

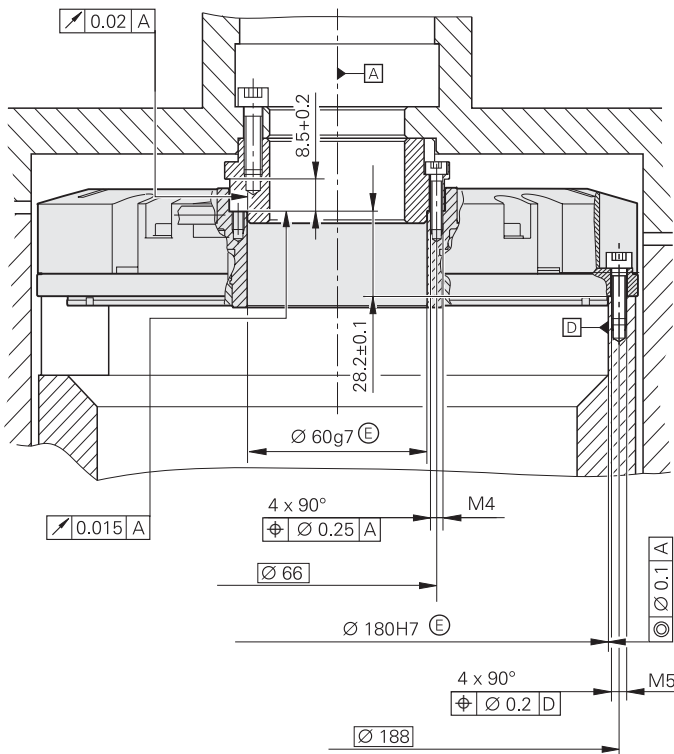
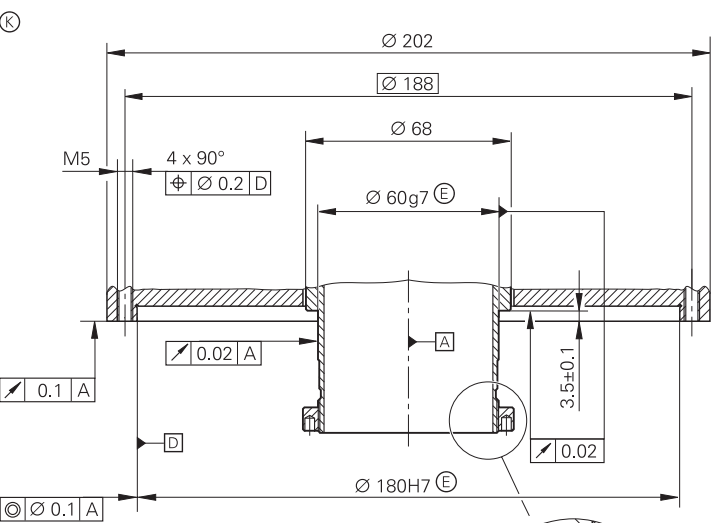
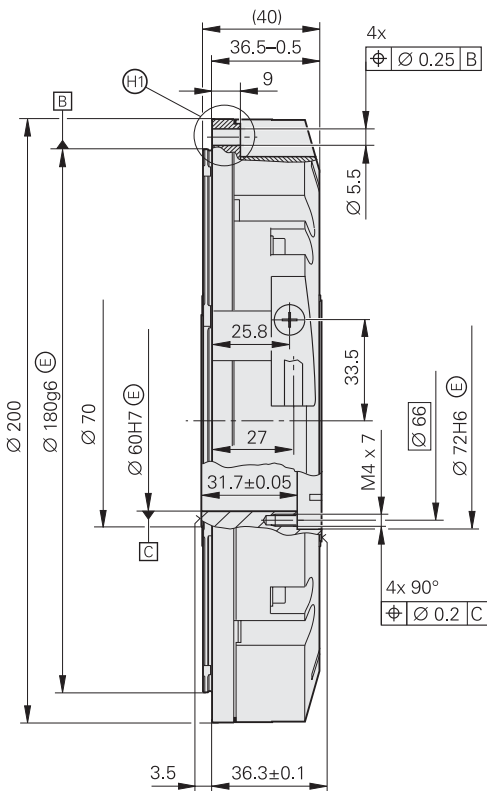
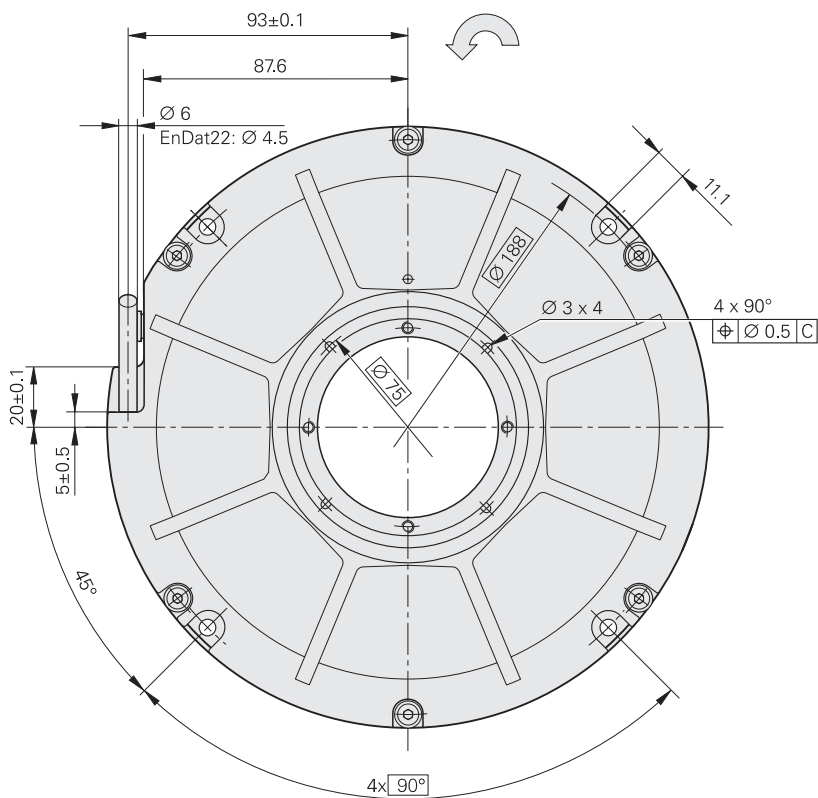
RCN 700/RCN 800 Series

