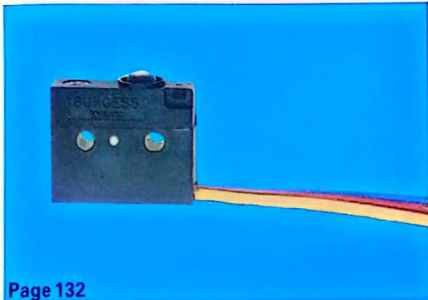


## Single and Multi-pole Sealed Miniature Micro Switches

A group of one, two and three-pole, changeover snap-action, miniature micro switches with mechanisms totally enclosed to IEC Code IP67 and NEMA Type 6. Efficient sealing is proved by pressure testing. Although they differ in appearance and overall dimensions V4S switches have mounting interchangeability with V4 series switches (see pages 36-37); V3S and multi-pole switches are interchangeable with V3 series (see pages 38-39). Their respective auxiliary actuators are described on pages 104-106 and 126-128.

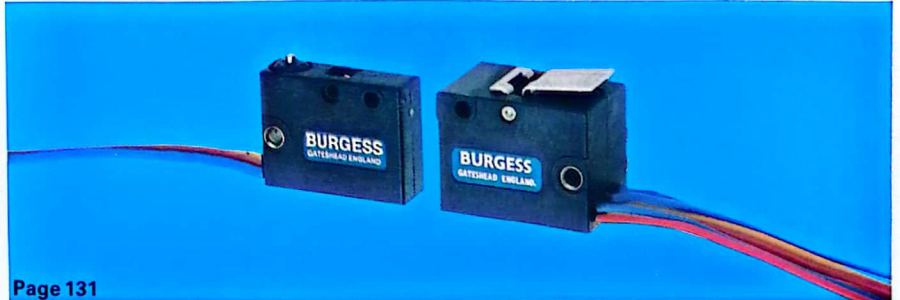
Sub-miniature V4 Series



Page 132

Single-pole, plain plunger actuator

Miniature V3 Series



Page 131

Typical single and multi-pole switches

### Construction

#### Mechanisms

Single pole switches incorporate a sub-miniature mechanism of the type described on pages 36-37. Multi-pole switches use an ultra miniature mechanism of the F5 series, see pages 32-33, but down-rated to the limits imposed by the wires. All mechanisms are changeover, snap-action units with coil springs. Those in multi-pole switches are electrically isolated and are adjusted individually during manufacture so that all will operate within 0.8 mm of plunger travel.

#### Enclosure

Each assembly is encapsulated in a reinforced plastic case. The efficiency of the seal is proved by pressure testing.

#### Actuators

Plungers and levers are stainless steel. Rollers are plastic. Note the very wide lever and roller.

#### Wires

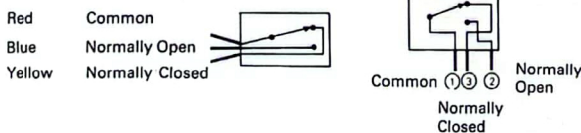
PVC coated, 0.5 m minimum length.

### Installation and Service

#### Mounting

Two holes are provided for side-mounting the switch to a flat, smooth surface. Suitable screws are M3 or #4 unified thread.

#### Diagram of Connections



#### Environmental Data

With one exception, all switches are completely enclosed to the standard indicated by IEC Code IP67 and NEMA Type 6. The single exception is the single-pole model with open terminals. Its mechanism is enclosed to the same standard but its terminals should be protected after connections are made. The continuous working recommended temperature range is  $-10^{\circ}$  to  $+70^{\circ}\text{C}$ .

#### Service

The switches are not user maintainable but a common-sense surveillance routine will ensure efficient service. Cleanliness, especially around the actuator, is important. Check regularly for mounting security, wear on the actuating medium and good connections at the remote ends of the wires.

### Electrical Ratings

#### V4S – Single Pole Switches

Voltage	Resistive Load	Tungsten Lamp Load		Inductive Load
		NC	NO	
AC				
125	3	0.5	0.5	3
250	3	0.5	0.5	3
DC				
Up to 15	3	3	1.5	3
30	3	3	1.5	3
50	1	0.7	0.7	1
75	0.75	0.5	0.5	0.25
125	0.5	0.4	0.4	0.05
250	0.25	0.2	0.2	0.03

#### V3S – Single Pole Switches

Voltage	Resistive Load	Tungsten Lamp Load		Inductive Load
		NC	NO	
AC				
125	5	0.5	0.5	5
250	5	0.5	0.5	5
DC				
Up to 30	5	3	1.5	3
50	1	0.7	0.7	1
75	0.75	0.5	0.5	0.25
125	0.5	0.4	0.4	0.06
250	0.25	0.2	0.2	0.03

Voltage	Resistive Load	Inductive Load
AC		
125	2	1
250	2	1
DC		
Up to 30	2	2
50	0.5	0.5
75	0.25	0.25
125	0.25	0.03
250	0.25	0.02

**Two and Three-Pole Switches**  
The adjoining ratings, in amperes, are recommended maxima. The abbreviations NC and NO mean Normally Close and Normally Open contacts

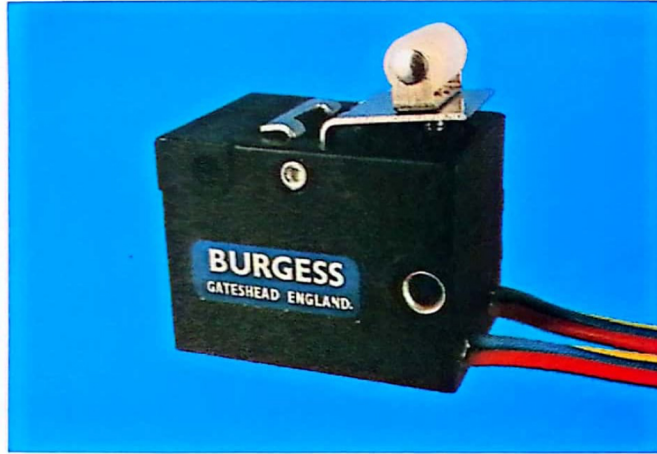
### Approvals

Please consult Burgess for the up-to-date position.

### Cross References

Similar explosion-proof switches – pages 74-76 and 196-202.  
Push button switches using single-pole sealed switch – pages 66-68, 177-186 and 190-192.

# 272F5YR1



**Actuator Mechanism** Integral lever with roller  
Changeover. Two poles electrically isolated and adjusted to operate within 0.8 mm of plunger travel

<b>Wires</b>	Six PVC insulated wires of 0.5 m minimum length
<b>Electrical Rating</b>	Recommended maximum 2A on 125 or 250 Vac. See page 43
<b>Free Position (max)</b>	23.8 mm 0.94 in
<b>Operating Position</b>	22.1 ±0.6 mm 0.87 in
<b>Movement Differential (max) per pole</b>	0.3 mm 0.012 in
<b>Available Overtravel</b>	Depress to case
<b>Actuating Force (max)</b>	4.0 N 14.5 ozf
<b>Release Force (min)</b>	1.0 N 3.5 ozf
<b>Mechanical Life</b>	In excess of 10 million operations
<b>Enclosure</b>	Sealing proved by pressure testing IEC Code IP67, NEMA type 6
<b>Temperature</b>	-10° to +70°C
<b>Weight</b>	40 g max, excluding wire
<b>Approvals</b>	Refer to Burgess. See Explosion-Proof Switch page 197

*Further details on page 43*

