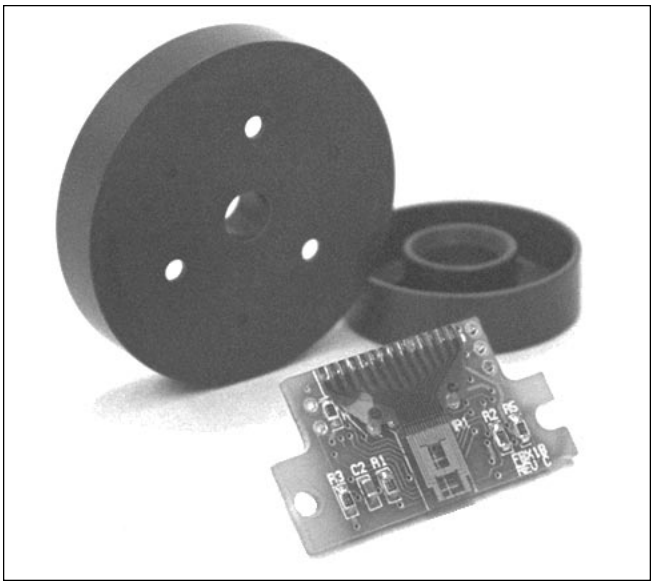

EK

Encoder Kit

Series EK630

Rugged, compact three-channel magnetic encoders offer high performance in harsh industrial and commercial environments.

Admotec's Series EK630 magnetic kit encoders provide high performance in applications where optical encoders don't work or don't last. Each kit consists of a magnetic encoder wheel made from a proprietary magnetic material and a matched magnetoresistive sensor with TTL-compatible outputs for two incremental channels in quadrature and a once-per-revolution index (marker). Two-channel versions (without marker) are available as Series EK620.

With resolution to 512 CPR (cycles per revolution) and wheel IDs to fit standard shafts, EK630 encoders are perfect for position and velocity feedback on small DC or stepper motors, actuators, valves, etc. These rugged quadrature encoders provide up to 10 times the resolution of comparable gear-tooth sensors in the same applications and require much less space.

Series EK630 encoders install quickly and easily without the delicate alignment associated with optical encoders. And tangential sensing means that axial end-play problems are a thing of the past. And if a standard EK630 encoder doesn't meet your needs, custom-configured units can be quickly designed to your requirements.

Admotec—motion and position sensing for original equipment manufacturers.

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Advanced Motion Technology

Features & Benefits

Rugged construction	Reliable operation in harsh environments: high shock and vibration, dust, oil, etc.
Small size	Maximum performance in minimum space.
Tangential sensing	Tolerates ±0.4mm axial end-play without loss of signal.
All-digital electronics	No mechanical adjustments.
Proprietary magnetic wheel material	Largest possible airgap between wheel and sensor.
Simple installation and alignment	Installs quickly without critical adjustments.

General Specifications

Operating Temperature	–40 to +85	°C
Maximum Speed	20,000	RPM
Radial Air Gap	0.17 – 0.53	mm nominal
Wheel Mass	8	gram max.
Wheel Inertia	17	g cm^2 max.
Resolution	120 – 512	Cycles/Rev.
Channel Frequency	25	kHz max.
Quadrature	90 ±30	° electrical
Supply Voltage	5.0 ±10%	V dc
Supply Current	25/40	mA typ./max.
Output Drive Current	±8	mA max.

Ordering Information

EK630 - □ □ - □ □ □

Wheel Bore
06 = 6mm
08 = 8mm
10 = 10mm
25 = 1/4"
31 = 5/16"
38 = 3/8"

