

SERIES 30 and 46 Decorator Line

FEATURES

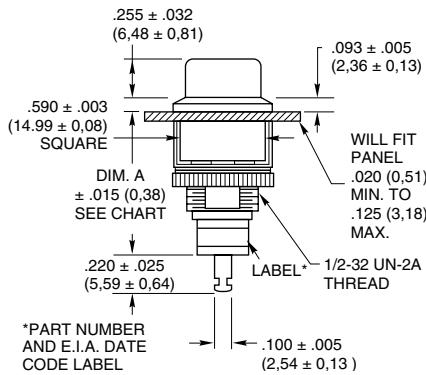
- Attractive Front Panel Bezels (6 choices)
- Space-Saving: Only 11/16" Square
- SPST with Option of Positive Feel
- SPDT, DPDT with Momentary Contact or Alternate Action
- Sturdy Metal Sleeve or Bushing and Nut Provide Secure Mounting



DIMENSIONS In Inches (and millimeters)

SPST—Normally Open

30-01-01-500-*
30-01-04-500-*

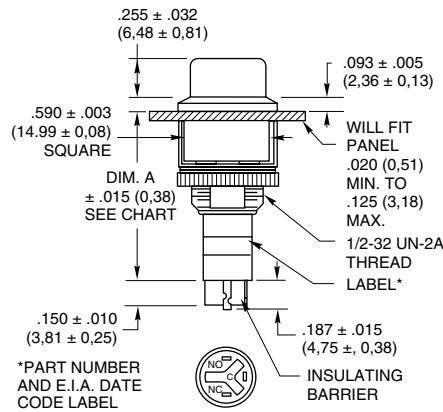


*PART NUMBER AND E.I.A. DATE CODE LABEL

| Feature | Partial Part No. | Dim. A |
|-----------|------------------|---------------|
| Momentary | 30-01-01-500-* | .880 (22,35) |
| Pos. Feel | 30-01-04-500-* | 1.037 (26,34) |

SPDT—Break Before Make

46-01-05-500-*
46-01-07-500-*



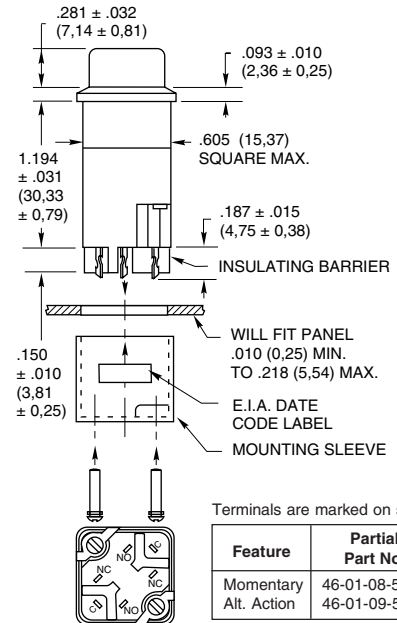
*PART NUMBER AND E.I.A. DATE CODE LABEL

Terminals are marked on switch.

| Feature | Partial Part No. | Dim. A |
|-------------|------------------|---------------|
| Momentary | 46-01-05-500-* | 1.174 (29,82) |
| Alt. Action | 46-01-07-500-* | 1.264 (32,11) |

DPDT—Break Before Make

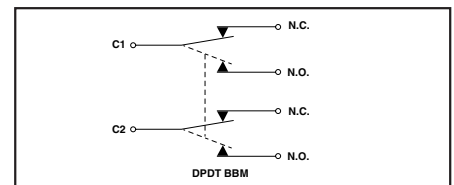
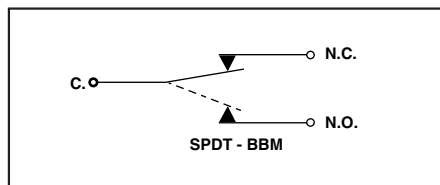
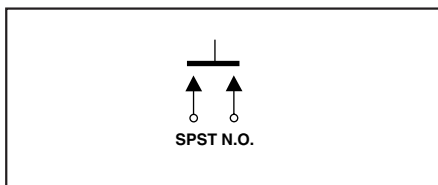
46-01-08-500-*
46-01-09-500-*



Terminals are marked on switch.

| Feature | Partial Part No. |
|-------------|------------------|
| Momentary | 46-01-08-500-* |
| Alt. Action | 46-01-09-500-* |

CIRCUITRY



FRONT VIEWS AND MOUNTING

Note: All switches fit panels up to .250 (6,35) thick.
Front and back panel access required for installation.

Mounting Hardware

For 46-01-08-500 & 46-01-09-500
(See drawing above—mounting hardware shipped loose.)

For SPST & SPDT switches
One internal tooth lockwasher
One knurled ring nut .640 ± .010 (16,26 ± 0,25) DIA.
.094 ± .010 (2,39 ± 0,25) Thk.

*Partial part number; complete part number by adding a dash for button color: white -01; red -03; green -04; blue -05; yellow -06 or black -07, see Ordering Information.

