

Sealed Linear Encoder for large traverses LB 326 with machine error compensation

Incremental, sealed linear encoder with **steel tape scale**.

2 mounting attitudes

Measuring lengths up to 30 m (98.4 ft)

Single length steel tape up to 30 m (98.4 ft)

Scale housing in sections (single housing)

Single completely assembled systems up to 3040 mm (120.0 in.)

Grating period 100 μm

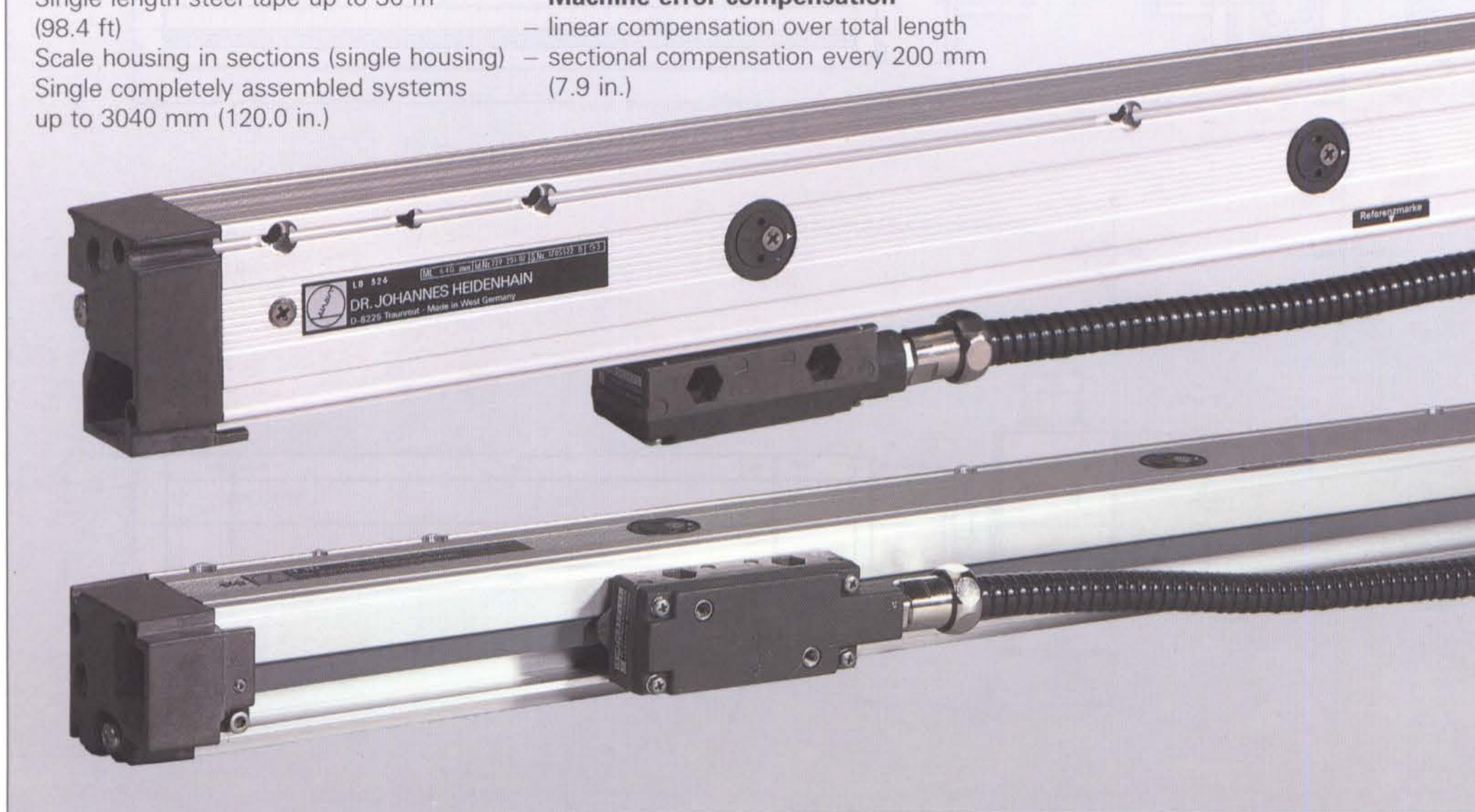
Recommended measuring steps

1 μm (0.00005 in.)

