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Condition Monitoring and Diagnostic Solutions SensoNODE™ Sensors and SCOUT™ Software

Sensors, Software, and Accessories
Catalog 3864 USA | May 2018

Parker

ENGINEERING YOUR SUCCESS.

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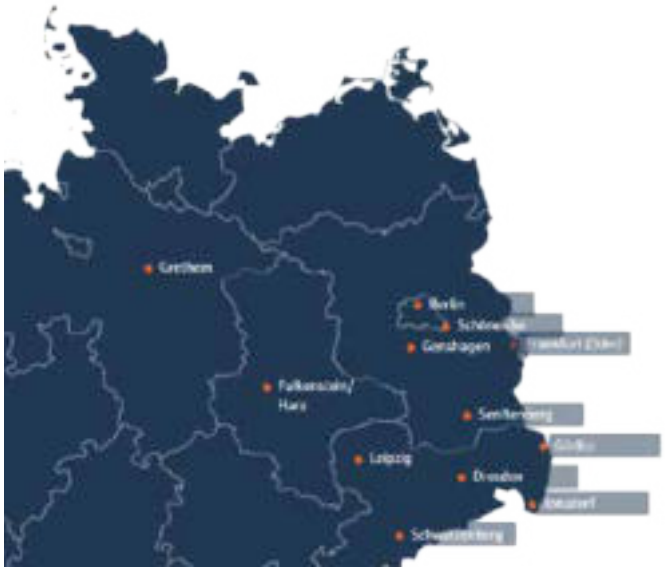

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Quick Coupling Division Locations

Minneapolis, MN

Grantsburg, WI

Chetek, WI

Union City, PA

⚠ WARNING

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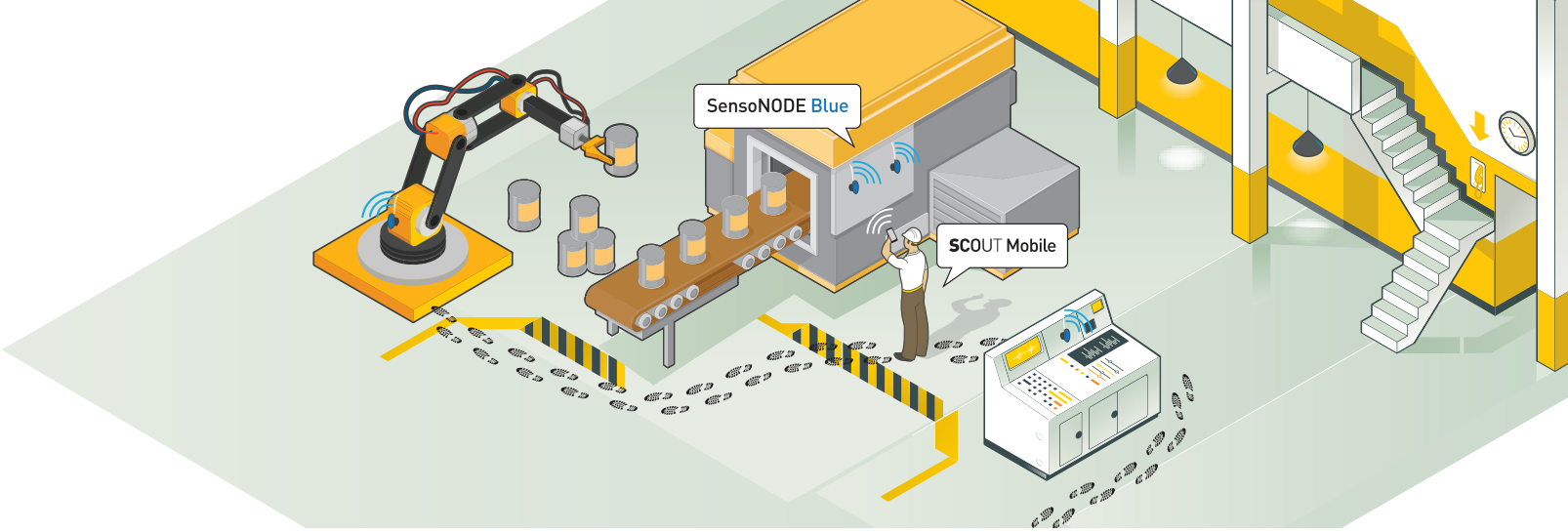

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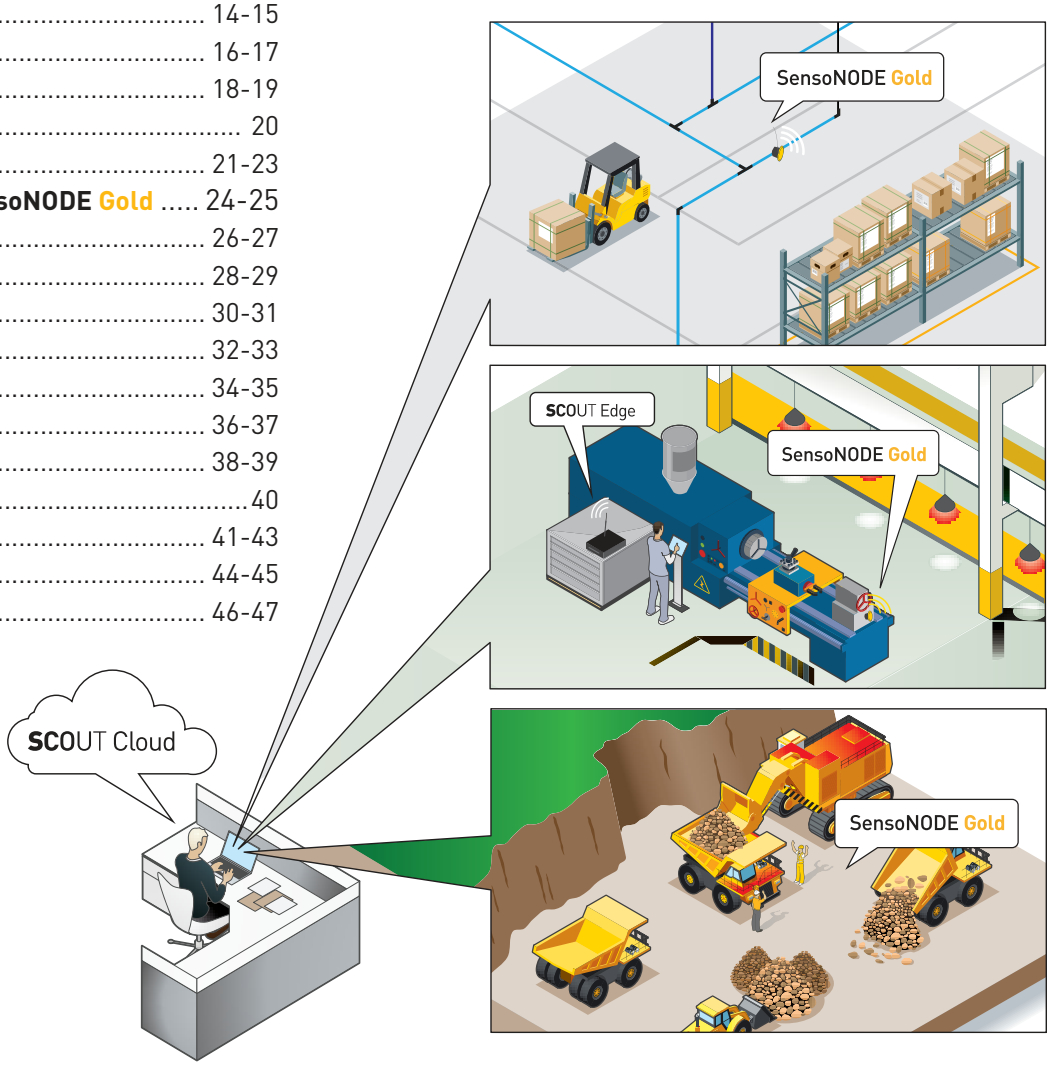


Parker's IoT-Empowered Solutions

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 **SCO**UT™ **Software** and **SensoNODE™ Sensors** 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

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

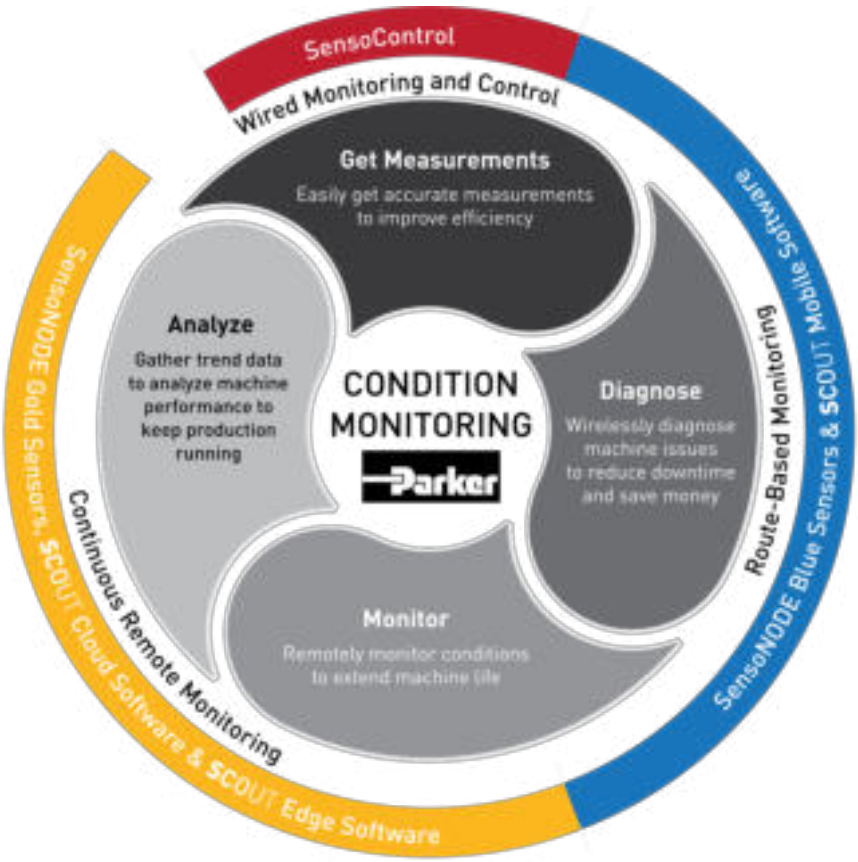
When used together, **SCO**UT Software and SensoNODE Sensors create an advanced condition monitoring solution that delivers vital measurement data to help drive optimal tactical, operational, and strategic decisions, leading to maximum uptime.

