1 5/16" (33.3 mm) Low Cost Industrial Single Turn Wirewound, Bushing Mount Type Potentiometer



FEATURES

- Suitable model for all industrial applications
- Center tap available
- Continuous rotation and mechanical stops both standard
- Large electrical angle: 352° ± 2°
- 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	Industrial
Dimensions	1 5/16" (33.3 mm)

ELECTRICAL SPECIFICATIONS

PARAMETER	MIL-PRF-12934 TEST PROCEDURES APPLY	
	STANDARD	**SPECIAL**
Total Resistance	5 Ω to 20 kΩ	to 35 kΩ
Tolerance: 50 Ω and Above	± 3 %	± 1 %
Below 50 Ω	± 5 %	± 3 %
Linearity (independent)	**STANDARD**	**BEST PRACTICAL**
Total Resistance		
5 Ω to 20 Ω	± 1.0 %	± 0.75 %
20 Ω to 200 Ω	± 1.0 %	± 0.50 %
200 Ω and above	± 0.5 %	± 0.25 %
Noise	100 Ω ENR	
Power Rating	40 °C ambient 2.75 W derated to zero at 125 °C	
Electrical Angle		
Continuous Rotation	352° ± 2°	
Stops	340° ± 5°	
Insulation Resistance	1000 MΩ minimum at 500 V_{DC}	
Dielectric Strength	1000 V_{RMS}, 60 Hz	
Absolute Minimum Resistance	1.0 % of total resistance or 0.5 W whichever is greater	
Minimum Voltage	0.5 % maximum	
Temperature Coefficient of Resistance	Refer to standard resistance element data	

MATERIAL SPECIFICATIONS

Housing	Molded glass filled thermoplastic
Rear Lid	Glass filled thermoset plastic
Shaft	Stainless steel, non-magnetic
Terminals	Brass, plated for solderability, Non-passivated
Mount Hardware Lockwasher Internal Tooth: Panel Nut:	 Steel, nickel plated Brass, nickel plated

ENVIRONMENTAL SPECIFICATIONS

Vibration	15 *g* thru 2000 Hz
Shock	50 *g*
Salt Spray	48 h
Rotational Life Shaft Revolutions	 500 000
Operating Temperature Range	- 55 °C to + 125 °C

ORDERING INFORMATION/DESCRIPTION

132	B	0	0	20K	BO10
MODEL	BUSHING MOUNT	MECHANICAL OPTIONS 0. Continuous 2. Stops	OTHER OPTIONAL FEATURES 0. Standard (end taps) 1. Center tap (within 5° of electrical center)	OHMIC VALUE	PACKAGING Box of 10 pieces

Other characteristics will be standard as described on this specification sheet. If special characteristics are required such as special linearity tolerance, special resistance tolerance, non-linear functions, etc., please state these on your order.

For technical questions, contact: sferprecisionpot@vishay.com

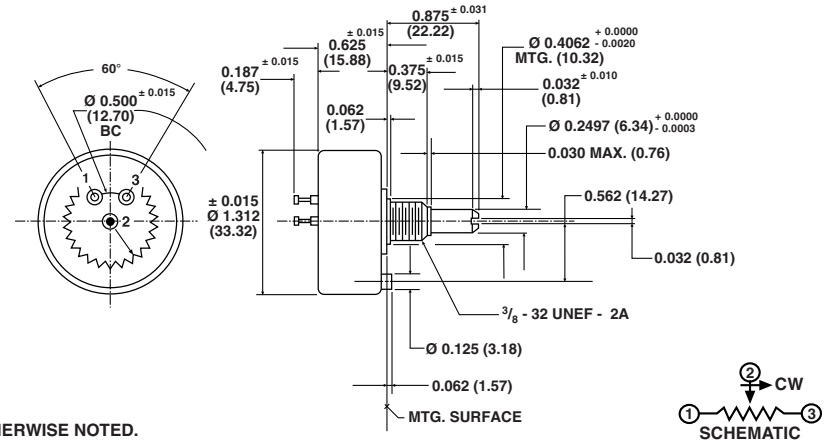
THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

SAP PART NUMBERING GUIDELINES

132	B	2	1	103	B10
MODEL	STYLE	MECHANICAL OPTIONS	ELECTRICAL OPTIONS	OHMIC VALUE	PACKAGING
		2: With stops	1: With center tap	103: 10K	Box of 10 pieces

DIMENSIONS in inches (millimeters)

MODEL 132B/132-...

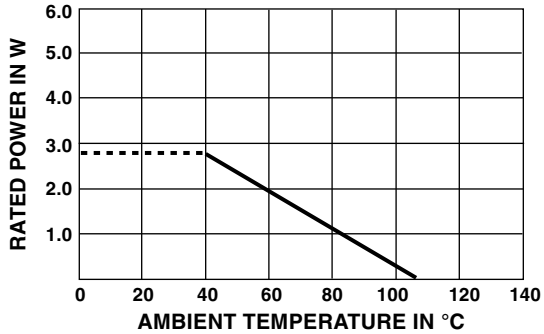


TOLERANCES: UNLESS OTHERWISE NOTED.
DECIMALS ± 0.005 ANGLES ± 2°

MECHANICAL SPECIFICATIONS

PARAMETER		
Rotation	360° (continuous) or 340° ± 5° (stops)	
Bearing Type	Sleeve	
Torque (maximums)	**STARTING** 1.0 oz. - in (72 g - cm)	**RUNNING** 0.7 oz.- in (50.40 g - cm)
Runouts (maximums)		
Shaft Runout (TIR)	0.002" (0.05 mm)	
Pilot Dia. Runout (TIR)	0.003" (0.08 mm)	
Lateral Runout (TIR)	0.005" (0.13 mm)	
Shaft End Play	0.008" (0.20 mm)	
Shaft Radial Play	0.003" (0.08 mm)	
Weight	1.0 oz. maximum (28.35 g)	
Stop Strength	8.0 in - lbs (9.21 kg - cm) (stops version only)	

POWER RATING CHART



RESISTANCE ELEMENT DATA

RESISTANCE VALUES (Ω)	RESOLUTION (%)	OHMS PER TURN	MAXIMUM CURRENT AT 40 °C AMBIENT (mA)	MAXIMUM VOLTAGE ACROSS COIL (V)	WIRE TEMP. COEF. (ppm/°C)
5	0.419	0.021	742	3.71	800
10	0.327	0.032	524	5.24	800
20	0.280	0.056	371	7.42	800
50	0.290	0.145	234	11.7	20
100	0.251	0.251	166	16.6	20
200	0.212	0.424	122	24.4	20
500	0.161	0.806	74.2	37.1	20
1K	0.150	1.50	52.4	52.4	20
2K	0.132	2.64	37.1	74.2	20
5K	0.107	5.34	23.4	117	20
10K	0.080	7.98	16.6	166	20
20K	0.067	13.4	12.2	244	20
35K	0.057	20.0	8.88	311	20

MARKING

Unit Identification	Units shall be marked with Vishay Spectrol name, model number, resistance and tolerance, linearity, terminal identification, and data code Applicable test procedures: MIL-R-12934. Example of a marking for a standard part: 132-0-0-103

For technical questions, contact: sferprecisionpot@vishay.com

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

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.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

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.

© 2022 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED