

# FMPD DIFFERENTIAL SENSOR INSTALLATION INSTRUCTIONS

This sensor is an improved replacement for all previous Alex-Tronix SPD sensors. Its enclosure is made of 304 stainless steel. All wetted parts are 316L stainless steel and it is to be used with Alex-Tronix Filter Master controllers from 4 to 32 station. Please note that it will not work with FM2DCL, or any non Filter Master Controllers.

## MOUNTING

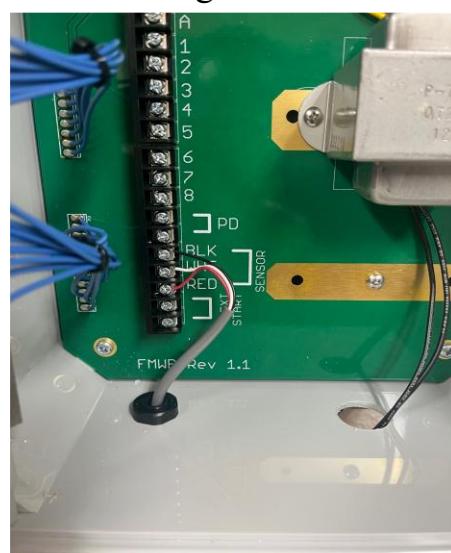
It is provided with pipe clamp mounts for 3/4" pipe which will allow the sensor to be mounted to most controller box support posts in use, however if the sensor must be panel mounted or mounted to another enclosure these clamps may be separated and used in any number of ways. Some examples are shown below.



Mounting on a panel



Wiring Connections



## WIRING

Wiring color is the same as before with RED representing positive power of 11 to 18 volts DC provided by a Filter Master Controller, WHITE being the voltage pressure signal back to the controller anywhere from 0 to 5 volts and about .25 to .5 volts under normal operating pressures, and Black being common. Think of it like testing a throttle position sensor on an engine. The controller wiring terminal is labeled R, W, and B respectively. A gland fitting of appropriate size has been included to help seal the new cable. A 1/2" hole is required for its use.

## PLUMBING CONNECTION

Connect high side pressure port labeled as "+" on the sensor to the inlet side of the filters and low side pressure port labeled "-" to the outlet side of the filters. Both ports are a female 1/4" NPT thread. DO NOT CONNECT EITHER PORT OF THIS SENSOR DIRECTLY TO THE FILTER MANIFOLD WITH A NIPPLE. This will greatly increase the likelihood of water hammer damage. We strongly recommend using a coiled length of poly tubing to connect to the system. Even a few feet with a loop in it will greatly reduce the risk of water hammer damage.

## FREEZE PROTECTION

If the filter system is to be used for frost mitigation special care must be taken to protect the differential sensor from freeze damage as no flow occurs through the sensor itself. The length of tubing leading from the filter manifolds to the sensor must either be heated or filled with a non freezing liquid to allow measurement and prevent freeze damage. Freeze or over pressure damage is not covered by warranty.

**DO NOT ALLOW PRESSURE TO BE APPLIED ONLY TO  
THE “-” LOW SIDE PORT.**

**DO NOT CONNECT THIS SENSOR BACKWARDS.  
DAMAGE CAUSED BY THIS IS NOT COVERED UNDER  
WARRANTY.**