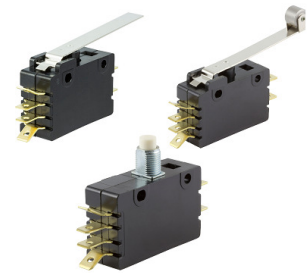


# Snap Action Switch

## Double Pole General Purpose

E19, E20, G20



### Features

- Choice of 3 current ratings
- Long life coil spring, snap action mechanism
- Agency approved extended life versions available
- RoHS compliant
- High temperature versions available – contact factory

### Typical Applications

- Household appliances
- Automated assembly lines
- Brake switch on utility vehicles
- Industrial and accessible door openers
- Vending machines

### Part Number Breakdown

**E19-00A0**

Example: E19-00A0 is a 15 A, normally open DPDT pole switch with a standard ratio button actuator.

| Series Type |                      | Type <sup>1</sup> |                                      | Circuitry |                 | Actuator <sup>1</sup> |   |
|-------------|----------------------|-------------------|--------------------------------------|-----------|-----------------|-----------------------|---|
| E19         | Double pole<br>15 A  | 0                 | Standard ratio actuator<br>or button | 0         | Double Throw    | A                     | Button  |
| E20         | Double pole<br>20 A  | 5                 | High ratio actuator                  | 1         | Normally Open   | H                     | Lever   |
| G20         | Double pole<br>0.1 A |                   |                                      | 2         | Normally Closed | J                     | Button with ferrule                             |
|             |                      |                   |                                      |           |                 | K                     | Roller  |
|             |                      |                   |                                      |           |                 | M                     | Button with extra<br>over-travel and<br>ferrule |

<sup>1</sup>See Actuator Specifications section for available actuator/type combinations

### Electrical Specifications per UL1054 – Min 6000 Operations

| Series | Operations   | Current and Power Ratings                              |
|--------|--|--|
| E19    | 6000 operations; 100,000 available – contact factory | 15 A, 125 / 250 VAC<br>¾ HP, 125 VAC / 1 ½ HP, 250 VAC |
| E20    | 6000 operations                                      | 20 A, 125 / 250 VAC<br>1 HP, 125 VAC / 2 HP, 250 VAC   |
| G20    | 100,000 operations                                   | 0.1 A, 125 VAC   |

### Commonly Stocked Distributor Parts








|          |          |          |          |
|----------|----------|----------|----------|
| E19-00A0 | E19-00M0 | E20-00H0 | E20-50K0 |
| E19-00H0 | E19-50H0 | E20-00K0 |          |
| E19-00J0 | E19-50K0 | E20-00M0 |          |
| E19-00K0 | E20-00A0 | E20-50H0 |          |

Note: Part numbers with a leading 0 are functionally no different than without a leading 0 (ex.: 0E19-00A0 is the same switch as E19-00A0)










## Actuator Specifications<sup>4</sup>

### E19/G20 Series

| Actuator |  | Max Operating Force<br>g (lb) | Max Pre-Travel<br>mm (in) | Operating Point <sup>5</sup><br>mm (in) | Min Over-Travel<br>mm (in) | Max Movement Differential<br>mm (in) | Actuation Length <sup>6</sup><br>mm (in) |
|----------|--|-------------------------------|---------------------------|---|----------------------------|--------------------------------------|--|
| A        |             | 850 (1.87)                    | 1.27 (0.050)              | 7.24 ± 0.76 (0.285 ± 0.030)             | 2.03 (0.080)               | 0.38 (0.015)                         | N/A                                      |
| H        |             | 205 (0.45)                    | 6.99 (0.275)              | 7.92 ± 1.57 (0.312 ± 0.062)             | 4.75 (0.187)               | 2.36 (0.093)                         | 38.10 (1.500)                            |
| H        | High ratio  | 130 (0.28)                    | 10.16 (0.400)             | 7.14 ± 1.57 (0.281 ± 0.062)             | 4.75 (0.187)               | 3.56 (0.140)                         | 44.45 (1.750)                            |
| J        |             | 850 (1.87)                    | 1.27 (0.050)              | 17.02 ± 0.76 (0.670 ± 0.030)            | 2.30 (0.080)               | 0.38 (0.015)                         | N/A                                      |
| K        |             | 212 (0.47)                    | 6.35 (0.250)              | 18.24 ± 1.57 (0.718 ± 0.062)            | 4.75 (0.187)               | 2.36 (0.093)                         | 35.33 (1.391)                            |
| K        | High ratio  | 150 (0.33)                    | 7.92 (0.312)              | 17.45 ± 1.57 (0.687 ± 0.062)            | 4.75 (0.187)               | 3.56 (0.140)                         | 41.78 (1.645)                            |
| M        |             | 850 (1.87)                    | 1.27 (0.050)              | 20.62 ± 0.76 (0.812 ± 0.030)            | 5.54 (0.218)               | 0.38 (0.015)                         | N/A                                      |

