2-100-2-4MO-PD	0-1500 [100]	PD	ø1.88" [48mm]	4.40" [112mm]
SNPT2-250-2-4MO-PD	0-3625 [250]	PD	ø1.88" [48mm]	4.40" [112mm]
SNPT2-400-2-4MO-PD	0-5800 [400]	PD	ø1.88" [48mm]	4.40" [112mm]

Note: Products in catalog are currently only for sale in U.S., Canada, and Europe except where stated otherwise.



How to Order:

SN PT 2 - 10 - 2 - 4 MO - EMA

- SensoNODE Series
- Types of Sensor
  PT: Pressure & Temperature
- Generation II
- Pressure Rating
  1: -1 to 1 bar/-14.5 to15 psi
  10: 10 bar/150 psi
  16: 16 bar/232 psi
  100: 100 bar/1500 psi
  250: 250 bar/3625 psi
  400: 400 bar/5800 psi
  600: 600 bar/8700 psi
- Wireless Signal
  2: 908 MHz - [FCC/IC] USA, Canada, Mexico
  3: 869 MHz - [CE] Europe
  4: 927 MHz - Asia, Japan
  5: 922 MHz - Korea, South America
- Port Size(1/6")
  4: 1/4"
- Port Configuration
  MO: Male SAE
  MP: Male Pipe
- QC Version
  EMA: EMA Quick Disconnect Profile
  PD: PD Quick Disconnect Profile

WARNING The products listed can expose you to chemicals including Lead, which is known to the State of California to cause cancer, and to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

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Features:

- User-definable measurement units (F˚/C˚) for convenient and familiar data readings
- Port Options: Male NPTF and SAE
- Corrosion-resistant materials for challenging environments
- Configurable measurement and broadcast intervals*. Refer to Voice of the Machine Cloud for more information about capabilities and modalities.
- Available in unique foot design for quick attachment to pipe or hard tubing

Sensor Technical Data

					
Housing Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Port	1/4" Male NPTF	-4 SAE	1/4" Male NPTF	-4 SAE	Foot
Wetted Parts Material	17-4 Stainless	17-4 Stainless and Nitrile	17-4 Stainless	17-4 Stainless and Nitrile	Stainless
Measurement Range (Fluid Temperature)	-40°F to 230°F [-40°C to 110°C]	-40°F to 230°F [-40°C to 110°C]	-40°F to 230°F [-40°C to 110°C]	-40°F to 230°F [-40°C to 110°C]	-40°F to 257°F [-40°C to 125°C]
Working Pressure	0-10k psi [0-700 bar]	0-9k psi [0-630 bar]	0-1500 psi [0-100 bar]	0-1500 psi [0-100 bar]	N/A
Max. Overload Pressure	3x	3x	2x	2x	N/A
Burst Pressure	4x	4x	3x	3x	N/A
Accuracy (at 77°F/ 25°C)	±3.0%	±3.0%	±3.0%	±3.0%	±5.0%
Resolution (from 14°F to 120°F)[-10°C to 44.8°C]	1°F [.56°C]	1°F [.56°C]	1°F [.56°C]	1°F [.56°C]	2°F [1.12°C]
Response Time (minimum)	1 sec	1 sec	1 sec	1 sec	1 sec
Ambient Temperature (battery limited**	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]	-4°F to 158°F [-20°C to 70°C]
Full Range Life Cycles	> 1 million	> 1 million	> 1 million	> 1 million	> 1 million
Certifications	FCC, IC, CE	FCC, IC, CE	FCC, IC, CE	FCC, IC, CE	FCC, IC, CE
Battery (Panasonic is recommended brand)	CR123A	CR123A	CR123A	CR123A	CR2450
IP Rating	IP65	IP65	IP65	IP65	IP65

Note: Consult QCD for other port options, pressure ratings, and port seal materials.
*Consult Subscription Agreement and Order Form or Parker QCD for any changes regarding data rates.
**Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-2)

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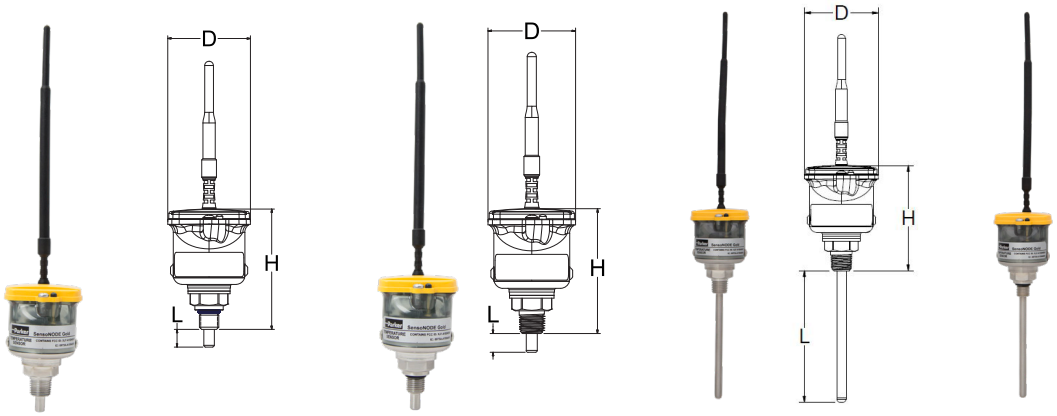
Temperature Sensors – Ported

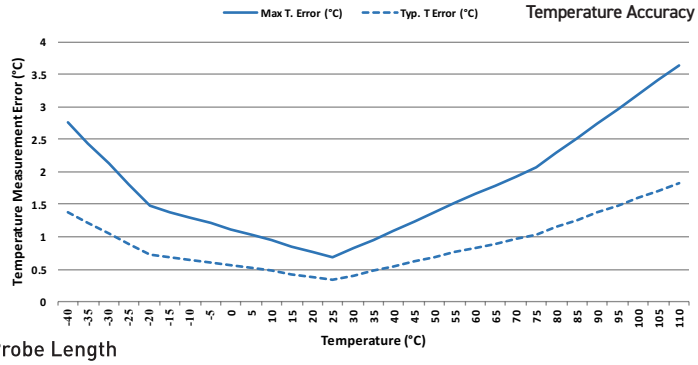


Part Number	Fluid Temperature Range	Port	D	H	L
SNT2-700-2-4MO	-40°F to 230°F [-40°C to 110°C]	-4 SAE	ø1.88" [48mm]	2.72" [69mm]	0.40" [10.16mm]
SNT2-700-2-4MP	-40°F to 230°F [-40°C to 110°C]	1/4" Male NPTF	ø1.88" [48mm]	2.66" [68mm]	0.40" [10.16mm]
SNT2-100-2-4MO-0335	-40°F to 230°F [-40°C to 110°C]	-4 SAE/Probe	ø1.88" [48mm]	2.72" [69mm]	3.35" [85mm]
SNT2-100-2-4MP-0335	-40°F to 230°F [-40°C to 110°C]	1/4" Male NPTF/Probe	ø1.88" [48mm]	2.66" [68mm]	3.35" [85mm]

Temperature Sensors – Foot

Part Number	Fluid Temperature Range	L	H	Optimal Clamping
SNT2-0-2-FT	-40°F to 257°F [-40°C to 125°C]	2.42" [61.5mm]	2.31" [58.7mm]	> Ø.25"+ [>Ø6.4mm]

Note: Products in catalog are currently only for sale in U.S., Canada, and Europe except where stated otherwise.



