

EK

ENCODER KIT

SERIES EK626

Rugged, large-bore two-channel magnetic encoders are custom-configured for high performance in harsh environments.

Admotec's Series EK626 magnetic kit encoders provide high performance in applications where optical encoders don't work or don't last. Each kit consists of a custom-configured magnetic encoder wheel and a matched magnetoresistive sensor with line-driver outputs for two incremental channels in quadrature. Three-channel versions (with marker) are available as Series EK636.

With wheel diameters from 100 to 150mm and an ID sized to fit your application, EK626 encoders are perfect for high-resolution feedback on hollow-shaft motors, high-speed spindles, or any rotating shaft up to 140mm in diameter. These rugged quadrature encoders provide up to 10 times the resolution of comparable gear-tooth sensors in the same applications and are an ideal solution for vector control of AC motors, engine testing, machine tool spindles, etc.

Series EK626 encoders are individually configured for your application and install quickly and easily without the delicate alignment associated with optical encoders. Choose from over 15 combinations of resolution, wheel OD, and operating airgap—just specify the wheel ID required in your application. And if a standard EK626 encoder doesn't meet your needs, completely customized units can be quickly designed to your requirements.

Admotec—motion and position sensing for original equipment manufacturers.

FEATURES & BENEFITS

Large through-hole capability	Economical position sensing of large diameter and hollow shafts.
Rugged construction	Reliable operation in harsh environments: high shock and vibration, dust, oil, moisture, and salt spray.
All-digital electronics	No mechanical adjustments.
Line driver outputs	High noise immunity.
Tangential sensing	Tolerates ±1 mm axial end-play without loss of signal.
Resolution to 3,000 CPR (cycles per revolution)	Performance not previously available with magnetic technology.

GENERAL SPECIFICATIONS

Operating Temperature	-40 to +115	°C
Maximum Speed	4,000	RPM
Radial Air Gap	0.11 – 0.53	mm nominal
Wheel OD	100 – 150	mm
Resolution	450 – 3,000	Cycles/Rev.
Channel Frequency	500	kHz max.
Quadrature	90 ±30	° electrical
Supply Voltage	5.0 ±10%	V dc
Supply Current	50/200	mA typ./max.
Output Load Resistance	100	Ω min.

ORDERING INFORMATION

EK626- □ □ □ □ - □ □ □ □

Configuration

Factory-assigned number for each application

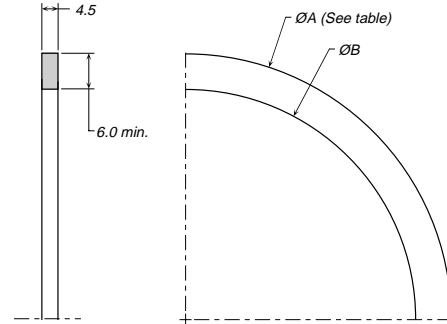
Resolution (CPR)

450, 480, 500, 512, 600, 720, 750, 800, 900, 1000, 1024, 1440, 1500, 1800, 2250, 2400, 3000

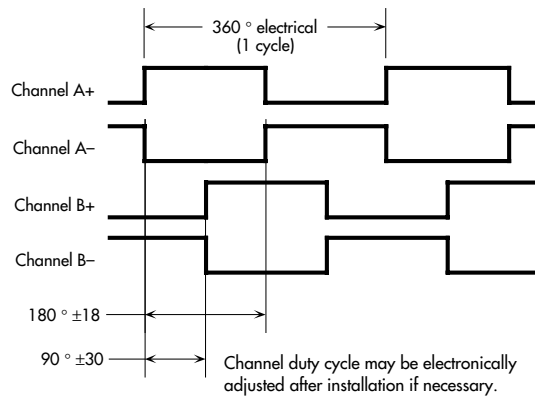
AVAILABLE RESOLUTIONS, WHEEL DIAMETERS, & AIRGAPS*

CPR	Airgap	Airgap	Airgap	Airgap	Minimum ØB (% of ØA)
	0.53±0.23 ØA	0.32±0.14 ØA	0.18±0.08 ØA	0.11±0.05 ØA	
450	106.7	—	—	—	41.8
480	113.9	—	—	—	45.5
500	118.6	—	—	—	47.6
512	121.5	—	—	—	48.9
600	142.6	—	—	—	56.4
720	—	103.9	—	—	63.6
750	—	108.2	—	—	65.1
800	—	115.5	—	—	67.3
900	—	130.0	—	—	70.9
1,000	—	144.5	—	—	73.8
1,024	—	148.0	—	—	74.4
1,440	—	—	114.5	—	81.8
1,500	—	—	119.3	—	82.5
1,800	—	—	143.3	—	85.5
2,250	—	—	—	108.6	88.4
2,400	—	—	—	115.9	89.1
3,000	—	—	—	144.9	91.3

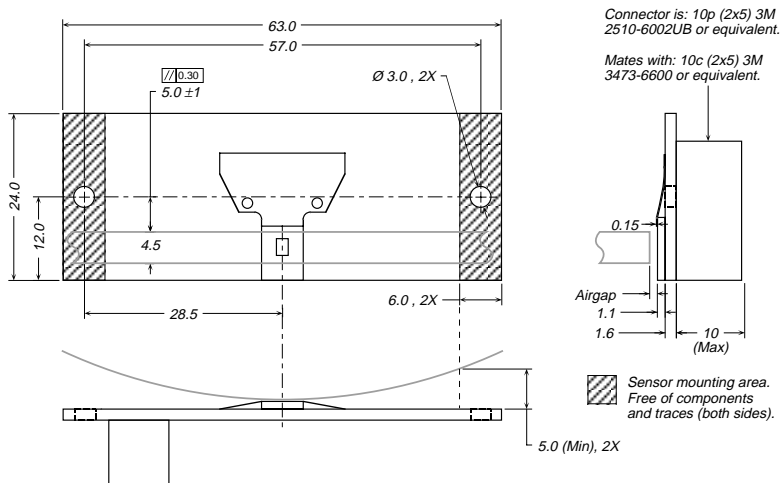
WHEEL DIMENSIONS*



OUTPUT SIGNAL FORMAT



OUTLINE AND MOUNTING DIMENSIONS*



ELECTRICAL PINOUT†

Pin	Signal Description
1	+5V (Power input)
2	+5V (Power input)
3	0V (Common)
4	0V (Common)
5	Channel A-
6	Channel A+
7	Channel B-
8	Channel B+
9	Not Used
10	Not Used

†Compatible with HP HEDL-xxxx series encoders.