

Model 25T Thru-Bore Encoder Model 25H Hollow Blind Bore



Ø63.5 mm

Features

- 63.50mm Opto-Asic Encoder with a low profile (50mm)
- Bore Sizes Ranging From 0.250" to 1.125" and 6mm to 28mm
- Resolutions to 10,000 PPR, Frequencies up to 1MHz
- Single Replacement Solution For 50.80mm to 88.90mm Encoders
- Versatile Flexible Mounting Options
- RoHS Compliant

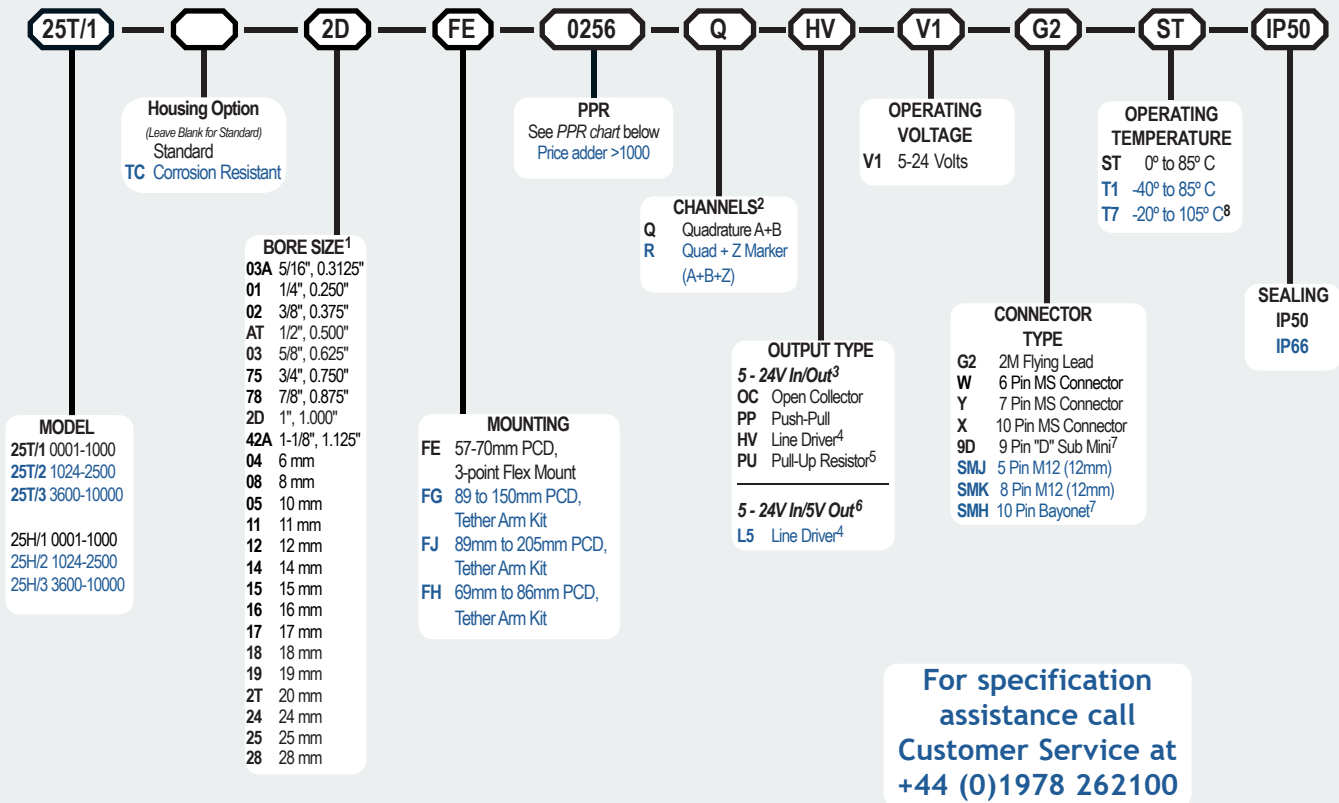
Introducing the next generation of high performance encoders - the Model 25T/H. As contemporary as its appearance, the Model 25T/H features the largest bore available in a 63.50mm encoder, mounting directly on shafts as large as 28 mm. With resolutions of up to 10,000 PPR, and frequencies of up to 1MHz this industrial strength encoder is perfect for fast revving motors. The 25T/H features the next generation of proprietary Opto-ASIC sensor which provides superior accuracy and precision counts. The injection moulded housing, made from a blend of nylon composites, is grooved with "cooling fins" and can take the extreme heat of the motion control industry. With sealing available up to IP66 and many new rugged flexible mounting options, the Model 25T/H can perform in demanding industrial environments.