How to Order:

SN T 2 - 100 - 2 - 4 MP - 0335

- SensoNODE Series
- Types of Sensor
  T: Temperature
- Generation II
- Pressure Rating
  0: 0 psi = Clamp
  0: 0 psi = Foot
  700: 700 bar/10k psi
  100: 0-100 bar/0-1500 psi
- Wireless Signal
  2: 908 MHz - [FCC/IC] USA, Canada, Mexico
  3: 869 MHz - [CE] Europe
  4: 927 MHz - Asia, Japan
  5: 922 MHz - Korea, South America
- Port Size(1/6")
  4: 1/4"
- Port Configuration
  CL: Clamp
  FT: Foot
  MO: Male SAE
  MP: Male Pipe
- Probe Length
  No Length Listed: 0.40"
  0335: 3.35"

WARNING

The products listed can expose you to chemicals including Lead, which is known to the State of California to cause cancer, and to cause birth defects or other reproductive harm.
For more information go to www.P65Warnings.ca.gov

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Features:

- 0-100% relative humidity
- Ideal for ambient condition and inert compressed gas monitoring applications
- NPTF port to make plumbing and connecting easier and faster
- Optimal mounting orientation is vertical with port facing down to prevent moisture collection
- Sensor also provides temperature values
- Configurable measurement and broadcast intervals*. Refer to the Voice of the Machine Cloud for more information about capabilities and modalities.

Sensor Technical Data	
Housing Material	Polycarbonate
Port	1/4" Male NPTF
Wetted Parts Material	Brass, Nitrile, Urethane, and GORE-TEX®
Measurement Range (Humidity)	0-100% RH
Working Pressure	0-150 psi [10 bar]
Max. Overload Pressure	150 psi Max [10 bar]
Burst Pressure	4x
Accuracy (77°F/25°C, 20% RH to 80% RH, at ambient pressure)	±5% RH Max
Resolution (at 77°F/25°C)	0.1% RH
Response Time (from 33% to 75% RH)	10 secs
Ambient Temperature (battery limited)**	-4°F to 158°F [-20°C to 70°C]
Temperature Accuracy (from 14°F to 185°F [-10°C to 85°C])	±1.0°F [±0.5°C]
Full Range Life Cycles	> 1 million
Certifications	FCC, IC, CE
Battery (Panasonic is recommended brand)	CR123A
IP Rating	IP65

*Consult Subscription Agreement and Order Form or Parker QCD for any changes regarding data rates.
**Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-2)

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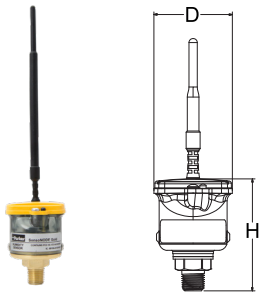
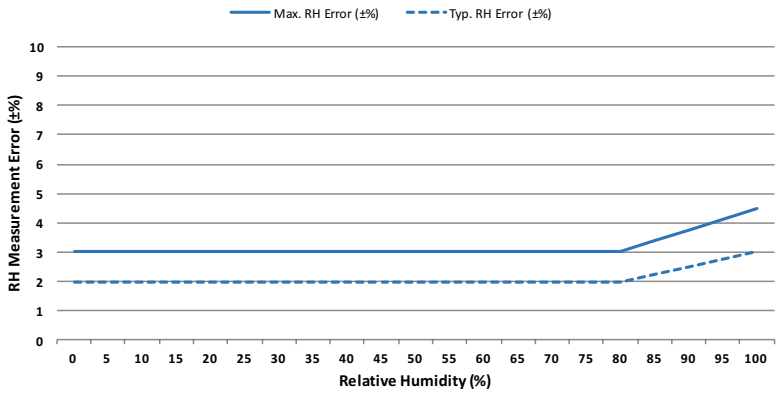
Humidity Sensors



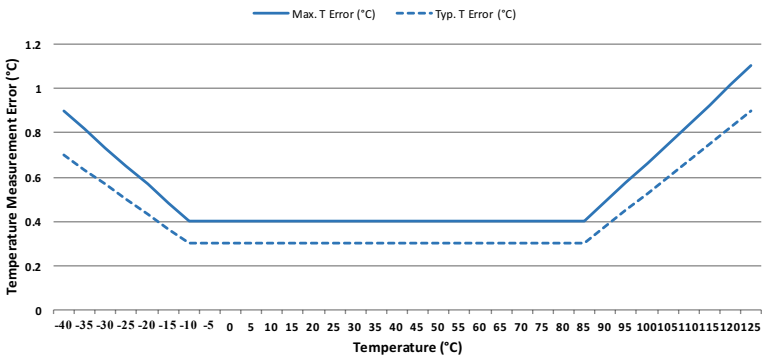
Part Number	RH Range	Port	D	H
SNHT2-10-2-4MP	0-100%	1/4" Male NPTF	ø1.88" [48mm]	2.66" [68mm]

Note: Products in catalog are currently only for sale in U.S., Canada, and Europe except where stated otherwise.

RH Accuracy



Temperature Accuracy



How to Order:

SN HT 2 - 10 - 2 - 4 MP

- SensoNODE Series
- Types of Sensor: HT: Humidity
- Generation II
- Pressure Rating: 10: 10 bar/150 psi
- Wireless Signal
  - 2: 908 MHz - [FCC/IC] USA, Canada, Mexico
  - 3: 869 MHz - [CE] Europe
  - 4: 927 MHz - Asia, Japan
  - 5: 922 MHz - Korea, South America
- Port Size(1/6") 4: 1/4"
- Port Configuration MP: Male Pipe

WARNING The products listed can expose you to chemicals including Lead, which is known to the State of California to cause cancer, and to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

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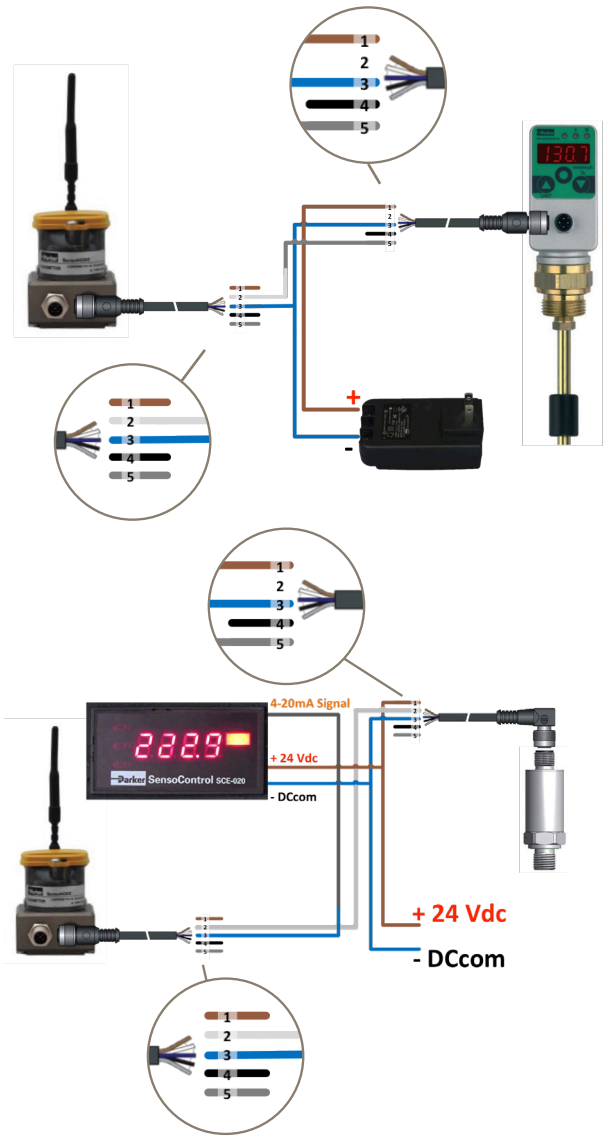
Transmitter Technical Data	
Base Material	Aluminum
Housing Material	Polycarbonate
Accuracy	0.5% (additive to source)
Resolution	0.1%
Temperature Range with Wired Power	-40ŪF-185ŪF
Temperature Range with Battery	-4ŪF-158ŪF
Full Range Life Cycles	> 1 million
Certifications	FCC, IC, CE
Battery (Panasonic is recommended brand)	CR123A
IP Rating	IP65

