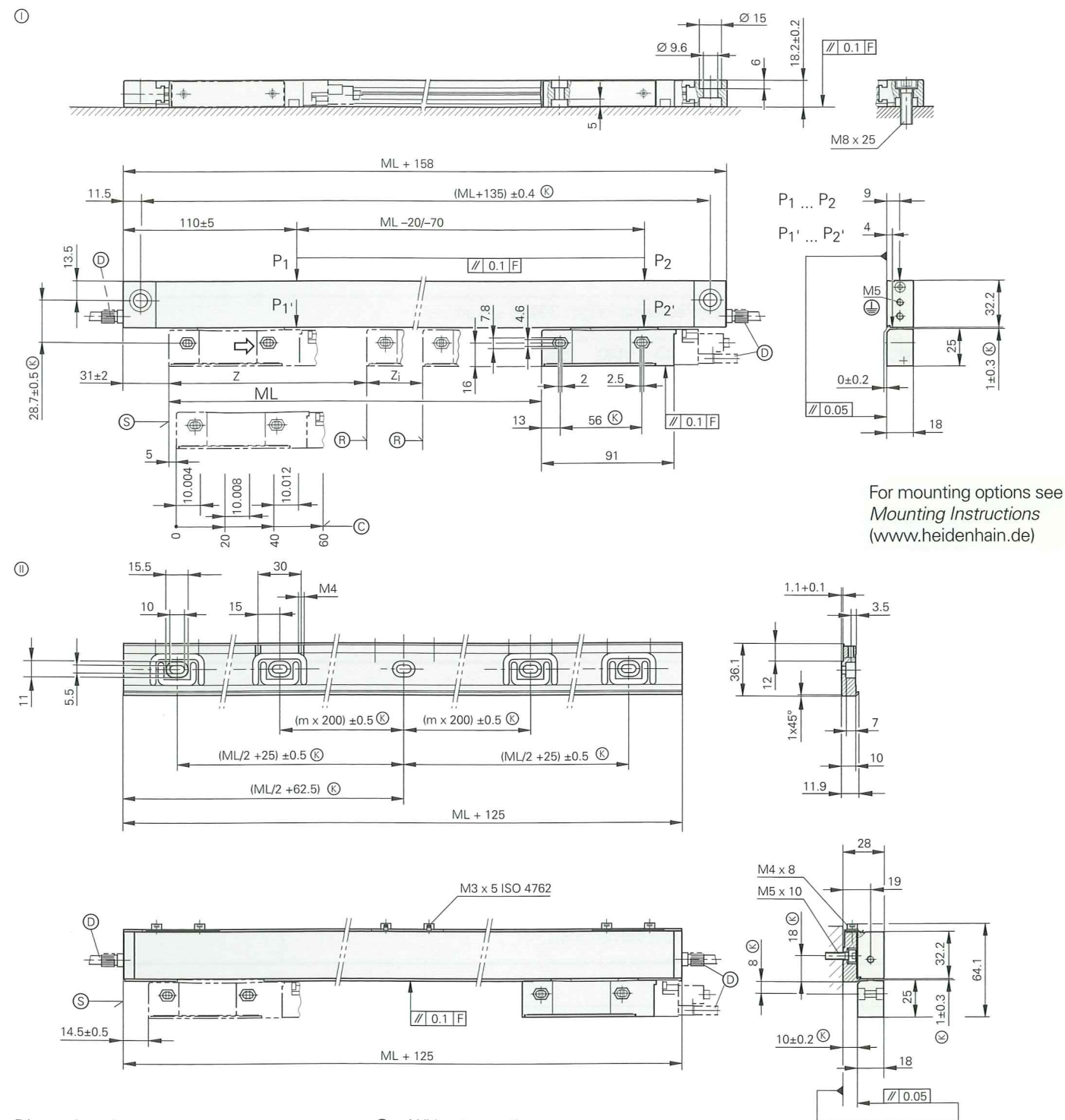


LF 481

- Incremental linear encoder for measuring steps to 0.1 μm
- Thermal behavior similar to steel or cast iron
- For limited installation space



For mounting options see
Mounting Instructions
(www.heidenhain.de)

