



Wiping Contact Pushbutton Switches

SERIES 46 SPST and DPDT, 1/4 Amp

FEATURES

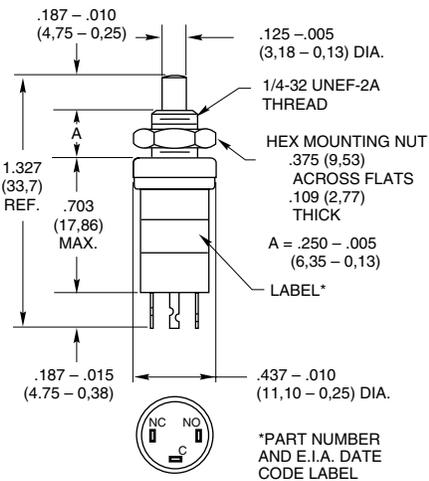
- Long Wipe Contact Assures High Reliability
- 250,000 Cycles of Operation



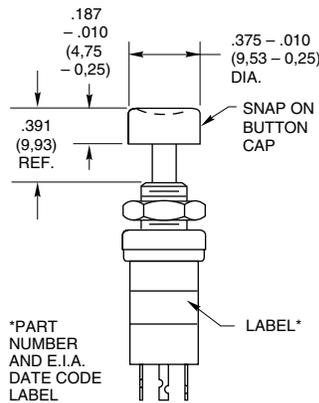
DIMENSIONS in inches (and millimeters)

Single Pole/Double Throw

46-101* (BBM)
46-110* (MBB)

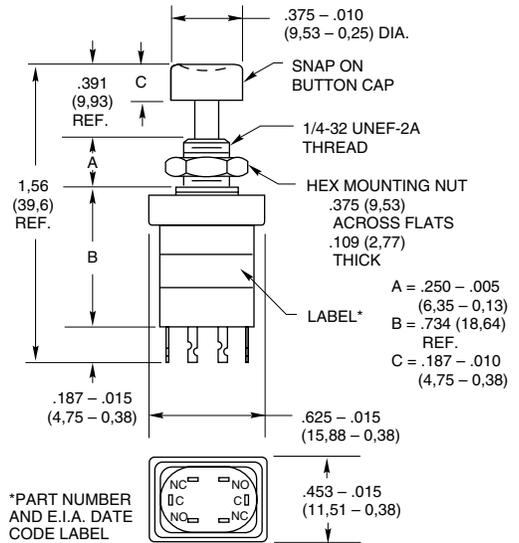


46-102* (BBM)
46-111* (MBB)



Double Pole/Double Throw

46-200* (BBM)
46-201* (MBB)



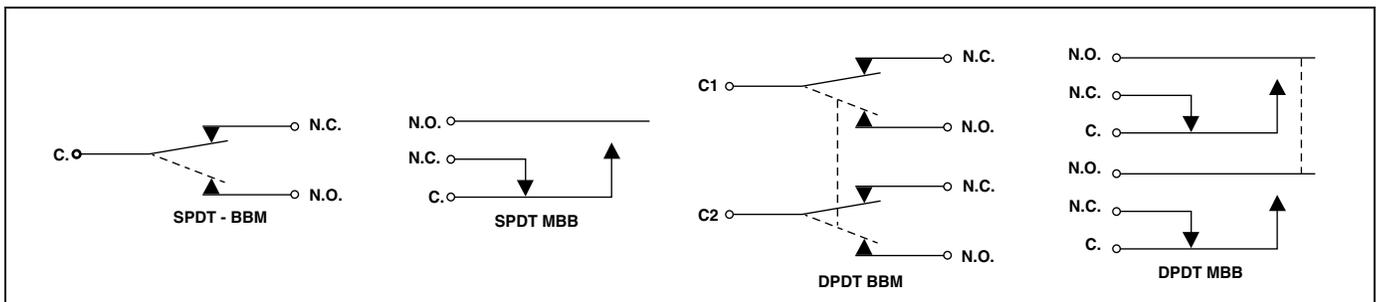
| Rating at 115 Vac Resistive | Rating at 220 Vac Resistive | Operations at Rated Load | *Complete Part Number | Button or Cap Color |
|-----------------------------|-----------------------------|--------------------------|-----------------------|---------------------|
| 1/4 Amp | 1/8 Amp | 250,000 | 46-101 RED | Red |
| | | | 46-101 BLK | Black |
| | | | 46-102 RED | Red |
| | | | 46-102 BLK | Black |
| | | | 46-110 RED | Red |
| | | | 46-110 BLK | Black |
| 46-111 RED | Red | | | |
| 46-111 BLK | Black | | | |