Features:

- Connects inline with any 4-20mA Sensor
- Integrates hard wired sensors into wireless Voice of the Machine Software
- Does not require reprogramming of existing control system
- Definable mapping feature in Cloud to present 4-20mA signal in user defined units
- Magnetic base for tool-free mounting
- Threaded stud port provides alternative mounting options where magnetic base is not suitable
- Requires connection cable SCK-400-xx-xx in conjunction with transmitter and 4-20mA Sensor



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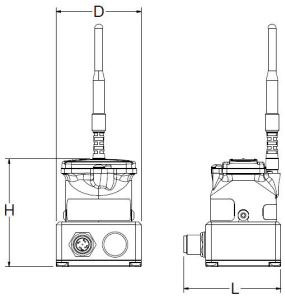
4-20mA Transmitter (Battery Powered)

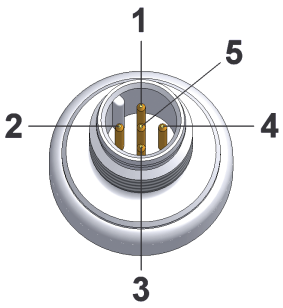


Part Number	Frequency	Base Mounting Thread	D	H	L
SN420-2	900 MHz	1/4-28 UNF x0.45" [11mm]	2.11" [54mm]	2.67" [68mm]	2.41" [61mm]

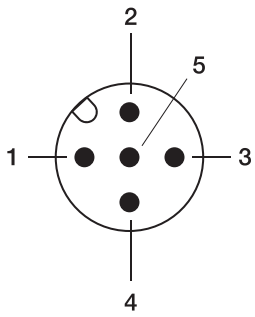
Pin Assignment

PIN	Connection	Wire Color
1	No Connection	Brown
2	4-20mA Signal In	White
3	4-20mA Signal Out	Blue
4	No Connection	Black
5	No Connection	Gray

Transmitter



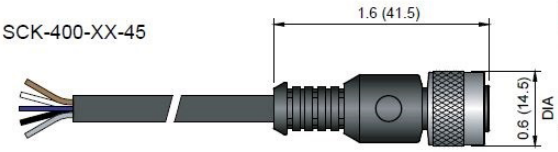
Cable



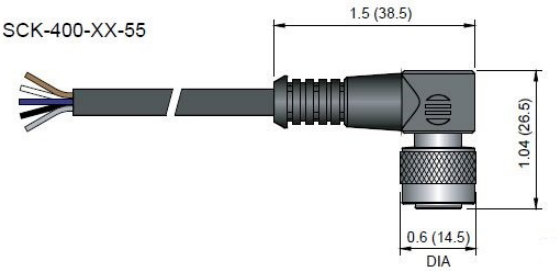
M12 Connection Cable

Part Number	Cable Length	Plug-in Connector
SCK-400-02-45	6.5 ft [2m]	M12 socket, straight
SCK-400-02-55	6.5 ft [2m]	M12 socket, 90Ū
SCK-400-05-45	16 ft [5m]	M12 socket, straight
SCK-400-05-55	16 ft [5m]	M12 socket, 90Ū
SCK-400-10-45	32.5 ft [10m]	M12 socket, straight
SCK-400-10-55	32.5 ft [10m]	M12 socket, 90Ū

SCK-400-XX-45



SCK-400-XX-55



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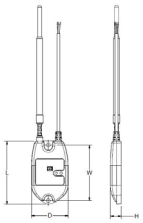
Features:

- Connects inline with any 4-20mA Sensor
- Integrates hardwired sensors into wireless Voice of the Machine Software
- Does not require reprogramming of existing control system
- Definable mapping feature in Cloud to present analog signal in user defined units
- Powered by current loop eliminating need for battery
- Robust overmolded construction

Transmitter Technical Data	
Material	Polyamide Thermoplastic
Cable Length	6’
Accuracy	±1% (additive to source)
Resolution	0.03%
Minimum Supply Voltage	10V
Maximum Inputs	20mA (@ 15V)
Temperature Range	-40°F to 185°F
Certifications	FCC & IC

Loop Analog Connector



Part Number	Frequency	W	D	H	L
SN420-2-LOOP	900 MHz	2.75” [70mm]	1.81” [46mm]	.53” [13mm]	3.12” [79mm]

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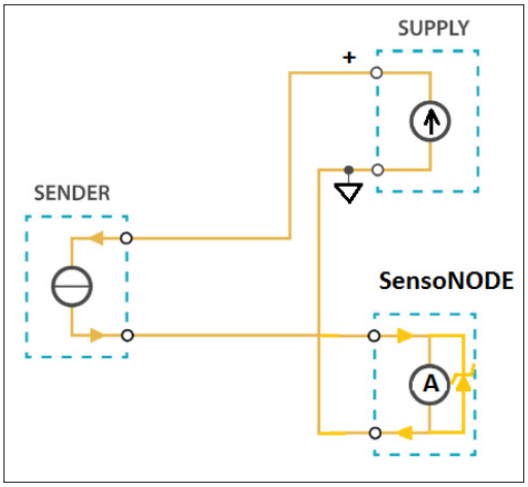
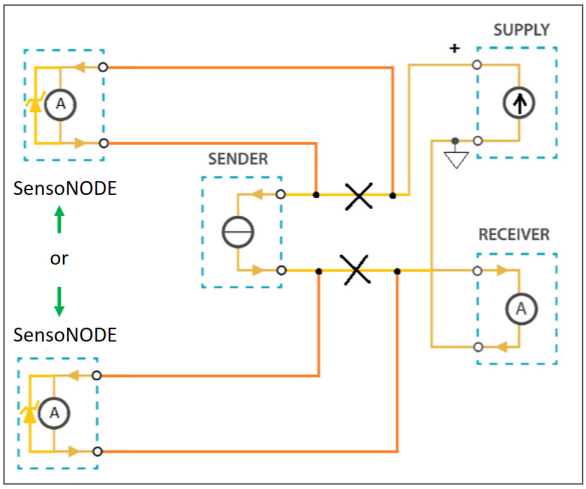
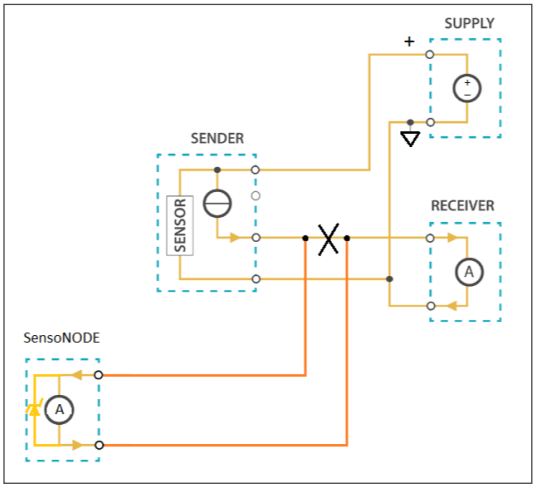
SensoNODE Only Configuration