Common Applications

Motor-Mounted Feedback and Vector Control, Speciality Machines, Robotics, Web Process Control, Paper and Printing, High Power Motors

Model 25T/H Ordering Guide

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



Model 25T PPR Options

0001	0002	0003	0005	0008	0010	0011	0012	0024
0025	0030	0032	0050	0060	0064	0070	0080	0100
0105	0115	0120	0125	0150	0180	0192	0200	0240
0250	0256	0300	0336	0360	0500	0512	0600	0625
1000	1024	1200	1250	1800	2000	2048	2400	2500
3600	4096	5000	7200	8192	10,000			

Contact Customer Service For other disc resolutions.

NOTES:

- 1 [More Bore Sizes Available](#) - Contact Customer Service for additional options not shown.
- 2 Contact Customer Service for non-standard index gating.
- 3 24Vcc Max for T7 temperature option.
- 4 Not available with 5-pin M12 or 6-pin MS style connectors. Available with 7-pin MS style connector without index Z.
- 5 With Input Voltage above 16 Vcc, operating temperature is limited to 85° C max.
- 6 Standard operating temperature only.
- 7 Not available with corrosion resistant option.
- 8 Contact Sales for availability on resolutions < 360 PPR.

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Model 25T/H Specifications

Electrical

- Input Voltage.....5 to 24 Vcc max
 Input Current.....100 mA max (65mA Typical) 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 Diagram*.
 Output Types.....Open Collector- 20 mA max per channel
 Pull Up - Open Collector with 2.2K ohm resistor, 20 mA max per channel
 Push-Pull- 20 mA max per channel
 Line Driver- 20 mA max per channel (Meets RS 422 at 5 Vcc supply)
 Index.....Once per revolution.
 361 to 10,000 PPR: Gated to output A
 1 to 360 PPR: Ungated
 See *Waveform Diagram*.
 Max Frequency.....250 kHz for 1 to 2500 PPR
 500 kHz for 2501 to 5000 PPR
 1 MHz for 5001 to 10,000 PPR
 CE Testing.....Emissions tested per EN61000-6-3:2001 as applicable. Immunity tested per EN6100-6-2: 2005 as applicable
 Min. Edge Sep.....45° electrical min, 63° electrical or better typical
 Quad Phasing.....90° (±22.5°) electrical
 Symmetry.....180° (±18°) electrical
 Rise Time.....Less than 1 microsecond
 Accuracy.....Within 0.1° mechanical from one cycle to any other cycle, or 6 arc minutes.

