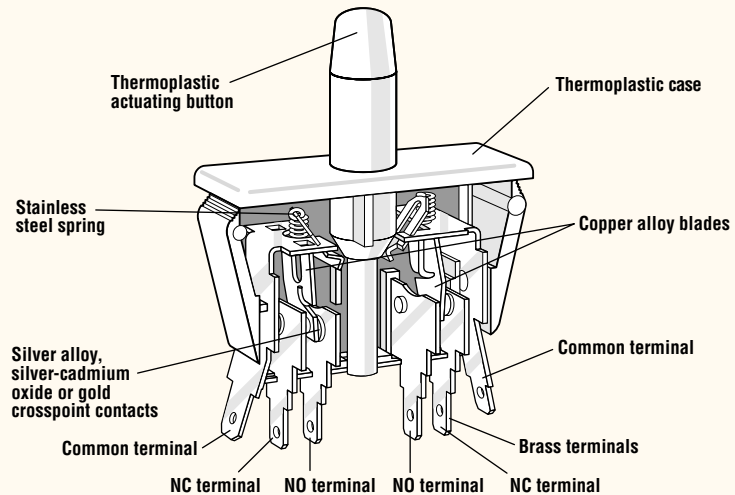


## PANEL MOUNT PUSHBUTTON — SINGLE & DOUBLE POLE

# E Series

### Features

- Choice of Momentary, Push-Pull (reset) and Cheat Interlock switches
- Snap-in panel mounting
- Long-life coil spring, snap-action mechanism
- Agency approved extended-life versions available
- VDE approval available on select models (F Series)
- Various terminal forms available (consult factory)



### Electrical Ratings

| Switch Series | EN61058 Rating                       | UL1054 Rating                        | Electrical Life at Rated Load      |                                   |
|---------------|--------------------------------------|--------------------------------------|------------------------------------|-----------------------------------|
|               |                                      |                                      | According to VDE (Min. Operations) | According to UL (Min. Operations) |
| E65           | N/A                                  | 16A, 125/250VAC; 1/3HP, 125/250VAC   | N/A                                | 6,000                             |
| E/F68         | 0.1(0.05)A, 125VAC                   | 0.1A, 125VAC                         | 50,000                             | 6,000*                            |
| E/F69         | 10(4)A, 250VAC                       | 10A, 125/250VAC; 1/3HP, 125/250VAC   | 50,000                             | 6,000*                            |
| E/F77         | 0.1(0.05)A, 125VAC<br>10(4)A, 250VAC | 0.1A, 125VAC; 10A, 1/3HP, 125/250VAC | 50,000                             | 6,000*                            |
| E/F78         | 0.1(0.05)A, 125VAC                   | 0.1A, 125VAC                         | 50,000                             | 6,000*                            |
| E/F79         | 10(4)A, 250VAC                       | 10A, 125/250VAC; 1/3HP, 125/250VAC   | 50,000                             | 6,000*                            |
| E75           | N/A                                  | 16A, 125/250VAC; 1/3HP, 125/250VAC   | N/A                                | 6,000                             |

\*Indicates 100K life available.

### Specifications

#### Electrical

Temperature Rating: -40° to +85°C

Flammability Rating: UL94V-O

#### Materials

Case: Thermoplastic Polyester (*Valox used on International versions*)

Actuating Button: Thermoplastic Acetal (*Valox used on International versions*)