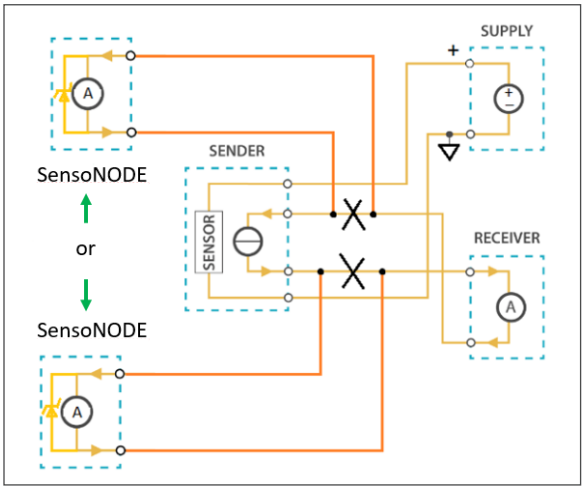
2 Wire Configuration



3 Wire Configuration



4 Wire Configuration



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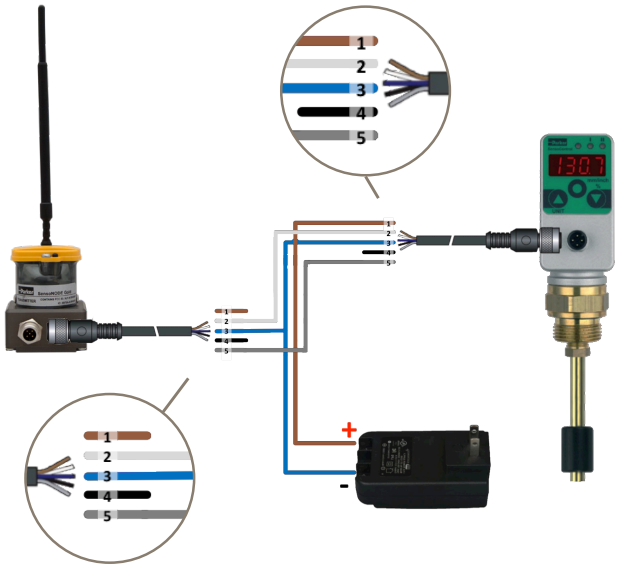
Features:

- Connects inline with common Voltage Sensors
- Dual channels offer connection with two Voltage Sensors
- Integrates hardwired sensors into wireless Voice of the Machine Edge software only
- Does not require reprogramming of existing control system
- Magnetic base for tool-free mounting
- Threaded stud port provides alternative mounting options where magnetic base is not suitable
- Requires connection cable SCK-400-xx-xx in conjunction with transmitter and Voltage Sensor

Technical Data	
Base Material	Aluminum
Housing Material	Polycarbonate
Analog Voltage Range	0-10VDC; 0-24VDC
Digital Voltage Range	0-2VDC = 0; +8VDC = 1
Accuracy	±2.0% for 0-10VDC (additive to source) ±3.0% for 0-24VDC (additive to source)
Resolution	0.03%
Max rated input voltage	32V (24VDC input, digital input) 16V (10VDC input)
Temperature Range with Wired Power	-40°F to 185°F
Temperature Range with Battery	-4°F to 158°F
Certifications	FCC & IC
Battery (Panasonic is recommended brand)	CR123A
IP Rating	IP65



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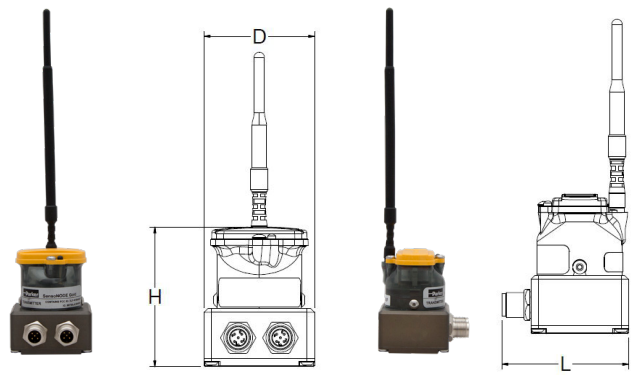
Transmitter

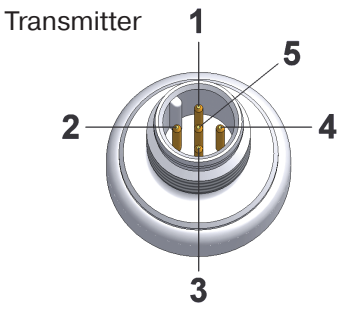


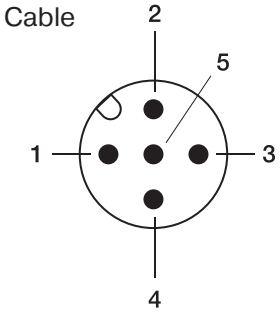
Part Number	Base Mounting Thread	D	H	L
SNDV2-2	1/4-28 UNF x 0.45" [11mm]	2.11" [54mm]	2.67" [68mm]	2.41" [61mm]

Pin Assignment

PIN	Connection	Wire Color
1	No Connection	Brown
2	Digital Input	White
3	0V/GND	Blue
4	10V Input	Black
5	24V Input	Gray

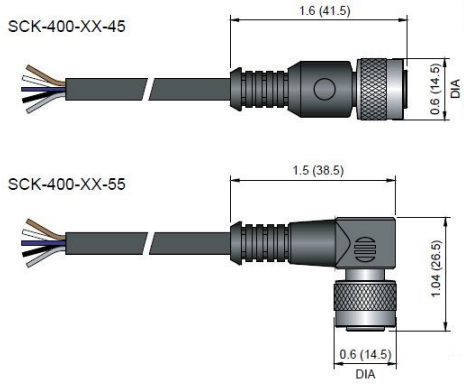
Technical Note: Only one voltage and one digital signal can be used concurrently per channel





M12 Connection Cable

Part Number	Cable Length	Plug-in Connector
SCK-400-02-45	6.5 ft [2m]	M12 socket, straight
SCK-400-02-55	6.5 ft [2m]	M12 socket, 90Ū
SCK-400-05-45	16 ft [5m]	M12 socket, straight
SCK-400-05-55	16 ft [5m]	M12 socket, 90Ū
SCK-400-10-45	32.5 ft [10m]	M12 socket, straight
SCK-400-10-55	32.5 ft [10m]	M12 socket, 90Ū



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Features:

- Fast installation over a variety of power lead diameters
- Easy installation with 1/2” conduit threaded nipple mount
- Standard CT opening width is 1.25” for 50A through 600A service
- Other CT sizes available upon request
- Configurable measurement and broadcast intervals*. Refer to the Voice of the Machine Cloud for more information about capabilities and modalities.

