

## Monnit Wireless Pressure Sensor Installation Guide

### PLEASE READ CAREFULLY BEFORE INSTALLING

#### General Application Notes

The Monnit Wireless Pressure Sensor is capable of measuring gas, liquid or vapor pressures from 0-160 PSI. This solution uses a combination pressure gauge / transducer interfaced to a Monnit wireless radio. It is suitable for any application capable of using a bourdon-tube based pressure gauge. The use of pressure snubbers, pulsation dampeners, and other appropriate devices can increase the range of applications available to pressure gauges. It is a prudent practice to use these items in any type of precision pressure instrument.

Note: This sensor requires 12 – 32 VDC input.

#### Do not tighten using the case

When installing and tightening the gauge, apply a wrench to the wrench flats located just above the threaded portion of the pressure fitting only. DO NOT tighten by using the gauge case housing, even by hand, as this may damage the unit or cause a calibration shift.

#### Suitable Sealing Method on Threads

For gauges with NPT type pressure fittings, apply Teflon tape or an equivalent appropriate sealant to the threads before installing to ensure a leak free connection. Even a very small leak may cause an inaccurate reading.

#### Vibration and Pulsation

The unit can withstand normal gauge vibration without damage or significant output effects. However, it is a good practice to mount the pressure gauge where vibration is minimized. In addition, it is a good practice to use an appropriate throttling device to decrease the effects of more severe pressure pulsation and/or vibration on pointer movement, including throttling screws, pulsation dampeners, elastomeric bladders and pressure snubbers.

#### Adjustment of Zero and Span

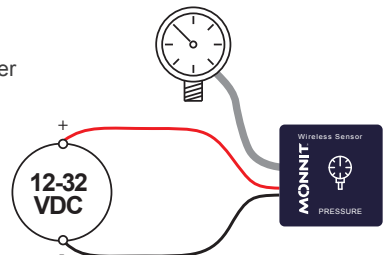
Adjustment of zero and span requires a specific factory procedure and pressure calibration standards. Do not attempt to do this without approval from the factory to avoid voiding the warranty.

#### Connecting Power to The Pressure Sensor

Take care when connecting the power source to the Monnit wireless pressure sensor. The grey cable connects the pressure gauge to the wireless radio. The two wires coming out of the wireless transceiver require 12-32 VDC power which is passed to the pressure gauge / transducer to enable operation.

Connect the positive side of the 12-32 VDC supply power to the red lead wire and the negative side to the black lead wire.

Note: The wireless radio requires 3 VDC and is powered by either a coin cell battery, 2 AA batteries or a single 3V AA battery, depending on sensor platform. Batteries are included with the sensor when purchased.





### **ESD WARNING!**

This instrument has a CE rated ESD (Electro Static Discharge) protection incorporated to prevent damage from ESD but at some higher ESD levels it is still susceptible to damage. It is always good practice to limit the exposure to ESD. To avoid damage, observe the following:

- Ground the body of the pressure gauge BEFORE making any electrical connections
- When disconnecting, remove the ground (BLACK) LAST.

Note: The shielded cable and drain wires are not connected internally to the pressure gauge and is not a suitable ground.

### **FLUID HAMMER WARNING!**

Fluid hammer and surges can destroy any pressure instrument. If surges or fluid hammer is a possibility in the application, a pressure snubber should be installed to limit or eliminate these damaging effects. Fluid hammer occurs when a liquid flow is suddenly stopped, as with quick closing solenoid valves. Surges occur when flow is suddenly begun, such as a pump turned on at full power or a valve is quickly opened. Liquid surges are particularly damaging to pressure instruments if the pipe is originally empty. To avoid damaging surges, fluid lines should remain full (if possible), pumps should be brought up to power slowly, and valves opened slowly. If fluid hammer or a pressure surge is a possibility, a surge chamber should be installed to avoid damage from both fluid hammer and surges. Symptoms of fluid hammer and surge are typically an output offset at zero pressure (large positive zero offset).

### **OVERPRESSURE WARNING!**

The number one cause of pressure gauge failures and returns are due to overpressure beyond the rated limits. Gauges should not operate continuously at the proof pressure limits. The maximum continuous pressure a gauge should be subjected to is 75% of the gauge range as called out in Monnit wireless pressure sensor data sheet (MD-023).

For additional information or more detailed instructions on how to use your Monnit Wireless Sensors or the iMonnit Online System, please visit us on the web at <http://www.monnit.com/support/>.



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