$^{7}/_{8}$" (22.2 mm) Ten Turn Wirewound Precision Potentiometer with a Plastic Shaft

FEATURES

- 10 standard resistance values
- Plastic shaft
- Rugged integrated construction
- 0.25 % linearity
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

QUICK REFERENCE DATA	
Sensor type	ROTATIONAL, multi turn wirewound
Output type	Output by turrets
Market appliance	Industrial
Dimensions	$^{7}/_{8}$" (22.2 mm)

ELECTRICAL SPECIFICATIONS	
PARAMETER	
Total resistance	Range 100 Ω to 100 kΩ, tolerance ± 5 %
Linearity (independent)	± 0.25 %
Noise	100 Ω ENR maximum
Electrical angle	3600° $^{+10°}_{-0°}$
Power rating	2.0 W at 70 °C derated to zero at 125 °C
Insulation resistance	1000 MΩ minimum, 500 V_{DC}
Dielectric strength	1000 V_{RMS}, 60 Hz
Absolute minimum resistance	Not to exceed 0.10 % of total resistance or 1 Ω, whichever is greater
Temperature coefficient	20 ppm/°C (wire only)
End voltage	0.25 % of total applied voltage maximum

ORDERING INFORMATION

5	3	6	B	1	0	3				

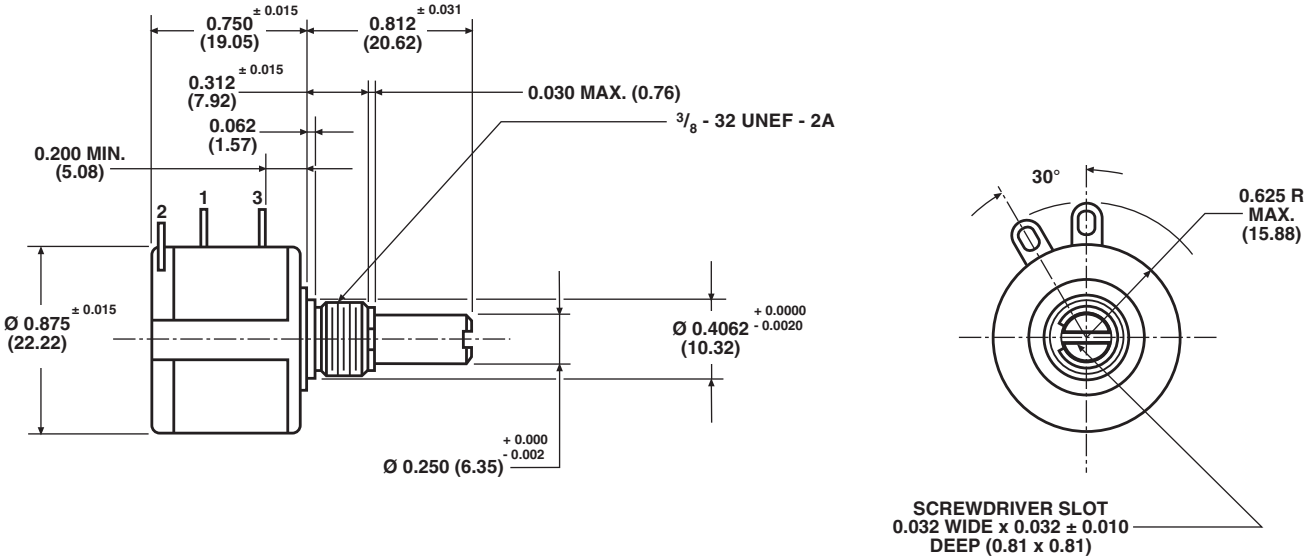
MODEL	STYLE	OHMIC VALUE	SPECIAL REQUEST
536	**B**: bushing	**470** = 47 Ω **222** = 2.200 Ω **103** = 10 kΩ For ohmic value range see electrical specification	**xxxx**

PART NUMBER DESCRIPTION (for information only)

