

Burgess

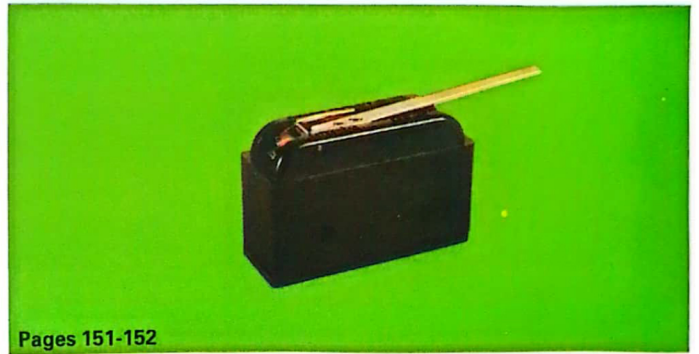
Standard Size, Moulded Case, Enclosed Terminal Micro Switches

Single-pole, changeover, snap-action switches with protected screw terminals. Apart from this feature and slightly increased case dimensions, the switches are similar to those described in the preceding section and offer comparable performances in service.



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Heavy-duty spring plunger actuator protected by a cowl



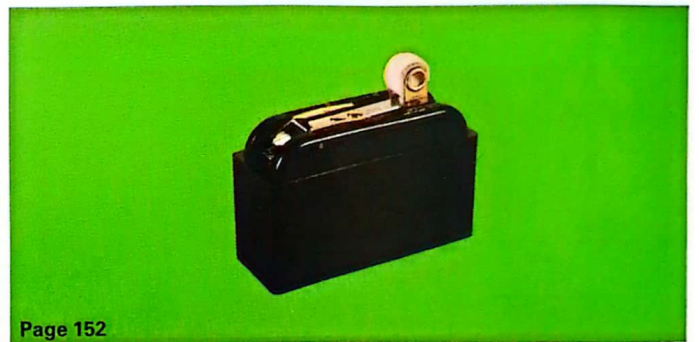
Pages 151-152

Plain lever, normal action actuator



Page 152

Normal action lever actuator with roller



Page 152

Normal action short lever actuator with roller



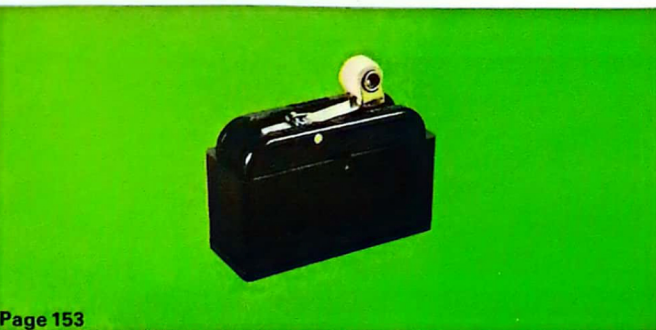
Page 152

Reverse-action plain lever actuator



Page 153

Reverse-action lever actuator with roller



Page 153

Reverse-action short lever actuator with roller



Page 153

Ball actuated switch

These illustrations represent a comprehensive range of switches which are described individually on the pages shown. A moulded terminal cover, for optional use in place of the cover plate provided and suitable for all models except the ball actuated switch, is listed on page 153.

Construction

Mechanism

Single-pole, snap-action trident spring of beryllium copper, with fine silver contacts. All models offer changeover working but may be used for normally open only or normally closed only working merely by selecting the appropriate two terminals from the three provided.

Enclosure

Case and lid are mouldings. Note that the ball-actuated switch (P3) is slightly larger than the others in the series, and that all are larger than the open terminal models described in the previous section.

Actuators

Plungers: heavy duty spring plunger with cowl protection in stainless steel or plated mild steel.

Normal action levers: switches so fitted have the letter 'K' in their references. Plain levers are available with or without return spring. Levers with free-running rollers are offered in two lengths. Levers are stainless steel, rollers are plastic.

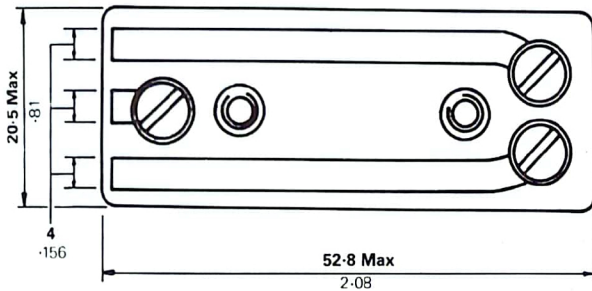
Reverse action levers: identified in ordering references by the letter 'M'.

Depression of the lever releases the plunger and thus the usual positions of the normally open and normally closed contacts and terminals are reversed. Plain lever and two lengths of lever with free-running roller are offered. Levers are stainless steel, rollers are plastic.

Ball actuator: switch reference P3 is actuated by a 12.7 mm, 0.5 in, stainless steel ball. The force to actuate may be directed from any angle above the horizontal.

Terminals

Three 6 BA terminals with captive washers in wiring channels. They are protected by a removable, insulated base cover plate.