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

- 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 **(SCO**UT **Cloud/Edge and SensoNODE Gold)**

- 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



Parker Hannifin Corporation
Quick Coupling Division
Minneapolis, MN
parker.com/conditionmonitoring

Condition Monitoring Solutions

	SensoControl	SCOUT Mobile and SensoNODE Blue	SCOUT Edge and SensoNODE Gold	SCOUT Cloud and SensoNODE Gold
Primary Application				
Wireless Continuous Remote Monitoring			√	√
Wireless Route-Based Monitoring		√		
Diagnostics	√	√		
Communication Method				
900 MHz Wireless			√	√
Bluetooth Low Energy (BLE)		√		
Wires	√			
Key Features				
Alert Notifications - Text, Email, In-System			√	√
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	1 millisecond**	1 second	750 milliseconds	20 seconds
Pressure Spike and Drop Capturing	√			
Synchronization of Measurement Inputs	√			
Battery Life	Use Dependent	Rate Dependent	Rate Dependent	Rate Dependent
FCC, IC, &/or CE Certified	√	√	√	√
IP Rating	IP67/IP64/IP65***	IP65	IP65	IP65
Data Storage				
Cloud				√
Local Server			√	
Mobile Device		√		
Handheld Meter	√			
Interface				
Desktop/Laptop	√		√	√
Mobile App		√		
Handheld Meter	√			
Other				
Software License			√	
Optional Cellular Subscription				√
Internet/WiFi/LAN Required			√	√
Collection Server Required			√	√
Site Survey Required			√	√

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

Route-Based Monitoring and Diagnostics

Parker's route-based monitoring and diagnostics allow workers to take instant measurements of individual assets wirelessly, and record those measurements using their mobile device. Compared to traditional, wired gauges, users spend less time getting measurements, and can avoid potentially unsafe working conditions; e.g. monitoring mobile equipment.

Parker's **SCO**UT Mobile Software and SensoNODE Blue Sensors deliver an IoT solution where hardware and software work together to provide measurements and diagnostics across multiple applications and industries.

Ideal for quick, accurate diagnostics, **SCO**UT Mobile and SensoNODE Blue help companies:

- Get accurate measurements
- Gather measurements from a distance without interrupting production
- Avoid potentially dangerous situations
- Diagnose issues quickly
- Improve work efficiency
- Share data direct from your mobile device

SensoNODE™ Blue Sensors and SCOUT™ Mobile Software

SensoNODE Blue is Parker's series of Bluetooth-enabled sensors. Compact, energy-efficient, and wireless, they are designed to provide simple and useful solutions for diagnostic and condition monitoring applications with mobile devices. SensoNODE monitors asset measurements to help predict problems and prevent downtime.

Why Blue?

- Accurate measurements
- Easy installation
- No network required
- Wireless installation removes challenges of wired systems
- No external power source required
- Ultra-low battery consumption for up to five years of battery life*
- Sealed sensor housing ideal for harsh environments
- Compact lightweight design
- LED indicators aid in identifying sensor status

* Not continuous use

SCOUT **Mobile** allows users to receive measurements direct to their mobile devices. **SCO**UT Mobile compiles the data and presents it in a way that makes sense to a user's operation, allowing them to track data immediately, and receive user-defined alarms for unplanned condition changes that may damage assets. Mapping and dashboard functions allow you to customize data visualization.

Why SCOUT **Mobile?**

- Measurements delivered to your mobile device
- Easy-to-use interface
- Customizable dashboards
- Mapping function
- Set your own alarm thresholds of measurements (min/max)
- Alerted when outside of defined thresholds
- Name sensors so they are easily identifiable
- Easy-to-understand trend charts
- Multiple users can access data from their mobile device
- Export data for analysis, sharing, and retention

Features:

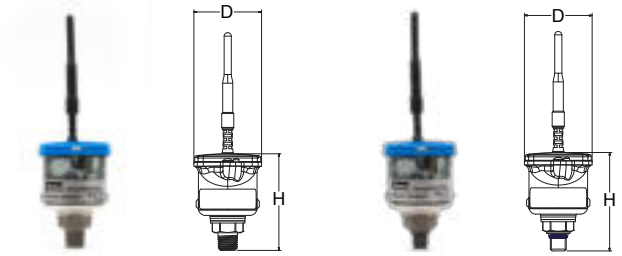
- Available in a variety of pressure ranges from -14.5 psi to 8700 psi.
- User-definable measurement units (psi/bar) for convenient and familiar data readings.
- Port options: Male NPT or SAE thread and EMA or PD quick couplers for fast and easy connecting.
- Corrosion resistant materials for challenging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

Sensor Technical Data

						
Housing Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Port	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 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]	0-1500 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	2250 psi	5440 psi	8700 psi	13,050 psi
Burst Pressure	3x	4x	4x	4x	4x	4x
Accuracy (at 77°F/ 25°C)	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
Measurement and Broadcast Interval	User Selectable	User Selectable	User Selectable	User Selectable	User Selectable	User Selectable
Response Time (min)	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]
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]
Full Range Life Cycles	> 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
Battery (Panasonic is recommended brand)	CR123A	CR123A	CR123A	CR123A	CR123A	CR123A
IP Rating	IP65	IP65	IP65	IP65	IP65	IP65

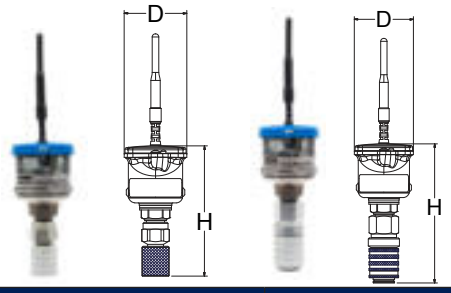
Note: Consult QCD for other port options, pressure ratings, and port seal materials.
*Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-B)

Pressure Sensors



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

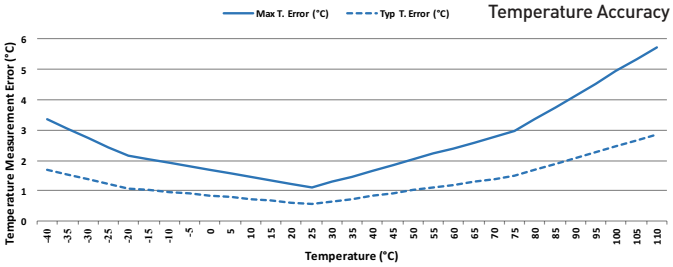
Quick Couplers



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

Note: Products in catalog are currently only for sale in the U.S., Canada and Europe. For sales information outside of these regions, please contact your Parker representative.

Temperature Accuracy



How to Order:

SN PT 2 - 10 - B - 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
  100: 100 bar/1500 psi
  250: 250 bar/3625 psi
  400: 400 bar/5800 psi
  600: 600 bar/8700 psi
- **Wireless Signal**
  B: Bluetooth
- **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

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.
- User-selectable measurement and broadcast intervals. Refer to **SCO**UT Mobile for more information about capabilities and modalities.
- Available in unique foot and clamp designs for quick attachment to pipe or hard tubing.

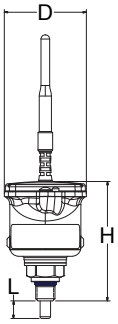
Sensor Technical Data

						
Housing Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Nylon
Port	1/4" Male NPTF	-4 SAE	1/4" Male NPTF	-4 SAE	Foot	Clamp
Wetted Parts Material	17-4 Stainless	17-4 Stainless and Nitrile	17-4 Stainless	17-4 Stainless and Nitrile	Stainless	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]	-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	N/A
Max. Overload Pressure	3x	3x	2x	2x	N/A	N/A
Burst Pressure	4x	4x	3x	3x	N/A	N/A
Accuracy (at 77°F/ 25°C)	±3.0%	±3.0%	±3.0%	±3.0%	±5.0%	±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]	2°F [1.12°C]
Measurement and Broadcast Intervals	User Selectable	User Selectable	User Selectable	User Selectable	User Selectable	Measurement Only (1 sec)
Response Time (minimum)	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]
Full Range Life Cycles	> 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
Battery (Panasonic is recommended brand)	CR123A	CR123A	CR123A	CR123A	CR123A	CR2450
IP Rating	IP65	IP65	IP65	IP65	IP65	IP65

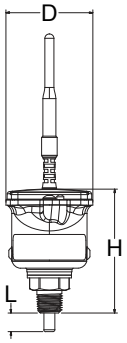
Note: Consult QCD for other port options and port seal materials.
*Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-B)

Temperature Sensors – Ported

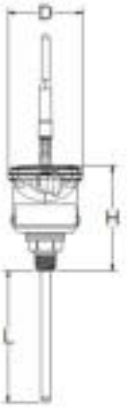

MO




MP

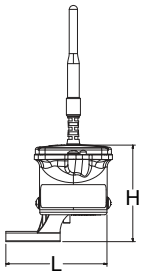


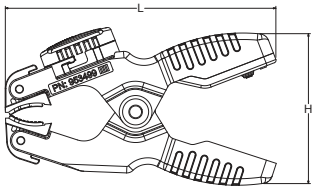

Probe



Part Number	Fluid Temperature Range	Port	D	H	L
SNT2-700-B-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-B-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-B-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-B-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 and Clamp





Part Number	Fluid Temperature Range	L	H	Optimal Clamping
SNT2-0-B-FT	-40°F to 257°F [-40°C to 125°C]	2.42" [61.5mm]	2.31" [58.7mm]	> Ø.25"+ [>Ø6.4mm]
SNT-0-B-CL-KB	-40°F to 257°F [-40°C to 125°C]	5.24" [133.1mm]	3.06" [77.7mm]	Ø.25" to Ø1.5" [Ø6.4mm-Ø38.1mm]

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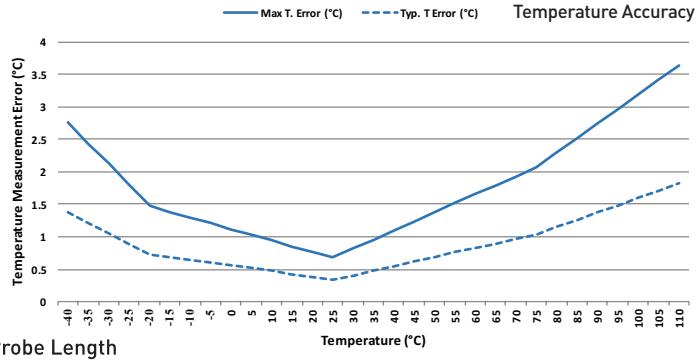


How to Order:

SN T 2 - 100 - B - 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**
  B: Bluetooth
- **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"

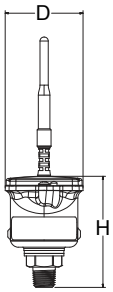
Features:

- 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 ambient temperature values.
- User-selectable measurement and broadcast intervals. Refer to the **SCO**UT Mobile App 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
Measurement and Broadcast Interval	User Selectable
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

*Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-B)

