

QUICK STARTUP GUIDE



Electrical and compressed Gas Hazards

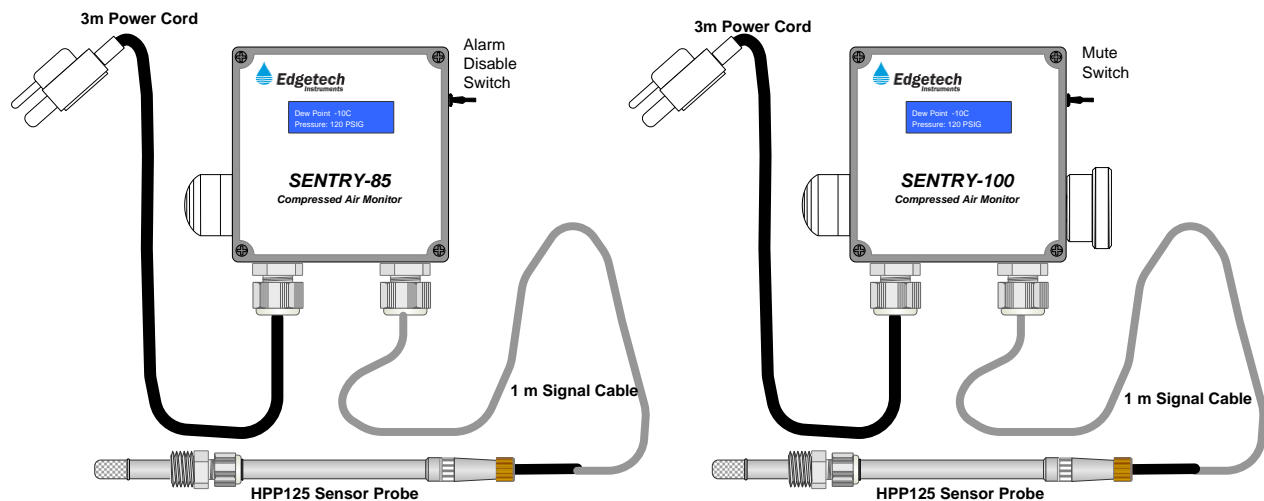
The SENTRY is designed to detect low pressure or high dew point conditions within compressed air or inert gas systems. It consists of a display control module and a *SMART, Multi-Sense Probe*. Using the supplied ½ inch Male NPT pipe fitting, the probe is inserted directly within the compressed air system header, accumulator tank, or at the point of use. The SENTRY system continuously monitors both pressure and dew point and provides a warning system to alert an operator should there be a pressure loss or dryer failure.

The Sentry system comes fully prewired and requires only installation of the display control module box and the probe. A power connection needs to be available within 3m (10ft).

There are two models available:

SENTRY-85: Combined strobe light and 85dB Audible Alarm.

SENTRY-100: Separate strobe light and 100dB Audible Alarm.



Sentry 85 utilises an Alarm disable switch which will deactivate both the Audible and visual alarms. **Caution** if the switch is left in the deactivate position there will be no alarm function.

Sentry 100 utilises an Alarm mute switch that will silence the Audible alarm. **Caution** if the switch is left in the mute position only the visual alarm will be active.

When the Probe is first introduced into the process it will need a period of time for the materials to dry down before the sensor reads Dew Point and RH correctly.

