









Renishaw's optical linear readheads

Product name	Outputs (resolution)	Reference mark	Limit switches	Maximum speed	Interpolation	Alarm signal format	IP rating	Scale types	Ride height tolerance	Set-up LED	Operating temperature	Cable	Minimum customer clock	Vacuum compatible
 RGH22	RS422: 5 µm, 1 µm, 0.5 µm, 0.1 µm, 50 nm Analogue: 1 Vpp, 12 µA	Magnetic actuator	Single or dual limits	10 m/s	Internal	Differential alarm or 3-state	IP50	RGS20-S tape scale	0.8 ±0.1 mm	On readhead	0 °C to 55 °C	Hi-flex, 12 core up to 5 m	20 MHz, 10 MHz, 5 MHz (for 0.1 µm and 50 nm)	No
 RGH24	RS422: 5 µm, 1 µm, 0.5 µm, 0.2 µm, 0.1 µm, 50 nm, 20 nm, 10 nm Analogue: 1 Vpp, 12 µA	Magnetic actuator	Single limit	10 m/s	Internal	3-state	IP40	RGS20-S tape scale	0.8 ±0.1 mm	On readhead	0 °C to 55 °C	Hi-flex, 8 core up to 5 m	12 MHz, 8 MHz, 6 MHz, 4 MHz (for 0.2 µm, 0.1 µm and 50 nm)	No
 RGH25	RS422: 5 µm, 1 µm, 0.5 µm, 0.2 µm, 0.1 µm, 50 nm, 20 nm, 10 nm Analogue: 1 Vpp, 12 µA	Magnetic actuator	Single limit	10 m/s	RGB25 (x4 to x400) RGF (x100 to x2000)	Differential alarm or 3-state	IP40	RGS20-S tape scale	0.8 ±0.1 mm	On interface	0 °C to 55 °C	Hi-flex, 8 core up to 5 m	20 MHz, 10 MHz, 5 MHz (for 0.1 µm and 50 nm)	RGH25U UHV, RGH25F UHV, RGH20F UHV Ultra high vacuum compatible readhead systems
 RGH26	5 µm, 1 µm, 0.5 µm Mitsubishi serial outputs	Magnetic actuator	Dual limits	6 m/s	Internal	N/A	IP50	RGS20-S tape scale	0.8 ±0.1 mm	On readhead	0 °C to 55 °C	Hi-flex, 12 core up to 5 m	N/A	No
 RGH34	RS422: 10 µm, 5 µm, 2 µm, 1 µm, 0.4 µm, 0.2 µm, 0.1 µm Analogue: 1 Vpp with RGI34 interface	Magnetic actuator	Single limit	8 m/s	RGI34 interface (x4 to x400)	3-State	0	RGS40-S tape scale, RGS40-G glass scale	1.5 ±0.15 mm	On RGI34 interface	0 °C to 55 °C	FPC cable up to 150 mm between head and interface	12 MHz, 8 MHz, 6 MHz, 4 MHz (for 0.4 µm, 0.2 µm and 0.1 µm)	No
 RGH40	RS422: 10 µm, 5 µm, 2 µm, 1 µm, 0.4 µm, 0.2 µm, 0.1 µm Analogue: 1 Vpp	Magnetic actuator	Dual limits	10 m/s	Internal	Differential alarm or 3-state	IP50	RGS40-G glass scale	0.8 ±0.15 mm	On readhead	0 °C to 55 °C	Hi-flex, 12 core up to 5 m	20 MHz, 10 MHz, 5 MHz (for 0.1 µm and 50 nm)	No
 RGH41	RS422: 10 µm, 5 µm, 2 µm, 1 µm, 0.4 µm, 0.2 µm, 0.1 µm Analogue: 1 Vpp	Magnetic actuator	Dual limits	15 m/s	Internal	Differential alarm or 3-state	IP50	RGS40-S tape scale	0.8 ±0.15 mm	On readhead	0 °C to 55 °C	Hi-flex, 12 core up to 5 m	N/A	No
 SR	RS422: 5 µm, 1 µm, 0.5 µm, 0.2 µm, 0.1 µm, 50 nm, 20 nm, 10 nm, 5nm Analogue: 1Vpp	<i>IN-TRAC</i> ™ auto-phase optical	Customer positioned optical dual limits	12.5 m/s	Si interface (x4 to x4000)		IP64 - 'recoverable readhead'	20 µm RELM Invar scale, 20 µm RSLM stainless steel scale	0.8 ±0.08 mm	On readhead and Si interface	0 °C to 85 °C	UL hi-flex, 12 core up to 10 m	40 MHz, 20 MHz, 12 MHz, 10 MHz, 8 MHz, 6 MHz, 4 MHz, 1 MHz on all resolutions	No