

D8 Encoder Data Sheet

Electrical Specifications

Input Voltage	5 VDC +/- 5%
Input Current Requirements	125 mA Typical @ 5 VDC Plus Interface Loads
Input Ripple	2% Peak to Peak @ 5 VDC
Output Circuits	AM26LS31 RS 422A Line Driver
Frequency Response	500 kHz
Incremental Output Format	Quadrature with A leading B for CW rotation. Index Pulse centered over A.
Symmetry	180 Degrees +/- 10% Typical
Minimum Edge separation	54 electrical degrees
Commutation Format	Three Phase, 4 Pole
Commutation Accuracy	+/- 1° Mechanical

Environmental Specifications

Storage Temperature	-40 to 125° C
Operating Temperature	-20 to 100° C Typical
Humidity	98% Non-Condensing
Vibration	20 G's @ 50 to 500 CPS
Shock	50 G's @ 11 ms duration

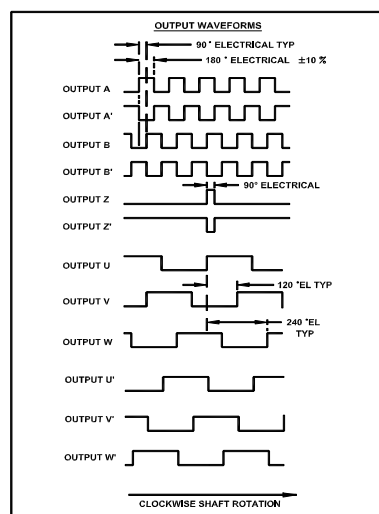
Mechanical Specifications

Line Count	5000 lines/revolution
Maximum Shaft Speed	8000 RPM
Through Shaft Diameter	0.250" (-0.0000", +0.0005")
Radial Shaft Movement	0.007" TIR
Axial Shaft Movement	+/- 0.030" MAX
Housing	Carbon Fiber Composite (case ground via cable)
Termination	15 conductor cable, 28 AWG, 18" long
Mounting	1.812" Bolt Circle
Moment of Inertial	1.5×10^{-4} oz-in-s ²
Acceleration	1×10^5 Radians/s ²
Accuracy	+/- 1.0 Arc Minutes

Physical Dimensions of "D" series Bearing Encoders are the same as "C" series Bearing Encoders but also include a custom mount needed for mounting to AB23000 Series and IB17000 Series motors.

CAUTION:

1. If another connector is to be used cut each wire individually and use caution to avoid static discharge
2. When used with STEP or BRUSH DC motors the HALL leads (Violet, Gray, Brown/White, Red/White, Orange/White, Black/White) should be terminated individually and the end heat shrunk to avoid shorting.



ENCODER CONNECTIONS	
COLOR	FUNCTION
RED	+VDC
BLACK	COMMON
BROWN	OUTPUT A
WHITE	OUTPUT A'
BLUE	OUTPUT B
GREEN	OUTPUT B'
ORANGE	OUTPUT Z
YELLOW	OUTPUT Z'
VIOLET	OUTPUT U
GRAY	OUTPUT U'
WHITE/BROWN	OUTPUT V
WHITE/RED	OUTPUT V'
WHITE/ORANGE	OUTPUT W
WHITE/YELLOW	OUTPUT W'
WHITE/BLACK	CASE GROUND
DRAIN WIRE	CABLE SHIELD