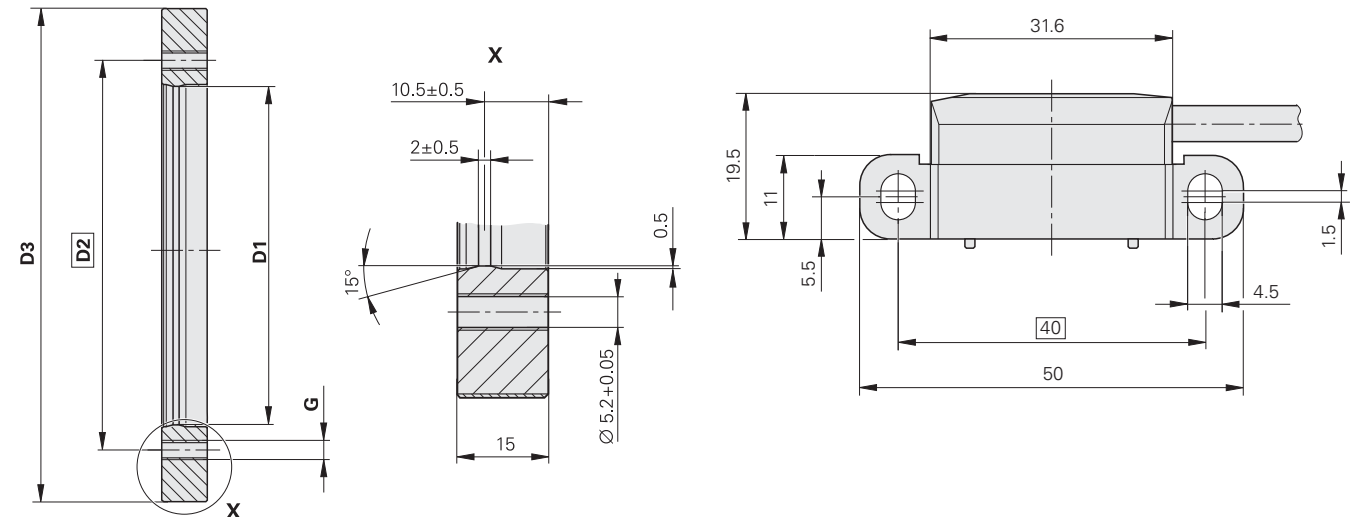
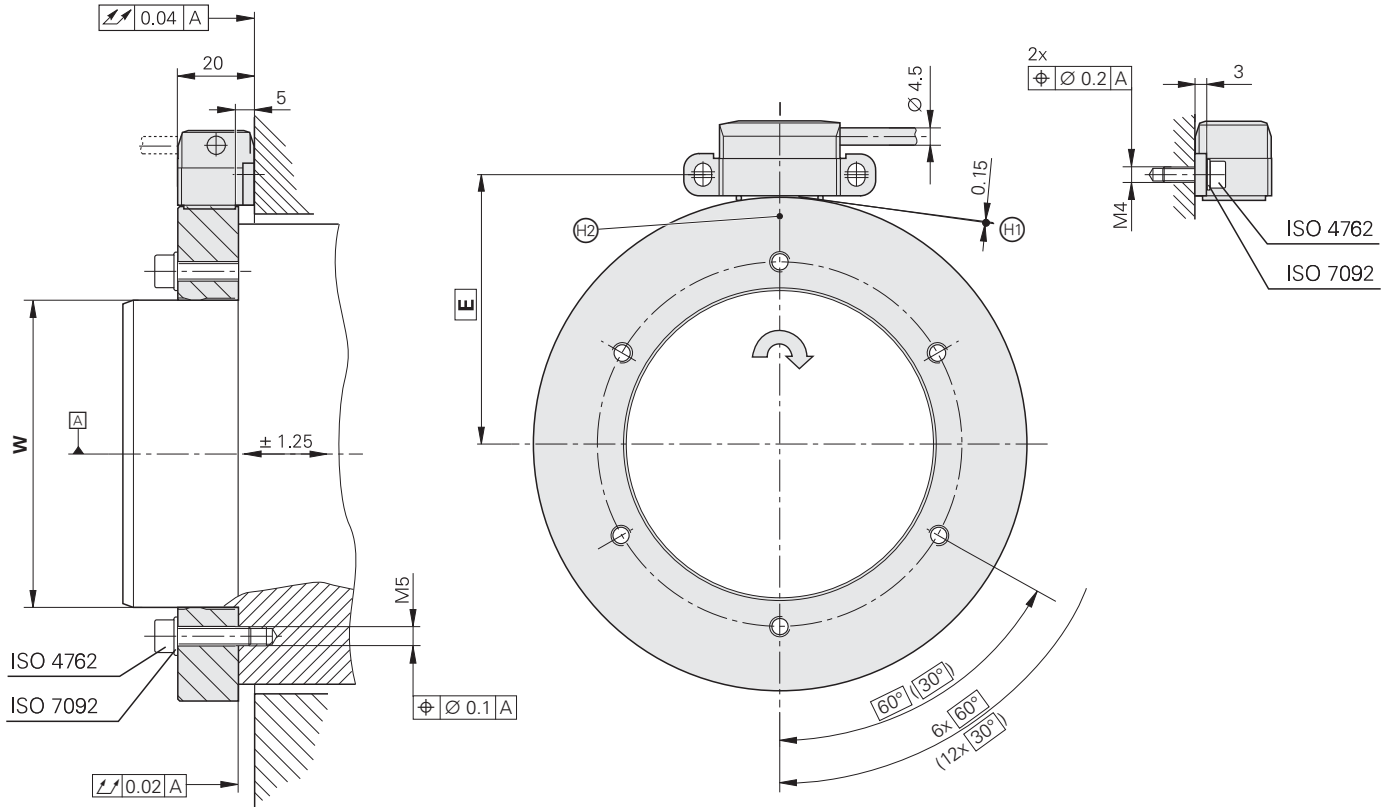