Sensor Technical Data	
Base Material	Aluminum
Housing Material	Polycarbonate
Port	1/2-14 NPSM Thread
Measurement Range (Amperes)	50-600
Accuracy	5% (Full Span)
Resolution	0.1% (Full Span)
Ambient Temperature (battery limited)**	-4˚F to 158˚F [-20˚C to 70˚C]
Full Range Life Cycles	> 1 million
Certifications	FCC, IC, CE
Battery (Panasonic is recommended brand)	CR123A
IP Rating	IP65

*Consult Subscription Agreement and Order Form or Parker QCD for any changes regarding data rates.
**Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-2)

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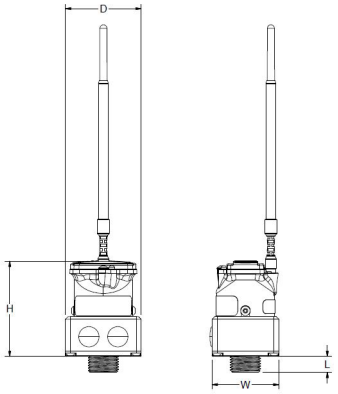
Current



Part Number	Measurement Range	Port	D	H	W	L
SNC2-050-2	10-50 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-100-2	20-100 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-200-2	40-200 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-300-2	60-300 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-400-2	80-400 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-600-2	120-600 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]

Note: Products in catalog are currently only for sale in U.S., Canada, and Europe except where stated otherwise.

How to Order:

SN C 2 - 050 - 2

- SensoNODE Series
- Types of Sensor
  - C: Current
- Generation II
- Wireless Signal
  - 2: 908 MHz - [FCC/IC] USA, Canada, Mexico
  - 3: 869 MHz - [CE] Europe
  - 4: 927 MHz - Asia, Japan
  - 5: 922 MHz - Korea, South America
- Amps
  - 050: 10-50 Amps
  - 100: 20-100 Amps
  - 200: 40-200 Amps
  - 300: 60-300 Amps
  - 400: 80-400 Amps
  - 600: 120-600 Amps

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Features:

- Configurable acceleration amplitude
- +/- 2g, 4g, 8g or 16g
- 6.4 Khz sampling frequency
- 3 axis measurement
- RMS & Peak acceleration or velocity
- Temperature

Sensor Technical Data	
Housing Material	Polycarbonate
Base Material	Aluminum
Mounting Options	Magnet, 1/4-28 stud, Epoxy
Certifications	FCC, IC, CE
Battery (Panasonic is recommended brand)	CR123A
IP Rating	IP65

Acceleration Technical Data	
Acceleration Range	+/-2,+/-4, +/-8, +/-16 g absolute [configurable]
Frequency Range	1 Hz to 3200hz
Sampling Frequency	6.4 KHz
Measurement Output	Peak & RMS acceleration over frequency range; Temperature
Measurement Axes	X,Y, Z
Resolution (Peak)	+/- 2 g range = 1 mg, +/-4 g range = 2mg, +/-8 g range = 4mg, +/-16 g range = 8mg
Temperature Sensor	-40 to +85 C
Samples Per Acquisition	800 samples
Filter Specs	DC offset removal

Velocity Technical Data	
Velocity Range	0 - 327 mm/sec
Frequency Range	7.5 Hz to 3200 Hz
Sampling Frequency	6.4 KHz
Measurement Output	Peak & RMS velocity over frequency range; Temperature
Measurement Axes	X, Y, Z
Resolution	0.01 mm/sec
Temperature Sensor	-40 to +85 C
Samples Per Acquisition	2200 samples
Filter Specs	7th order butterworth digital high pass filter, 60 dB down at 3 Hz, 3 db down at 7.5 Hz.

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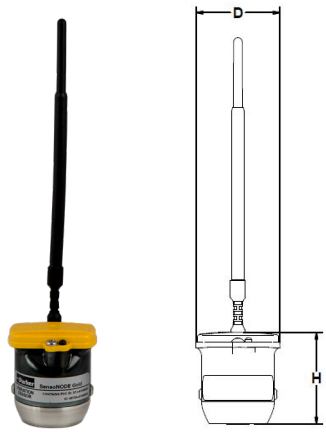
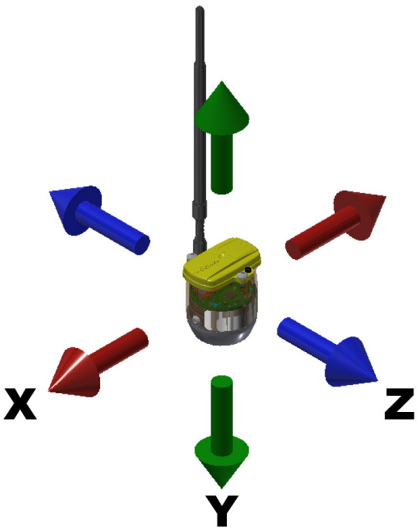
Transmitter



Part Number	Base Mounting Thread	D	H
SNVT2-1632-2	1/4-28 UNF	1.88” [48mm]	2.05” [52mm]

Measurement Axes



How to Order:

SN V T 2 - 16 32 - 2

- SensoNODE Series
- Types of Sensor
  - V: Vibration
  - T: Temperature
- Generation II
- **Max Configurable Amplitude**
  16: ±16g Amplitude
- **Effective Measurement Frequency Range**
  32: 3200kHz
- Wireless Signal
  2: 908 MHz - [FCC/IC] USA, Canada, Mexico
  3: 869 MHz - [CE] Europe
  4: 927 MHz - Asia, Japan
  5: 922 MHz - Korea, South America

WARNING The products listed can expose you to chemicals including Lead, which is known to the State of California to cause cancer, and to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

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Features:

- High-speed mechanical systems process pulse counter
- Connects to binary voltage output sensors:
  - Proximity Sensor
  - Light Curtain
  - Hall Effect
  - Reed Switch
- Accumulate and store pulse count data
- Internal memory
- Does not require reprogramming of existing control system
- Magnetic base for tool-free mounting
- Threaded stud port provides alternative mounting options where magnetic base is not suitable
- Requires connection cable SCK-400-xx-xx in conjunction with transmitter and sensor

Technical Data	
Base Material	Aluminum
Housing Material	Polycarbonate
Digital Voltage Range	0-2VDC Low; 8-32VDC High
Pulse	> 5 milliseconds on - > 5 milliseconds off
Total Count Resolution	32-bit counter = 4.2 billion cycles
Max rated input voltage	32V (24VDC nominal)
Temperature Range with Wired Power	-40°F to 185°F
Temperature Range with Battery	-4°F to 158°F
Certifications	FCC & IC
Battery (Panasonic is recommended brand)	CR123A
IP Rating	IP65

Pulse: High-to-low voltage pulse transition from external device

Channel: Used to determine which internal channel (A, B) the pulse count is represented in the data output

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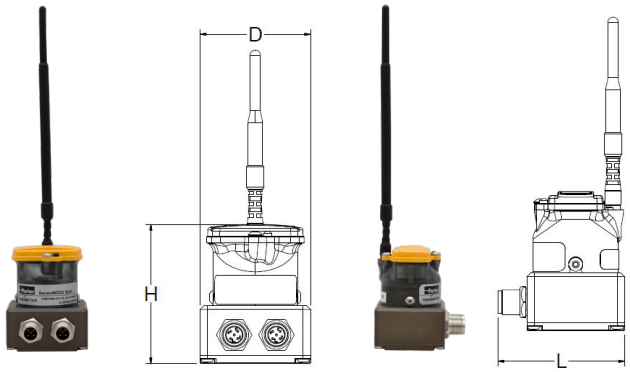
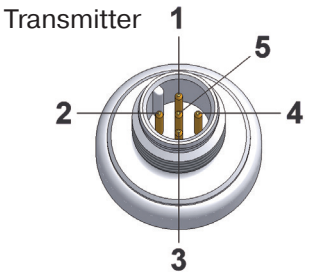
Transmitter

