

TIDLAND PRESSUREMAX AIR PRESSURE MONITORING SYSTEM

Improve Performance & Safety with Responsive Air-Pressure Monitoring Alerts

Introducing the PressureMax air shaft pressure monitoring system from Tidland.

The PressureMax system reduces operating costs by minimizing unplanned downtime and scrap while improving safety during unwind and rewind processes.

Internal air bladders of winding shafts and chucks require correct inflation and regular maintenance to ensure adequate torque is transferred to the roll. Tidland's Industry 4.0 solution provides real-time condition monitoring, alerts and analytics to machine operators, helping to maintain correct inflation levels and to detect air bladder leaks before failures occur. Eliminate core slippage that can lead to safety risks, web breaks, material scrap and unplanned downtime with PressureMax air monitoring.



APPLICATIONS

Display, monitoring, and alerts for air pressure and temperature on air shafts, reel spools, chucks and adapters

Retrofit for existing process lines

Integration into new equipment builds

Simplex winding, 2 and 4 shaft turret winders, multiple shaft machines

Winding processes without continuous air rotary unions

Real-time data and status outputs to PLC, historian or asset management systems

KEY FEATURES

- Real-time air leak detection and alerts
- Improves safety and reduces scrap
- Wireless collection and display of pressure data, ensuring proper inflation and deflation
- Preventative maintenance reduces your downtime and maintenance costs
- Easy analysis and troubleshooting with saved trend, alarm, and warning history
- Optional data output to PLC provides integration into operator control stations
- Customizable alert thresholds
- Configurable display modes for simplex and multi-shaft turrets
- One-way RF receiver provides a secure connection to sensors

SPECIFICATIONS

HMI/Receiver

Operating Temperature Range
0°C to +50°C (32°F to +122°F)

Display
7 inch color LCD resistive touchscreen

I/O Ports
LAN: 1 x 10/100 Base-T RJ-45,
1 x GbE RJ-45
CANbus: Yes

Input Voltage & Frequency
100-240 VAC, 1ph, 50-60 Hz

Input Current
2.3 A @ 120 V, 1.1A @ 220-230 V

Mounting
Direct wall mount, hardware included



Sensor



Operating Temperature Range
-20°C to +70°C (-4°F to +158°C)

Operating Pressure Range
8 to 215 psi

Transmit Range
Approx. 328 ft (100 m) line of sight

RF Transmission Frequency
433.92 MHz +/- 20.6 KHz, one way

Transmit Interval
Immediate with +/- 10% change in pressure every 14 seconds while inflated
Sleep mode while deflated

Battery Life
Internal non-replaceable battery, 3+ year life

Installation
Female thread, screws directly onto Schrader valve

Placement
Dedicated valve opening in journal or body, new or retrofit

Certifications and Compliances

HMI/Receiver:

- UL & FCC certified components
- Designed to UL508A
- CE, RoHS
- NEMA 4, 12; IP-65

Sensor:

- FCC, CE, IC, RoHS
- Select J1455 and MIL STD 810G

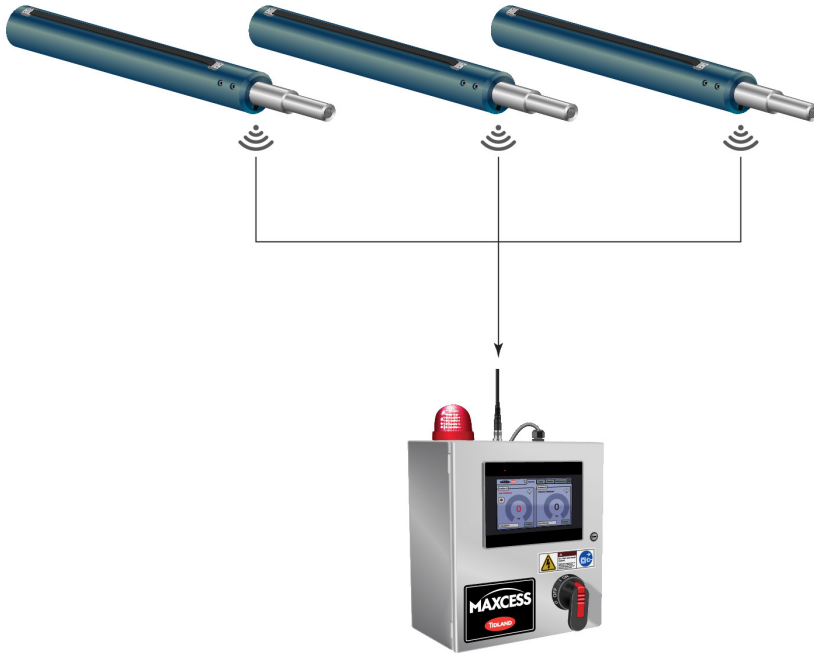
Materials

Industrial construction and operation ratings provide reliable performance in all factory conditions

