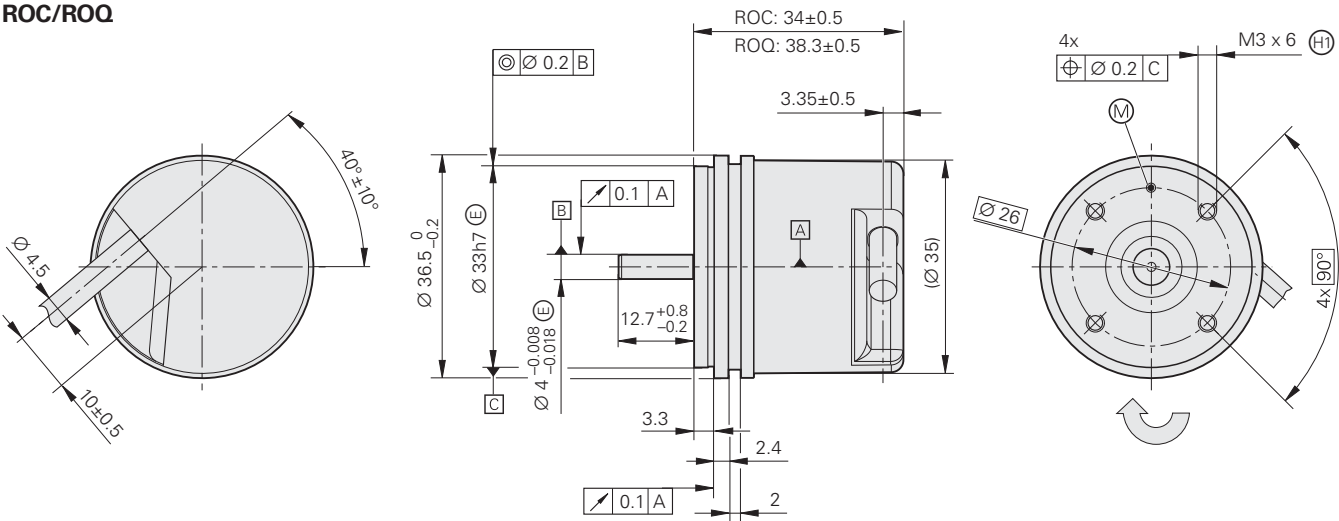


ROC, ROQ, ROD 1000 Series

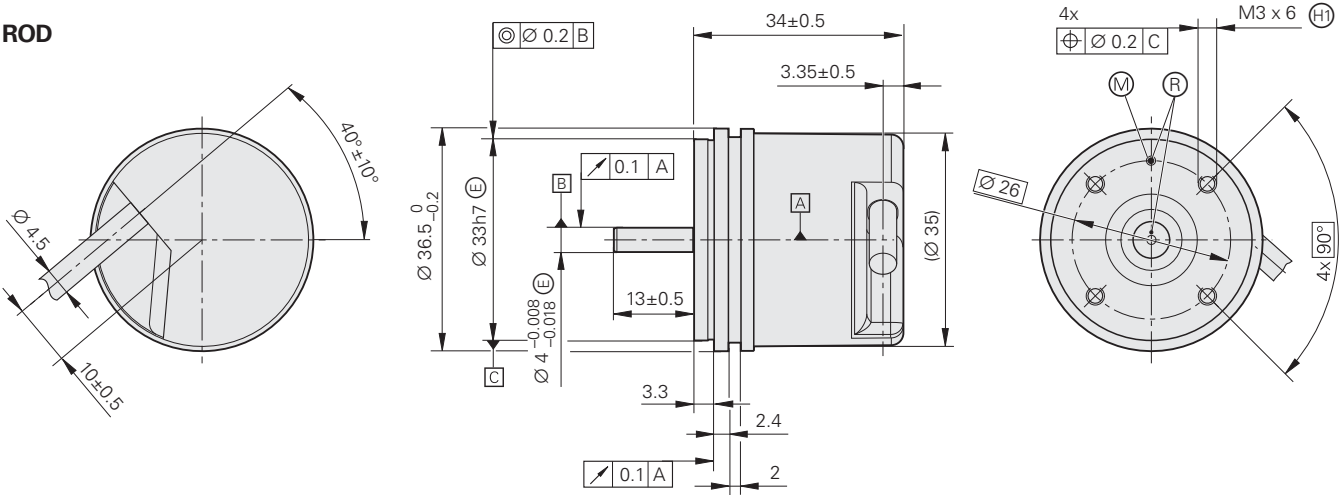
- Rotary encoders for separate shaft coupling
- Compact dimensions
- Synchro flange
- Functional Safety for ROC 1023/ROQ 1035 upon request



ROC/ROQ



ROD



Dimensions in mm



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

Cable radial, also usable axially

Ⓐ = Bearing

Ⓜ = Measuring point for operating temperature

Ⓡ = Reference mark position $\pm 20^\circ$

Ⓜ = Threaded mounting hole

↻ Direction of shaft rotation for output signals as per the interface description

	Incremental									
	ROD 1020			ROD 1030			ROD 1080		ROD 1070	
Incremental signals	 TTL			 HTL			 1 V _{PP} ¹⁾		 TTL	
Line counts*	100 1000	200 1024	250 1250	360 1500	400 2000	500 2048	720 2500	900 3600	1000 2500 3600	
Integrated interpolation*	–							5-fold		10-fold
Cutoff frequency –3 dB	–			–			≥ 180 kHz		–	
Scanning frequency	≤ 300 kHz			≤ 160 kHz			–		≤ 100 kHz	
Edge separation a	≥ 0.39 μs			≥ 0.76 μs			–		≥ 0.47 μs	
Power supply	5 V ± 10 %			10 to 30 V			5 V ± 10 %		5 V ± 5 %	
Current consumption without load	≤ 120 mA			≤ 150 mA			≤ 120 mA		≤ 155 mA	
Electrical connection	Cable 1 m/5 m, with or without coupling M23							Cable 5 m without M23 coupling		
Shaft	Solid shaft D = 4 mm									
Mech. permissible speed n	≤ 12000 min ^{–1}									
Starting torque	≤ 0.001 Nm (at 20 °C)									
Moment of inertia of rotor	≤ 0.5 · 10 ^{–6} kgm ²									
Shaft load	Axial: 5 N Radial: 10 N at shaft end									
Vibration 55 to 2000 Hz	≤ 100 m/s ² (EN 60068-2-6)									
Shock 6 ms	≤ 1000 m/s ² (EN 60068-2-27)									
Max. operating temp. ²⁾	100 °C			70 °C			100 °C		70 °C	
Min. operating temp.	For fixed cable: –30 °C For frequent flexing: –10 °C									
Protection EN 60529	IP 64									
Weight	Approx. 0.09 kg									

Bold: These preferred versions are available on short notice

* Please select when ordering

1) Restricted tolerances: Signal amplitude 0.8 to 1.2 V_{PP}

2) For the correlation between the operating temperature and the shaft speed or supply voltage, see *General Mechanical Information*