

# Model 260 Ultra Versatile Commutated Thru-Bore



**ACCUCODER**  
In Encoder Products Company



## Features

- Low Profile 1.19"
- Up to 12 Pole Commutation
- Thru-Bore and Hollow Bore (Blind) Styles
- Simple, Innovative Flexible Mounting System
- Incorporates Opto-ASIC Technology
- CE marking available

**New M12  
Body Mount**



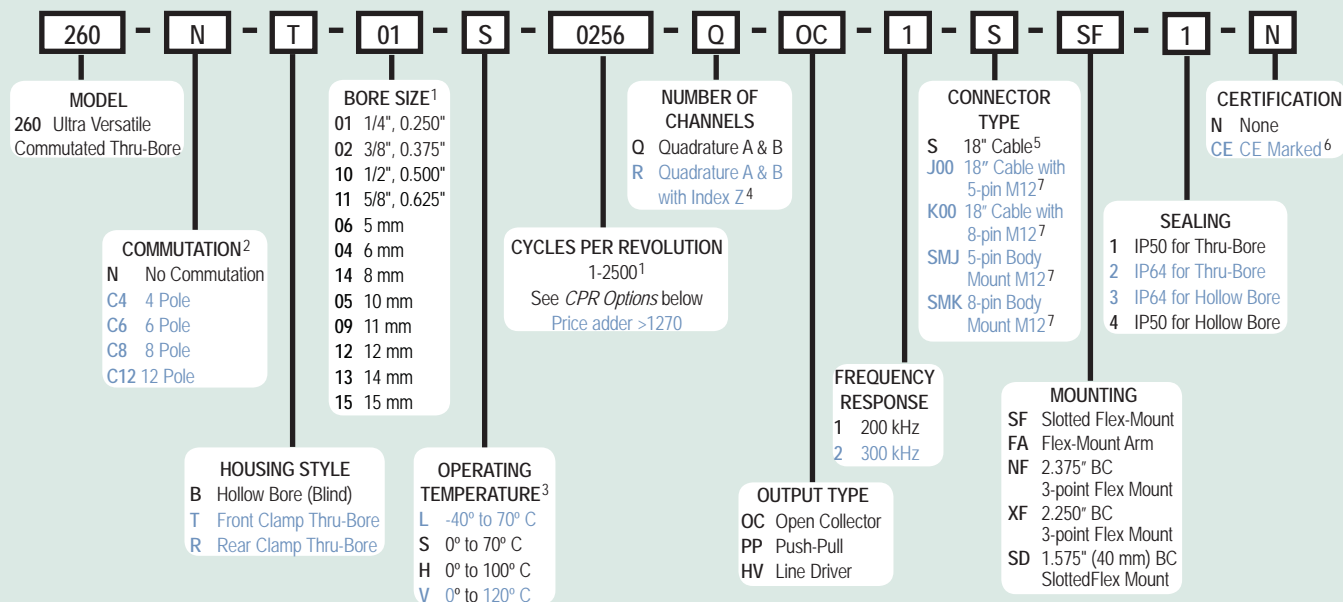
The Model 260's larger bore (up to 0.625") and low profile make it the perfect solution for many machine and motor applications. Available in two distinct formats - a Hollow Bore and a complete Thru-Bore - the Model 260 uses EPC's pioneering Opto-ASIC design. The Model 260 uses EPC's innovative anti-backlash mounting system, allowing simple, reliable, and precise encoder attachment. Unlike traditional kit or modular encoder designs, its integral bearing set provides stable and consistent operation without concerns for axial or radial shaft runout. For brushless servo motor applications, the Model 260 can be specified with three 120° electrical phase tracks to provide up to 12 pole commutation feedback. The optional extended temperature capability allows servo motors to operate at higher power outputs and duty cycles.

## Common Applications

Brushless Servo Motor Commutation, Robotics, Motor-Mounted Feedback, Assembly Machines, Digital Plotters, High Power Motors

## Model 260 Ordering Guide

Blue type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.



For specification  
assistance call  
Customer Service at  
1-800-366-5412

For enhanced connectivity, available  
with an M12 in-line connector



## Model 260 CPR Options

0001*	0010*	0011*	0012*	0020*	0025*	0030*
0040*	0060	0100	0120	0128*	0200	0250
0254	0256	0300	0360	0400	0500	0512
0600	0720	0800	0840	1000	1024	1200
1220	1250	1270	2000	2048	2500	2540

\*Contact Customer service for High Temp option

Contact Customer Service for other disk resolutions; not all disk resolutions available with every commutation option.