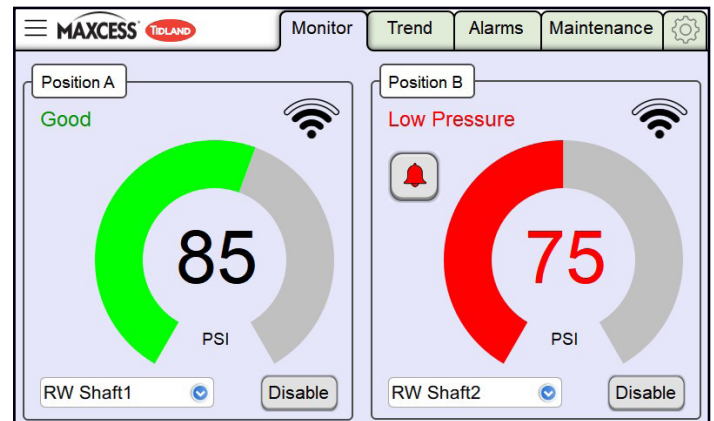
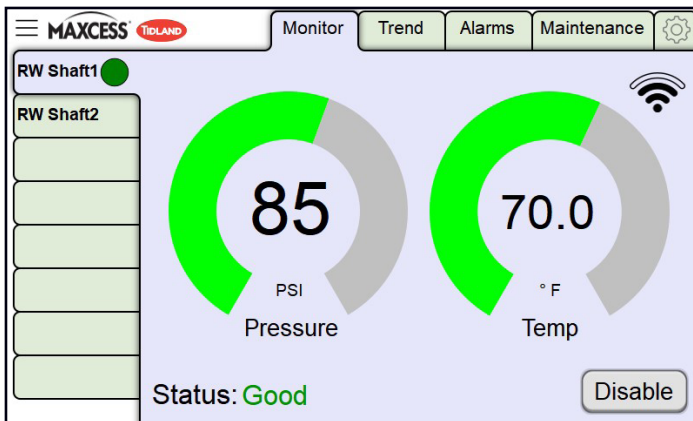
Enclosure: powder coated steel (grey)

Sensor: self-contained plastic housing with brass connection threads

SYSTEM DETAILS



See
PressureMax
in action!
Scan QR code



Software

Pairing

Connect with up to 8x shaft/sensors

View Mode

Single, 2-shaft turret, or 4-shaft turret screen view

Notifications

Current status icons for each shaft to quickly identify issues

Tab View

Separate monitor, trend, and stats tabs for each paired sensor/shaft

Alarm History

Saved alarm history by paired sensor/shaft for easy troubleshooting

Stats

Current and lifetime inflation count and timer for preventative maintenance

Inflation Thresholds

Set custom min and max inflation thresholds by shaft, time to inflate, count warnings, and leak limits

Automatic Operation

Options for automatic enabling and disabling of alarms based on operation conditions

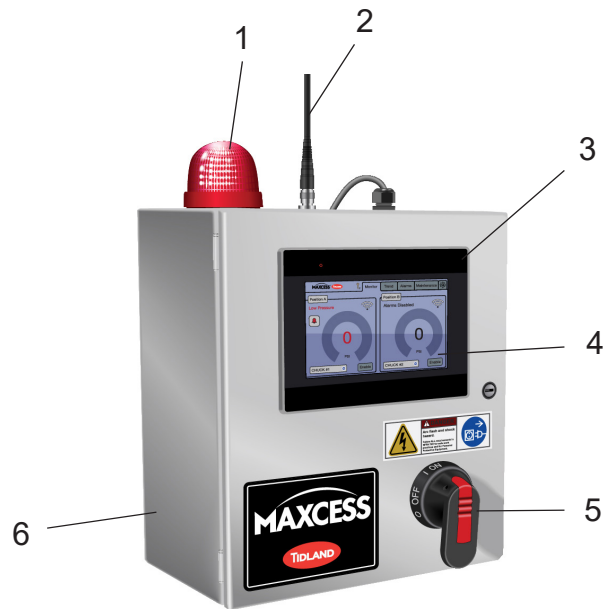
Optional Run/Stop Input

Supports digital or PLC run/stop input via LAN to minimize operator interaction w/ HMI

DESIGN FEATURES

PressureMax Receiver/HMI

1. Red signal beacon makes alerts visible from any viewing angle
2. External antennae (receive only) provides secure and extended operating range
3. Large 7 inch LCD color touchscreen HMI - clear view of data and navigation
4. Pressure monitoring software provides real-time data, custom alerts and history to improve safety and performance, reducing downtime and material scrap
5. Main disconnect switch to safely turn cabinet power on and off
6. Industrial construction and operation ratings provide reliable performance in all factory conditions



DIMENSIONS

PressureMax Dimensions

Model	Weight	Width/Diameter	Enclosure Height	Height w/Antennae	Depth	Mounting Centers
PressureMax Receiver/HMI	51.5 kg (23 lbs)	249.9 mm (9.84 in)	300 mm (11.81 in)	452.4 mm (17.81 in)	199.9 mm (7.87 in)	281.4 x 185.4 mm
Sensor	0.02 kg (0.04 lbs)	28.2 mm (1.11 in)	25.7 mm (1.01 in)	N/A	N/A	N/A

Options and Catalog Numbers

- PressureMax Receiver/HMI for customer drilled cable entry (**part no. 270039512**)
- **PressureMax Receiver/HMI with factory drilled 1.27 cm (0.5 in) top entry, red beacon light, 7in touchscreen, cord grip**
- PressureMax Sensor, sold separately (replacement) (**part no. 270039509**)
- PressureMax Sensor retrofit kit (for installation in Maxcess factory) (**part no. 270039510**)

Accessories from Maxcess

- Connection cord set, 3.05 m (10 ft) with NEMA 5-15P plug (**part no. 270041094**)
- Connection cord set, 6.10 m (20 ft) with NEMA 5-15P plug (**part no. 270041095**)
- Hand tool for sensor installation or removal (**part no. 270040797**)
- Force 5 chuck (3-6 in) end cover and valve retrofit kit (**part no. #####**)
- Mounting bracket kit for receiver/HMI (part no. **270041096**)



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