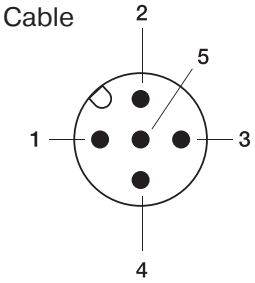


Part Number	Base Mounting Thread	D	H	L
SNCOUNT2-2	1/4-28 UNF x 0.45" [11mm]	2.11" [54mm]	2.67" [68mm]	2.41" [61mm]

Pin Assignment Pulse Side

PIN	Connection	Wire Color
1	No Connection	Brown
2	Pulse V+	White
3	0V/GND	Blue
4	No Connection	Black
5	No Connection	Gray



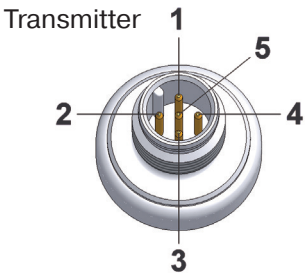


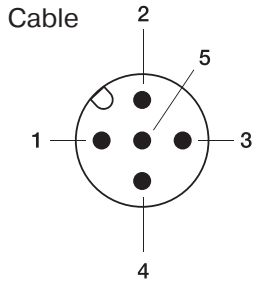
Pulse Input (0-2VDC Low; 8-32VDC High)

*A pulse is counted every high-to-low voltage transition

Pin Assignment Channel Side

PIN	Connection	Wire Color
1	No Connection	Brown
2	Channel V+	White
3	0V/GND	Blue
4	No Connection	Black
5	No Connection	Gray



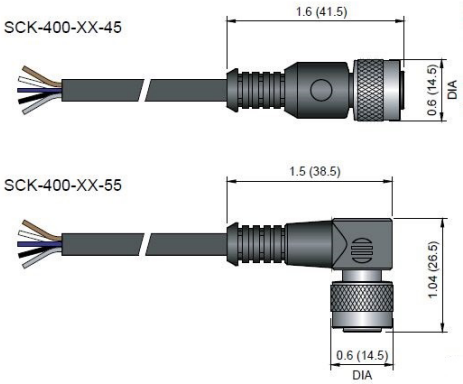


Channel (0-2VDC Channel A; 8-32VDC Channel B)

*Channel A and B are represented in the sensor pulse count data output

M12 Connection Cable

Part Number	Cable Length	Plug-in Connector
SCK-400-02-45	6.5 ft [2m]	M12 socket, straight
SCK-400-02-55	6.5 ft [2m]	M12 socket, 90
SCK-400-05-45	16 ft [5m]	M12 socket, straight
SCK-400-05-55	16 ft [5m]	M12 socket, 90
SCK-400-10-45	32.5 ft [10m]	M12 socket, straight
SCK-400-10-55	32.5 ft [10m]	M12 socket, 90



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Quick Coupling Division
Minneapolis, MN
parker.com/conditionmonitoring

Features:

- Enables remote wireless monitoring of fluid level
- Integrates seamlessly with Voice of the Machine software
- Eliminates necessity for communication cabling
- High visibility level display
- No surge pipe necessary
- Two switching outputs for independent process control

Kit Technical Data[1]					
SNCLSD2-KIT-	**250**	**370**	**520**	**800**	**1000**
Sensor length measurement range [inches (mm)]	9.8 (250)	14.6 (370)	20.5 (520)	31.5 (800)	39.4 (1000)
Active range [inches (mm)]	1.6 to 8.3 (40 to 210)	1.6 to 13 (40 to 330)	1.6 to 18.9 (40 to 480)	1.6 to 30 (40 to 760)	1.6 to 37.8 (40 to 960)
Increment size [inches (mm)]	0.2 (5)	0.2 (5)	0.2 (5)	0.4 (10)	0.4(10)
Lowest reset point RSP [inches (mm)]	1.6 (40)	1.6 (40)	1.6 (40)	1.6 (40)	1.6 (40)
Largest switching value SP [inches (mm)]	8.3 (210)	13 (330)	18.9 (480)	30 (760)	37.8 (960)

Level Controller Technical Data[1]	
Input Parameters	
Measuring Component	Resistance reed chain with float
Connector thread	G3/4 BSPP; nickel-plated brass: ED soft seal NBR[2]
Wetted Parts	Brass; nickel-plated brass, NBR[2]
Fluid temperature range	-4 to 185°F
Media compatibility	Water; lubricating oil; hydraulic oil
Output Values	
Switching point accuracy	±1% FS at 77°F
Controller Display accuracy	±1% FS ±1 digit at 77°F
Response speed	⩽700 ms
Controller resolution	0.3 inches
Float	
Material	NBR
Dimensions	Ø 0.7 inches, length 1.4 inches
Level Rod	
Material	Stainless Steel
Dimensions	Ø 0.3 inches
Operating pressure	14.5 psi

Transmitter Technical Data[3]	
Base Material	Aluminum
Housing Material	Polycarbonate
Accuracy	0.5% (additive to source)
Resolution	0.1%
Ambient temperature (battery limited)	-4 to +158°F
Radio Certifications	FCC, IC, CE
Battery [Panasonic is recommended]	CR123A
IP Rating (Transmitter only)	IP65

[1]Consult Parker Catalog 4083 for additional flow block details & data
[2]Different sealing material (FKM, EPDM, etc) upon request
[3]Consult Analog Transmitter portion of Parker Catalog 3864 for additional details

How to Order:

SN CLSD 2 - KIT - 250 - 2

- SensoNODE Series
- **SensoControl** LevelController
- Generation II

Wireless Signal
2: 908 MHz - [FCC/IC] USA, Canada, Mexico
3: 869 MHz - [CE] Europe
4: 927 MHz - Asia, Japan
5: 922 MHz - Korea, South America

Rod Length:
250: 9.8 inches
370: 14.6 inches
520: 20.5 inches
800: 31.5 inches
1000: 39.4 inches

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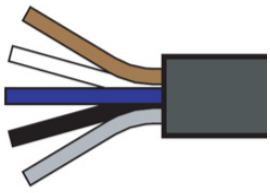
Technical Data	
	Analog Transmitter (SN420-X) The transmitter wirelessly communicates the analog signal output from the controller to the gateway receiver for monitoring the fluid level of common tanks.
	LevelController (SCLSD-xxx-10-05) The LevelController combines the functions of a level switch, a level sensor and a level display. The LevelController is ideal for the monitoring of fluid level contents. The parameters are set using the keys or over a programming module.
	Mating Cable (SCK-WH-02-45-02) This connection cable (2 meter length) is uniquely designed to connect the analog signals from the controller to the wireless transmitter and switching outputs while also allowing the supply of sufficient voltage needed to power the controller.
	Power Lead (SCK-400-02-45) Connect this cable (2 meter length) via M12 plug to the mating cable to supply voltage to the system. A 15 to 30Vdc supply is required, and can be provided via flying leads from the factory DC power or the included 24Vdc power supply included within kit.
	Power Supply (SCSN-240) Provided as an easy solution to supply the appropriate voltage to the wireless kit system. Connect the appropriate Power Leads to corresponding terminals of power supply. Input Voltage: 90~264 VAC Output Voltage: 24Vdc

Flying Lead Wire Diagram for Level Kit (SCK-400-02-45)

PIN	Connection	Wire Color
1	V Supply	Brown
2	S2 out	White
3	0 V/GND	Blue
4	S1 out	Black
5	No Connection	Gray



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Features:

