VOICE OF THE MACHINE

Condition Monitoring and Diagnostic Solutions
SensoNODE™ Silver 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

Minneapolis, MN

Grantsburg, WI

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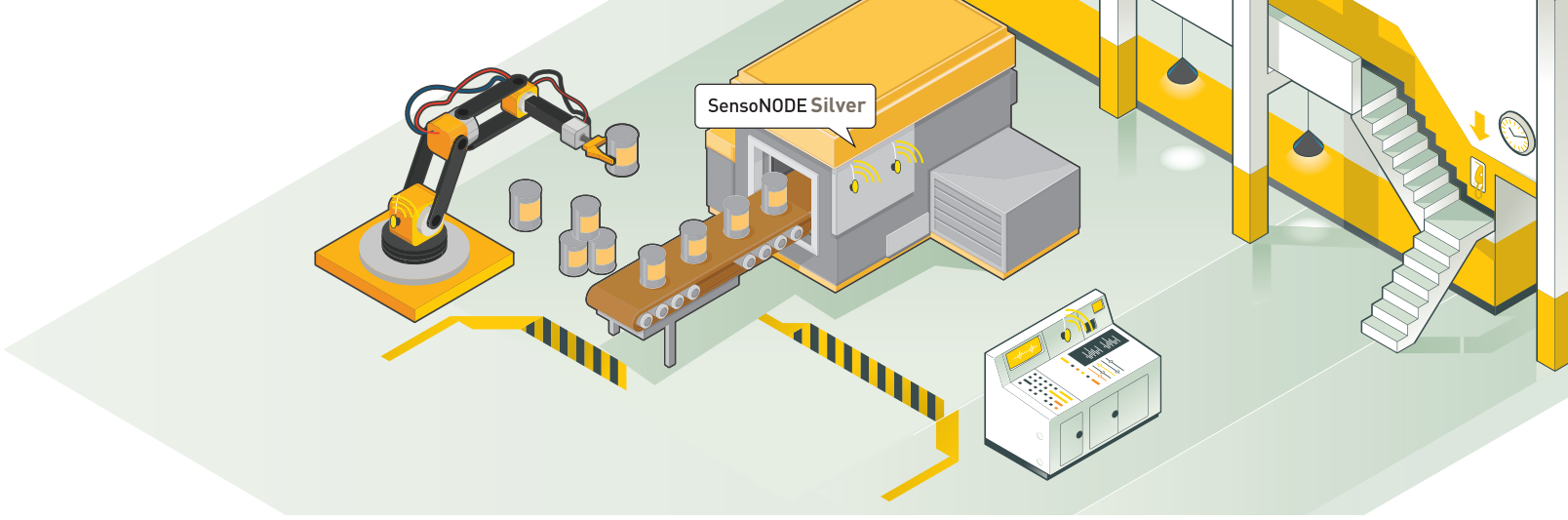
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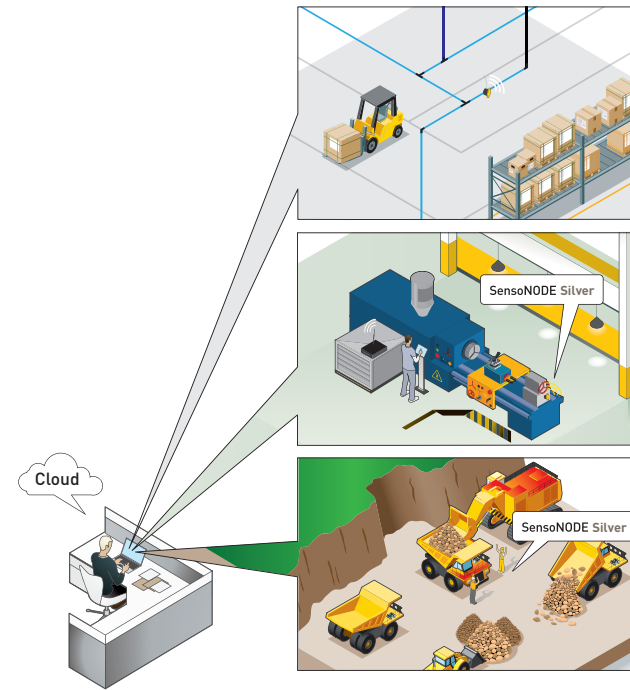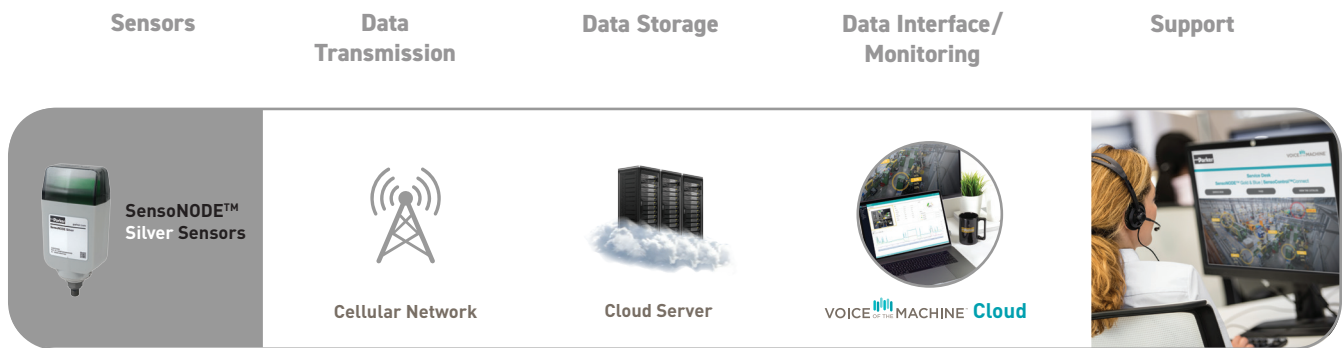
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Parker's Complete IoT-based Condition Monitoring and Diagnostics System