| Action | Total Travel | Bottoming Force (oz.) | Mtg. Hole |
|-----------|------------------|-----------------------|---------------|
| Momentary | .180 (4,57) Min. | 17 ± 5 | 17/64" (6,75) |

| Rating at 115 Vac Resistive | Rating at 220 Vac Resistive | Operations at Rated Load | *Complete Part Number | Cap Color |
|-----------------------------|-----------------------------|--------------------------|-----------------------|-----------|
| 1/4 Amp | 1/8 Amp | 250,000 | 46-200 RED | Red |
| | | | 46-200 BLK | Black |
| | | | 46-201 RED | Red |
| | | | 46-201 BLK | Black |

| Action | Total Travel | Bottoming Force (oz.) | Mtg. Hole |
|-----------|------------------|-----------------------|---------------|
| Momentary | .180 (4,57) Min. | 35 ± 9 | 17/64" (6,75) |

CIRCUITRY



SERIES 46 SPST and DPDT, 1/4 Amp

FEATURES

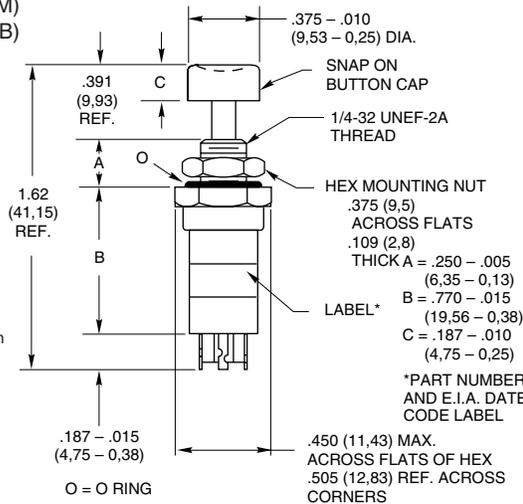
- Bushing and Button Seal
- Environmentally Sealed



DIMENSIONS in inches (and millimeters)

Sealed Bushing and Button Single Pole/Double Throw

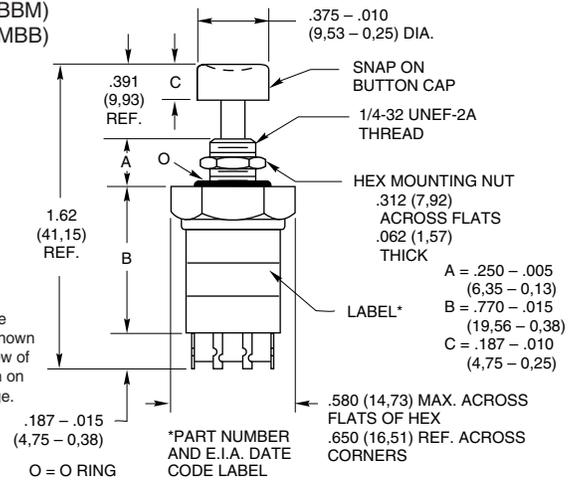
46-150* (BBM)
46-151* (MBB)



Terminals are marked as shown in bottom view of SPDT switch on previous page.

Sealed Bushing and Button Double Pole/Double Throw

46-270* (BBM)
46-271* (MBB)



Terminals are marked as shown in bottom view of DPDT switch on previous page.

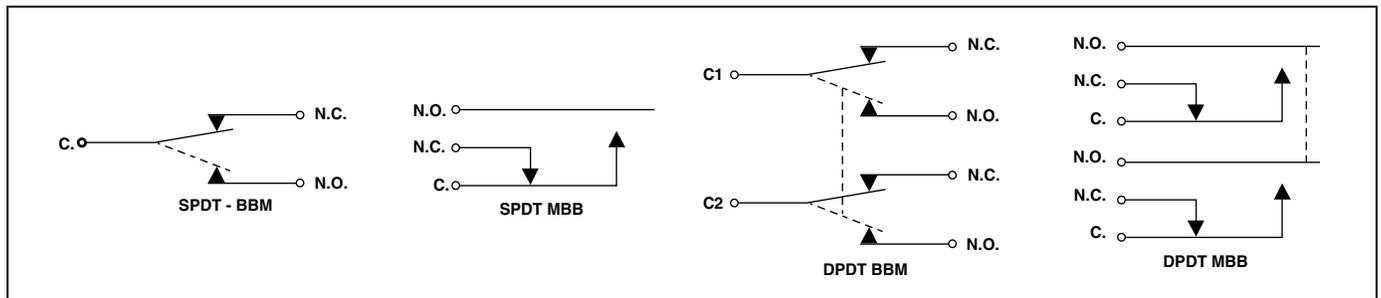
| Rating at 115 Vac Resistive | Rating at 220 Vac Resistive | Operations at Rated Load | *Complete Part Number | Cap Color |
|-----------------------------|-----------------------------|--------------------------|--|------------------------------|
| 1/4 Amp | 1/8 Amp | 100,000 | 46-150 RED 46-150 BLK 46-151 RED 46-151 BLK | Red Black Red Black |

