

New high accuracy encoder scale for flat panel applications

With ± 30 nm cyclic error, patented filtering optics, resolution to 5 nm and simple installation, Renishaw's SiGNUM™ RSLM encoder system provides all of the benefits of a 20 μ m encoder with the performance of a fine pitch system.



Renishaw's SiGNUM™ range offers high speed, reliable, non-contact performance combined with advanced features including the *IN-TRAC*™ auto-phase optical reference mark and dynamic signal processing. The RSLM spar scale is a new addition to the range, which offers performance to rival fine pitch glass scales at lengths far beyond their reach.

RSLM scale is available in defined lengths up to 5 m with an overall accuracy better than ± 4 μ m - an industry first! Combined with the ultra-low ± 30 nm sub-divisional error (SDE) of the SiGNUM™ encoder, RSLM is perfect for long travel applications where metrology cannot be compromised.

The *IN-TRAC*™ optical reference mark provides a bi-directionally repeatable datum point across the entire speed and temperature range (over 12 m/s and up to 85 °C) without increasing overall system width. RSLM is available with multiple *IN-TRAC*™ optical reference marks regularly spaced for customer selection or a single reference mark, either at the centre of the scale or close to the end of the scale. Dual optical limits provide easy-to-use end-of-travel indication.



Manufactured from a hard martensitic stainless steel, RSLM offers a low coefficient of thermal expansion (10.8 μ m/m/°C), yet its special composition provides a high resistance to corrosion. SiGNUM™ RSLM is as easy to use as tape scale, yet is as accurate as fine pitch glass scale. The robust scale offers a much smaller cross section than typical glass scales, allowing easier handling and installation without risk of breakage. In addition, RSLM can be coiled for simple storage and handling yet behaves as a spar scale once uncoiled. System designers can choose between clip and clamp mounting, or adhesive tape with epoxy anchor point, to suit their requirements.

The SR readhead features Renishaw's

unique filtering optics to provide excellent immunity to dirt, dust and scratches. Like all SiGNUM™ encoders, the RSLM encoder system benefits from SiGNUM™ intelligent signal processing, which ensures excellent reliability and ultra-low sub-divisional error. In addition, SiGNUM™ software enables optimum set-up and real-time system diagnostics via a PC's USB port.

As with all Renishaw products, the SiGNUM™ range is backed-up by a worldwide team offering truly responsive global support.

Visit www.renishaw.com/encoders for full details.