

INSTALLATION INSTRUCTIONS FOR SEALED GAUGE SENSORS

The Dynotek Slimline sensor is a sealed gauge sensor, meaning that the reference side of the sensing element is referenced to sea level atmosphere (14.7 psi), but is sealed to prevent moisture intrusion. It is identical in construction to an absolute transducer, except that an absolute sensor is referenced to 0 psi. This construction makes it much more reliable in that there is no vent tube going to the atmosphere, and therefore no route for moisture intrusion.

When a sealed gauge sensor is employed, the output is not 4-20 mA exactly, but will vary due to altitude and the reference pressure that is actually achieved. When calculating water level, the initial (Zero) mA reading is subtracted from the actual reading in the formula:

$$\text{Water Depth} = (\text{mA Reading}) - (\text{Zero mA reading}) / 16 * (\text{Pressure range}) \times 2.31$$

INSTALLING SENSOR

1. Before Installing sensor in a well or reservoir, connect to reading device or PLC and follow the ADJUSTING DATUM procedure below.
2. To connect to a reading device or PLC, for Poly Cable, attach the White lead to the 4-20 circuit Positive, and the Black to Negative. For Stainless Steel cable, connect the Yellow lead to positive, and the remaining lead to Negative. If 3 Non-Yellow leads are exposed, connect the Yellow to positive and connect each of the other leads in turn until the signal is obtained.

ADJUSTING DATUM

The surest way of zeroing the sensor to reflect local datum is the following:

1. Read sensor value (mA) at surface before installation. This is the local zero value.
2. Install the sensor. When probe is secured at desired depth, read the sensor value (mA), and simultaneously measure the depth to static water level with a level meter.
3. Calculate the water column height from the mA reading and the formula above.
4. The **probe depth** for calculation purposes will be the measured static level plus the water column in feet as measured by the probe.

5. To obtain water depth (ground surface to water level) **subtract probe reading in feet from the probe depth.**