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*For immediate release*

**Cutting edge absolute linear encoder is now available with Panasonic serial communications protocol.**

Renishaw's RESOLUTE™ absolute optical encoder is now compatible with the Panasonic serial communications protocol in linear encoder formats. This allows RESOLUTE to be used with Pansonic’s MINAS A5 range of drives, which are often employed in industries such as electronics assembly, semiconductor processing and flat panel display manufacturing.

A priority for these industries is to increase throughput, and maximise yields, thus the choice of encoder for accurate motion control is crucial. RESOLUTE true absolute encoders are the key to highly dynamic axes that can be run harder, for longer; increasing work output and maximising up-time and yield. Axes run more smoothly with less vibration thus reducing the risk of damage to fragile products. This is crucial in areas such as wafer dicing and chip packaging where attempts to use thinner silicon wafers make the process more fragile and susceptible to microcracks.

RESOLUTE is a true absolute encoder, meaning it accurately reports the position of axes immediately upon switch-on,prior to any movement. This eliminates the need for reference returns and provides instant commutation for linear motors, so machines can be re-started more quickly and in a controlled, safe manner. Indeed, if work is in progress and a machine suffers power loss, the RESOLUTE absolute encoder allows the machine to maintain complete control and security of valuable parts. For example, fragile silicon wafers can be extracted safely, with greatly reduced risk of collision.

RESOLUTE linear encoders with Panasonic protocol boast sub-micron accuracy, a super-fine resolution of 1 nm and impressively high speeds of up to 40 m/s, whilst ensuring excellent electro-magnetic immunity. RESOLUTE is ideal for machine builders who demand more performance from linear axes; it facilitates smoother velocity ripple, enhanced servo stiffness and confers ultra-low hysteresis errors. Furthermore, higher-fidelity position feedback means less heat is generated in the linear motors, so machine efficiency is improved.

The RESOLUTE absolute encoder achieves this unique combination of performance because it works in a completely different way to any other encoder: RESOLUTE is analogous to a miniature, ultra-fast digital camera, taking photos of coded scale. The pictures include redundant data which is cross-checked by error-rejecting algorithms within the readhead, to confer outstanding immunity to dirt and contamination. Unique to RESOLUTE, further data-processing continually monitors position to ensure the integrity of output data and hence safety of operation. The scale is arranged as a single-track of code, which combines absolute position with incremental phase. Compared to the traditional arrangement with 2 or more tracks, RESOLUTE allows far greater set-up tolerances and delivers excellent immunity to dirt, scratches and light oils on the scale.

RESOLUTE absolute encoders use sophisticated optics to read a variety of fine-pitch, single-track linear scales. Scales include the RELA Invar® spar scale offering 'zero' thermal expansion and ±1 µm accuracy on lengths up to 1130 mm, RSLA stainless steel spars with a total accuracy of ±4 µm over 5 m, and *FASTRACK*™ RTLA for the quickest and easiest installation offering ±5 µm/m accuracy and lengths up to 10 m (up to 5 m on self-adhesive RTLA-S).

The RESOLUTE absolute encoder range is also available with other protocols, including FANUC and *BiSS*®*,* and in rotary format. RESOLUTE is RoHS/WEEE compliant, has CE approval, is manufactured in-house by Renishaw under strict quality controls that are certified to ISO9001:2008, and like all Renishaw encoders, is backed by a truly responsive global sales and support network.

Invar® is a registered trademark of Arcelor Mittal.

*BiSS*® is a registered trademark of iC-Haus.

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