

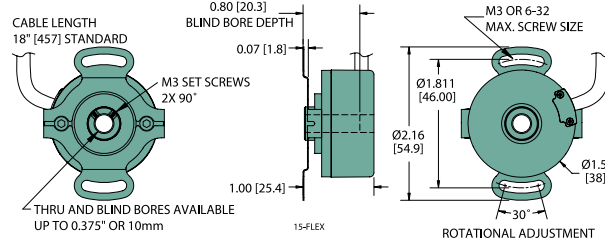
Model 15T Thru-Bore Model 15H Hollow Bore



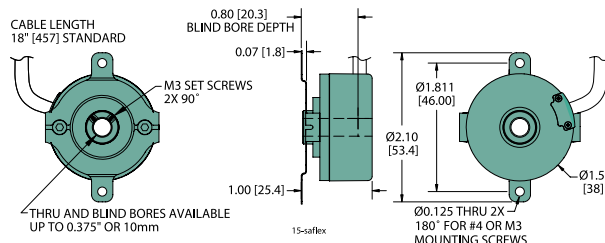
Model 15T/H Specifications

Electrical	
Input Voltage	5 VDC ±10% Fixed Voltage 12 VDC ±10% Fixed Voltage 4.75 to 28 VDC max for temperatures up to 85° C 4.75 to 24 VDC for temperatures between 85° to 100° C
Input Current	100 mA max (65 mA 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 encoder mounting face. See <i>Waveform Diagrams</i> .
Output Types	Open Collector- 20 mA max per channel Push-Pull- 20 mA max per channel Pull-Up- Open collector with 2.2K ohm Pull-Up 20 mA max per channel Line Driver- 20 mA max per channel (Meets RS 422 at 5 VDC supply)
Index	Once per revolution. 190 to 10,000 CPR: Gated to output A 1 to 189 CPR: Ungated See <i>Waveform Diagrams</i> .
Max. Frequency	Standard Frequency Response is 200 kHz for CPR 1 to 2540 500 kHz for CPR 2541 to 5000 1 MHz for CPR 5001 to 10,000 Extended Frequency Response (optional) is 300 kHz for CPR 2000, 2048, 2500, and 2540
Noise Immunity	Tested to BS EN61000-6-2; BS EN50081-2; BS EN61000-4-2; BS EN61000-4-3; BS EN61000-4-6; BS EN500811
Symmetry	180° (±18°) electrical
Quad. Phasing	90° (±22.5°) electrical
Min. Edge Sep	67.5° electrical
Accuracy	Within 0.017° mechanical or 1 arc-minute from true position. (for CPR>189)
Commutation	Up to 12 pole. Contact Customer Service for availability.
Comm. Accuracy	1° mechanical
Mechanical	
Max Shaft Speed	8000 RPM. Higher speeds may be achievable, contact Customer Service.
Bore Size	0.1875" through 0.375", 5 mm through 10 mm
Bore Tolerance	-0.0000" / +0.0006"
User Shaft Tolerances	
Radial Runout	0.008" max
Axial Endplay	±0.030" max
Starting Torque	IP50 Hollow Bore: 0.2 oz-in IP50 Thru-Bore: 0.3 oz-in IP64: 0.6 oz-in
Moment of Inertia	6.7 x 10 ⁻⁹ oz-in-sec ² (4.8 gm-cm ²)
Max Acceleration	1 x 10 ⁹ rad/sec ²
Electrical Conn	18" cable (foil and braid shield, 24 AWG conductors non-commutated, 28 AWG commutated), 5- or 8-pin M12 (12 mm) in-line connector with 18" cable (braid shield)
Mounting	1.812" (46 mm) Slotted Flex mount 1.812" (46 mm) Two Hole Flex Mount 1.142" (29 mm) Slotted Flex Mount 1.2795" (32.5 mm) Slotted Flex Mount 1.575" (40 mm) Slotted Flex Mount (See mechanical drawings for dimensions)
Weight	3 oz typical
Environmental	
Operating Temp	-20° to +85° C standard models -40° to +85° C for low temperature option -20° to +100° C for high temperature option -20° to +120° C for extreme temperature option
Storage Temp	-25° to +85° C
Humidity	98% RH non-condensing
Vibration	10 g @ 58 to 500 Hz
Shock	80 g @ 11 ms duration
Sealing	IP50 standard; IP64 available

Model 15T/H 1.811" (46 mm) Slotted Flex Mount (SF)

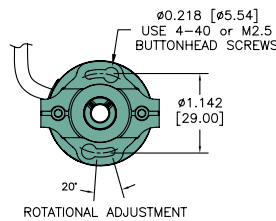


Model 15T/H 1.811" (46 mm) Two Hole Flex Mount (SA)

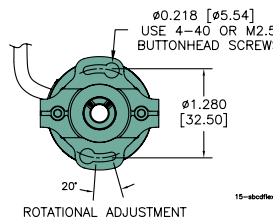


Model 15T/H Small Diameter Slotted Flex Mounts

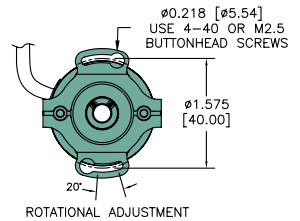
1.142" (29 mm): SB*



1.2795" (32.5 mm): SC*



1.575" (40 mm): SD*



Encoder Length and Diameter are the same as SF and SA mounts detailed above
All dimensions are in inches with a tolerance of ±0.005" or ±0.01" unless otherwise specified
Metric dimensions are given in brackets [mm]

*** Order Appropriate No Charge Mounting and Installation Kit for SB, SC, or SD Option**

176150-01 Installation Kit, 4-40 Buttonhead Screws with 0.062" Shortened Hex Wrench

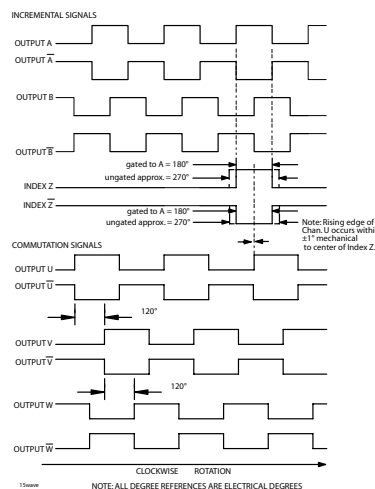
176149-01 Installation Kit, M 2.5 Buttonhead Screws with 1.5 mm Shortened Hex Wrench

Each kit contains 10 screws for mounting 5 encoders



"SB" Slotted Flex Mount

Waveform Diagrams



Wiring Table

Function	Cable Wire Color	5-pin M12**	8-pin M12**	
Com	Black	3	7	* CE Option: Cable shield (bare wire) is connected to internal case
+VDC	White	1	2	
A	Brown	4	1	**Non-CE Option: Cable shield is connected to M12 connector body.
A'	Yellow	--	3	
B	Red	2	4	CE Option: Cable shield and M12 connector body is connected to internal case.
B'	Green	--	5	
Z	Orange	5	6	
Z'	Blue	--	8	
U	Violet	--	--	
U'	Gray	--	--	
V	Pink	--	--	
V'	Tan	--	--	
W	Red/Green	--	--	
W'	Red/Yellow	--	--	
Shield	Bare *	--	--	