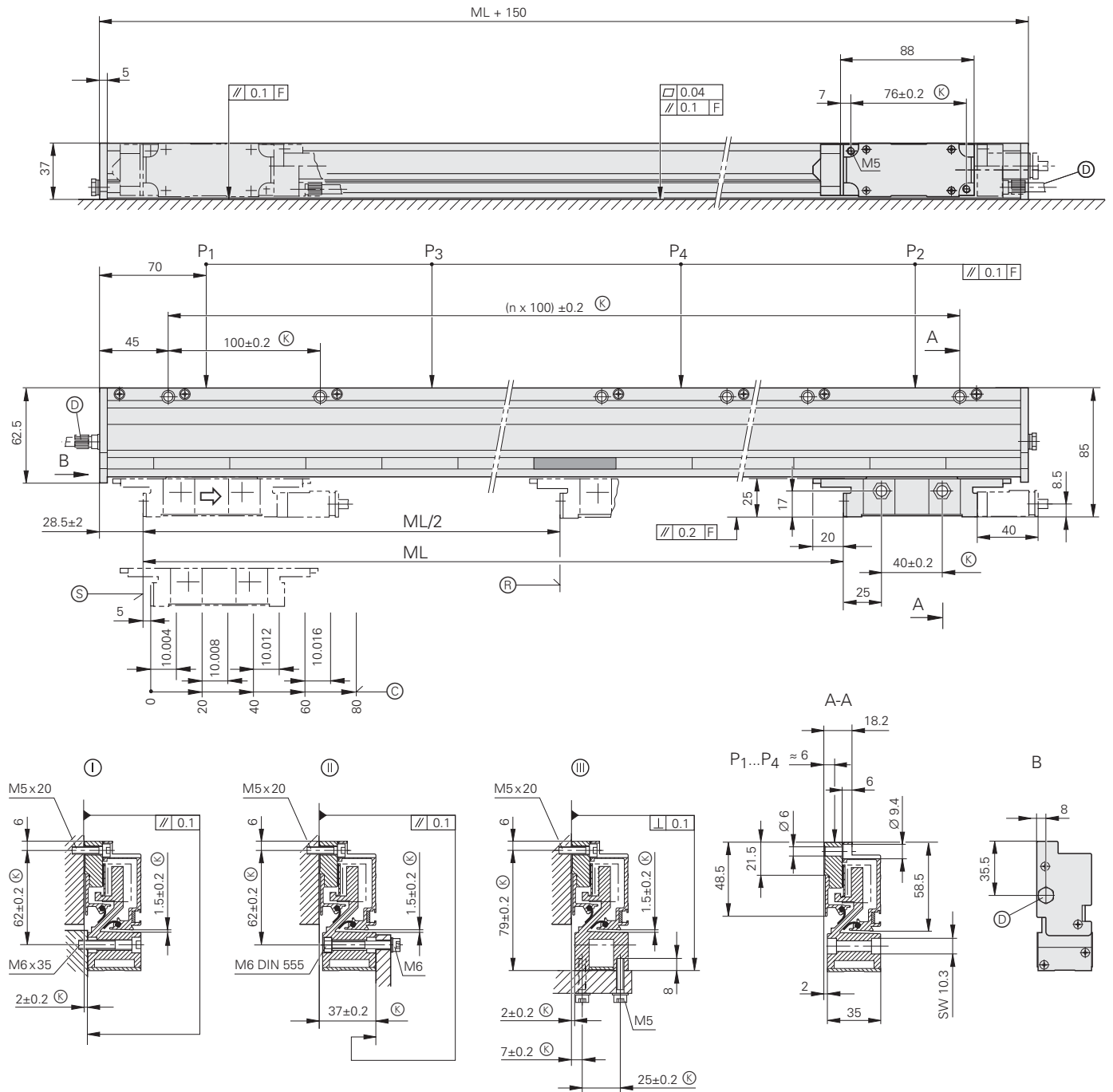


LF 183

- Incremental linear encoder for measuring steps to 0.1 μm
- Thermal behavior similar to steel or cast iron
- High vibration rating
- Horizontal mounting possible



Dimensions in mm



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

①, ②,

③ = Mounting options

F = Machine guideway

P = Gauging points for alignment

⊗ = Required mating dimensions

⊙ = Compressed air inlet

① = Reference-mark position on LF 183

② = Reference-mark position on LF 183C

③ = Beginning of measuring length (ML)

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



Specifications	LF 183
Measuring standard Expansion coefficient	DIADUR phase grating on steel $\alpha_{\text{therm}} \approx 10 \times 10^{-6} \text{ K}^{-1}$
Accuracy grade*	$\pm 3 \mu\text{m}; \pm 2 \mu\text{m}$
Measuring length ML* in mm	140 240 340 440 540 640 740 840 940 1040 1140 1240 1340 1440 1540 1640 1740 1840 2040 2240 2440 2640 2840 3040
Incremental signals	$\sim 1 \text{ V}_{\text{pp}}$
Grating period Signal period	8 μm 4 μm
Reference marks* <i>LF 183</i> <i>LF 183C</i>	Selectable with magnets every 50 mm Standard setting: 1 reference mark at midpoint of measuring length Distance-coded
Cutoff frequency -3dB	$\geq 200 \text{ kHz}$
Power supply without load	5 V $\pm 5 \%$ / < 200 mA
Electrical connection	Separate adapter cable (1 m/3 m/6 m/9 m) connectable to mounting block
Cable length ¹⁾	$\leq 150 \text{ m}$
Traversing speed	$\leq 60 \text{ m/min}$
Required moving force	$\leq 4 \text{ N}$
Vibration 55 to 2000 Hz Shock 11 ms Acceleration	$\leq 150 \text{ m/s}^2$ (IEC 60068-2-6) $\leq 300 \text{ m/s}^2$ (IEC 60068-2-27) $\leq 100 \text{ m/s}^2$ in measuring direction
Operating temperature	0 °C to 40 °C
Protection IEC 60529	IP 53 when mounted according to the mounting instructions IP 64 if compressed air is connected via DA 300
Weight	1.1 kg + 3.8 kg/m measuring length

* Please indicate when ordering

¹⁾ With HEIDENHAIN cable

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