

BH

BH20-RE / BH20-NE
(with origin) / (without origin)

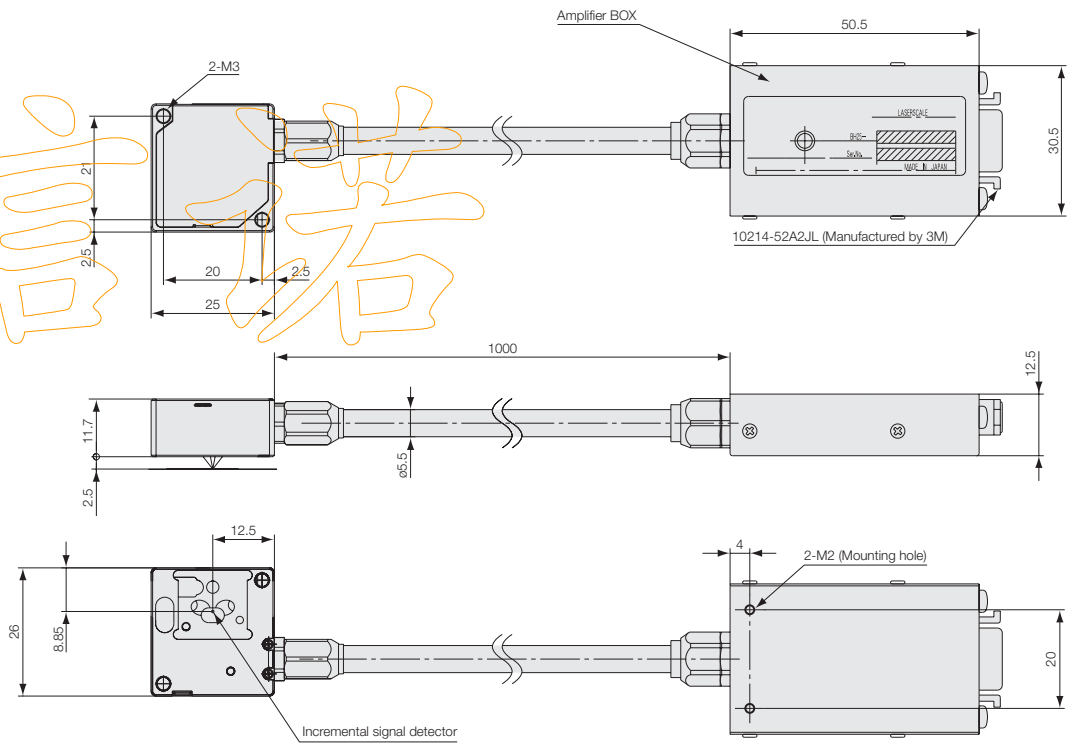
Compact, reflective rotary Laserscale featuring high accuracy, high resolution and high response speed.
Ideal for high-resolution angle measuring in HDD manufacturing equipment, precision measuring instruments, and aspheric surface processing machines.



- Signal wavelength : 250nm
- High-speed response : 1,500mm/s (When using analog output), 700mm/s(When using interpolator BD96) 160 min⁻¹ (when using r=41mm scale) 555 min⁻¹(when using r=12mm scale)
- High resolution : 4,294,967,296 pulses/rotation (when using r=41mm scale, divisions=4096) 3.017 x 10⁻⁴sec (when using r=41mm scale) 1.46nrad (when using r=41mm scale)
- Available with/without reference point
- Thin head with thickness of 12mm
- Interpolators with various resolutions and output modes available
- Special nonmagnetic and vacuum-compatible models available

External Dimensions

● BH20-NED



Unit: mm

Main specifications

Detection head	BH20-RED	BH20-NED
Detection system	Diffraction grating scanning system	
Light source	Semiconductor laser with power of 6mW or less and wavelength of 790nm	
Reference point	Single reference point; single -direction detection	None
Grating pitch	1.0μm	
Signal pitch	250μm	
Reference point	With reference point	None
Direction of starting point detection	For one	None
Scale	Linear scale : 7 to 18mm (scale : Ni-Co or Si) Rotary scale : Radius 6.016, 9.454, 12.032, 27.073, 36.097mm (rotary scale Ni-Co)	
Maximum response speed	1,500mm/s(When using analog output),700mm/s(When using interpolator BD96)	
Operating temperature range	+10°C to +30°C no condensation. Avoid operating under high humidity.	
Storage temperature range	±0°C to +50°C no condensation. Avoid operating under high humidity.	

Film scale (BE10)

Detection radius		12.032mm	27.073mm	36.097mm	41.723mm
Detection track	Max.radius	13.532mm	28.573mm	37.597mm	43.523mm
	Min.radius	10.532mm	25.573mm	34.597mm	40.597mm
External form	Internal diameter	7.7mm	19.77mm	29.00mm	34mm
	External diameter	13.45mm	28.57mm	37.60mm	43.523mm
Scale diameter		20mm	59mm	77mm	87mm
Number of output pulse of one rotation		302400	680400	907200	1048576
Maximum response speed *		1190 min ⁻¹	529 min ⁻¹	396 min ⁻¹	343min ⁻¹

* When using cable length 1m and Analog output. However, the Max.response speed is limited depending on the cable length.