| Action | Total Travel | Bottoming Force (oz.) | Mtg. Hole |
|-----------|------------------|-----------------------|---------------|
| Momentary | .180 (4.57) Min. | 24 ± 4 | 17/64" (6.75) |

| Rating at 115 Vac Resistive | Rating at 220 Vac Resistive | Operations at Rated Load | *Complete Part Number | Cap Color |
|-----------------------------|-----------------------------|--------------------------|--|------------------------------|
| 1/4 Amp | 1/8 Amp | 100,000 | 46-270 RED 46-270 BLK 46-271 RED 46-271 BLK | Red Black Red Black |

| Action | Total Travel | Bottoming Force (oz.) | Mtg. Hole |
|-----------|------------------|-----------------------|---------------|
| Momentary | .180 (4.57) Min. | 48 ± 4 | 17/64" (6.75) |

CIRCUITRY



Pushbutton Switches



Wiping Contact Pushbutton Switches

DIMENSIONS in inches (and millimeters)

Environmentally Sealed Double Pole/Double Throw
46-260* (BBM)

Dimensions:
 A = 1.14 (29,0) MAX.
 B = 22.00 (558,8) MAX.
 C = .390 - .010 (9,90 - 0,25)
 D = .281 - .010 (7,14 - 0,25)

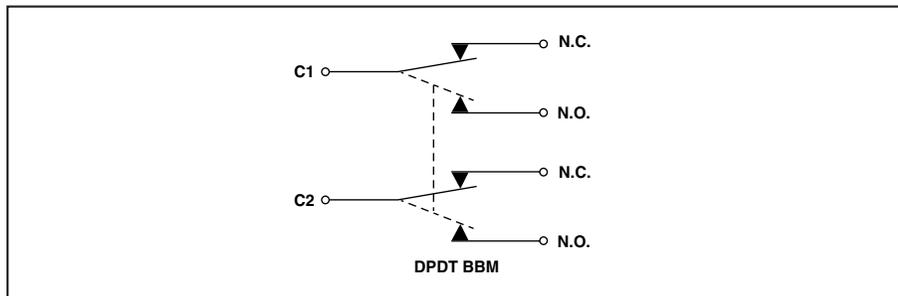
Labels:
 SNAP ON BUTTON CAP
 O-RING SEALED
 3/8-32 UNEF-2A THREAD TO .060 (15,24) MAX. FROM SHOULDER
 HEX MOUNTING NUT .562 (14,2) ACROSS FLATS .094 (2,40) THICK
 SWITCH AND WIRE LEADS ENCAPSULATED

| Rating at 115 Vac Resistive | Rating at 220 Vac Resistive | Operations at Rated Load | *Complete Part Number | Cap Color |
|-----------------------------|-----------------------------|--------------------------|--------------------------|--------------|
| 1/4 Amp | 1/8 Amp | 250,000 | 46-260 RED 46-260 BLK | Red Black |

| Action | Total Travel | Bottoming Force (oz.) | Mtg. Hole |
|-----------|------------------|-----------------------|---------------|
| Momentary | .180 (4,57) Min. | Approx. 45 | 25/64" (9,92) |

Pushbutton Switches

CIRCUITRY



SPECIFICATIONS

Rating Criteria

Contact Resistance: Less than 25 milliohms at the switch initially. Less than 4 milliohms/inch of wire.

Voltage Breakdown: 1,000 Vac between mutually insulated parts

Insulation Resistance: 1,000 megohms minimum

Materials and Finishes

Cover, Bushing, Mounting Nut: Brass, tin zinc

Shorting Bar: Phosphor bronze, silver-plated.

Terminals: Phosphor bronze, silver contact surface. Terminal ends are tin/silver

Base or Potting Shell: Phenolic per MIL-M-14, type CFG

Spring: Tinned music wire

Button Cap: Polyethylene

Button: Polyphenylene sulfide (PPS) for 46-200 and 46-201. Polycarbonate for all other unsealed versions. Aluminum for all sealed versions.

O-Ring Seal: Nitrile per MIL-P-5516, class B

Seal Adapter and Hex Nut (46-260): Brass, zinc trivalent chromate-plated

Wire Leads (46-260): Per MIL-W-16878 type E. #26 AWG, insulated teflon, copper stranded wire

Operating Features

Break-Before-Make: Rest position to N.C. break .020" (0,51) minimum. Rest position to N.O. Make .140" (3,35) maximum.

