New Products

Nobel's sixth generation weight transmitter

In 1973, Bofors Electronics (as Nobel Systems was then called) produced the world's first microprocessor controlled weight indicator and terminal – the Scale-O-Scope. In 1998, 25 years later, Nobel’s sixth generation AST3 weight transmitter is available in a package that weighs less than the mains transformer of the original Scale-O-Scope.

The trend since then has seen the extensive use of microprocessor power to give greater flexibility, higher resolution and accuracy, faster speed, easier setting up, smaller size and lower cost. Now, the sixth generation AST3 has an internal resolution of 1 in 8 million (23 bit) using a patented Sigma/Delta A/D conversion technique and communicates on RS485 at 115 baud using modbus protocol. Analogue outputs of 0-10V, 0-2mA are standard. Communication speed is 380 times greater than the original Scale-O-Scope and the resolution 260 times greater.

The AST3 can also be connected via a modem to allow remote diagnostics and maintenance of the weighing system. The unit is fully CE compliant to meet the latest EMC and low voltage directives. All this comes with a digital display in a DIN rail mounted package that weighs less than 0.5 kg. The new AST3 weighs approximately 1/60th of the original Scale-O-Scope of 1973.

The photograph shows the original Scale-O-Scope, the E-2-TAD digital weight indicator and the AST3 weight transmitter.

For further information, please contact David Viney Tel: 01234 349241 Fax: 01234 325387.

Compact weighing system with telemetry link

Thought to be the first of its kind, Applied Measurements Ltd has introduced a load weighing system consisting of a load cell and a portable weight indicator linked by a cordless telemetry link. Without long interconnecting cables, the new system is ideal for measurement of cable tension, hook crane and lifting gear weighing.

The compact load cell is robustly constructed with IP66 waterproofing, accepts standard lifting shackles and comes in ten load ranges from 1 to 500 tonne. Specifically designed for the measurement of cable tension and under hook crane and lifting gear weighing, the complete system consists of a robust load cell with an internal data transmitter with a range of 200 metres, together with a portable, hand held receiver instrument, displaying the weight digitally.

The load cell is available in ten different ranges from 1 to 500 tonne and offers excellent performance with a repeatability of <0.05% of rated output. It has been designed for use with standard lifting shackles and is sealed to IP66 for waterproofing to withstand arduous outside conditions. Its weight and height have been kept to a minimum, thereby reducing the overall headroom required for the installed system.

The portable instrument receives the load cell transmitted signal at typically 420 MHz and displays the weight value on the 8 character 14 segment LCD display, over the range of -4999 to 65000. Features on the unit include a 'hold' control for display storage, and a 'tare' control for automatic zeroing of the load signal. It operates on a 9V PP3 supply, with auto power down to conserve battery life.

'Train', November 1998
The MTNEP probes will operate over a frequency range of DC to 10kHz under temperature conditions of -30°C to 180°C.

To complete the measuring system, Monitran also offer the MTNECPD eddy current probe driver which operates with the probe to provide a DC in - DC out capability.

For further information, please contact Chris Hansford, Monitran Ltd, Monitor House, Hazlemere Road, Penn, Bucks HP10 8AD; Tel: 01494 816569 Fax: 01494 812256.

For more information, please contact Peter Lewis, Applied Measurements Ltd, 3 Mercury House, Calleva Park, Aldermaston RG7 8PN; Tel: 0118 981 7339 Fax: 0118 981 9121.

Extended non-contacting position sensor range

Monitran has extended the range of MTN/EP non-contacting position sensing probes by introducing a new model which will measure distances of up to 12mm, in both static and dynamic modes. With four models now available in the range, measurement from 0 to 2mm and up to 0 to 12mm is possible, for use in sensing position, proximity, profiles, movement, alignment, radial vibration, and speed in research projects and industrial machine monitoring.

The new probe uses the eddy current technique where a high frequency signal is radiated from the tip into the conductive target. Eddy currents are produced and after conditioning and linearisation, represent the dimensional gap as a DC signal, or the profile of a rotating component as an AC signal.

Four models are now available with linear measuring ranges from 0 to 2mm and up to 0 to 12mm, having threaded bodies with securing nuts, or flanges for easy mounting into the equipment. They are robustly made in stainless steel with an encapsulated tip and are fitted with armoured cable making them ideally suited to the harsh conditions of both industrial and research applications.

Reel optimising system

A reel optimising system, Densitrol-Ros, which is designed by Nobel Elektronik AB in co-operation with the Stora Hylte Paper Mill, is highlighted in a new leaflet from Nobel Systems Ltd.

