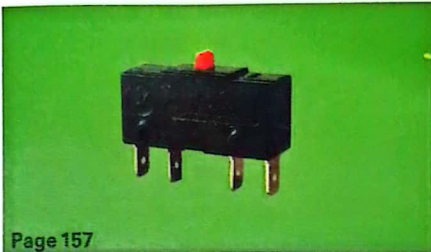


# Burgess

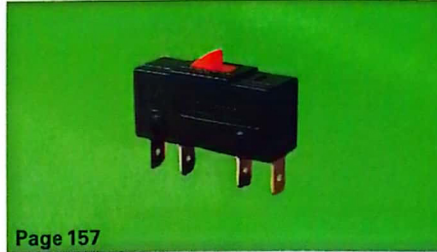
## Standard Size, Double-Break Switches

Moulded-cased, two or four-circuit, changeover switches which open or close the conductors at two points. True bi-stability and positive snap-action are important features of the whole series. Two-circuit switches (K5 references) are exceptionally highly rated at 25 amperes (recommended maximum) and are offered with a variety of integral actuators. Four-circuit switches (M2 references) have plunger actuators which may be used alone or with auxiliary lever actuators.



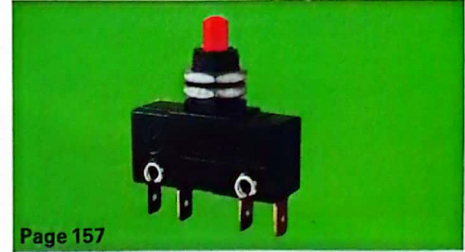
Page 157

Two-circuit plunger actuators



Page 157

Two-circuit cam-following actuator



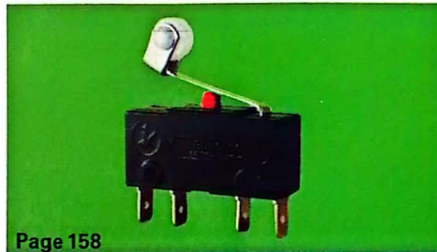
Page 157

Two-circuit spring plunger actuator



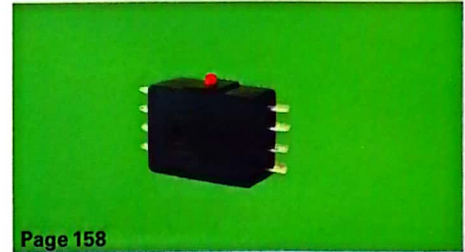
Page 157

Two-circuit plain lever actuator



Page 158

Two-circuit roller-lever actuator



Page 158

Four-circuit plunger actuator

The above switches are described individually on the pages indicated. Auxiliary actuators for the four-circuit switch are listed on page 158.

## Construction

### Mechanism

The two-circuit mechanism comprises two pivoted contact carrying arms controlled by a coil spring. Four-circuit switches have two such mechanism linked by a glass rod. Silver contacts throughout.

### Enclosure

Strong moulded case and lid.

### Actuators

Moulded plunger, wedge-shaped internally pivoted cam-follower or spring plunger in a moulded screwed sleeve. Stainless steel levers, with or without free-running nylon roller.

### Terminals

K5 series two-circuit switches: four down-pointing brass 6.3 mm quick-connect tabs. M2 series four-circuit switches: eight horizontally aligned solder tabs.

## Installation and Service

### Mounting

Two side-mounting holes provided. Use M2.5, M2.6 or #4 screws for M2 series 4 circuit switches, and M3.5 or #6 screws for K5 series two-circuit switches. One switch in the latter series, reference K5Q, is provided with a screwed plunger sleeve which may be used for single hole mounting. Either a clearance hole of 12.7 mm (0.5 in) recommended diameter or a 11.9 mm (0.47 in) diameter hole tapped 32 TPI Whitworth form is required.

### Environmental Data

Mechanisms enclosed to IP40, with open terminals. Recommended continuous working temperature limits are  $-10^{\circ}$  to  $+85^{\circ}\text{C}$ .

### Service

Check regularly for cleanliness and wear.

## Cross References

Sub-miniature double-break switches – pages 33 and 91-93.

Miniature double-break switches – pages 44 and 134.

Positive action switches in cases similar to those of K5 series switches – pages 80 and 205-207.

