Mounting conditions of capacitive sensors

Mounting the sensor in a machine or plant environment can result in preattenuation of the sensor due to material located within the detection range. This preattenuation results in a change in the preset operating distance. An installed potentiometer can be used to offset these changes within certain limits. However, if the preset operating distance has not changed, you must ensure that no material, other than the object, is located within the sensor detection range (see the gray clearance area). The exact values for lengths A to F are sensor-specific and are included on the data sheets of the corresponding product.



Installation conditions for cubic sensors



Mounting conditions for cylindrical sensors

Flush mounting of capacitive sensors

In addition to the above-mentioned, nonflush mounting of cylindrical sensors, the sensors can also be flush mounted (measurement A is 0 mm) in special cases. Pepperl+Fuchs offers specially aligned flush-mountable sensors (CJ-, CBB-, CCB types) for this purpose. A potentiometer can also be used with these types of sensor to adapt the operating distance for different object materials.

Sensors in cubic housing are generally installed on a carrier material. In this case, measurement A is defined by the height of the housing. One particular quality feature of capacitive sensors is their shielding against the carrier material. The most critical case would involve mounting in a metallic conductive carrier material. Pepperl+Fuchs sensors can be used under the above-mentioned conditions in all types of carrier material.

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