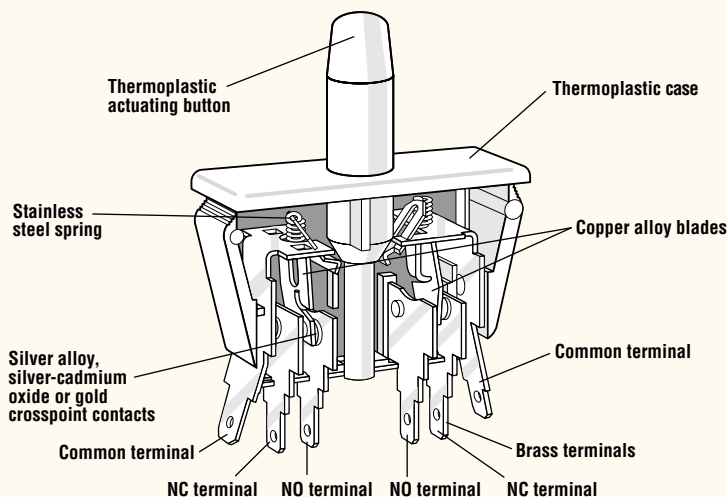


PANEL MOUNT PUSHBUTTON — SINGLE & DOUBLE POLE

ES

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 Rating

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 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

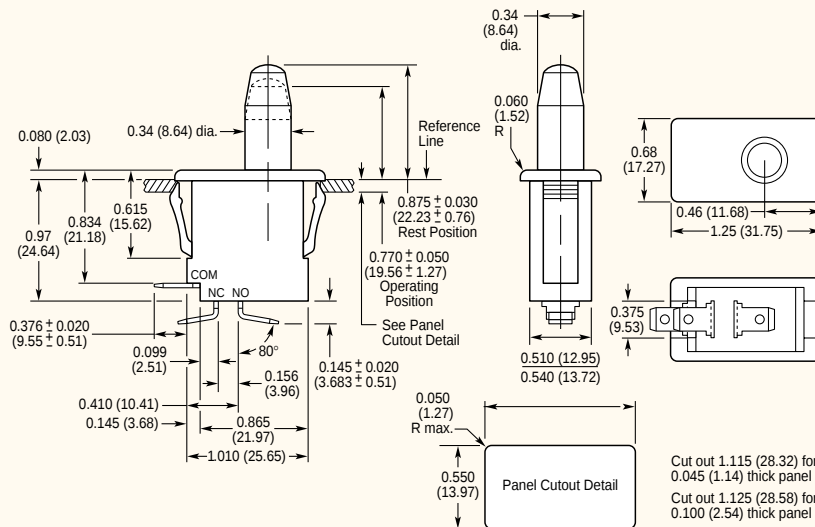
Materials

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.



D — Single Pole inches (mm)



Ae — 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)
Basic Momentary Action								
-00A		0.845-0.905 (21.46-22.99)	0.125 (3.18)	0.720-0.820 (18.29-20.83)	0.375 (9.53)	0.045 (1.14)	425	0.400 (10.16)
Push-Pull (Reset)								
-20A		0.920-0.980 (22.37-24.89)	0.150 (3.81)	0.800-0.900 (20.32-22.86)	0.300 (7.62)	0.045 (1.14)	285	0.500 (12.70)
Momentary								
-30A†		0.730-0.790 (18.54-20.07)	0.125 (3.18)	0.610-0.710 (15.49-18.03)	0.100 (2.54)	0.045 (1.14)	475	0.520 (13.21)
"Cheat Interlock" (Pull out to lock)								
		0.730-0.790 (18.54-20.07)	0.125 (3.18)	0.800-0.900 (20.32-22.86)	0.050 (1.27)	0.060 (1.52)	385	0.980 (24.89)
Short Button Momentary								
-40A		0.420-0.480 (10.67-12.19)	0.125 (3.18)	0.300-0.400 (7.62-10.16)	0.175 (4.45)	0.045 (1.14)	425	0.125 (3.18)
For Auxiliary Push Button								
-50A		0.420-0.480 (10.67-12.19)	0.125 (3.18)	0.300-0.400 (7.62-10.16)	0.175 (4.45)	0.045 (1.14)	425	0.125 (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.

