

LASERSCALE

BS75A-NS/N

BS76-NS/N

SALES & SERVICE:

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High accuracy laser scales with a low expansion coefficient that provide reliable, high-precision measuring with a resolution selectable from 0.0086 μm^* (BD15) and 0.1 μm (BD60)

- Comparable to a laser interferometer in accuracy and resolution.
- Accuracy: $\pm (0.025 + 0.1L) / 100 \mu\text{m}$ or less (BS75A/ 76-NS Series)
 $\pm (0.05 + 0.2L) / 100 \mu\text{m}$ or less (BS75A/ 76-N Series)
 $\pm (L = \text{measuring length in mm})$
- Resolution: 0.0086 μm (with BD15)*
- The scale glass used has an expansion coefficient of $-0.7 \times 10^{-6} \text{ }^\circ\text{C}$
- Measuring length: 30 mm to 410 mm / 1.18" to 16.14" (9 models)
- Easy installation
- Little affected by disturbed air and changing atmospheric pressure.
- Usable in vacuum of up to 10^{-5} Pa (BS76).

*A resolution of 0.00028 μm is available using BD15-T detector.

Specifications

Model	BS75A-NS/N		BS76-NS/N	
	-30NS to -410NS	-30N to -410N	-30NS to -410NS	-30N to -410N
Measuring length L mm (inch)	30/60/110/160/210/260/310/360/410 (1.18/2.36/4.33/6.29/8.26/10.23/12.20/14.17/16.14)			
Overall length	L + 36 mm/ 1.4"			
Max. travel	L + 10 mm/ 0.39"			
Accuracy (at 20 °C /68 °F)	$\pm (0.025 + 0.1L) / 100 \mu\text{m}$	$\pm (0.05 + 0.2L) / 100 \mu\text{m}$	$\pm (0.025 + 0.1L) / 100 \mu\text{m}$	$\pm (0.05 + 0.2L) / 100 \mu\text{m}$
Resolution	0.0086 μm (with BD15)			
Return error	$\pm 0.0086 \mu\text{m}$ (with BD15)			
Repeatability	$\pm 0.0086 \mu\text{m}$ (2 σ) (with BD15)			
Expansion coefficient	$-0.7 \times 10^{-6} / \text{ }^\circ\text{C}$			
Light source	Semiconductor laser			
Detection method	Diffracting grating scan			
Use in vacuum	—		Up to 10^{-5} Pa	
Design	Exposed scale			
Operating temperature	10 °C to 30 °C /50 °F to 86 °F (condensation not allowed)			
Storage temperature	-10 °C to 50 °C / 14 °F to 122 °F			
Cable length	3 m / 9.8'			
Mass	0.44/0.44/0.45/0.46/0.47/0.48/0.49/0.50/0.51 kg (0.97/0.97/1.00/1.01/1.04/1.06/1.08/1.10/1.12 lbs)			

Dimensions

Model	L1	L2	L3	N
BS75A-30NS/N	66/2.60	—	—	2
BS75A-60NS/N	96/3.78	—	—	4
BS75A-110NS/N	146/5.75	50/1.97	—	6
BS75A-160NS/N	196/7.72	75/2.95	—	6
BS75A-210NS/N	246/9.69	100/3.94	—	6
BS75A-260NS/N	296/11.65	120/4.72	—	8
BS75A-310NS/N	346/13.62	120/4.72	—	8
BS75A-360NS/N	396/15.59	75/2.95	75/2.95	10
BS75A-410NS/N	446/17.56	100/3.94	100/3.94	10

*The reference plates vary with the measuring length.

Unit : mm/inch