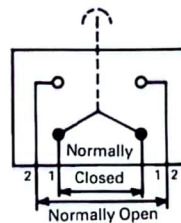
## Electrical Ratings

Ratings in the following tables are in amperes and are recommended maxima. Switches may be used to control one or two loads per mechanism but the slightly lower DC ratings shown in brackets apply when two loads per mechanism are switched.

Table 1

| Voltage  | Resistive Load | Tungsten Lamp Load | Inductive Load |
|----------|----------------|--------------------|----------------|
| AC       |                |                    |                |
| 125      | 25             | 5                  | 15             |
| 250      | 25             | 5                  | 15             |
| 380      | 17.5           |                    | 15             |
| 480      | 15             |                    | 15             |
| DC       |                |                    |                |
| Up to 15 | 25             | 5                  | 15 (12)        |
| 30       | 15             | 5                  | 7 (5)          |
| 50       | 5 (3)          | 3                  | 2              |
| 75       | 3 (1.5)        | 2 (1.5)            | 1              |
| 125      | 1 (0.5)        | 1                  | 0.5            |
| 250      | 0.5 (0.25)     | 0.5 (0.4)          | 0.25           |

Diagram of Connections



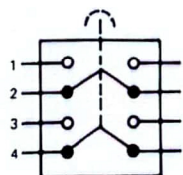
K5 series

Two-circuit switches

Table 2

| Voltage  | Resistive Load | Tungsten Lamp Load | Inductive Load |
|----------|----------------|--------------------|----------------|
| AC       |                |                    |                |
| 125      | 15             | 3                  | 15             |
| 250      | 15             | 3                  | 15             |
| 380      | 15             |                    | 15             |
| 400      | 15             |                    | 15             |
| DC       |                |                    |                |
| Up to 15 | 15             | 3                  | 12             |
| 30       | 15             | 3                  | 7 (3)          |
| 50       | 5              | 3                  | 2 (1)          |
| 75       | 2 (1)          | 3                  | 1 (0.25)       |
| 125      | 1 (0.5)        | 1                  | 0.5 (0.1)      |
| 250      | 0.5 (0.25)     | 0.4                | 0.25 (0.05)    |

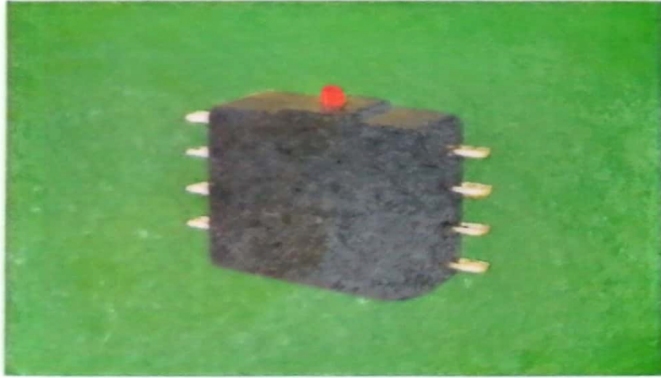
Diagram of Connections



M2 series

Four-circuit switches

# M2



- Actuator** Plain plunger. Suitable lever auxiliary actuators are available – see bottom of page
- Mechanism** Four circuit, double-break. Changeover on both pairs of circuits occurs virtually simultaneously
- Terminals** Eight 2.8 mm (0.11) tabs for

|                                    |   |          |
|------------------------------------|---|----------|
| <b>Electrical Rating</b>           | soldering or quick-connect receptacles<br>Recommended maximum 15A on 125 or 250 Vac.<br>Full ratings on page 55 (Table 2) |          |
| <b>Free Position (max)</b>         | 14.7 mm   | 0.58 in  |
| <b>Operating Position</b>          | 12.83 ±0.3 mm   | 0.51 in  |
| <b>Movement Differential (max)</b> | 0.9 mm  | 0.035 in |
| <b>Available Overtravel</b>        | Depress to case   |          |
| <b>Actuating Force (max)</b>       | 6.1 N   | 22 ozf   |
| <b>Release Force (min)</b>         | 0.8 N   | 3 ozf    |
| <b>Mechanical Life</b>             | 1 million operations minimum  |          |
| <b>Enclosure</b>                   | Mechanism: IP40<br>Exposed terminals  |          |
| <b>Temperature</b>                 | -10° to +85°C   |          |
| <b>Weight</b>                      | 16 g max  |          |
| <b>Approvals*</b>                  | CSA, SEV, UL  |          |

*This model and similar models are described in detail on page 55*