# ERM 2410 Series

- Modular encoders
- Magnetic scanning principle
- Incremental measuring method with distance-coded reference marks
- Integrated counting function for absolute position-value output
- Absolute position value after traverse of two reference marks (see "Angle for absolute reference")



in mm



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

- ▢ = Bearing
- ⊕ = Mounting distance of 0.15 mm set with spacer foil
- ⊙ = Reference mark position
- ↻ = Direction of shaft rotation for output signals according to interface description

D1	W	D2	D3	E	G
∅ 40 -0.007	∅ 40 +0.009/+0.002	∅ 50	∅ 75.44	43.4	6x M6
∅ 70 -0.008	∅ 70 +0.010/+0.002	∅ 85	∅ 113.16	62.3	6x M6
∅ 80 -0.008	∅ 80 +0.010/+0.002	∅ 95	∅ 128.75	70.1	6x M6
∅ 120 -0.010	∅ 120 +0.013/+0.003	∅ 135	∅ 150.88	81.2	6x M6
∅ 130 -0.012	∅ 130 +0.015/+0.003	∅ 145	∅ 176.03	93.7	6x M6
∅ 180 -0.012	∅ 180 +0.015/+0.003	∅ 195	∅ 257.50	134.5	6x M6
∅ 220 -0.014	∅ 220 +0.018/+0.004	∅ 235	∅ 257.50	134.5	6x M6
∅ 295 -0.016	∅ 295 +0.020/+0.004	∅ 310	∅ 326.90	169.2	6x M6
∅ 410 -0.020	∅ 410 +0.025/+0.005	∅ 425	∅ 452.64	232.0	12x M6

<b>Scanning head</b>	<b>AK ERM 2410</b>
<b>Interface</b>	EnDat 2.2
Ordering designation	EnDat 22
Integrated interpolation	16384-fold (14 bits)
Clock frequency	≤ 8 MHz
Calculation time $t_{cal}$	≤ 5 $\mu$ s
Signal period	Approx. 400 $\mu$ m
Line count*	See Scale Drum
<b>Power supply</b>	3.6 to 14 V DC
Power consumption <sup>1)</sup>	At 14 V: 110 mA; at 3.6 V: 300 mA (maximum)
Current consumption (typical)	At 5 V: 90 mA (without load)
<b>Electrical connection</b>	Cable, 1 m, with M12 coupling (8-pin)
Cable length	≤ 150 m (with HEIDENHAIN cable)
<b>Vibration</b> 55 to 2000 Hz <b>Shock</b> 6 ms	≤ 300 m/s <sup>2</sup> (EN 60068-2-6) ≤ 1000 m/s <sup>2</sup> (EN 60068-2-27)
<b>Operating temperature</b>	-10 °C to 100 °C
<b>Protection</b> EN 60529	IP 67
<b>Weight</b>	Approx. 0.1 kg (with cable)