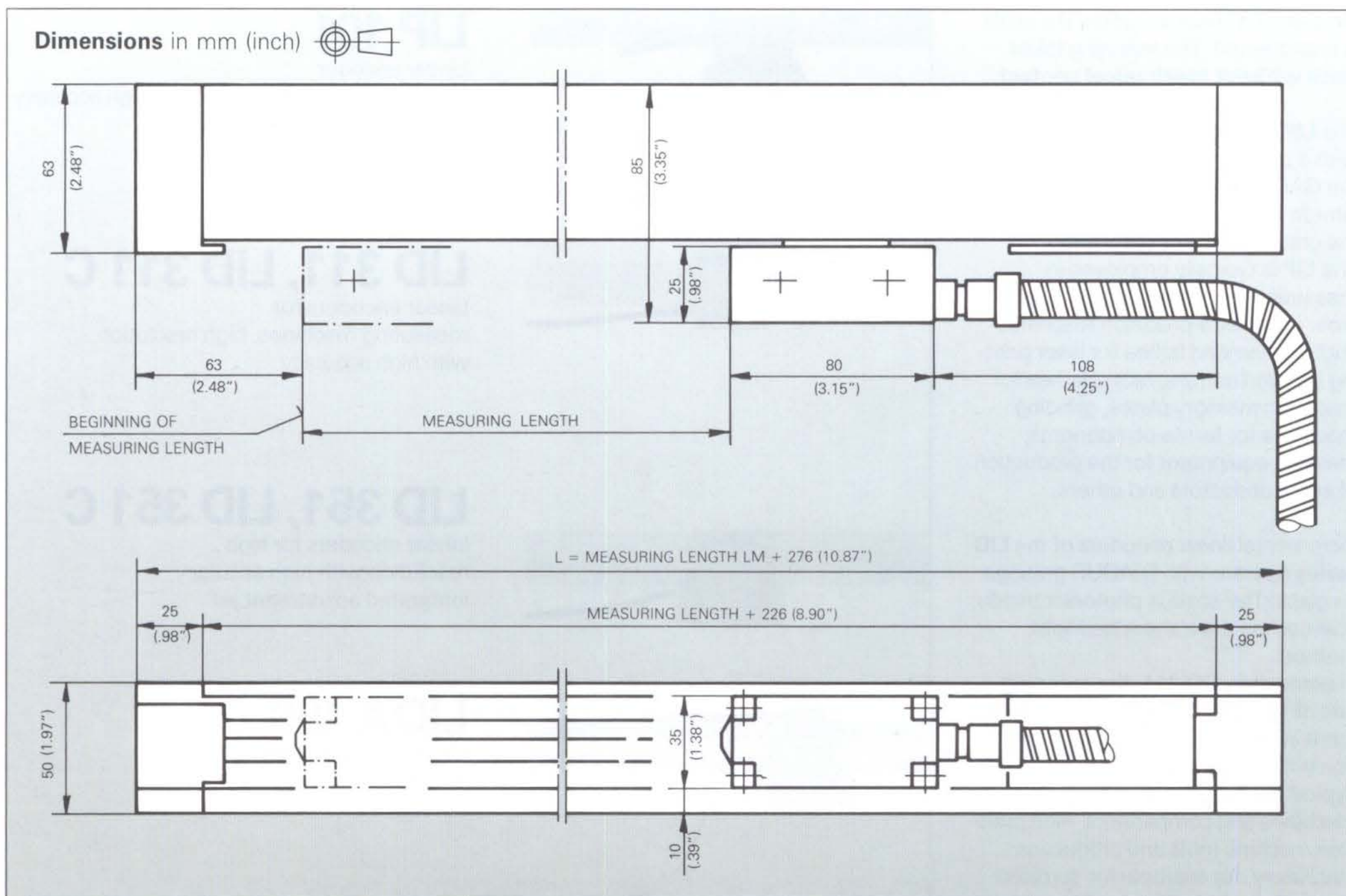
Reference marks every 50 mm/2 in. via selector magnets

Machine error compensation

- linear compensation over total length
- sectional compensation every 200 mm (7.9 in.)



Mechanical data		LB 326
Measuring standard		Stainless steel tape scale with AURODUR-grating Grating period 100 μm
Accuracy grades		· single system (up to 3040 mm/120.0 in.) $\pm 5 \mu\text{m}$ with $\pm 2 \mu\text{m}/200 \text{ mm}$ ($\pm 0.00020 \text{ in.} \pm 0.00008 \text{ in.}/7.9 \text{ in.}$) · multi-section system (over 3040 mm/120 in.) $\pm 5 \mu\text{m}$ ($\pm 0.00020 \text{ in.}$)
Machine error compensation		1) with tape tensioning screw; range max. $\pm 100 \mu\text{m}/\text{m}$ ($\pm 100 \text{ ppm}$) 2) by setting correction discs (every 200 mm, 7.9 in.); range $\pm 20 \mu\text{m}$ (0.0008 in.) per meas. length, max. $\pm 10 \mu\text{m}/200 \text{ mm}$ ($\pm 50 \text{ ppm}$)
Reference marks		every 50 mm/2 in. (selector magnets)
Measuring lengths	mm inch	Single completely assembled systems: 440/640/840/1040/1240/1440/1640/1840/2040/2240/2440/2640/2840/3040 17.3/25.2/33.0/41.0/48.8/56.7/64.6/72.4/80.3/88.2/96.0/104.0/112.0/120.0 Kit comprising single-length AURODUR scale and housing section lengths for measuring lengths up to 30 000 mm (98.4 ft) Housing section lengths: 1000, 1200, 1400, 1600, 1800 and 2000 mm (39.4/47.2/55.1/63.0/70.9/78.7 in.)
Max. traversing speed		60 m/min (200 ft/min)
Permissible acceleration		60 m/s^2
Max. vibration (50 ... 2000 Hz)		1000 m/s^2 for measuring lengths up to 3040 mm (120.0 in.)
Max. shock (11 ms)		400 m/s^2 for measuring lengths over 3040 mm (120.0 in.)
Required moving force		$\leq 15 \text{ N}$
Operating temperature		0 ... 45°C (32 ... 113°F)
Storage temperature		-20 ... 70°C (-4 ... 158°F)
Weight		1.8 kg + 3.3 kg/m measuring length (4.0 lb + 2.2 lb/ft)
Connecting cable		3 m (10 ft), with connector and armored sheathing (standard); 0.5 m (1.7 ft), with connector (special type); 1.5 m (5 ft), without connector (special type)



Electrical data		LB 326
Light source		LED
Operating voltage for light source and switching circuit for reference mark selection		5 V $\pm$ 5 %/140 mA
Output signals	Incremental signals	2 sinusoidal signals I_{e1} and I_{e2}
	Reference signal	1 signal I_{e0}
Signal levels with 1 k Ω load		I_{e1} approx. 7 ... 16 μ A _{pp} I_{e2} approx. 7 ... 16 μ A _{pp} I_{e0} approx. 2 ... 8 μ A (usable portion)
Total permissible cable length		20 m (65.6 ft)