CARLO GAVAZZI
Automation Components

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Sensors	Switches	Controls

Application notes

Application Note : July 2018	
Market involved : HVAC	
Product : CA30CAN25....IO	
Customer : OEMs	
Subject : Speed control of the wood pellets according to its density	

CUSTOMER ISSUE :

In HVAC applications like Pellet Burners, a capacitive sensor is usually used to measure the level of pellets in the hopper.

When a backfire occurs, a temperature sensor gives an alarm so that the fire can be extinguished.

The energy level in the pellet burners changes depending on the density of the wooden pellets.
This might lead to a too fast or too slow feeding speed.

OUR SOLUTION :

The new CA30CAN25…IO IO-Link sensor has a built-in temperature sensor placed on the front side, as well as a 16 bit "analogue" value present in the cyclic process data file, giving information about the density of the wooden pellets around the sensor.

Different wooden pellets have various dielectric value that changes depending on the wood and the dimension of the pellets.

The built-in temperature sensor has a temperature output that can give an alarm when the temperature is too high.

BENEFITS :

- The "analogue" value allows the customer to change the speed of the worm drive to feed the correct amount of pellets to the burner.

- At the same time the sensor detects the presence of the wooden pellets in to the hopper.

- The alarm temperature in the sensor can be set up at the appropriate value by the customer.