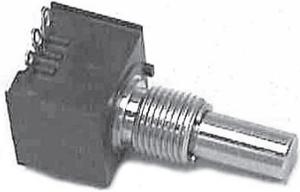


## Industrial Rotary Position Sensor



### 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 $\Omega$
Capability Range	200K $\Omega$
Resistance Tolerance	$\pm 20\%$
Linearity	$\pm 2\%$
Power Rating	1.0 watt @ 85°C
Electrical Travel	240° $\pm$ 4°
Dielectric Withstanding	500V <sub>RMS</sub> @ 60Hz minimum
Output Smoothness	0.2% maximum

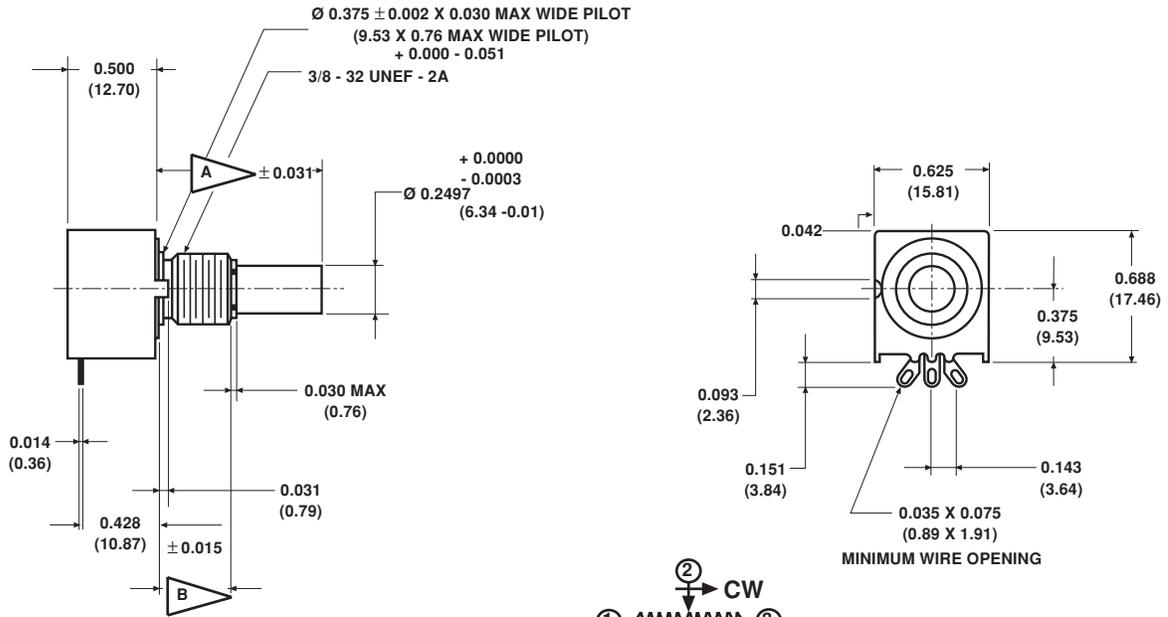
### MECHANICAL SPECIFICATIONS

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

### ORDERING INFORMATION

657	0	0	0	XXX	
MODEL	SHAFT OPTIONS	SHAFT AND BUSHING OPTIONS			EIA RESISTANCE CODE
	0 - Round 2 - Flatted*	Shaft Length <sup>A</sup>	Bushing Length <sup>B</sup>	Flat <sup>C</sup>	1st Significant Figure 2nd Significant Figure Number of Zeros
		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"	
Shaft Flat applies to 657 -2-X-XXX P/N's					
*Non-Standard					
Example: 657 - 0 - 0 - XXX					

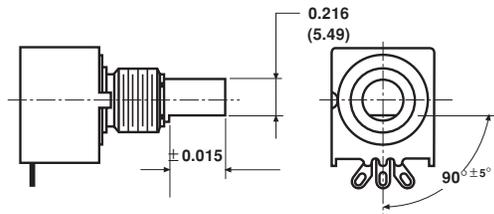
**DIMENSIONS** in inches (millimeters)



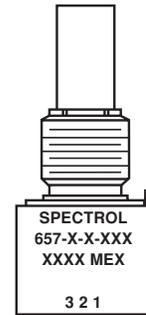
DECIMALS: XX ± 0.01 INCHES (± 0.25mm)  
XX ± 0.005 INCHES (± 0.13mm) ANGLES: ± 2°



**SHAFT FLAT AND PHASING DIAGRAM**



WITH SHAFT FLAT POSITIONED AS SHOWN, OUTPUT RATIO TO BE e/E = 0.50 ± 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



## Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.