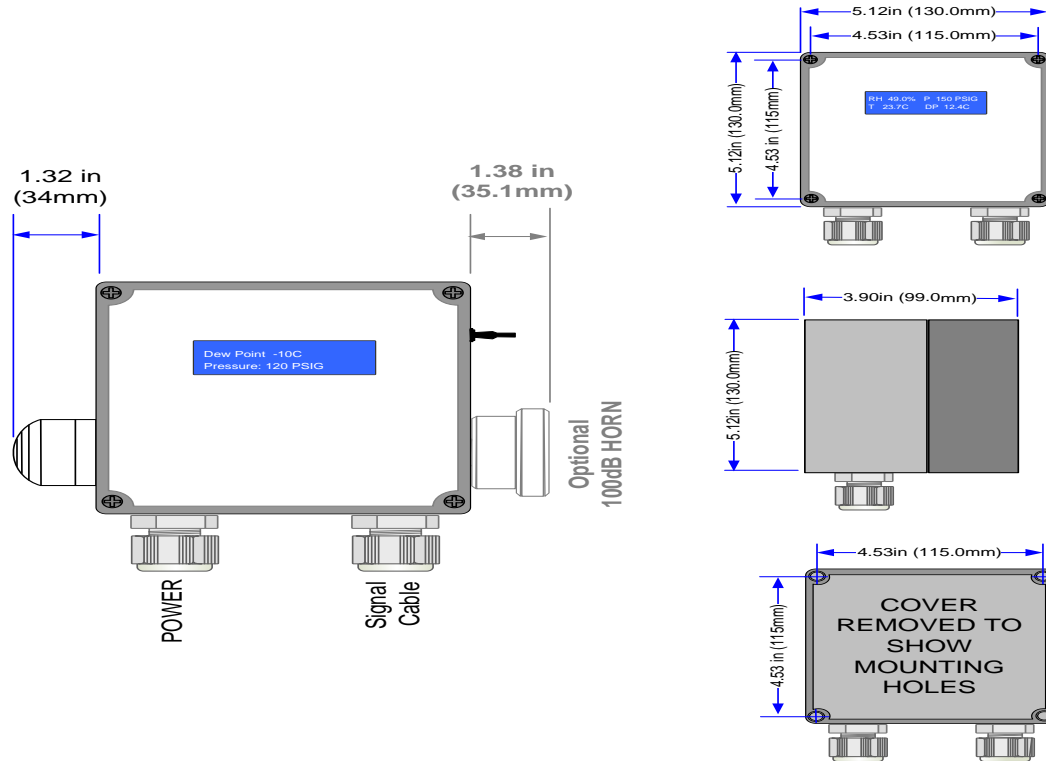
During installation process the probe will have been exposed to ambient conditions. The stainless steel filter and the tip PCB will have absorbed some moisture.

Once installed in the process any entrained moisture will be drawn off by the process gas and the unit will quickly reach equilibrium.

The initial RH and Dew Point values displayed when first installed may be misleading

Mounting the Display and control box.

Both the Sentry 85 and Sentry 100 have the same mounting process.



1. Note the probe connection cable is 3ft long so the display must be mounted within 3ft of the probe insertion point.
2. Remove the cover. The control box can be mounted with 4 screws installed through the same holes as the cover mounting screws.



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Safety

The HP125 delivered to you has been tested for safety, calibrated and approved as shipped from the factory. Note the following precautions:

CAUTION

Do not modify the unit. Improper modification can damage the product or lead to malfunction.

CAUTION

The transmitter body does not have user serviceable parts inside, and is not designed to be opened. Opening the transmitter will void the warranty.

ESD Protection

Electrostatic Discharge (ESD) can cause immediate or latent damage to electronic circuits. Edgetech Instruments products are adequately protected against ESD for their intended use. It is possible to damage the product, however, by delivering electrostatic discharges when touching, removing, or inserting any objects inside the equipment housing.

1. To make sure you are not delivering high static voltages yourself when handling the replaceable sensor tip PCB
2. Handle ESD sensitive components on a properly grounded and protected ESD workbench.
3. When an ESD workbench is not available, ground yourself to the equipment chassis with a wrist strap and a resistive connection cord.
4. If you are unable to take either of the above precautions, touch a conductive part of the equipment chassis with your other hand before touching ESD sensitive components.

Always hold component boards by the edges and avoid touching the component contacts.

Using “Swagelok” fitting

1. How to install Swagelok fittings. Insert the HP125 probe to your selected insertion depth, tighten by hand until the nut is finger tight. Further tighten the nut until the probe will not turn by hand and cannot be moved axially in the fitting.

Mark the nut at the at the 6-0-clock position

While holding the fitting body steady, tighten the nut one and one quarter turns till the nut is in the 9-0-clock position.

Swagelok fittings may be disassembled and reassembled many times. See Sentry Manual

Mounting the PROBE with CABLE.

