



# 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:  $352^\circ \pm 2^\circ$
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://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 $\Omega$ to 20 k $\Omega$	to 35 k $\Omega$
Tolerance: 50 $\Omega$ and Above	$\pm 3\%$	$\pm 1\%$
Below 50 $\Omega$	$\pm 5\%$	$\pm 3\%$
Linearity (independent)		BEST PRACTICAL
Total Resistance		
5 $\Omega$ to 20 $\Omega$	$\pm 1.0\%$	$\pm 0.75\%$
20 $\Omega$ to 200 $\Omega$	$\pm 1.0\%$	$\pm 0.50\%$
200 $\Omega$ and above	$\pm 0.5\%$	$\pm 0.25\%$
Noise	100 $\Omega$ ENR	
Power Rating	40 $^\circ\text{C}$ ambient 2.75 W derated to zero at 125 $^\circ\text{C}$	
Electrical Angle		
Continuous Rotation	$352^\circ \pm 2^\circ$	
Stops	$340^\circ \pm 5^\circ$	
Insulation Resistance	1000 M $\Omega$ minimum at 500 V <sub>DC</sub>	
Dielectric Strength	1000 V <sub>RMS</sub> , 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:	Steel, nickel plated
Panel Nut:	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 $^\circ\text{C}$ to + 125 $^\circ\text{C}$

## ORDERING INFORMATION/DESCRIPTION

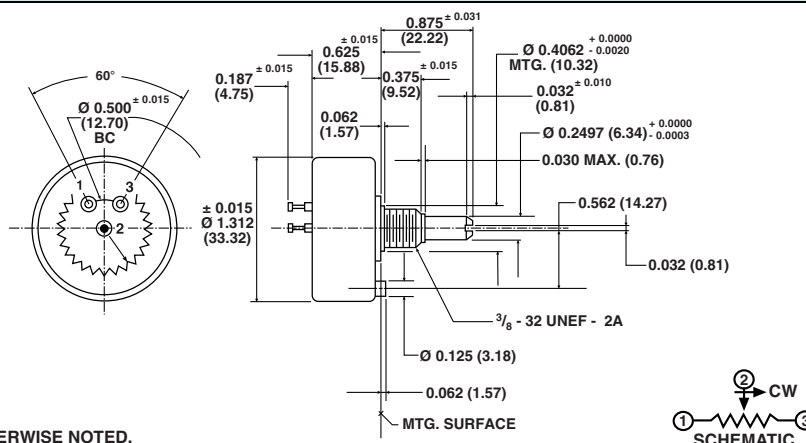
132	B	0	0	20K	BO10
MODEL	BUSHING MOUNT	MECHANICAL OPTIONS	OTHER OPTIONAL FEATURES	OHMIC VALUE	PACKAGING
		0. Continuous 2. Stops	0. Standard (end taps) 1. Center tap (within 5 $^\circ$ of electrical center)		Box of 10 pieces
Other characteristics will be standard as described on this specification sheet. If special characteristics are required such as special linearity tolerance, special resistance tolerance, non-linear functions, etc., please state these on your order.					

**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)

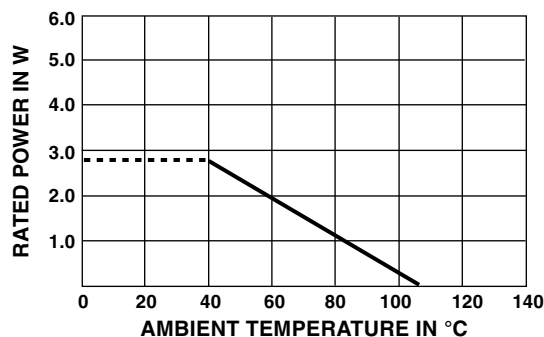
MODEL 132B/132-...



TOLERANCES: UNLESS OTHERWISE NOTED.  
DECIMALS  $\pm 0.005$  ANGLES  $\pm 2^\circ$

**MECHANICAL SPECIFICATIONS**

PARAMETER		
Rotation	360° (continuous) or 340° $\pm 5^\circ$ (stops)	
Bearing Type	Sleeve	
Torque (maximums)	<b>STARTING</b> 1.0 oz. - in (72 g - cm)	<b>RUNNING</b> 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****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
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**RESISTANCE ELEMENT DATA**

RESISTANCE VALUES ( $\Omega$ )	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



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