

**Application Note:**  
**RO4 Fork Sensor: No straw for the juice?**



A producer of fruit juice recently had a malfunction in production when the machine securing drinking straws to 250ml boxes of fruit juice, ran out of cling wrap unnoticed.

In the final phase of production, filled boxes pass underneath a reservoir containing drinking straws. A straw is dropped onto each of the passing boxes after which the box and straw are automatically wrapped with cling wrap to keep the straw in place.

In this instance, the supply of cling wrap on the machine ran out while the process of straws dropping onto the boxes, continued. This resulted in hundreds of boxes produced without drinking straws.

A re-occurrence of this mishap was prevented by installing a cost effective Detehtor model RO4 opto fork sensor from Rhomberg Electronics between the roll of cling wrap and the point where the wrapping takes place, thereby monitoring the supply of cling wrap to the wrapping machine. Being able to detect clear plastic, the sensor will now activate a relay, which stops the process, should the supply of cling wrap run out. Not only does this prevent loss in production and income, it also sets an operator free, as it is no longer necessary to attend to the operation.

Detehtor opto fork sensors are offered with a switching frequency of 10kHz. This enables the sensors to operate under high speed conditions, also making it possible to interface with PLC's and high frequency counters. Sensitivity adjustment can be done via a remote potentiometer, thereby obviating the need to have access to the sensor should it need to be mounted in a confined space.

