AESSEAL®
ENVIRONMENTAL TECHNOLOGY
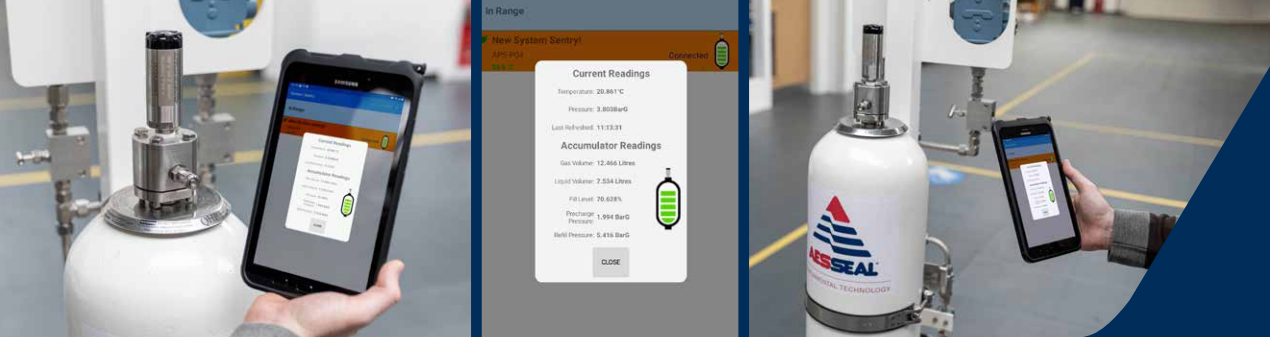
System Sentry®

The wireless sight glass for your 53B

- Free System Sentry app tells you the barrier fluid level and when to top up
- Replaces both the temperature and pressure transmitters required by API 682 4th edition
- ATEX, IECEx & Hazloc hazardous area certification
- Wireless Bluetooth® connectivity

www.aesseal.com

System Sentry®

System Sentry® is an all-in-one solution employing pressure and temperature monitoring to allow the user to monitor the health of a 53B system using API 682 4th edition methods, quickly, simply, and without the need for additional cabling. The onboard algorithm does all the calculations for each system to tell the user when they need to top up the barrier fluid.

Benefits

- Built in API 682 4th edition floating pre-charge/alarm/trip/fill calculation
- System Sentry® software will guide the user during the charging process based on the current temperature with no manual calculations required
- Filling the system is made easier with live fluid level gauge in the connected software
- The easy-to-use software allows users of all experience levels to see the health of their systems using clear traffic lights
- Battery-powered and Bluetooth® connectivity removes need for additional wiring
- User will be able to see the trend of the fluid levels, pressure & temperature readings over a period of time & be able to use that to predict next top-up based on the leakage rate (requires a Machine Sentry® license)
- Machine Sentry® Gateways can be used to automatically collect readings from System Sentry® sensors if used with the Machine Sentry® solution
- Can be fitted to existing systems without the need to remove existing pressure or temperature monitoring systems
- ATEX, IECEx & Hazloc hazardous area certification

"Our purpose is to give our customers such exceptional service that they need never consider alternative sources of supply."

Experience what is possible

System Sentry® Pressure and Temperature Sensor

The intelligent and wireless System Sentry® continually monitors pressure and temperature of a 53B system, calculates fill level, and via a Bluetooth® connected device, communicates system health to a user.
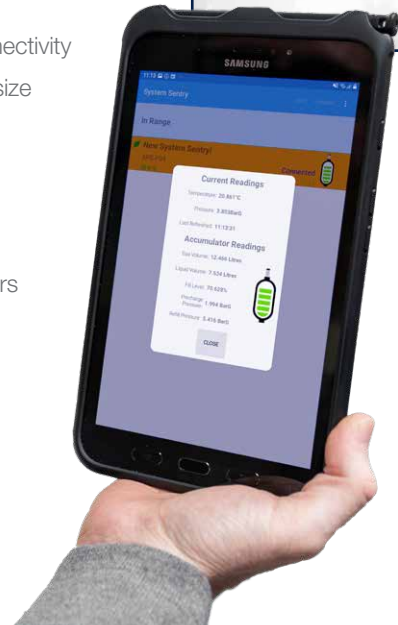
The automatic floating pre-charge and fill pressure calculation performed by the System Sentry® software enables simple set-up and refill of API 682 4th edition 53B systems.

