

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



FEATURES

- Ohmic value range: 50 Ω up to 20 k Ω
- Smallest size available: 12.7 mm
- Center tap on request
- Custom shafts available on request
- 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 k Ω
Tolerance	$\pm 5\%$
Absolute Minimum Resistance	Linearity x total resistance or 0.5 Ω , whichever is greater
Linearity (independent)	$\pm 1.0\%$
Noise	100 Ω ENR
Power Rating	2 W at 40 $^{\circ}\text{C}$ ambient derating linearly to zero at 125 $^{\circ}\text{C}$
Insulation Resistance	1000 M Ω min. 500 V _{DC}
Dielectric Strength	1000 V _{RMS} , 60 Hz
Electrical Angle	350 $^{\circ}$ + 0 $^{\circ}$ - 4 $^{\circ}$
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

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 $^{\circ}\text{C}$ to + 125 $^{\circ}\text{C}$ (operating)

ORDERING INFORMATION/DESCRIPTION

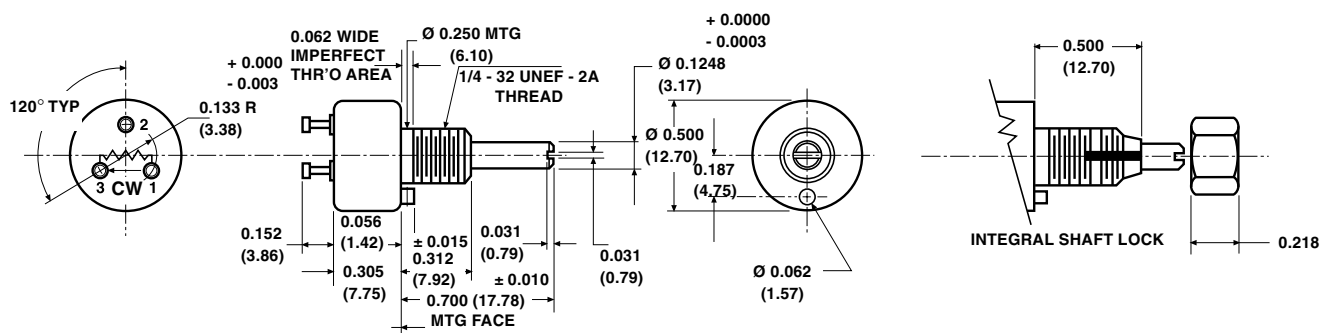
142S	0	0	10K	BO10
MODEL	MECHANICAL OPTIONS	SPECIAL FEATURE	OHMIC VALUE	PACKAGING
	0. Continuous rotation, plain shaft (std.)	0. Standard torque 1. Center tap (10K max. Rt)		Box of 10 pieces

SAP PART NUMBERING GUIDELINES

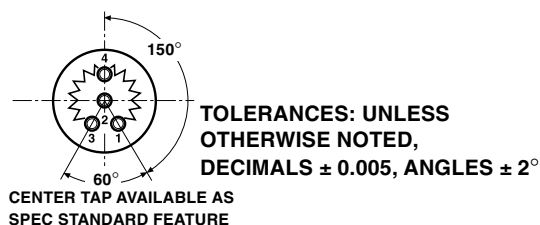
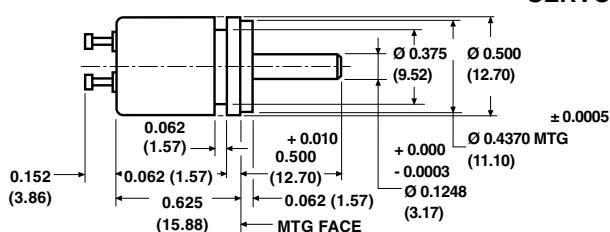
142S	0	1	502	B10
MODEL	MECHANICAL OPTIONS	SPECIAL FEATURE	OHMIC VALUE	PACKAGING
		1: With center tap	502 = 5K	Box of 10 pieces

DIMENSIONS in inches (millimeters)

BUSHING MOUNT



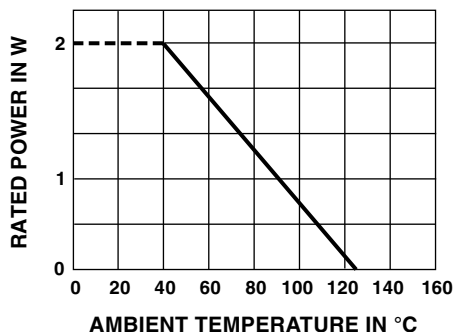
SERVO MOUNT



MECHANICAL SPECIFICATIONS

PARAMETER	
Rotation	360° continuous
Bearing Type	BALL BEARING
Torque (maximums)	
Starting	0.075 oz. - in (5.40 g - cm)
Running	0.05 oz. - in (3.60 g - cm)
Dead Zone	0.20 oz. - in (14.40 g - cm)
Weight	0.3 oz. (8.50 g) maximum
Runouts (maximum)	
Shaft (TIR)	0.002" (0.05 cm)
Pilot Dia. (TIR)	0.002" (0.05 cm)
Lateral (TIR)	0.002" (0.05 cm)
Shaft End Play	0.004" (0.10 cm)
Shaft Radial Play	0.002" (0.05 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
----------------------------	---



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.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9