

# Model 760 Commutated Thru-Bore / Blind-Bore



## Features

- Size 25 / 63.5 mm Diameter (Hollow Shaft)
- Up to 12 Pole Commutation Available
- Thru-Bore or Blind-Bore Options
- Simple, Innovative Flexible Mounting System
- Incorporates Opto-ASIC Technology

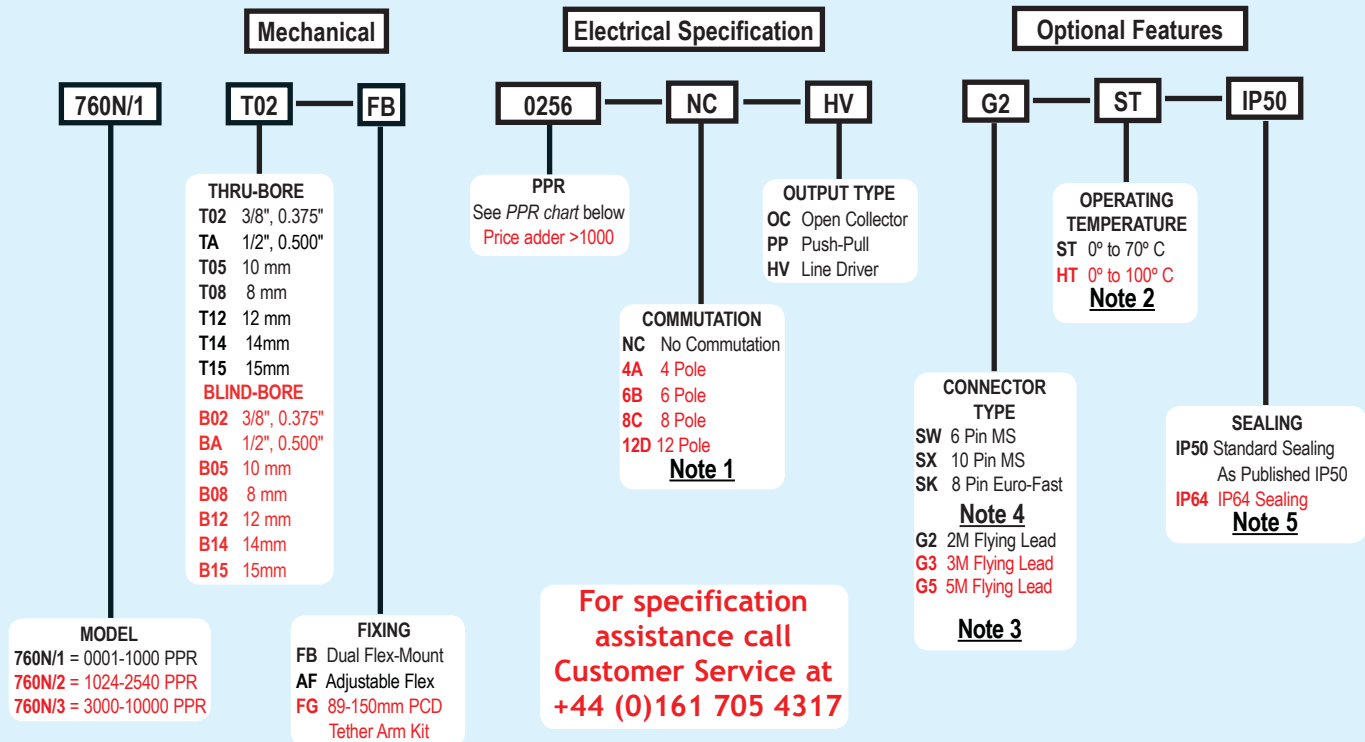
The 760N encoder is configured with either a full thru-bore (which may be fixed at either end of the shaft), or with a blind-bore which uses the front shaft fixing only. The encoder body is retained by means of 2 flexible mountings, or by a single adjustable radius fixing, which compensate for minor shaft misalignment. This encoder can now be provided with commutation signals for use with brushless motor control. Output circuits available include 5-24V RS422, 5-24V push-pull or 5-24V input / NPN open-collector. This encoder also now uses the same pioneering Opto-ASIC technology used in the model 260 encoder.

## Common Applications

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

## Model 760 Ordering Guide

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



## Model 760 PPR 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	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 Blind-Bore + Flying lead options only

# Model 760 Commutated Thru-Bore / Blind-Bore



**trumeter**  
innovation by design

## Model 760 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, Typical
- 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 EN5011
- 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