Make-Before-Break: Rest position to N.O. make .065" ± .015 (1,65 ± 0,38). Rest position to N.C. break .130" ± .015 (3,30 ± 0,38).

Operating Temperature: -40°C to +85°C

STANDARD OPTIONS

Epoxy sealed terminals and wire leads

Decorative mountings

ACCESSORY



Decorative Mounting Nut
Part No. 30C1023-1
Fits .250" (6,35) Bushing

ORDERING INFORMATION

| Description | Part No. |
|--------------------------|------------|
| SPDT, BBM, Red Button | 46-101 RED |
| SPDT, BBM, Black Button | 46-101 BLK |
| SPDT, BBM, Red Cap | 46-102 RED |
| SPDT, BBM, Black Cap | 46-102 BLK |
| SPDT, MBB, Red Button | 46-110 RED |
| SPDT, MBB, Black Button | 46-110 BLK |
| SPDT, MBB, Red Cap | 46-111 RED |
| SPDT, MBB, Black Cap | 46-111 BLK |
| SPDT, BBM, Red Cap | 46-150 RED |
| SPDT, BBM, Black Cap | 46-150 BLK |
| SPDT, MBB, Red Cap | 46-151 RED |
| SPDT, MBB, Black Cap | 46-151 BLK |
| DPDT, BBM, Red Cap | 46-200 RED |
| DPDT, BBM, Black Cap | 46-200 BLK |
| DPDT, MBB, Red Cap | 46-201 RED |
| DPDT, MBB, Black Cap | 46-201 BLK |
| DPDT, BBM, Red Cap | 46-270 RED |
| DPDT, BBM, Black Cap | 46-270 BLK |
| DPDT, MBB, Red Cap | 46-271 RED |
| DPDT, MBB, Black Cap | 46-271 BLK |
| DPDT, BBM, Sealed, Red | 46-260 RED |
| DPDT, BBM, Sealed, Black | 46-260 BLK |
| ACCESSORY | |
| Decorative Nut | 30C1023-1 |



Pushbutton Engineering Information

Pushbutton switches are selected not only by their ratings, but also by their contact type. While nearly all rotary switches and DIP switches have wiping contacts, pushbutton switches may have either wiping or butt contacts (see internal views below).

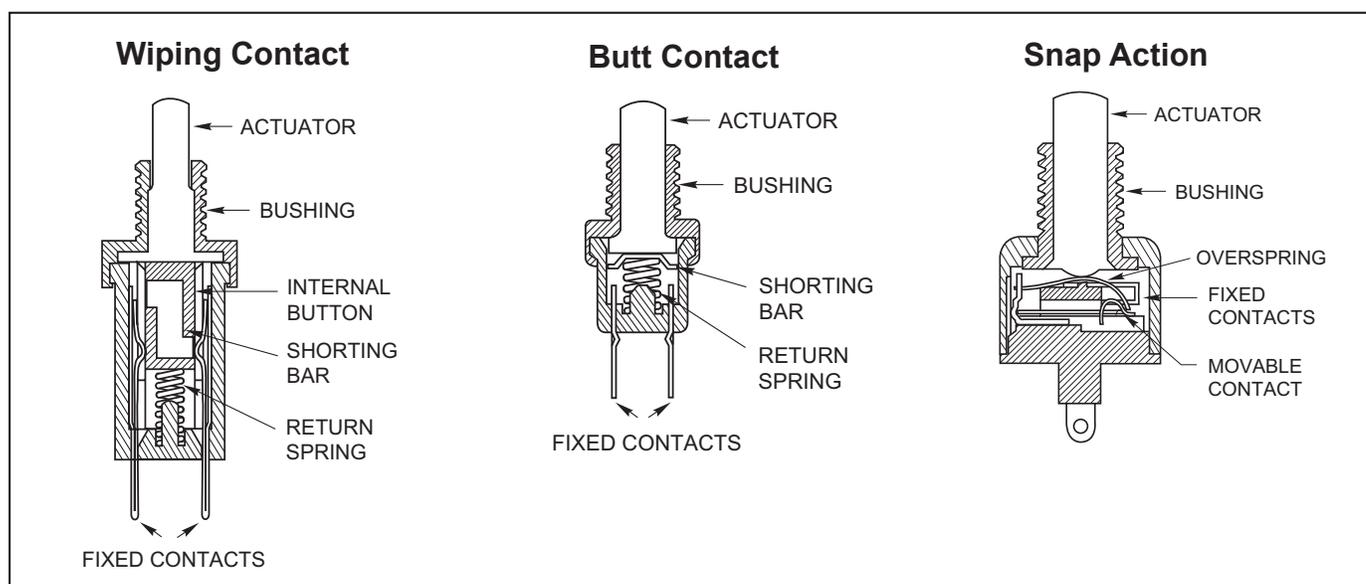
Wiping Contacts are self-cleaning and usually provide a low resistance in circuits where contact resistance is critical. However, the wiping action creates mechanical wear and conductive wear products.

