

# RCN 700/RCN 800 Series

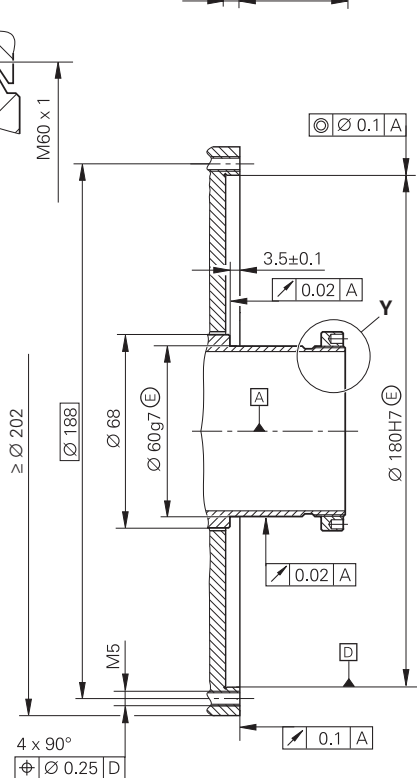
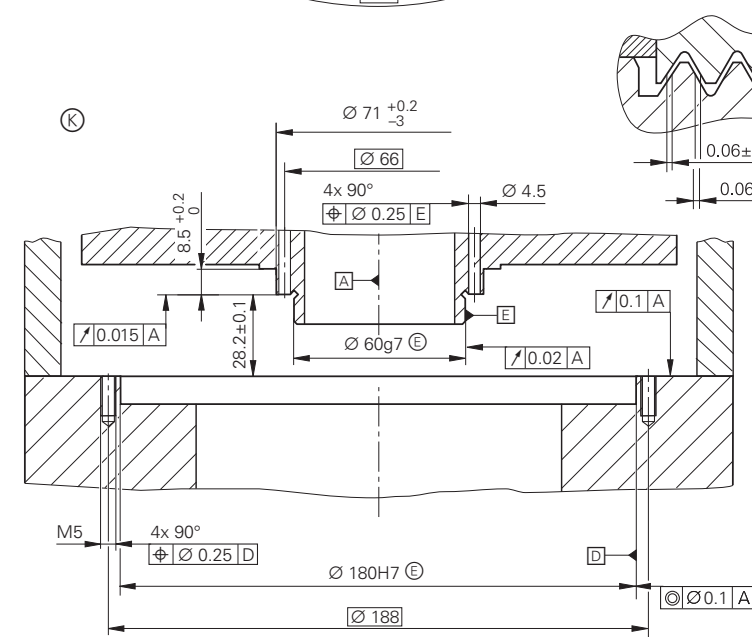
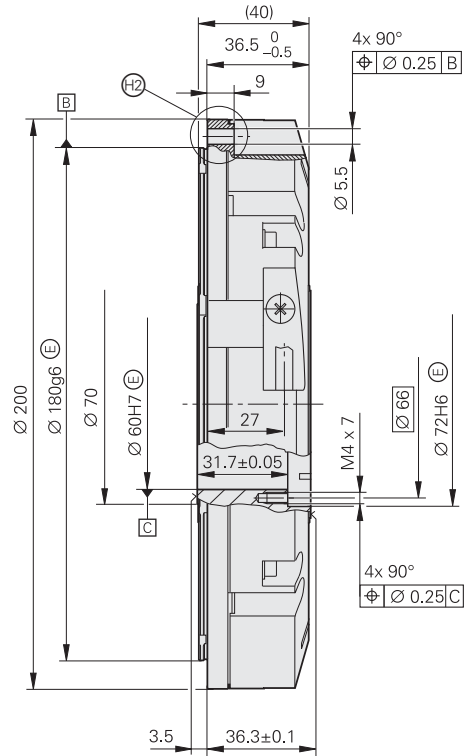
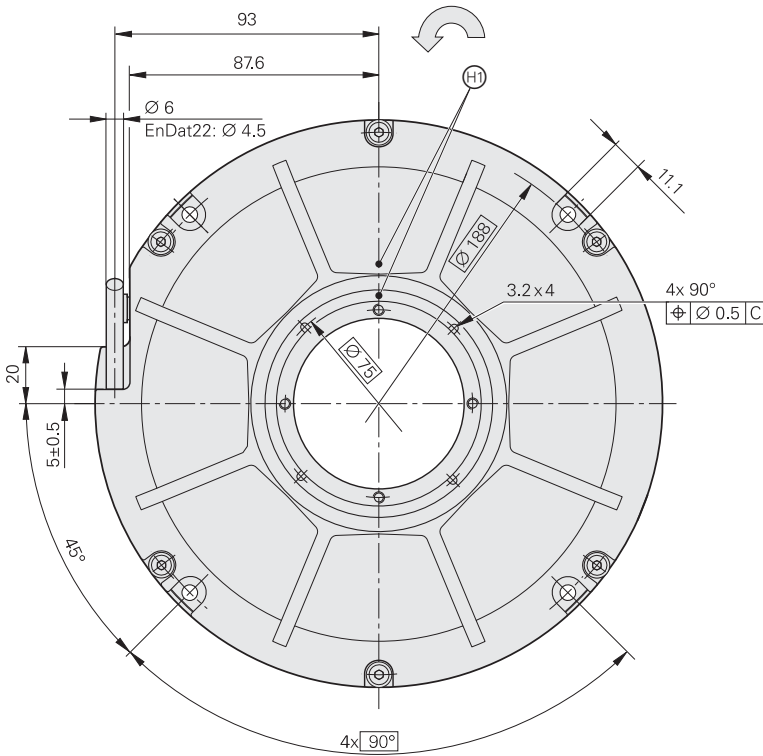
- Integrated stator coupling
- Hollow through shaft  $\varnothing 60$  mm
- System accuracy  $\pm 2''$  or  $\pm 1''$