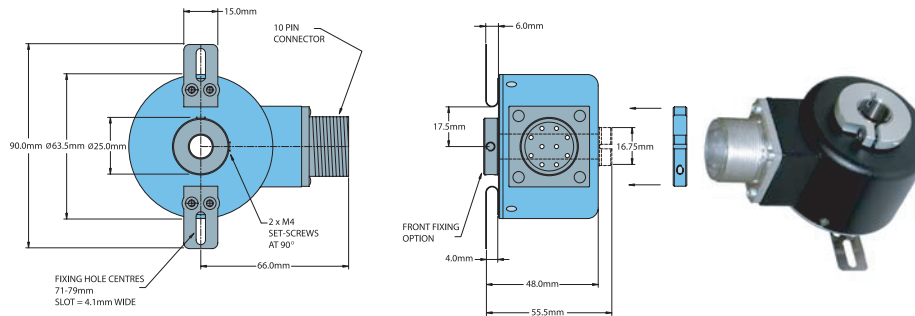
### Mechanical

- Max Shaft Speed.....6000 RPM.
- Bore Size.....8mm through 15mm
- Bore Tolerance.....H7 (SLIDING FIT FOR g6)
- User Shaft Tolerances  
Radial Runout.....0.2mm max TIR  
Axial Endplay.....0.75mm max
- Starting Torque.....IP50 Thru-Bore:  $3.53 \times 10^{-3}$  Nm  
IP64 Thru-Bore:  $1.765 \times 10^{-2}$  Nm
- Max Acceleration..... $1 \times 10^5$  rad/sec<sup>2</sup>
- Electrical Conn.....2M cable (foil and braid shield, 24 AWG conductors non-commutated, 28 AWG commutated), 6-pin MS, 10 Pin MS, or 8 Pin Euro-Fast
- Housing.....Black non-corrosive finish
- Mounting.....Dual adjustable radius Flex Mount standard, or single adjustable radius options.
- Weight.....600 gms typical

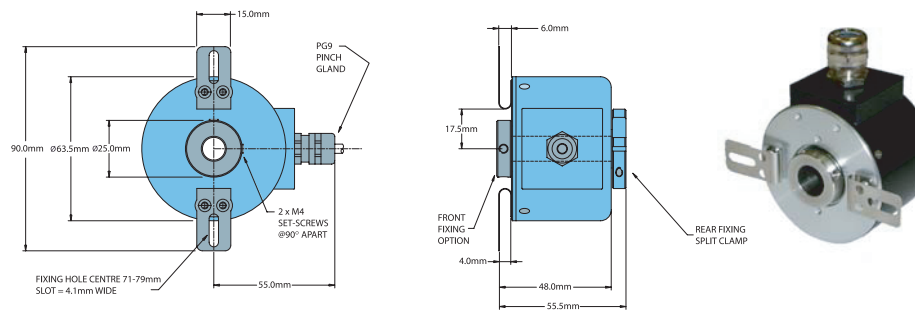
### Environmental

- Operating Temp.....0° to 70° C for standard models  
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

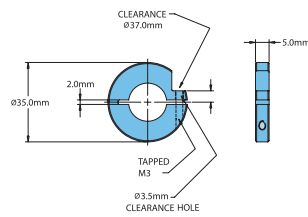
## Model 760 With 10 Pin Connector



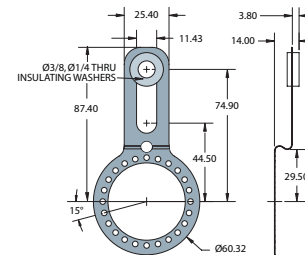
## Model 760 With PG9 Pinch Gland



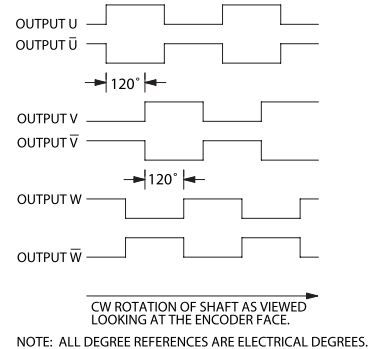
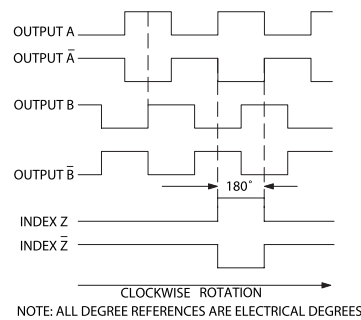
### Rear Fixing Clamp



### FG Flex Mount



### Waveform Diagrams



### Wiring Table - With Commutation

Function	Cable Wire Color
Com	Black
+VDC	White
A	Brown
A'	Yellow
B	Red
B'	Green
Z	Orange
Z'	Blue
U	Violet
U'	Gray
V	Pink
V'	Turquoise
W	Red/Green
W'	Red/Yellow
Shield	Bare *

### Wiring Table - Non-Commutation

Function	Gland Cable Wire Color	8-pin M12 HV	10-pin MS HV	6-pin MS PP, OC
Com	Black	7	F	F
+VDC	White	2	D	D
A	Brown	1	A	A
A'	Yellow	3	H	---
B	Red	4	B	B
B'	Green	5	I	---
Z	Orange	6	C	C
Z'	Blue	8	J	---
Case	---	---	G	---
Shield	Screen	---	---	---