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Encoders specified for low speed applications including printer motors, machine automation...

OPTEK DEVELOPS MINIATURE SINGLE- AND DUAL-CHANNEL INCREMENTAL ENCODERS

CARROLLTON, TX (August 6, 2009) — Providing design engineers with miniature devices designed for general encoding of low speed applications, TT electronics OPTEK Technology has developed a family of single- and dual-channel incremental encoders. Designated the OPE1275 single-channel (tachometer) and OPE2275 dual-channel encoders, the analog output encoders are designed for small shaft motors with a diameter of 2mm (0.079”) and a minimum length of 3.8mm (0.150”). The encoders feature 256 pulses per revolution, with a maximum of 5,000 RPM.

“These incremental encoders are the least expensive encoders available in their size range on the market today, by as much as \$40 each,” said Alan Bennett, vice president of sales for OPTEK Technology. “The encoders also feature extended capabilities in that the single-channel device features a rise and fall pulse, providing two slopes for each pulse, thus doubling the count capability; while the rise and fall pulse of the OPE2275 encoder is in a quadrature pattern, providing design engineers four times the pulse-per-revolution count.”

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Typical applications for the single- and dual-channel encoders include printer motors,

machine automation, and machine safety.

The OPE1275 encoder provides a single-channel analog output for speed of rotation, while the OPE2275 device provides a dual-channel analog output for speed and direction of rotation. Electrical connection is achieved via a 4-pin Molex 53048-0410 connector providing V+, ground and output pins. The mating connector is a 4-pin Molex 51021-0400 (Terminal pin 50058 or 50079) or equivalent.

The extended shaft versions of the OPE1275 and OPE2275 encoders are fully assembled and ready for immediate connection. Mounting of the hollow shaft version of the encoders is achieved with a stick-on transfer adhesive pre-applied to the back of the housing.

Frequency response ranges from DC to 25kHz, providing a maximum of 256 cycles per revolution (CPR) and 1024 quadrature states per revolution (PPR). Typical rise and fall times are 500ns and 100ns, respectively. Supply voltage (V_{CC}) is 5.0, while supply current (I_{CC}) is 21mA. Operating temperature ranges from 0°C to +85°C.

Typical pricing for the OPE1275 and OPE2275 incremental encoders is approximately \$23.89 each in quantities of 1-99 pieces. Lead time, if stock is not available, is from 6 to 8 weeks.

For more information about OPTEK's incremental encoders, contact TT electronics OPTEK Technology at 1645 Wallace Dr., Carrollton, TX, 75006; call 972-323-2200, or visit OPTEK on the web at <http://www.optekinc.com/viewparts.aspx?categoryID=84>.

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OPTEK is a leading manufacturing and solutions provider for sensing and illumination covering the infrared, visible and ultraviolet spectrum; with standard as well as application specific products for a variety of markets, including, but not limited to office machines, industrial

equipment, encoders, automotive electronics, military and high-reliability applications, medical diagnostic equipment and solid-state lighting. Headquartered in Carrollton, TX, the company is ISO/TS16949:2002 and BS EN ISO 9001:2000 certified, as well as ITAR registered. OPTEK Technology was acquired by TT electronics in December 2003.

TT electronics plc is a global electronics company manufacturing a broad range of advanced electronic components, assemblies and sensor modules for the automotive, industrial, telecommunication, computer and aerospace markets.