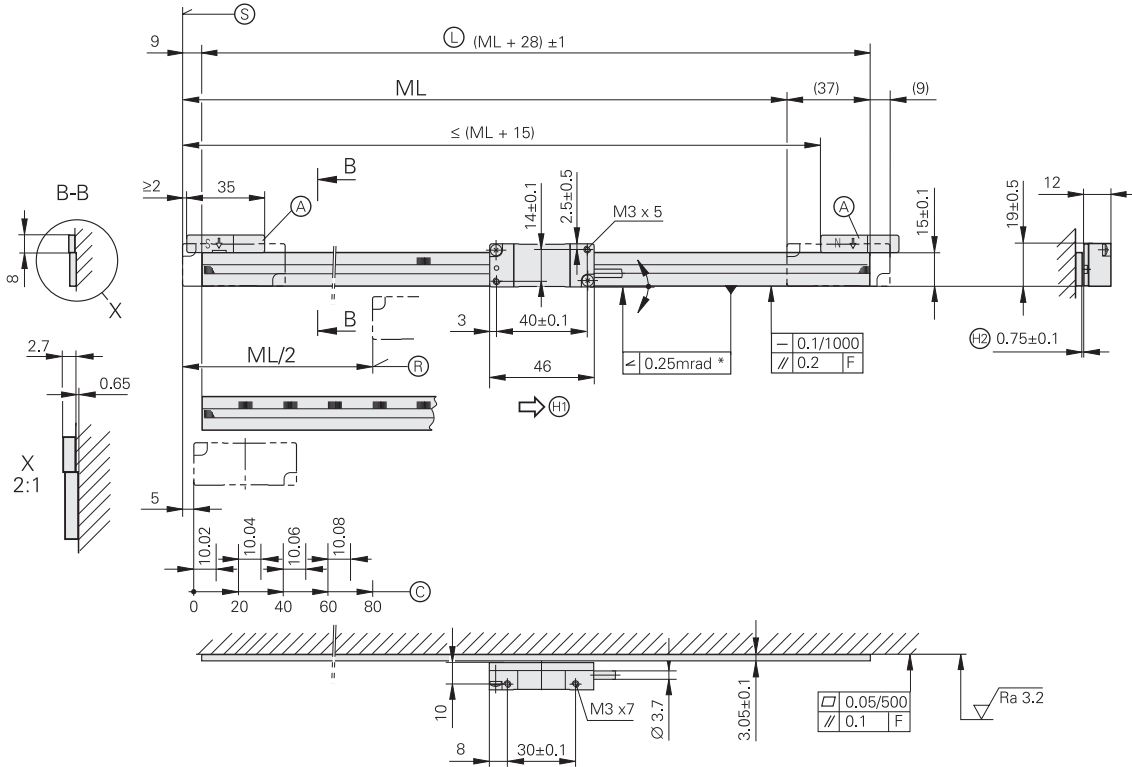


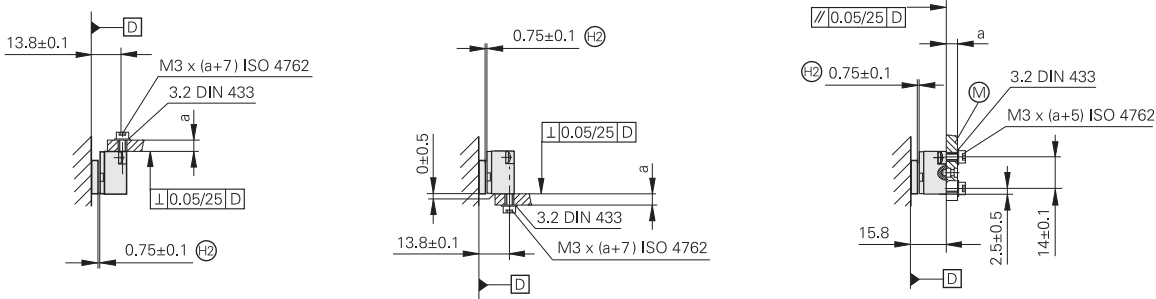
# LIDA 473, LIDA 483

Incremental linear encoders with limit switches

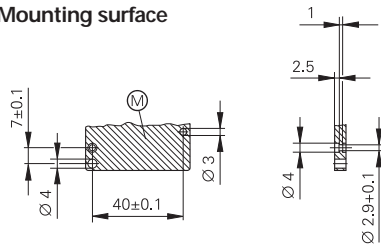
- For measuring steps of 1 µm to 0.01 µm
- Measuring standard of glass or glass ceramic
- Glass scale fixed with adhesive film



## Possibilities for mounting the scanning head



## Mounting surface



mm



Tolerancing ISO 8015

ISO 2768 - m H

< 6 mm: ± 0.2 mm

\* = Max. change during operation

F = Machine guideway

Ⓛ = Scale length

Ⓢ = Beginning of measuring length (ML)

Ⓜ = Reference mark position

Ⓜ = Mounting surface for scanning head

Ⓢ = Direction of scanning unit motion for output signals in accordance with interface description

