

Load sensor transmits data wirelessly

BANBURY-BASED Sensor Technology has developed a smart load sensor that integrates weighing with handling operations. The device, called LoadSense, captures data in real time from cranes, forklifts and other handling systems, and can transmit it wirelessly for storage and analysis.

The system combines an intelligent load sensor, a handheld display and a receiver. A single-chip computer on board the sensor records, analyses and archives readings.

A transmitter sends the load data to the display – a colour touchscreen computer running Windows XP and NI's LabView software. The display shows real-time readings of the load, while the computer can record and process real-time values.

The battery-powered system can be deployed with minimal disruption to operations, and will start to transmit data automatically. No special training is required to install or operate it.

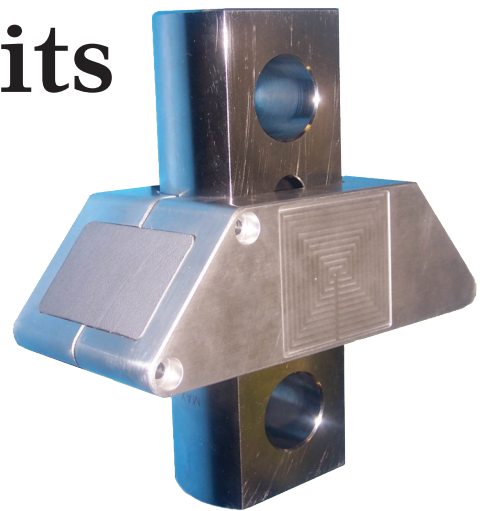
The sensor is based on proven strain gauge technology, and is calibrated for

measurements in the range 1–5 tonnes, with other ranges available on request.

Sensor Technology says the system can optimise the efficiency and profitability of a wide range of industrial operations. For instance, it can work out how much material is being transported, or keep track of two or more materials being used simultaneously which need to be accounted separately.

"Our main markets are materials-handling and warehouse operations, where the intelligence will convert raw data into instant stock counts," explains Sensor Technology's Tony Ingham. "We have already had enquiries about raising nuclear fuels rods, monitoring window cleaners' cradles on high-rise buildings, and winching and weighing building materials.

"Theatre stagehands could lift and lower scenery from the wings rather than from a remote control room," he adds. "And for applications involving liquid discharge, a system could be configured to monitor and control flow."

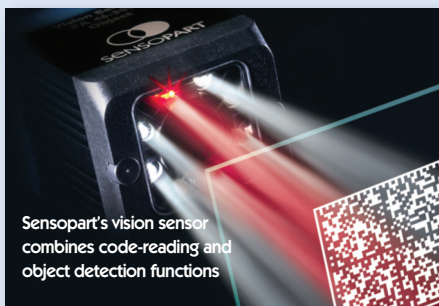


↑ Sensor Technology's LoadSense system transmits load data wirelessly

LoadSense can be integrated wirelessly into Scada or MES systems, producing instant operating reports and e-mailable customer bills. It can also improve safety because it allows operators to be moved away from dangerous locations.

The system is being launched at the Sensing Technologies exhibition at Birmingham's NEC on 28–29 September.

www.sensors.co.uk



Dual-code sensor challenges machine vision systems

SENSOPART HAS developed a code-reader that reads both standard 1D barcodes and 2D data matrix codes, as well as detecting object characteristics. The company says that, in many cases, the FA 46 vision sensor will avoid the need for costly image processing or multi-sensor installations.

The sensor can analyse up to five data matrix and/or barcodes in one search zone, and allows an unlimited number of search zones to be defined. It can also identify other object characteristics, such as date stamps or markings, in the same reading process.

There are three more detectors for pattern

recognition, grey-level sensing and contrast measurements. A position-tracking option allows codes and object characteristics to be detected reliably, even when offset from the taught position. Image filters with extended setting options are said to ensure good reading performance, even in difficult conditions.

The sensor can handle complex automation tasks – such as reading several codes or combining code readings and object detection – that previously needed an image processing system or several separate sensors. Installing and setting up the compact sensor is said to be easy, using PC-based configuration software.

Inspection results can be analysed inside the sensor, avoiding the need for a PLC or PC connection in many cases. Free monitoring software allows results and images to be displayed and monitored while the sensor is operating. The software can also be used to download images from the sensor's memory for offline simulation of configurations.

The code-reader consists of a compact (45 x 45 x 64mm) camera with an integrated digital signal processor, infrared, red- or white-light LEDs, Ethernet and RS-422 interfaces, and digital I/O. A lower-cost version is available that reads codes but omits the object detection functions.

www.sensopart.com



The UK inductive sensing specialist Zettlex has developed this novel ring-shaped angle encoder that allows items such as drive shafts, cables and bearings to pass through its hollow core. The InCoder device is aimed at applications such as rotary joints, gimbals, test equipment and robots, where precision measurement is needed in harsh environments. The sensors are produced using a "unique" printing technique that results in sensors with no contacts, bearings, or delicate parts, and no need for maintenance.

www.zettlex.com