SPECIFICATIONS

Material and Finishes

Lockwasher (Round Bezel): Steel, zinc trivalent chromate-plated

Behind Panel Plate (Square Bezel): Steel, zinc trivalent chromate-plated

Mounting Sleeve and Screws (46-01-08-500, 46-01-09-500 only): Steel, zinc trivalent chromate-plated. **Base:** Phenolic per MIL-M-14, Type CFG

Square Bezel: ABS (SPST, SPDT), thermoset plastic (DPDT)

Mounting Nut, Bushing, and Round Bezel: Brass, tin zinc

Button Cap: ABS (UL version is PPS)

Shorting Bar: Series 30—Fine silver contact area

Series 46—Phosphor bronze, silver-plated

Terminals: Series 30—Fine silver contact area with silver-plated terminal ends

Series 46—Silver contact surface with tin/silver clad terminal ends

Spring: Tinned music wire

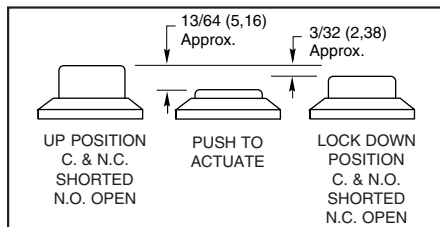
Plunger: Polyphenylene sulfide (PPS) for 30-01-01-500-X and 46-01-05-500-X. Nickel-plated brass for 46-01-07-500-X, 46-05-07-502-X, 46-01-09-500-X and 46-05-09-502-X. Zinc trivalent chromate-plated brass for 46-01-08-500-X. Polycarbonate for all others.

Operating Temperature: -40°C to +85°C

ALTERNATE ACTION (PUSH-PUSH) OPERATING SEQUENCE

Part Number* 46-05-07-502, 46-05-09-502, 46-01-07-500, 46-01-09-500

Alternate action (Push-Push) switches provide a maintained actuated position until the button is pushed again to release.



STANDARD OPTIONS

Epoxy-sealed terminals and wire leads, see page E-35.

ORDERING INFORMATION & OPERATING FEATURES

| Butt Contact | Square Bezel | Round Bezel | Circuitry | Feature | Total Travel | Bottoming Force | Actuating Force | Overtravel |
|----------------|----------------|----------------|-----------|----------------------------|---------------------------|-----------------|-----------------|------------|
| Butt Contact | 30-01-01-500-* | 30-05-01-502-* | SPST-N.O. | Momentary | .080 ± .015 (2,03 ± 0,38) | — | 10 ± 4 oz. | — |
| | 30-01-04-500-* | 30-05-04-502-* | SPST-N.O. | Positive Feel & Overtravel | .156 ± .015 (3,96 ± 0,38) | — | 18 ± 4 oz. | .046 Min. |
| Wiping Contact | 46-01-05-500-* | 46-05-05-502-* | SPDT | Momentary | .180 min. (4,57) | 1.1 ± .25 Lbs | — | — |
| | 46-01-07-500-* | 46-05-07-502-* | SPDT | Alternate Action | .210 ± .015 (5,33 ± 0,38) | 1.5 ± .25 Lbs | — | — |
| | 46-01-08-500-* | 46-05-08-502-* | DPDT | Momentary | .180 min. (4,57) | 1.6 ± .5 Lbs. | — | — |
| | 46-01-09-500-* | 46-05-09-502-* | DPDT | Alternate Action | .210 ± .015 (5,33 ± 0,38) | 1.8 ± .5 Lbs. | — | — |

*Partial part number; complete the part number by adding a dash for button color: white -01; red -03; green -04; blue -05; yellow -06 or black -07.

Available from your local Grayhill Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.

RATINGS

| Electrical Ratings | Series 30 | Series 46 |
|-------------------------------|--|------------------------------|
| Contacts | Butt type | Wiping type |
| Rating at 115 Vac Res. | 1 Amp | 0.25 Amp |
| Rating at 220 Vac Res. | 0.5 Amp | 0.125 Amp |
| Circuitry | SPST-N.O. (Standard); SPST-N.O. (w/Overtravel), SPST-N.O. (w/Positive Feel) | SPDT, DPDT Break Before Make |
| Life Expectancy | SPST-N.O. (Standard): 1,000,000 operations SPST-N.O. (w/Positive Feel): 200,000 operations; SPST-N.O. (w/Overtravel): 500,000 operations | 250,000 operations |
| Contact Resistance | 25 milliohms or less on a new switch | |
| Voltage Breakdown | 1000 Vac between mutually insulated parts | |
| Insulation Resistance | 1000 megohms minimum | |
| Operating Temperature | -40°C to +85°C | |

LEGENDS

All button caps can be printed in epoxy ink. Any type style or design can be used to produce the legend. If News Gothic Condensed style is used, limits can be approximated from the chart below; actual limits depend on specific legend.

There is a per-button impression charge. A nominal set up charge per legend applies to orders of 1 to 99 pieces. (Non-standard legends are subject to a one time tooling charge. Contact Grayhill for more specifics.)

| Grayhill Type Identification No. | Character Height (Typ.) | Sample Style and Sizes | Square Button Character and Line Limitation | | Round Button Character and Line Limitation | |
|----------------------------------|-------------------------|------------------------|---|------------|--|------|
| | | | Character | Line | Character | Line |
| 4GH088 | .083 (2,1) | ABCDEFGHIJ | 6 Char. 2 Lines | TAB LOCATE | 3 Char. 1 Line | OFF |
| 1GH125 | .138 (3,5) | ABCDEFGHIJ | 5 Char. 1 Lines | INDEX | 3 Char. 1 Line | TAB |
| 3GH187 | .207 (5,3) | ABCDEF | 3 Char. 1 Line | OFF | 2 Char. 1 Line | 15 |
| 2GH250 | .276 (7,0) | ABCD | 2 Char. 1 Line | 15 | N/A | N/A |

Pushbutton Switches