Terminals\*: Brass

Moving Blade: Beryllium Copper

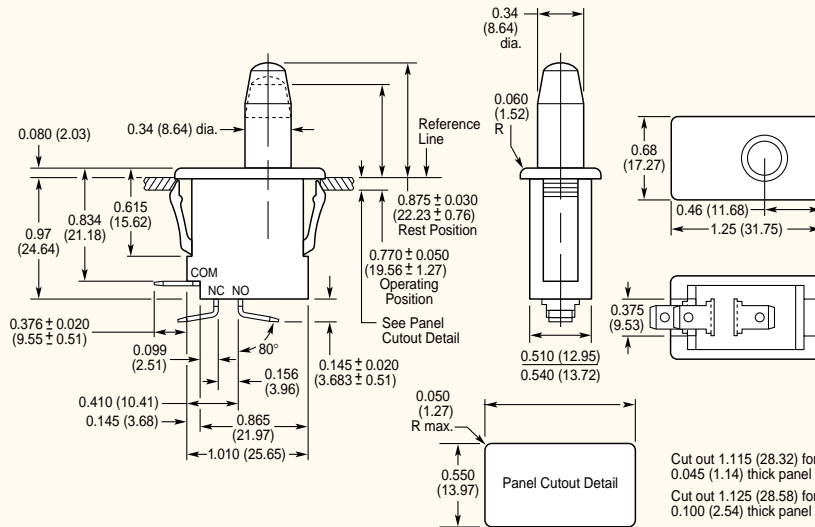
Spring: Stainless Steel

Contacts: Silver Alloy (*E65, E/F69*)  
Silver-Cadmium Oxide (*E75, E/F77, E/F79*)  
Gold Crosspoint (*E/F68, E/F77*)

\*Common terminals are plated — the remaining two terminals are not plated.



## Dimensions — Single Pole inches (mm)



## Actuator Specifications — Single Pole

| Actuator Type                               | Switch Type | Rest Position inches (mm)    | Maximum Pre-Travel inches (mm) | Operating Point* inches (mm) | Minimum Over-Travel inches (mm) | Max. Movement Differential inches (mm) | Maximum Operating Force** (g) | Maximum Full Overtravel Position inches (mm) |
|---|-------------|------------------------------|--------------------------------|------------------------------|---------------------------------|--|-------------------------------|--|
| <i>Basic Momentary Action</i>               |             |                              |                                |                              |                                 |  |                               |  |
| -00A  |             | 0.845–0.905<br>(21.46–22.99) | 0.125<br>(3.18)                | 0.720–0.820<br>(18.29–20.83) | 0.375<br>(9.53)                 | 0.045<br>(1.14)                        | 425                           | 0.400<br>(10.16)                             |
| <i>Push-Pull (Reset)</i>                    |             |                              |                                |                              |                                 |  |                               |  |
| -20A  |             | 0.920–0.980<br>(22.37–24.89) | 0.150<br>(3.81)                | 0.800–0.900<br>(20.32–22.86) | 0.300<br>(7.62)                 | 0.045<br>(1.14)                        | 285                           | 0.500<br>(12.70)                             |
| <i>Momentary</i>                            |             |                              |                                |                              |                                 |  |                               |  |
| -30A <sup>†</sup>                           |             | 0.730–0.790<br>(18.54–20.07) | 0.125<br>(3.18)                | 0.610–0.710<br>(15.49–18.03) | 0.100<br>(2.54)                 | 0.045<br>(1.14)                        | 475                           | 0.520<br>(13.21)                             |
| <i>“Cheat Interlock” (Pull out to lock)</i> |             |                              |                                |                              |                                 |  |                               |  |
|   |             | 0.730–0.790<br>(18.54–20.07) | 0.125<br>(3.18)                | 0.800–0.900<br>(20.32–22.86) | 0.050<br>(1.27)                 | 0.060<br>(1.52)                        | 385                           | 0.980<br>(24.89)                             |
| <i>Short Button Momentary</i>               |             |                              |                                |                              |                                 |  |                               |  |
| -40A  |             | 0.420–0.480<br>(10.67–12.19) | 0.125<br>(3.18)                | 0.300–0.400<br>(7.62–10.16)  | 0.175<br>(4.45)                 | 0.045<br>(1.14)                        | 425                           | 0.125<br>(3.18)                              |
| <i>For Auxiliary Push Button</i>            |             |                              |                                |                              |                                 |  |                               |  |
| -50A  |             | 0.420–0.480<br>(10.67–12.19) | 0.125<br>(3.18)                | 0.300–0.400<br>(7.62–10.16)  | 0.175<br>(4.45)                 | 0.045<br>(1.14)                        | 425                           | 0.125<br>(3.18)                              |

\*Measured above reference line. Refer to dimensional drawing above.

