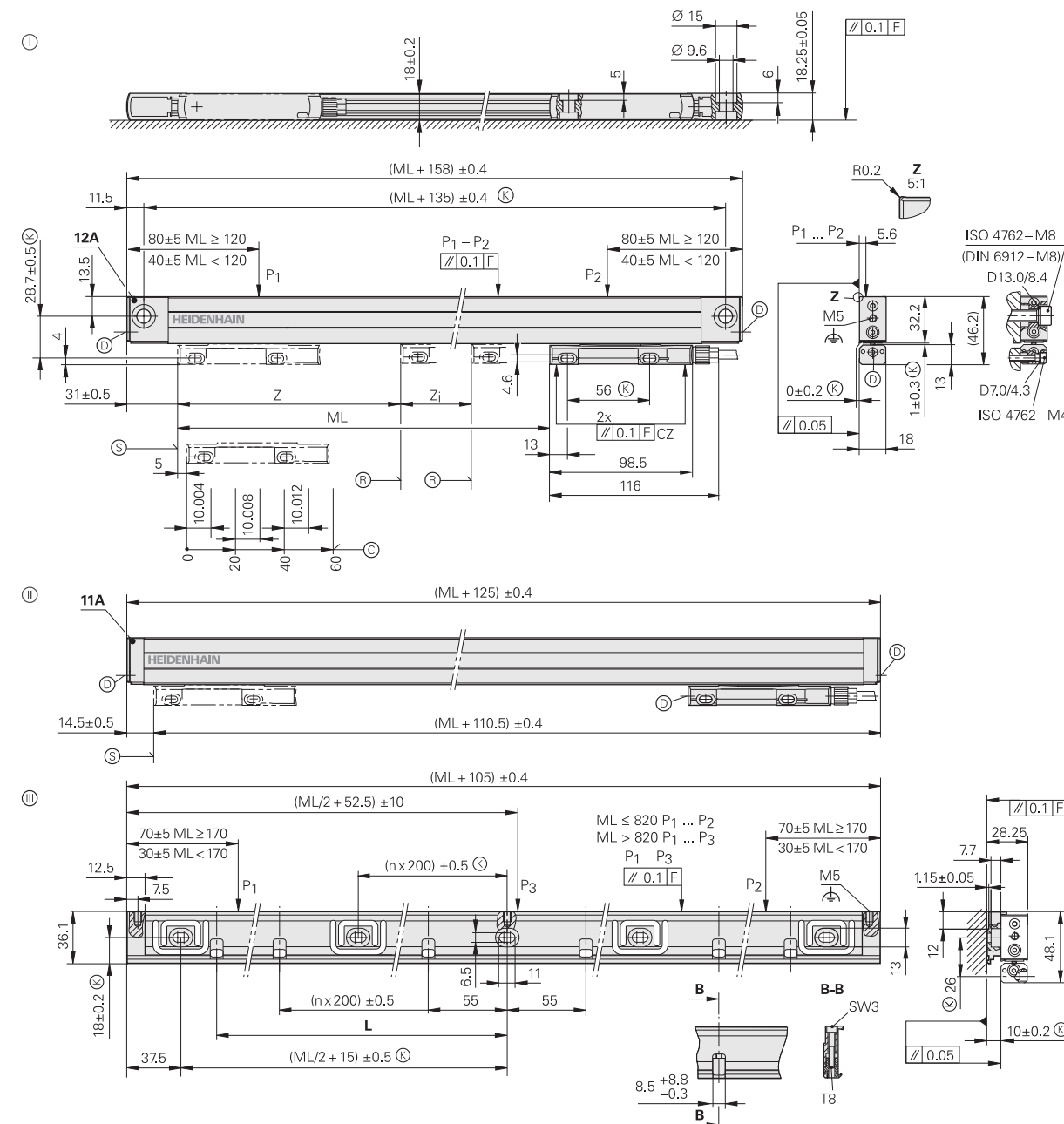


# LF 485

Incremental linear encoders with slimline scale housing

- Very high repeatability
- Thermal behavior similar to steel or cast iron
- For limited installation space



<b>ML</b>	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1120	1220	1320	1420	1520	1620	1720	1820	2020
<b>L</b>	37.5	55	75	100	115	140	175	200	225	250	275	300	325	350	375	400	425	450	475	500	515	555	610	655	710	760	810	855	910	1010

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

- ⊕ = End block 12A; for mounting with and without mounting spar
- ⊖ = End block 11A; installation with mounting spar
- ⊗ = Mounting spar MSL 41
- F = Machine guideway
- P = Gauging points for alignment
- ⊙ = Required mating dimensions

- ⊙ = Reference mark position on LF 485  
 Two reference marks for measuring lengths  
 50 ... 1000      1120 ... 1220  
 z = 25 mm      z = 35 mm  
 z<sub>i</sub> = ML - 50 mm      z<sub>i</sub> = ML - 70 mm
- ⊙ = Reference mark position on LF 485 C
- ⊙ = Compressed air inlet
- ⊙ = Beginning of measuring length (ML)
- = Direction of scanning unit motion for output signals in accordance with interface description

Specifications	LF 485
<b>Measuring standard</b>	SUPRADUR phase grating on steel, grating period 8 μm
Coefficient of linear expansion	$\alpha_{\text{therm}} \approx 10 \times 10^{-6} \text{ K}^{-1}$
<b>Accuracy grade*</b>	± 5 μm; ± 3 μm
<b>Measuring length ML* in mm</b>	Back-up spar* optional 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 900 1000 1120 1220
<b>Incremental signals</b>	~ 1 V <sub>pp</sub>
Signal period	4 μm
Reference marks* LF 485	• 1 reference mark at midpoint of measuring length
LF 485 C	• 2 reference marks, each 25 mm (at ML ≤ 1000 mm) or 35 mm (at ML ≥ 1120 mm) from the beginning and end of measuring length. Distance-coded
Cutoff frequency -3 dB	≥ 250 kHz
<b>Electrical connection</b>	Separate adapter cable (1 m/3 m/6 m/9 m) connectable to mounting block
Cable length	≤ 150 m (with HEIDENHAIN cable)
Power supply without load	5 V DC ± 5 % / < 120 mA
<b>Traversing speed</b>	≤ 60 m/min
<b>Required moving force</b>	≤ 4 N
<b>Vibration</b> 55 Hz to 2000 Hz affecting the scanning unit:	Housing with mounting spar: ≤ 150 m/s <sup>2</sup> (EN 60068-2-6) Scanning unit: ≤ 200 m/s <sup>2</sup> (EN 60068-2-6)
<b>Shock</b> 11 ms	≤ 300 m/s <sup>2</sup> (EN 60068-2-27)
<b>Acceleration</b>	≤ 100 m/s <sup>2</sup> in measuring direction
<b>Operating temperature</b>	0 °C to 50 °C
<b>Protection</b> EN 60529	IP 53 when installed according to instructions in the brochure IP 64 with sealing air via DA 400
<b>Weight</b>	0.4 kg + 0.6 kg/m measuring length

\* Please select when ordering