Dimensions in mm



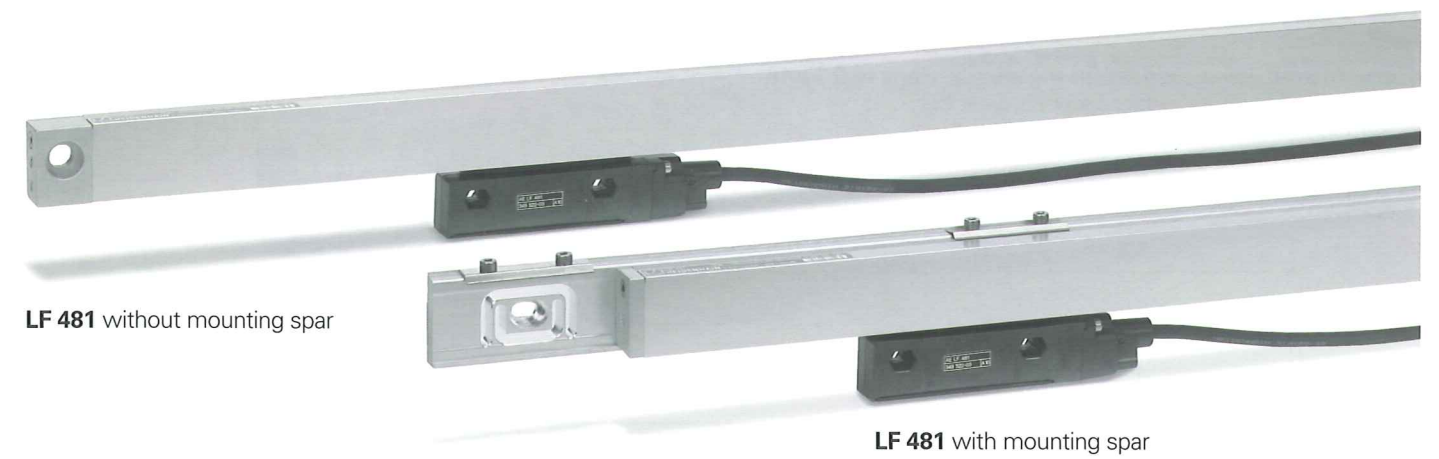
Tolerancing ISO 8015
ISO 2768 - m H
< 6 mm: ±0.2 mm

- ⊖ = Without mounting spar
 - ⊕ = With mounting spar
 - F = Machine guideway
 - P = Gauging points for alignment
 - ⊗ = Required mating dimensions
 - ⊙ = Compressed air inlet
 - Ⓜ = Reference-mark position on LF 481
2 reference marks for measuring lengths
- | | |
|--------------------------|--------------------------|
| 50 ... 1000 | 1120 ... 1220 |
| z = 25 | z = 35 |
| z _i = ML - 50 | z _i = ML - 70 |

- Ⓜ = Reference-mark position on LF 481 C
- Ⓢ = Beginning of measuring length (ML)
- ⇒ = Direction of scanning unit motion for output signals in accordance with interface description

Mounting spar

ML	m
50 ... 500	0
550 ... 900	1
1000 ... 1220	2



LF 481 without mounting spar

LF 481 with mounting spar

Specifications	LF 481
Measuring standard Expansion coefficient	DIADUR phase grating on steel $\alpha_{\text{therm}} \approx 10 \times 10^{-6} \text{ K}^{-1}$
Accuracy grade*	± 3 μm; ± 5 μm
Measuring length ML* in mm	Mounting spar* recommended 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 900 1000 1120 1220
Incremental signals	~ 1 V _{PP}
Grating period Signal period	8 μm 4 μm
Reference marks* LF 481 LF 481 C	ML 50 mm: 1 reference mark at midpoint ML 100 to 1000 mm: 2, located 25 mm from the beginning and end of the measuring length From ML 1120 mm: 2, located 35 mm from the beginning and end of the measuring length Distance-coded
Cutoff frequency	-3dB ≥ 200 kHz
Power supply without load	5 V ± 5 % / < 200 mA
Electrical connection	Separate adapter cable (1 m/3 m/6 m/9 m) connectable to mounting block
Cable length ¹⁾	≤ 150 m
Traversing speed	≤ 30 m/min
Required moving force	≤ 5 N
Vibration 55 to 2000 Hz Shock 11 ms Acceleration	≤ 80 m/s ² (IEC 60068-2-6) ≤ 100 m/s ² (IEC 60068-2-27) ≤ 30 m/s ² in measuring direction
Operating temperature	0 °C to 50 °C
Protection IEC 60529	IP 53 when mounted according to the mounting instructions IP 64 if compressed air is connected via DA 300
Weight without mounting spar	0.4 kg + 0.5 kg/m measuring length

* Please indicate when ordering
¹⁾ With HEIDENHAIN cable