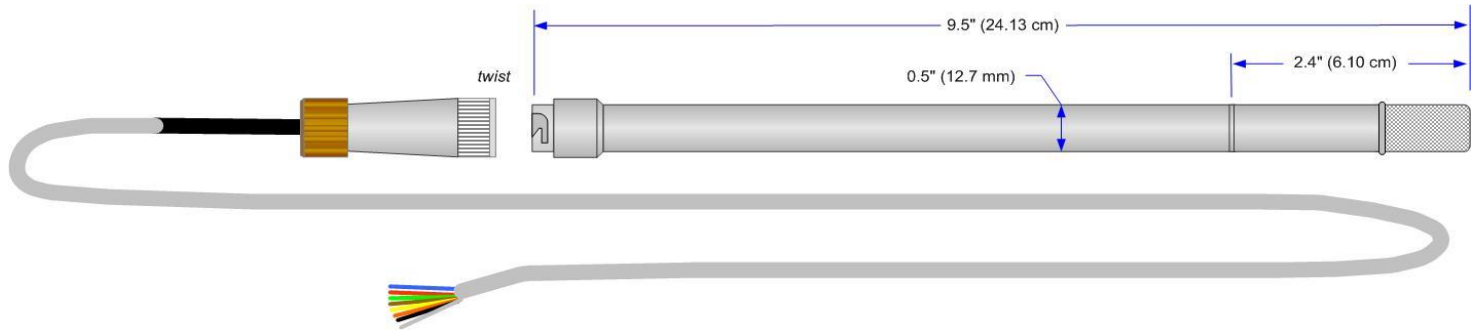


Before mounting the probe into any system ensure the system is safe to work on. Depressurise and verify that all the power connections are isolated in the OFF position.

Installation should be carried out by trained technicians and following all local safety protocols.

1. Ensure there is adequate cable length from the probe cable to make connection to the control box.
2. Select Probe insertion position, ensure safe clearance around the probe to avoid damage.
3. Check all pipe fittings and pipe boss dry assembly for fit up. Probe is standard with ½” NPT fitting, optional ¾” NPT.
4. Insert pipe fittings using suitable sealing tape or sealing compound. Mount the Probe in position to measure the desired gas.
5. Ensure the Probe is inserted to an adequate depth to obtain a good flow of the sample gas around the tip sensor. Insertion depth: Max 6” (15cm) Min 2.4” (6cm). The compression fitting should avoid the threaded tip cover joint area
6. Tighten the swage fitting till it grips the probe in place but at this stage do not apply force.
7. Re check the probe position and measurement depth are correct, fully tighten all pipe fittings
8. Slowly pressurise the system checking for any leaks. Do not quickly apply pressure. If the probe is incorrectly fitted it will be projected out of the fitting and can cause injury or damage.

Do not apply Power until all wiring is completed and checked



The Sentry unit is a standalone system and can now be powered up. If working correctly 3 values will be displayed on the read out.

Additional customer connections

1. Two 4-20mA Analog Outputs: Pressure and Dew Point.
2. RS-232 Serial Interface.
3. One user accessible relay for remote low pressure/ high dew point alarm.

TERMINAL TB1	ITEM
1, 2	ALARM Relay
6	4-20mA OUTPUT Pressure
7	4-20mA OUTPUT Dew Point
8	4-20mA COM.
11	RS232 RETURN
14	RS232 TX
15	RS232 RX

Notes:

Connect only the outputs desired.

Do not apply Power until all wiring is completed.

When the unit is powered up the display will show the Alarm set point (Pressure and Dew point)

Default factory set Alarm points are Pressure 90PSIG and DewPoint -20F

When the unit is powered up the display will show the 4-20mA range settings for optional remote connections

Default factory range is Pressure 0 to 400PSIG and Dew point -40 to 140F

The Dew Point value is displayed as Dew Point at atmospheric pressure. The system has imbedded intelligence that automatically corrects the DewPoint display so it always corrected to the system pressure.

The pressure is displayed as PSIG

The default display units are pressure in PSIG and DewPoint and temperature in degree F



Always turn the power off before disconnecting or reconnecting the probe