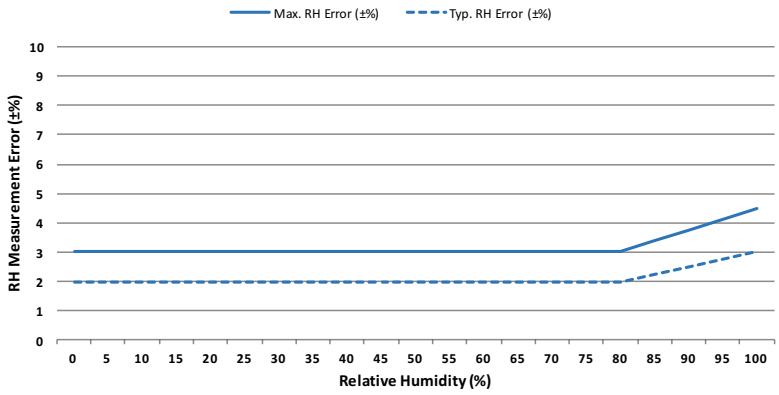
Humidity Sensors



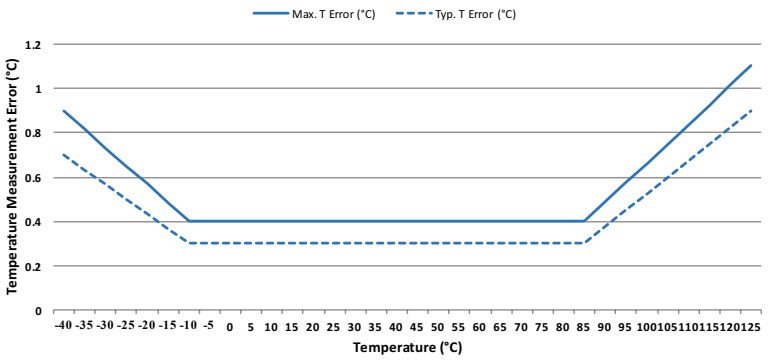
Part Number	RH Range	Port	D	H
SNHT2-10-B-4MP	0-100%	1/4" Male NPTF	ø1.88" [48mm]	2.66" [68mm]

Note: Products in catalog are currently only for sale in the U.S., Canada and Europe. For sales information outside of these regions, please contact your Parker representative.

RH Accuracy



Temperature Accuracy



How to Order:

SN HT 2 - 10 - B - 4 MP

- SensoNODE Series
- Types of Sensor — HT: Humidity
- Generation II
- Pressure Rating — 10: 10 bar/150 psi
- Wireless Signal — B: Bluetooth
- Port Size (1/6") — 4: 1/4"
- Port Configuration — MP: Male Pipe

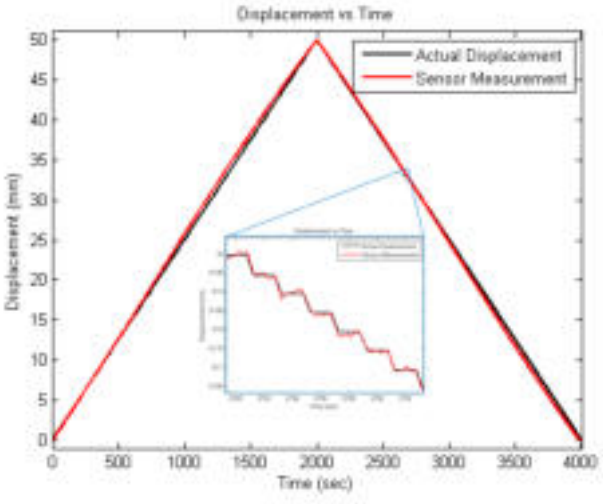
Features:

- Magnetic base for tool free mounting.
- Threaded stud port provides alternative mounting option where magnetic base is not suitable.
- Soft, thin and conformable sensors.
- Reliable accurate measurements while being strained up to 100% for millions of cycles.
- Resilient silicone rubber that can withstand harsh environments.

Sensor Technical Data		
Active Area Dimensions	50mm x 14mm	100mm x 14mm
Maximum Extension	100mm	200mm
Resolution	±0.1% strain FS (±50µm)	±0.1% strain FS (±100µm)
Sensitivity	0.026% strain FS (13µm)	0.026% strain FS (26µm)
Linearity	±1% FS	±1% FS
Hysteresis	±1% FS	±1% FS
Stiffness	0.15 N/mm	0.15 N/mm
Measurement Outputs	Percent strain in 100ths of a percent of length of active area; temperature in °C or °F	Percent strain in 100ths of a percent of length of active area; temperature in °C or °F
Sampling Rate	1Hz for standard configuration	1Hz for standard configuration
Ambient Temperatures	-40°F to +185°F, [-40°C to +85°C]	-40°F to +185°F, [-40°C to +85°C]
Full Range Life Cycles	> 5 million	> 5 million
IP Rating	IP67	IP67

Transmitter Technical Data	
Base Material	Aluminum
Housing Material	Polycarbonate
Measurement and Broadcast Interval	User Selectable
Temperature Range with Wired Power	-40˚F-185˚F
Temperature Range with Battery	-4˚F-158˚F
Certifications	FCC, IC, CE*
Battery (Panasonic is recommended brand)	CR123A
IP Rating	IP65

*CE Certification is available August 2017



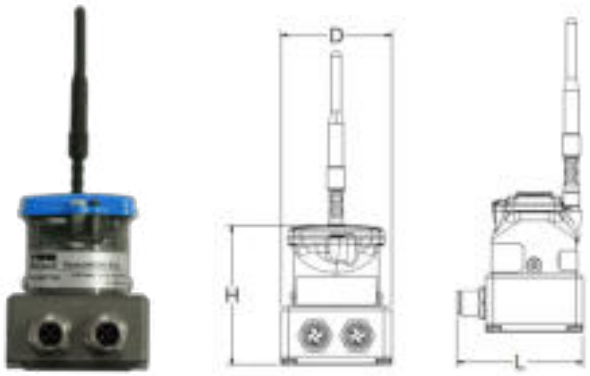
Sensor Kit

Part Number	Transmitter	Sensors
SNES2-KIT-B-50	(1) SNES2-B	(2) 50mm

Sensors

Part Number	Sensor Length (L)	Sensor Width (W)	Cable Length
EAPS-50HD	1.97" [50mm]	0.67" [17mm]	18" [457.2mm]
EAPS-100HD	3.94" [100mm]	0.67" [17mm]	18" [457.2mm]

Transmitter



Part Number	Base Mounting Thread	D	H	L
SNES2-B	1/4-28 UNF x 0.45" [11mm]	2.11" [54mm]	2.67" [68mm]	2.41" [61mm]

Note: Products in catalog are currently only for sale in the U.S. and Canada.
For sales information outside of these regions, please contact your Parker representative.

How to Order:

EAP S - 50 HD

Material
EAP: Electroactive Polymer

Types of Sensor
S: Strain

Length of Active Area
50: 50mm
100: 100mm

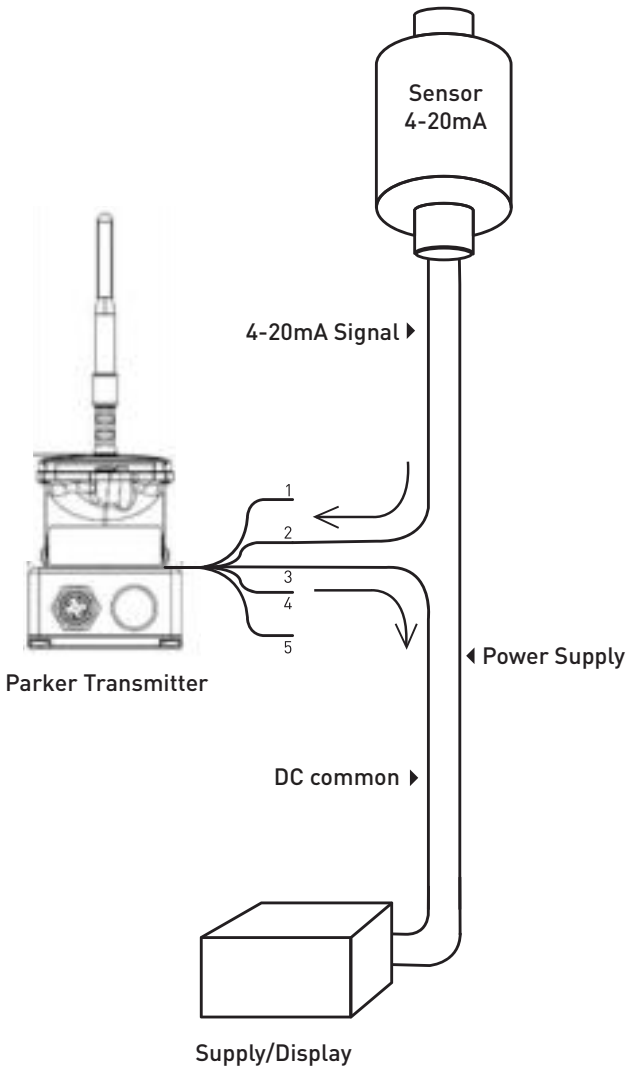
Sensor Type
HD: Heavy Duty

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

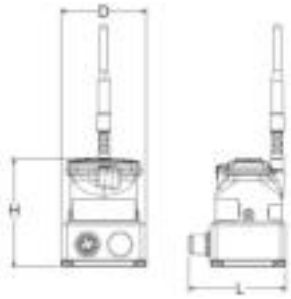
*CE Certification is available August 2017

Features:

- Connects inline with any 4-20mA Sensor.
- Transmits wired sensor output into **SCO**UT Mobile App, including alarms and trend data.
- Magnetic base for tool free mounting.
- Threaded stud port provides alternative mounting options where magnetic base is not suitable.
- Definable mapping feature in **SCO**UT Mobile App to present 4-20mA signal in user defined units.
- Requires connection cable SCK-400-xx-xx in conjunction with transmitter and 4-20mA Sensor.



