

ElastiSense

Sensors and Monitoring Solutions for Pressing Applications

www.elastisense.com

ElastiSense ApS proudly introduces its ground breaking new solution for monitoring the function of press tools and other equipment for metal processing. Our real-time displacement sensors are designed to detect small abnormalities in tool movement in the press, enabling the detection of un-ejected slugs, wear in punches or broken components like springs. Together with the controller unit that synchronises multiple sensor signals and translates them into consolidated actions/alarms, they constitute a solution that can fundamentally reduce your process costs in terms of less downtime and less scrap.

ElastiSense Sensors

The capacitive and highly elastic Electroactive Polymer (EAP) displacement sensors are core elements, as they provide the unique combination of precision and robustness, which is necessary in metal processing applications. The sensors are sealed against ingress to preserve high performance operation across the operating range.



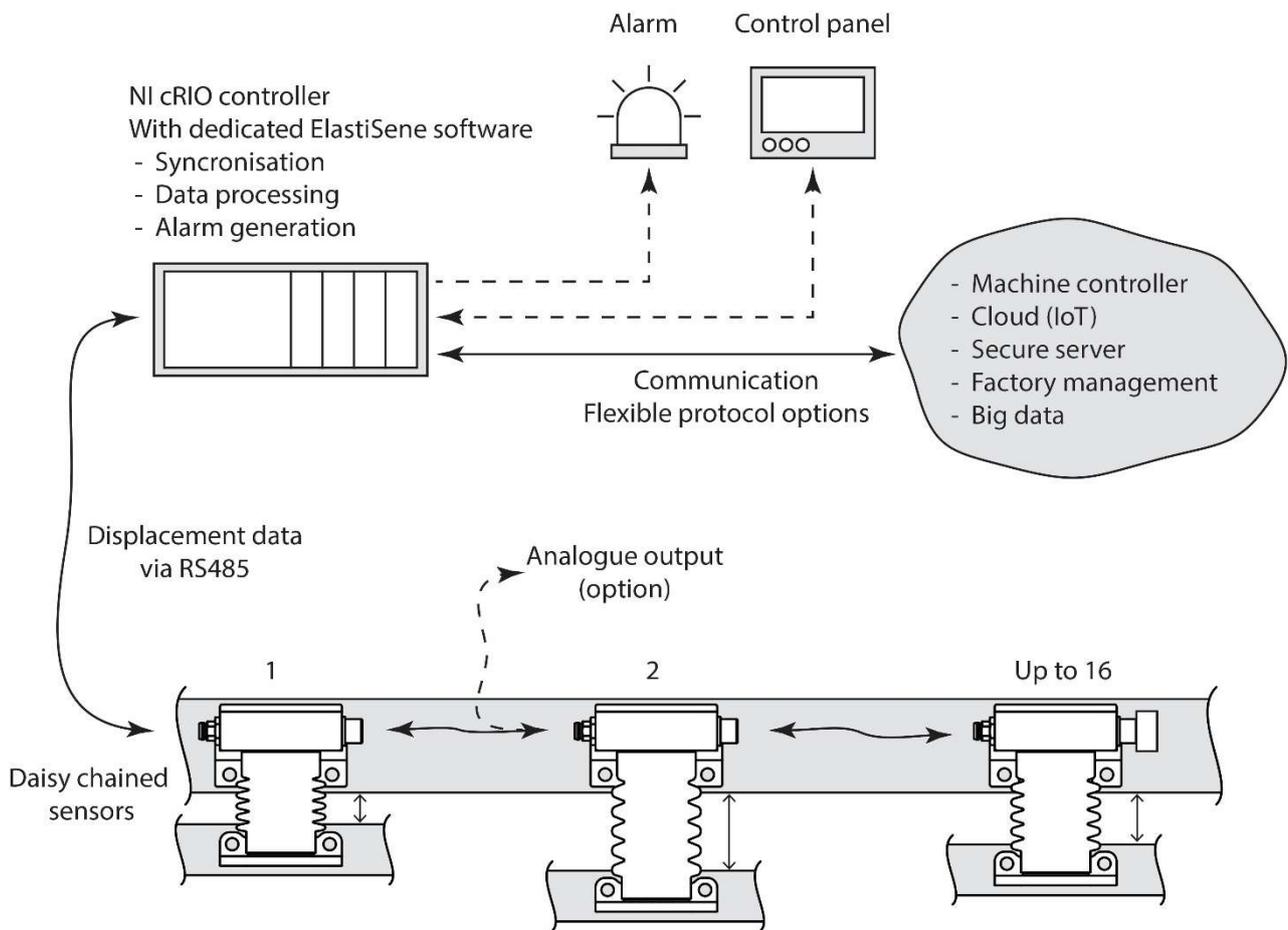
Customised displacement sensor for press tools

ElastiSense Controller

Where a multiplicity of sensors is required for monitoring the tool for bending or twisting we highly recommend using the ElastiSense controller to handle communication with daisy chained sensors. The controller communicates with the sensors over a full duplex RS485 network. The controller receives real-time, synchronised data from the sensors, analyses it, and then sends a corresponding signal to the machine. The controller used for this is a standard, versatile controller from National Instruments from their cRIO Series. It can be configured to communicate with the production line with a protocol of your choice, as there is an abundance of corresponding communication modules available.

Benefits

- The solution requires no special training for installation, which is fast and simple.
- An absolute measurement of displacement prevents false alarms and unnecessary down time.
- High value for money compared to established monitoring systems on the market.
- Frequent visits by technicians for setup and calibration are not needed, thus minimizing operational and maintenance costs.
- It is virtually immune to influences of extraneous vibration, dirt and an oily atmosphere.
- Having no sliding parts drastically reduces wear, increasing life and allowing simple removal and replacement of the sensors.



ElastiSense solution for monitoring press tool behaviour.

The all-rubber design of our sensors, enables robust and reliable measurements of displacement, frequency, and speed in nearly all applications in factory automation. Most value is added in mechanically aggressive applications where precision is a key performance requirement.

Reference projects

Grundfos, a large Danish pump manufacturer is in the process of implementing ElastiSense sensors for failure detection in their metal forming equipment. Two other Danish metal forming companies are currently testing sensors for their ability to improve productivity and monitor tool reliability.

About us

The founders of ElastiSense ApS have a combined 30 years' experience with EAP technology through their earlier work with Danfoss and LEAP Technology, both being EAP technology providers. ElastiSense is a specialist developer and manufacturer of EAP enabled sensor products for industrial automation.

Contact and more information

Jørgen Pedersen, Sales & Marketing Manager.
+45 2239 0019
joergen@elastisense.com
www.elastisense.com
Bjerndrup Bygade 23,
DK-6200 Aabenraa, Denmark