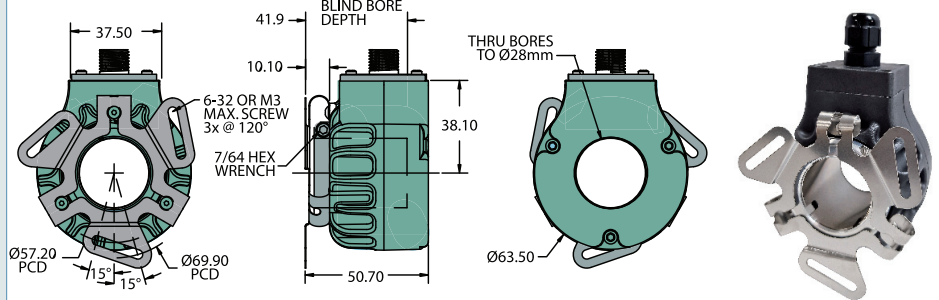
Mechanical

- Max Shaft Speed.....6000 RPM, 8000 RPM intermittent
 4000 RPM for IP66 seal option
 Bore Size.....0.250" through 28mm
 Bore Tolerance.....-0.00mm/+0.02mm
 User Shaft Tolerances
 Radial Runout.....0.127mm max
 Axial Endplay.....±1.27mm max
 Starting Torque.....IP50 sealing: 7.0 x 10⁻³ Nm
 IP66 sealing: 28.0 x 10⁻³ Nm
 Note: Add 7.0 x 10⁻³ for -20° C operation
 Electrical Conn.....6-, 7-, or 10-pin MS Style (12 mm), 10-pin Bayonet or gland with 2 Metres of cable (foil and braid shield, 24 AWG conductors), 9-pin D-Sub
 Housing.....Proprietary nylon composite
 Mounting.....57.1mm to 69.8mm PCD 3-point flex mount
 88.9mm to 149.8mm PCD tether arm kit,
 88.9mm to 205.7 PCD tether arm kit and
 69mm to 86.8mm PCD tether arm kit.
 See mechanical drawing for dimensions
 Weight.....226 grams typical

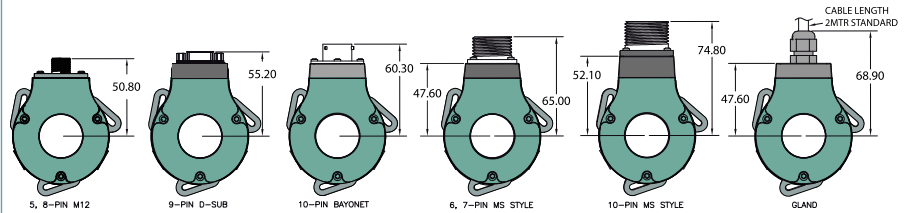
Environmental

- Operating Temp.....-20° to 85° C for standard models
 -20° to 105° C for high temperature option
 Storage Temp.....-20° to +85° C
 Humidity.....98% RH non-condensing
 Vibration.....20 g @ 5 to 2000 Hz
 Shock.....80 g @ 11 ms duration
 Sealing.....IP50, IP66 with shaft seals at both ends

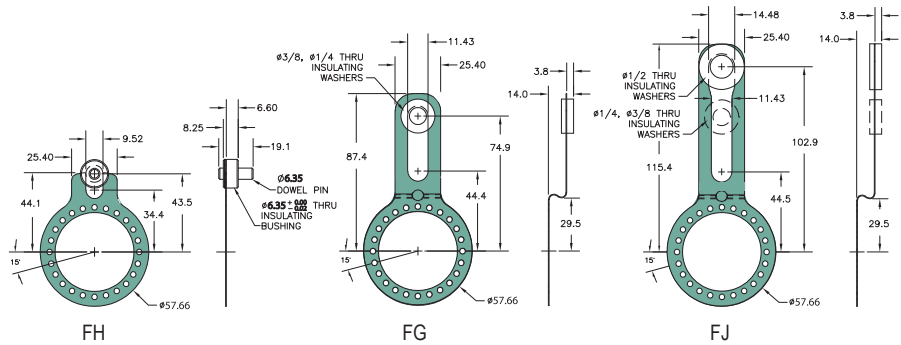
Model 25T/H



Model 25T/H Connector Options



Model 25T/H Mounting Options



Wiring Table

Function	Gland Cable ¹ Wire Color	5-pin M12** PP,OC,PU	8-pin M12** HVL5	8-pin M12** OC,PP,PU	6 Pin MS** A, F PU,OC,PP	7 Pin MS** HVL5	7 Pin MS** PU,OC,PP	10 Pin MS** HVL5	9 Pin D-SUB HVL5	10 Pin Bayonet HVL5
0 Volts	Black	3	7	7	A, F	F	F	F	9	F
+VCC	White	1	2	2	B	D	D	D	1	D
A	Brown	4	1	1	D	A	A	A	2	A
A'	Yellow	--	3	--	--	C	--	H	3	H
B	Red	2	4	4	E	B	B	B	4	B
B'	Green	--	5	--	--	E	--	I	5	J
Z	Orange	5	6	6	C	C	C	C	6	C
Z'	Blue	--	8	--	--	--	--	J	7	K
Shield	Bare ²	Case	Case	8	Case	G	G	G	8	G

¹CE: Cable shield (bare wire) is connected to internal case.

²Standard cable is 24 AWG conductors with foil and braid shield.

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

Waveform Diagrams