Butt Contacts have less wear than wiping contacts and therefore, have a longer life. They are also smaller. Butt contacts are not self-cleaning, so their contact resistance can vary from operation to operation.

Snap Action switches are basically butt contact switches with a spring mechanism which provides the make and break. The mechanism controls both the operating point and the rate of operation, but adds to the wear of

the switch. The rapid rate of make and break means that these switches are appropriate for high current loads. They usually have a slight wiping action and contact surfaces made of precious metals to minimize their disadvantages.

Internal Views of Pushbutton Switches



Switch Terminology

Actuator: The part of the switch to which an external force is applied to operate the switch.

Alternate Action (Push-Push) Switch: A switch in which the operable position is maintained after the first actuation, and then disengaged with the second operation.

Break-Before-Make Switch (BBM): A double throw switch in which the moving contact breaks the connection with the first circuit before making contact with the second; also called non-shorting switch.

Double Throw Switch: A switch which has a normally open as well as a normally closed circuit per pole.

Joystick Action Switch: (From Joystick, the control for an airplane). A lever switch which operates with momentary action in 4 directions, and is disengaged in the upright position.

Make-Before-Break Switch (MBB): A double throw switch in which the contacts makes connection with the second circuit before breaking contact with the first; also called shorting switch.

Maintained Contact Switch: A switch in which the actuator remains in a position until it is actuated to another position where it also remains until actuated. Example: Push-Pull Switch.

Momentary Contact Switch: A switch in which the shorting bar returns from its operated position to its normal or free position when the actuating force is removed.

Operating Position or Point: The position of the actuator when the desired electrical action (make or break of contact) occurs.

N.C., Normally Closed: Switch in which the circuit is closed without actuation (with actuator in the "normal" position).

N.O., Normally Open: Switch in which the circuit is open without actuation (with actuator in the "normal" position).

Overtravel: The distance or angle between the operating position and the extreme position to which the actuator may be moved.

Pole: An electrically isolated circuit within a switch; a common terminal and all the selected terminals to which it connects.

Pretravel: The distance or angle through which the actuator moves from its free position to its electrical operating position.

Single Throw Switch: A switch which has only one normally open or one normally closed circuit per pole.

Throw: See Single Throw and Double Throw.



| Circuitry* | Rating (Amps at 115 Vac Res.) | Operations At Rating | Maximum Width*** inch (mm) | Features | Series |
|------------|-------------------------------|----------------------|----------------------------|----------|--------|
|------------|-------------------------------|----------------------|----------------------------|----------|--------|

