Stedham Electronics Corporation

Adjusting a Capacitive Prox Sensor

Most of Stedham Electronics capacitive proximity sensors are equipped with an adjustment potentiometer located near the cable entrance. By rotating the potentiometer in the **clockwise direction** the sensing distance is **increased**. For convenience, each sensor so equipped is provided with a small screw driver for this purpose.

Apply power to the sensor and place the target at the desired detection point. If the sensor is detecting the target, reduce the sensitivity until it no longer detects it. Then adjust the potentiometer until is just detects the target. Then add an appropriate safety factor (see note) by rotating the potentiometer more in the clockwise direction.

Achieving usable sensing distances up to $1.25*S_n$ may be possible, however, degradation of the performance specifications (hysteresis and repeatability) may occur .

The nominal sensing distance (S_n) is defined by using a square 1mm thick earth grounded steel test-target measuring dia x dia for cylindrical sensors. After setting the sensor for your application and target material, you should check the sensor using such a target. If the steel test-target is detected at a distance greater than $1.25 \times S_n$ the sensor should be mounted closer to the actual target if possible, and the sensing distance readjusted.

Note:
The safety factor varies for each application and is a function of several variables such as: target material, desired sensing distance, environmental conditions and variability, etc. By increasing the sensitivity past the point where the sensor just detects the target, the above factors are eliminated from causing false triggers. However, the sensitivity can inadvertently be increased so much that the sensor detects the target too early or is unintentionally influenced by nearby objects. Determination of the safety factor is therefore best carried out on site.

Please call us if you need further help setting up your sensor.

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