

Fibre optic laser encoder products

RLU laser units

RLU10 laser unit

With a laser frequency stability of ± 50 ppb over any one hour period, the RLU10 is a practical and cost effective solution for the majority of 'in-air' applications.



RLU20 laser unit

For applications which require the highest measurement performance, such as vacuum applications. The RLU20 offers a laser frequency stability of ± 2 ppb over any one hour period.



RLD heads

RLD10 plane mirror interferometer

The RLD10-PMI (Plane Mirror Interferometer) is a double pass system configured for applications where a plane mirror is required (for example XY stage applications).



RLD10 retroreflector interferometer

The RLD10-RRI (Retroreflector Interferometer) is a single pass interferometer configured for applications where a retroreflector is required (for example longer range or higher speed applications).



RLD10 differential interferometer

The RLD10 DI (Differential Interferometer) is a double pass interferometer system designed to provide a differential measurement. Ideally suited for vacuum chamber applications.



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Россия +7(495)268-04-70

Казахстан +7(7172)727-132

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<https://renishaw.nt-rt.ru/> || rwe@nt-rt.ru

RLD10 no internal interferometer

The RLD10-XX (no internal interferometer) detector head is designed with no internal interferometer optics. This allows the head to be used in a sequence with specialist optics to achieve linear, angular and straightness measurements.



Compensator

RCU10 real-time quadrature compensation system

Utilises environmental sensors to monitor a machine's ambient environment and provides real-time compensation of the position feedback signals.



Laser encoder interfaces

RPI30 parallel interface

The RPI30 accepts differential analogue 1 Vpp sine/cosine signals, interpolates by 4096 and provides an output in parallel format with up to 36-bits of position data being available.



RPI20 parallel interface

Accepts differential analogue 1 Vpp sine / cosine signals and interpolates by 4096 to provide a 36-bit parallel format output with resolution capability of 38.6 picometres at 1 m/s.



RLI20-P laser interface - Panasonic

Using a 1 Vpp sine / cosine signal from an RLE system the RLI20-P provides the interface to Panasonic (MINAS A5 series) controllers.



RSU10 USB interface

The RSU10 USB interface accepts 1 Vpp sine / cosine signals from an RLE system, interpolates by 16,384 and provides a position reading via a USB port.



REE interpolators

The REE range of interpolators offers a simple 'plug and play' solution for lower levels of signal interpolation, increasing the resolution of the digital quadrature output signal by a factor of more than 20.



Mirrors and optics

Mirrors and accessories

Highly reflective plane mirrors with easily adjustable mirror mounts and vacuum chamber windows with minimal signal loss. These mirrors and optics have been specified to achieve the highest performance for your laser encoder system.



15 mm DI periscope assembly

The periscope assembly increases the offset between the measurement and reference beams of the RLD10-X3-DI differential interferometer detector head.



RVI20 vacuum compatible interferometer

Offers the ability to keep the entire measurement path within the vacuum environment when used with the RLD10-A3-XX detector head.



RMAP multi-axis periscope

Renishaw's multi-axis periscope is designed to enable six degrees of freedom measurement in XY stage applications, utilising the performance from the RLD10-X3-DI interferometer head, to accurately measure pitch, yaw and roll.



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