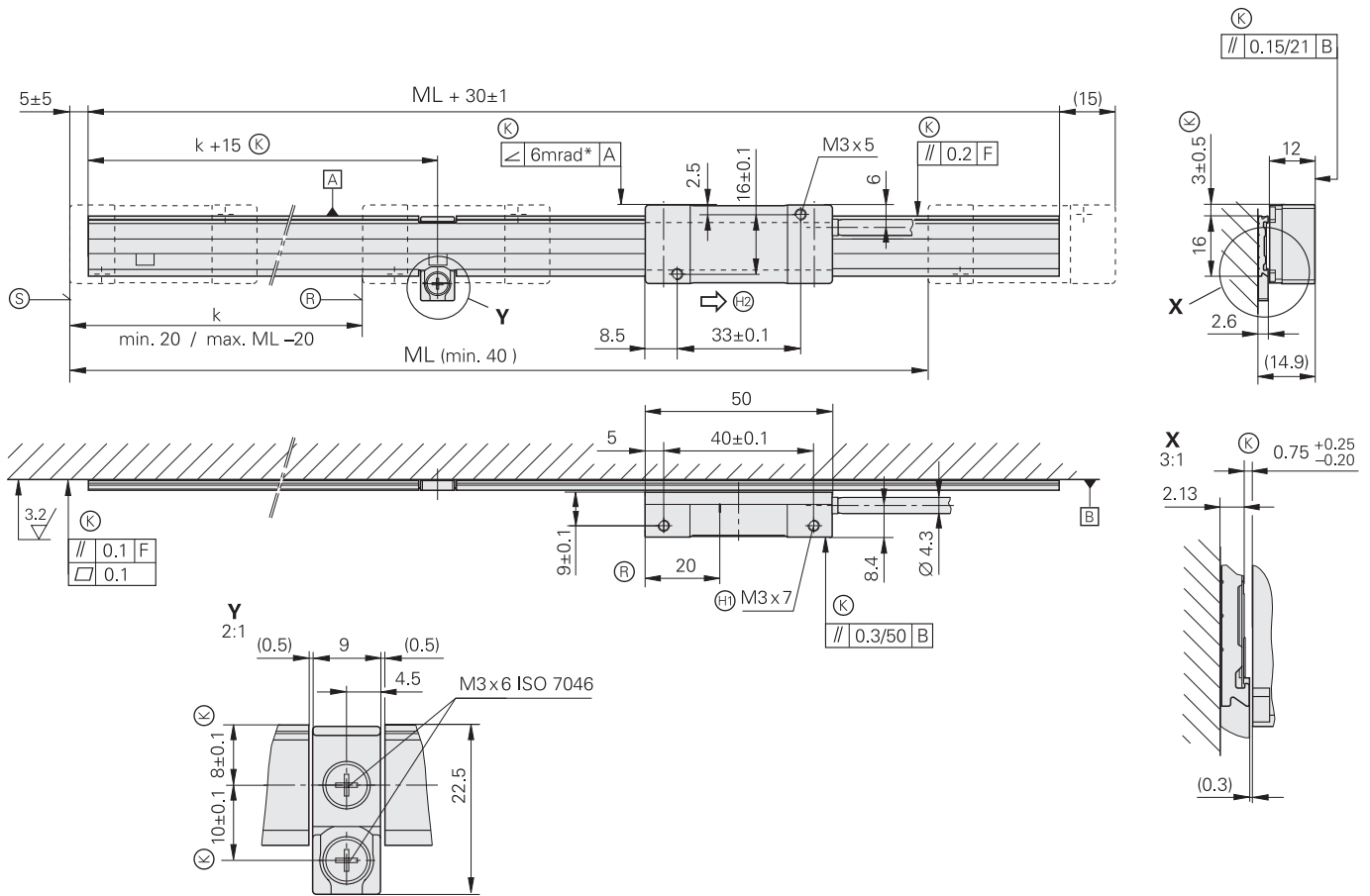


# LIDA 277, LIDA 287

Incremental linear encoder with large mounting tolerance

- For measuring steps to 0.5 μm
- Scale tape cut from roll
- Steel scale-tape is drawn into adhesive aluminum extrusions and fixed



mm  
  
 Tolerancing ISO 8015  
 ISO 2768 - m H  
 < 6 mm:  $\pm 0.2$  mm

- \* = Max. change during operation
- F = Machine guideway
- (K) = Required mating dimensions
- (R) = Reference mark
- (L) = Scale tape length
- (S) = Beginning of measuring length (ML)

- (⊕) = Thread at both ends
- (⊖) = Adhesive tape
- (⊗) = Steel scale tape
- (⊞) = Direction of scanning unit motion for output signals in accordance with interface description

Reference mark:

- k = Position of 1st reference mark from the beginning of the measuring length, depending on the cut
- j = Additional reference marks every 100 mm



Specifications	LIDA 287	LIDA 277		
<b>Measuring standard</b> Coefficient of linear expansion	Steel scale tape $\alpha_{\text{therm}} \approx 10 \cdot 10^{-6} \text{ K}^{-1}$			
<b>Accuracy grade</b>	$\pm 30 \mu\text{m}$			
<b>Scale tape cut from roll*</b>	3 m, 5 m, 10 m			
<b>Reference marks</b>	Selectable every 100 mm			
<b>Incremental signals</b>	$\sim 1 \text{ V}_{\text{PP}}$	□ TTL		
Grating period	200 $\mu\text{m}$			
Integrated interpolation* Signal period	– 200 $\mu\text{m}$	10-fold 20 $\mu\text{m}$	50-fold 4 $\mu\text{m}$	100-fold 2 $\mu\text{m}$
Cutoff frequency Scanning frequency Edge separation a	$\geq 50 \text{ kHz}$ – –	– $\leq 50 \text{ kHz}$ $\geq 0.465 \mu\text{s}$	– $\leq 25 \text{ kHz}$ $\geq 0.175 \mu\text{s}$	– $\leq 12.5 \text{ kHz}$ $\geq 0.175 \mu\text{s}$
<b>Traversing speed</b>	$\leq 600 \text{ m/min}$		$\leq 300 \text{ m/min}$	$\leq 150 \text{ m/min}$
<b>Power supply</b> Current consumption	DC 5 V $\pm 5\%$ < 110 mA	DC 5 V $\pm 5\%$ < 140 mA (without load)		
<b>Electrical connection*</b> Cable length	Cable 1 m or 3 m with D-sub connector (15-pin) $\leq 30 \text{ m}$ (with HEIDENHAIN cable)			
<b>Vibration</b> 55 to 2000 Hz <b>Shock</b> 11 ms	$\leq 200 \text{ m/s}^2$ (EN 60068-2-6) $\leq 500 \text{ m/s}^2$ (EN 60068-2-27)			
<b>Operating temperature</b>	0 °C to 50 °C			
<b>Weight</b>	Scanning head Scale tape Scale-tape carrier Connecting cable Connector	20 g (without connecting cable) 20 g/m 70 g/m 30 g/m 32 g		

\* Please select when ordering

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