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.

Parker's **SensoNODE™ sensors and Voice of the Machine™ software** platforms 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.**

With multiple sensor options, software configurations, and integrating with existing infrastructure, **we partner with customers** to identify the best solution for each application.

Sensors	Data Transmission	Data Storage	Data Interface/ Monitoring	Support

SensoNODE™ Silver Sensors

Cellular Network

Cloud Server

VOICE OF THE MACHINE Cloud

Condition Monitoring for Preventative and Predictive Maintenance

REACTIVE

FIX IT WHEN IT BREAKS

PREVENTATIVE

SCHEDULE MAINTENANCE JUST IN CASE

PREDICTIVE
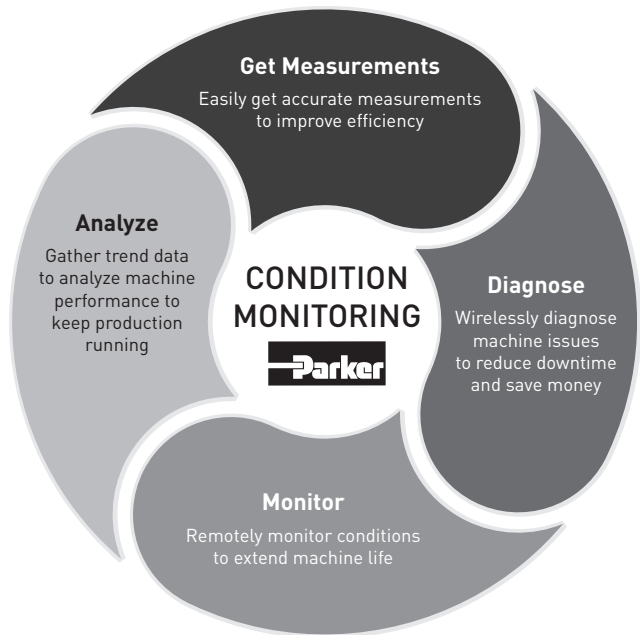
MAINTAIN IT BEFORE IT BREAKS

CONDITION MONITORING ENABLES

IoT-based condition monitoring is driving data generation to monitor and analyze performance of machines and processes in manufacturing.

This is leading to improved maintenance practices that are helping maintenance and operations teams identify issues before they escalate to big challenges resulting in shutdowns of machines and production.

By switching from manual maintenance practices and run-to-failure strategies to more preventative and predictive maintenance tactics, maintenance teams are discovering benefits and better results including:

- Increased uptime
- Decreased maintenance costs
- Increased asset lifetime
- Reduction in safety risks

Get Measurements
Easily get accurate measurements to improve efficiency

Analyze
Gather trend data to analyze machine performance to keep production running

CONDITION MONITORING
Parker

Diagnose
Wirelessly diagnose machine issues to reduce downtime and save money

Monitor
Remotely monitor conditions to extend machine life

Condition Monitoring Solutions

	SensoNODE Silver and Cloud
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	20 minutes
Pressure Spike and Drop Capturing	
Synchronization of Measurement Inputs	
Battery Life	Rate Dependent
FCC, IC, &/or CE Certified	√
Sensor IP Rating	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	Mandatory
Internet/WiFi/LAN Required	
Gateway Required	
Site Survey Required	

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

SensoNODE™ Silver Sensors and Voice of the Machine™ Cloud Interface

Our SensoNODE Silver wireless sensors utilize cellular technology to send data directly to the Voice of the Machine Cloud Interface. This means no gateway is required. This makes SensoNODE Silver ideal for applications where gateways are impossible or inconvenient.