Densitrol-Ros has been developed to improve reel quality and waste reduction on reel changeover. Load cells fitted to the primary and secondary arms measure the actual line force being applied (rather than the inferred force by measuring pressure in the actuators) and servo hydraulic systems control the primary and secondary arms and the primary/secondary changeover is “bumpless” with the demanded line pressure controlled all the way through. This control gives a perfect parallel feed, it eliminates bottom breaks and surface breaks and reduces breaks on reel changes.

Nobel’s new illustrated leaflet includes sections on operator possibilities, controlling the line force and system performance. Densitrol-Ros uses Nobel’s control electronics to measure and control positions and forces at the reel carrier via sensors and hydraulic servos. The system aslo controls the linear force with great accuracy and constant parallelism, to give a possible 2-4% paper saving. A number of parameters can be modified by the operator to alter the “ideal” operating configuration of the reel carrier.
The system can be used in conjunction with an ABB Denitrol system to measure and display density and roll diameter. Performance parameters specified include a control accuracy of +/-2% at the sensor during reeling on the secondary arm and a +/-3% control accuracy on the primary arm. Position sensor accuracy is quoted at better than 0.05%. The system has very good repeatability.

For further information please contact David Viney, Nobel Systems Ltd, Tel: (01234) 349241 Fax: (01234) 325387 email: dviney@aol.com

New portable force indicator

The new "Display-Mate" is a hand held LCD indicator offering a low cost solution to a wide number of load-force measuring problems.

Obvious applications include, the field measurement of forces applied to brake, clutch and accelerator pedals, measuring the applied tension - compression forces during component and product testing, and remote load indicators for crane scales.

This precision indicator accepts strain gauge based transducers within the sensitivity span of 0.60mV/V to 4.6mV/V full scale 19999. The four keypad unit is simple to operate and offers two selectable scales for use with two different load cells, or to display, say, N/lb on a single cell. Other facilities include tare, peak and valley hold. Internal push buttons offer selectable scaling, filtering and calibration with anti-tamper lockout.

For further details please contact Mr J. Beck Tel: (01727) 861110 Fax: (01727) 844272 email: sales@gwi-co.demon.co.uk

New position transducers from Endevco UK are flight data recorder compatible

Endevco UK has launched new position transducers from SpaceAge Control, Inc. that are compatible with commercial aircraft flight data recorders. Developed in response to an FAA mandate requiring that increased flight data parameters be monitored on commercial aircraft, the products have size, weight and installation advantages over traditional rod and cylinder transducers such as LVDTs and linear potentiometers. In addition, they offer easier mounting than rotary synchro and RVDT sensors.

SpaceAge Control position transducers were first developed in the late 1960s to monitor aircraft flight control surfaces for NASA. Since that time, these products have been used in a broad range of aircraft/aerospace applications for control, acquisition, test and measurement purposes. Most recently, they have been used with military aircraft flight data recorders.

The flexible and space efficient products use a stainless steel cable wound around a precision machined drum. The bearing mounted drum is mated to a precision sensor based on potentiometric, synchro, RVDT or encoder technology that translates linear position information to an electrical signal. This transducer technology gives high precision, easy installation and fast calibration. The products are quickly mounted using high flexibility mounting bases or custom installation plates.

The transducers feature anodised aluminium cases, threaded/grooved drums for enhanced repeatability, a minimum -40 to +125°C operating temperature range, and operate for up to 50 million cycles. Over 60 models ranging from 0 – 38mm up to 0 – 1.08m are offered in package sizes as small as 19mm square by 10mm thick.

Endevco, a Meggitt Electronic Components company, is a leading designer and manufacturer of dynamic instrumentation for pressure, vibration and shock measurement, solving dynamic measurement problems in aerospace, automotive, petroleum, power, nuclear, chemical marine and similar industries.

More information from: Paul Marchant, Endevco UK Ltd, Melbourn, Royston, Herts, SG8 6NA; Tel: 01763 261311 Fax: 01763 261120.

New flush mount pressure transducer from Endevco UK

Endevco UK has introduced a new miniature flush mount pressure transducer from Paine Corporation. At just over 32mm in length, this transducer is ideal for applications where frequent flushing or cleaning is required or when using a thick slurry pressure medium. Model 210-90-050-XX is offered in a mV/V output and is temperature rated to 135°C. Its compact size makes it a perfect fit where space is limited or weight is critical.

In addition to the standard models, amplified versions with 0-5V output can be supplied with a small increase in overall length (approximately 13mm). Pressure ranges are available from 0 tp 3.5 MPa (500psi) up to 0 to 70MPa (10000 psi). Custom configurations can also be supplied to special order.

For further information, please contact Jeremy Bryceson Tel: 01763 261311 Fax: 01763 261120.