

BH

BH25-RE / BH25-NE
(with/without origin)

High-accuracy, reflective Laserscale with signal wavelength of 250nm
Ideal for low-profile stages, semiconductor back-end processing equipment
and precision microscopes



Actual size

- Signal wavelength : 250nm
- High accuracy : $\pm 1\mu\text{m}/420\text{nm}$
- High response speed : 700mm/s
- Maximum resolution : 0.03125nm
- Available : with/without reference point
- Completely non-contact design Return error is theoretically eliminated.
- Scale : Blue plate glass/Low expansion glass
- Thin head with thickness of 12mm
- Supporting various resolutions and output modes (Depending on the interpolator connected.)
- Special non-magnetic and vacuum-compatible models available

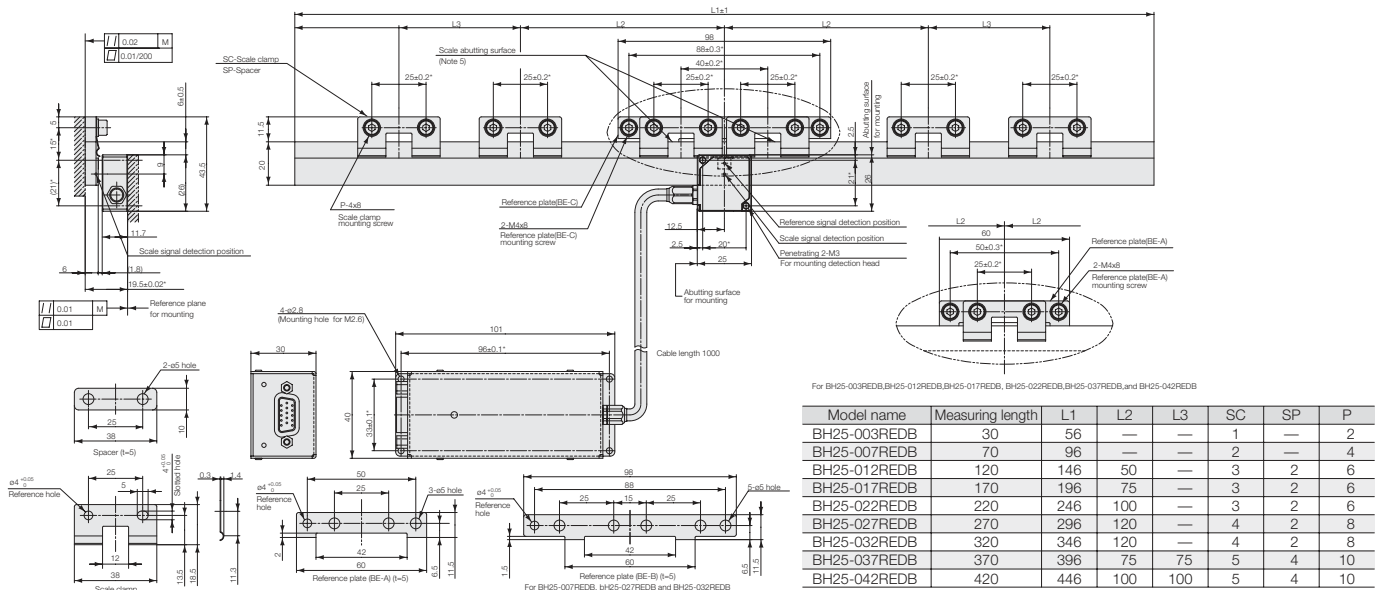


Type example : BH25-170REDB

- B: Blue plate glass;
- C: Low-expansion glass
- BD96 connection
- E: Open type scale
- R: with reference point;
- N: without reference point
- Effective length

