

Model 760 Commutated Thru-Bore / Blind-Bore



Incremental Thru-Bore & Motor Mount Encoders

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

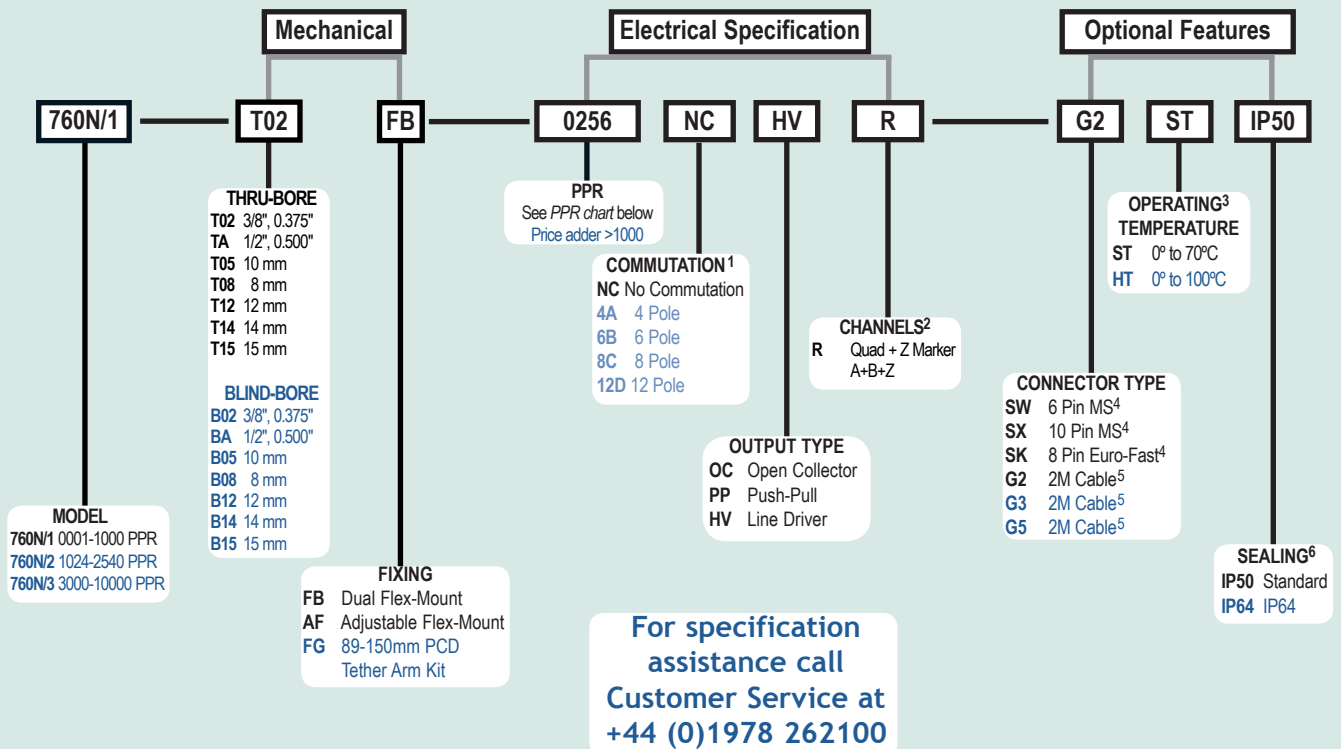
The 760N encoder is configured with either a full thru-bore (which may be fixed at either end of the shaft), or with a blind-bore which uses the front shaft fixing only. The encoder body is retained by means of 2 flexible mountings, or by a single adjustable radius fixing, which compensate for minor 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*	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	10,000

* 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.

