Mechanical Encoders

## SERIES 25

## Multi-Deck

## FEATURES

- Multiple Code and Indexing Choices
- Reliability Tested to Listed Specifications
- Less than 1.0" Square
- Termination Choices
- Panel and Shaft Seal Option
- Manufactured to ISO 9001 and Military Standards
- Custom Configurations Available


DIMENSIONS
In inches (and millimeters)


## SPECIFICATIONS

## Electrical Ratings

Switching Loads: 150 mA at 120 Vac ,
resistive; 150 mA at 28 Vdc , resistive
Current Carrying Capacity: 250 mA at 28 Vdc , resistive
Contact Resistance: $75 \mathrm{~m} \Omega$ maximum after life
Insulation Resistance: $1000 \mathrm{~m} \Omega$ minimum between terminals and shaft
Voltage Breakdown: 1000 Vac minimum between terminals and shaft
Life Expectancy: 50,000 cycles at rated loads Contacts: Shorting

## Mechanical Ratings

Stop Strength: 10 in-lbs minimum
Rotational Torque: 4-20 in-oz, dependent on the number of decks
Operating Temperature Range: $-65^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$
Non-Turn Device: Flatted mounting bushing, .375" dia. x .320"
Package Size: . 865 " square
Termination: PC terminals, .100 " on center. Decks are .200" apart.

## Materials and Finishes

Bushing: Die cast zinc alloy, tin-zinc plated
Mounting Hardware: plated brass
Decks, Deck Separators, End Plate:
Thermoplastic
Contacts and Terminals: Gold, silver, nickel-
plated beryllium copper
Shaft, Stop Blades: Stainless Steel
Detent Balls: Steel, nickel-plated
Rivets: Brass, zinc-plated

ORDERING INFORMATION

Series 25: Multi-deck


Shaft size: B=1/4" diameter shaft
Sealed or non-sealed: S = Shaft and panel seal; No letter = no seal
Terminal structure: $P=P C$, perpendicular to shaft; $R=P C$, rear facing (one deck only); F = PC, front facing (one deck only).
Angle of throw (determines the maximum number of positions):
$10=10^{\circ}, 36$ positions; $11=11.25^{\circ}, 32$ positions; $12=12^{\circ}, 30$ 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; $60=60^{\circ}, 6$ positions;
$90=90^{\circ}, 4$ positions.

## 25BSP22-Q-1-16 C



Stop arrangement: For switches with maximum positions, add C for continuous rotation; add F for stop between first and last. No notation required for less than maximum positions.
Number of positions: Maximum is dependent on the angle of throw. Minimum is two. Number of decks: One through four possible.

## Code output:

$\mathrm{B}=$ Binary available in $22.5^{\circ}$
Q = Quadrature
$\mathrm{G}=$ Gray available in $22.5^{\circ}$
Specials include ${ }^{1} / 8^{\prime \prime}$ diameter shaft, custom angles of throw for binary, binary complement and gray code outputs. Contact Grayhill Sales for availability.
Control 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.