4-20mA Transmitter



Part Number	Base Mounting Thread	D	H	L
SN422-B	1/4-28 UNF x0.45" [11mm]	2.11" [54mm]	2.67" [68mm]	2.41" [61mm]

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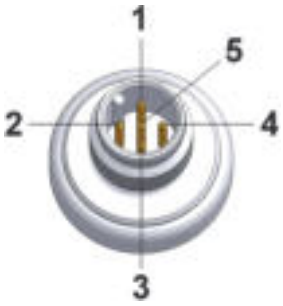
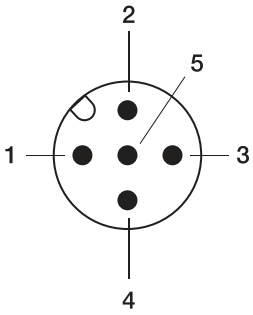
Pin Assignment

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

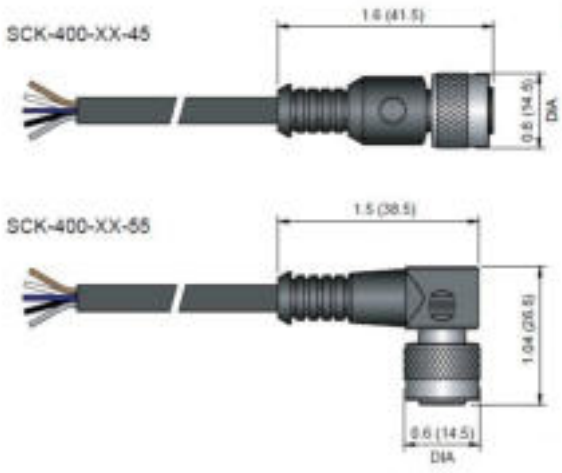


Cable



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, 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°



Features:

- Wireless, remote readings
- Easy operation
- Hand-held digital pressure gauge
- Measure and Display - Pressure
- Backlit display
- User-adjustable pressure units
- Min/Max memory
- Battery life indicator
- Ranges for hydraulics and pneumatics
- Scanning rate of 10ms
- Fluid temperature: -4˚F to 176˚F
- Certifications: FCC, IC, CE*

Cover Color Code	
Blue	-14.5 to 230 psi (-1 to 16 bar)
Green	0 to 1500 psi (0 to 100 bar)
Orange	0 to 5800 psi (0 to 400 bar)
Red	0 to 8700 psi (0 to 600 bar)

Digital pressure monitoring

- Capture minimum/maximum pressure changes at a rate of 10 ms
- Digital readout more accurate than mechanical
- Exportable records and proof-of-work statements
- Set alarms, create/view trend graphs, create asset records

Wireless operation

- Powered by SCOUT Mobile Software
- Fast accurate readings
- No more wiring or hoses getting caught in machinery
- Line of sight is not needed to obtain measurement
- Allows users to be away from machinery while in use and under full load, reducing safety risks

Scalable and expandable

- Increase or decrease the total number of gauges used
- No need to reconfigure wired infrastructure
- Works with SensoNODE™ Blue Sensors via SCOUT Mobile

*CE Certification is available August 2017

ServiceJunior CONNECT

ServiceJunior CONNECT (PD Coupler*)	ServiceJunior CONNECT (EMA3 Coupler**)	ServiceJunior CONNECT (1/4"NPT Port)	Measuring Range	Overload Pressure (psi)	Resolution (psi)	Accuracy
SCJR-0250-PD-BLE2	SCJR-0250-EMA-BLE2	SCJR-0250-4MP-BLE2	-14.5 to 230 psi (-1 to 16 bar)	460	0.1	0.5% FS
SCJR-1500-PD-BLE2	SCJR-1500-EMA-BLE2	SCJR-1500-4MP-BLE2	0 to 1500 psi (0 to 100 bar)	2,900	1	0.5% FS
SCJR-5800-PD-BLE2	SCJR-5800-EMA-BLE2	SCJR-5800-4MP-BLE2	0 to 5800 psi (0 to 400 bar)	11,600	1	0.5% FS
SCJR-8700-PD-BLE2	SCJR-8700-EMA-BLE2	SCJR-8700-4MP-BLE2	0 to 8700 psi (0 to 600 bar)	14,500	1	0.5% FS

Product Dimensions	W	D	H	L
ServiceJunior CONNECT	3.52" [89.40mm]	2.28" [57.91mm]	4.04" [102.61mm]	7.05" [179.07mm]

Note: Products in catalog are currently only for sale in the U.S. and Canada.
For sales information outside of these regions, please contact your Parker representative.

Battery life is dependent upon wireless transmission rate:
1 second rate = 100 hours of battery life 2 second rate = 200 hours of battery life

* PD Couplers rated to 6,000 psi max
** EMA3 Couplers rated to 9,000 psi max
Note: To receive ServiceJunior with calibration certificate, add K- to the beginning of the part number. (i.e. K-SCJR-1500-PD)

Accessories

Part Number	Description
PD240	PD Series Diagnostic Coupler
SCA-7/16-EMA-3	7/16 - 20UNF-2B female to M16X2.0 EMA3 female swivel
SCJA-1/4	7/16 - 20UNF-2B female to 1/4" NPT male adapter
PDH-19	19" PD Hose extension to be used with PD nipple
PDH-32	32" PD Hose extension to be used with PD nipple
SMA3-400	16" (400 mm) Hose assembly for EMA M16X2.0 interface
SCC-300	Storage case for three gauges and diagnostic adapters

SensoNODE™ Blue

Wired Power Supply

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 operating range over batteries.
- FCC, IC, and CE* certified when used with SensoNODE products.

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

*CE Certification is available August 2017

SCOUT Mobile Software

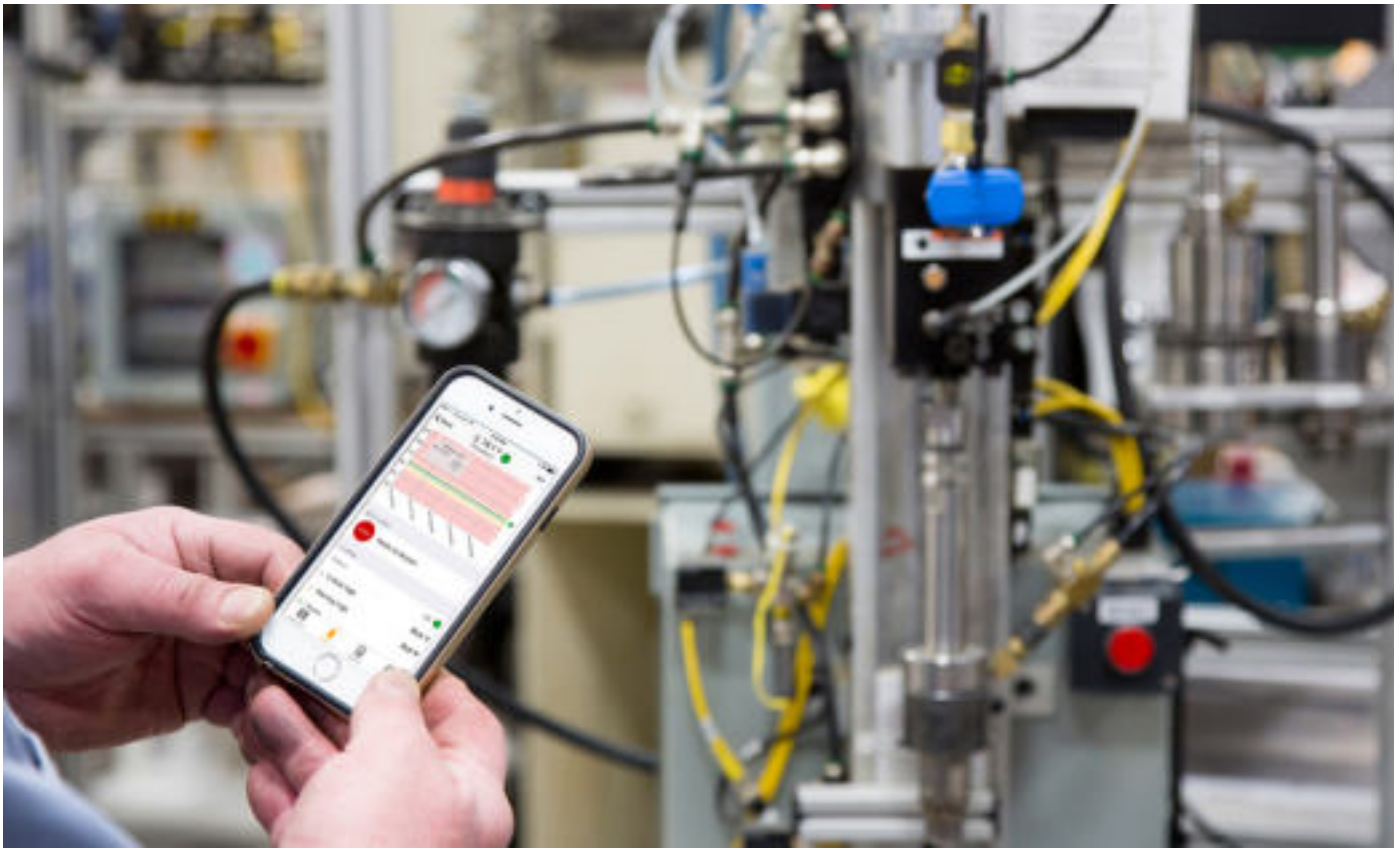
SCOUT Mobile is used for diagnostics and condition monitoring for predictive maintenance. The app allows users to connect to Parker's SensoNODE™ Blue wireless sensors to gather measurements for a wide range of fluid and gas applications.

SCOUT Mobile puts vital information in the palm of the user's hand. It offers immediate and historic trend information collected by SensoNODE™ Blue wireless sensors and presents it in a way that makes sense to a user's operation, providing the information needed to optimize asset performance. Data can also be easily exported and shared.

SCOUT Mobile alerts users to unplanned condition changes that may damage components and equipment. As levels rise above or fall below user-defined thresholds, users are alerted to these events, giving them an opportunity to address potential issues that could harm the system over time, helping to reduce unplanned downtime and increase productivity.

Capabilities:
- Mobile application designed for iOS and Android
- Connect and display SensoNODE Blue Sensors

Features:
- Intuitive design and user experience
- Auto recognition enables users to quickly add and connect multiple sensors concurrently
- Easy readability of measurements with visualized data in digital gauges and trend charts
- View immediate measurements that include current values and minimum/maximum indicators in addition to historical sensor information
- Configurable alarm thresholds with alerts when thresholds are exceeded; monitoring continues while sensors are unattended
- Customizable trend charts and dashboards
- Mapping function for pressure, 4-20mA and flexible displacement sensors that correlates raw measurements into your "specific" units
- Easily export and share data



Compatibility:
- Requires iOS 9 or newer/Android 4.4 or newer

Languages:
- English

Supported Devices:
- iPhone (4S and newer)
- iPod Touch (5th Gen and newer)
- iPad 3, 4
- iPad Air and iPad Air 2
- iPad Mini (1st Gen and newer)
- iPad Pro
- Compatible with most Bluetooth Low Energy (BLE) supported Android devices

Sensor Inventory

One touch access to sensors that have been added to your mobile device with their latest measurements, alarm status, and sensor mode - broadcasting or connected.

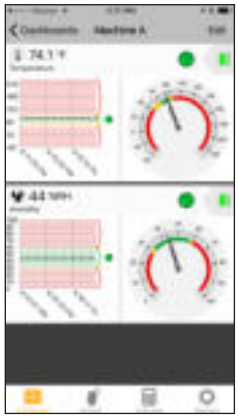
Measurement Detail

Focus on a single measurement with trend charts, digital gauge, alarm thresholds and other useful features for the operational professional.

