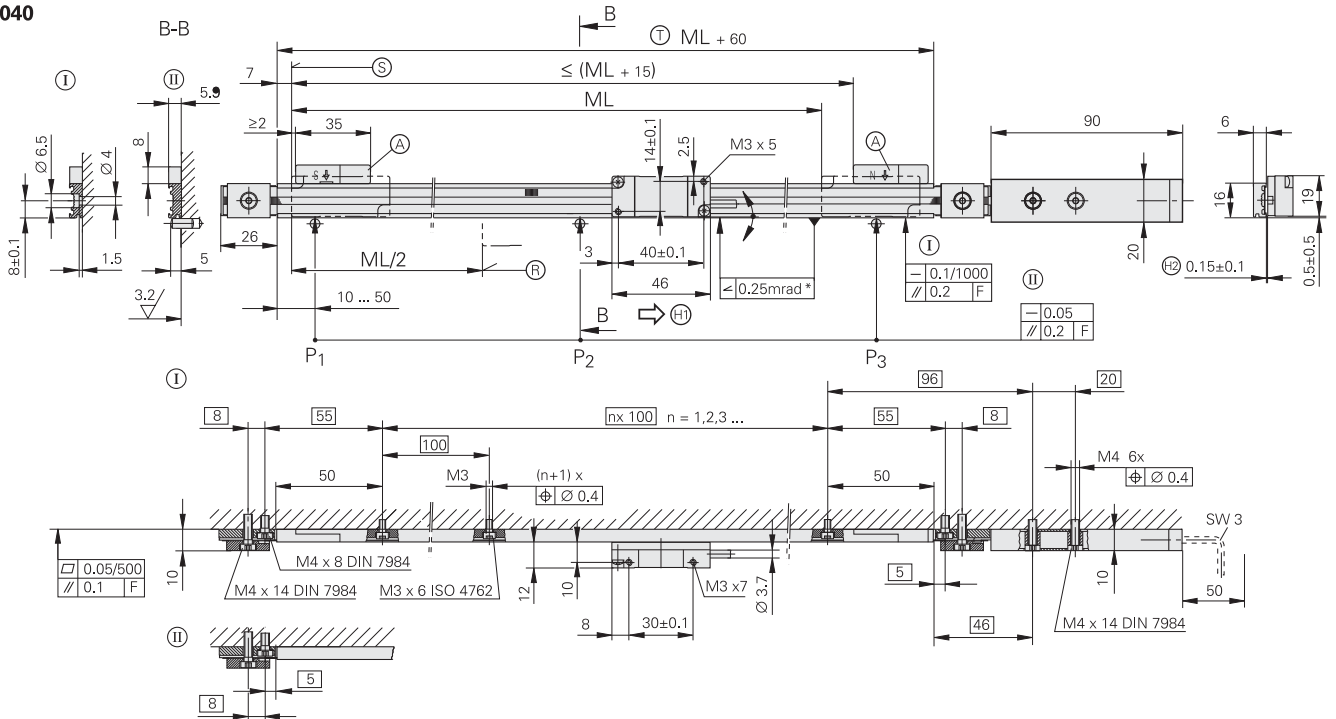


# LIDA 475, LIDA 485

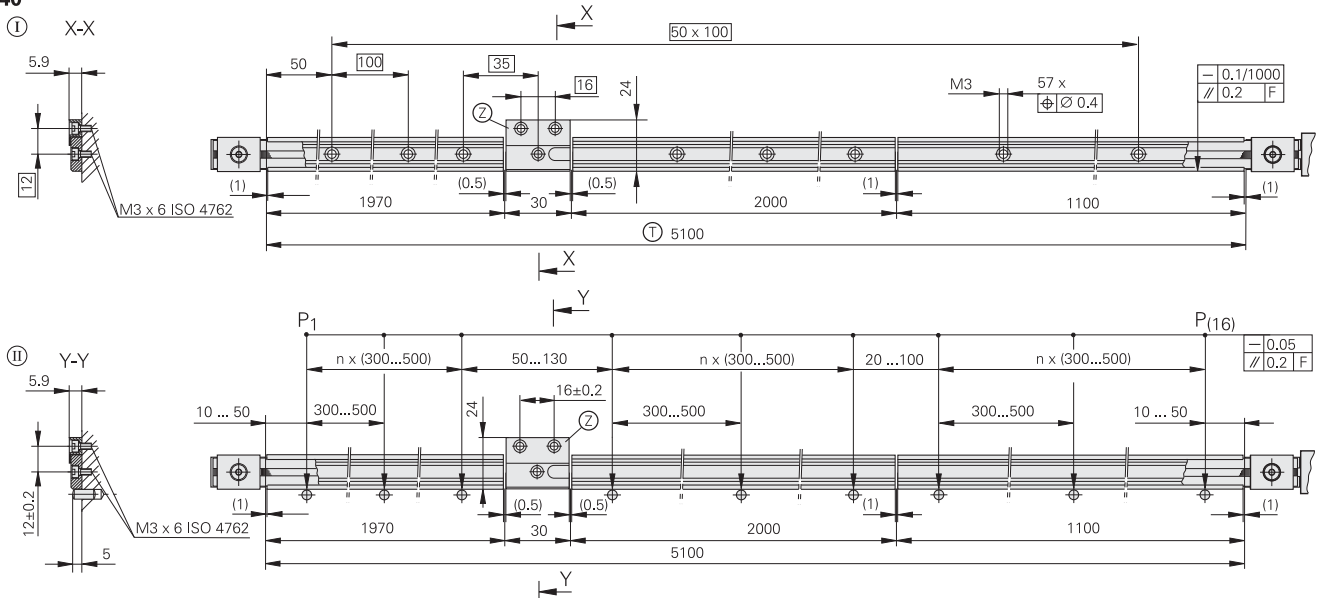
Incremental linear encoders for measuring lengths up to 30 m

