

*RoHS COMPLIANT



BOURNS®

Features

- Conductive plastic technology
- Low profile package
- 50,000 cycle rotational life
- Available with momentary push or rotary switch option
- PCB mount terminal configuration
- Rugged metal housing for industrial applications
- Flatted or slotted shaft options
- RoHS compliant*

39 – 13 mm Single-Turn Panel Control with Switch Option

Electrical Characteristics

| | |
|--|---------------------|
| Standard Resistance Range | 5 K - 100 K ohms |
| Total Resistance Tolerance | ±20 % |
| Independent Linearity | ±5 % |
| End Resistance | 2 ohms maximum |
| Effective Electrical Angle | |
| Non-Switch Type (Bushing Type "S") | 220° ± 5° |
| Rotary Switch Type (Bushing Type "S") | 220° ± 5° |
| Momentary Push Switch Type (Bushing Type "L") | 201° ± 5° |
| Contact Resistance Variation | 3 % maximum |
| Dielectric Withstanding Voltage (MIL-STD-202, Method 301) | |
| Sea Level | 750 VRMS minimum |
| Insulation Resistance | 100 megohms minimum |
| Power Rating @ 70 °C (Derated to 0 @ 125 °C) | |
| (Voltage Limited by Power Dissipation or 350 VAC, whichever is less) | |
| Linear Taper | 0.25 watt |
| Audio Taper | 0.125 watt |

Switch Characteristics

| | |
|--|----------------------------------|
| Rotary Switch Type | SPST N.O. |
| Power Rating (Resistive Load) | 1.5 amps @ 12 VDC |
| Contact Resistance @ 10 mA | 200 milliohms maximum |
| Contact Bounce | 5 milliseconds |
| Actuation Torque | 0.7 to 4.9 N-cm (1 to 7 oz.-in.) |
| Momentary Push Switch Type | SPST N.O. |
| Power Rating (Resistive Load) | 250 milliamps @ 12 VDC |
| Contact Resistance @ 10 mA (w/500 gm Shaft Load) | 50 ohms maximum |
| Contact Bounce | 5 milliseconds |
| Actuation Force | 500 ± 100 gram |

Environmental Characteristics

| | |
|-----------------------------|--------------------------------------|
| Operating Temperature Range | -40 °C to +85 °C (-40 °F to +185 °F) |
| Storage Temperature Range | -55 °C to +85 °C (-67 °F to +185 °F) |
| Vibration | 15 G |
| Total Resistance Shift | ±3 % |
| Voltage Ratio Shift | ±5 % |
| Shock | 30 G |
| Total Resistance Shift | ±3 % |
| Voltage Ratio Shift | ±5 % |
| Load Life | 1,000 Hours |
| Total Resistance Shift | ±10 % |
| Rotational Life (No Load) | 50,000 cycles |
| Total Resistance Shift | ±10 % |
| Switch Life | |
| Rotary Switch Type | 25,000 cycles |
| Momentary Push Switch Type | 50,000 cycles |
| Moisture Resistance | MIL-STD-202, Method 103, Condition B |
| Total Resistance Shift | ±10 % |
| IP Rating | IP 40 |

Mechanical Characteristics

| | |
|-----------------------------------|---|
| Stop Strength | 19.8 N-cm (28 oz.-in.) |
| Mechanical Angle | |
| Non-Switch and Rotary Switch Type | 270° ± 10° |
| Momentary Push Switch Type | 230° ± 10° |
| Torque | |
| Starting | 0.07 to 0.70 N-cm (0.1 to 1.0 oz.-in.) minimum |
| Running | 0.07 to 0.53 N-cm (0.1 to 0.75 oz.-in.) maximum |
| Mounting | 1.7 to 2.0 N-m (15 to 18 lbs.-in.) maximum |
| Shaft Retention | |
| Pull Force | 4 Kg (8.8 lb.) maximum |
| Push Force | 4.5 Kg (10 lb.) maximum |
| Weight (Single Section) | 4 grams (0.14 oz.) |
| Terminals | |
| Potentiometer | Printed circuit board terminals |
| Switch | Flat terminals |
| Soldering Condition | |
| Manual Soldering | 96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire; 370 °C (700 °F) max. for 3 seconds |
| Wave Soldering | 96.5Sn/3.0Ag/0.5Cu solder with no-clean flux; 260 °C (500 °F) max. for 5 seconds |
| Wash processes | Not recommended |
| Marking | Manufacturer's trademark, part number and date code |
| Ganging | 1 cup maximum |
| Hardware | One lockwasher and one mounting nut is shipped with each potentiometer, except where noted in the part number |
| Packaging | 100 pcs./tray |

