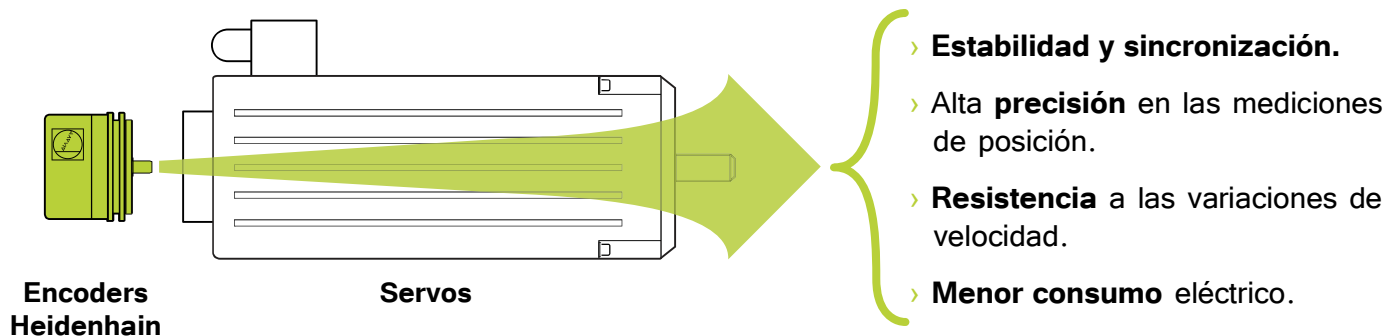


# ENCODERS PARA SERVOS HEIDENHAIN



## » RENDIMIENTO Y PRECISIÓN PARA SUS MOTORES



## › MODELOS: ECN/EQN 1300, ERN 1300, ERO 1200 / 1400.

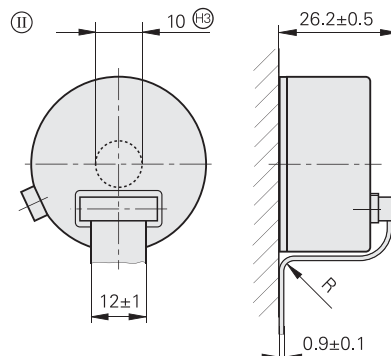
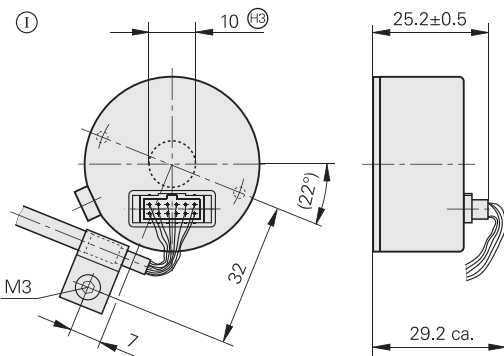
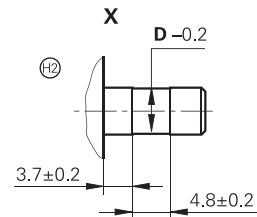
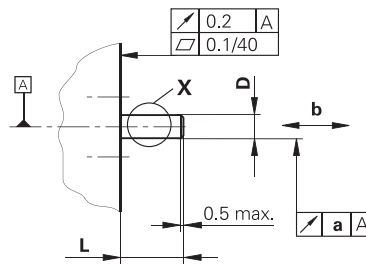
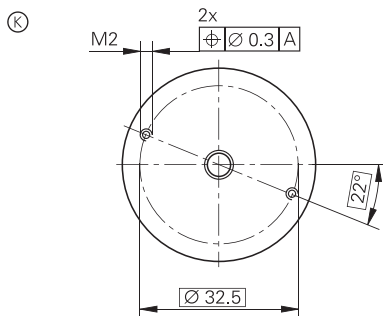
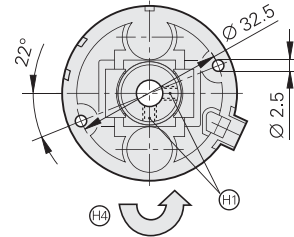
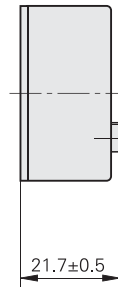
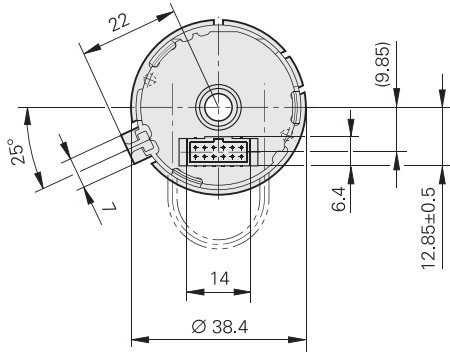
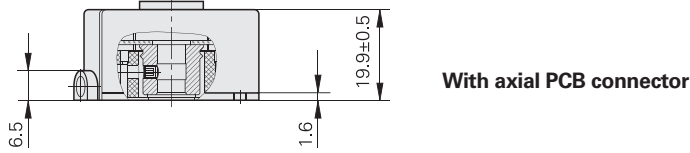
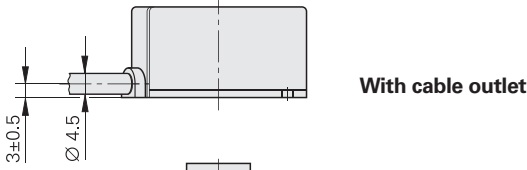
- › **Resistentes** a altos grados de temperatura (+100°C).
- › Amplio rango de **protección** (Ej. IP64).
- › **Montaje sencillo.**
- › **Alto grado de precisión** en la generación de impulsos por vuelta.
- › Aptos para **motores trifásicos (AC/DC).**
- › Señales **incrementales y absolutas.**
- › 1 año de **garantía.**



