

EK

ENCODER KIT

SERIES EK6310

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

Admotec's Series EK6310 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 and a once-per-revolution index (marker). Two-channel versions (without marker) are available as Series EK6210.

With wheel diameters from 210 to 250mm and an ID sized to fit your application, EK6310 encoders are perfect for high-resolution feedback on very large hollow-shaft motors, dynamometer torque sensors, or any rotating shaft up to 240mm 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 EK6310 encoders are individually configured for your application and install quickly and easily without the delicate alignment associated with optical encoders. Choose from six combinations of resolution, wheel OD, and operating airgap—just specify the wheel ID required in your application. And if a standard EK6310 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.

admotec
Advanced Motion Technology

FEATURES & BENEFITS

Very 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 ± 0.4 mm axial end-play without loss of signal.
Resolution to 4,500 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	200 – 250	mm
Resolution	900 – 4,500	Cycles/Rev.
Channel Frequency	500	kHz max.
Quadrature	90 \pm 30	° electrical
Supply Voltage	5.0 \pm 10%	V dc
Supply Current	50/200	mA typ./max.
Output Load Resistance	100	Ω min.

ORDERING INFORMATION

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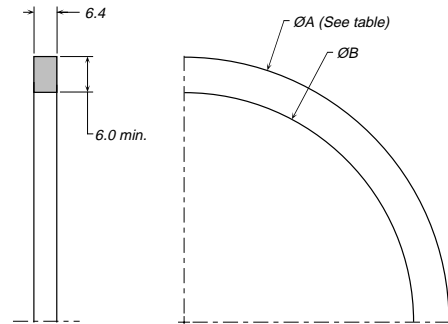
Configuration
Factory-assigned number for each application

Resolution (CPR)
900, 1000, 1024, 1500, 3000, 4500

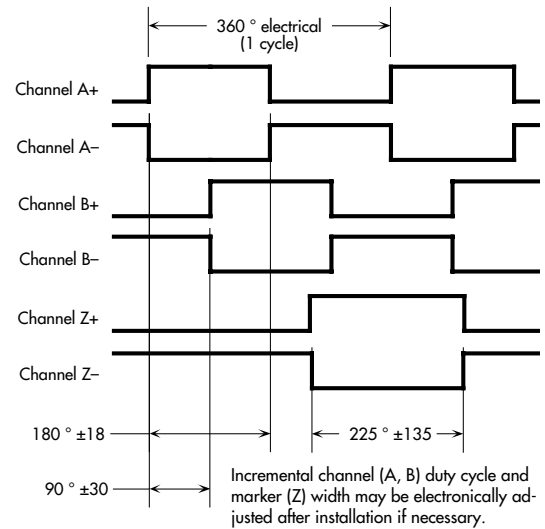
AVAILABLE RESOLUTIONS, WHEEL DIAMETERS, & AIRGAPS*

CPR	Airgap 0.53±0.23 ØA	Airgap 0.32±0.14 ØA	Airgap 0.18±0.08 ØA	Airgap 0.11±0.05 ØA	Minimum ØB
900	214.4	—	—	—	200.0
1,000	238.3	—	—	—	200.0
1,024	244.1	—	—	—	200.0
1,500	—	217.1	—	—	200.0
3,000	—	—	239.0	—	218.2
4,500	—	—	—	217.5	204.9

WHEEL DIMENSIONS*



OUTPUT SIGNAL FORMAT



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	Channel Z-
10	Channel Z+

†Compatible with HP HEDL-xxxx series encoders.

OUTLINE AND MOUNTING DIMENSIONS*

