1/2" (12.7 mm) Single - Turn Wirewound Bushing Mount Type Precision Potentiometer

FEATURES

- Ohmic value range: 50 Ω up to 20 kΩ
- Smallest size available: 12.7 mm
- Mechanical stops on request
- High torque and sealed versions available
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

QUICK REFERENCE DATA

Sensor type	ROTATIONAL, single turn wirewound
Output type	Output by turrets
Market appliance	Professional
Dimensions	1/2" (12.7 mm)

ELECTRICAL SPECIFICATIONS

PARAMETER	
Total Resistance	50 Ω to 20 kΩ
Tolerance	± 5 %
Absolute Minimum Resistance	Linearity x total resistance or 0.5 Ω, whichever is greater
Linearity (Independent)	± 1.0 %
Noise	100 Ω ENR
Power Rating	2 W at 40 °C ambient derating linearly to zero at 125 °C
Insulation Resistance	1000 MΩ min. 500 V_{DC}
Dielectric Strength	1000 V_{RMS}, 60 Hz
Electrical Angle	320° ± 5°
End Voltage	Linearity x total applied voltage for total resistance above 20 Ω; 2.0 % of total applied voltage for 20 Ω and below

MATERIAL SPECIFICATIONS

Shaft	Stainless steel, non magnetic non-passivated
Housing	Aluminum, anodized
Rear Lid	Molded glass filled thermoset plastic
Terminals	Brass, gold plated
Mounting Hardware Lockwasher Internal Tooth: Panel Nut:	 Steel, nickel plated. Brass, nickel plated

ENVIRONMENTAL SPECIFICATIONS

Vibration	20 *g* thru 2000 Hz
Shock	50 *g*
Salt Spray	96 h
Rotational Life	500 000 shaft revolutions
Load Life	900 h
Temperature Range	- 55 °C to + 125 °C (operating)

ORDERING INFORMATION/DESCRIPTION

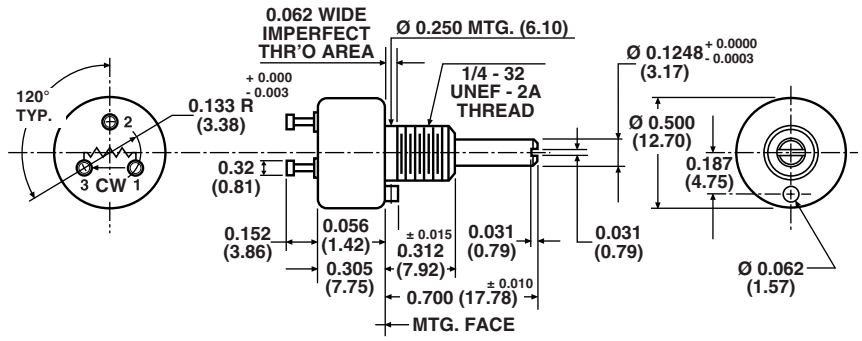
140B	0	0	20K	BO10
MODEL	MECHANICAL OPTIONS	SPECIAL FEATURE	OHMIC VALUE	PACKAGING
	0. Stops, slotted shaft (std) **1.** Plain shaft **2.** Shaft lock **3.** Continuous rotation **4.** Combination 1 and 2 **5.** Combination 1 and 3 **6.** Combination 2 and 3 **7.** Combination 1, 2 and 3	**0.** Standard torque **1.** Center tap (10K max. R_t) **2.** High torque **3.** Sealed construction **4.** Combination 1 and 2 **5.** Combination 1 and 3 **6.** Combination 2 and 3 **7.** Combination 1, 2 and 3		Box of 10 pieces

SAP PART NUMBERING GUIDELINES

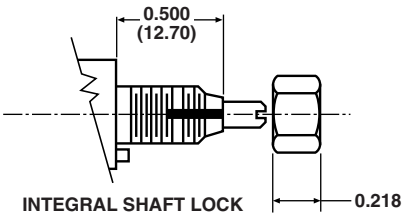
140B	7	0	103	B10
MODEL	MECHANICAL OPTION	FEATURE	OHMIC VALUE	PACKAGING
	From 0 to 7	From 0 to 7	103 = 10K	Box of 10 pieces

DIMENSIONS in inches (millimeters)

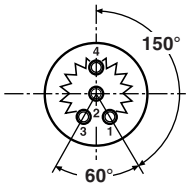
MODEL 140B/140-...



