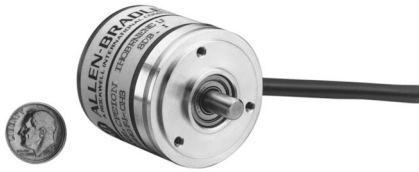


Bulletin 845P Optical Incremental Encoders

NEMA Type 1, Size 15, High Performance



Servo Mount
845P-SHC14-CN3

Description

Bulletin 845P optical incremental encoders convert shaft rotation into an electronic digital format. The encoder output (square wave pulses) provides an accurate means of digitizing position, velocity, and direction of rotation. Various position and motion controllers can then compare this information to desired settings, and control the system accordingly.

The Bulletin 845P is a size 15 industrial incremental encoder. The NEMA Type 1 aluminum enclosure provides protection against incidental contact with dirt, dust, lint, fibers, and other nonliquid contaminants. The electronics offer dual channel encoder signals in quadrature, with a standard gated index. The encoder provides differential output signals at 100kHz, with code disk resolution of 500 or 1000 pulses per revolution.

Specifications

Electrical	
Code Format	Incremental, 2 channels with zero index
Quadrature	90° ±36° Channel A leads B CCW
Symmetry	50% ±10%
Zero Index Channel	1/2 cycle, gated to channel B
Power Requirements	5V DC ±5% @ 90mA maximum
Frequency Response	100kHz
Operating Speed (Data)	(100kHz x 60)/pulses per revolution = RPM or 5000 RPM, whichever is lower
Resolution	500 or 1000 PPR on code disk
Output Drive Capability	Differential line driver = ±20mA
Mechanical	
Starting Torque	0.6Ncm typical (0.9in-oz)
Running Torque	0.1Ncm typical (0.15in-oz)
Slew Speed	5000 RPM
Shaft Loading	Axial 11N (2.5lbs) Radial 22N (5.0lbs)
Shaft Size	6.4mm (1/4in) diameter
Environmental	
Housing	NEMA Type 1
Temperature	0°C to +60°C (+32°F to +140°F) — operating -25°C to +90°C (-13°F to +194°F) — storage
Humidity	85%, noncondensing
Shock	50g (11ms duration)
Vibration	20g (5 to 2000Hz)
Approximate Ship Weight	0.34kg (12oz)

Accessories

Description	Page Number
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Servo Clamps	7-51
Differential Encoder Buffer Board	7-58

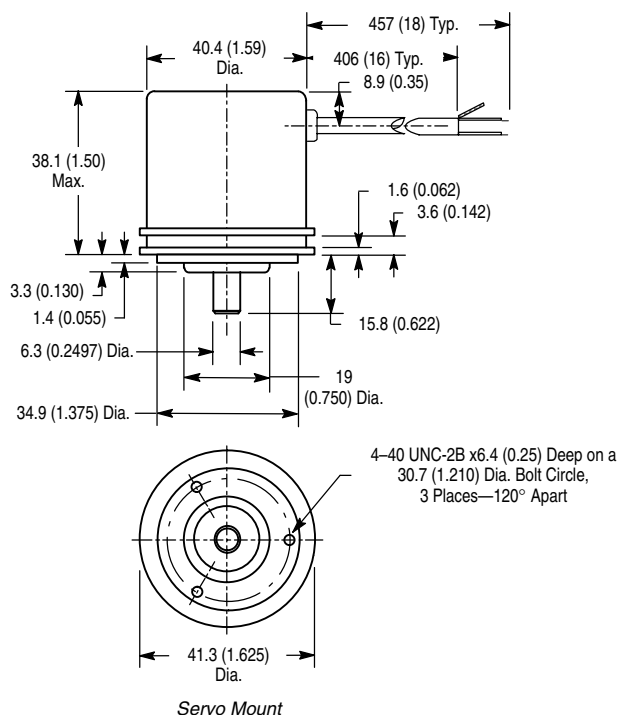
Selection Guide

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Resolution	
Code	Description (PPR)
CM	500
CN	1000

Dimensions—mm (inches)

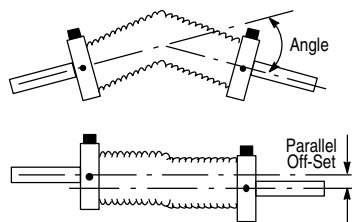


Cable

Differential Line Driver Output

Wire Color	Function
White	DC+ Input (5V DC)
Black	DC Return
Red	Channel A
Violet	Channel \bar{A}
Green	Channel B
Blue	Channel \bar{B}
Yellow	Channel Z
Orange	Channel \bar{Z}
Shield	Floating

Flexible Shaft Couplings



⚠ ATTENTION: Rigidly coupling the encoder shaft to the machine shaft **will cause a failure** in either the bearings of the encoder or the bearings of the machine shaft.