Sensor Setup

Configure sensors with individually programmed name, highlight color and modes of operation to suit different use cases.

Dashboard

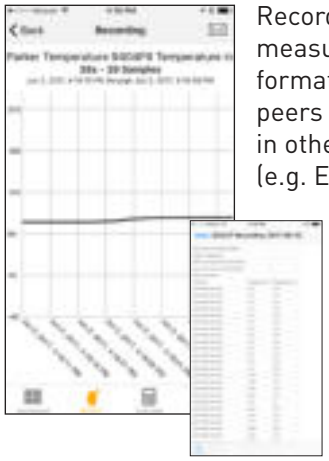


Simplify monitoring activities by grouping measurements that belong together and compare the group's trends and gauges.

Alarm Settings

Define measurement thresholds to get notified of important changes. Critical thresholds are programmed to sensor firmware for exception monitoring between readings.

Record and Export



Record and export measurements in CSV format for sharing with peers or further analyzing in other applications (e.g. Excel).

Continuous Remote Monitoring

For more long-term condition monitoring applications, continuous remote monitoring allows you to track measurements to gauge the health of your machines and processes. Whether you're at your desk or out visiting a customer, you can monitor and collect data from multiple assets and get alerts of deviations. This is ideal for large-scale operations with production and assembly lines.

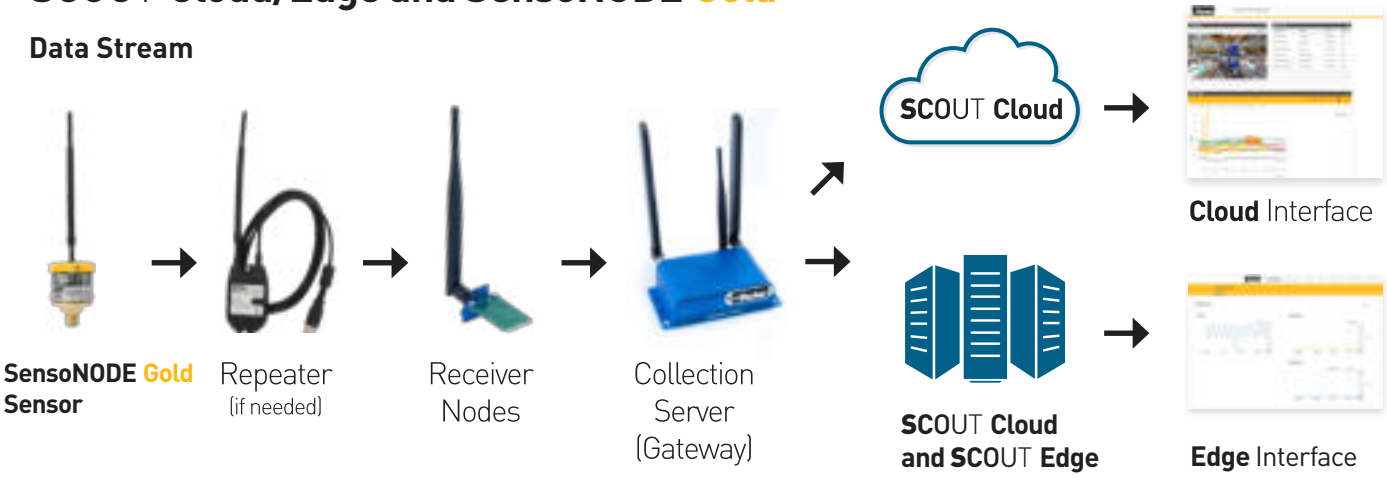
Parker's **SCO**UT Cloud Software and SensoNODE Gold Sensors deliver a complete, **standalone solution that isn't dependent on a facility network or IT department.** All you need is an internet connection and browser to monitor your asset measurements from anywhere.

With quick and simple data gathering from multiple facilities, users can:

- Review data anywhere, anytime and make better decisions
- Improve safety
- Get measurements without interrupting production
- Monitor more assets and processes with fewer staff
- Optimize machine performance and service life
- Maintain production quality
- Immediate notification of deviations/ exceptions
- Analyze performance trends for indications of pending failures

SCOUT **Cloud/Edge and SensoNODE Gold**

Data Stream



SensoNODE™ Gold Sensors, SCOUT™ Cloud, and SCOUT™ Edge

SensoNODE Gold is Parker's series of networked, wireless sensors that are developed for continuous condition monitoring via the cloud or local enterprise applications. That means as long as you have an internet connection, you can get up-to-date measurements.

Why Gold?
- Wireless sensors that are small in size
- Simple sensor installation
- Provides accurate measurements
- Place sensors at point of need
- Longer battery life
- Longer range radio
- Durable construction for harsh environments – IP65 rated

SCOUT Cloud is Parker's cloud-based continuous condition monitoring interface that provides alerts, status, and analytics for increased awareness of your processes and assets.

Why SCOUT Cloud?
- Access to data anytime, anywhere
- Easy to use web-based interface
- No software download – no updates
- Receive alert notifications - email, text message, or in-system
- Visualize data in a way that makes most sense
- Customize alerts, trend charts, and dashboards
- View measurement anomalies easily
- Support continuous improvement efforts with trend data
- Multiple user access levels
- Remotely monitor multiple sites and sensors
- Export data

SCOUT Edge is Parker's gateway software which enables sensor network connectivity to local enterprise application.

Why Edge?
- User defined and determined
- Presents measurements to customer-managed network system
- Control collection of sensor data
- Easy to use web-based interface for configuration and management
- Data security
- Native support for numerous industrial data standards
- Integration of customer sensors
- Export and share data
- Visual programming for integration

Features:

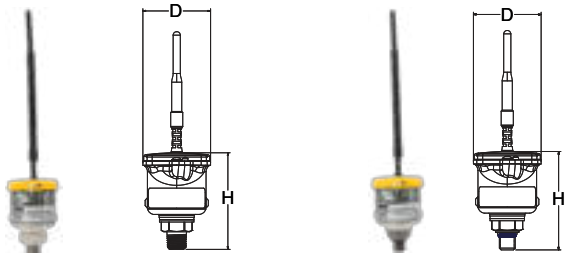
- Available in a variety of pressure ranges from -14.5 psi to 8700 psi.
- User-definable measurement units (psi/bar) for convenient and familiar data readings.
- Port options: Male NPT or SAE thread and EMA or PD quick couplers for fast and easy connecting.
- Corrosion resistant materials for challenging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

Sensor Technical Data

						
Housing Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Port	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 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]	0-1500 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	2250 psi	5440 psi	8700 psi	13,050 psi
Burst Pressure	3x	4x	4x	4x	4x	4x
Accuracy (at 77°F/ 25°C)	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
Response Time (min)	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]
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]
Full Range Life Cycles	> 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***
Battery (Panasonic is recommended brand)	CR123A	CR123A	CR123A	CR123A	CR123A	CR123A
IP Rating	IP65	IP65	IP65	IP65	IP65	IP65

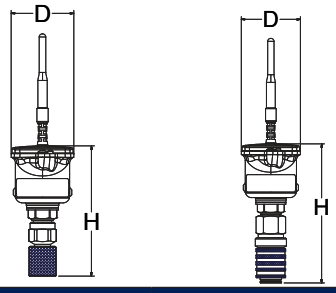
Note: Consult QCD for other port options, pressure ratings, and port seal materials.
*Consult Subscription Agreement and Order Form or Parker QCD for any changes regarding data rates.
**Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-2)
***CE Certification is available August 2017

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]
SNPT2-100-2-4MO	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]

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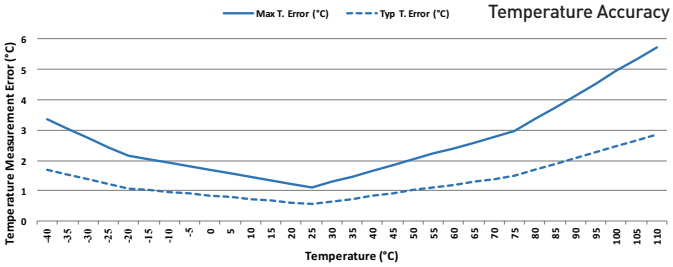
Temperature Accuracy



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
  100: 100 bar/1500 psi
  250: 250 bar/3625 psi
  400: 400 bar/5800 psi
  600: 600 bar/8700 psi
- Wireless Signal
  2: 900 MHz [FCC/IC]
  3: 868 MHz [CE]
- 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

Features:

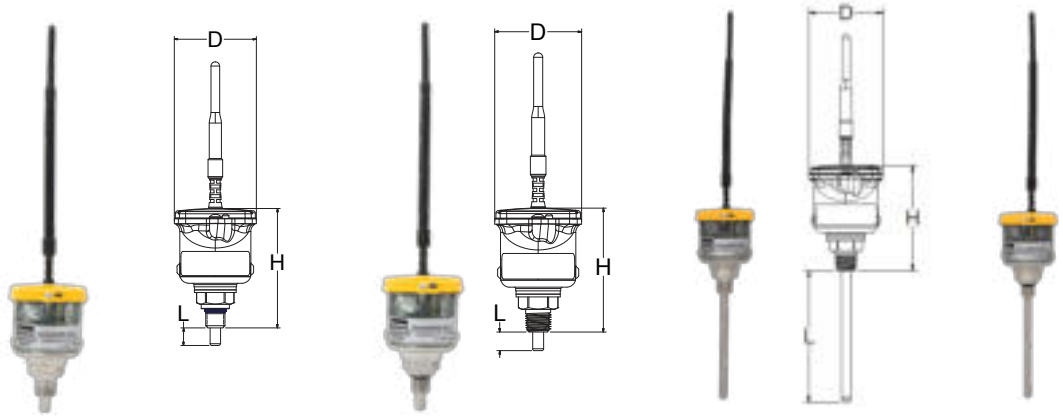
- User-definable measurement units (F°/C°) for convenient and familiar data readings.
- Port Options: Male NPTF and SAE
- Corrosion-resistant materials for challenging environments.
- Configurable measurement and broadcast intervals*. Refer to **SCO**UT Cloud for more information about capabilities and 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

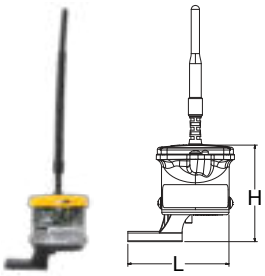
Note: Consult QCD for other port options, pressure ratings, and port seal materials.
*Consult Subscription Agreement and Order Form or Parker QCD for any changes regarding data rates.
**Ambient temperature range can be broadened by installing Wired Power Adapter (SNWP2-2)
***CE Certification is available August 2017

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]

