



Sensors



Switches



Controls

Application notes



Application Note : May 2020

Market involved : Plastics machinery

Product : IO-Link master YN115

Customer : Plastics tube manufacturers

Subject : Tube quality checks

CUSTOMER ISSUE :

With an extrusion machine it is possible to manufacture several types of tubes with different diameters and thicknesses.

It is necessary to verify that the thickness is constant for the whole length of the tube.

The tube is then used on a flexo-printing machine and is subjected to high speed rotation and any ovality of the tube may represent an issue.

OUR SOLUTION :

The IO-Link capacitive sensors also indicate an analogue value that represents the dielectric constant of the detected material.

With several capacitive sensors it is possible to verify the variability of the thickness in the whole length of the tube by reading the analogue values. For each type of tube, the customer defines the value of the dielectric constant to verify the roundness tolerance of the tube.

The capacitive sensors are connected to a Y115 IO-Link master and the analogue value is read via MODBUS TCP from a remote PC by means of software custom made by the customer.

By identifying a trend where the values are out of tolerance it is possible to verify if the tube is out of specification.

BENEFITS :

- Simultaneous access to the parameters of the IO-Link devices connected via multiple protocols, including MODBUS TCP and OPC UA
- Easy installation of the DIN rail IO-Link master thanks to the included pluggable push-in connectors
- Integrated web-interface to fine-tune the IO-Link sensors in the application
- Remote access to MODBUS TCP diagnostics via a web browser, even from a tablet or a smartphone