- Integrated stator coupling
- Hollow through shaft, diameter 60 mm
- System accuracy $\pm 2''$ or $\pm 1''$

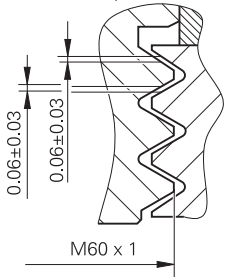
Dimensions in mm



Tolerancing ISO 8015
ISO 2768 - m H



Cable radial, also usable axially
A = Ball bearing
⊗ = Required mating dimensions
⊕ = Shown rotated by 45°
↻ Direction of shaft rotation for output signals is described in interface description



	Absolute			
	RCN 729 RCN 829	RCN 729 RCN 829	RCN 727 F RCN 827 F	RCN 723M RCN 823 M
Absolute position values	EnDat 2.2	EnDat 2.2	Serial Interface Fanuc 02	Mitsubishi high-speed serial interface
Ordering designation*	EnDat 22	EnDat 02	Fanuc 02	Mitsu 01
Positions per revolution	536870912 (29 bits)		134217728 (27 bits)	8388608 (23 bits)
Elec. permissible speed	≤ 300 rpm for continuous position value			
Clock frequency	≤ 8 MHz	≤ 2 MHz	–	
Calculation time t_{cal}	5 μs		–	
Incremental signals	–	$\sim 1\text{ V}_{PP}$	–	
Line count*	–	32 768	–	
Cutoff frequency –3 dB	–	≥ 180 kHz	–	
Recommended measuring step for position capture	RCN 72x: 0.0001° RCN 82x: 0.00005°			
System accuracy	RCN 72x: ± 2″ RCN 82x: ± 1″			
Power supply without load	3.6 to 5.25 V/Max. 350 mA		5 V ± 5% max. 350 mA	
Electrical connection*	Cable 1 m (3.3 ft), with coupling M12	Cable 1 m (3.3 ft), with or without M23 coupling		
Max. cable length ¹⁾	150 m		30 m	25 m
Shaft	Hollow through shaft D= 60 mm			
Mech. permissible speed	≤ 1000 rpm			
Starting torque	≤ 0.5 Nm at 20 °C (68 °F)			
Moment of inertia of rotor	1.3 · 10 ^{–3} kgm ²			
Natural frequency	≥ 1000 Hz			
Permissible axial motion of measured shaft	≤ ± 0.1 mm			
Vibration 55 to 2000 Hz Shock 6 ms	≤ 100 m/s ² (IEC 60068-2-6) ≤ 1000 m/s ² (IEC 60068-2-27)			
Operating temperature	0 to 50 °C (32 °F to 122 °F)			
Protection IEC 60529	IP 64			
Weight	Approx. 2.8 kg (6.2 lb)			

