

| | Absolute RCN 2510 RCN 2310 | RCN 2580 RCN 2380 | RCN 2590F RCN 2390F | RCN 2590M RCN 2390M |
|---|---|---|--|------------------------------------|
| Measuring standard | DIADUR circular scale with absolute and incremental track (16384 lines) | | | |
| System accuracy | <i>RCN 25x0: ± 2.5"; RCN 23x0: ± 5"</i> | | | |
| Position error per signal period | <i>RCN 25x0: ≤ ± 0.3" RCN 23x0: ≤ ± 0.4"</i> | <i>RCN 25x0: ≤ ± 0.4" RCN 23x0: ≤ ± 0.4"</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 | <i>RCN 25x0: 268435456 (28 bits); Fanuc α Interface: 134217728 (27 bits) RCN 23x0: 67108864 (26 bits); Fanuc α Interface: 8388608 (23 bits)</i> | | | |
| Elec. permissible speed | ≤ 3000 min ⁻¹ for continuous position value | ≤ 1500 min ⁻¹ for continuous position value | ≤ 3000 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= 20 mm | | | |
| Mech. permissible speed | ≤ 1500 min ⁻¹ ; <i>temporary: ≤ 3000 min⁻¹</i> ⁴⁾ (Speeds over 1500 min ⁻¹ require consultation) | | | |
| Torque (friction) | ≤ 3.3 Nm (typical starting torque: ≤ 0.08 Nm at 20 °C) | | | |
| Moment of inertia | <i>Rotor (hollow shaft): 180 · 10⁻⁶ kgm²; Stator (housing/flange): 670 · 10⁻⁶ kgm²</i> | | | |
| Permissible axial motion of measured shaft | ± 0.3 mm | | | |
| Natural frequency | ≥ 1000 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 | <i>RCN 25xx: 0 °C to 50 °C; RCN 23xx: –20 °C to 60 °C</i> ⁴⁾ | | | |
| Protection EN 60 529 | IP 64 | | | |
| Weight | ≈ 1.0 kg | | | |

* Please indicate when ordering

²⁾ With HEIDENHAIN cable; ≤ 8 MHz⁴⁾ For mechanical fault exclusion, see page 21¹⁾ For dimensions and specifications, see separate Product Information document³⁾ See *General electrical information* in the catalog *Interfaces of HEIDENHAIN Encoders*