The System Sentry® can be paired to any Android™ tablet or smartphone, using standard Bluetooth® communications, to provide safe and efficient data collection from up to 100m away. The System Sentry® can also be connected to 53B systems that are not compatible with traditional control systems, in order to monitor the system health.

System Sentry® Features

- **Easy to install** – No wiring required to install due to battery power and Bluetooth® connectivity
- **Easy to retrofit** – Easy to retrofit to a wide range of 53Bs with no limit on accumulator size
- **Large sensor memory** – The sensor is fitted with a large internal memory that will hold up to 3000 readings
- **Compact** – Sensor is only 38mm x 118mm and is capable of reading both pressure and temperature
- **Long battery life** – Powered by a replaceable battery which will typically last over 3 years
- **Monitor locally** – Monitor with Android device and System Sentry® app, or integrate into Machine Sentry® for remote cloud-based monitoring

Machine Sentry® Features

Modular cloud-based Machine Sentry® software – Features include: action tracking, watchkeeping, process measurements, thermal imaging integration, inspections, lubrication management, intuitive dashboard and reporting.

Vibration analysis – With patented intelligent tri-axial vibration measurement capability and temperature sensor.

IP67 rated and ATEX certified – Certified for use in hazardous areas (Zone 1 and Zone 2).

Oil Analysis – Laboratory oil analysis data is automatically* mapped and integrated into the Machine Sentry® database for easy access by all users, enabling better trending and analysis.

ADA™ Automated Diagnosis Assistant – Can predict stage 2, 3 and 4 bearing failure and detect a wide range of other common fault conditions.

Suitable for both fixed assets and rotating machinery – The pipework vibration compliance feature allows a plant operator to quickly screen all process pipework and small-bore connections in order to identify lines that have the greatest risk of failure.

Key Performance Indicators (KPIs) – To systematically measure the effectiveness of the condition-based maintenance program from schedule compliance to asset health and bad actor management.

Lubrication management – Plan, track and manage lubrication activities and usage.

Pressure and Temperature Sensor	
Measurements	
Pressure	0 Bar(g) to 80 Bar(g)
Temperature	-40°C to 115°C Accuracy +/-0.5°C (0-60°C), +/-1.5°C (-40-115°C)
Outputs	Wireless Bluetooth® connection to mobile device connected to System Sentry® software via Android™ v 5.0.1+
Installation	1/2" NPT Male process connection
Wireless range	~100m in ideal conditions
Wireless communications	Bluetooth® 5.2 LE.
Wireless frequency band	2.4 Ghz
Bluetooth® transfer rate	100 readings per second
Memory storage	3000 reading sets
Battery type	Li 3.6v 8500mAh
Battery life	Typically over 3 years depending on ambient temperature
Environmental	
Ambient temperature range	-20ºC to 60ºC operating, 10ºC to 25ºC storage
Sealing	IP67
Weight	370g
Dimensions	38mm (d) x 118mm (h)
Approvals	CE, UKCA, Hazloc
	ATEX/UKEX/IECEx Certification II 1G Ex ia IIC T4 Ga II 1D Ex ia IIIC T135°C Da (-20°C ≤ Ta ≤ +60°C)
Case material	316 stainless/polycarbonate

This brochure is fully recyclable. When laminated, a sustainable, biodegradable and recyclable lamination is used.

For further information and safe operating limits contact our technical specialists at the locations below.

AESSEAL plc is certified to:
ISO 9001, ISO 14001, ISO/IEC 20000, ISO/IEC 27001, ISO/TS 29001, ISO 37001, ISO 45001 & ISO 50001

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2021

THE QUEEN'S AWARDS FOR ENTERPRISE: SUSTAINABLE DEVELOPMENT 2022

Use double mechanical seals with hazardous products.

Always take safety precautions:
- **Guard your equipment**
- **Wear protective clothing**

WARNING

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