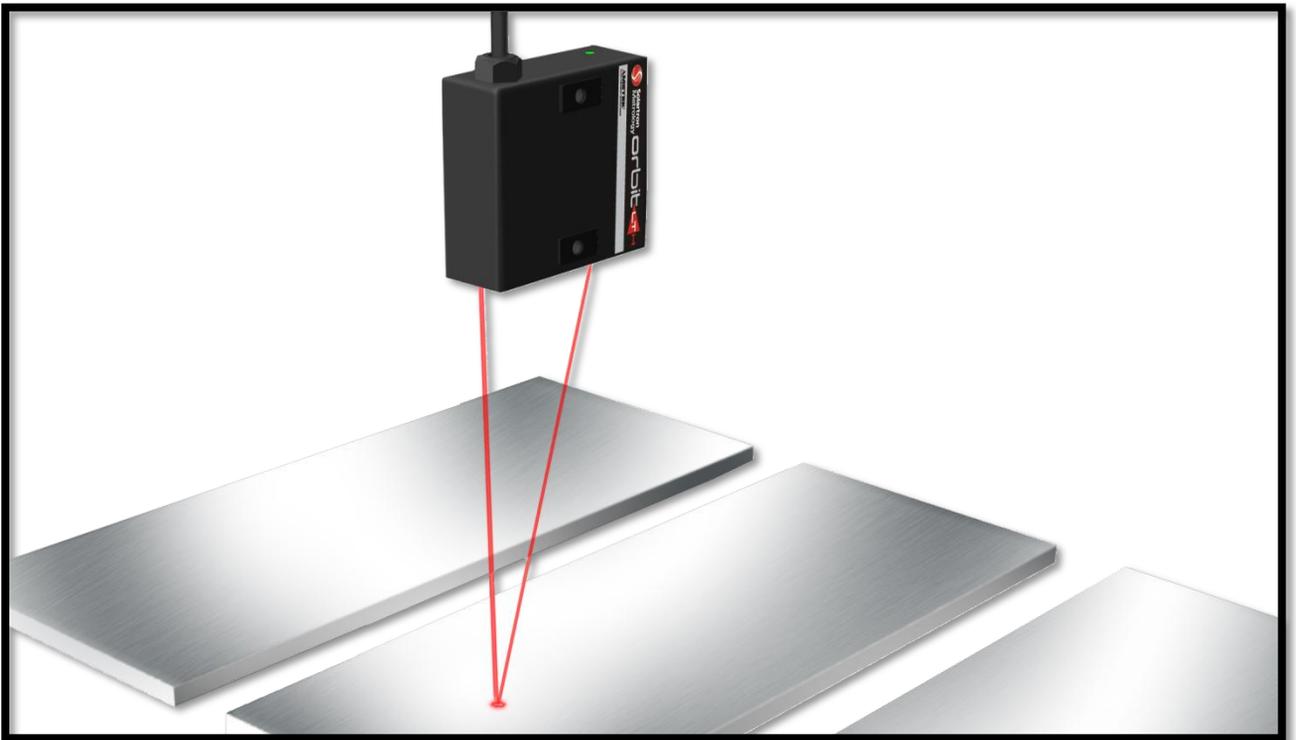


## Application Story

*Non Contact*

# Checking the thickness of aluminium cans using Orbit<sup>®</sup> LTH



Precision. Quality. Reliability

[www.solartronmetrology.com](http://www.solartronmetrology.com) • [sales.solartronmetrology@ametek.com](mailto:sales.solartronmetrology@ametek.com)

## The Product

Solartron's Orbit<sup>®</sup> LTH is a high precision, high performance non contact sensor for rapid, accurate gauging. With a 40 kHz sample rate, it's Auto Gain circuitry helps it adjust to various surfaces, ensuring a solid, repeatable measurement.



Range: 2 or 10 mm  
Accuracy: Up to 0.2% of reading  
Resolution: Up to 0.0076 μm  
Repeatability: Up to 0.04 μm

