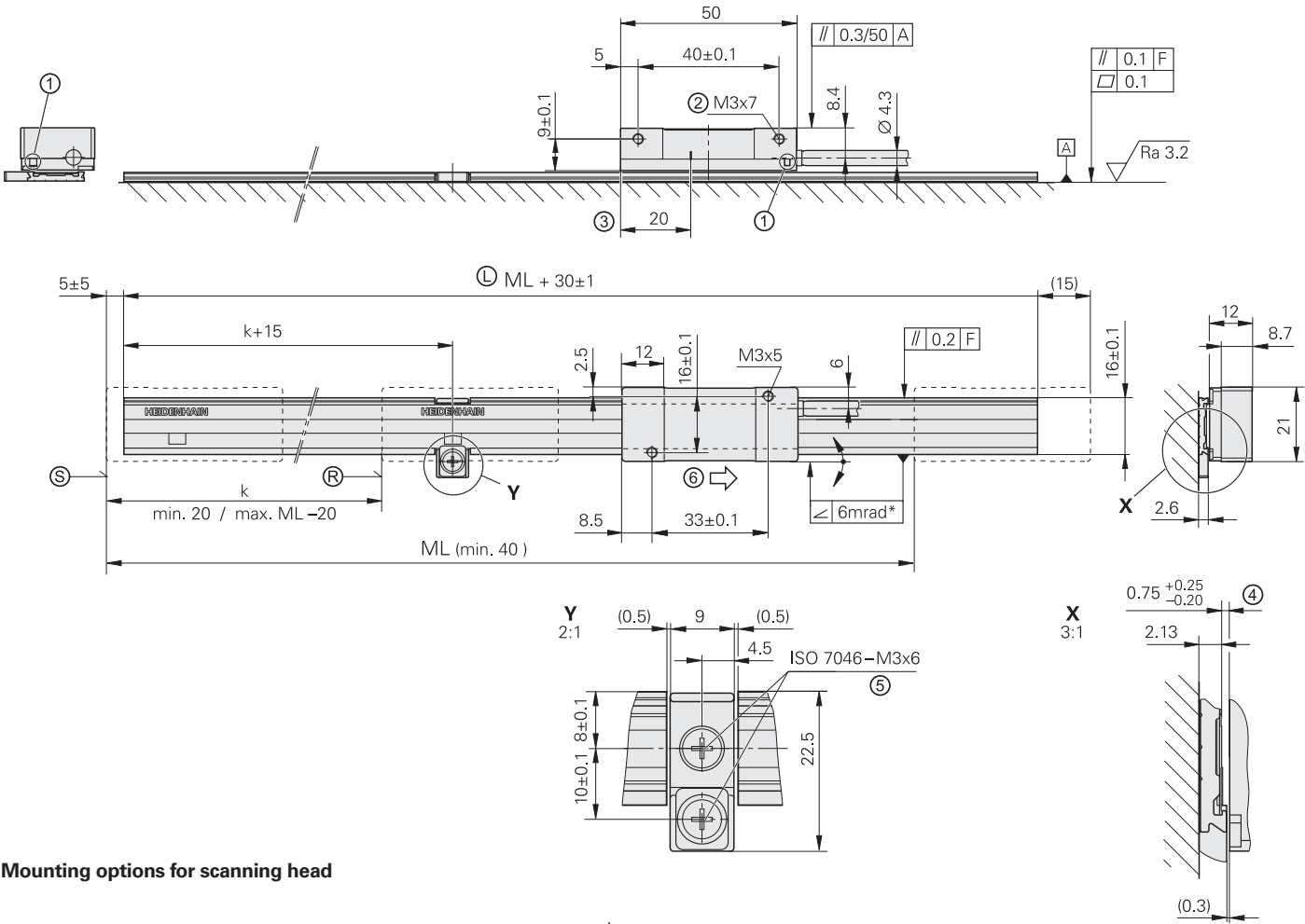


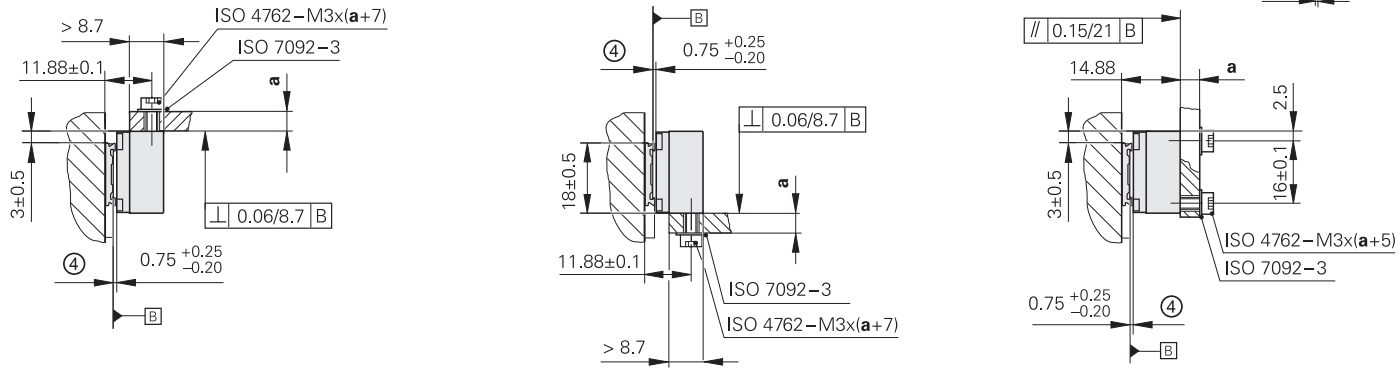
LIDA 277, LIDA 287

Incremental linear encoder with wide mounting tolerances

- For measuring steps of down to 100 nm
- Scale tape cut from roll
- Steel scale tape pulled through adhesive aluminum extrusions and secured
- Integrated three-color LED signal-quality indicator
- Consisting of a linear scale and scanning head



Mounting options for scanning head



mm
Tolerancing ISO 8015
ISO 2768:1989-mH
≤ 6 mm: ±0.2 mm

- * = Maximum change during operation
- F = Machine guideway
- R = Reference mark
- Ⓛ = Scale tape length
- Ⓢ = Beginning of measuring length (ML)
- 1 = LED (integrated mounting checker)
- 2 = Thread at both ends
- 3 = Scanning-head reference mark
- 4 = Mounting gap between scale and scanning head
- 5 = M3 threaded mating hole, 5 mm deep
- 6 = Direction of motion of the scanning unit for increasing position values

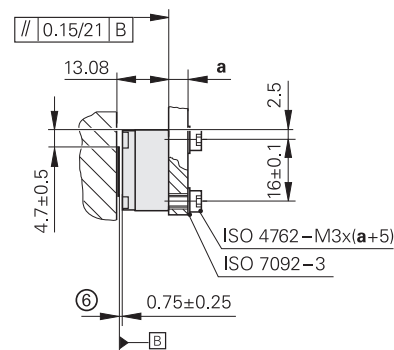
Reference mark:
k = Any position of the selected reference mark starting from the beginning of the measuring length (depending on where the scale tape is cut)

Scale	LIDA 207			
Measuring standard Coefficient of linear expansion	Steel scale tape; grating period: 200 µm $\alpha_{\text{therm}} \approx 10 \cdot 10^{-6} \text{ K}^{-1}$			