- Enables remote wireless monitoring of hydraulic flow
- Integrates seamlessly with Voice of the Machine software
- Eliminates necessity for communication cabling
- Turbine based measurement
- Measurement range 4 to 210 gpm
- Low flow resistance
- Capable of reverse flow measurement

Kit Technical Data[1]						
SNCFT2-KIT-	**004**	**016**	**040**	**080**	**160**	**210**
Flow measuring range Qn [gpm (l/min)]	0.25 to 4 (1 to 15)	0.8 to 16 (3 to 60)	1.3 to 40 [5 to 150)	2 to 80 (8 to 300)	4 to 160 (15 to 600)	5 to 210 (20 to 800)
Accuracy (±%) FS/IR @ 21cSt.	± 1 % FS	± 1 % IR	± 1 % IR	± 1 % IR	± 1 % IR	± 1 % IR
Operating Pressure Pn [psi (bar)]	5000 (350)	5000 (350)	5000 (350)	5000 (350)	4200 (290)	5800 (400)
Ports (A-B)	3/4"-16UN #8 SAE ORB	1-1/16"-12UN #12 SAE ORB	1-1/16"-UN #12 SAE ORB	1-5/16"-12UN #16 SAE ORB	1-5/8"-12UN #20 SAE ORB	1-7/8"-12UN #24 SAE ORB
Pressure Drop ΔP [psi (bar)] @ (FS)	21 (1.5)	21 (1.5)	21 (1.5)	58 (4)	58 (4)	72 (5)
Weight [lbs (g)]	1.5 (700)	3.5 (1600)	3.5 (1600)	3.7 (1700)	6 (2700)	11 (5000)

Flow Turbine Technical Data[1]	
Accuracy	
Response time	50 ms
Thermal drift	±0.05 % FS/°C
Repeat accuracy	±0.5 % FS
Resistance to pressure	
Qmax (gpm)	Qn × 1.1
Overload pressure Pmax	Pn × 1.2
Material	
Flow Turbine Housing	Aluminum
Seal	FKM
Wetted Path	Aluminum, steel, FKM
Ambient Conditions	
Ambient temperature	+50 to +122°F
Storage temperature	-4 to +176°F
Tmax Fluid	-4 to +176°F
Filtration	25 µm (10 µm for SNCFT2-004)
Viscosity	15 to 100 cSt.
Protection Class	IP66

Transmitter Technical Data[2]	
Base Material	Aluminum
Housing Material	Polycarbonate
Accuracy	0.5% (additive to source)
Resolution	0.1%
Ambient temperature (battery limited)	-4 to +158°F
Radio Certifications	FCC, IC, CE
Battery [Panasonic is recommended]	CR123A
IP Rating (Transmitter only)	IP65

[1]Consult Parker Catalog 4083 for additional flow block details & data
[2]Consult Analog Transmitter portion of Parker Catalog 3864 for additional details

How to Order:

K SN CFT 2 - KIT - 004 - 2

- **Calibrated Option** (K)
- **SensoNODE Series** (SN)
- **SensoControl** Flowblock (CFT)
- **Generation II** (2)
- **Wireless Signal** (2)
  - 2: 908 MHz - [FCC/IC] USA, Canada, Mexico
  - 3: 869 MHz - [CE] Europe
  - 4: 927 MHz - Asia, Japan
  - 5: 922 MHz - Korea, South America
- **Flow Rating:** (004)
  - 004: 4 gpm
  - 016: 16 gpm
  - 040: 40 gpm
  - 080: 80 gpm
  - 160: 160 gpm
  - 210: 210 gpm

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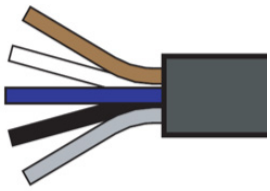
Technical Data	
	Analog Transmitter (SN420-X) The transmitter wirelessly communicates the analog signal output from the flow turbine to the gateway receiver for monitoring the condition of common hydraulic systems.
	Flow Turbine (SCFT-xxxG-2U-07) The turbine wheel is driven by the oil flow. The generated frequencies are processed through the digital electronics and influences from the disturbing flow effects are compensated for. Because of the low flow resistance Q_R, the hydraulic circuit operates with very low losses. Reverse operation is also possible because of the special vane (winged) design – so the turbine can be operated in both directions. The turbine casing also includes two plugged 7/16-20UN SAE ORB ports to add additional wireless pressure or temperature sensors directly in the oil flow. Please contact division for more detail.
	Mating Cable (SCK-WH-02-45-01) This connection cable (2 meter length) is uniquely designed to connect the analog signals from the flow turbine to the wireless transmitter while also allowing the supply of sufficient voltage needed to power the flow block.
	Power Lead (SCK-400-02-45) Connect this cable (2 meter length) via M12 plug to the mating cable to supply voltage to the system. An 18 to 30Vdc supply is required, and can be provided via flying leads from the factory DC power or the included 24Vdc power supply within kit.
	Power Supply (SCSN-240) Provided as an easy solution to supply the appropriate voltage to the wireless kit system. Connect the appropriate power leads to corresponding terminals of power supply. Input Voltage: 90~264 VAC Output Voltage: 24Vdc

Flying Lead Wire Diagram for Flow Kit (SCK-400-02-45)

PIN	Connection	Wire Color
1	V Supply	Brown
2	No Connection	White
3	0 V/GND	Blue
4	No Connection	Black
5	No Connection	Gray



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Part Number	Communication	Connectors	Compliance
SN-CS-10-A	LTE (AT&T), Ethernet, WiFi	RS232, RS485, GPIO, CAN, USB, LAN	FCC, IC, PTCRB
SN-CS-10-V	LTE (VZW), Ethernet, WiFi	RS232, RS485, GPIO, CAN, USB, LAN	FCC, IC, PTCRB

Specifications	Description
System	
Processor	Intel® ATOM™, E3827/1.75 GHz, Dual Core
On Board RAM	DDR3L, 4GB 1066MT/s
SSD Internal	Half-Slim SATA Module, 32 GB
Display	
Resolution	2560x1600 @ 60Hz for VGA
Interface	1xVGA (DB15)
Wireless Communication	
WLAN	802.11 b/g/n Wireless Module, external antenna
Bluetooth	Bluetooth 4.0 module, with external antenna
Cellular Data Module	4G/LTE CAT1 Cellular Module with SIM slot and two external antennas
RF Module	Parker SensoNODE Low Power Wireless Module with external antenna
I/O	
Ethernet	2x10/100/1000-BaseT(RJ45)
USB	2xUSB2.0 Host (Type A)
Audio	HD Audio, 1xMIC in 3.5mm, 1xline Out 3.5mm
COM Port	1xRS232/422/485 (Full Function, DB9); 1xRS232/485 (2 wires on Green Terminal)
CAN	1xCAN 2.0b
Alarm	Buzzer Out
SD card	1xSD card Slot
RTC	Supported
Control	ON/OFF Button (Front)
GPIO	Reserved GPIO (terminal)
UART	1x full function UART use DB9
Accelerometer	On Board Accelerometer, 3-Axis