* Please indicate when ordering

¹⁾ With HEIDENHAIN cable

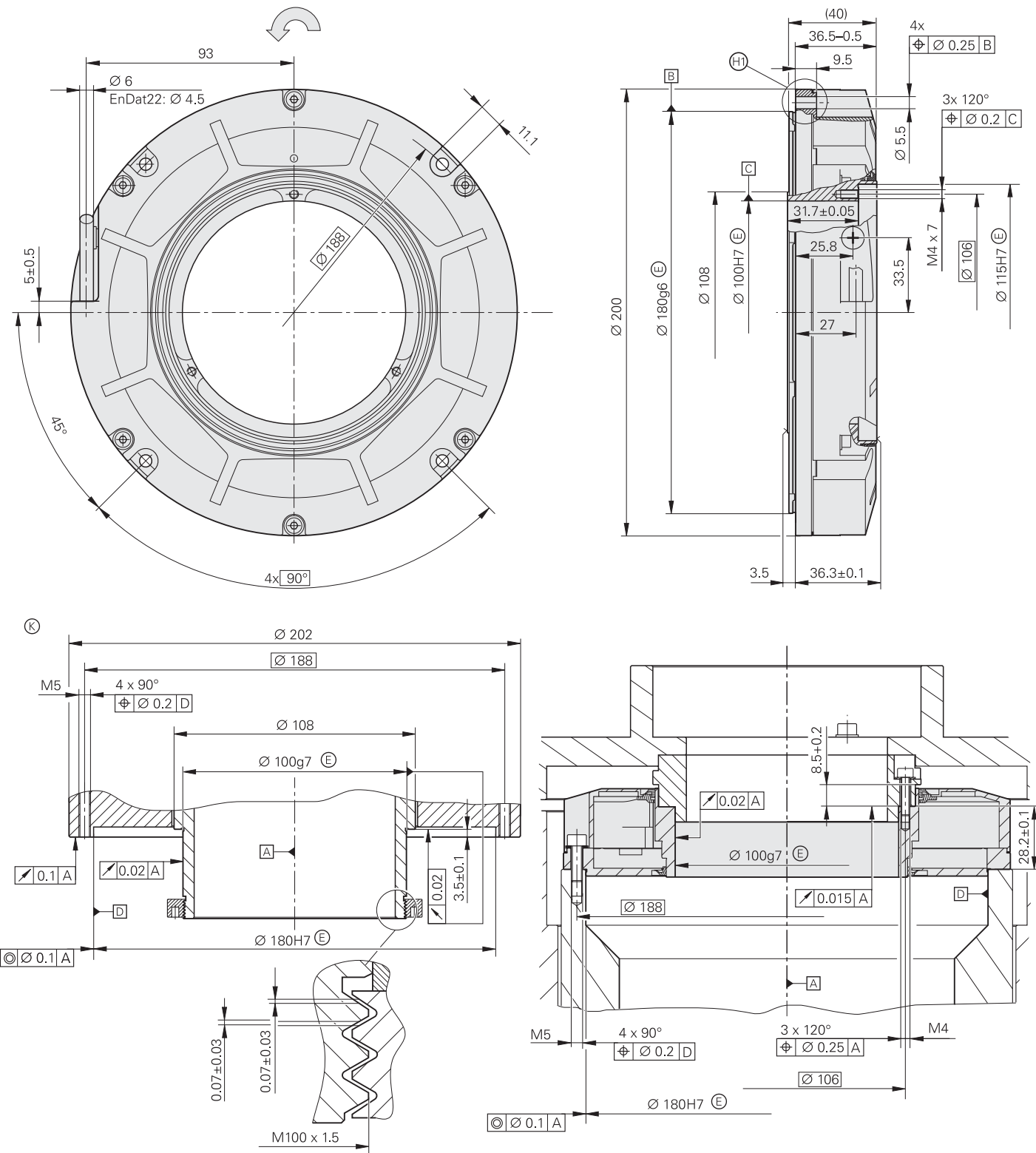
RCN 700/RCN 800 Series

- Integrated stator coupling
- Hollow through shaft, diameter 100 mm
- System accuracy $\pm 2''$ or $\pm 1''$

Dimensions in mm



Tolerancing ISO 8015
ISO 2768 - m H



Cable radial, also usable axially
 [A] = Ball bearing
 [C] = Required mating dimensions

[H] = Shown rotated by 45°
 [R] = Direction of shaft rotation for output signals is described in interface description.

	Absolute		
	RCN 729 RCN 829	RCN 729 RCN 829	RCN 727 F RCN 827 F
Absolute position values	EnDat 2.2	EnDat 2.2	Serial Interface Fanuc 02
Ordering designation*	EnDat 22	EnDat 02	Fanuc 02
Positions per revolution	536 870 912 (29 bits)		134 217 728 (27 bits)
Elec. permissible speed	≤ 300 rpm for continuous position value		
Clock frequency	≤ 8 MHz	≤ 2 MHz	–
Calculation time t_{cal}	5 µs		–
Incremental signals	–	$\sim 1 V_{pp}$	–
Line count*	–	32 768	–
Cutoff frequency –3 dB	–	≥ 180 kHz	–
Recommended measuring step for position capture	RCN 72x: 0.0001° RCN 82x: 0.00005°		
System accuracy	RCN 72x: ± 2" RCN 82x: ± 1"		
Power supply without load	3.6 to 5.25 V/Max. 350 mA		5 V ± 5% max. 350 mA
Electrical connection*	Cable 1 m (3.3 ft), with coupling M12	Cable 1 m (3.3 ft), with or without M23 coupling	
Max. cable length ¹⁾	150 m		30 m
Shaft	Hollow through shaft D= 100 mm		
Mech. permissible speed	≤ 1000 rpm		
Starting torque	≤ 1.5 Nm at 20 °C (68 °F)		
Moment of inertia of rotor	$3.3 \cdot 10^{-3} \text{ kgm}^2$		
Natural frequency	≥ 900 Hz		
Permissible axial motion of measured shaft	≤ ± 0.1 mm		
Vibration 55 to 2000 Hz Shock 6 ms	≤ 100 m/s ² (IEC 60 068-2-6) ≤ 1000 m/s ² (IEC 60 068-2-27)		
Operating temperature	0 to 50 °C (32 °F to 122 °F)		
Protection IEC 60 529	IP 64		
Weight	Approx. 2.6 kg (5.7 lb)		

