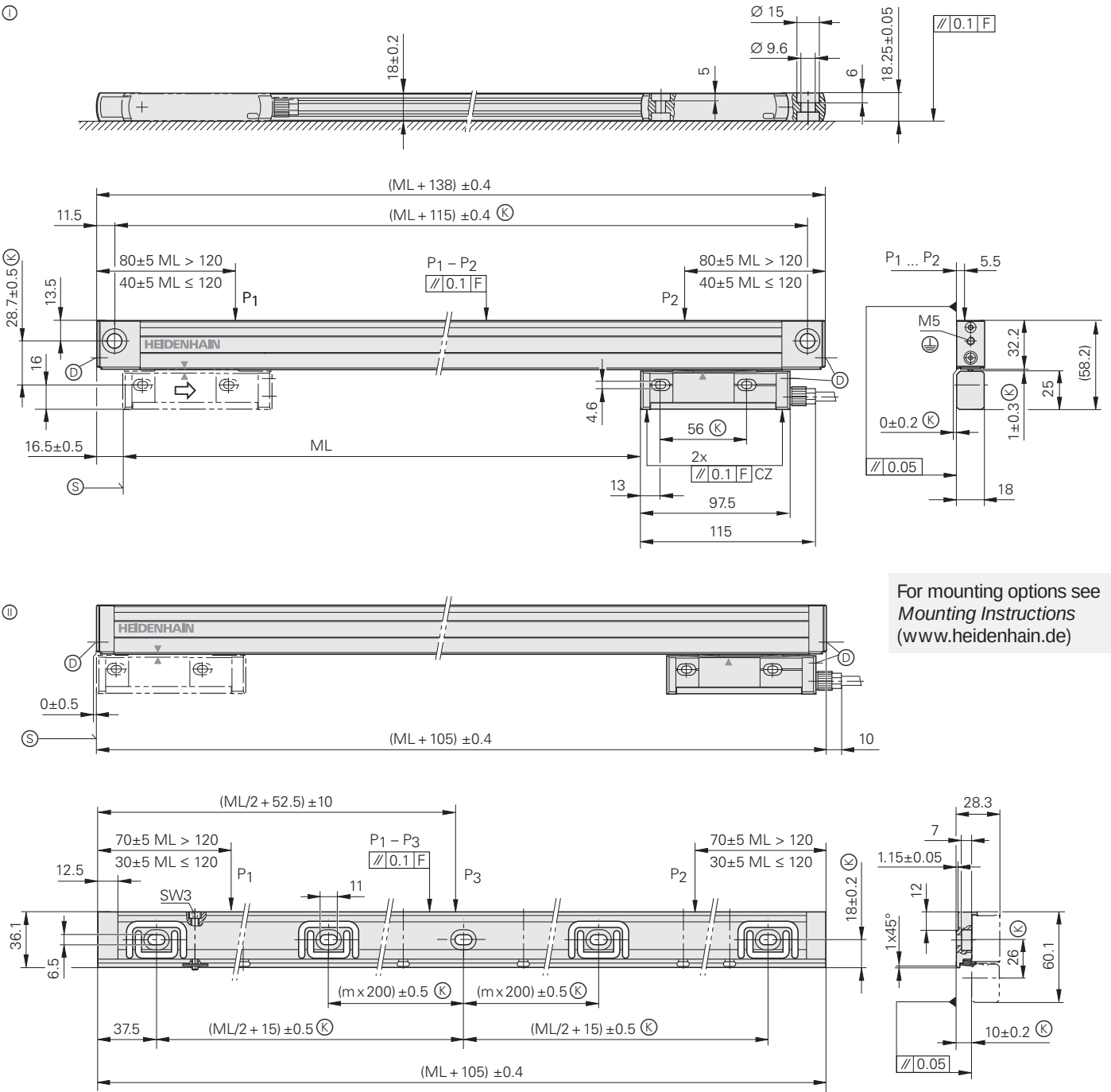


LC 400 Series

- Absolute linear encoders for measuring steps to 0.1 µm (resolution to 0.005 µm)
- For limited installation space
- Up to two additional scanning units are possible



Dimensions in mm



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

- ① = Without mounting spar (with M8 screws)
- ② = Mounting with mounting spar (LC 483 with short end pieces shown; LC with normal end pieces can also be mounted)
- F = Machine guideway
- P = Gauging points for alignment
 - ML ≤ 820 P₁ – P₂
 - ML > 820 P₁ – P₃
- Ⓚ = Required mating dimensions
- Ⓛ = Compressed air inlet
- Ⓜ = Beginning of measuring length (ML) (at 20 mm)
- ⇒ = Direction of scanning unit motion for output signals in accordance with interface description

Mounting spar

ML	m
70 ... 520	0
570 ... 920	1
1020 ... 1340	2
1440 ... 1740	3
1840 ... 2040	4



LC 483 without mounting spar

LC 483 with mounting spar

Specifications	LC 483	LC 493F	LC 493 M			
Measuring standard Expansion coefficient	DIADUR glass scale with absolute track and incremental track $\alpha_{\text{therm}} \approx 8 \times 10^{-6} \text{ K}^{-1}$ (mounting type ①); <i>with mounting spar:</i> $\alpha_{\text{therm}} \approx 9 \times 10^{-6} \text{ K}^{-1}$ (mounting type ②)					
Accuracy grade*	$\pm 3 \text{ }\mu\text{m}$; $\pm 5 \text{ }\mu\text{m}$					
Measuring length ML* in mm	Mounting spar* or clamping elements* optional 70 120 170 220 270 320 370 420 470 520 570 620 670 720 770 820 870 920 1020 1140 1240					
	Mounting spar* or clamping elements* necessary 1340 1440 1540 1640 1740 1840 2040					
Absolute position values*	EnDat 2.2 <i>Ordering designation</i> EnDat 02		Fanuc 02 serial interface		Mitsubishi high speed serial interface, Mit 02-4 or Mitsu 01	
Resolution <i>Accuracy $\pm 3 \text{ }\mu\text{m}$</i> <i>Accuracy $\pm 5 \text{ }\mu\text{m}$</i>	0.005 μm 0.01 μm		0.01 μm 0.05 μm			
Calculation time t_{cal} <i>EnDat 2.1 command set</i> <i>EnDat 2.2 command set</i>	< 1 ms $\leq 5 \text{ }\mu\text{s}$		– –			
Incremental signals	$\sim 1 \text{ V}_{\text{PP}}^{1)}$		–			
Grating period/signal period	20 μm		–			
Cutoff frequency –3dB	$\geq 150 \text{ kHz}$		–			
Power supply without load	3.6 to 5.25 V/< 300 mA					
Electrical connection	Separate adapter cable (1 m/3 m/6 m/9 m) connectable to mounting block					
Cable length ²⁾	$\leq 150 \text{ m}$; depending on the interface and subsequent electronics		$\leq 30 \text{ m}$		$\leq 20 \text{ m}$	
Traversing speed	$\leq 180 \text{ m/min}$					
Required moving force	$\leq 5 \text{ N}$					
Vibration 55 to 2000 Hz Shock 11 ms Acceleration	<i>Without mounting spar:</i> $\leq 100 \text{ m/s}^2$ (IEC 60068-2-6) <i>With mounting spar and cable outlet right/left:</i> $\leq 200 \text{ m/s}^2/100 \text{ m/s}^2$ (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 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	<i>Encoder:</i> 0.2 kg + 0.5 kg/m measuring length, <i>mounting spar:</i> 0.9 kg/m					

* Please indicate when ordering
¹⁾ Depending on the adapter cable

²⁾ With HEIDENHAIN cable