## NOTES:

- 1 Contact Customer Service for additional options not shown.
- 2 Not available in all configurations. Contact Customer Service for availability.
- 3 5 to 16 VDC supply only for H option; 5 VDC supply only for V option. Contact Customer Service for availability and additional information.
- 4 Contact Customer Service for non-standard index gating options.
- 5 For non-standard cable lengths add a forward slash (/) plus cable length expressed in feet. Example: S/6 = 6 feet of cable.
- 6 Please refer to Technical Bulletin TB100: *When to Choose the CE Option* at [www.encoder.com](http://www.encoder.com).
- 7 Not available with commutation or extreme temperature (V) option. 5-pin not available with line driver (HV) output.

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## Model 260 Specifications

### Electrical

- Input Voltage.....4.75 to 28 VDC for temperatures up to 70° C  
5 to 16 VDC for 0° to 100° C operating temperature  
5 VDC for 0° to 120° C operating temperature
- Input Current.....100 mA max with no output load
- Output Format.....Incremental- Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the mounting face. See *Waveform Diagrams* below.
- Output Types.....Open Collector- 20 mA max per channel  
Push-Pull- 20 mA max per channel  
Line Driver- 20 mA max per channel (Meets RS 422 at 5 VDC supply)
- Index.....Once per revolution gated to channel A. See *Waveform Diagrams* below.
- Freq. Response.....200 kHz standard, 300 kHz optional
- Noise Immunity.....Tested to BS EN61000-6-2; BS EN50081-2; BS EN61000-4-2; BS EN61000-4-3; BS EN61000-4-6, BS EN55011
- Symmetry.....180° (±18°) electrical
- Quad. Phasing.....90° (±22.5°) electrical
- Min. Edge Sep.....67.5° electrical
- Accuracy.....Within 0.01° mechanical from one cycle to any other cycle, or 0.6 arc minutes.
- Commutation.....Up to 12-pole. Contact Customer Service for availability.
- Comm. Accuracy.....1° mechanical

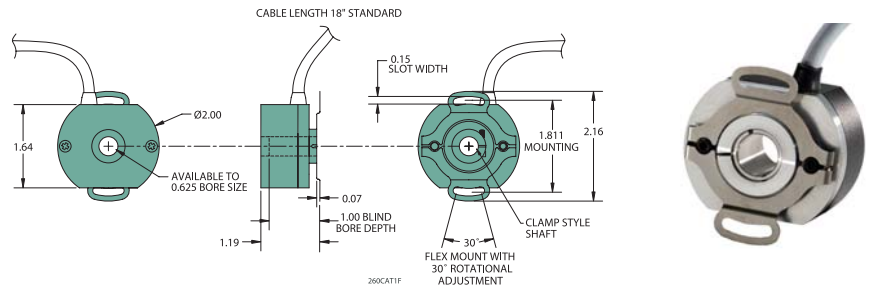
### Mechanical

- Max Shaft Speed.....7500 RPM. Higher shaft speeds may be achievable, contact Customer Service.  
Note: For extreme temperature operation, de-rate temperature by 5° C for every 1000 RPM above 3000 RPM
- Bore Size.....0.250" through 0.625"  
5 mm through 15 mm
- Bore Tolerance.....-0.0000" / +0.0006"
- User Shaft Tolerances  
Radial Runout.....0.007" max  
Axial Endplay.....±0.030" max
- Starting Torque.....IP50 Thru-Bore: 0.50 oz-in  
IP50 Hollow Bore: 0.30 oz-in  
IP64 Thru-Bore: 2.50 oz-in  
IP64 Hollow Bore: 2.0 oz-in  
Note: Add 3.0 oz-in for -40° C operation
- Moment of Inertia.....3.9 X 10<sup>-4</sup> oz-in-sec<sup>2</sup>
- Max Acceleration.....1 X 10<sup>5</sup> rad/sec<sup>2</sup>
- Electrical Conn.....18" cable (foil and braid shield, 24 AWG conductors non-commutated, 28 AWG commutated), 5- or 8-pin M12 (12 mm) in-line connector with 18" cable (foil and braid shield)
- Housing.....Black non-corrosive finish
- Mounting.....Slotted Flex Mount standard, additional flex mount options available (see Ordering Guide)
- Weight.....3.5 oz typical