* Please indicate when ordering

¹⁾ With HEIDENHAIN cable

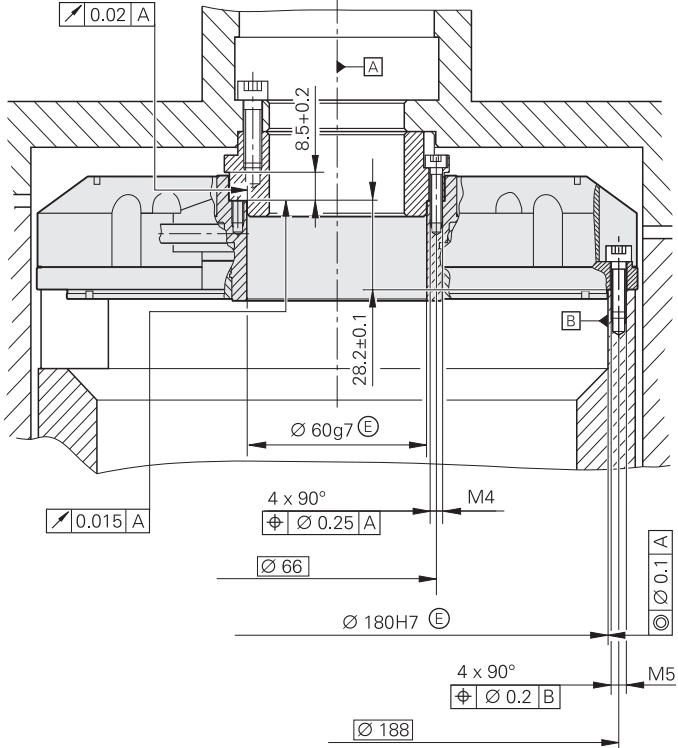
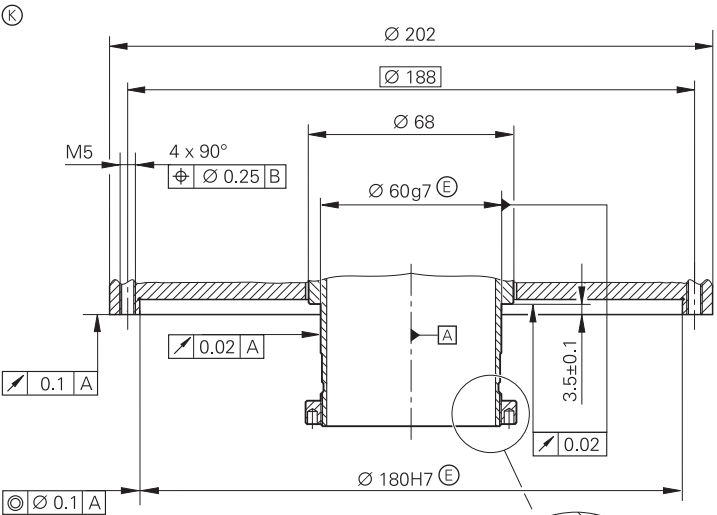
