

Bulletin 842D DeviceNet Absolute Multi-Turn Magnetic Encoder



DeviceNet Encoder

Description

The Bulletin 842D offers direct connection to DeviceNet for advanced functionality with reduced wiring cost. The following is a partial feature list:

Features

- Magnetic design withstands 100 g shock and temperature extremes
- 26 bit multi-turn absolute encoder retains position data if power is lost
- Up to 8192 PPR & 8192 turns
- Connects via 5-pin micro QD
- Slotted rear cover allows address and baud rate selection
- Position reset button
- NEMA 4/IP66 housing

Programmable Features

- Current position (0 to 67,108,864)
- Counts per revolution (1 to 8192)
- Revolutions (1 to 8192)
- Eight programmable cams with high/low limits & hysteresis
- Position change required for COS communication
- Counting direction (cw/ccw)

Diagnostic Features

- Red and green LEDs
- Cumulative operating time
- Min./max. acceleration & velocity
- Maximum velocity warning flag
- Current velocity (RPM, RPS or STEPS/SEC)

Specifications

Electrical

Code Format	Natural binary
Code Direction	CW or CCW (programmable)
Electrical Interface	DeviceNet specification release 2.0
Operating Voltage	11...25V DC (24V DC recommended)
Power Requirements	1.8 W
Max # of Steps/Revolution	8192
Max # of Revolutions	8192
Position Forming Time	0.3 ms
Delay on Power Up	1050 ms
Preset Position	Via covered rear button or DeviceNet

Mechanical

Angular Acceleration	$5 \times 10^5 \text{ rad/s}^2$
Moment of Inertia	$35 \text{ gcm}^2 (5.0 \times 10^{-4} \text{ oz}\cdot\text{in}\cdot\text{s}^2)$
Operating Speed	6000 RPM at max shaft loading
Starting Torque	$2.5 \text{ N}\cdot\text{cm} (3.5 \text{ oz}\cdot\text{in})$
Shaft Loading	Axial 11 lb (50 N) Radial 67 lb (300 N)

Environmental

Housing	Aluminum
Operating Temperature [C (F)]	-20...85° (-4...+185°)
Storage Temperature [C (F)]	-40...125° (-40...+257°)
Humidity	98% noncondensing
Enclosure Type Rating	NEMA Type 4, 13, IP66 (IEC 529)
Shock	100 g/6 ms
Vibration	20g/10...2000 Hz
Approximate Weight [kg (lbs)]	0.91 (2)

Accessories

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Indicators

LED	Status
Off	Not connected not on-line
Green Blinking	Active but not allocated by master
Green Steady	Active and allocated by master
Red Blinking	Minor fault and/or connection interrupt
Red Steady	Critical communication fault

❶ Also see DeviceNet round media cable in the Network Media section of the *On-Machine™ Connectivity* catalog.

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Product Selection

Electrical Connection	Cat. No.
One 5-pin male micro QD	842D-60131331BDA
Two 5-pin micro QDs (one male & one female)	842D-60131331BXA

Approximate Dimensions [mm (in.)]

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.

WARNING



Pressing the preset position button results in a change of position reading. This can cause unexpected motion which could result in damage to the product, equipment, or personal injury.

Flexible Shaft Couplings