## The Challenge

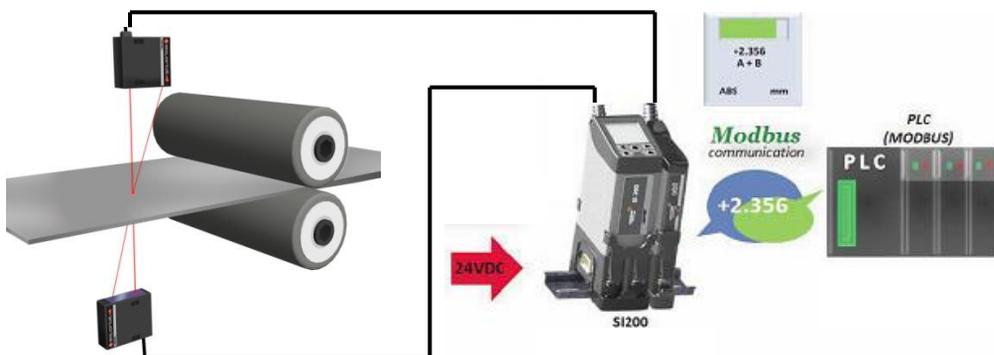
In beverage can factories, much attention is paid to the raw stock of aluminium that is bought in. Due to rising material costs, factories try to create process savings by producing cans with thinner walls. A critical factor is the thickness of the aluminium sheets that are bought to the factory in rolls, and fed into the machines. If the material supplied is not within spec, the machine will produce leaky or weak cans, and the discovery not made until after fabrication. With thousands of cans being created in a matter of minutes, heavy losses can be incurred due to machine shutdowns, post process checks, and aluminium sheets being scrapped.



## The Solution

Orbit<sup>®</sup> LTH is being used to check the aluminium sheet thickness as it comes off the roll, but before being cut into blanks and "drawn" into a cup shape. This has incurred thousands in savings, as machine downtime and scrap have been reduced. With its 40 kHz sample rate and CMOS technology, a measurement is made instantaneously, and the Auto Gain circuitry will adapt to any material blemishes or inconsistencies.

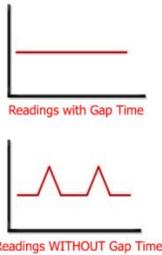
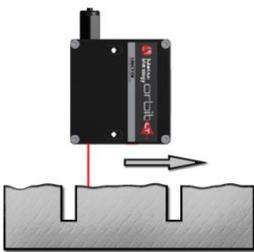
Because it's a thickness measurement, an SI 200 system is used. Here, the compact Orbit<sup>®</sup> ACS modules can be set to an A+B or A-B measurement, with the tolerance entered into the unit, and the output sent to the machine's PLC. With four pins of output, the SI 200 can also switch on an alarm or stop the press if the raw stock is out of spec.



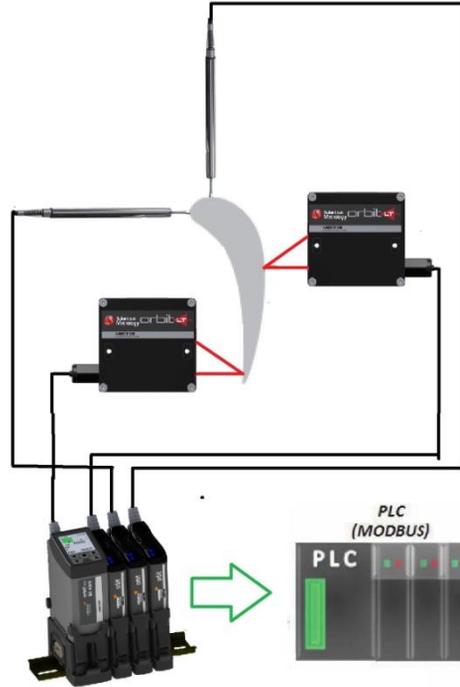
# orbit LTH



Operates in Diffuse and Specular Modes (for Reflective surfaces)



Gap Time Feature is available for surfaces with holes or gaps



Orbit® LTH can be networked with contact probes or other sensors via Orbit® 3 or Orbit® ACS

# orbitACS

Orbit® ACS (Automation & Control Systems) is a line of Solartron Orbit® products built specifically for PLCs and other automation related systems. It includes single, dual, and quad channel stand alone systems, as well as gateways into PLCs.

SI 100



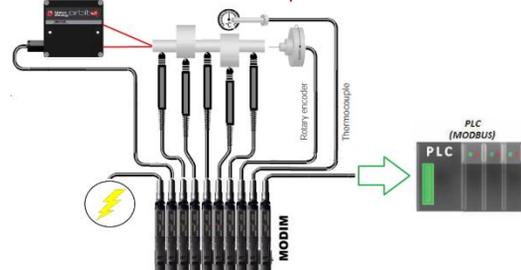
SI 200



SI 400



MODIM Example



Modbus Interface Module (MODIM)

(Up to 150 Sensors into PLC)

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Solartron pursues a policy of continuous development. Specifications in this document may therefore be changed without notice.

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