\*\*Operating Forces listed above are for E68/E69 switches only. E65 Operating Force: 708 grams max. for momentary switches.

<sup>†</sup>Dual function switch: Push in to operate in normal momentary mode and pull out for maintained action.

## Ordering Information

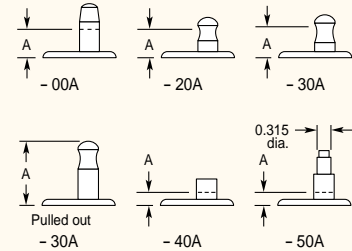
Select the current rating you need.  
Combine the corresponding Series/Prefix number with the appropriate suffix number for the switch type, circuitry and terminals you require. Example: SPDT: E68–30A, SPST NO: E68–31A, SPST NC: E68–32A.

## Auxiliary Buttons — Single Pole

–50A has button with special shaft to accept auxiliary push buttons for manual actuation. Consult factory for auxiliary buttons.

## Button Detail — Single Pole

"A" dimension (full overtravel position)



## Circuitry — Single Pole

Double throw or single throw versions available.

Single Pole Series:  
E65, E68/F68, E69/F69

## Terminals — Single Pole

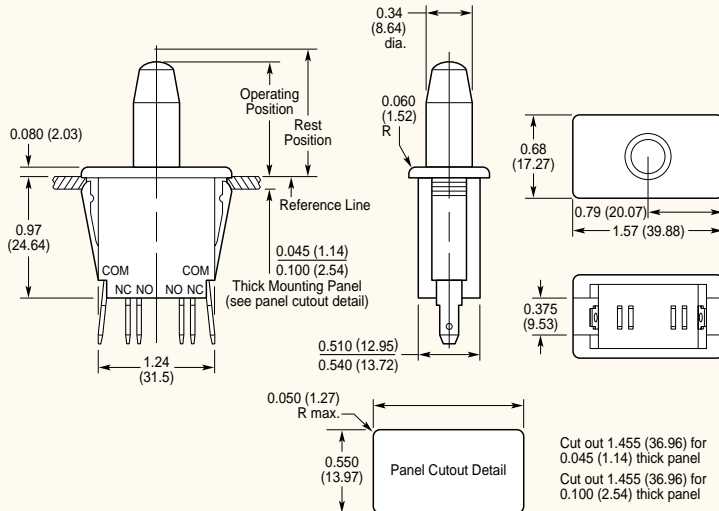
This switch series has 0.187" x 0.020" (4.75mm x 0.51mm) as standard for up to 10 amps and 0.250" x 0.032" (6.35mm x 0.81mm) for 16 amps.

Consult factory for non-standard terminal options.

## International Versions — Single Pole

For VDE applications, standard terminals are 0.187" x 0.032" (4.75mm x 0.81mm). Switch prefix must be "F" for VDE approved switches. Example: F68–30A was E68–30A.