# ERO 1400 Series

Rotary encoders without integral bearing

- For integration in motors with PCB connector (protection IP 00)
- For mounting on motors with cable outlet (protection IP 40)
- Installation diameter 44 mm




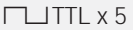
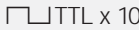



<b>L</b>	13+4.5/-3	10 min.

mm  
  
 Tolerancing ISO 8015  
 ISO 2768 - m H  
 < 6 mm: ±0.2 mm

- Ⓜ = Bearing
- Ⓚ = Required mating dimensions
- Ⓛ = Accessory: Round cable
- Ⓛ = Accessory: Ribbon cable
- Ⓜ = Setscrew, 2x90° offset, M3, width A/F 1.5 M<sub>d</sub> = 0.25 ±0.05 Nm
- Ⓛ = Version for repeated assembly
- Ⓜ = Version featuring housing with central hole (accessory)
- Ⓛ = Direction of shaft rotation for output signals as per the interface description

	Bend radius R	Rigid configuration	Frequent flexing
<b>Ribbon cable</b>	R ≥ 2 mm	R ≥ 10 mm	

	a	b	D
<b>ERO 1420</b>	0.03	± 0.1	Ø 4h6 Ⓚ
<b>ERO 1470</b>	0.02	± 0.05	Ø 6h6 Ⓚ
<b>ERO 1480</b>			Ø 8h6 Ⓚ

	Incremental					
	ERO 1420	ERO 1470				ERO 1480
<b>Incremental signals</b>						
Line count *	512 <b>1000</b> 1024	<b>1000</b> 1500				512 <b>1000</b> 1024
Integrated interpolation*	–	5-fold	<b>10-fold</b>	20-fold	25-fold	–
Signal periods/rev	512 1000 1024	5000 7500	10000 15000	20000 30000	25000 37500	512 1000 1024
Edge separation a	≥ 0.39 μs	≥ 0.47 μs	≥ 0.22 μs	≥ 0.17 μs	≥ 0.07 μs	–
Scanning frequency	≤ 300 kHz	≤ 100 kHz		≤ 62.5 kHz	≤ 100 kHz	–
Cutoff frequency –3 dB	–					≥ 180 kHz
Reference mark	One					
<b>System accuracy</b>	<i>512 lines: ± 139"</i> <i>1000 lines: ± 112"</i> <i>1024 lines: ± 112"</i>	<i>1000 lines: ± 130"</i> <i>1500 lines: ± 114"</i>				<i>512 lines: ± 190"</i> <i>1000 lines: ± 163"</i> <i>1024 lines: ± 163"</i>
<b>Power supply</b>	5 V DC ± 10%	5 V DC ± 5%				5 V DC ± 10%
Current consumption (w/o load)	≤ 150 mA	≤ 155 mA		≤ 200 mA		≤ 150 mA
<b>Electrical connection*</b>	<ul style="list-style-type: none"> <li>Over 12-pin axial <b>PCB connector</b></li> <li>Cable 1 m, radial, without connecting element (not with ERO 1470)</li> </ul>					
<b>Shaft*</b>	<b>Blind hollow shaft</b> Ø 4 mm; <b>Ø 6 mm</b> or Ø 8 mm or hollow through shaft in housing with bore (accessory)					
<b>Moment of inertia</b> of rotor	<i>Shaft Ø 4 mm: 0.28 · 10<sup>-6</sup> kgm<sup>2</sup></i> <i>Shaft Ø 6 mm: 0.27 · 10<sup>-6</sup> kgm<sup>2</sup></i> <i>Shaft Ø 8 mm: 0.25 · 10<sup>-6</sup> kgm<sup>2</sup></i>					
<b>Mech. perm. speed n</b>	≤ 30000 min <sup>-1</sup>					
<b>Permissible axial motion of measured shaft</b>	± 0.1 mm		± 0.05 mm			
<b>Vibration</b> 55 Hz 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>Max. operating temp.</b>	70 °C					
<b>Min. operating temp.</b>	–10 °C					
<b>Protection</b> EN 60529	<i>With PCB connector: IP 00<sup>2)</sup></i> <i>With cable outlet: IP 40</i>					
<b>Weight</b>	Approx. 0.07 kg					

**Bold:** This preferred version is available on short notice

\* Please select when ordering

<sup>1)</sup> Before installation. Additional error caused by mounting inaccuracy and inaccuracy from the bearing of the measured shaft is not included.

<sup>2)</sup> CE compliance of the complete system must be ensured by taking the correct measures during installation.

Representante oficial de:



**HEIDENHAIN**

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