SensoNODE Silver Sensors are best for applications when infrequent measurements are needed to monitor equipment or machines. The sensors are IP65 rated. They require (3) Energizer AA batteries.

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.

SensoNODE™ Silver Sensors

Communication Technology: Cellular
Software Platform: Voice of the Machine™ Cloud
Interface: Optimized for Windows, Linux, and MacOS based hardware. Android and iOS mobile devices.
Data Storage: Cloud
Applications: Infrequent continuous measurements. Locations where gateways are impossible or inconvenient. Single sensor implementations.
Sensor Types: Pr`essure
Requirements: Voice of the Machine™ Cloud and cellular service

Voice of the Machine™ Cloud Interface

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.

Interface: Optimized for Windows, Linux, and MacOS based hardware via an internet browser. Android and iOS mobile devices via mobile internet browser.
Sensors: SensoNODE™ Gold and Silver
Data Storage: Cloud
Applications: Continuous condition monitoring at predetermined intervals. Designed for in-plant, on-premise use, or remote locations. Low implementation effort required. View SensoNODE™ Gold and Silver signals on single dashboard.
Requirements: Parker Gateway, internet connectivity

- 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

Features:

- Available in a variety of pressure ranges from - 14.5 psi to 8700 psi.
- There are actually 23 user-selectable units of measure (for pressure alone) in the VoM Cloud
- 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.
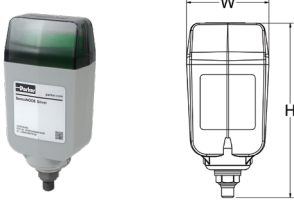- Sensors are set with a report rate of once every 20 minutes.

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
Measurement and Broadcast Interval	User Selectable	User Selectable	User Selectable	User Selectable	User Selectable	User Selectable	User Selectable
Report Rate (min)	20 min	20 min	20 min	20 min	20 min	20 min	20 min
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	FCC, IC	FCC, IC	FCC, IC	FCC, IC	FCC, IC	FCC, IC
Battery (Energizer is recommended brand)	AA	AA	AA	AA	AA	AA	AA
IP Rating	IP65	IP65	IP65	IP65	IP65	IP65	IP65

Note: Consult QCD for other port options, pressure ratings, and port seal materials.
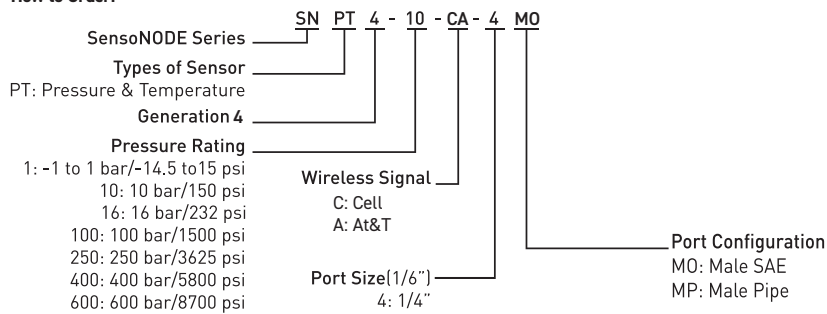
*Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-B)

Pressure Sensors

Part Number	Pressure Rating psi [bar]	Port	Width	Height
SNPT4-1-CA-4MP	-14.5 to 14.5 [-1 to1]	1/4" Male NPT	3.00" [76mm]	6.33" [161mm]
SNPT4-10-CA-4MP	0-150 [10]	1/4" Male NPT	3.00" [76mm]	6.33" [161mm]
SNPT4-16-CA-4MP	0-232 [16]	1/4" Male NPT	3.00" [76mm]	6.33" [161mm]
SNPT4-100-CA-4MO	0-1500 [100]	-4 SAE	3.00" [76mm]	6.33" [161mm]
SNPT4-250-CA-4MO	0-3625 [250]	-4 SAE	3.00" [76mm]	6.33" [161mm]
SNPT4-400-CA-4MO	0-5800 [400]	-4 SAE	3.00" [76mm]	6.33" [161mm]
SNPT4-600-CA-4MO	0-8700 [600]	-4 SAE	3.00" [76mm]	6.33" [161mm]

Note: Products in catalog are currently only for sale in U.S and Canada.

How to Order:

SN PT 4 - 10 - CA - 4 MO

SensoNODE Series

Types of Sensor
PT: Pressure & Temperature

Generation 4

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
C: Cell
A: At&T

Port Size(1/6")
4: 1/4"

Port Configuration
MO: Male SAE
MP: Male Pipe

Notes

Notes

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

Parker Hannifin Corporation
Quick Coupling Division
8145 Lewis Road
Minneapolis, MN 55427
phone 763 544 7781
fax   763 544 3418
parker.com/conditionmonitoring