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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 FormatIncremental- 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 TypesOpen 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)

IndexOnce 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

Symmetry180° (±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 x 10⁻³ Nm
IP64 Thru-Bore: 1.765 x 10⁻² 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

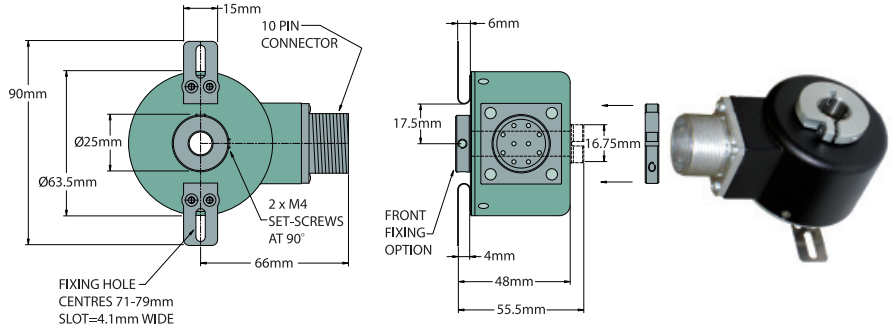
Humidity.....98% RH non-condensing

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

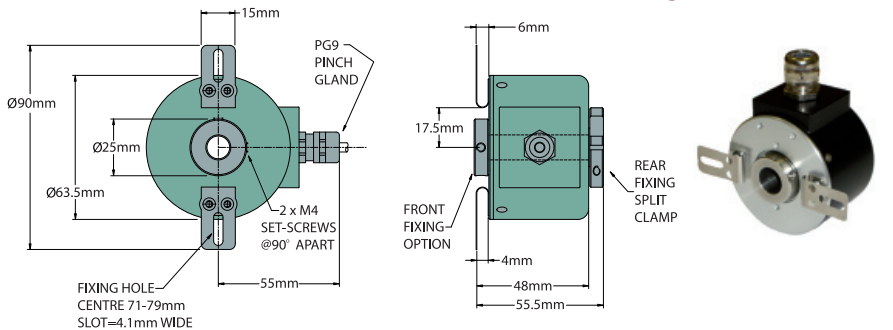
Shock.....50 g @ 11 ms duration

Sealing.....IP50; IP64

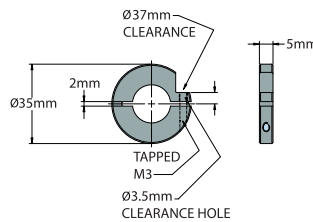
Model 760 with 10 Pin Connector & FB Fixings



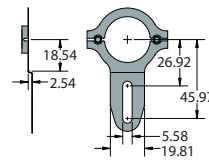
Model 760 with PG9 Pinch Gland & FB Fixings



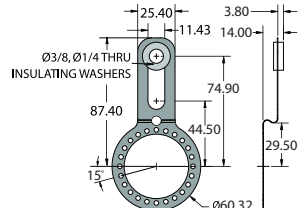
Rear Fixing Clamp



Adjustable Flex-Arm (AF)

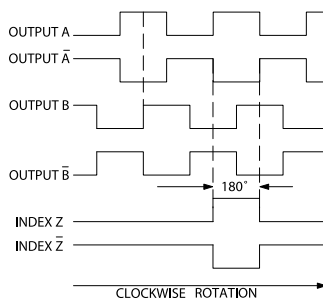


89-150mm PCD Flex-Mount (FG)

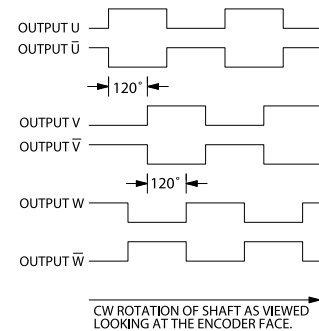


All dimensions are in mm with a tolerance of ±0.127mm or ±0.254 unless otherwise specified

Waveform Diagrams



NOTE: ALL DEGREE REFERENCES ARE ELECTRICAL DEGREES



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Wiring Table - With Commutation

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 *	--

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	---	---	---

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