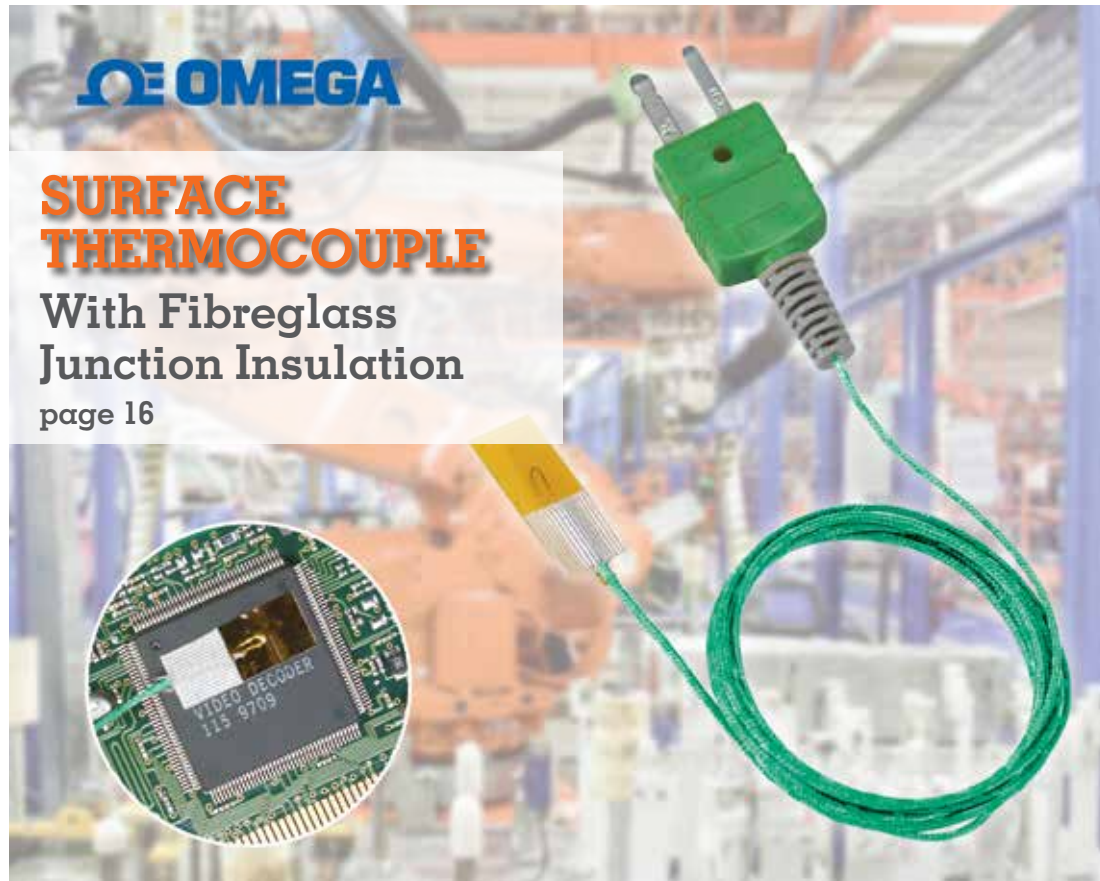


## INDUSTRIAL ENGINEERING NEWS

- 10** **Highly Flexible and Modular System** for Functional Testing, Integrated Into the Manufacturing Cell
- 20** **New Calibration Standards** for the Main Optical Areal Surface Measurement Technologies
- 26** **Code Reader** With CMOS Camera, LED Lighting and Embedded Micro Computer
- 30** **Stainless Steel Screws** For Quicker Installation and Replacement



**SURFACE THERMOCOUPLE**  
**With Fibreglass Junction Insulation**  
 page 16



**Exclusive Interview**  
 Trevor Forster, Managing Director of Titan Enterprises

page 16



**24** **Bluetooth Module For Wireless Torque Measurement**

[www.ien.eu](http://www.ien.eu)

**SPS IPC Drives Show Preview on IEN Europe October**

## HUMIDITY AND TEMPERATURE TRANSMITTERS

For measurement of relative humidity and temperature



The EE210 and EE160 transmitters from **E+E Elektronik** are designed for highly accurate measurement of relative humidity and temperature. Both are now available with a BACnet MS/TP interface for easy integration

into a network or bus system for modern building automation. Unitary digital communication standards in modern building automation allows for easy integration and interaction of devices from different manufacturers. With the BACnet protocol, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has established an internationally recognised network standard for building automation.

