How To

Service Documents from APPI

Document: #HT000114

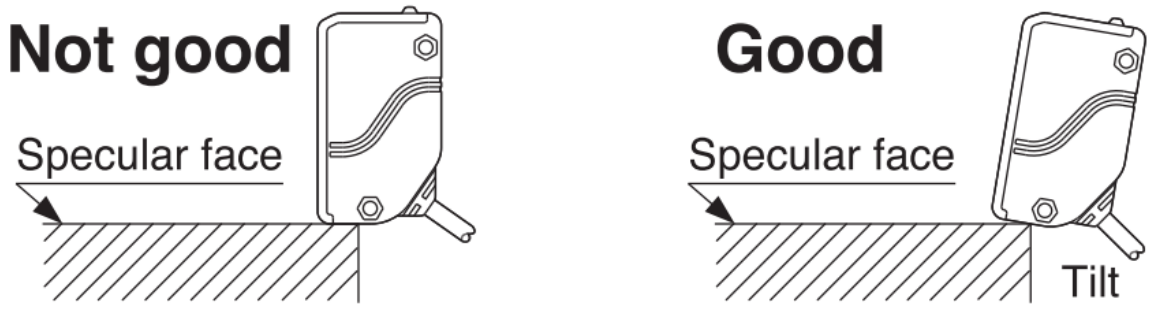
Document Title: Adjusting the Bowl Level Sensor

Product(s): UC-2400 & UC-3000

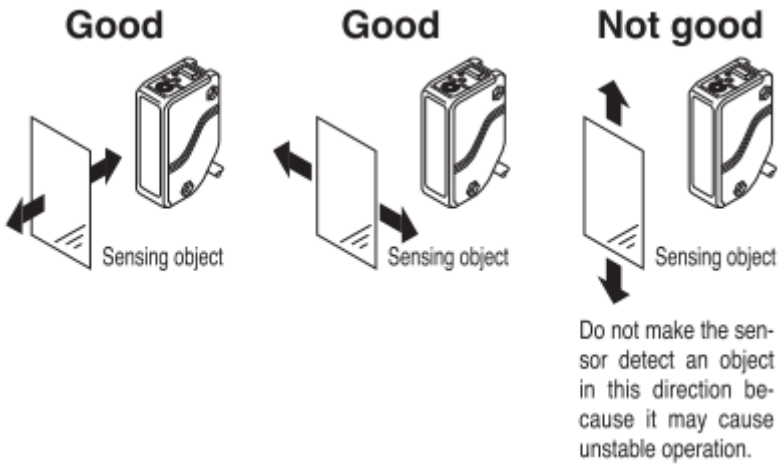
Sensor Information:

The sensor will be setup and calibrated from the factory according to customer specifications. This sensor is on when the equipment is on and is always operating when the equipment is operating. The sensor will need to be adjusted over time due to the vibrations from the Vibra-Drive system and when the material being bagged changes.

When detecting a specular (mirror-like) object, such as aluminum or other reflective surface, or an object having a glossy surface or coating, the object may not be seen by the sensor due to a small change in angle or wrinkles on the objects surface. When a specular object is present below the sensor, tilting the sensor slightly upwards will increase its ability to see the object.



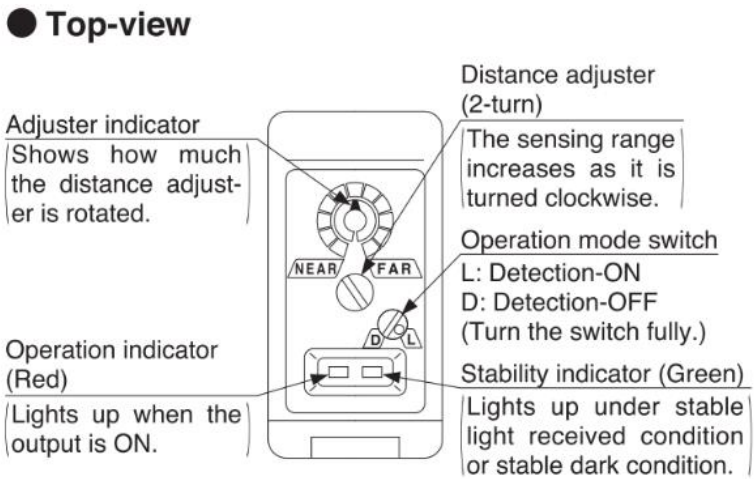
Adjusting Procedure: Use the diagrams for adjusting the sensor. Turning adjustments screws with excessive force will cause damage to the adjuster. The sensor operates in an industrial environment and is likely to accumulate dust on the sensory lens. Be sure to clean the lens when performing other maintenance to the system.



Note: Overfilling the bowl will prevent the parts from moving smoothly or may cause the parts to stop flowing.

A green LED is located on a box to the rear of the hopper (or on the conveyor if a hopper conveyor system is supplied). The LED indicates that the hopper should be feeding. The hopper will only feed if the bowl is in fast feed mode. If the leveling switch turns ON and the bowl is in fast mode, the hopper will start to vibrate. The hopper will vibrate for at least five seconds even if the switch turned on for only a moment.

To increase the vibration level of the hopper, turn the potentiometer clockwise. To decrease the vibration level of the hopper, turn the potentiometer counterclockwise.



● Adjusting procedure

Step	Description	Distance adjuster
①	Turn the distance adjuster fully counterclockwise to the minimum sensing range position of 0.2m approx.	
②	Place an object at the required distance from the sensor, turn the distance adjuster gradually clockwise, and find out point Ⓐ where the sensor changes to the light received condition.	
③	Remove the object, turn the distance adjuster further counterclockwise, and find out point Ⓑ where the sensor changes to the light received condition again with only the background. (When the sensor does not go to the light received condition even if the adjuster is fully turned clockwise, point Ⓑ is this extreme point in the range.)	
④	The optimum position to stably detect objects is the center point between Ⓐ and Ⓑ.