



	Absolute			
	ECN 1313	ECN 1325	EQN 1325	EQN 1337
Incremental signals	 $V_{PP}^{1)}$	–	 $V_{PP}^{1)}$	–
Line count*/ System accuracy	512/± 60" 2048/± 20"	2048/± 20"	512/± 60" 2048/± 20"	2048/± 20"
Cutoff frequency –3 dB	2048 lines: ≥ 400 kHz 512 lines: ≥ 130 kHz	–	2048 lines: ≥ 400 kHz 512 lines: ≥ 130 kHz	–
Absolute position values	EnDat 2.2			
Ordering designation	EnDat 01	EnDat 22	EnDat 01	EnDat 22
Position values per rev	8 192 (13 bits)	33 554 432 (25 bits)	8 192 (13 bits)	33 554 432 (25 bits)
Revolutions	–		4 096 (12 bits)	
Elec. permissible speed/ Deviation ²⁾	512 lines: 5 000 min ⁻¹ /± 1 LSB 12 000 min ⁻¹ /± 100 LSB 2048 lines: 1 500 min ⁻¹ /± 1 LSB 12 000 min ⁻¹ /± 50 LSB	12 000 min ⁻¹ (for continuous position value)	512 lines: 5 000 min ⁻¹ /± 1 LSB 12 000 min ⁻¹ /± 100 LSB 2048 lines: 1 500 min ⁻¹ /± 1 LSB 12 000 min ⁻¹ /± 50 LSB	12 000 min ⁻¹ (for continuous position value)
Calculation time t_{cal}	≤ 5 μs			
Power supply	3.6 to 14 V			
Current consumption without load	≤ 110 mA ³⁾		≤ 140 mA ³⁾	
Electrical connection via PCB connector	12-pin	Rotary encoder: 12-pin Temp. sensor ⁴⁾ : 4-pin	12-pin	Rotary encoder: 12-pin Temp. sensor ⁴⁾ : 4-pin
Shaft	Taper shaft Ø 9.25 mm; taper 1:10			
Mech. permissible speed n	≤ 15 000 min ⁻¹		≤ 12 000 min ⁻¹	
Starting torque at 20 °C	≤ 0.01 Nm			
Moment of inertia of rotor	2.6 · 10 ⁻⁶ kgm ²			
Natural frequency of the stator coupling	≥ 1 800 Hz			
Permissible axial motion of measured shaft	± 0.5 mm			
Vibration 55 to 2 000 Hz Shock 6 ms	≤ 300 m/s ² ⁵⁾ (EN 60 068-2-6) ≤ 2 000 m/s ² (IEC 60 068-2-27)			
Max. operating temp.	115 °C			
Min. operating temp.	–40 °C			
Protection EN 60 529	IP 40 when mounted			
Ground	Approx. 0.25 kg			

* Please indicate when ordering

1) Restricted tolerances Signal amplitude: 0.8 to 1.2 V_{PP}
 Asymmetry: 0.05
 Amplitude ratio: 0.9 to 1.1
 Phase angle: 90° ± 5° elec.
 Signal-to-noise ratio E, F: 100 mV

2) Velocity-dependent deviations between the absolute and incremental signals

3) Depends on the power supply; see *General Electrical Information*

4) Evaluation optimized for KTY 84-130

5) As per standard for room temperature; the following applies for operating temperature Up to 100 °C: ≤ 300 m/s²; up to 115 °C: ≤ 150 m/s²

Functional Safety for ECN 1325 and EQN 1337 upon request