▶▶ 49089 at [www.ien.eu](http://www.ien.eu)

## DATA LOGGERS

To record detailed temperature profiles



**Datapaq** has introduced a smarter, and time-saving quality control solution for high-temperature heat treatment applications. Featuring up to 20 channels and a large memory for 3.6 million data points, the new DATAPAQ TP3 data

loggers record detailed temperature profiles. The loggers can be powered with any of three user-interchangeable battery types: Lithium, Alkaline, or rechargeable NiMH batteries. Users can perform ten consecutive profiling runs before downloading to a computer via USB or Bluetooth. Even water or gas quench processes can be profiled - with variable sampling intervals that can be programmed to capture fast temperature changes when needed. The measured temperature range is -100 to 1,370 °C.

▶▶ 49092 at [www.ien.eu](http://www.ien.eu)

## DIGITAL LOCK-IN AMPLIFIER

With intuitive user-interface



The **Zurich Instruments MFLI** is a digital lock-in amplifier that sets the new standard for measurements in the medium and low frequency range. The MFLI is available in two

versions covering the frequency range DC to 500 kHz and DC to 5 MHz (an upgrade from 500 kHz to 5 MHz is possible later). With the carefully developed analog and digital front ends in combination with the merits of fast digital processing provided by the on board FPGA, the MFLI combines superior performance with the outstanding LabOne® toolset. The embedded data and web servers allow straightforward connection to any device running a web browser. The MFLI is ideal for many applications as optical chopper applications and pulsed laser applications (e.g. high power lasers).

▶▶ 49110 at [www.ien.eu](http://www.ien.eu)

## TOTAL CHLORINE ANALYZER

With a plug-n-play design



The new plug-n-play TC-80 Total Chlorine Analyzer from **Electro-Chemical Devices (ECD)** offers simplified water monitoring and treatment processes, easy installation and less maintenance for lower ownership costs. Highly reliable, the TC-80 Analyzer

monitors total chlorine in drinking water, rinse water, cooling water or other fresh water samples from 0.05 - 20 ppm chlorine as the standard range or 0.005 - 2.000 ppm with the low range sensor. Its plug-n-play design installs quickly right out of the box. The TC-80's advanced panel mount design includes built-in flow control, which eliminates the need for complicated pressure regulators and rotometers.

▶▶ 49085 at [www.ien.eu](http://www.ien.eu)

## BLUETOOTH INTERFACE

For wireless torque measurement



**Sensor Technology's** new Bluetooth module brings total wireless flexibility to torque measurement. In use the module simply plugs into the TorqSense's existing 15 way 'D' digital lead connector. As well as

collecting the torque signal, the Bluetooth allows the transducer to be powered through the interface and also provides a USB output for connection to a PC, which allows a full version of the TorqView software to be used. Having a Bluetooth enabled TorqSense transducer removes the need for cable runs from the sensing head to the receiver. This can make system lay out easier and even allow torque to be measured in real time in situation where it was previously impossible.

▶▶ 49093 at [www.ien.eu](http://www.ien.eu)

## INDUCTIVE SENSORS

For ambient temperatures up to +230°C



The inductive sensors with enlarged temperature range by **ipf electronic** cover a wide range of applications, be it in the field of plastic injection molding, in foundries, in paint shops or in handling and

conveying systems. Here, they act as signal transducers for different control sequences, secure areas that are exposed to hazards or perform important control functions. The sensors suitable for an enlarged operating temperature range are available in the M8, M18, M30, M50 and cubic designs. The connection is made via an external amplifier. The maximum ambient temperature range for the M8 version is +140°C, for the M18, M30, M50 and cuboid versions it is +230°C.

▶▶ 49090 at [www.ien.eu](http://www.ien.eu)