

# Model 760 Commutated Hollow Blind / Thru-Bore Encoder



Ø63.5 mm

## 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

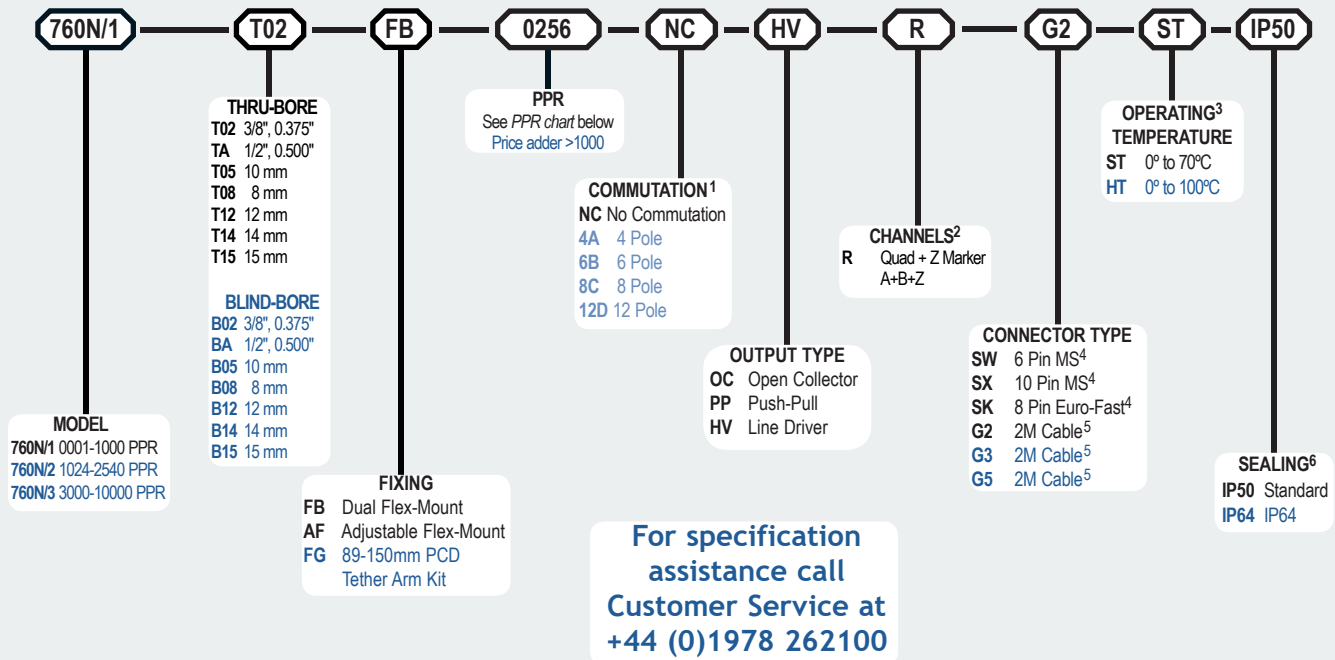
The 760N encoder is configured with either a full thru-bore (which may be fixed at either end of the shaft), or with a blind-bore which uses the front shaft fixing only. The encoder body is retained by means of 2 flexible mountings, or by a single adjustable radius fixing, which compensate for minor shaft misalignment. This encoder can now be provided with commutation signals for use with brushless motor control. Output circuits available include 5-24V Line Driver, 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

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



## Model 760 PPR Options

0001 thru 0189*	0200	0250	0254	0256
0300	0360	0400*	0500	0512
0720	0800	1000	1024	1200
1270	1500	1800*	2000	2048
2540	3000	3600*	4000	4096
6000	7200*	8192	10,000	5000

\* Contact customer service for availability

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 Contact Customer Service for non-standard marker gating or phase relationship options.
- 3 5 to 16 Vcc supply only for HT option.
- 4 Not available with commutation.
- 5 For non-standard cable lengths contact sales for availability and cost.
- 6 Blind-Bore + Flying Lead options only.

# Model 760 Commutated Hollow Blind / Thru-Bore Encoder

## 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 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.....6000 RPM.

