



*Reflective switch designed for assembly line, vending machine, automation equipment...*

## **TT electronics OPTEK Technology enhances long distance reflective switch with adjustable sensitivity**

**Carrollton, TX, June 17 2010:** Providing design engineers with an adjustable reflective switch to meet a number of non-contact reflective object sensing application needs, TT electronics OPTEK Technology has enhanced its long distance reflective switch with adjustable sensitivity and simplified mounting. The OPB725A-18Z device uses an infrared LED and a logic output sensor in a reflective switch configuration, and features a reflective sensing distance of up to 24" depending on the object.

"The OPB725A-18Z switch includes an externally-accessible trimpot, which allows customers to adjust the sensitivity of the device depending on their application-specific needs," said Don Cook, product engineer for TT electronics OPTEK Technology. "The device is shipped with two M18 x 1mm plastic nuts to allow for easy mounting into an 18mm (+0.2/-0) hole. The switch is ideal for use in applications that require feedback on the presence or absence of an object, such as vending machines, mail sorters and conveyor belts."

The OPB725A-18Z switch is tested to ensure detection of an 8" x 8" 90% diffuse reflective white card at a distance of 18", with the sensitivity set to maximum (clockwise rotation) by the trimpot, which is accessible through a 4.3mm diameter hole in the sensor body.

Additional applications for the OPB725A-18Z long distance reflective switch include assembly line and machine automation, equipment security, machine safety, as well as door and end-of-travel sensing.

The OPB725A-18Z long distance reflective switch features an 850nm LED, and is offered with 48" (122cm) 26 AWG wires with mounting nuts. Power dissipation is 250mW, maximum collector voltage is 30V, and collector DC current is 50mA. Operating temperature ranges from 0°C to +50°C.

While an object is in the reflective path of the switch, light from the LED is reflected back to the housing, irradiating the surface of the logic output sensor. This causes the output NPN transistor to turn "on," providing a "low" (0.8V max) output voltage when connected to the appropriate value pull-up resistor. When the infrared light from the LED is not reflected to the Photologic sensor, the output transistor turns "off," minimizing the  $I_{C(ON)}$  current and providing a "high" (22V min) output.



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**About OPTEK Technology**

OPTEK Technology, a division of TT electronics, 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.

**About TT electronics PLC**

TT electronics plc is a focused, global electronics group supplying leading manufacturers in the defense, aerospace, medical, transportation and industrial markets. The Group consists of five divisions: Components, Sensors, Secure Power, Integrated Manufacturing Services and General Industrial each delivering technology, products and services to customers in target markets worldwide. TT electronics plc operates from headquarters based in Weybridge, Surrey, with more than 20 global manufacturing locations and more than 6,000 employees worldwide.

Additional information is available from our corporate website: <http://www.ttelectronics.com/>.

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