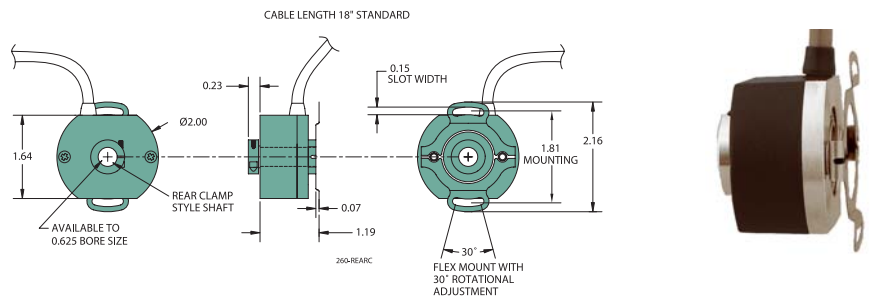
### Environmental

- Operating Temp.....0° to 70° C for standard models  
-40° to 70° C for low temperature option  
0° to 100°C for high temperature option  
0° to 120° C for extreme temperature option
- Storage Temp.....-40° to +100° C
- Humidity.....98% RH non-condensing
- Vibration.....10 g @ 58 to 500 Hz
- Shock.....50 g @ 11 ms duration
- Sealing.....IP50; IP64 available

## Model 260 With Front Shaft Clamp (T)

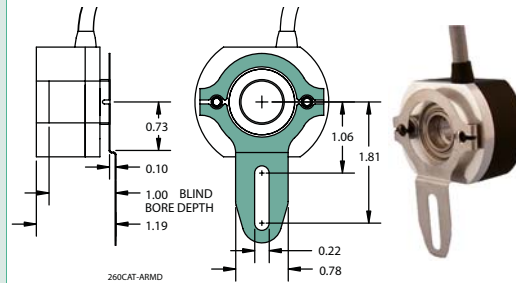


## Model 260 Rear Clamp (R)

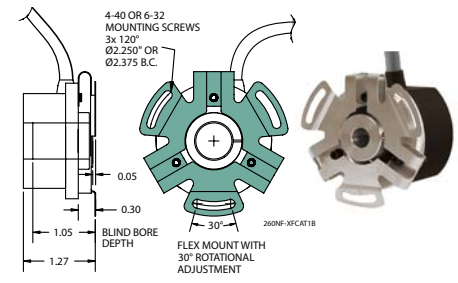


## Model 260 Additional Mounts

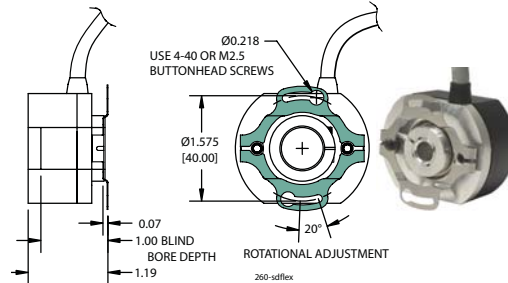
### Flex Arm (FA)



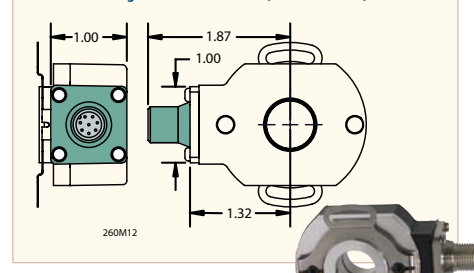
### Three Point Flex Mount (NF, XF)



### 1.575" (40 mm) Flex Mount (SD)

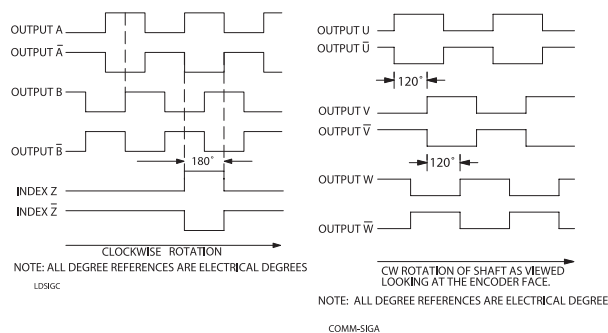


### Body Mount M12 (SMJ, SMK)



All dimensions are in inches with a tolerance of ±0.005" or ±0.01" unless otherwise specified

## Waveform Diagrams



## Wiring Table

Function	Cable Wire Color	5-pin M12**	8-pin M12**	
Com	Black	3	7	* CE Option: Cable shield (bare wire) is connected to internal case
+VDC	White	1	2	
A	Brown	4	1	**Non-CE Option: Cable shield is connected to M12 connector body. CE Option: Cable shield and M12 connector body is connected to internal case.
A'	Yellow	--	3	
B	Red	2	4	
B'	Green	--	5	
Z	Orange	5	6	
Z'	Blue	--	8	
U	Violet	--	--	
U'	Gray	--	--	
V	Pink	--	--	
V'	Tan	--	--	
W	Red/Green	--	--	
W'	Red/Yellow	--	--	
Shield	Bare *	--	--	

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