Ⓢ = Adjust or set



Specifications	LIDA 483	LIDA 473			
<b>Measuring standard</b> Coefficient of linear expansion*	METALLUR graduation on glass ceramic or glass $\alpha_{\text{therm}} \approx 8 \cdot 10^{-6} \text{ K}^{-1}$ (glass) $\alpha_{\text{therm}} \approx 0 \cdot 10^{-6} \text{ K}^{-1}$ (ROBAX glass ceramic) $\alpha_{\text{therm}} = (0 \pm 0.1) \cdot 10^{-6} \text{ K}^{-1}$ (Zerodur glass ceramic)				
<b>Accuracy grade</b>	$\pm 5 \mu\text{m}$ (higher accuracy grades available on request)				
<b>Measuring length ML*</b> in mm	240 2640	340 2840	440 3040	640 (ROBAX glass ceramic with up to ML 1640)	840 1040 1240 1440 1640 1840 2040 2240 2440
Reference marks* <i>LIDA 4x3</i> <i>LIDA 4x3C</i>	One at midpoint of measuring length Distance-coded upon request				
<b>Incremental signals</b>	$\sim 1 \text{ V}_{\text{pp}}$	□TTL			
Grating period	20 $\mu\text{m}$				
Integrated interpolation* Signal period	– 20 $\mu\text{m}$	5-fold 4 $\mu\text{m}$	10-fold 2 $\mu\text{m}$	50-fold 0.4 $\mu\text{m}$	100-fold 0.2 $\mu\text{m}$
Cutoff frequency –3dB	$\geq 400 \text{ kHz}$	–			
Scanning frequency*	–	$\leq 400 \text{ kHz}$ $\leq 200 \text{ kHz}$ $\leq 100 \text{ kHz}$ $\leq 50 \text{ kHz}$	$\leq 200 \text{ kHz}$ $\leq 100 \text{ kHz}$ $\leq 50 \text{ kHz}$ $\leq 25 \text{ kHz}$	$\leq 50 \text{ kHz}$ $\leq 25 \text{ kHz}$ $\leq 12.5 \text{ kHz}$	$\leq 25 \text{ kHz}$ $\leq 12.5 \text{ kHz}$ $\leq 6.25 \text{ kHz}$
Edge separation a <sup>1)</sup>	–	$\geq 0.100 \mu\text{s}$ $\geq 0.220 \mu\text{s}$ $\geq 0.465 \mu\text{s}$ $\geq 0.950 \mu\text{s}$	$\geq 0.100 \mu\text{s}$ $\geq 0.220 \mu\text{s}$ $\geq 0.465 \mu\text{s}$ $\geq 0.950 \mu\text{s}$	$\geq 0.080 \mu\text{s}$ $\geq 0.175 \mu\text{s}$ $\geq 0.370 \mu\text{s}$	$\geq 0.080 \mu\text{s}$ $\geq 0.175 \mu\text{s}$ $\geq 0.370 \mu\text{s}$
<b>Traversing speed</b> <sup>1)</sup>	$\leq 480 \text{ m/min}$	$\leq 480 \text{ m/min}$ $\leq 240 \text{ m/min}$ $\leq 120 \text{ m/min}$ $\leq 60 \text{ m/min}$	$\leq 240 \text{ m/min}$ $\leq 120 \text{ m/min}$ $\leq 60 \text{ m/min}$ $\leq 30 \text{ m/min}$	$\leq 60 \text{ m/min}$ $\leq 30 \text{ m/min}$ $\leq 15 \text{ m/min}$	$\leq 30 \text{ m/min}$ $\leq 15 \text{ m/min}$ $\leq 7.5 \text{ m/min}$
<b>Limit switches</b>	L1/L2 with two different magnets; <i>output signals</i> : TTL (without line driver)				
<b>Power supply</b> Current consumption	DC 5 V $\pm$ 5 % < 100 mA	DC 5 V $\pm$ 5 % < 170 mA (without load)		DC 5 V $\pm$ 5 % < 255 mA (without load)	
<b>Electrical connection</b> Cable length	Cable 3 m with D-sub connector (15-pin), interface electronics for LIDA 473 in the connector $\leq 20 \text{ m}$ (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 Connecting cable Connector	20 g (without connecting cable) 3 g + 0.1 g/mm measuring length 22 g/m <i>LIDA 483</i> : 32 g, <i>LIDA 473</i> : 140 g				

\* Please indicate when ordering

<sup>1)</sup> At the corresponding cutoff or scanning frequency

Representante oficial de:



**HEIDENHAIN**

[Argentina – Bolivia – Chile – Colombia - Costa Rica – Ecuador - El Salvador –  
Guatemala – Honduras – Nicaragua – Panamá – Paraguay – Perú -  
República Dominicana – Uruguay – Venezuela.]



Calle 49 N° 5764 - Villa Ballester (B1653AOX) - Prov. de Buenos Aires - ARGENTINA  
Tel: (+54 11) 4768-4242 / Fax: (+54 11) 4849-1212  
Mail: [ventas@nakase.com.ar](mailto:ventas@nakase.com.ar) / Web: [www.nakase.com.ar](http://www.nakase.com.ar)