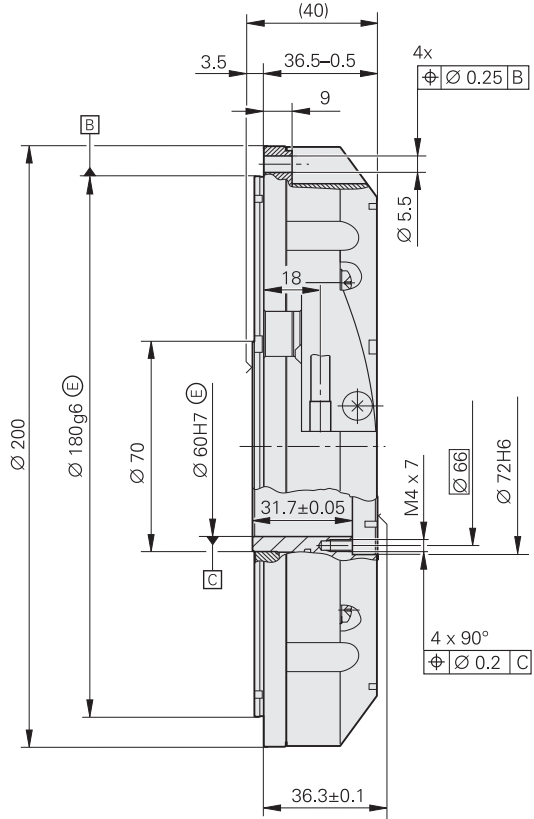
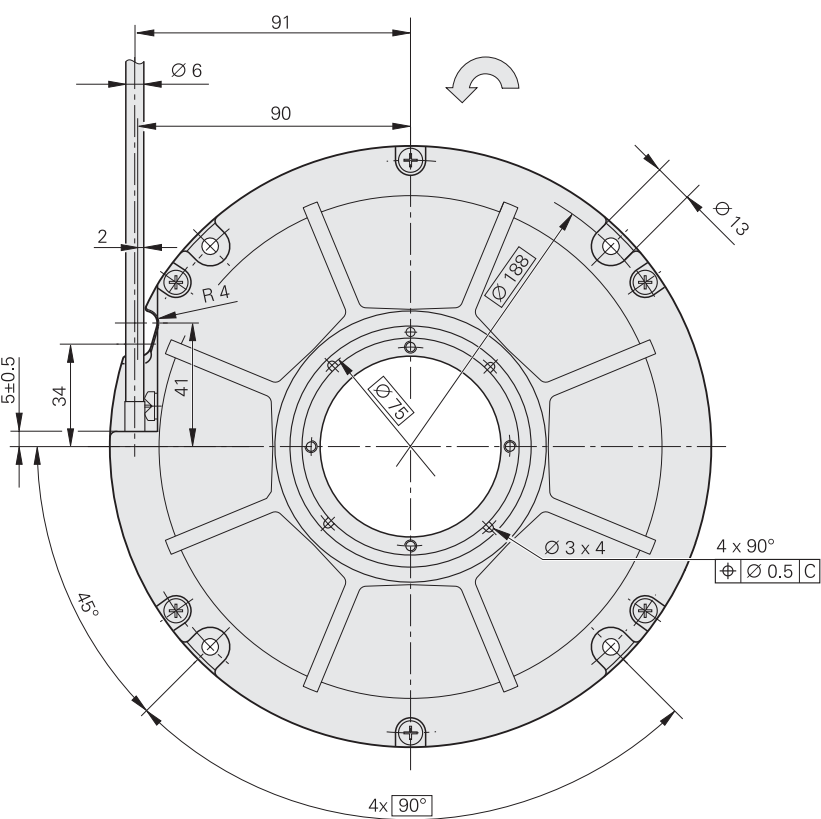
RON 786/RON 886/RPN 886

