

# Model 260 Ultra Versatile Commutated Encoder



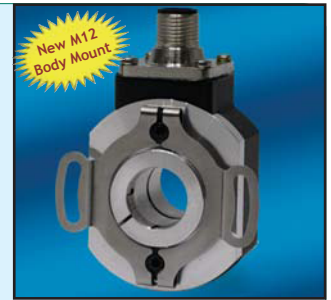
# trumeter

innovation by design



## Features

- Low Profile 30.30mm
- Up to 12 Pole Commutation Available
- Thru-Bore Style or Hollow Blind Bore
- Simple, Innovative Flexible Mounting System
- Incorporates Opto-ASIC Technology



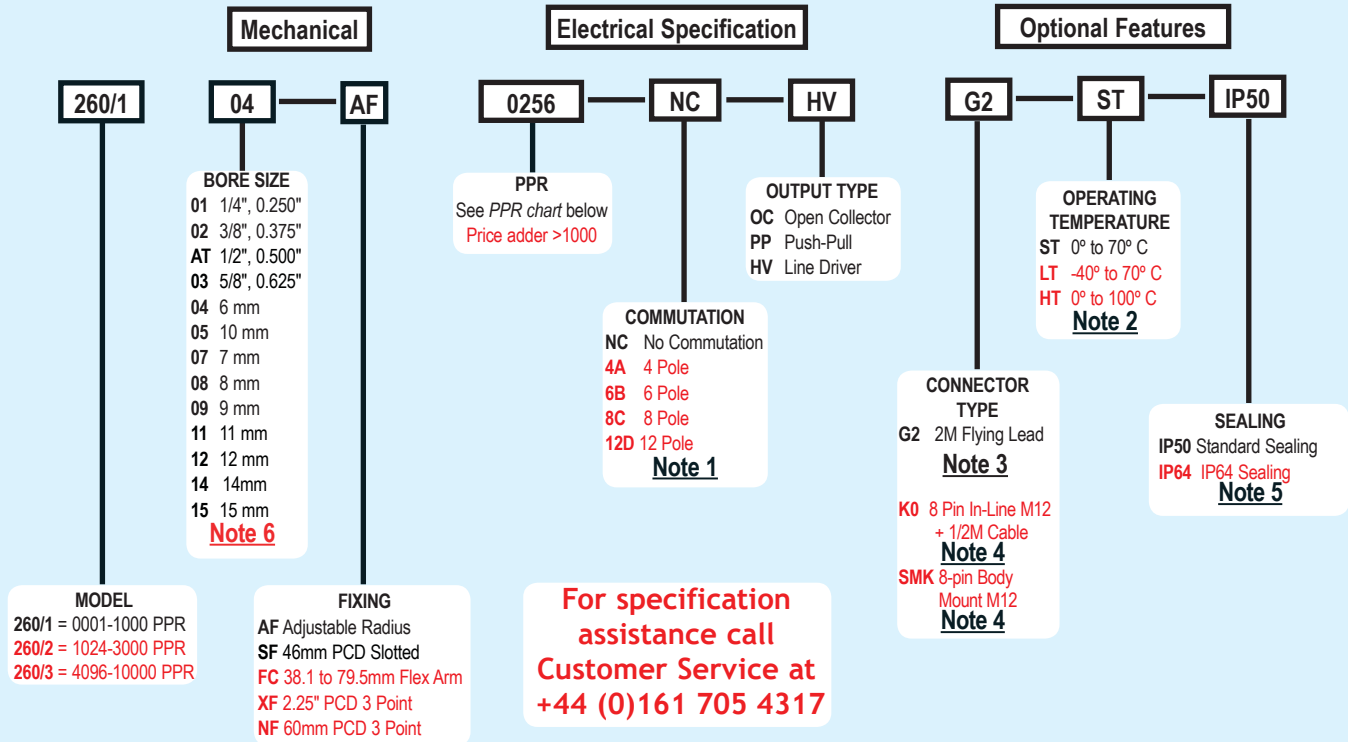
The Model 260's larger bore (up to 15.875mm) and low profile make it the perfect solution for many machine and motor applications, and is provided with a full Thru-Bore or Hollow Blind Bore. The Model 260 uses a pioneering Opto-ASIC design, and innovative anti-backlash mounting system, allowing simple, 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

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



## Model 260 PPR Options

0001*	0010*	0011*	0012*	0020*	0025*	0030*	0040*
0050	0060	0100	0120	0128*	0200	0250	0254
0256	0300	0360	0400	0500	0512	0600	0720
0800	1000	1024	1200	1220	1250	1270	1500
1800	2000	2048	2500	2540	3000	4096	5000
6000	8192	10000					

\*Contact Customer service for High Temp option

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

## NOTES:

- 1 Not available in all configurations. Contact Customer Service for availability.
- 2 5 to 16 VCC supply only for HT option.
- 3 For non-standard cable lengths contact sales office for details and cost.
- 4 Not available with commutation.
- 5 Increased starting torque with IP64 Option.
- 6 For Hollow Blind Option - Please add the letter "B" before the code for the Bore size - Example "14" for thru-bore or "B14" for Blind Hollow Bore.

# Model 260 Ultra Versatile Commutated Encoder

## Model 260 Specifications

### Electrical

Input Voltage.....4.75 to 24 VCC for temperatures up to 70° C  
5 to 16 VCC for 0° to 100° 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 (up to 1MHz)

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.