### E20 Series

| Actuator |  | Max Operating Force<br>g (lb) | Max Pre-Travel<br>mm (in) | Operating Point <sup>5</sup><br>mm (in) | Min Over-Travel<br>mm (in) | Max Movement Differential<br>mm (in) | Actuation Length <sup>6</sup><br>mm (in) |
|----------|--|-------------------------------|---------------------------|---|----------------------------|--------------------------------------|--|
| A        |             | 1280 (2.82)                   | 2.54 (0.100)              | 6.30 ± 0.76 (0.248 ± 0.030)             | 1.27 (0.050)               | 0.38 (0.015)                         | N/A                                      |
| H        |             | 425 (0.94)                    | 8.38 (0.330)              | 11.89 ± 1.57 (0.468 ± 0.062)            | 3.96 (0.156)               | 1.27 (0.050)                         | 20.85 (0.821)                            |
| H        | High ratio  | 285 (0.63)                    | 15.24 (0.600)             | 11.10 ± 1.57 (0.437 ± 0.062)            | 3.96 (0.156)               | 2.03 (0.080)                         | 27.20 (1.071)                            |
| J        |             | 1280 (2.82)                   | 2.54 (0.100)              | 6.30 ± 0.76 (0.248 ± 0.030)             | 1.27 (0.050)               | 0.38 (0.015)                         | N/A                                      |
| K        |             | 425 (0.94)                    | 8.84 (0.348)              | 21.84 ± 1.57 (0.860 ± 0.062)            | 3.96 (0.156)               | 1.14 (0.045)                         | 17.48 (0.688)                            |
| K        | High ratio  | 312 (0.69)                    | 13.34 (0.525)             | 21.03 ± 1.57 (0.828 ± 0.062)            | 3.71 (0.146)               | 1.91 (0.075)                         | 22.91 (0.902)                            |
| M        |             | 1280 (2.82)                   | 2.54 (0.100)              | 19.66 ± 0.76 (0.774 ± 0.030)            | 4.78 (0.188)               | 0.38 (0.015)                         | N/A                                      |

<sup>4</sup>Contact factory regarding combinations not shown

<sup>5</sup>Measured above reference line; refer to dimensional drawing below

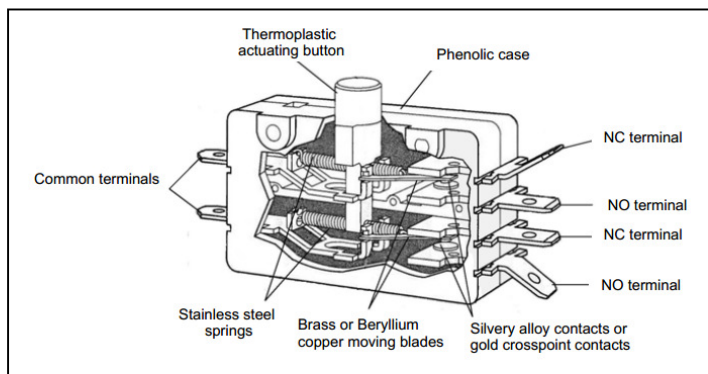
<sup>6</sup>Actuator tolerances ± 0.791 mm (0.031"); E14 H and K actuators are shorter and formed up 11° at the button

## Material Specifications

|                     |  |
|---------------------|--|
| Case                | General Purpose Phenolic                         |
| Actuating Button    | Thermoplastic                                    |
| Common Terminal     | Copper Alloy                                     |
| NO and NC Terminal  | Copper Alloy (E13, G13)<br>Copper (E14)          |
| Moving Blade        | Copper Alloy (E13, G13)<br>Copper (E14)          |
| Spring              | Stainless Steel                                  |
| Auxiliary Actuators | Cold-Rolled Steel (Nickel-Plated)                |
| Roller              | Sintered Stainless Steel                         |
| Contacts            | Gold Crosspoint (G13)<br>Silver Alloy (E13, E14) |

