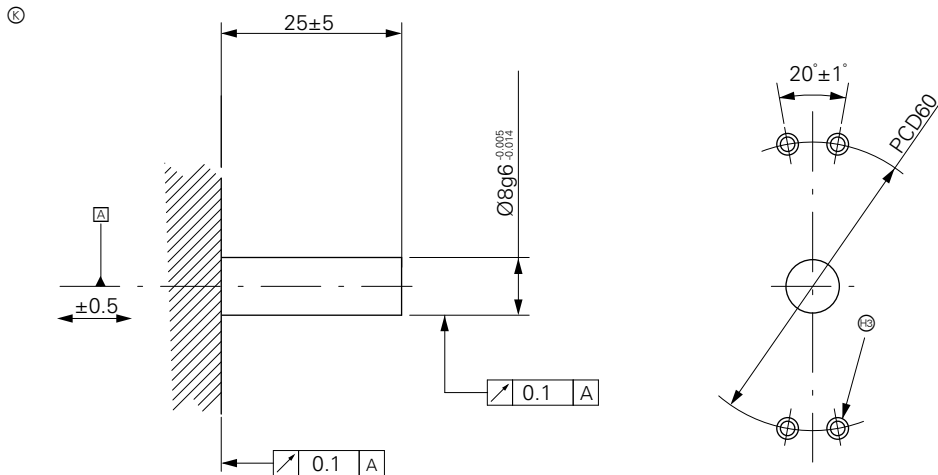
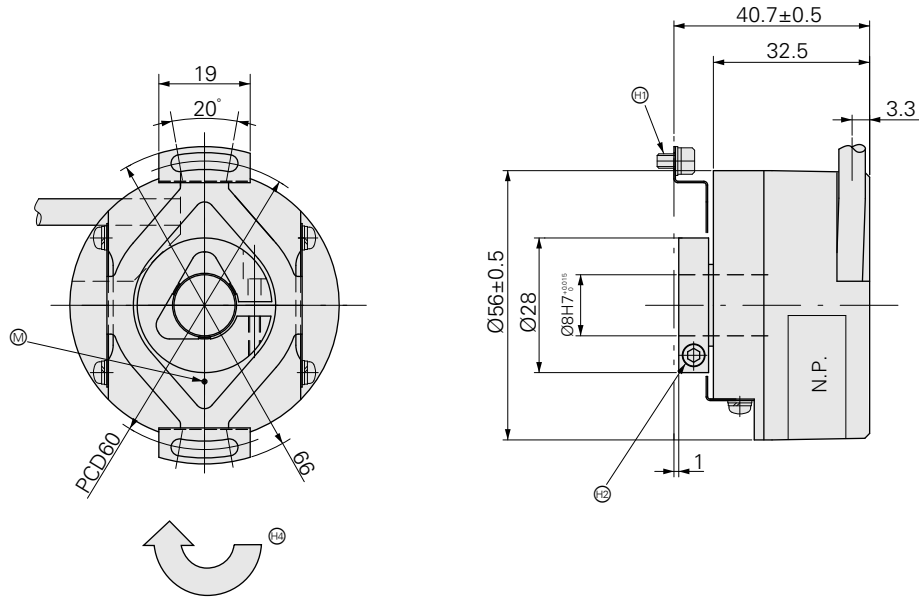


ERN 1300 Series

Incremental Rotary Encoders with mounted stator coupling

- Outer Diameter 56 mm
- Length 40.7 mm
- Blind Hollow Shaft Diameter 8.0 mm

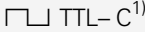




Dimensions in mm



Tolerancing ISO 8015

- Ⓚ = Required mating dimensions
- Ⓜ = Measuring point for operating temperature
- Ⓢ = Hexagon Socket Head Cap Screw (W, SW), 4-M3x6
- Ⓣ = Hexagon Socket Head Cap Screw M2.5x6, Torque for screw locking: 1.0 Nm
- Ⓤ = 4-M3, Depth 6
- Ⓦ = Direction of shaft rotation for output signals as per the interface description

	ERN 1320	ERN 1330	
Incremental signals	 TTL- C ¹⁾	 HTL- C ¹⁾	 HTLs ²⁾ - C ¹⁾
Output pulse * (Accuracy Class)	600^(I) 1024^(I) 2000 ^(I) 2048 ^(I) 5000 ^(I) 10000 ^(II)		
Scanning frequency Edge separation <i>a</i>	≤ 300 kHz ≥ 0.41 μs	≤ 200 kHz ≥ 0.62 μs	
System accuracy	Accuracy Class I : ±1/10 SP Accuracy Class II : ±1/5 SP		
Power supply Current consumption without load	5V ± 10% ≤ 70 mA	10.8V to 26.4V ≤ 70 mA	
Output current	± 10 mA	± 20 mA	≤ 40 mA
Electrical connection	Cable 1m, without connector		
Shaft	Blind hollow shaft D = 8 mm		
Mech. permissible speed n	≤ 6000 min ⁻¹		
Starting torque (at 20°C)	≤ 0.008 Nm		
Moment of inertia of rotor	5 · 10 ⁻⁶ kgm ²		
Permissible axial motion of measured shaft	± 0.5 mm		
Vibration 25 to 500 Hz Shock 6 ms	≤ 100 m/s ² (JIS C 60 068-2-6, EN 60 068-2-6) ≤ 1000 m/s ² (JIS C 60 068-2-27, EN 60 068-2-27)		
Max. operating temp. (Ambient Temperature)	90°C (85°C)		
Min. operating temp.	<i>For rigid configuration</i> : -20°C <i>For frequent flexing</i> : -10°C		
Protection EN 60 529	IP20		
Mass	Approx. 0.2 kg (without cables)		

Bold : preferred versions

* Please select when ordering.

¹⁾ Bypass capacitor is connected to FG.

²⁾ Without inverse signal

Pin Layout

□ TTL - C / □ HTL - C

	Power supply		FG	Incremental signals						Other signals		
	U _P	0V		U _{a1}	\overline{U}_{a1}	U _{a2}	\overline{U}_{a2}	U _{a0}	\overline{U}_{a0}	0V	Vacant	Vacant
Cable Ø6.5 mm 4x 2x 0.18 mm ²	White	Black		Red	Pink	Olive	Blue	Yellow	Orange			

Cable shield connected to housing; **U_P** = power supply

□ HTLs- C / Open Collectors

	Power supply		FG	Incremental signals						Other signals		
	U _P	0V		U _{a1}	0V	U _{a2}	0V	U _{a0}	0V	0V	Vacant	Vacant
Cable Ø6.5 mm 4x 2x 0.18 mm ²	White	Black		Red	Pink	Olive	Blue	Yellow	Orange			

Cable shield connected to housing; **U_P** = power supply

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