

1/2" (12.7 mm) Ten Turn Wirewound Bushing Mount Precision Potentiometer


**RoHS
COMPLIANT**
FEATURES

- Large range of ohmic values: 100 Ω to 100 k Ω
- Smallest size available on the market
- Very easy and accurate adjustment
- Material categorization: for definitions of compliance please see www.vishay.com/doc299912

QUICK REFERENCE DATA

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

ELECTRICAL SPECIFICATIONS

| PARAMETER | STANDARD | SPECIAL |
|---|---|---------------------------------------|
| Total Resistance Standard Range Tolerance | 100 Ω to 100 k Ω $\pm 5\%$ | 115 k Ω $\pm 1\%$ |
| Linearity (independent) | STANDARD $\pm 0.30\%$ | BEST PRACTICAL $\pm 0.15\%$ |
| Noise | 100 Ω ENR | |
| Electrical Angle | 3600° +15° -0° | |
| Power Rating | 2.0 W at 40 °C ambient, derated to zero at 125 °C | |
| Insulation Resistance | 100 M Ω minimum, 500 V _{DC} | |
| Dielectric Strength | 500 V _{RMS} , 60 Hz | |
| Absolute Minimum Resistance | Linearity x total resistance or 0.5 Ω , whichever is greater | |
| 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

| | |
|--|--|
| Housing and Lids | Molded, glass filled, thermoset plastic |
| Bushing | Brass, nickel plated |
| Shaft | Stainless steel, non-passivated |
| Terminals | Brass, plated for solderability |
| Bushing 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 | 500 000 shaft revolutions |
| Temperature Range | -55 °C to +125 °C |

Note

- Nothing stated herein shall be construed as a guarantee of quality or durability.

MARKING

| | |
|----------------------------|---|
| Unit Identification | Units shall be marked with Vishay Spectrol name and model no, resistance and resistance tolerance, linearity, terminal identification and date code |
|----------------------------|---|

ORDERING INFORMATION/DESCRIPTION

The Model 162 can be ordered from this datasheet with a variety of alternate characteristics, as shown. For most rapid service on your order, please state:

| | | | |
|------------|--------------------|------------------|------------|
| 162 | B | 10K | B05 |
| MODEL | STYLE (BUSHING) | TOTAL RESISTANCE | PACKAGING |

Other characteristics will be standard as described on this datasheet. If special characteristics are required, such as: special linearity tolerance, special resistance tolerance, extra taps, non-linear functions, etc., please state these on your order and allow additional lead time for delivery.

SAP PART NUMBERING GUIDELINES

| | | | |
|------------|----------|-------------|------------|
| 162 | B | 103 | B05 |
| MODEL | STYLE | OHMIC VALUE | PACKAGING |

DIMENSIONS in inches (millimeters)

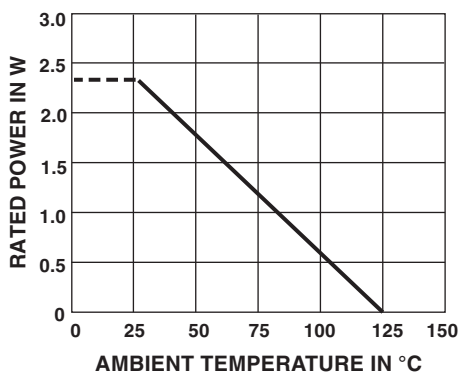
MODEL 162B/162-1...



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

| MECHANICAL SPECIFICATIONS | |
|--------------------------------|---|
| PARAMETER | |
| Mechanical Rotation | 3600°, +15° -0° |
| Bearing Type: | Sleeve |
| Torque (Maximum) | STARTING 0.8 oz. - in (57.60 g - cm) RUNNING 0.6 oz. - in (43.20 g - cm) |
| Mechanical Runouts (maximums): | |
| Shaft (TIR) | 0.003" (0.08 cm) |
| Pilot Dia. (TIR) | 0.003" (0.08 cm) |
| Lateral (TIR) | 0.005" (0.13 cm) |
| Shaft End Play | 0.010" (0.25 cm) |
| Shaft Radial Play | 0.003" (0.08 cm) |
| Weight | 0.3 oz. (8.50 g) maximum |
| Stop Strength | 20 oz. - in (static) (1.44 kg - cm) |

POWER RATING CHART



| MARKING |
|---|
| Example of a marking for a standard part: 162-11103 |

| RESISTANCE ELEMENT DATA | | | | | |
|--------------------------------|----------------|---------------|---------------------------------------|---------------------------------|---------------------------|
| STANDARD RESISTANCE VALUES (Ω) | RESOLUTION (%) | OHMS PER TURN | MAXIMUM CURRENT AT 40 °C AMBIENT (mA) | MAXIMUM VOLTAGE ACROSS COIL (V) | WIRE TEMP. COEF. (ppm/°C) |
| 100 | 0.092 | 0.092 | 141 | 14 | 20 |
| 200 | 0.069 | 0.138 | 100 | 20 | 20 |
| 500 | 0.049 | 0.245 | 63 | 32 | 20 |
| 1K | 0.047 | 0.470 | 45 | 45 | 20 |
| 2K | 0.038 | 0.763 | 32 | 64 | 20 |
| 5K | 0.031 | 1.56 | 20 | 100 | 20 |
| 10K | 0.025 | 2.55 | 14 | 140 | 20 |
| 20K | 0.020 | 3.94 | 10 | 200 | 20 |
| 30K | 0.018 | 5.34 | 8.2 | 246 | 20 |
| 50K | 0.015 | 7.64 | 6.3 | 315 | 20 |
| 100K | 0.013 | 13.2 | 4.5 | 450 | 20 |



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