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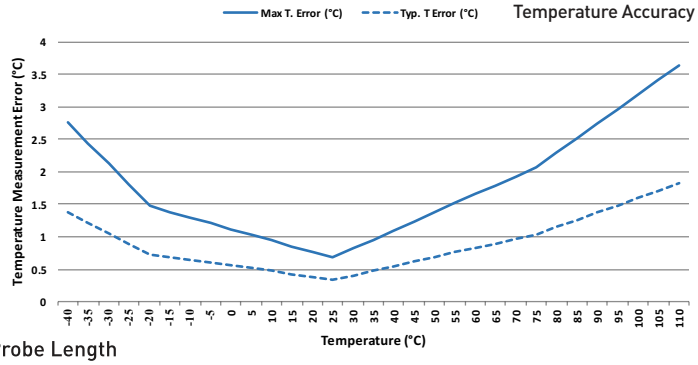


How to Order:

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: 900 MHz [FCC/IC]
  3: 868 MHz [CE]
- 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"

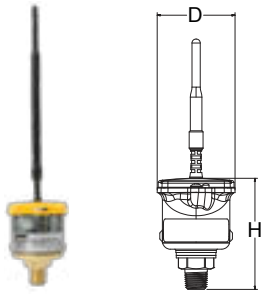
Features:

- 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 **SCO**UT 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)
***CE Certification is available August 2017

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]

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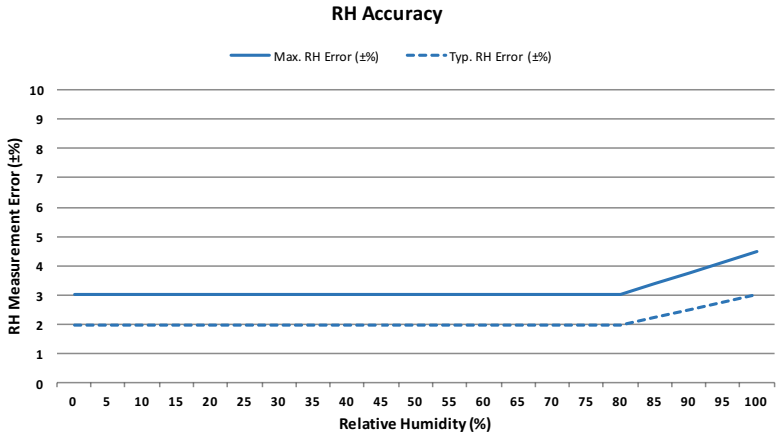
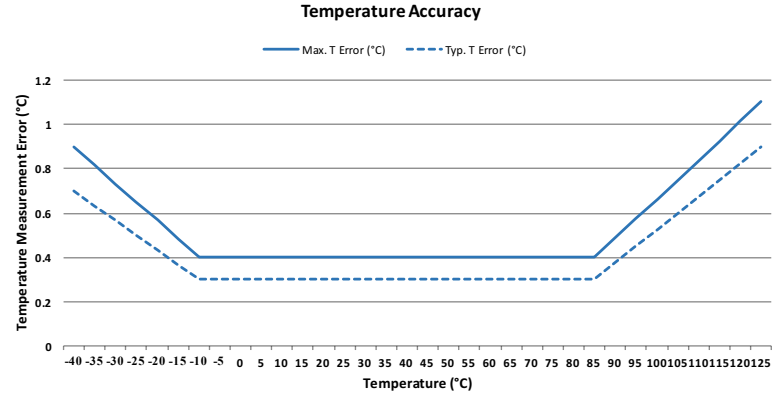




How to Order:

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: 900 MHz [FCC/IC]; 3: 868 MHz [CE]
- Port Size (1/6"): 4: 1/4"
- Port Configuration: MP: Male Pipe

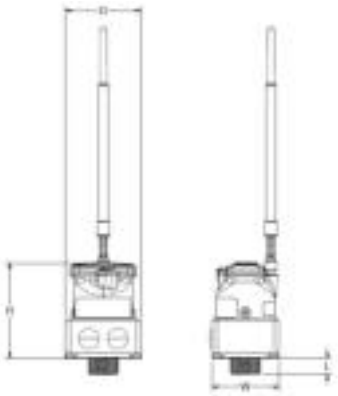
Features:

- 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.
- CT with 0.75" opening width is available for 50A through 200A service by request.
- Configurable measurement and broadcast intervals*. Refer to the **SCO**UT 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)
***CE Certification is available August 2017

Current



Part Number	RH Range	Port	D	H	W	L
SNC2-050-2	0-50 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-100-2	0-100 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-200-2	0-200 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-300-2	0-300 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-400-2	0-400 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]
SNC2-600-2	0-600 Amps	1/2-14 NPSM	2.11" [54mm]	2.67" [68mm]	1.86" [47mm]	.44" [11mm]

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How to Order:

SN C 2 - 050 - 2

- SensoNODE Series
- Types of Sensor
  - C: Current
- Generation II
- Amps
  - 050: 0-50 Amps
  - 100: 0-100 Amps
  - 200: 0-200 Amps
  - 300: 0-300 Amps
  - 400: 0-400 Amps
  - 600: 0-600 Amps
- Wireless Signal
  - 2: 900 MHz [FCC/IC]
  - 3: 868 MHz [CE]

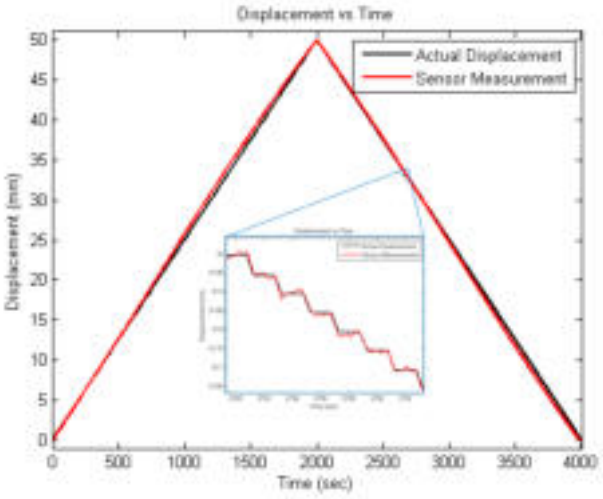
Features:

- Magnetic base for tool free mounting.
- Threaded stud port provides alternative mounting option where magnetic base is not suitable.
- Soft, thin and conformable sensors.
- Reliable accurate measurements while being strained up to 100% for millions of cycles.
- Resilient silicone rubber that can withstand harsh environments.

Sensor Technical Data		
Active Area Dimensions	50mm x 14mm	100mm x 14mm
Maximum Extension	100mm	200mm
Resolution	±0.1% strain FS (±50µm)	±0.1% strain FS (±100µm)
Sensitivity	0.026% strain FS (13µm)	0.026% strain FS (26µm)
Linearity	±1% FS	±1% FS
Hysteresis	±1% FS	±1% FS
Stiffness	0.15 N/mm	0.15 N/mm
Measurement Outputs	Percent strain in 100ths of a percent of length of active area; temperature in °C or °F	Percent strain in 100ths of a percent of length of active area; temperature in °C or °F
Sampling Rate	1Hz for standard configuration	1Hz for standard configuration
Ambient Temperatures	-40°F to +185°F, [-40°C to +85°C]	-40°F to +185°F, [-40°C to +85°C]
Full Range Life Cycles	> 5 million	> 5 million
IP Rating	IP67	IP67

Transmitter Technical Data	
Base Material	Aluminum
Housing Material	Polycarbonate
Temperature Range with Wired Power	-40˚F-185˚F
Temperature Range with Battery	-4˚F-158˚F
Certifications	FCC, IC, CE*
Battery (Panasonic is recommended brand)	CR123A
IP Rating	IP65

*CE Certification is available August 2017



Sensor Kit

Part Number	Transmitter	Sensors
SNES2-KIT-2-50	(1) SNES2-2	(2) 50mm

Sensors

Part Number	Sensor Length (L)	Sensor Width (W)	Cable Length
EAPS-50HD	1.97" [50mm]	0.67" [17mm]	18" [457.2mm]
EAPS-100HD	3.94" [100mm]	0.67" [17mm]	18" [457.2mm]

Transmitter

Part Number	Base Mounting Thread	D	H	L
SNES2-2	1/4-28 UNF x 0.45" [11mm]	2.11" [54mm]	2.67" [68mm]	2.41" [61mm]

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How to Order:

EAP S - 50 HD

Material
EAP: Electroactive Polymer

Types of Sensor
S: Strain

Length of Active Area
50: 50mm
100: 100mm

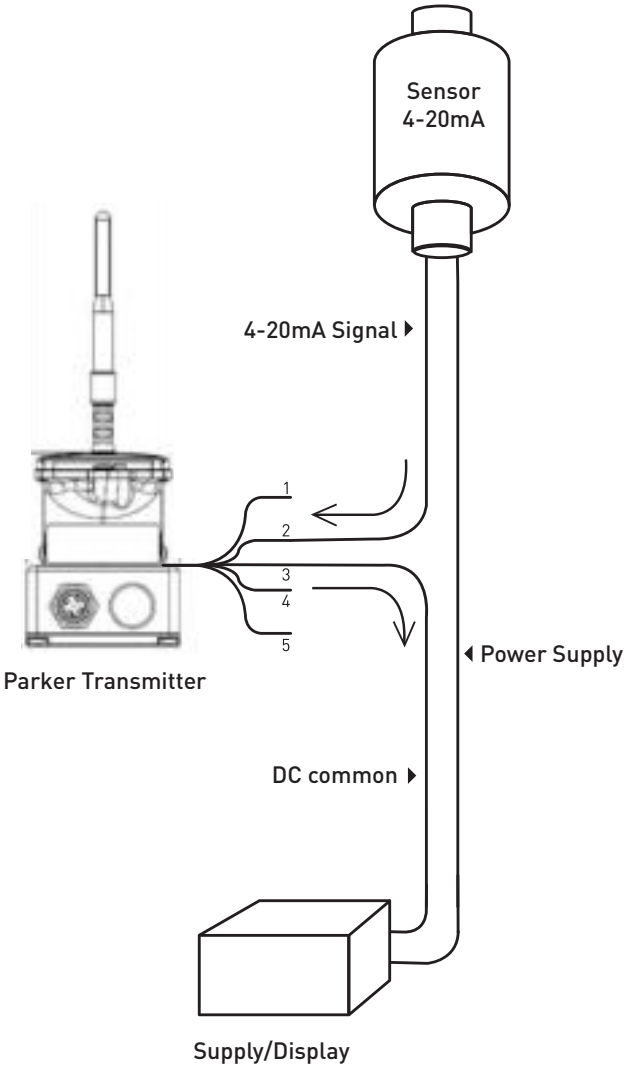
Sensor Type
HD: Heavy Duty

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

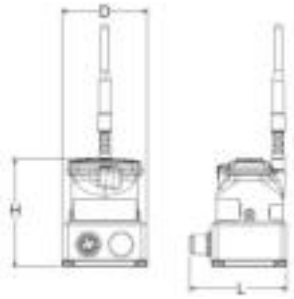
*CE Certification is available August 2017