Butt Contact

| | | | | | | |
|------|--------------|--------------|-----------|---------------|--|----|
| SPST | N.O. or N.C. | 5 | 6,000 | 3/8 (9,53) | UL Listed | 30 |
| | N.O. or N.C. | 1 | 1,000,000 | 3/8 (9,53) | Momentary, Terminal Seal, (Wire Leads Optnl.) | 30 |
| | N.O. | 1 | 500,000 | 3/8 (9,53) | Overtravel, Terminal Seal, (Wire Leads Optnl.) | 30 |
| | N.O. | 1 | 200,000 | 11/16 (17,46) | Positive Feel, Overtravel, Terminal Seal, (Wire Leads Optional) | 30 |
| | On or Off | 1 | 100,000 | 11/16 (17,46) | Push/Pull Action (Maintained) | 30 |
| | N.O. or N.C. | 1 | 250,000 | 1/2 (12,7) | Watertight, Terminal Seal, (Wire Leads Optnl.) | 30 |
| | N.O. | 1 | 1,000,000 | 11/16 (17,46) | Square & Round Bezels | 30 |
| | N.O. or N.C. | 1 | 1,000,000 | 1+ (25,4) | Square Bezel Panel Mount | 30 |
| | N.O. | 1 | 200,000 | 11/16 (17,46) | Pos. Feel, Overtravel, Square & Round Bezels | 30 |
| | N.O. | 1 | 200,000 | 11/16 (17,46) | Pos. Feel, Overtravel, Sq. Bezel Panel Mount | 30 |
| | N.O. | .020** | 80,000 | 5/16+ (8,13) | Miniature, Surface Mount | 38 |
| | N.O. | .020** | 80,000 | 5/16+ (8,13) | Miniature, Horizontal PC Mount | 38 |
| | N.O. | .020** | 80,000 | 5/16+ (8,13) | Miniature, Vertical to PC Mount | 38 |
| | N.O. or N.C. | .250 | 100,000 | 1/4 (6,35) | Sealed Plunger, Stackable with LEDs | 32 |
| | N.O. | .500 | 1,000,000 | 1/4 (6,35) | Miniature | 39 |
| | N.O. | .500 | 500,000 | 1/2 (12,7) | Overtravel, Miniature Limit Switch, (Wire Leads Optional) | 39 |
| | N.O. | .500 | 100,000 | 1/2 (12,7) | Overtravel, Miniature, (Wire Leads Optional) | 39 |
| | N.O. | .500 | 250,000 | 5/16 (7,94) | Watertight Seal, Miniature, (Wire Leads Optional) | 39 |
| | N.C. | .250 | 250,000 | 1/4 (6,35) | Miniature (Wire Leads Optional) | 39 |
| | N.C. | .250 | 100,000 | 5/16 (7,94) | Watertight Seal, Miniature, (Wire Leads Optnl.) | 39 |
| | N.C. | .250 | 100,000 | 1/2 (12,7) | Actuator Seal, Miniature Limit Switch (Wire Leads Optional) | 39 |
| | N.O. | .150** | 1,000,000 | 1/4 (6,35) | PC Mount, Miniature, Sealed | 39 |
| | N.O. | .150** | 1,000,000 | 1/4 (6,35) | PC Mount, Miniature, Right Angle, Cap Seal | 39 |
| | N.O. | .150** | 100,000 | 1/4 (6,35) | PC Mount, Miniature, Overtravel | 39 |
| | N.O. | .020, .150** | 1,000,000 | 3/8 (9,53) | Economical Contact Plating | 30 |
| | N.O. | .020, .150** | 1,000,000 | 3/8 (9,53) | Econ. Plating, Square Bezel Panel Mount | 30 |
| | N.O. | .020, .150** | 1,000,000 | 1/4 (6,35) | Economical Contact Plating | 39 |
| | N.O. | .020, .150** | 100,000 | 1/2 (12,7) | Actuator Seal, Overtravel, Miniature Limit Switch, (Wire Leads Optional) | 39 |
| SPDT | BBM | .250 | 100,000 | 1/4 (6,35) | SPST AND SPDT, Stackable w/LEDs | 32 |
| | BBM | .250 | 500,000 | 1/2 (12,7) | PC Mount, 2 Circuits, Right Angle, Total Seal | 39 |
| | BBM | .020** | 80,000 | 5/16 (8,13) | Miniature, Surface Mount | 38 |

Wiping Contact

| | | | | | | |
|------------|--------------|---------|------------|--|--|---------|
| SPST | N.O. or N.C. | 3 | 6,000 | 13/16 (20,6) | Decorator Line | 4000/10 |
| | N.O. or N.C. | 1 | 100,000 | 13/16 (20,6) | Momentary Action & Positive Feel Types | 4000/10 |
| | N.O. | .250 | 100,000 | 1/2 (12,7) | Momentary Action & Terminal Seal Types | 23 |
| | N.O. | .4VA | 40,000 | .177 (4,5) | Process Sealed, Subminiature | 49 |
| SPDT | BBM or MBB | .250 | 250,000 | 7/16 (11,11) | Momentary Action | 46 |
| | BBM or MBB | .250 | 250,000 | 1+ (25,4+) | Square Bezel Panel Mount | 46 |
| | BBM or MBB | .250 | 100,000 | 1/2 (12,7) | Watertight Seal | 46 |
| | BBM | .250 | 250,000 | 11/16 (17,46) | Square & Round Bezels | 46 |
| | BBM | .250 | 250,000 | 11/16 (17,46) | Alternate Action, Square & Round Bezels | 46 |
| | BBM | .250 | 250,000 | 1+ (25,4+) | Alternate Action, Square Bezel Panel Mount | 46 |
| DPDT | N.O. | .4VA | 40,000 | .177 (4,5) | Process Sealed, Subminiature | 49 |
| | BBM or MBB | .250 | 100,000 | 5/8 (15,88) | Momentary Action | 46 |
| | BBM | .250 | 250,000 | 13/16 (20,6) | Environmental Seal/Wire Leads | 46 |
| | BBM or MBB | .250 | 100,000 | 11/16 (17,46) | Watertight Seal | 46 |
| | BBM | .250 | 250,000 | 11/16 (17,46) | Square & Round Bezel & Positive Feel Types | 46 |
| | BBM | .250 | 250,000 | 11/16 (17,46) | Alternate Action, Square & Round Bezels | 46 |
| BBM or MBB | .250 | 250,000 | 1+ (25,4+) | Alternate Action, Square Bezel Panel Mount | 46 | |

Snap Action Contact

| | | | | | | |
|------|--------------|-------|--------|-------------|-------------------|---------|
| SPST | N.O. or N.C. | 1, 3 | 25,000 | 7/8 (22,23) | SPST, 1 and 3 Amp | 4000/10 |
| SPDT | BBM | 5, 10 | 25,000 | 7/8 (22,23) | Audible Click | 2000/7 |

* BBM is Break-Before-Make (Non-Shorting). MBB is Make-Before-Break (Shorting).

