

BS65-R

High accuracy laser scale with built-in optical zero point

- High accuracy, high resolution laser scale:
Accuracy: $\pm (0.05 + 0.2 L / 100) \mu\text{m}$ ($L < 460 \text{ mm}$)
($L = \text{measuring length in mm}$)
- Resolution: $0.1 \mu\text{m}$ (with BD60 detector)
- High accuracy optical zero point: $\pm 0.1 \mu\text{m}$
- Measuring length: 160 mm to 960 mm / 6.29" to 37.79"
- Easy installation
- Little affected by disturbed air and changing atmospheric pressure.

Specifications

Model	BS65-160R to BS65-960R
Measuring length L mm (inch)	160/260/360/460/560/660/760/860/960 (6.29/10.23/14.17/18.11/22.04/25.98/29.92/33.85/37.7)
Overall length	$L + 36 \text{ mm} / 1.4"$
Max. travel	$L + 10 \text{ mm} / 0.39"$
Accuracy (at 20 °C / 68 °F)	$L < 460 \text{ mm} : \pm (0.05 + 0.2 L / 100) \mu\text{m}$ or less; $L \geq 460 \text{ mm} : \pm 1.5 \mu\text{m}$
Resolution	$0.1 \mu\text{m}$ (with BD60)
Return error	$0.05 \mu\text{m}$
Repeatability	$0.05 \mu\text{m}$ (2σ)
Zero point	In the center and every 50 mm to the right and left of the center
Zero point accuracy	$\pm 0.1 \mu\text{m}$
Zero point detection	Unidirectional
Expansion coefficient	$8 \times 10^{-6} \text{ } ^\circ\text{C}$
Light source	Semiconductor laser
Detection method	Diffraction grating scan
Design	Exposed Scale
Operating temperature	$10 \text{ } ^\circ\text{C}$ to $30 \text{ } ^\circ\text{C}$ / $50 \text{ } ^\circ\text{C}$ to $86 \text{ } ^\circ\text{F}$ (condensation not allowed)
Storage temperature	$-10 \text{ } ^\circ\text{C}$ to $50 \text{ } ^\circ\text{C}$ / $14 \text{ } ^\circ\text{F}$ to $122 \text{ } ^\circ\text{F}$
Cable length	$3 \text{ m} / 9.8'$
Mass	$0.5 \text{ to } 1.0 \text{ kg} / 1.0 \text{ to } 2.2 \text{ lbs}$

Dimensions

Scale signal detecting position

Reference plate t=5

Spacer t=2

Reference plate t=5

Scale clamp

Model	L1	L2	L3	N	A
BS65-160R	196	75	—	—	6
BS65-260R	296	120	—	—	8
BS65-360R	396	75	75	1	10
BS65-460R	496	120	75	1	12
BS65-560R	596	75	75	2	14
BS65-660R	696	120	75	2	16
BS65-760R	796	75	75	3	18
BS65-860R	896	120	75	3	20
BS65-960R	996	75	75	4	22

Unit : mm/inch