Features:

- Connects inline with any 4-20mA Sensor
- Transmits wired sensor output into **SCO**UT Cloud, including alerts and trend data
- Definable mapping feature in **SCO**UT 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



4-20mA Transmitter (Battery Powered)



Part Number	Base Mounting Thread	D	H	L
SN322-2	1/4-28 UNF x0.45" [11mm]	2.11" [54mm]	2.67" [68mm]	2.41" [61mm]

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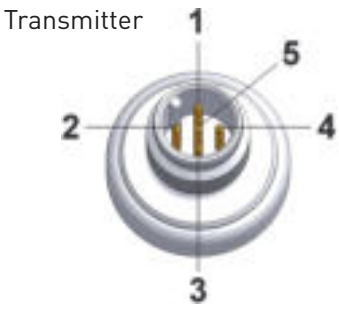
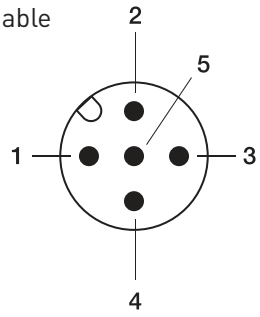
Pin Assignment

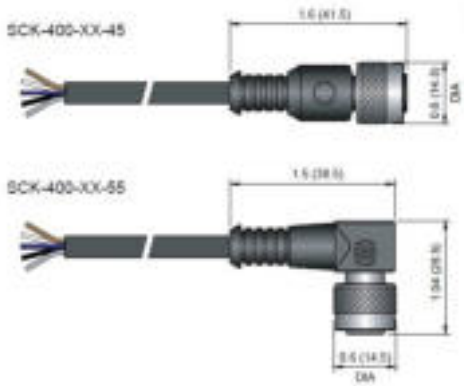
PIN	Connection	Wire Color
1	No Connection	Brown
2	4-20mA Signal In	White
3	4-20mA Signal Out	Blue
4	No Connection	Black
5	No Connection	Gray



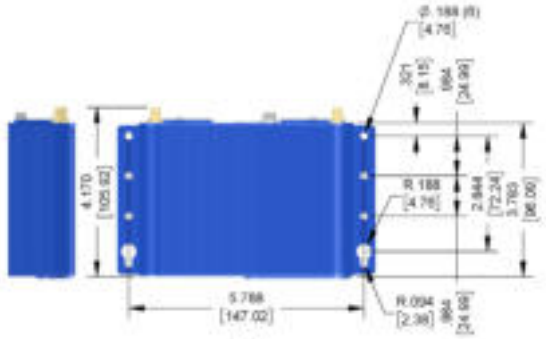


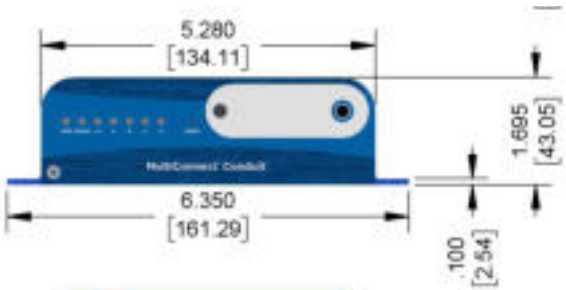
M12 Connection Cable

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˚



Collection Server





Part Number	Communication	Connectors	Compliance
SN-CS-1	Ethernet	One RJ-45 Ethernet 10/100	FCC, EN, ICES
SN-CS-2	Cellular	Two Cell 2dBi Antenna	FCC, EN, ICES

Conduit Specifications	Description
Physical Description	
Dimensions	See the Dimensions Drawing above
Weight	15.6 oz (422.25 grams) with no accessory cards installed
Connectors	
Connectors	1 USB device micro Type B debug port (behind nameplate)
	1 RJ-45 Ethernet port
	2 USB ports (1 USB DEVICE micro Type B, 1 USB HOST Type A)
	2 cellular antenna connectors
Power Requirements	
Dimensions	Input Voltage
Weight	See Conduit Power Draw
Environment	
Operating Environment	-30° to 70° C *
Storage Environment	-40° to 85° C
Relative Humidity	20 to 90% non-condensing
Certifications	
Radio & EMC Compliance	EV 55022 2010
	EN 301 489
	FCC Part 15 Class B
	IC Class B
Safety Compliance	UL/cUL 60950-1 2nd Ed
	IEC 60950-1 2nd Ed Am. 1 and Am. 2
Telecom Approvals	Based on the radio installed

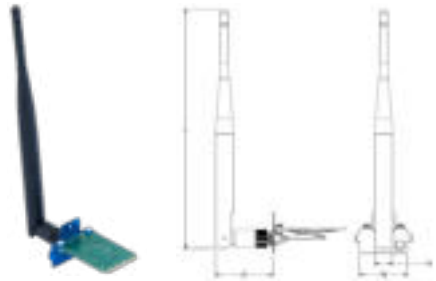
*UL Listed @ 40° C limited by AC power supply. UL Recognized @ 65° C for Conduit LTE devices within IP67 enclosure or when used with the fused DC power cable part number FPC-532 DC.

Installation in outdoor locations or ambient above 70° C has not been evaluated by the UL. UL Certification does not apply or extend to use in outdoor applications. Optional power must be UL Listed ITE power supply marked LPS or Class 2 rated 12 VDC. 5A Certification does not apply or extend to Voltages outside certified range, and has not been evaluated by UL for operating voltages beyond tested range.

Back Panel Connectors

Label	Description
CELL, AUX	Cellular antenna inputs • H5: CELL – Primary. AUX – Diversity • LTE: CELL and AUX (Requires two antennas but diversity is optional)
AP1, AP2	Slots for MultiTech accessory cards. You can install an accessory card in either slot. Both slots can be occupied at one time.
USB Device	User-defined, high-speed 480 Mbps, standard USB 2.0 Micro B connector. By default, this port is a serial port terminal interface, but you can program it to act as another device such as a mass storage device or an Ethernet port.
E-NET	RJ-45 receptacle for standard Ethernet 10/100 Base-T Caution: Ethernet ports and command ports are not designed to be connected to a public telecommunication network or used outside the building or campus.
USB HOST	High-speed, standard USB 2.0 Type A connector. 500mA maximum current draw. You can plug into the Host port a device such as a flash drive, camera, or printer if the Linux kernel has the appropriate driver.
Power	9-32 Vdc power receptacle for provided cord.

mCard PRN



- Primary use as centralized receiver for the sensor network with support for up to 250 sensors
- Connects to gateway via mCard slot on rear panel

Part Number	W	D	H	L
SNMPR-2	1.36" [35mm]	1.62" [41mm]	0.50" [13mm]	6.75" [171mm]

Repeater

- Primary use as a network repeater (range extender) for all sensors connected to mCard PRN
- Connects to gateway or power source via 2 meter USB cable
- Support for up to 500 sensors at one hop each
- Robust overmolded design for harsh environments

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

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	-40˚F-185˚F
Input Power	5-36 Volts DC
Output Power	3 Volts DC
Connection	Flying lead 24 AWG Wires
Form	CR123A Battery

*CE Certification is available August 2017

SCOUT Cloud

SCOUT Cloud is used for continuous remote monitoring for long-term condition monitoring applications. The web-based interface allows users to remotely retrieve data.

SensoNODE Gold Sensors integrated into assets or production lines collect the data and send it to the on-site collection server, which pushes the data to the cloud. Users access that data by logging into **SCOUT** Cloud via their desktop anywhere they have an internet connection. **SCOUT** Cloud lets users monitor and collect data from multiple assets and receive alerts of deviations.

With increased awareness of processes and assets, users don't have to be on-site to review data to optimize machine performance, extend service life, maintain production quality and reduce downtime.

Capabilities:

- Monitor multiple assets in multiple facilities anywhere, anytime
- Connect with and display SensoNODE Gold Sensors

Features:

- Easy to use web-based interface
- No software to download or update
- Receive alert notifications via email, text, or in-system
- Visualize data in a way that makes most sense
- Customize alerts, trend charts, and dashboards
- View measurement anomalies easily
- Support continuous improvement efforts with trend data
- Multiple user access levels
- Remotely monitor multiple sites and sensors
- Easily export data

Parker Hannifin Corporation
Quick Coupling Division
Minneapolis, MN
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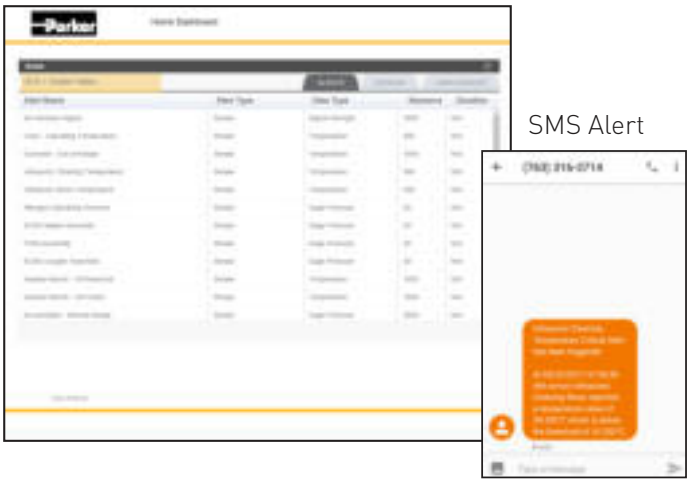
Site View Enlarged

The enlarged Site View displays measurement type, alarm indicators, and live measurements for each sensor. Easy identification of assets within your facility.