** Rated for 28 Vdc and/or 5 Vdc (.150 A) and 20 Vdc (.020 A).

*** Maximum width behind panel or above PC board rounded to next highest 1/16" (1,59 mm).



Pushbutton Options and Accessories

SEALED TERMINAL AND WIRE LEAD OPTIONS OPTION -E AND -EW

FEATURES

- 1/4, 1/2, and 1 Amp
- Limit, Overtravel, or Panel Seal
- Butt or Wiping Contact
- Normally Open or Normally Closed
- Momentary or Push/Pull
- Series 23, 30, 39 and 46



Option -E
Epoxy-Sealed
Terminals

Option -EW,
Potted Base & 6"
Wire Leads



SPECIFICATIONS

Rating Criteria

Make and Break Current Rating: See page for standard part number

Contact Resistance: 25 milliohms maximum on a new switch. Less than 4 milliohms per inch of wire for wire lead option styles.

Insulation Resistance: 1,000 megohms minimum between mutually insulated parts

Voltage Breakdown: 1,000 Vac minimum between mutually insulated parts

Materials and Finishes

Potting Sleeve (Series 39): Thermoset Plastic

Wire Leads: #26AWG, (.99mm diameter) insulated Teflon, Copper stranded wire, per MIL-W-16878, Type E. Ends are stripped 0.250" (6.35) and solder dipped. For other specifications, see Page References.

| Standard Part Number Red Button | Standard Part Number Black Button | Choices of Suffix | Length Behind Panel In inches (and millimeters) | |
|------------------------------------|--------------------------------------|-------------------------|--|-------------------|
| | | | Standard Switch & Terminals | -EW Style Body |
| 23-1 | 23-4 | -E | 0.665 (16,89) | — |
| 30-1 | 30-3 | -E, -EW | 0.592 (15,04) | 0.645 (16,38) |
| 30-15 | 30-37 | -E, -EW | 0.679 (17,25) | 0.728 (18,49) |
| 30-17 RED | 30-17 BLK | -E, -EW | 0.958 (24,33) | 1.007 (25,58) |
| 30-16 RED | 30-16 BLK | -E, -EW | 0.958 (24,33) | 1.007 (25,58) |
| 30-251 RED | 30-251 BLK | -E, -EW | 0.632 (16,05) | 0.685 (17,40) |
| 30-252 RED | 30-252 BLK | -E, -EW | 0.645 (16,38) | 0.700 (17,78) |
| 30-32 RED | 30-32 BLK | -E, -EW | 0.867 (22,02) | 0.896 (22,76) |
| 30-6 | 30-2 | -E, -EW | 0.605 (15,37) | 0.640 (16,26) |
| 30-601 RED | 30-601 BLK | -E, -EW | 0.592 (15,04) | 0.645 (16,38) |
| 39-1* | 39-3* | -EW** | 0.315 (8,00) | 0.440 (11,18) |
| 39-12* | 39-2 | -E, -EW | 0.490 (12,45) | 0.575 (14,61) |
| 39-101 | 39-24* | -EW** | 0.455 (11,56) | 0.575 (14,61) |
| 39-351 RED | 39-351 BLK | -EW** | 0.650 (16,51) | 0.775 (19,69) |
| 39-352 RED* | 39-352 BLK* | -E, -EW | 0.350 (8,89) | 0.450 (11,43) |
| 39-601 RED | 39-601 BLK | -E, -EW | 0.529 (13,44) | 0.630 (16,00) |
| 39-701*** | — | -EW* | 0.315 (8,00) | 0.440 (11,18) |
| 39-702*** | — | -EW** | 0.800 (20,32) | 0.925 (23,50) |
| 46-101 RED | 46-101 BLK | -E, -EW | 0.510 (12,95) | 0.750 (19,05) |
| 46-102 RED | 46-102 BLK | -E, -EW | 0.890 (22,61) | 0.957 (24,31) |
| 46-110 RED | 46-110 BLK | -E, -EW | 0.890 (22,61) | 0.957 (24,31) |
| 46-111 RED | 46-111 BLK | -E, -EW | 0.890 (22,61) | 0.957 (24,31) |
| 46-150 RED | 46-150 BLK | -E, -EW | 0.890 (22,61) | 0.957 (24,31) |
| 46-151 RED | 46-151 BLK | -E, -EW | 0.957 (24,31) | 1.024 (26,01) |
| 46-200 RED | 46-200 BLK | -E | 0.957 (24,31) | 1.024 (26,01) |
| 46-201 RED | 46-201 BLK | -E | 0.921 (23,39) | — |
| 46-270 RED | 46-270 BLK | -E | 0.921 (23,39) | — |
| 46-271 RED | 46-271 BLK | -E | 0.957 (24,31) | — |
| | | -E | 0.957 (24,31) | — |

*Epoxy potting sleeve enlarges the diameter of the -EW style to 0.300 (7,62).

