

## OHDK 10 Background Suppression Laser Solves Conveyor Application

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Diagram 1

**Product:** OHDK10

**Market:** Material handling/conveyors

### The Application

The OHDK 10 Laser diffuse sensor with true background suppression by triangulation is used to sense the exact position of a package so that it can be placed on a merging conveyor (diagram 2, point A). As the packages proceed down the initial conveyors (diagram 2, point B) two OHDK 10s, each on a separate conveyor, aimed downward at the conveyor, detect the package's leading edge (diagram 1).

That detection output is processed by a motion controller to synchronize the two conveyors such that packages are alternately moved onto the merging conveyor. The merging unit takes multiple conveyor lines and merges them into a single conveyor.

### User benefit

Because this is a fast moving line, the customer needed fast and repeatable detection. With the OHDK 10's beam spot of just 0.2mm, the leading edge of the packages were detected quickly as they moved into the detection area. In a standard diffuse sensor, a larger beam spot would decrease this repeatability due to the fact that a larger area of the package would need to proceed into the sensing area before sufficient light was reflected to the sensor.

and detect only packages as they approached. True background suppression by triangulation allows for extremely tight cutoff between the ignored background and the sensed target because the sensor relies on the angle of received light as opposed to the intensity of received light. So, unlike standard diffuse sensors, the OHDK 10 will not false trigger due to the reflective conveyor.

And, the packages would be varied in color and reflectivity. Again, due to background suppression's use of angles, rather than intensity, the OHDK 10 is insensitive to variations in color or reflectivity. This allows precise recognition of the packages regardless of surface qualities.

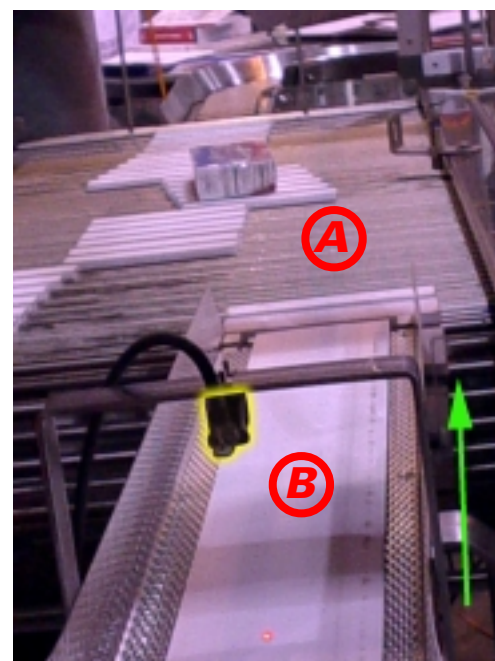


Diagram 2

Also, the sensor needed to be able to "ignore" the reflective conveyor,



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