

	Absolute RCN 8510 RCN 8310	RCN 8580 RCN 8380	RCN 8590F RCN 8390F	RCN 8590M RCN 8390M
Measuring standard	DIADUR circular scale with absolute and incremental track (32 768 lines)			
System accuracy	<i>RCN 85x0: ± 1"; RCN 83x0: ± 2"</i>			
Position error per signal period	<i>RCN 85x0: ≤ ± 0.15" RCN 83x0: ≤ ± 0.2"</i>	<i>RCN 85x0: ≤ ± 0.2" RCN 83x0: ≤ ± 0.2"</i>		
Functional safety*	Option ¹⁾	–		
Interface	EnDat 2.2		Fanuc serial interface αi Interface	Mitsubishi high speed interface
Ordering designation	EnDat22	EnDat02	Fanuc05	Mit03-4
Position values/revolution	536870912 (29 bits); <i>Fanuc α Interface: 134217 728 (27 bits)</i>			
Elec. permissible speed	≤ 1500 min ⁻¹ for continuous position value	≤ 750 min ⁻¹ for continuous position value	≤ 1500 min ⁻¹ for continuous position value	
Clock frequency Calculation time t_{cal}	≤ 16 MHz ≤ 5 μs	≤ 2 MHz ≤ 5 μs	–	
Incremental signals Cutoff frequency –3 dB	–	$\sim 1 V_{PP}$ ≥ 400 kHz	–	
Electrical connection	Separate adapter cable connectable to encoder via quick disconnect			
Cable length ²⁾	≤ 150 m		≤ 50 m	≤ 30 m
Voltage supply	3.6 V to 14 V DC			
Power consumption ³⁾ (max.)	3.6 V: ≤ 1.1 W; 14 V: ≤ 1.3 W			
Current consumption (typical)	5 V: 140 mA (without load)			
Shaft	Hollow through shaft D = 100 mm			
Mech. permissible speed	≤ 500 min ⁻¹ ; <i>temporary: ≤ 1500 min⁻¹</i> ⁴⁾ (Speeds over 500 min ⁻¹ require consultation)			
Torque (friction)	≤ 4.5 Nm (typical starting torque: ≤ 1.0 Nm at 20 °C)			
Moment of inertia	<i>Rotor (hollow shaft): 3.20 · 10⁻³ kgm²; Stator (housing/flange): 10.0 · 10⁻³ kgm²</i>			
Permissible axial motion of measured shaft	± 0.3 mm			
Natural frequency	≥ 900 Hz			
Vibration 55 to 2000 Hz Shock 6 ms	≤ 200 m/s ² (EN 60068-2-6) ≤ 200 m/s ² (EN 60068-2-27)			
Operating temperature	0 °C to +50 °C			
Protection EN 60 529	IP 64			
Weight	≈ 2.6 kg			

* Please indicate when ordering

²⁾ With HEIDENHAIN cable; ≤ 8 MHz

⁴⁾ For mechanical fault exclusion, see page 21

¹⁾ For dimensions and specifications, see separate Product Information document

³⁾ See *General electrical information* in the catalog *Interfaces of HEIDENHAIN Encoders*