- Integrated stator coupling
- Hollow through shaft, diameter 60 mm
- System accuracy $\pm 2''$ or $\pm 1''$

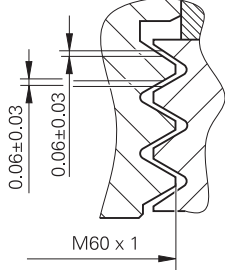
Dimensions in mm



Tolerancing ISO 8015
ISO 2768 - m H



Cable radial, also usable axially
⊠ = Ball bearing
⊙ = Required mating dimensions
↻ Direction of shaft rotation for output signals is described in interface description.



	Incremental		
	RON 786	RON 886	RPN 886
Incremental signals	 1 V _{PP}		
Line count*	18 000 36 000	36 000	90 000 ($\triangleq$ 180 000 signal periods)
Reference mark*	RON x86: One RON x86C: Distance-coded		One
Cutoff frequency	–3 dB $\geq$ 180 kHz –6 dB		$\geq$ 800 kHz $\geq$ 1300 kHz
Recommended measuring step for position capture	0.0001°	0.00005°	0.00001°
System accuracy	$\pm$ 2"	$\pm$ 1"	
Power supply without load	5 V $\pm$ 10% max. 150 mA		5 V $\pm$ 10% max. 250 mA
Electrical connection*	Cable 1 m (3.3 ft), with or without M23 coupling		
Max. cable length ¹⁾	150 m		
Shaft	Hollow through shaft D= 60 mm		
Mech. permissible speed	$\leq$ 1000 rpm		
Starting torque	$\leq$ 0.5 Nm at 20 °C (68 °F)		
Moment of inertia of rotor	$1.2 \cdot 10^{-3}$ kgm ²		
Natural frequency	$\geq$ 1000 Hz		$\geq$ 500 Hz
Permissible axial motion of measured shaft	$\leq \pm$ 0.1 mm		
Vibration 55 to 2000 Hz Shock 6 ms	$\leq$ 100 m/s ² (IEC 60 068-2-6) $\leq$ 1000 m/s ² (IEC 60 068-2-27)		$\leq$ 50 m/s ² (IEC 60 068-2-6) $\leq$ 1000 m/s ² (IEC 60 068-2-27)
Operating temperature	0 to 50 °C (32 °F to 122 °F)		
Protection IEC 60 529	IP 64		
Weight	Approx. 2.5 kg (5.5 lb)		

* Please indicate when ordering
¹⁾ With HEIDENHAIN cable