Dimensions in mm



Tolerancing ISO 8015  
ISO 2768 - m H  
< 6 mm:  $\pm 0.2$  mm



Cable radial, also usable axially

- $\square$  = Bearing
- $\odot$  = Required mating dimensions
- $\oplus$  = Mark for 0° position ( $\pm 5^\circ$ )
- $\otimes$  = Shown rotated by 45°
- Direction of shaft rotation for output signals as per the interface description

	Absolute			
	RCN 729 RCN 829	RCN 729 RCN 829	RCN 727F RCN 827F	RCN 727M RCN 827M
<b>Absolute position values</b>	EnDat 2.2	EnDat 2.2	Fanuc 02 serial interface	Mitsubishi High Speed Serial Interface
Ordering designation*	EnDat 22	EnDat 02	Fanuc 02	Mit 02-4
Positions per revolution	536870912 (29 bits)		134217728 (27 bits)	
Elec. permissible speed	≤ 300 min <sup>-1</sup> for continuous position value			
Clock frequency	≤ 8 MHz	≤ 2 MHz	-	
Calculation time t <sub>cal</sub>	5 μs		-	
<b>Incremental signals</b>	-	~ 1 V <sub>PP</sub>	-	
Line count*	-	32768	-	
Cutoff frequency -3 dB	-	≥ 180 kHz	-	
<b>Recommended measuring step</b> for position measurement	RCN 72x: 0.0001° RCN 82x: 0.00005°			
<b>System accuracy</b>	RCN 72x: ± 2" RCN 82x: ± 1"			
<b>Power supply</b> Without load	3.6 to 5.25 V, max. 350 mA			
<b>Electrical connection*</b>	Cable 1 m, with coupling M12	Cable 1 m, with M23 coupling		
<b>Max. cable length<sup>1)</sup></b>	150 m		30 m	
<b>Shaft</b>	Hollow through shaft D = 60 mm			
<b>Mech. perm. speed</b>	≤ 1000 min <sup>-1</sup>			
<b>Starting torque</b>	≤ 0.5 Nm at 20 °C			
<b>Moment of inertia</b> of rotor	1.3 · 10 <sup>-3</sup> kgm <sup>2</sup>			
<b>Natural frequency</b>	≥ 1000 Hz			
<b>Permissible axial motion of measured shaft</b>	≤ ± 0.1 mm			
<b>Vibration</b> 55 to 2000 Hz <b>Shock</b> 6 ms	≤ 100 m/s <sup>2</sup> (EN 60068-2-6) ≤ 1000 m/s <sup>2</sup> (EN 60068-2-27)			
<b>Operating temperature</b>	0 °C to 50 °C			
<b>Protection</b> EN 60529	IP 64			
<b>Weight</b>	Approx. 2.8 kg			

\* Please select when ordering

<sup>1)</sup> With HEIDENHAIN cable



	Absolute			
	RCN 729 RCN 829	RCN 729 RCN 829	RCN 727F RCN 827F	RCN 727M RCN 827M
<b>Absolute position values</b>	EnDat 2.2	EnDat 2.2	Fanuc 02 serial interface	Mitsubishi High Speed Serial Interface
Ordering designation*	EnDat 22	EnDat 02	Fanuc 02	Mit 02-4
Positions per revolution	536870912 (29 bits)		134217728 (27 bits)	
Elec. permissible speed	≤ 300 min <sup>-1</sup> for continuous position value			
Clock frequency	≤ 8 MHz	≤ 2 MHz	–	
Calculation time $t_{cal}$	5 μs		–	
<b>Incremental signals</b>	–	~ 1 V <sub>PP</sub>	–	
Line count*	–	32768	–	
Cutoff frequency –3 dB	–	≥ 180 kHz	–	
<b>Recommended measuring step</b> for position measurement	RCN 72x: 0.0001° RCN 82x: 0.00005°			
<b>System accuracy</b>	RCN 72x: ± 2" RCN 82x: ± 1"			
<b>Power supply</b> Without load	3.6 to 5.25 V, max. 350 mA			
<b>Electrical connection*</b>	Cable 1 m, with coupling M12	Cable 1 m, with M23 coupling		
<b>Max. cable length<sup>1)</sup></b>	150 m		30 m	
<b>Shaft</b>	Hollow through shaft D = 100 mm			
<b>Mech. perm. speed</b>	≤ 1000 min <sup>-1</sup>			
<b>Starting torque</b>	≤ 1.5 Nm at 20 °C			
<b>Moment of inertia</b> of rotor	3.3 · 10 <sup>-3</sup> kgm <sup>2</sup>			
<b>Natural frequency</b>	≥ 900 Hz			
<b>Permissible axial motion of measured shaft</b>	≤ ± 0.1 mm			
<b>Vibration</b> 55 to 2000 Hz <b>Shock</b> 6 ms	≤ 100 m/s <sup>2</sup> (EN 60068-2-6) ≤ 1000 m/s <sup>2</sup> (EN 60068-2-27)			
<b>Operating temperature</b>	0 °C to 50 °C			
<b>Protection</b> EN 60529	IP 64			
<b>Weight</b>	Approx. 2.6 kg			

\* Please select when ordering

<sup>1)</sup> With HEIDENHAIN cable

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