

RGS40-G glass encoder system



The RGS40-G is a 40 µm chrome on glass scale designed for use with Renishaw's RG4 series RGH40 filtering readheads.

The RGS40-G system offers many of the features that have made Renishaw's famous RGS tape scale such a success - high-speed, non-contact optical performance that is immune to dust, light oil and scratches.

The RGH40 benefits from filtering optics and an integral set-up LED which ensure easy installation and reliable operation.

The RGS40-G scale is easy to install and can be mounted directly to the substrate using either mechanical clips or specially formulated adhesive.

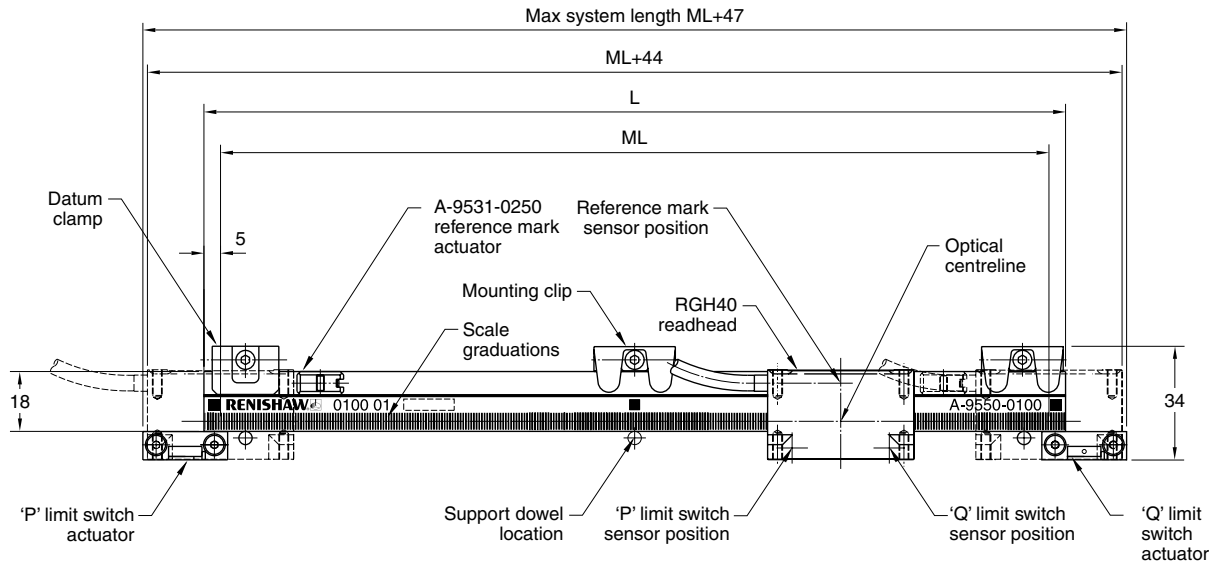
In addition to these features, the RGS40-G is ideally suited for applications where the scale does not need to be mastered to the substrate. The thermal behaviour of RGS40-G can be compensated for by simply entering the coefficient of expansion of the scale into the host controller.

The RGS40-G boasts an extensive list of application areas e.g. linear motion stages, linear motors, scientific instruments, metrology instruments, optical inspection, XY stages, medical equipment.

- Suitable for use with RGH40 series readheads
- Available in 8 convenient lengths
- Defined thermal behaviour
- Reliable dirt immunity
- Compatible with reference marks and limit switches
- Clamp or adhesive mounting options
- Can be mounted on any substrate
- 3 x 18 mm cross section for compact installation

RGS40-G glass scale installation (datum clamp and mounting clip method shown)

All dimensions in mm



Actual length L (mm)	130	180	230	280	310	510	760	1010
Measuring length ML (mm)	120	170	220	270	300	500	750	1000
Recommended number of support dowels	3	3	3	3	3	3	4	5
Accuracy (µm) (SDE not Included)	± 0.7	± 0.9	± 1.1	± 1.3	± 1.4	± 2.2	± 3.2	± 4.2

Scale	Type	Chrome on glass	
	Pitch	40 µm at 20 °C	
	Thermal expansion	Approximately 8.5 µm/m/°C	
	Fixings	Epoxy adhesive and adhesive tape or datum clamp and mounting clips	
Reference mark	Type	Adjustable magnetic actuator A-9531-0250	
	Mounting	Epoxy adhesive	
	Position	One or more user selected locations fitted directly onto the scale spar	
	Repeatability	Output synchronised with incremental channels (see RGH40 readhead Data Sheet L-9517-9110) and repeatability (uni-directional) maintained within these conditions: Temperature range: ± 20 °C from installation temperature Magnetic field: steady ± 0.02 T or changing ± 7.5 T/s	
Limit switch	Type	Magnetic actuator	
	Options available	10 mm screw mounted 'P' limit actuator	10 mm adhesive mounted actuator
		10 mm screw mounted 'Q' limit actuator	24 mm adhesive mounted actuator
			50 mm adhesive mounted actuator
	Position	One or more user selected locations	
	Repeatability	< 0.1 mm asynchronous output (see RGH40 readhead Data Sheet L-9517-9110)	

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