<b>Scale drum</b>	<b>TTR ERM 200C</b>									
<b>Measuring standard</b>	MAGNADUR graduation, signal period approx. 400 $\mu$ m									
<b>Inside diameter*</b>	40 mm	70 mm	80 mm	120 mm	130 mm	180 mm	220 mm	295 mm	410 mm	
<b>Outside diameter</b>	75.44 mm	113.16 mm	128.75 mm	150.88 mm	176.03 mm	257.50 mm	2570.50 mm	326.90 mm	452.64 mm	
<b>Line count*</b>	600	900	1024	1200	1400	2048	2048	2600	3600	
<b>System accuracy<sup>2)</sup></b>	± 36"	± 25"	± 22"	± 20"	± 18"	± 12"	± 12"	± 10"	± 9"	
<b>Accuracy of the graduation<sup>3)</sup></b>	± 14"	± 10"	± 9"	± 8"	± 7"	± 5"	± 5"	± 4"	± 4"	
<b>Reference marks</b>	Distance-coded									
Angle for absolute reference	≤ 36°	≤ 24°	≤ 22.5°	≤ 24°	≤ 18°	≤ 22.5°	≤ 22.5°	≤ 14°	≤ 12°	
<b>Mech. permissible speed</b>	≤ 19000 min <sup>-1</sup>	≤ 14500 min <sup>-1</sup>	≤ 13000 min <sup>-1</sup>	≤ 10500 min <sup>-1</sup>	≤ 9000 min <sup>-1</sup>	≤ 6000 min <sup>-1</sup>	≤ 6000 min <sup>-1</sup>	≤ 4500 min <sup>-1</sup>	≤ 3000 min <sup>-1</sup>	
<b>Moment of inertia of the rotor</b>	0.34 · 10 <sup>-3</sup> kgm <sup>2</sup>	1.6 · 10 <sup>-3</sup> kgm <sup>2</sup>	2.7 · 10 <sup>-3</sup> kgm <sup>2</sup>	3.5 · 10 <sup>-3</sup> kgm <sup>2</sup>	70.7 · 10 <sup>-3</sup> kgm <sup>2</sup>	38 · 10 <sup>-3</sup> kgm <sup>2</sup>	23 · 10 <sup>-3</sup> kgm <sup>2</sup>	44 · 10 <sup>-3</sup> kgm <sup>2</sup>	156 · 10 <sup>-3</sup> kgm <sup>2</sup>	
<b>Permissible axial motion</b>	± 1.25 mm									
<b>Weight</b> approx.	0.35 kg	0.69 kg	0.89 kg	0.72 kg	1.2 kg	3.0 kg	1.6 kg	1.7 kg	3.2 kg	

\* Please select when ordering

<sup>1)</sup> See *General Electrical Information*

<sup>2)</sup> Before installation. Additional error caused by mounting inaccuracy and inaccuracy from the bearing of the drive shaft are not included.

<sup>3)</sup> For other errors, see *Measuring Accuracy*

Representante oficial de:



**HEIDENHAIN**

[Argentina – Bolivia – Chile – Colombia - Costa Rica – Ecuador - El Salvador –  
Guatemala – Honduras – Nicaragua – Panamá – Paraguay – Perú -  
República Dominicana – Uruguay – Venezuela.]



Calle 49 N° 5764 - Villa Ballester (B1653AOX) - Prov. de Buenos Aires - ARGENTINA  
Tel: (+54 11) 4768-4242 / Fax: (+54 11) 4849-1212  
Mail: [ventas@nakase.com.ar](mailto:ventas@nakase.com.ar) / Web: [www.nakase.com.ar](http://www.nakase.com.ar)