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

O — Single Pole

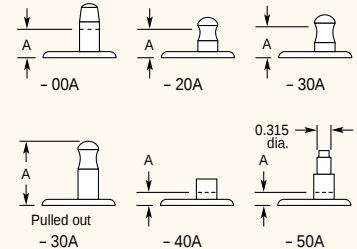
Select the current rating you need.
Combine the corresponding Series/Prefix number with the appropriate suffix number for the switch type, circuitry and terminals you require. Example: SPDT: E68-30A, SPST NO: E68-31A, SPST NC: E68-32A.

A — Single Pole

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

B — Single Pole

"A" dimension (full overtravel position)



O — Single Pole

Double throw or single throw versions available.

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

T — Single Pole

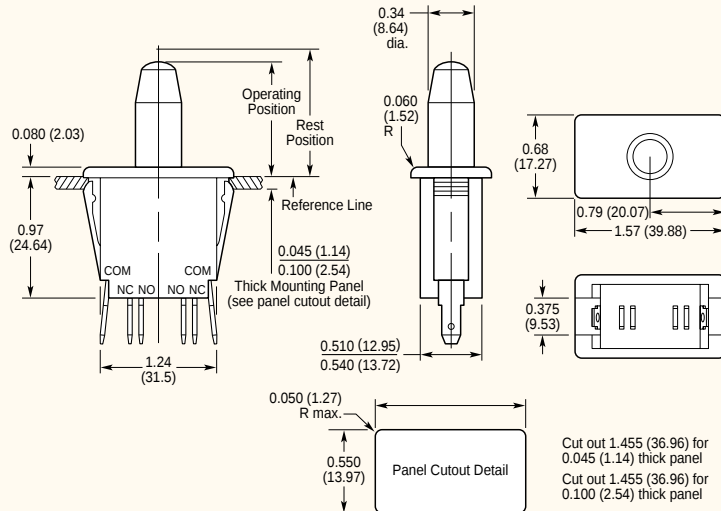
This switch series has 0.187" x 0.020" (4.75mm x 0.51mm) as standard for up to 10 amps and 0.250" x 0.032" (6.35mm x 0.81mm) for 16 amps.

Consult factory for non-standard terminal options.

I — 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.

D — Double Pole inches (mm)



A — Single Throw — 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)
Basic Momentary Action								
-00A		0.845-0.905 (21.46-22.99)	0.125 (3.18)	0.720-0.820 (18.29-20.83)	0.375 (9.53)	0.075 (1.91)	680	0.400 (10.16)
Push-Pull (Reset)								
-20A		0.920-0.980 (23.37-24.89)	0.150 (3.81)	0.800-0.900 (20.32-22.86)	0.300 (7.62)	0.075 (1.91)	510	0.500 (12.70)
Momentary								
-30A†		0.730-0.790 (18.54-20.07)	0.125 (3.18)	0.610-0.710 (15.49-18.03)	0.100 (2.54)	0.075 (1.91)	757	0.520 (13.21)
"Cheat Interlock" (Pull out to lock)								
		0.730-0.790 (18.54-20.07)	0.155 (3.94)	0.800-0.900 (20.32-22.86)	0.030 (0.76)	0.090 (2.29)	567	0.980 (24.89)
Short Button Momentary								
-40A		0.420-0.480 (10.67-12.19)	0.125 (3.18)	0.300-0.400 (7.62-10.16)	0.175 (4.45)	0.075 (1.91)	680	0.125 (3.18)
For Auxiliary Push Button								
-50A		0.420-0.480 (10.67-12.19)	0.125 (3.18)	0.300-0.400 (7.62-10.16)	0.175 (4.45)	0.075 (1.91)	680	0.125 (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.

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

O — DPDT — Double Pole

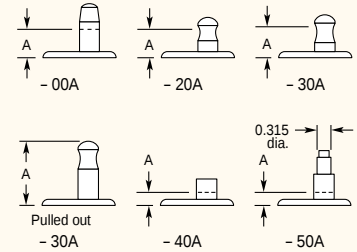
Select the current rating you need.
Combine the corresponding Series/Prefix number with the appropriate suffix number for the switch type, circuitry and terminals you require. Example: DPDT: E78-30A, DPST NO: E78-31A, DPST NC: E78-32A.

A — DPDT — Double Pole

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

B — DPDT — Double Pole

"A" dimension (full overtravel position)



O — DPDT — Double Pole

Double throw or single throw versions available.

Double Pole Series:

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

T — DPDT — 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.

I — DPDT — 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.