## Dimensions — Double Pole inches (mm)



## Actuator Specifications — Double Pole

| Actuator Type                               | Switch Type | Rest Position inches (mm)    | Maximum Pre-Travel inches (mm) | Operating Point* inches (mm) | Minimum Overtravel inches (mm) | Max. Movement Differential inches (mm) | Maximum Operating Force** (g) | Max. Full Over-Travel Position inches (mm) |
|---|-------------|------------------------------|--------------------------------|------------------------------|--------------------------------|--|-------------------------------|--|
| <i>Basic Momentary Action</i>               |             |                              |                                |                              |                                |  |                               |  |
| -00A  |             | 0.845–0.905<br>(21.46–22.99) | 0.125<br>(3.18)                | 0.720–0.820<br>(18.29–20.83) | 0.375<br>(9.53)                | 0.075<br>(1.91)                        | 680                           | 0.400<br>(10.16)                           |
| <i>Push-Pull (Reset)</i>                    |             |                              |                                |                              |                                |  |                               |  |
| -20A  |             | 0.920–0.980<br>(23.37–24.89) | 0.150<br>(3.81)                | 0.800–0.900<br>(20.32–22.86) | 0.300<br>(7.62)                | 0.075<br>(1.91)                        | 510                           | 0.500<br>(12.70)                           |
| <i>Momentary</i>                            |             |                              |                                |                              |                                |  |                               |  |
| -30A <sup>†</sup>                           |             | 0.730–0.790<br>(18.54–20.07) | 0.125<br>(3.18)                | 0.610–0.710<br>(15.49–18.03) | 0.100<br>(2.54)                | 0.075<br>(1.91)                        | 757                           | 0.520<br>(13.21)                           |
| <i>“Cheat Interlock” (Pull out to lock)</i> |             |                              |                                |                              |                                |  |                               |  |
|   |             | 0.730–0.790<br>(18.54–20.07) | 0.155<br>(3.94)                | 0.800–0.900<br>(20.32–22.86) | 0.030<br>(0.76)                | 0.090<br>(2.29)                        | 567                           | 0.980<br>(24.89)                           |
| <i>Short Button Momentary</i>               |             |                              |                                |                              |                                |  |                               |  |
| -40A  |             | 0.420–0.480<br>(10.67–12.19) | 0.125<br>(3.18)                | 0.300–0.400<br>(7.62–10.16)  | 0.175<br>(4.45)                | 0.075<br>(1.91)                        | 680                           | 0.125<br>(3.18)                            |
| <i>For Auxiliary Push Button</i>            |             |                              |                                |                              |                                |  |                               |  |
| -50A  |             | 0.420–0.480<br>(10.67–12.19) | 0.125<br>(3.18)                | 0.300–0.400<br>(7.62–10.16)  | 0.175<br>(4.45)                | 0.075<br>(1.91)                        | 680                           | 0.125<br>(3.18)                            |

\*Measured above reference line. Refer to dimensional drawing above.

\*\*Operating Forces listed above are for E78/E79 switches only. E75 Operating Force: 921 grams max. for momentary switches.

<sup>†</sup>Dual function switch: Push in to operate in normal momentary mode and pull out for maintained action.

## Ordering Information

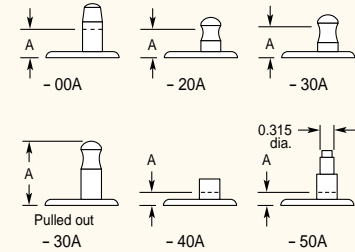
Select the current rating you need.  
Combine the corresponding Series/Prefix number with the appropriate suffix number for the switch type, circuitry and terminals you require. Example: DPDT: E78–30A, DPST NO: E78–31A, DPST NC: E78–32A.

## Auxiliary Buttons — Double Pole

–50A has button with special shaft to accept auxiliary push buttons for manual actuation. Consult factory for auxiliary buttons.

## Button Detail — Double Pole

"A" dimension (full overtravel position)



## Circuitry — Double Pole

Double throw or single throw versions available.

Double Pole Series:

E77/F77, E78/F78, E79/F79, E75

## Terminals — Double Pole

This switch series has 0.187" x 0.020" (4.75mm x 0.51mm) as standard for up to 10 amps and 0.250" x 0.032" (6.35mm x 0.81mm) for 16 amps.

Consult factory for non-standard terminal options.

## International Versions — Double Pole

For VDE applications, standard terminals are 0.187" x 0.032" (4.75mm x 0.81mm).

Switch prefix must be "F" for VDE approved switches. Example: F78–30A was E68–30A.