Bore Size.....8mm through 15mm

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

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

Starting Torque.....IP50 Thru-Bore: 3.53 x 10<sup>-3</sup> Nm  
IP64 Thru-Bore: 1.765 x 10<sup>-2</sup> Nm

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 grams 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

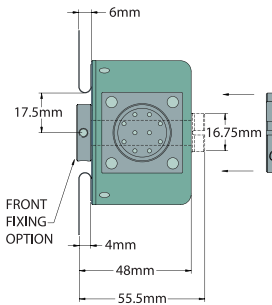
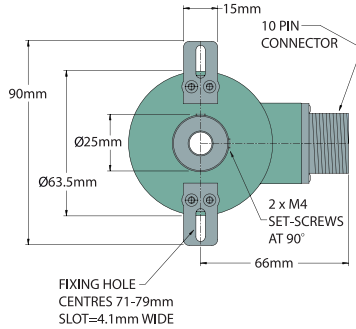
Humidity.....98% RH non-condensing

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

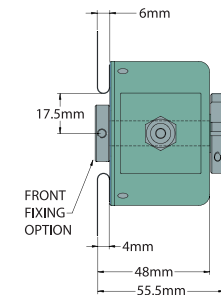
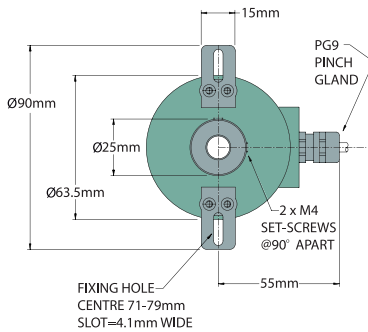
Shock.....50 g @ 11 ms duration

Sealing.....IP50; IP64

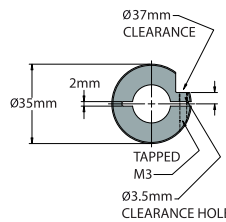
## Model 760 with 10 Pin Connector & FB Fixings



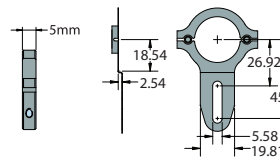
## Model 760 with PG9 Pinch Gland & FB Fixings



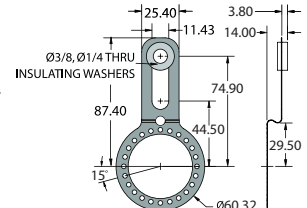
### Rear Fixing Clamp



### Adjustable Flex-Arm (AF)

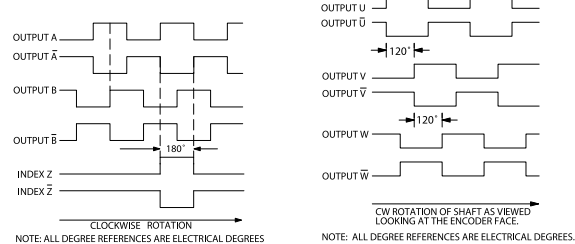


### 89-150mm PCD Flex-Mount (FG)



All dimensions are in mm with a tolerance of ±0.127mm or ±0.254 unless otherwise specified

### Waveform Diagrams



### Wiring Table

Function	Gland Cable† Wire Color	8-pin	8-pin	6-pin	10 Pin
		M12** PP,OC,PU	M12** HV	MS** OC,PP,PU	MS** HV
0 Volts	Black	7	7	F	F
+VCC	White	2	2	D	D
A	Brown	1	1	A	A
A'	Yellow	--	3	--	H
B	Red	4	4	B	B
B'	Green	--	5	--	J
Z	Orange	6	6	C	C
Z'	Blue	--	8	--	J
U	Violet	--	--	--	--
U'	Gray	--	--	--	--
V	Pink	--	--	--	--
V'	Turquoise	--	--	--	--
W	Red/Green	--	--	--	--
W'	Red/Yellow	--	--	--	--
Shield	Bare‡	8	Case	Case	G

\*CE: Cable shield (bare wire) is connected to internal case.

†Standard cable is 24 AWG conductors with foil and braid shield.

\*\*CE: Shield is connected to connector case unless otherwise specified.