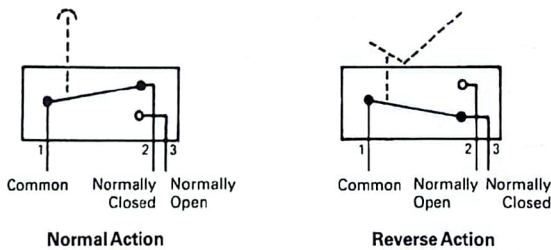
Base of 3BR and CY type switches (with cover removed). The P3 ball-actuated switch has a base which is similar in style but slightly larger.

Installation and Service

Mounting

Side-mounting holes provided. Use M3.5 or #6 unified thread screws, preferably coated with epoxy resin to improve security, and mount to a flat surface. Full installation instructions are provided with each consignment of switches.

Diagram of Connections



Environmental Data

The switches are variously rated as noted in the individual descriptions. One model, reference 3BR/510 listed on page 151, is sealed and pressure tested. The working temperature range is -10° to +85°C.

Service Recommendations

Keep switches reasonably clean, especially around the actuator. Check periodically for secure mounting and for wear on the actuating medium.

Cross References

Models with exposed terminals – pages 48-49 and 140-150.
Metal cased models – pages 52-53 and 154-155.
Double-break models – pages 55 and 156-157.

Electrical Ratings

Ratings are in amperes and in all cases are recommended maxima. The abbreviations NO and NC mean Normally Open and Normally Closed contacts.

Table 1 – Plunger and Normal Action Lever Actuated Models

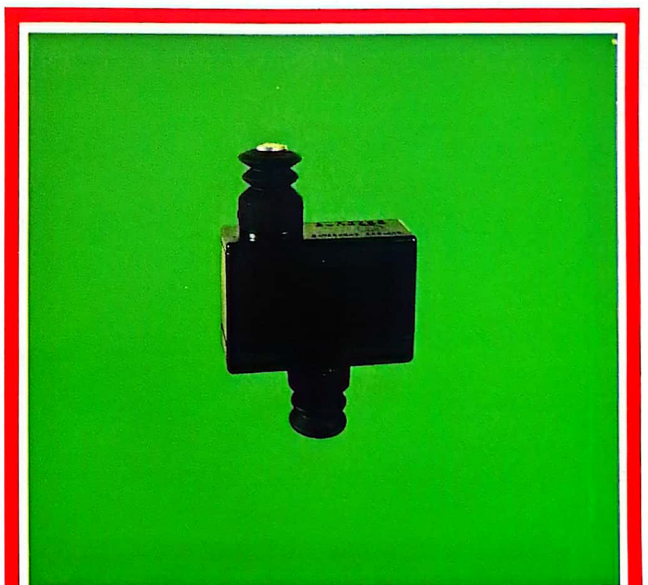
Voltage	Resistive Load	Tungsten Lamp Load		Inductive Load'
		NC	NO	
AC				
125	15	1.5	1.0	5
250	15	0.7	0.5	5
DC				
Up to 15	15	3	1.5	8
30	2	3	1.5	1
50	0.7	0.7	0.7	0.5
75	0.6	0.5	0.5	0.2
125	0.5	0.4	0.4	0.03
250	0.25	0.2	0.2	0.02

Table 2 - Reverse Action Lever Actuator Models

Voltage	Resistive Load	Tungsten Lamp Load		Inductive Load
		NC	NO	
AC				
125	15	1.0	1.5	5
250	15	0.5	0.7	5
DC				
Up to 15	15	1.5	3	8
30	2	1.5	3	1
50	0.7	0.7	0.7	0.5
75	0.6	0.5	0.5	0.2
125	0.5	0.4	0.4	0.03
250	0.25	0.2	0.2	0.02

Table 3 – P3 Ball-Actuated Switches

Voltage	Resistive Load	Tungsten Lamp Load		Inductive Load
		NC	NO	
AC				
125	15	3	1.5	15
250	15	2.5	1.5	15
DC				
Up to 15	15	3	1.5	10
30	5	3	1.5	5
50	1.25	0.7	0.7	1.25
75	0.75	0.5	0.5	0.3
125	0.5	0.4	0.4	0.05
250	0.25	0.2	0.2	0.03



A moulded terminal cover, to fit all switches in this series except the ball-actuated model reference P3, is described on page 153 under the reference IB2. It will replace the flat base plate provided with each switch and offers cable entry facilities via a synthetic rubber gland at its centre.

3BR/103



Actuator Spring plunger with cowl protection
Mechanism Single-pole, changeover
Terminals Three 6BA screws with captive washers behind removable cover.

Case	Open access to cable channels
	Plastic
Electrical Rating	Recommended maximum 15A on 125 or 250 Vac.
	Full ratings on page 51 (Table 1)
Free Position (max)	40.7 mm 1.6 in
Operating Position	39.3 1.55 in
	±0.4 mm
Movement Differential (max)	0.08 mm 0.003 in
Available Overtravel	4.6 mm 0.18 in
Actuating Force (max)	7.2 N 26 ozf
Release Force (min)	1.7 N 6 ozf
Mechanical Life	Between 1 and 10 million operations
Enclosure	Mechanism only: IP54
Temperature	-10° to +85°C
Weight	50 g max
Approvals	Please contact Burgess for latest information

This model and similar models are described in detail on pages 50-51