**Sealed terminal (-E) option is not necessary; terminals have sealed construction.

***Natural Color Button

†Adjustable from 1.214 (30,84) to 1.334 (33,88) dependent on button height, see switch pages.

ORDERING INFORMATION

Use the Selector Charts at the beginning of the section to select a series. Use the pages listed there or referenced here to select a switch.

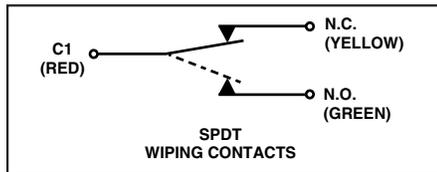
To order epoxy sealed terminals, add the suffix -E to the selected part number as allowed in the chart. **Example:** 30-1-E.

To order the epoxy-potted version with 6-inch wire leads, use the suffix -EW as allowed in the chart. **Example:** 39-1-EW

Available From Your Local Grayhill Distributors. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.

| Standard Part Number Without Options Choice of Button Color (see switch pages) | Standard Part Number Part Number Choice of Button Color (see switch pages) | Choices of Options | Length Behind Panel In inches (and millimeters) | |
|--|--|--------------------|--|----------------|
| | | | Standard Switch & Terminals | -EW Style Body |
| --- | 30-001-A-XX | -E, -EW | 1.119 (28,42) | 1.172 (29,77) |
| --- | 30-002-A-XX | -E, -EW | 1.132 (28,75) | 1.167 (29,64) |
| --- | 30-015-A-XX | -E, -EW | 1.204 (30,58) | 1.253 (31,83) |
| --- | 30-017-A-XX | -E, -EW | Adjustable† | Adjustable† |
| 30-01-01-500-XX | 30-1-1-50-XX | -E, -EW | 1.100 (27,94) | 1.153 (29,29) |
| 30-01-04-500-XX | 30-1-4-50-XX | -E, -EW | 1.257 (31,93) | 1.310 (33,27) |
| 30-05-01-502-XX | 30-5-1-52-XX | -E, -EW | 0.930 (23,62) | 0.983 (24,97) |
| 30-05-04-502-XX | 30-5-4-52-XX | -E, -EW | 1.130 (28,70) | 1.183 (30,05) |
| --- | 30-601-A-XX | -E, -EW | 1.119 (28,42) | 1.172 (29,77) |
| 46-01-05-500-XX | 46-1-5-50-XX | -E, -EW | 1.361 (34,57) | 1.428 (36,27) |
| 46-01-07-500-XX | 46-1-7-50-XX | -E, -EW | 1.451 (36,86) | 1.518 (38,56) |
| 46-01-08-500-XX | 46-1-8-50-XX | -E | 1.381 (35,08) | --- |
| 46-01-09-500-XX | 46-1-9-50-XX | -E | 1.381 (35,08) | --- |
| 46-05-05-502-XX | 46-5-5-52-XX | -E, -EW | 1.179 (29,95) | 1.246 (31,65) |
| 46-05-07-502-XX | 46-5-7-52-XX | -E, -EW | 1.465 (37,21) | 1.532 (38,91) |
| 46-05-08-502-XX | 46-5-8-52-XX | -E | 1.188 (30,18) | --- |
| 46-05-09-502-XX | 46-5-9-52-XX | -E | 1.317 (33,45) | --- |
| --- | 46-102-A-XX | -E, -EW | 1.417 (35,99) | 1.484 (37,69) |
| --- | 46-111-A-XX | -E, -EW | 1.417 (35,99) | 1.484 (37,69) |
| --- | 46-200-A-XX | -E | 1.448 (36,78) | --- |
| --- | 46-201-A-XX | -E | 1.448 (36,78) | --- |

CIRCUITRY: Series 46



*Epoxy potting sleeve enlarges the diameter of the -EW style to 0.300 (7,62).
 **Sealed terminal (-E) option is not necessary; terminals have sealed construction.
 ***Natural Color Button
 †Adjustable from 1.214 (30,84) to 1.334 (33,88) dependent on button height, see switch pages.

Pushbutton Switches

Mouser Electronics

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