Accuracy grade	±15 µm			
Scale tape from roll*	3 m, 5 m, 10 m			
Reference marks	Selectable every 100 mm			
Mass	Scale tape: 20 g/m Scale tape carrier: 70 g/m			
Scanning head	LIDA 28	LIDA 27		
Interface	~ 1 V _{PP}	□□TTL		
Integrated Interpolation* Signal period	– 200 µm	10-fold 20 µm	50-fold 4 µm	100-fold 2 µm
Cut-off frequency Scanning frequency Edge separation <i>a</i>	≥ 50 kHz – –	– ≤ 50 kHz ≥ 0.465 µs	– ≤ 25 kHz ≥ 0.175 µs	– ≤ 12.5 kHz ≥ 0.175 µs
Traversing speed	≤ 600 m/min		≤ 300 m/min	≤ 150 m/min
Interpolation error	±2 µm	–		
Electrical connection*	Cable (1 m or 3 m) with 15-pin D-sub connector (male)			
Cable length	See the interface description; however ≤ 30 m (with HEIDENHAIN cable)			
Supply voltage	DC 5 V ±0.25 V			
Current consumption	< 155 mA	< 140 mA (without load)		
Vibration 55 Hz to 2000 Hz Shock 11 ms	≤ 200 m/s ² (EN 60068-2-6) ≤ 500 m/s ² (EN 60068-2-27)			
Operating temperature	–10 °C to 70 °C			
Mass	Scanning head: 20 g (without cable) Cable: 30 g/m Connector: 32 g			

* Please select when ordering

Incremental linear encoder with wide mounting tolerances

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