

Model 657

Spectrol

Industrial Rotary Position Sensor



FEATURES

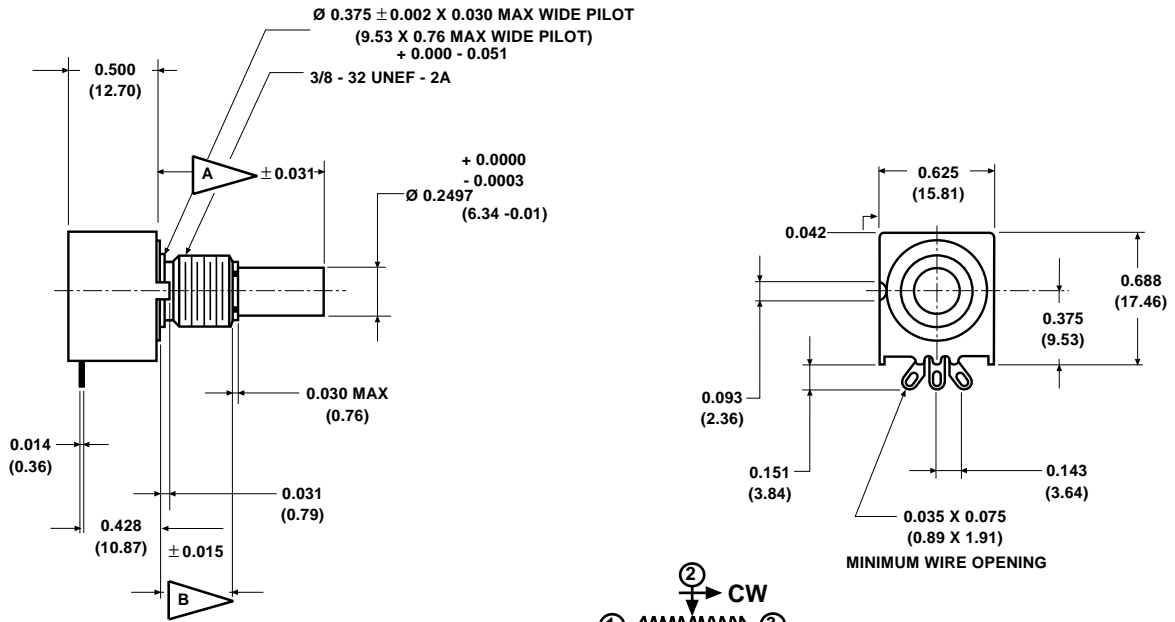
- Fully Sealed for high Immunity to Environmental Damage
- Excellent Temperature Stability
- Rotational Life Exceeds 2 millimeter on Revolutions
- Low Cost and Wide Range of Options
- Stainless Steel Shaft
- Shock to 30G's Vibration to 15G's at 10 to 2,000Hz

ELECTRICAL SPECIFICATIONS	
PARAMETER	
Standard Resistance	1K to 100K Ω
Capability Range	200K Ω
Resistance Tolerance	$\pm 20\%$
Linearity	$\pm 2\%$
Power Rating	1.0 watt @ 85°C
Electrical Travel	240° $\pm 4^\circ$
Dielectric Withstanding	500V _{RMS} @ 60Hz minimum
Output Smoothness	0.2% maximum

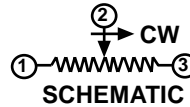
MECHANICAL SPECIFICATIONS	
PARAMETER	
Bearing Type	Sleeve
Mechanical Rotation	250° $\pm 2^\circ$
Stop Strength	10 in - lb maximum
Starting Torque	3.0 oz - in maximum
Running Torque	3.0 oz - in maximum

ORDERING INFORMATION			
657	0	0	XXX
MODEL	SHAFT OPTIONS	SHAFT AND BUSHING OPTIONS	EIA RESISTANCE CODE
	0 - Round 2 - Flatted	Shaft Length ^A Bushing Length ^B Flat ^C 0 - 0.875" FMS 0.375" FMS 0.440" 1 - 0.625" FMS 0.250" FMS 0.315" 2 - 1.000" FMS 0.500" FMS 0.440" 3 - 1.250" FMS 0.750" FMS 0.440"	1st Significant Figure 2nd Significant Figure Number of Zeros
Shaft Flat applies to 657 -2-X-XXX P/N's			
Example: 657 - 0 - 0 - XXX			

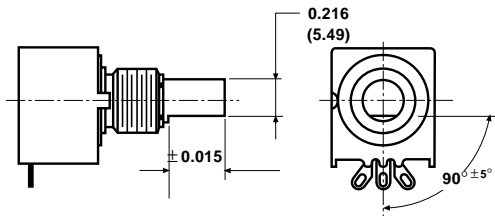
DIMENSIONS in inches (millimeters)



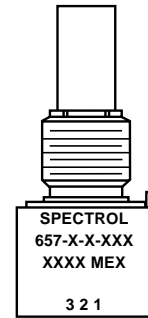
DECIMALS: XX ± 0.01 INCHES (± 0.25mm)
XX ± 0.005 INCHES (± 0.13mm) ANGLES: ± 2°



SHAFT FLAT AND PHASING DIAGRAM



WITH SHAFT FLAT POSITIONED AS SHOWN, OUTPUT RATIO TO BE $e/E = 0.50 \pm 0.02$



STANDARD RESISTANCE VALUES	
CODE	RESISTANCE (Ω)
102	1K
202	2K
502	5K
103	10K
203	20K
503	50K
104	100K

ENVIRONMENTAL SPECIFICATIONS	
Rotational Life	2 Million Revolutions
Vibration	15G's @ 10 to 2,000Hz
Operating Temperature	- 40°C to + 125°C
Storage Temperature	- 55°C to + 150°C
Temperature Coefficient	± 600ppm/°C
Shock	30G's
Resistant to Solder Heat	350°C for 5 sec
Moisture Resistance	Sealed Construction
IP Rating	IP67*Application to provide protection for wiring terminals

MATERIAL SPECIFICATIONS	
Shaft	Stainless Steel
Bushing	Nickel Plated Brass
Housing	Thermoplastic
Element	Conductive Plastic on Alumina Substrate

MARKING	
Unit Identification	Spectrol, part number, data code, country of origin and terminal designation