

IR phototransistors

To provide a miniature surface-mount device for IR detection in sensing applications, **TT electronics OPTEK Technology** has developed a series of NPN silicon phototransistors in 1206 chip packages. The OP520/OP521 Series



surface-mount devices offer response times of 15 μ s with a peak response to 880 nm wavelength. The OP520 features an opaque lens to shield it from ambient light, while the OP521 lens is clear to offer a wide response range. The series performs at collector-emitter voltages of 30 V, emitter-collector voltage of 5 V, collector current of 20 mA, and power dissipation of 75 mW at 25°C. Operation is rated from -25 to +85°C (-13 to 185°F).

For more information, circle 1

Spring-loaded LVDTs

Macro Sensors offers a line of GHSE/GHSER 750 Series 24 V dc-operated spring-loaded linear variable differential transformer (LVDT) position sensors that deliver an output of 0 to 10 V dc over the full sensing range. Constructed of stainless steel, the GHSE/GHSER 750 Series are rugged, ready-to-use, and hermetically sealed for various industrial applications. Coil windings are sealed to IEC standard IP-68 to protect against harsh industrial environments, and units have radially-mounted connectors that shorten the installed length in space-restricted areas. A supplied detachable mating connector repairs or replaces damaged or severed cables without replacing the entire LVDT.

For more information, circle 4

Rotation angle detection

The compact, noncontact axial angle sensor from **Elobau** detects rotation angles ranging from 30° (\pm 15°) to 120° (\pm 60°). An integrated Hall sensor detects the rotation of the surrounding magnetic field, and the axial sensor can be equipped with a second redundant analog output. The use of a plastic bearing not designed to handle high external radial forces makes the sensor a cost-effective solution for axial couplings in applications where the rotational axis is steady and does not control the angle sensor via a lever. The electrical connection for machinery can be made with individual wires or through customer-specified three-pin connectors. The axial sensor features protection class IP67 and performs in temperatures from -25 to +85°C (-13 to +185°F)

For more information, circle 5



Low-pressure measurement

Honeywell's ASDXL and ASDXL DO Series pressure sensors were designed for applications requiring accurate pressure management at low-pressure measurements, including HVAC, barometry, and pneumatic controls. The sensors are fully calibrated and temperature-compensated with onboard application specific integrated circuitry. DO sensors use integrated circuit compatible protocol to allow interfacing with commonly used microcontrollers and microprocessors without additional components or circuitry. The series features an analog output span of 2.0 or 4.0 V dc and pressure ranges from 0.01 and 0.02 to 7.0 bar (0.15 and 0.3 to 100 psi); devices are available to measure absolute, differential, and gage pressures.

For more information, circle 2



Speed sensor

Wabash Technologies expands available configurations for the GTSS (Generic Threaded Speed Sensor), offering single or dual outputs and lower-cost options that require less tooling investment. The sensors were designed for engine, transmission, PTO, I/O shaft, and implement speed sensing applications in the agricultural, construction, and off-highway markets. The GTSS is able to withstand temperature extremes and harsh environments, according to the company.

For more information, circle 3



Proximity sensor

The Telemecanique XS6 line of inductive proximity sensors from **Schneider Electric** is a complete line of fully shielded metal body cylindrical inductive proximity sensors with an increased sensing range that incorporate a self-teach mechanism to simplify setup. Available in 8-, 12-, 18-, and 30-mm (0.3-, 0.5-, 0.7-, and 1.2-in) sizes, all but the 8-mm (0.3-in) version offer self-teach capabilities.

For more information, circle 6





Rotary actuator

Rotary actuators from **SKF** provide precise positioning, accuracy, and repeatability in heavy-duty industrial applications, including high-power switching, gas turbines, and assembly operations. Designed to deliver optimized torque in a compact package, the actuators feature modular construction to enable customization for particular application requirements. They are lubricated for life, requiring no maintenance and incorporating few moving parts to promote trouble-free operation. The self-contained units can achieve maximum torque up to 1700 N·m (1250 lb·ft), rotational motion ranges from 100 to 360°, and speeds up to 20 rpm. SKF actuators typically serve as alternatives to conventional worm gears in effecting partial rotary motion and can be customized for demanding applications.

For more information, circle 7



Sampling system

The EPA has approved **Sierra Instruments** and **Caterpillar's** use of Sierra's Model BG-3 Transient Partial Flow Sampling System (TPFSS) as an alternative procedure in place of full-flow constant volume systems (CVS). Compared with CVS systems designed to demonstrate engine compliance to exhaust particulate emissions regulations, the BG-3 offers improved versatility, reduced costs, meaningful engine emissions data, portability, and minimal maintenance requirements. The system is suited for transient test cycles of any sized diesel engines for both engine and chassis test cells as well as for steady-state test cycles. Using the TPFSS, man-

ufacturers of off-highway diesel and marine engines can improve testing cycles and reduce time to market, according to Sierra. For more information, circle 8



Imaging system

Lenox Instrument's VideoFlex series is a high-resolution remote imaging system featuring four-way tip articulation and an integrated control/display hand piece with a 6.4-in (163-mm) display. For viewing inside complex assemblies, the Series offers a tight bending radius and a steerable four-way, easily manipulated 150° articulated tip. The scope's working portion is protected with polyurethane-impregnated tungsten braiding in diameters of 6.0 or 8.4 mm (0.24 and 0.33 in) and lengths up to 7.5 m (24.6 ft). The hand piece features rugged, all-metal construction and a 2-m (6.6-ft) umbilical cable. Operators can articulate the tip using single-hand controls. Connections include interfaces for auxiliary monitor connection, video output, and 12-V dc powering with optional accessories available. The videoscope is suitable for inspection of aircraft engines and turbines, airframes, process tanks and vessels, tubing and pipes, heat exchangers, and covert surveillance and armament applications.

