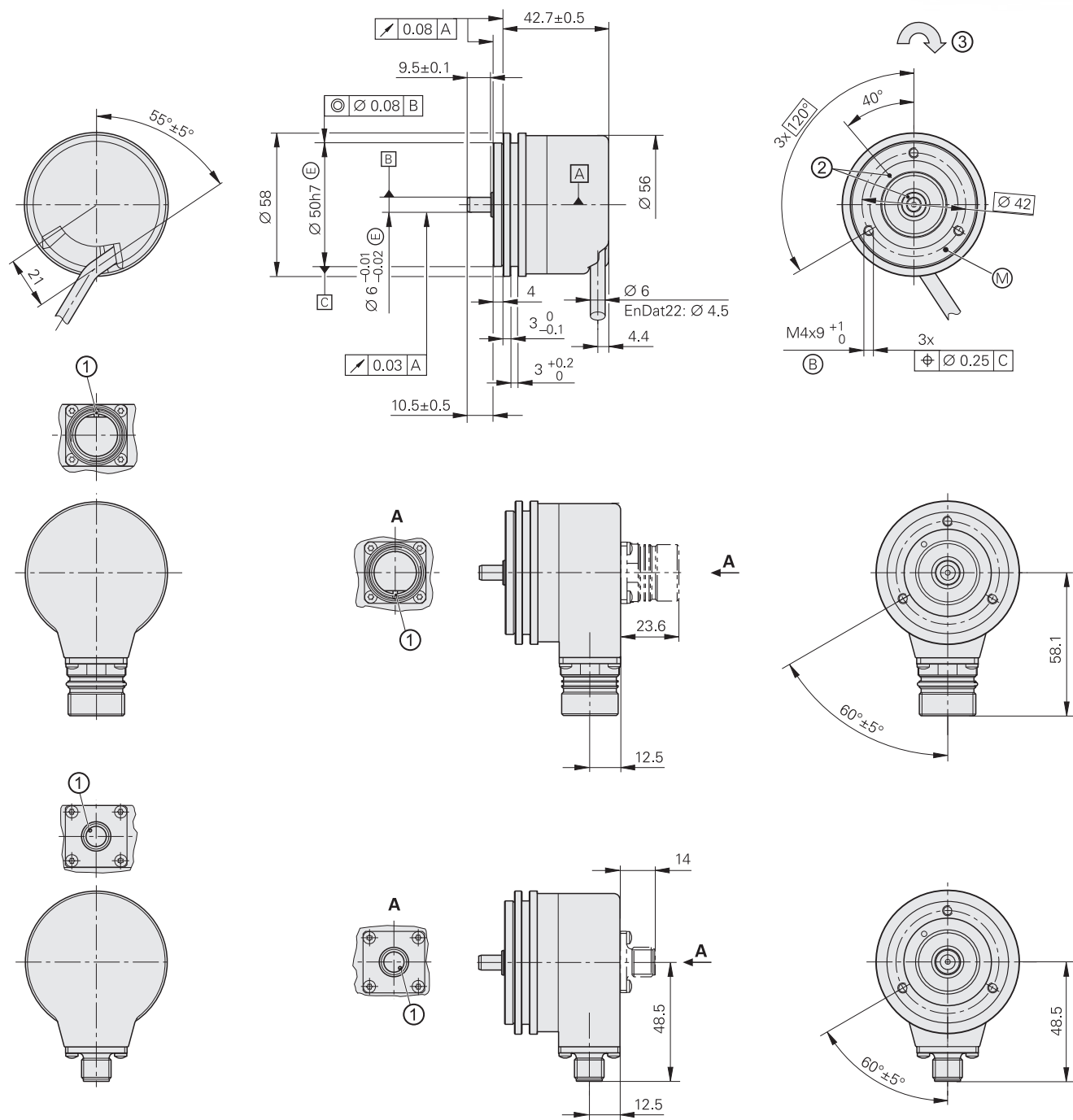


ROC/ROQ/ROD 400 series

Absolute and incremental rotary encoders

- **Synchro flange**
- **Solid shaft for separate shaft coupling**



mm

 Tolerancing ISO 8015
 ISO 2768:1989-mH
 ≤ 6 mm: ±0.2 mm

Radial cable (can also be used axially)

Ⓐ = Bearing

Ⓢ = Fastening thread

Ⓜ = Measuring point for operating temperature

1 = Connector coding

2 = ROD reference mark position for shaft and flange $\pm 30^\circ$

3 = Incremental rotary encoders: direction of shaft rotation for output signals as per interface description

Absolute rotary encoders: direction of shaft rotation for ascending position values

	Incremental														
	ROD 426				ROD 466				ROD 436				ROD 486		
Interface	 TTL								 HTL				 1 V _{PP} ¹⁾		
Line counts*	50	100	250	360	500	512	720					–			
	1000	1024	1250	1500	2000	2048	2500	3600	4096	5000					
Reference mark	One														
Cutoff frequency –3 dB	–											≥ 180 kHz			
Scanning frequency	≤ 300 kHz/≤ 150 kHz											–			
Edge separation <i>a</i>	≥ 0.39 μs/≥ 0.25 μs											–			
System accuracy	1/20 of grating period														
Electrical connection*	• M23 flange socket, radial and axial • Cable (1 m/5 m) with or without M23 coupling														
Supply voltage	DC 5 V ±0.5 V				DC 10 V to 30 V				DC 10 V to 30 V				DC 5 V ±0.5 V		
Current consumption without load	≤ 120 mA				≤ 100 mA				≤ 150 mA				≤ 120 mA		
Shaft	Solid shaft (Ø 6 mm)														
Mech. permiss. speed	≤ 16000 rpm														
Starting torque (typical)	0.01 Nm (at 20 °C) (at IP66: 0.025 Nm)														
Moment of inertia of rotor	≤ 2.7 · 10 ^{–6} kgm ²														
Shaft load ²⁾	Axial: ≤ 40 N; radial: ≤ 60 N at shaft end														
Vibration: 55 Hz to 2000 Hz Shock: 6 ms	≤ 300 m/s ² (EN 60068-2-6) ≤ 2000 m/s ² (EN 60068-2-27)														
Max. operating temp. ³⁾	100 °C				70 °C				100 °C ⁴⁾						
Min. operating temp.	Flange socket or fixed cable: –40 °C; moving cable: –10 °C														
Protection EN 60529	IP67 at housing; IP64 at shaft inlet (IP66 upon request)														
Mass	≈ 0.3 kg														
Valid for ID	376846-xx				376866-xx				376836-xx				376886-xx ⁵⁾		

Bold: This preferred version is available on short notice.

* Please select when ordering

1) Limited tolerances: signal amplitude: 0.8 V_{PP} to 1.2 V_{PP}

2) See also “Mechanical design types and mounting”

3) For the relationship of operating temperature to shaft speed and supply voltage, see “General mechanical information”

4) 80 °C for ROD 486 with 4096 or 5000 lines

5) Available with mechanical fault exclusion; for deviating specifications and special mounting information, see the *Fault Exclusion* Customer Information document