

BH

BH20-RE / BH20-NE
(with/without reference point)

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 pitch : 250nm
- High response speed : 1,800mm/s (When using analog output), 700mm/s(When connected with BD96)
160 min⁻¹ (when using r=41mm scale)
555 min⁻¹(when using r=12mm scale)
- High resolution : 4,194,304,000 pulses/rotation (when using r=41mm scale, divisions=4000)
3.09 x 10⁻⁴ s
=1.5nrad
- Available with/without reference point
- Thin head with thickness of 12mm
- Interpolators with various resolutions and output modes available (BD96)
- Special vacuum-compatible models available



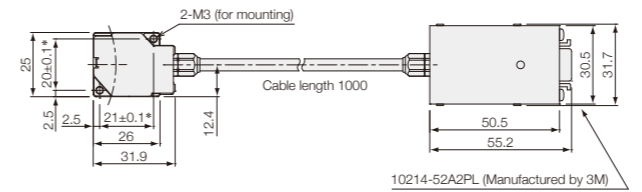
Type example : BH20-RED

D: BD96 Connected type
E: Open type scale
R: with reference point; N: without reference point
*Contact us directly for detail specifications

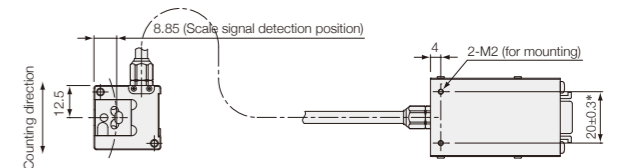
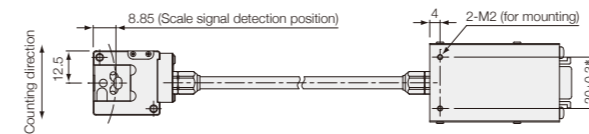
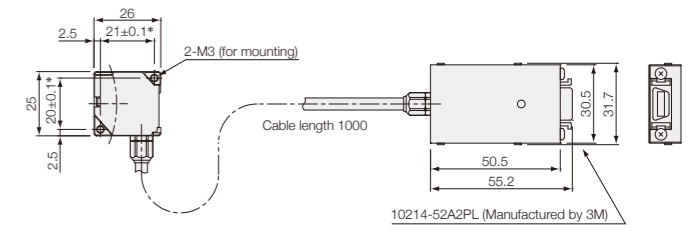
External Dimensions

● BH20-NED

Straight cable exit



Lateral cable exit



Note: The items marked by an asterisk indicate the machining dimensions on the mounting surface.

Unit: mm

Main Specifications

Detector head

Model	BH20-RED	BH20-NED
Detection principle	Diffraction grating scanning system	
Light source	Semiconductor laser : Wavelength 790nm, Output 6mW	
Signal pitch	250nm	
Reference point	With reference point	None
Reference point detection direction	Single direction	None
Max. response speed	700mm/s(When connected with BD96)	
Operating temperature	10 to 30°C (No condensation)	
Storage temperature	0 to 50°C (No condensation)	

Signal scale (BE10)

External form	Detection radius	12.032mm	27.073mm	36.097mm	41.723mm
	Internal diameter	8.5mm	37mm	57mm	68mm
External diameter	27mm	60mm	78mm	89mm	
Grating pitch	1.0μm				
Number of output pulse of one rotation	302,400	680,400	907,200	1,048,576	
Max. response speed*(Note1)	1,428 min ⁻¹	634 min ⁻¹	476 min ⁻¹	411 min ⁻¹	

Note 1: When using cable length 1m and Analog output. However, the Max.response speed is limited depending on the cable length.
Note 2: When the scale and the detector head are purchased separately, signal adjustment is required.