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

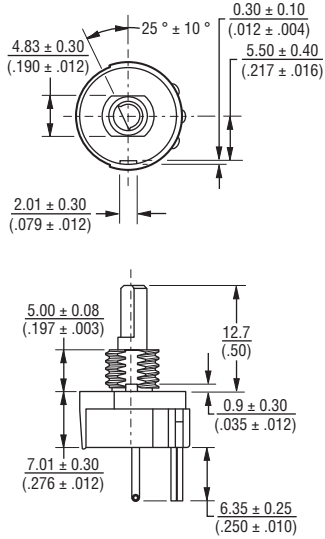
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

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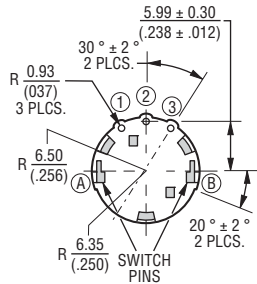
BOURNS®

Product Dimensions

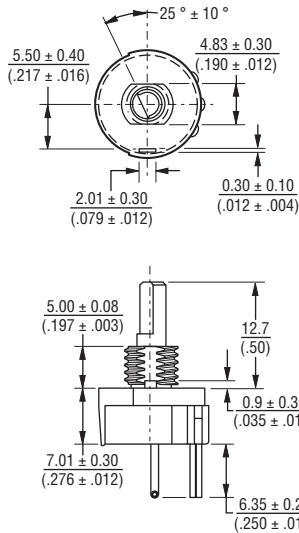
BUSHING STYLE "L"



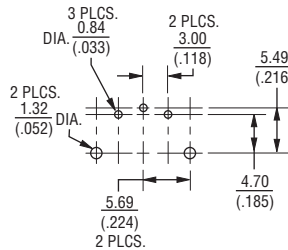
BOTTOM VIEW



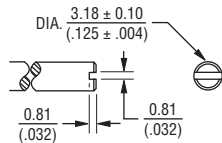
BUSHING STYLE "S"



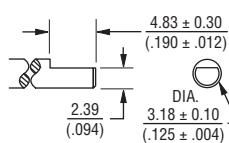
BOARD LAYOUT



SHAFT STYLE "A"



SHAFT STYLE "B"



How To Order

39 S B - 1 R B - 503

SWITCH TYPE

| Code | Description |
|------|----------------|
| N | No Switch |
| P | Momentary Push |
| R | Rotary Switch |

TERMINAL CONFIGURATION

| Code | Description |
|------|-----------------|
| 1 | 6.35 mm (.250") |

SHAFT TYPE (SEE SHAFT STYLE FIGURES)

| Code | Description |
|------|--|
| A | Slotted Shaft, Dia. 3.175 mm (1/8") x 12.7 mm (1/2") FMS |
| B | Flatted Shaft, Dia. 3.175 mm (1/8") x 12.7 mm (1/2") FMS |

BUSHING TYPE (SEE BUSHING STYLE FIGURES)

| Code | Description | EFFECTIVE ELECTRICAL ANGLE | AVAILABLE ONLY IN SWITCH TYPE |
|------|----------------------------------|----------------------------|-------------------------------|
| L | 1/4-28-UNF-2A x 5 mm (.197") FMS | 201 | P |
| S | 1/4-28-UNF-2A x 5 mm (.197") FMS | 220 | R & N |

MODEL NUMBER

| Code | Description |
|------|-------------|
| 39 | Model 39 |

ELEMENT TAPER

| Code | Description |
|------|---------------------|
| B | Linear C.P. 20 % |
| D | CW Audio C.P. 20 % |
| G | CCW Audio C.P. 20 % |

RESISTANCE CODE 20 %

| Code | Description |
|------|-----------------|
| 502 | 5 K Ohms (13) |
| 103 | 10 K Ohms (15) |
| 203 | 20 K Ohms (16) |
| 253 | 25 K Ohms (17) |
| 503 | 50 K Ohms (18) |
| 104 | 100 K Ohms (20) |

DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

TOLERANCES EXCEPT AS SHOWN:
 .XX $\frac{0.13}{(.005)}$.X $\frac{0.38}{(.015)}$

REV. 03/13

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Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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