## Environmental Specifications

|                     |   |
|---------------------|---|
| Temperature Rating  | 105 °C (221 °F) standard<br>150 °C (302 °F) available |
| Flammability Rating | UL94HB  |



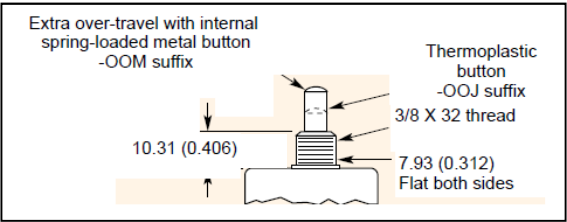
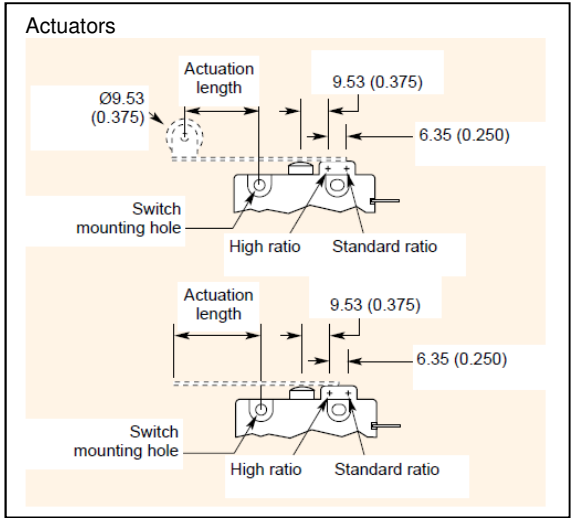
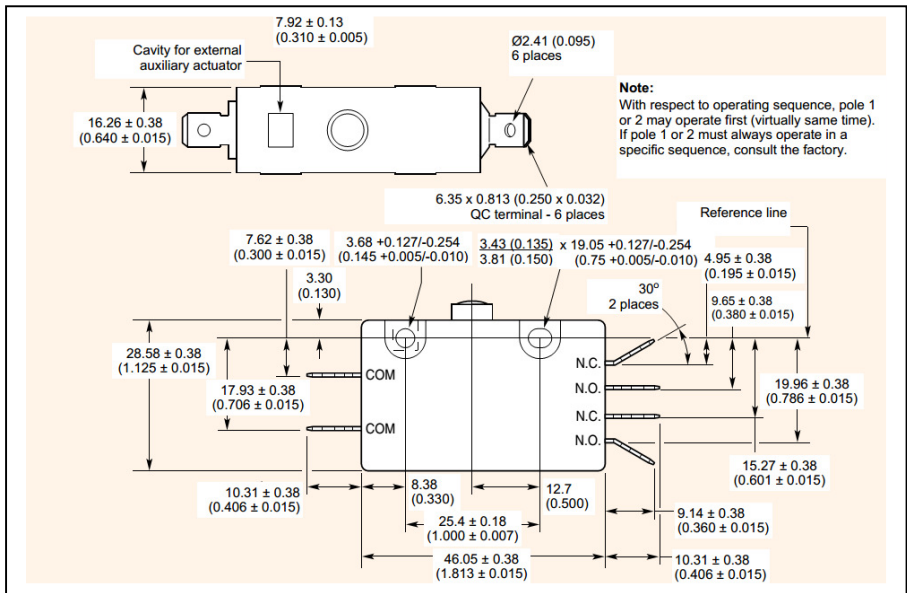
## Dimensions – see page 3

<http://switches-sensors.zf.com> ZF Electronics Systems Pleasant Prairie, LLC (“ZF”) acquired the rights to the CHERRY branded switches and sensors in 2008. Although ZF divested its interest in the CHERRY name in 2015, the switches and sensors remain unchanged and are now sold under the ZF brand.

Page 2 of 3, Last update 2017-10-02, Specifications subject to change without notice.



**Dimensions – mm (inches)**



**Optional hardware**  
 Brass hex nut : 00120023  
 Plated hex nut: 00120028





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- Экспресс доставка в любую точку России;
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- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.