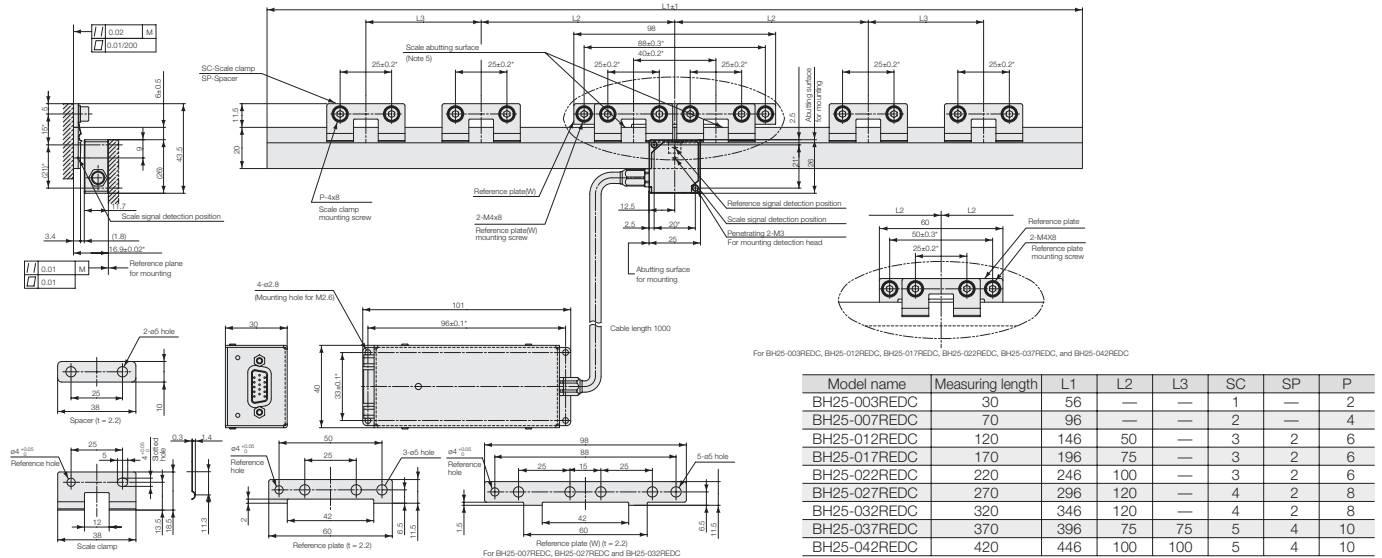
External Dimensions

● BH25-RED BH25-***REDB



Notes: 1. The items marked by an asterisk indicate the machining dimensions on the mounting surface. 2. The surface roughness of the scale mounting surface is $R_{max} = 6.3S(250\mu\text{inch})$. 3. The surface roughness of the detector head mounting surface is $R_{max} = 6.3S(250\mu\text{inch})$. 4. "M" refers to the machine guide. 5. Mount and adjust the paired reference plates so that their reference surfaces have a parallelism of 0.01 or less with respect to the machine guide.

● BH25-RED BH25-***REDC



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Unit: mm

Main specifications

Model	BH25-RED	BH25-NED
Measuring length (mm)	30/70/120/170/220/270/320/370/420 (Low expansion glass/Blue plate glass)	
Entire scale length	Measuring length +26mm	
Maximum travel length	Measuring length +10mm	
Accuracy (at 20°C)	$\pm 0.5\mu\text{m}$ (30 to 170mm) $\pm 1.0\mu\text{m}$ (220 to 420mm)	
Grating pitch	1.0 μm	
Signal pitch	250nm	
Reference point	With reference point	None
Direction of starting point detection	For one	None
Output signal	AB phase and Interpolator BD96	
Output resolution	AB phase and BD96 connection(Depend on the number of partitions.)	
Temperature coefficient	$-0.7 \times 10^{-6}/^{\circ}\text{C}$ (Low expansion glass) $8 \times 10^{-7}/^{\circ}\text{C}$ (Blue plate glass)	
Light source	Semiconductor laser Wavelength, 780nm, Maximum output 6mW	
Detection system	Diffraction grating scanning system	
Operating temperature range	+10°C to +30°C (No condensation)	
Storage temperature range	-10°C to +50°C (Humidity less than 60%)	
Maximum response speed	700mm/s (When connected with BD96)	