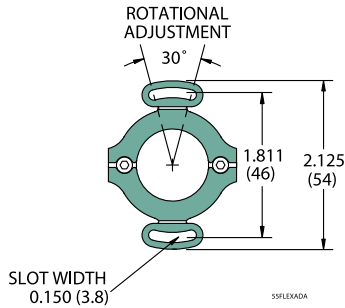
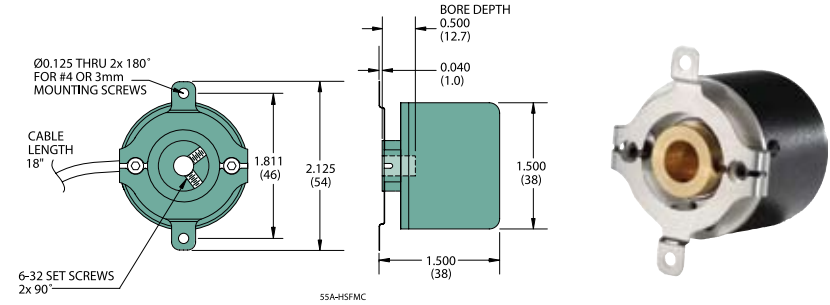


Model 755A Hollow Bore

Model 755A Specifications

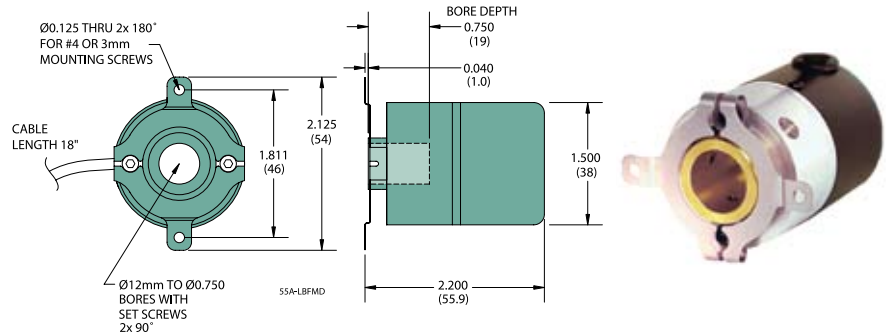
Electrical	
Input Voltage.....	4.75 to 28 VDC max for temperatures up to 70° C 4.75 to 24 VDC for temperatures between 70° C to 100° C
Input Current.....	100 mA max with no output load
Input Ripple.....	100 mV peak-to-peak at 0 to 100 kHz
Output Format.....	Incremental- Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the encoder mounting face. See <i>Waveform Diagrams</i> below.
Output Types.....	Open Collector- 100 mA max per channel Pull-Up- 100 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.....	Occurs once per revolution. The index for units >3000 CPR is 90° gated to Outputs A and B. See <i>Waveform Diagrams</i> below.
Max Frequency.....	Up to 1 MHz
Noise Immunity.....	Tested to BS EN61000-4-2; IEC801-3; BS EN61000-4-4; DDENV 50141; DDENV 50204; BS EN55022 (with European compliance option); BS EN61000-6-2; BS EN50081-2
Symmetry.....	1 to 6000 CPR: 180° (±18°) electrical at 100 kHz output 6001 to 20,480 CPR: 180° (±36°) electrical at 100 kHz output
Quad Phasing.....	1 to 6000 CPR: 90° (±22.5°) electrical at 100 kHz output 6001 to 20,480 CPR: 90° (±36°)
Min Edge Sep.....	1 to 6000 CPR: 67.5° electrical at 100 kHz output 6001 to 20,480 CPR: 54° electrical >20,480 CPR: 50° electrical
Rise Time.....	Less than 1 microsecond
Accuracy.....	Instrument and Quadrature Error: For 200 to 1999 CPR, 0.017° mechanical (1.0 arc minutes) from one cycle to any other cycle. For 2000 to 3000 CPR, 0.01° mechanical (0.6 arc minutes) from one cycle to any other cycle. Interpolation error (units > 3000 CPR only) within 0.005° mechanical. (Total Optical Encoder Error = Instrument + Quadrature + Interpolation)
Mechanical	
Max Shaft Speed.....	7500 RPM. Higher shaft speeds may be achievable, contact Customer Service.
Bore Size.....	0.1875", 0.250", 0.3125", 0.375", 0.500", 0.625", 0.750", 4 mm, 5 mm, 6 mm, 8 mm, 10 mm, 12 mm, 14 mm
Bore Tolerance.....	-0.0000" / +0.0006"
User Shaft Tolerances	
Radial Runout.....	0.007" max
Axial End Play.....	±0.030" max
Starting Torque.....	0.14 oz-in typical 4.0 oz-in typical for -40° C operation
Moment of Inertia.....	2.8×10^{-4} oz-in-sec ²
Max Acceleration.....	1×10^5 rad/sec ²
Electrical Conn.....	18" cable (foil and braid shield, 24 AWG conductors), 5- or 8-pin M12 (12 mm) in-line connector with 18" cable (braid shield), 8-pin Molex, Terminal Block
Housing.....	Black non-corrosive finish
Bearings.....	Precision ABEC ball bearings
Mounting.....	Flex, and Slotted Flex Mounting
Weight.....	3.50 oz typical
Environmental	
Operating Temp.....	0° to 70° C for standard models -40° to 70° C for low temperature option 0° to 100° C for high temperature option (0° to 85° C for certain resolutions, see CPR Options.)
Storage Temp.....	-25° to +85° C
Humidity.....	98% RH non-condensing
Vibration.....	10 g @ 58 to 500 Hz
Shock.....	50 g @ 11 ms duration

Model 755A Flex Mount (S)



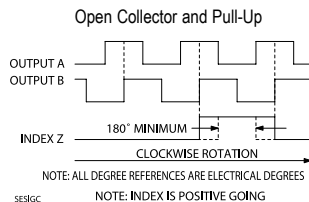
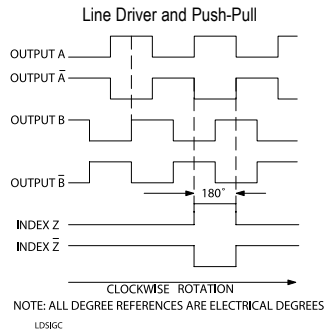
Optional Slotted Flex Mount (SF)

Model 755A Large Bore Flex Mount (S)



All dimensions are in inches with a tolerance of ±0.005" or ±0.01" unless otherwise specified. Metric dimensions are given in brackets [mm].

Waveform Diagrams



Wiring Table

Function	Cable Wire Color	Terminal Block	8-pin Molex	5-pin M12 ²	8-pin M12 ²
Com	Black	7	2	3	7
+VDC	White	8	1	1	2
A	Brown	1	8	4	1
A'	Yellow	2	7	-----	3
B	Red	3	4	2	4
B'	Green	4	3	-----	5
Z	Orange	6	6	5	6
Z'	Blue	5	5	-----	8
Shield	Bare ¹	-----	-----	-----	-----

¹CE Option: Cable shield (bare wire) is connected to internal case
²CE Option: Read Technical Bulletin TB111

Incremental Thru-Bore & Motor Mount Encoders