



## SEEING IS BELIEVING - A Miniature 3 Channel Optical Encoder!

Escalate your reputation for safety with Elesta's reliable **forcibly guided safety SIS Series PCB Relays** from Willow Technologies Ltd. ([www.willow.co.uk](http://www.willow.co.uk))! Elesta have just added this miniature 3 channel optical encoder, in 7 x 13mm aluminium housing, to its wide product portfolio.

John Merrill, Relays Product Manager at Willow, commented "This optical encoder is one of the smallest on the market, it has been fitted with 2 precision ball bearings guaranteeing exceptionally smooth running and a long service life at speeds of up to 80,000 rpm! Even at these high speeds, a very exact signal quality and accuracy is achieved."



Inside the miniature housing is the patented unique Elesta encoder system - the E OI R, an integrated system operating on the basis of a new optical focussing incidental light method.

Within the integrated system are multiple reflective parabolic shaped concave mirrors, forming the code segments of the code wheel. The clever design of the mirrors reflect only an extremely clear and steep concentration of light from the transmitter LED, ensuring exact signal quality and accuracy across the entire speed range. The encoder delivers 128 pulses at any rotation speed, to two outputs that are phase shifted by 90°. The third channel provides one index pulse per revolution.

"The encoder is designed to operate with 4 mA current at 5V, making it ideal for battery-powered applications." Continued Merrill.

The E OI R007 housing is mounted using grub screws, securely braced against rotation. Coupling of the encoder with commercial clutch elements for connection to motors, gearboxes or the like, are just as straightforward as the adaptation of potentiometer knobs with clamps or a fixing screw. The chamfered output shaft has a diameter of 2 mm and is flattened on two sides. Dental drills and general robotics are typical applications.

"Willow and Elesta have an excellent relationship and work together to provide extensive design support. It is possible to evaluate individual solutions integrating the encoder housing or using customer-specific systems or housing. The optical encoder is also available as a modular system in kit form, giving customers the option to integrate the sensor and code wheel kit in an existing housing, motor or system." Concluded Merrill

[Elesta Optical Encoders from Willow](#)



### About Willow Technologies Limited

Founded in 1989, Willow Technologies is located in Copthorne, West Sussex in the UK. We provide electronic solutions to customers by designing, manufacturing and supplying components and systems globally to the electrical and electronic marketplace. Specialists in switching, sensing, resistive and hermetic seal solutions we have a wide portfolio of sensing technologies and over 60 years of application experience. Our in-house engineering capability and rapid prototyping facility for custom parts enable us to develop products to match specific application requirements. Willow is ISO9001:2000 registered.

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