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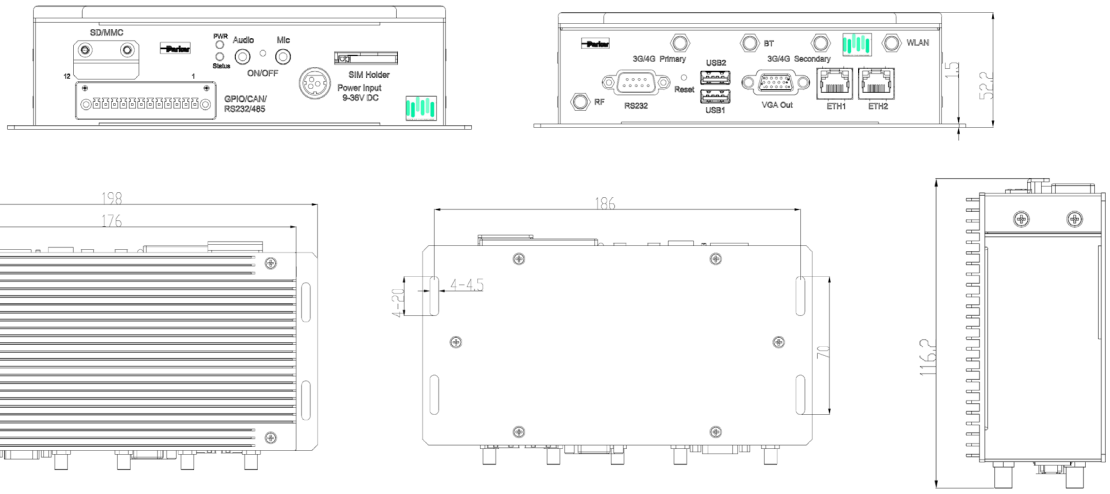
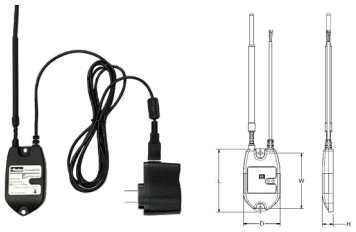


Specifications	Description
Security	
Security	TPM Module on board, Compliant with TCG PC client specific TPM interface specification (TIS) version 1.2
Software	
OS	Secured Embedded Linux
Applications	Parker Voice of the Machine Edge software
Power	
Input	DC12 / 24V(9-36V), Locked Power Jack
Consumption	6W (Pulse8W), Sleep 2W. (without LTE,GPS,WLAN)
Mechanical	
Dimensions	176x101x52mm (Box)
Install Brackets	198x101x52mm
Weight	0.6Kg (1.2Kg package Kit)
Enclosure	Aluminum Alloy with Black Color
Environment Condition	
Temperature	Operating: -20°C ~ +60°C, Storage:-40°C ~ +85°C
Humidity	5-95%RH at 25-35 (Non-Condensation)
Cooling Mode	Fan less, Heat Sink
Approvals	UL, FCC Class B, CE, RoHS, and PTCRB Compliance

Repeater



- Primary use as network repeater [range extender] for all sensors joined to gateway receiver
- Support for up to 250 sensors at one hop each
- Robust overmolded design for harsh environments

Part Number	W	D	H	L
SNREN-2	2.75" [70mm]	1.81" [46mm]	.53" [13mm]	3.12" [79mm]

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Features:

- Supplies continuous power to sensors
- Used with IEC/UL 508 Class 2 power supply
- Easy upgrade eliminates the need for battery replacement
- Extends temperature range over batteries
- FCC, IC, and CE certified when used with SensoNODE products

Technical Data	
Part Number	SNWP2-2
Wire Length	9.8 ft [3m]
Temperature Range	-40ŰF-185ŰF
Input Power	5-36 Volts DC
Output Power	3 Volts DC
Connection	Flying lead 24 AWG Wires
Form	CR123A Battery

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SensoNODE™ Gold and Voice of the Machine™ Cloud Starter Kit

The SensoNODE Gold and Voice of the Machine Cloud Starter Kit is the perfect introduction to an IoT infrastructure. Start monitoring machine performance by installing SensoNODE Gold Sensors and accessing Parker's web-based Voice of the Machine Cloud Software.

This out-of-the-box solution allows you to begin measuring and recording crucial data immediately.

Only three steps are required:
1. Install the sensors
2. Supply power to the gateway
3. Login to Voice of the Machine Cloud.

Set alerts to notify responsible parties of an event, view actionable data in graphical form, and export data for further analysis.

Part Numbers
QN-KIT-10-A
QN-KIT-10-V

The **SensoNODE Gold** and **Voice of the Machine Cloud Starter Kit** includes:

(1) 150 psi Pressure Sensor and (1) 5,800 psi Pressure Sensor
SensoNODE Gold Pressure Sensors are designed for accurate monitoring with the most commonly used pressures in the industry.

(1) SensoNODE Gold Temperature Sensor
SensoNODE Gold Temperature Sensors are designed for accurate tracking of in-line or ambient temperatures measured in Fahrenheit or Celsius.

(1) SensoNODE Gold Vibration Sensor
Parker's SensoNODE Vibration Sensors provide a simple and effective way to measure vibration of industrial machinery.

(1) SensoNODE Gold Analog Connector
The Analog Connector turns any wired 4-20mA sensor into a wireless device, making it easier to monitor any asset.

(1) SensoNODE Gold Repeater
The Repeater is used as a network range extender for all sensors connected to the gateway.

(1) SensoNODE Gold Gateway System
The gateway is the control center of the system which receives the data from the sensors and transmits it to Voice of the Machine Cloud.

(2) Adapters and (1) Cable
Pipe adapters to convert SAE o-ring port to NPT; M12 connection cable (6.5ft) for use with existing sensor and Analog Connector.

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SensoNODE™ Gold and Voice of the Machine™ Cloud Site Survey Kit

The SensoNODE Gold and Voice of the Machine Cloud Site Survey Kit is the first step in the installation of Parker's condition monitoring solution.

The Site Survey Kit determines the precise location of the Parker Gateway and SensoNODE Sensors.

The Kit establishes the best site plan and identifies obstacles.

Part Number
SNSK2

Site Survey Kit includes:

- SensoNODE Gold Site Survey Node
- Parker Receiver Node (PRN)
- Parker Repeater

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SCC-255

SensoNODE Accessory Case

Part Number	L	W	D	Case
SCC-255*	14”	11.5”	5”	Blow Molded Case

*Sensor products not included.

Battery (CR123A)

Part Number	Technology	Voltage
QX-008-121	Lithium Ion	3.00V

Test Port Couplings

Catalog 3800
Quick Coupling Products
Page B-99

For information and availability of Test Port Couplings, review Parker’s Catalog 3800, page B-99.

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Notes

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Parker Fluid Connectors Group

Your complete source for quality tube fittings, hose & hose fittings, brass & composite fittings, quick-disconnect couplings, valves, and assembly tools, locally available from a worldwide network of authorized distributors.

Fittings:
Available in inch and metric sizes covering SAE, BSP, DIN, GAZ, JIS, and ISO thread configurations, manufactured from steel, stainless steel, brass, aluminum, nylon, and thermoplastic.

Hose, Tubing, and Bundles:
Available in a wide variety of sizes and materials including rubber, wire-reinforced, thermoplastic, hybrid and custom compounds.

Worldwide Availability:
Parker operates Fluid Connectors manufacturing locations and sales offices throughout North America, South America, Europe, and Asia-Pacific.

For more information on
SensoNODE and **Voice of the Machine** products:
Visit: Parker.com/ConditionMonitoring
Call: (763) 544-7781

For more information on
SensoControl Wired Diagnostic and **Control** products:
Visit: Parker.com/SensoControl
Call: (763) 544-7781

Have questions or need help? Sign into our Condition Monitoring Service Desk.

Solutions.Parker.com/IoT-Support

Sales of **SensoNODE** Sensors and **Voice of the Machine** Software in U.S., Canada and Europe. Consult QCD for other regions.

Catalog 3864/USA 05/23

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