Bore Size.....6mm through 0.625" (15.875mm)

Bore Tolerance.....H7 (SLIDING FIT FOR g6)

User Shaft Tolerances  
Radial Runout.....0.2mm max TIR  
Axial Endplay.....0.75mm max

Starting Torque.....IP50 : 3.53 x 10<sup>-3</sup> Nm  
IP64 : 1.765 x 10<sup>-2</sup> Nm  
38.84 x 10<sup>-3</sup> Nm for -40° C operation

Max Acceleration.....1 X 10<sup>5</sup> rad/sec<sup>2</sup>

Electrical Conn.....2M cable (foil and braid shield, 24 AWG conductors non-commutated, 28 AWG commutated), or 8-pin M12 (12 mm) in-line connector with 0.5M cable (foil and braid shield)

Housing.....Black non-corrosive finish

Mounting.....Slotted Flex Mount standard, additional flex mount options available (see Ordering Guide)

Weight.....200 gms 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

Storage Temp.....-40° to +100° C

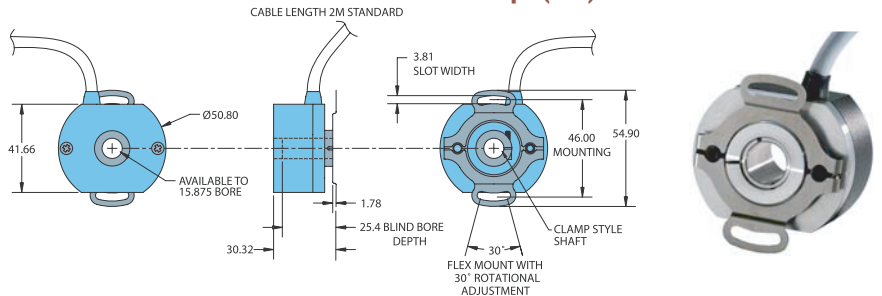
Humidity.....98% RH non-condensing

Vibration.....10 g @ 58 to 500 Hz

Shock.....50 g @ 11 ms duration

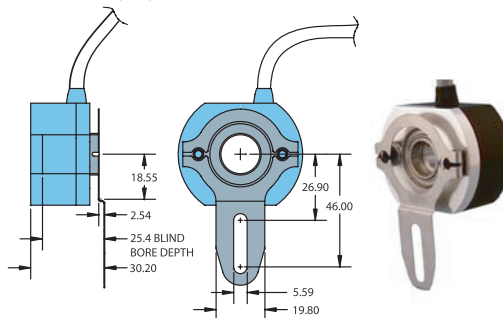
Sealing.....IP50; IP64 available

## Model 260 With Front Shaft Clamp (SF)

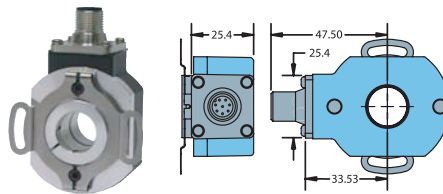


## Model 260 Additional Mounts

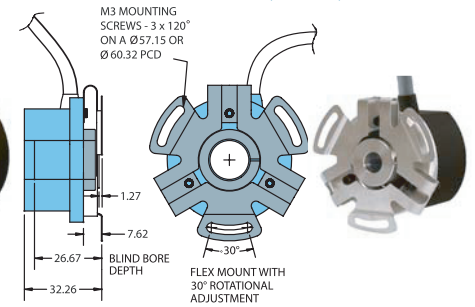
### Flex Arm (AF)



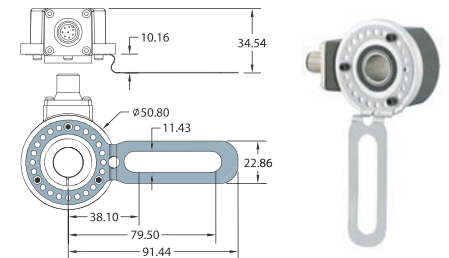
### Body Mount M12 (SMK)



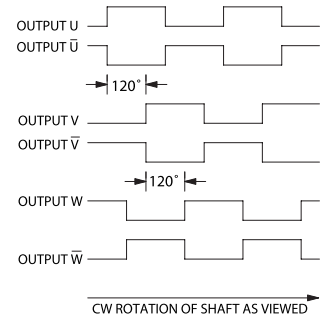
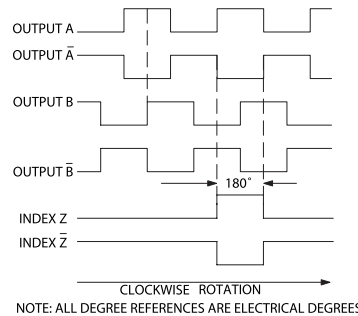
### Three Point Flex Mount (NF, XF)



### 38.1mm to 79.50mm Flex Arm (FC)



## Waveform Diagrams



## Wiring Table

Function	Cable Wire Color	8-pin M12**
Com	Black	7
+VDC	White	2
A	Brown	1
A'	Yellow	3
B	Red	4
B'	Green	5
Z	Orange	6
Z'	Blue	8
U	Violet	--
U'	Gray	--
V	Pink	--
V'	Turquoise	--
W	Red/Green	--
W'	Red/Yellow	--
Shield	Bare *	--