SHAFT LOCK OPTION



CENTER TAP OPTION



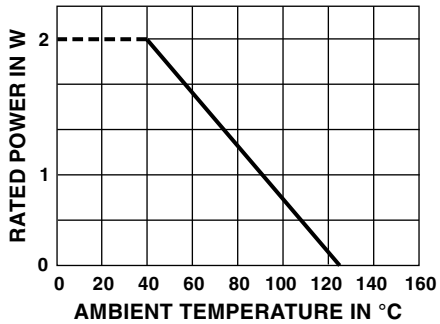
CENTER TAP AVAILABLE AS SPEC STANDARD FEATURE

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

MECHANICAL SPECIFICATIONS

PARAMETER	
Rotation	330° ± 5°
Bearing Type	SLEEVE BEARING
Torque (maximums)	
Starting	0.2 oz. - in (14.40 g - cm)
Running	0.2 oz. - in (14.40 g - cm)
Dead Zone	Not applicable
Weight	0.1 oz. maximum (2.84 g)
Stop Strength	5 in - lbs (5.76 kg - cm) static
Runouts (maximum)	
Shaft (TIR)	0.002" (0.05 cm)
Pilot Dia. (TIR)	0.002" (0.05 cm)
Lateral (TIR)	0.003" (0.08 cm)
Shaft End Play	0.006" (0.15 cm)
Shaft Radial Play	0.003" (0.08 cm)

POWER RATING CHART



RESISTANCE ELEMENT DATA

STD RESISTANCE VALUES (Ω)	RESO-LUTION (%)	OHMS PER TURN	MAXIMUM CURRENT AT 40 °C AMBIENT (mA)	MAXIMUM VOLTAGE ACROSS COIL (V)	WIRE TEMP. COEF. (ppm/°C)
50	0.542	0.271	200.0	10.0	20
100	0.431	0.431	141.0	14.1	20
200	0.361	0.722	100.0	20.0	20
500	0.312	1.56	63.2	31.6	20
1K	0.255	2.55	44.7	44.7	20
2K	0.197	3.94	31.6	63.2	20
5K	0.170	8.50	20.0	100.0	20
10K	0.147	14.7	14.1	141.0	20
20K	0.105	21.0	10.0	200.0	20

MARKING

Unit Identification	Units shall be marked with manufacturer's name, model number, resistance value and tolerance, circuit diagram, terminal identification, linearity and data code. Example of a marking for a standard part: 140-1-2-103

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.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for vishay ***manufacturer:***

Other Similar products are found below :

M39006/22-0577H Y00892K49000BR13L M8340109M6801GGD03 VS-MBRB1545CTPBF 1KAB100E CRCW1210360RFKEA VSMF4720-GS08 CRCW04024021FRT7 001789X LTO050FR0500JTE3 CRCW0805348RFKEA LVR10R0200FE03 CRCW12063K30FKEAHP 009923A CRCW2010331JR02 CRCW25128K06FKEG CS6600552K000B8768 M39003/01-2289 M39003/01-2784 M39006/25-0133 M39006/25-0228 M64W101KB40 M64Z501KB40 CW001R5000JS73 CW0055R000JE12 CW0056K800JB12 CW0106K000JE73 672D826H075EK5C CWR06JC105KC CWR06NC475JC MAL219699001E3 MCRL007035R00JHB00 GBU4K-E3/51 GBU8M-E3/51 PTF56100K00QYEK PTN0805H1502BBTR1K RCWL1210R130JNEA RH005220R0FE02 RH005330R0FC02 RH010R0500FC02 132B20103 RH1007R000FJ01 RH2503R500FE01 RH254R220FS03 RH-50-40R2-1%-C02 134D336X9075C6 132B00301 135D277X0025F6 DG202BDY-T1-E3 DG9426EDQ-T1-GE3