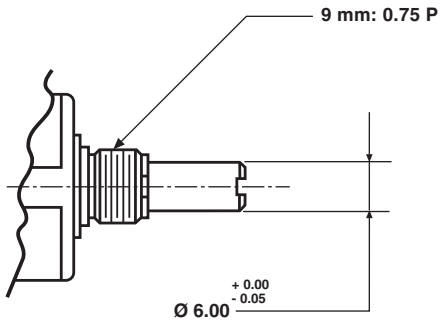
536-	1-	103	xxxx
MODEL	STYLE	OHMIC VALUE	SPECIAL
	B: 1		

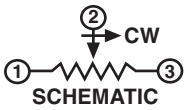
DIMENSIONS in inches (millimeters)

BUSHING MOUNT: 536B/536-1



METRIC SHAFT/BUSHING THREAD





TOLERANCES: UNLESS OTHERWISE NOTED.
DECIMALS ± 0.005 ANGLES ± 2°

MECHANICAL SPECIFICATIONS

PARAMETER		
Rotation	3600° +10° - 0°	
Torque (maximums)	**STARTING** 0.5 oz. - in (36.00 g - cm)	**RUNNING** 0.4 oz. - in (28.80 g - cm)
Mechanical runouts Shaft (TIR) Pilot dia. (TIR) Lateral runout (TIR) Shaft end play Shaft radial play	0.005" (0.13 cm) 0.003" (0.08 cm) 0.005" (0.13 cm) 0.010" (0.25 cm) 0.005" (0.13 cm)	
Weight (maximum)	0.75 oz. (21.26 g)	
Stop strength	75 oz. - in (static) (5.4 kg - cm)	

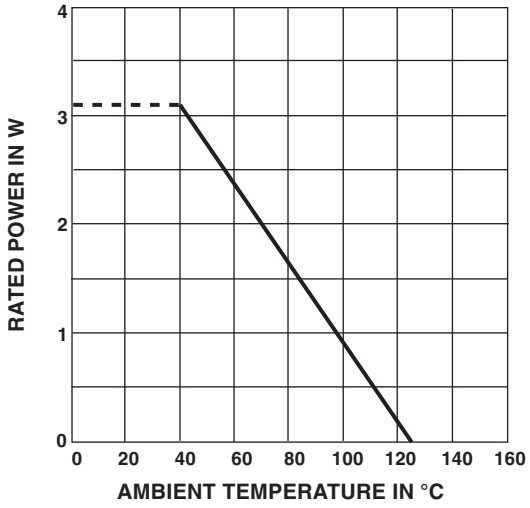
MATERIAL SPECIFICATIONS	
Front lid	Stainless steel and nickel plated brass bushing
Housing	Thermoplastic nylon glass filled
Rear lid	Thermo-glass filled
Shaft	Thermo-glass filled
Terminals	Brass plated for solderability
Mounting hardware Lockwasher internal tooth: Panel nut:	 Steel nickel plated Brass, nickel plated

ENVIRONMENTAL SPECIFICATIONS	
Vibration	15 *g* thru 2000 Hz
Shock	50 *g*
Rotational life	1 million shaft revolutions
Load life	900 h
Operating temperature range	-55 °C to +125 °C

Note

- Nothing stated herein shall be construed as a guarantee of quality or durability.

POWER RATING CHART



RESISTANCE ELEMENT DATA				
STANDARD RESISTANCE VALUES (Ω)	RESOLUTION (%)	OHMS PER TURN	MAXIMUM CURRENT AT 70 °C AMBIENT (mA)	MAXIMUM VOLTAGE ACROSS COIL (V)
100	0.060	0.0603	141.0	14.1
200	0.037	0.0746	100.0	20.0
500	0.031	0.1520	63.2	31.6
1K	0.025	0.2459	44.7	44.7
2K	0.021	0.4113	31.6	63.2
5K	0.016	0.8206	20.0	100.0
10K	0.017	1.7230	14.1	141.0
20K	0.015	3.0160	10.0	200.0
50K	0.009	4.6690	6.32	316.0
100K	0.007	7.4560	4.47	447.0

MARKING	
Unit identification	Units shall be marked with Vishay Spectrol name and model no, resistance, resistance tolerance, linearity, terminal identification and date code. Example of a marking for a standard part: 536-1-1-502

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.