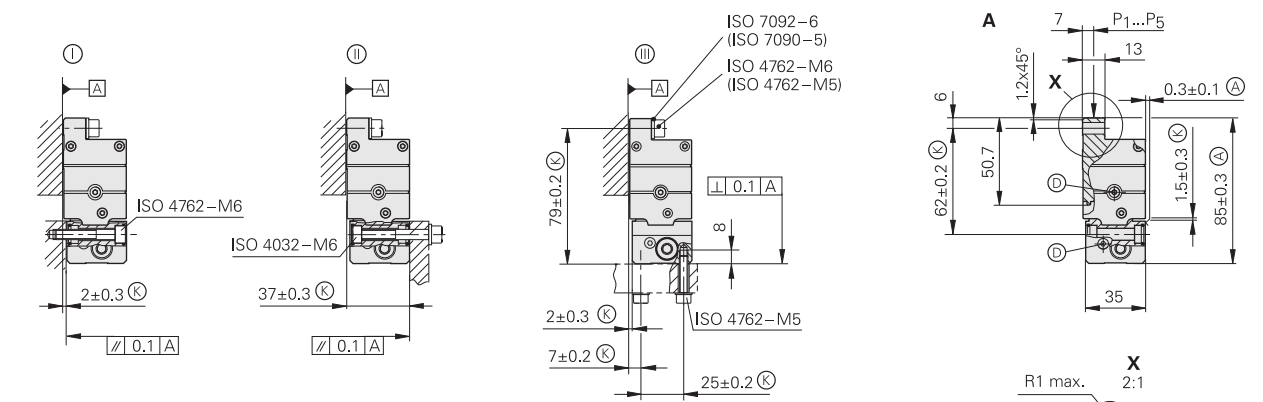
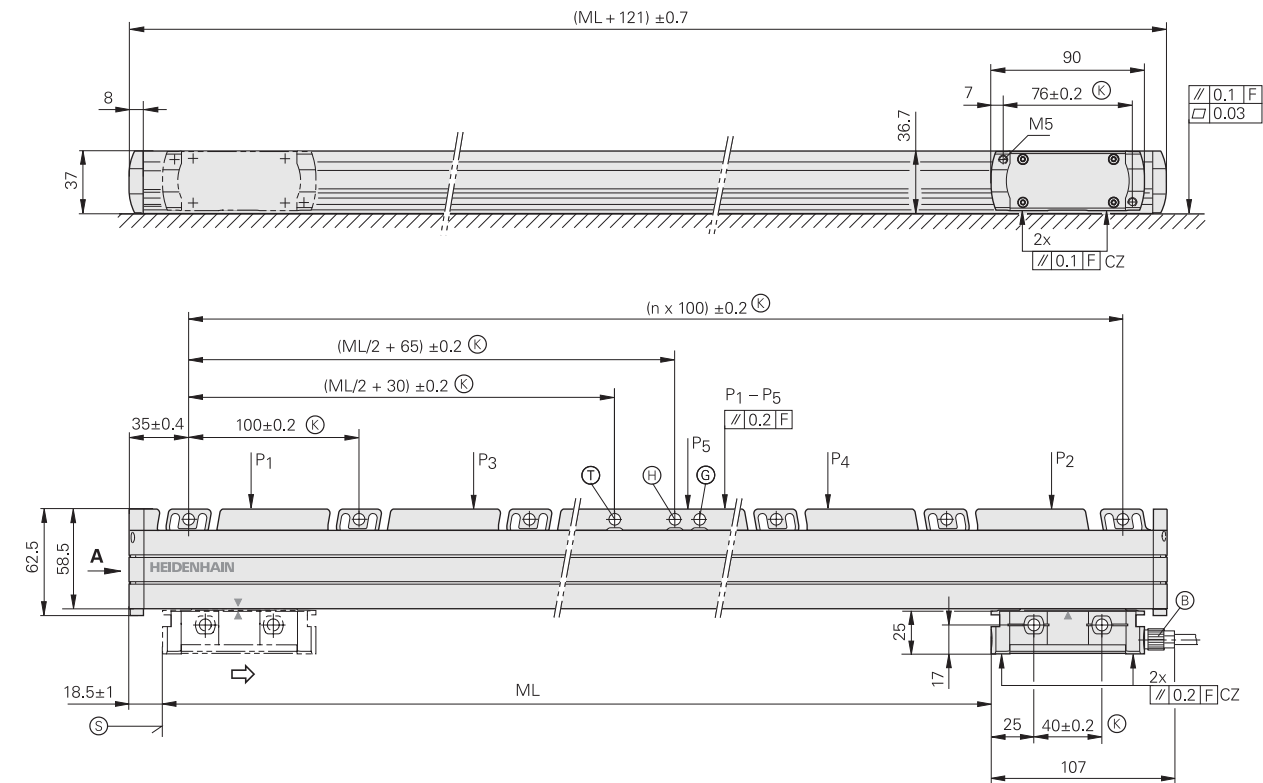


