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Vishay Spectrol

Model 132

1⁵/₁₆" (33.3 mm) Low Cost Industrial Single Turn Wirewound, Bushing Mount Type Potentiometer



QUICK REFERENCE DATA				
Sensor type ROTATIONAL, single turn wirewou				
Output type	Output by turrets			
Market appliance	Industrial			
Dimensions	1 ⁵ / ₁₆ " (33.3 mm)			

FEATURES

- Suitable model for all industrial applications
- Center tap available
- · Continuous rotation and mechanical stops both standard
- Large electrical angle: 352° ± 2°



COMPLIANT • Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

ELECTRICAL SPECIFICATIONS				
PARAMETER	MIL-PRF-12934 TEST PROCEDURES APPLY			
	STANDARD	SPECIAL		
Total Resistance	5 Ω to 20 k Ω	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	3	$52^\circ \pm 2^\circ$		
Stops	$340^{\circ} \pm 5^{\circ}$			
Insulation Resistance	1000 M Ω 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 <i>g</i> thru 2000 Hz		
Shock	50 <i>g</i>		
Salt Spray	48 h		
Rotational Life			
Shaft Revolutions	500 000		
Operating Temperature Range	- 55 °C to + 125 °C		

ORDERING INFORMATION/DESCRIPTION						
132	В	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° of electrical center)		Box of 10 pieces	
			tion sheet. If special charac blease state these on your c	•	such as special linearity	

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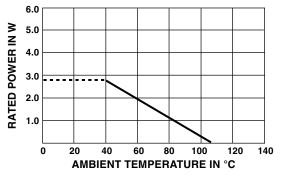
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SAP PART NUMBERING GUIDE	LINES			
132 B	2	1	103	B10
MODEL STYLE	MECHANICAL OPTIONS	ELECTRICAL OPTIONS	OHMIC VALUE	PACKAGING
	2: With stops	1: With center tap	103: 10K	Box of 10 pieces
DIMENSIONS in inches (millimeter	s)			
MODEL 132B/132	$\begin{array}{c} 60^{\circ} & 0.187 \\ 0.500^{\pm 0.015} & (4.75) \\ 12.70) \\ BC \\ 1 \\ 0 \\ 1 \\ 0 \\ 1 \\ 0 \\ 1 \\ 0 \\ 1 \\ 0 \\ 1 \\ 0 \\ 1 \\ 1$	9.52) 0.062 (1.57) B=C	∎	€ CW MMATIC
MECHANICAL SPECIFICATIONS	5			
PARAMETER				
Rotation			or 340° ± 5° (stops)	
Bearing Type	Sleeve			
Torque (maximums)	_	STARTING 1.0 oz in (72 g - cm)		NNING (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 - Ibs (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

RESISTANCE ELEMENT DATA					
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)
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

2 For technical questions, contact: <u>sferprecisionpot@vishay.com</u> Document Number: 57096

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