Home Dashboard Alerts



SMS Alert

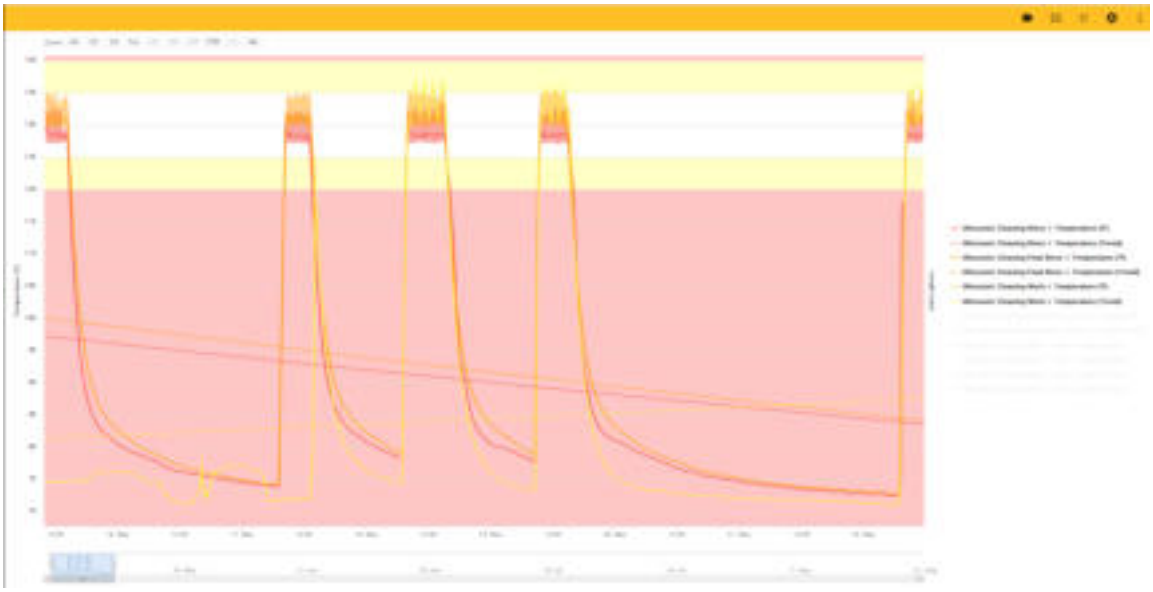
The Alerts tab of the Home Dashboard displays every alert assigned at a sensor, asset, or group level. The alert's settings are quickly identified.

Email Alert

Site Group Dashboard

The Group level dashboard displays live measurements, historical trend chart, and identifying image of your selected assets organized within a grouping.

Site View Trend Chart



The Trend Chart displays historical measurement data, alarm bands, and measurement trends. The displayed data can be downloaded in CSV format.

Asset Dashboard

The Asset level dashboard displays live measurements, historical trend chart, and identifying image of your selected sensors attached to a specific asset.

Sensor View with Callout

Hovering over the live sensor measurement in the identifying image displays a callout. The callout provides additional information for the individual sensor.

SCOUT™ Edge

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.

Key Benefits & Overview:
SCOUT **Edge** is designed to work seamlessly with a web browser based user interface. Data is ingested from virtually any industrial asset. **SCO**UT **Edge** allows you to run various applications utilizing your data at the Edge, or send it securely to the Cloud for seamless enterprise integration.

- **App & Industrial Driver Marketplace**
  Get started with free drivers such as Ethernet/IP, Modbus RTU, TCP, RS232, RS485, and more.
- **Security Monitoring**
  Instantly find anomalies in access, external hacking, and non-permitted data transmission.
- **Remote Device Management**
  Gateways are capable of being provisioned to SCOUT Cloud or other system.
- **3rd Party Cloud Integration**
  Send your processed and filtered data to SCOUT Cloud or other 3rd party Cloud connectors to enable end-to-end solution creation.
- **Private Marketplace**
  SCOUT Edge provides OEMs and System Integrators with the ability to host a private marketplace of applications and drivers for their customers.
- **Easy to Use Graphical Programming Interface**
  An extensive UI and flow-based configurations make solution building simple and easy.

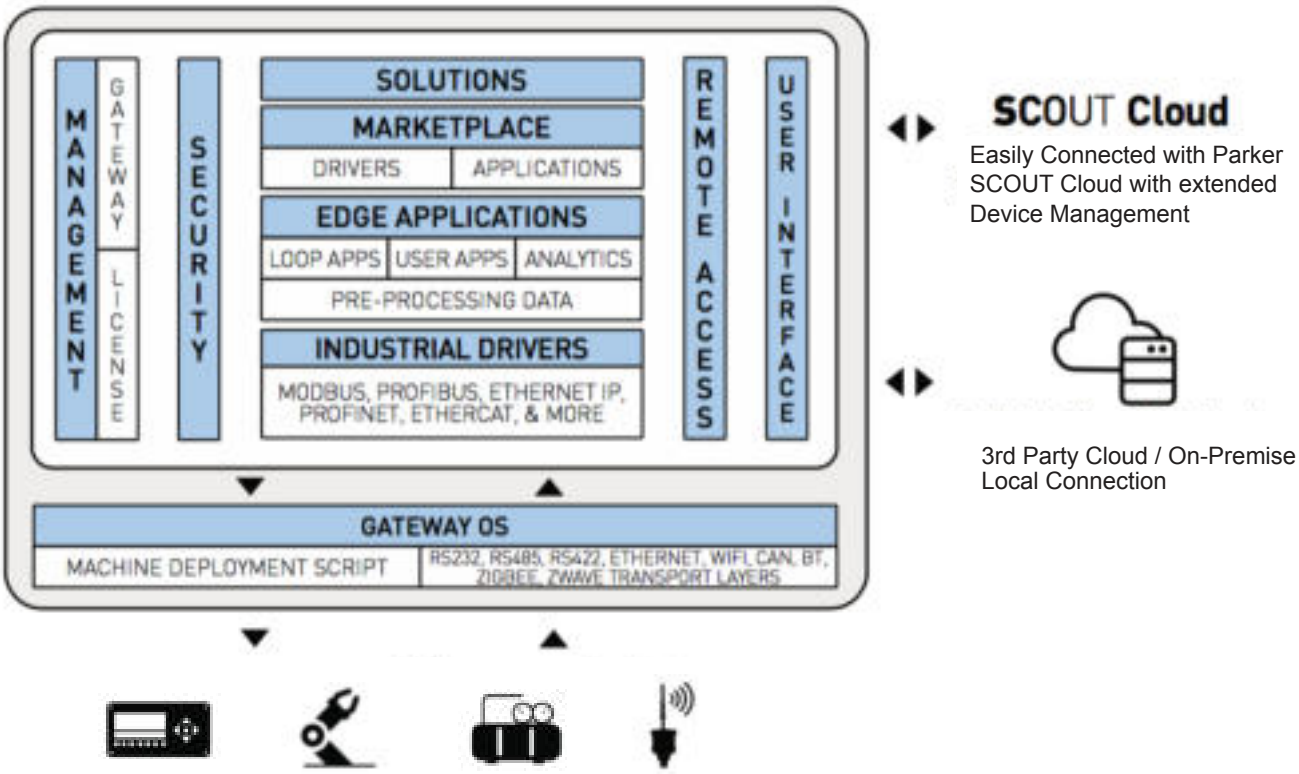
Features:
SCOUT Edge provides several key functionalities that are necessary for any IoT deployment. Using a management UI, SCOUT Edge enables the distribution of drivers at the gateway level to collect data from almost all legacy industrial protocols. Run applications locally (at the Edge) for quick and effective processing, so you don't bombard your Cloud infrastructure with unnecessary data.

Industrial Device Connectivity
Using a simple drag and drop interface, collect data from many different types of legacy or modern systems with Flows. Many downloadable drivers are available for free.

Application Deployment
Includes an application marketplace where you can effortlessly deploy and run applications at the Edge. Applications include: data filtering, analytics, CEP, data enrichment, rules and alerts engine, and more.

Secure Access
Login/password protected access to gateway with the ability to setup multiple levels of permissions.

SCOUT™ Edge Architecture



PLCs, Robotic Systems, Legacy Industrial Systems, SensoNODE Sensors with various protocols, Existing local data sources, Loggers and many more

VOICE OF THE MACHINE™

Features:

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

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

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

SCC-255

SCC-260

SensoNODE Accessory Case

Part Number	L	W	D	Case
SCC-255*	14"	11.5"	5"	Blow Molded Case
SCC-260*	16.5"	13"	7"	Ruggedized Case with Room for Tablet

*Sensor products not included.

Battery (CR123A)

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

EMA3 Series – Test Port Couplings

Male Pipe Thread

Part Number	Port Thread Size	Wrench Flats	Interface Thread Size	Overall Length	Weight
EMA3/1/8NPT	1/8-27NPT	17	M16X2.0	1.81" [46mm]	0.15lb [.07kg]
EMA3/1/4NPT	1/4-18NPT	17	M16X2.0	1.98" [50.3mm]	0.16lb [.07kg]

SAE Straight Thread

Part Number	Port Thread Size	Wrench Flats	Interface Thread Size	Overall Length	Weight
EMA3/7/16-20UNF-2A*	7/16-20UNF	17	M16X2.0	1.88" [47.8mm]	0.15lb [.07kg]
EMA3/9/16-18UNF-2A*	9/16-18UNF	19	M16X2.0	1.88" [47.8mm]	0.17lb [.08kg]

*O-Ring seal on port

EMA Gauge Adapter

Part Number	Port Thread Size	Wrench Flats	Interface Thread Size	Overall Length	Weight
MAVMD1/4NPT-MA3	1/4-18NPT	19mm	M16X2.0	2.22" [56.4mm]	0.18lb [.08kg]
SCA-7/16-EMA-3	7/6-20	19mm	M16X2.0	1.60" [40.64mm]	0.15lb [.45kg]

Note: Consult QCD or Catalog #3800 for additional accessories and port options.

PD Couplings

Couplers- Female Thread

Body Size	Part Number	Thread Size	Overall Length	Wrench Flats	Largest Diameter	Weight
1/8	PD240	7/16-20 UNF	2.12"	0.8"	0.96"	0.26lb
1/8	PD242	1/4-18 NPTF	2.12"	0.8"	0.96"	0.25lb

Nipples- Female Pipe Thread

Body Size	Part Number	Thread Size	Overall Length	Exposed Length	Wrench Flats	Largest Diameter	Weight
1/8	PD322	1/8-27 NPTF	1.48"	0.78"	0.56"	0.65"	0.06lb
1/8	PD342	1/4-18 NPTF	1.63"	0.93"	0.75"	0.87"	0.12lb

Nipples- Male Pipe Thread

Body Size	Part Number	Thread Size	Overall Length	Exposed Length	Wrench Flats	Largest Diameter	Weight
1/8	PD323	1/8-27 NPTF	1.55"	0.85"	0.69"	0.79"	0.17lb
1/8	PD343	1/4-18 NPTF	1.48"	0.78"	0.69"	0.79"	0.06lb
1/8	PD363	3/8-18 NPTF	1.50"	1.13"	0.81"	0.96"	0.09lb

Nipples- Male Straight Thread

Body Size	Part Number	Thread Size ORB	Overall Length	Exposed Length	Wrench Flats	Largest Diameter	Weight
1/8	PD341	7/16-20 UNF	1.60"	0.90"	0.69"	0.79"	0.08lb
1/8	PD361	9/16-18 UNF	1.32"	0.62"	0.69"	0.79"	0.06lb

Note: Consult QCD or Catalog #3800 for additional accessories and port options.

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 **SCOUT** products:

Visit: www.parker.com/conditionmonitoring
Call: (763) 544-7781

For more information on
SensoControl Wired Diagnostic and **Control** products:

Visit: www.parker.com/sensocontrol
Call: (763) 544-7781

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

http://support.parker-scout.com/

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

Catalog 3864/USA

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