

SERIES 25L

Hex, Gray and Quadrature Code

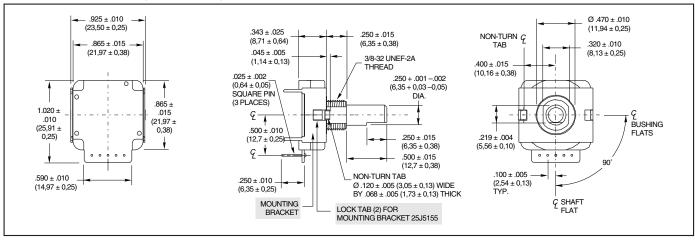


FEATURES

- Price Competitive to Similar Designs
- Quality Construction and Contact Materials
- Multiple Code and Indexing Choices
- 100,000 Life Cycles
- Less than 1.0" Square
- Manufactured to ISO 9001 Standards



DIMENSIONS In inches (and millimeters)



TRUTH TABLES

Clockwise Rotation					
	4-Bit Gray Code-16 Position				
Switch	Code	Output			
Position	Position	1	2	4	8
1	0				
2	1	•			
3	2	•	•		
4	3		•		
5	4		•	•	
6	5	•	•	•	
7	6	•		•	
8	7			•	
9	8			•	•
10	9	•		•	•
11	10	•	•	•	•
12	11		•	•	•
13	12		•		•
14	13	•	•		•
15	14	•			•
16	15				•

•	Indicates closed	circuit;	blank	indicates
(open circuit.			

Clockwise Rotation					
	4-Bit Binary Code Hexadecimal-16 Position				
Switch Position	Code Position	1	2 O u	tput 4	8
1	0				
2	1	•			
3	2		•		
4	3	•	•		
5	4			•	
6	5	•		•	
7	6		•	•	
8	7	•	•	•	
9	8				•
10	9	•			•
11	10		•		•
12	11	•	•		•
13	12			•	•
14	13	•		•	•
15	14		•	•	•
16	15	•	•	•	•

• Indicates closed circuit; blank indic open circuit.

8	Switch Position	"A" Output "B"	
	1		
	2	•	
	3	•	•
	4		•
	5		
	6	•	
	7	•	•
•	8		•
	9		
•	10	•	
•	11	•	•
•	12		•
•	13		
•	14	•	
-	15	•	•
•	16		•
	17		
cates	18	•	
	19	•	•
	20		•
	21		
	22	•	
	23	•	•
	24		•
	25		
	26	•	
	27	•	•
	28		•
	29		
	30	•	

Clockwise Rotation Quadrature 2-Bit Code 1/4 Cycle per Detent

 Indicates closed circuit; blank indicates open circuit. Code repeats every 4 positions.



SPECIFICATIONS

Electrical Ratings

Switching Loads: 1.5 mA at 115 Vac, resistive;

150 mA at 14 Vdc, resistive Current Carrying Capacity: 250 mA maximum at 28 Vdc, resistive load Contact Resistance: 75 m Ω , typical

Insulation Resistance: 1000 $\text{m}\Omega$ minimum

between terminals

Voltage Breakdown: 1000 Vac minimum

between terminals

Life Expectancy: 100,000 cycles of operation at rated loads. One cycle of operation is a rotation through all of the active positions and a return to the starting position.

Mechanical Ratings

Rotational Torque: 2 to 6 in-oz

Operating Temperature Range: -40 $^{\circ}$ to +85 $^{\circ}$ Storage Temperature Range: -65 $^{\circ}$ to +85 $^{\circ}$ Continuous Rotation: All standard switches are continuous rotation. Desired stop locations supplied upon request.

Anti-Rotation Device: Integral non-turn tab, flatted bushing, .375" diameter, .320 double "D" across flats.

Termination: Standard is PC style, parallel to shaft, facing rear. Options include PC, parallel to shaft, facing front.

Panel Mounting Torque: 10 in-lbs maximum

Materials and Finishes

Bushing/Housing and Shaft/Rotor: Reinforced thermoplastic

Detent Ball: Stainless steel, nickel-plated

Detent Spring: Tinned music wire **Contacts:** Beryllium copper, gold plate over

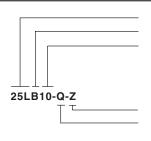
contacts: Beryllium copper, gold plate ov nickel

Terminals: Copper alloy, #725, 100% tin plate

over nickel plate

Output Board: FR-4, copper/nickel-plated Mounting Nut: Brass, tin/zinc-plated hex nut Mounting Bracket: Stainless Steel, tin-plated

ORDERING INFORMATION



Series: 25L = Economical, single deck encoder **Housing Color:** B = Black housing; R = Red housing

Angle of Throw: $10 = 10^{\circ}$, 36 positions; $11 = 11.25^{\circ}$, 32 positions;

 $15 = 15^{\circ}$, 24 positions; $18 = 18^{\circ}$, 20 positions; $22 = 22.5^{\circ}$, 16 positions; $30 = 30^{\circ}$, 12 positions;

 $45 = 45^{\circ}$, 8 positions

Mounting Bracket: Z = with bracket, Blank = no bracket **Code Output:** H = Hexadecimal available only in 22.5°

G = Gray available only in 22.5°

Q = Quadrature (2-bit)

Custom materials, styles, color and markings are available. Custom knobs available, see page I-57.

Available from your local Grayhill Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill. For Custom codes. Termination, Tirque, Angles of Throw, Call Grayhill for more information.