

## New true absolute angle encoder is suitable for low temperature environments

**Renishaw's new RESOLUTE™ ETR (Extended Temperature Range) encoder brings all the benefits of the revolutionary RESOLUTE absolute, fine pitch angle encoder to harsh, low-temperature applications. With operation guaranteed down to -40 °C (-40 °F) in non-condensing environments, RESOLUTE ETR is highly suited for use in demanding applications such as telescopes, scientific research, military and aerospace.**

With solid stainless steel scales and high vibration resistance, the RESOLUTE ETR absolute encoder has been designed to withstand the physical punishment of harsh environments, yet still offer outstanding metrology, exceptionally high speeds and excellent reliability on rotary axes.

Motion system designers will also benefit from the new encoder's modular, non-contact format that has zero friction between the readhead and ring. This arrangement facilitates the use of a directly-mounted scale, eliminating flexible couplings from the system, and therefore provides far greater dynamic performance and improved repeatability.

Reliability of position data is also assured by RESOLUTE ETR's excellent dirt immunity, and its built-in separate position-checking algorithm which actively checks every reading to ensure that any potential problem is flagged before it reaches the controller. Combined with wide set-up and running tolerances, the new absolute encoder can continue working even in the harshest environments.

Along with its new rugged design, the RESOLUTE ETR absolute encoder also combines fine resolution (18, 26 or 32 bit) with exceptional speed capability of 18000 rev/min or 52 metres/second. Furthermore, the advanced optics and detection method intrinsically provide very low sub-divisional error (SDE) of  $\pm 40$  nm and

ultra-low noise (jitter) of less than 10 nm RMS. The result is enhanced velocity ripple performance and rock solid positional stability, meaning axes can be accelerated and decelerated faster, settle to target position more quickly and more precisely, and track objects with greater accuracy.



All RESOLUTE ETR absolute encoder readheads are fitted with a waterproof, breathable membrane in the lid that preserves IP64 sealing, whilst allowing dry air to circulate inside the readhead when placed in a desiccated environment.

As with all Renishaw encoders, the new RESOLUTE ETR absolute encoder is backed by a truly responsive global sales and support network, and satisfies the highest environmental standards, with both WEEE and RoHS compliance.

For more information on this product, please visit:

[www.renishaw.com/encoders](http://www.renishaw.com/encoders)

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