LC 100 series

Absolute linear encoders with full-size scale housing

- High vibration resistance
- Reclining mounting possible
- High reliability through double sealing lips



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

- Ⓞ, Ⓟ = Mounting options
- Ⓜ = Machine guideway
- P = Gauging points for alignment
- Ⓢ = Required mating dimensions
- Ⓣ = Alternative mating dimensions
- Ⓤ = Cable connection usable at either end
- Ⓥ = Compressed-air connection usable at either end
- Ⓦ = Mechanical fixed point (to be preferred)
- Ⓧ = Mechanical fixed point, compatible to predecessor model
- Ⓨ = Mechanical fixed point, with spacing interval of 100 mm
- Ⓩ = Beginning of measuring length ML (= 20 mm absolute)
- ⓐ = Mating surfaces
- = Direction of scanning unit motion for output signals in accordance with interface description

Specifications	LC 115	LC 195F	LC 195M	LC 195S
Measuring standard	DIADUR glass scale with absolute track and incremental track, grating period 20 µm			
Coefficient of linear expansion	$\alpha_{\text{therm}} \approx 8 \times 10^{-6} \text{ K}^{-1}$			
Accuracy grade*	± 3 µm up to measuring length 3040 mm; ± 5 µm			
Measuring length ML* in mm	140 1540 4040	240 1640 4240	340 1740	440 1840
Absolute position values	EnDat 2.2	Fanuc serial interface αi interface	Mitsubishi high speed serial interface	DRIVE-CLiQ
Ordering designation	EnDat 22	Fanuc 05	Mit 03-04	DQ 01
Resolution <i>At ± 3 µm</i> <i>At ± 5 µm</i>	0.001 µm 0.010 µm	αi interface/α interface 0.00125 µm/0.010 µm 0.0125 µm/0.050 µm	0.001 µm 0.010 µm	
Clock frequency	≤ 16 MHz	-		
Calculation time <i>t_{cal}</i>	≤ 5 µs	-		
Electrical connection	Separate adapter cable (1 m/3 m/6 m/9 m) connectable on both sides to mounting block			
Cable length	≤ 100 m ¹⁾	≤ 30 m	≤ 30 m	≤ 30 m ²⁾
Power supply	3.6 to 14 V DC			10 to 28.8 V DC
Power consumption (maximum)	3.6 V: ≤ 1.1 W 14 V: ≤ 1.3 W			10 V: ≤ 1.5 W 28.8 V: ≤ 1.7 W
Current consumption (typical)	5 V: 140 mA (without load)			24 V: 46 mA (without load)
Traversing speed	≤ 180 m/min			
Required moving force	≤ 4 N			
Vibration 55 Hz to 2000 Hz affecting the	Housing: ≤ 200 m/s ² (EN 60068-2-6) Scanning unit: ≤ 200 m/s ² (EN 60068-2-6)			
Shock 11 ms	≤ 300 m/s ² (EN 60068-2-27)			
Acceleration	≤ 100 m/s ² in measuring direction			
Operating temperature	0 °C to 50 °C			
Protection EN 60529	IP 53 when installed according to instructions in the brochure, IP 64 with sealing air from DA 400			
Weight	0.55 kg + 2.9 kg/m measuring length			

* Please select when ordering

¹⁾ With HEIDENHAIN cable, clock frequency ≤ 8 MHz

²⁾ Larger cable lengths upon request

Functional safety: LC 115 see special Product Information sheet; LC 195S in preparation