Resolution (CPR)
120, 128, 180,
200, 256, 360,
500, 512

EK
ENCODER KIT
SERIES EK630

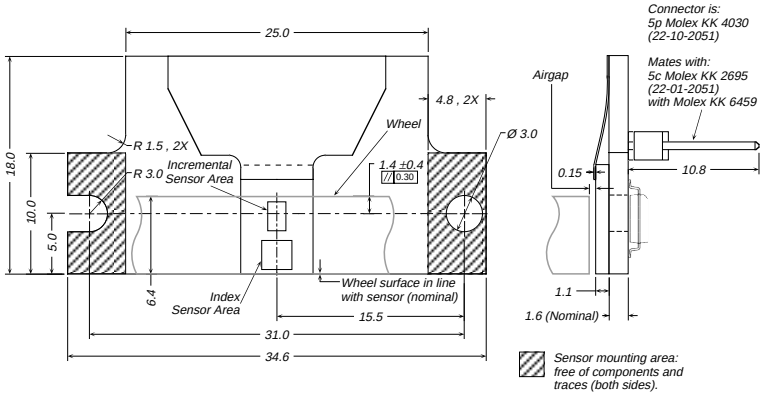
WHEEL DIAMETER (ØA) & AIRGAP

Resolution	ØA	Airgap
120 PPR	29.0mm	0.53mm ± 0.23
128 PPR	29.0mm	0.50mm ± 0.21
180 PPR	40.5mm	0.49mm ± 0.21
200 PPR	29.0mm	0.32mm ± 0.14
256 PPR	40.5mm	0.35mm ± 0.15
360 PPR	29.0mm	0.18mm ± 0.08
500 PPR	40.5mm	0.18mm ± 0.08
512 PPR	40.5mm	0.17mm ± 0.07

WHEEL BORE (ØB)

Model Number	ØB	ØB Tolerance
EK630-06-□□□	6mm	+0.01/–0.00 (ISO H7)
EK630-08-□□□	8mm	+0.01/–0.00 (ISO H7)
EK630-10-□□□	10mm	+0.01/–0.00 (ISO H7)
EK630-25-□□□	6.35mm (¼")	–0.01/–0.03
EK630-31-□□□	7.94mm (5⁄16")	–0.02/–0.03
EK630-38-□□□	9.53mm (⅜")	–0.02/–0.03

OUTLINE AND MOUNTING DIMENSIONS*

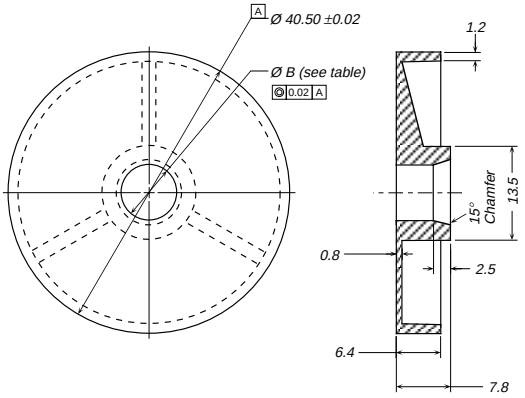


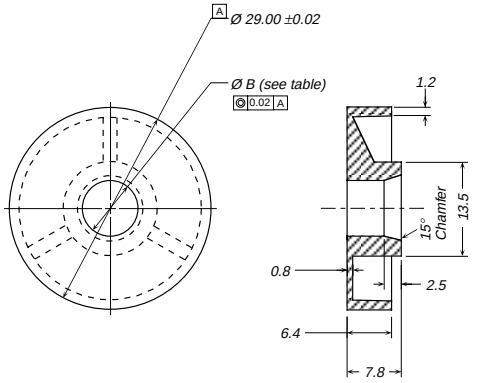
ELECTRICAL PINOUT†

Pin	Signal Description
1	0V (Common)
2	Channel Z
3	Channel A
4	+5V (Power input)
5	Channel B

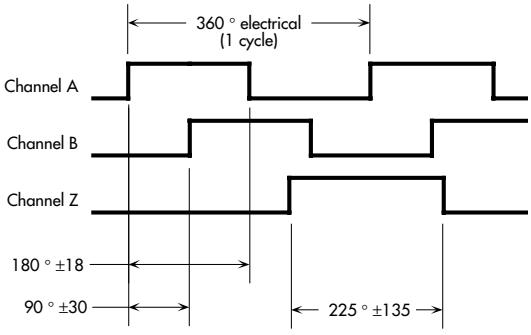
†Compatible with HP HEDS-9xxx series encoders.

WHEEL DIMENSIONS*





OUTPUT SIGNAL FORMAT



Incremental channel (A, B) duty cycle and marker (Z) width may be electronically adjusted after installation if necessary.

* All dimensions in mm.

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