- For measuring steps of 1  $\mu\text{m}$  to 0.05  $\mu\text{m}$
- Limit switches
- Steel scale-tape is drawn into aluminum extrusions and tensioned

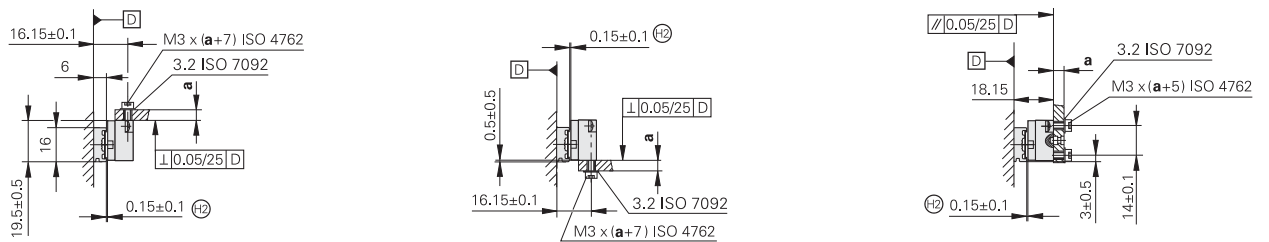
ML  $\leq$  2040




ML > 2040



## Possibilities for mounting the scanning head



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

- ⊙ = Scale carrier sections fixed with screws
- ⊙ = Scale carrier sections fixed with PRECIMET glue
- \* = Max. change during operation
- F = Machine guideway
- P = Gauging points for alignment
- ⊙ = Reference mark position
- ⊙ = Beginning of measuring length (ML)
- ⊙ = Selector magnet for limit switch
- ⊙ = Carrier length
- ⊙ = Spacer for measuring lengths from 3040 mm
- ⊙ = Direction of scanning unit motion for output signals in accordance with interface description
- ⊙ = Adjust or set



Specifications	LIDA 485	LIDA 475													
<b>Measuring standard</b> Coefficient of linear expansion	Steel scale tape with METALLUR graduation Depends on the mounting surface														
<b>Accuracy grade</b>	± 5 µm														
<b>Measuring length ML*</b> in mm	140 1540	240 1640	340 1740	440 1840	540 1940	640 2040	740	840	940	1040	1140	1240	1340	1440	
	Larger measuring lengths up to 30040 mm with a single-section scale tape and individual scale-carrier sections														
Reference marks	One at midpoint of measuring length														
<b>Incremental signals</b>	~ 1 V <sub>PP</sub>			□TTL											
Grating period	20 µm														
Integrated interpolation* Signal period	– 20 µm		5-fold 4 µm		10-fold 2 µm		50-fold 0.4 µm		100-fold 0.2 µm						
Cutoff frequency –3dB	≥ 400 kHz		–												
Scanning frequency*	–		≤ 400 kHz ≤ 200 kHz ≤ 100 kHz ≤ 50 kHz		≤ 200 kHz ≤ 100 kHz ≤ 50 kHz ≤ 25 kHz		≤ 50 kHz ≤ 25 kHz ≤ 12.5 kHz		≤ 25 kHz ≤ 12.5 kHz ≤ 6.25 kHz						
Edge separation a <sup>1)</sup>	–		≥ 0.100 µs ≥ 0.220 µs ≥ 0.465 µs ≥ 0.950 µs		≥ 0.100 µs ≥ 0.220 µs ≥ 0.465 µs ≥ 0.950 µs		≥ 0.080 µs ≥ 0.175 µs ≥ 0.370 µs		≥ 0.080 µs ≥ 0.175 µs ≥ 0.370 µs						
<b>Traversing speed</b> <sup>1)</sup>	≤ 480 m/min		≤ 480 m/min ≤ 240 m/min ≤ 120 m/min ≤ 60 m/min		≤ 240 m/min ≤ 120 m/min ≤ 60 m/min ≤ 30 m/min		≤ 60 m/min ≤ 30 m/min ≤ 15 m/min		≤ 30 m/min ≤ 15 m/min ≤ 7.5 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 ± 5 % < 100 mA		DC 5 V ± 5 % < 170 mA (without load)				DC 5 V ± 5 % < 255 mA (without load)								
<b>Electrical connection</b> Cable length	Cable 3 m with D-sub connector (15-pin), interface electronics for LIDA 475 in the connector ≤ 20 m (with HEIDENHAIN cable)														
<b>Vibration</b> 55 to 2000 Hz <b>Shock</b> 11 ms	≤ 200 m/s <sup>2</sup> (EN 60068-2-6) ≤ 500 m/s <sup>2</sup> (EN 60068-2-27)														
<b>Operating temperature</b>	0 °C to 50 °C														
<b>Weight</b>	Scanning head	20 g (without connecting cable)													
	Scale	115 g + 0.25 g/mm measuring length													
	Connecting cable	22 g/m													
	Connector	LIDA 485: 32 g, LIDA 475: 140 g													

\* Please indicate when ordering

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

Representante oficial de:



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