For more information, circle 9



Miniature transformer

TransERA Electronics' mini-line series of epoxy-encapsulated power transformers offers units with outputs from 0.08 up to 0.5-V amps. Offering resistance to heat, humidity, moisture, and shock and vibration, the series features a small footprint of 23 x 22 mm (0.90 x 0.86 in) and covers most primary and secondary voltages. The mini-line series also includes a small transformer with a height of 12 mm (0.47 in) and a mass of 18 g (0.58 oz) that

requires minimal space on circuit boards or in equipment housings. For more information, circle 10



Measurement station

A shaft lead measurement station from **Metrology Resource** evaluates sealing areas for lead on ground and turn surfaces of engines, gear shafts, and flanges to prevent leaks. The Lead Measurement Tool (LMT) takes a 3-D profile and surface roughness measurement across the full circumference of a workpiece using a linear variable differential transformer (LVDT) stylus pickup. Lead parameters include lead angle, lead pitch, and number of grooves per revolution, length, lead depth, and theoretical oil transport cross

section. The standard LMT station is 47 in (1200 mm) high with a mass of 150 lb (70 kg).

For more information, circle 11



Long-life battery

EnerSys has come out with a starting, lighting, and ignition battery which the company promises will last up to three times as long as conventional batteries. The 12-V Odyssey PC2250 is suitable for buses and RVs as well as for marine, agricultural, and construction vehicles. The sealed battery design does not require the addition of water and the terminals do not need to be cleaned or retightened after installation. The PC2250 also features a service life of six years and a two-year storage life at room temperature. Rugged con-

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For more information, circle 12



Military switches

Snap-Action Rotary Switches from **Electroswitch** comply with military specifications for ac or dc switching in high-shock, high-vibration environments. The switches feature a 10-ms contact transfer time not affected by the operator and are available with up to 12 poles and up to four positions. Fully enclosed decks and sturdy glass alkyd moldings provide insulated compartments for contact separation. Extended stationary contact and standard

double-wiping contacts reduce resistance. Stationary contacts can be non-shorting, shorting, or sweep style, while rotor blades can be simple, right-angle, or multi-fingered. Switches also can be configured with a selection of electrical ratings and contact configurations for specialized applications.

For more information, circle 13



Rugged switch

Compact MicroRelay switches from **Cole Hersee** accept loads up to 25 A at 12 V dc and act as remote switching devices. The relays allow for smaller wiring from switches to remotely turn on or off a heavy current cycle and are suitable for a variety of heavy-duty trucking applications, including lamp control, horns, power windows, fuel pumps, fans, and

lift gates. The switches are weather-resistant and feature silver-alloy contacts to lengthen life.

For more information, circle 14



Motor reverser

Teledyne Relays offers a three-phase induction motor reverser that can be used safely to turn on an industrial motor in either direction. The Series EMCRT is designed to control and invert the direction of a three-phase motor with a maximum current of 50 A. The reversers incorporate high-immunity components and can be mounted on a data index number rail or attached with screws. Designed for cranes and three-phase motor applications, the units measure 3.94 x 2.99 x 2.22 in (100 x 76 x 56 mm), have a mass of 4.58 oz (130 g), and operate at 400 V ac.

For more information, circle 15



Foam tape

For applications requiring conformability, compressibility, and improved shear strength, **MACTac** offers MACmount double-coated, closed-cell, polyethylene foam tapes. Available with rubber or acrylic-based adhesives, the tapes provide gap filling, sound and vibration damping, sealing, and mounting capabilities for a variety of materials including low surface energy plastics. MACmount tapes are suitable for applications in the transportation, electronics, and construction industries. Benefits include reduced production time, improved aesthetics by eliminating surface bumps, and reduction of organic compounds caused by liquid or spray adhesives.

For more information, circle 16



Vibration meter

Columbia Research Laboratories' Model VM-300 handheld vibration meter offers routine vibration checks of industrial machinery and general field use where portability is required. The Model VM-300 operates from a rugged, precision piezoelectric accelerometer and incorporates a charge amplifier input stage for stability and to minimize errors. Operation is controlled by an internal integrated micro-controller under direction of a splash-resistant seven-key membrane keypad. The accelerometer outputs an electrical charge proportional to the instantaneous value of the applied acceleration; the charge signal is then communicated to the unit through a low-noise coaxial cable. Other features include dual power, low-voltage lockout circuit, automatic 10-min timeout, and an optional printer.

For more information, circle 18



Brake system

MICO offers an object detection and brake interlock system to provide extra safety and protection while backing up for a variety of vehicles in the construction industry. The system unites the MICO 691 Brake Lock and the PreView radar object detection system from **Preco Electronics** to automatically intervene on the operator's behalf instead of just providing a warning. Initiated when the equipment shifts to reverse, the PreView radar detects both stationary and moving objects within the cone of the radar signal. An onboard display module provides both visible and audible indication to the operator when an object is identified at distances up to 26 ft (8 m).

For more information, circle 17

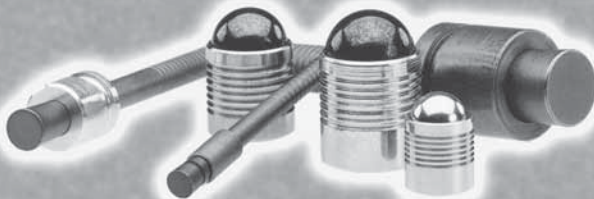
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