

# Burgess

## Burgess Snap-Action Limit Switches L25 Series

Heavy-duty plug-in limit switch assemblies consisting of single-pole, double-break, changeover, snap-action switch bodies and plunger and rotary action actuator heads. They are robust, convenient and precise, well able to give long and satisfying service in engineering environments.



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Assembly of plunger actuator head on L25 switch body



Pages 175-176

Assembly of rotary action rod actuator head on L25 switch body



Pages 175-176

Assembly of rotary action nylon roller-lever actuator head on L25 switch body



Pages 175-176

Assembly of rotary action slotted steel lever and nylon roller actuator head on L25 switch body

Switch bodies and actuator heads are offered as separate items and are described thus on the pages shown.

# Switch Body

## Enclosure

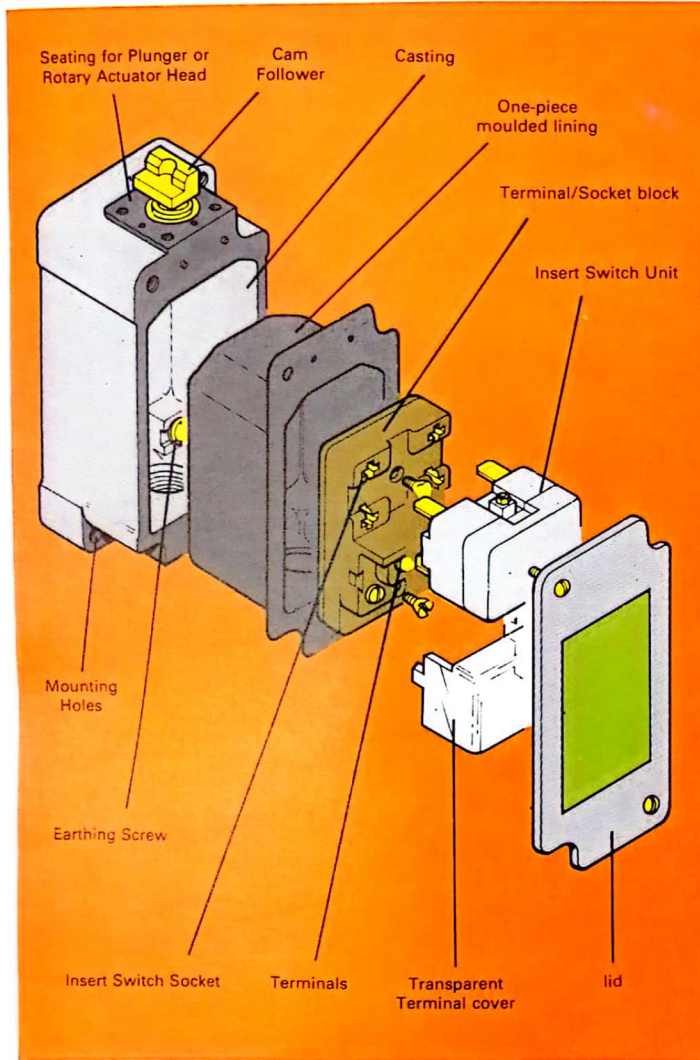
Metal diecasting with a one-piece, moulded insulating lining and a metal front cover secured by two captive screws. The conduit entry at the base of the casting is tapped 20 mm ISO or 1/2 in NPS (other styles available on special order). Internal earth (ground) facilities exist and interfacing and seating for the actuator head is provided.

## Terminal-socket Block

A one-piece moulding, fastened to the switch body interior by screws, is readily accessible when the front cover is removed. The block carries the socket into which the switching module is plugged and four 6-32 screw and cup washer terminals. When installed, a transparent cover fits over the terminals to minimise the risk of accidental contact.

## Plug-in Switching Module

A single-pole, double-break, changeover snap-action micro switch with four blade terminals which engage in the socket described above. There is a strong interference fit to achieve low impedance contact. All modules are factory adjusted to conform to a tightly toleranced standard operating position to eliminate the need for any readjustments on site when fitting a replacement.

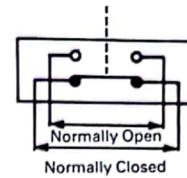


## Electrical Ratings

The ratings in the following table are in amperes and are recommended maxima. As the switching module has a double-break mechanism, it may be used to control one or two loads. In certain circumstances, the ratings should be reduced to the values shown in parenthesis when used to control two loads. Please apply to Burgess for control gear and other ratings not shown here.

Voltage	Resistive Load	Tungsten Lamp Load	Inductive Load
AC			
125	15	3 (1.5)	15
250	15	3 (1.5)	15
380	15		5
480	15		4
DC			
Up to 15	15	5	15 (12)
30	15	5	10 (3)
50	5 (3)	3	3 (1)
75	3 (1.5)	2	1 (0.25)
125	1 (0.5)	1	0.5 (0.1)
250	0.5 (0.25)	0.5	0.3 (0.05)

## Diagram of Connections



## Wiring

Remove front cover and the transparent terminal cover. Insert the wires through the conduit entry and connect to the four terminals in accordance with adjoining wiring diagram. If desired, the whole terminal-socket block may be removed and held clear of the unit so that wiring may be done with open air convenience.

## Mounting

Two diametrically opposed mounting holes suitable for M6 or 1/4 UNF screws or bolts are provided. Use shakeproof washers and mount to a firm, flat surface. The holes do not give access to the interior so need not be sealed.

## Switching Module Replacement

The design and provision of the L25 series switch bodies are such that when the switching module reaches the end of its useful life a replacement can be fitted in a few seconds. It is simply a matter of removing the front cover, inserting a screwdriver into the recess at the top of the module and easing it out, pushing in its replacement and putting the cover back. Lever re-adjustment is not necessary and the wires need not be disturbed. Replacement modules are listed on page 175.

# The Actuator Heads

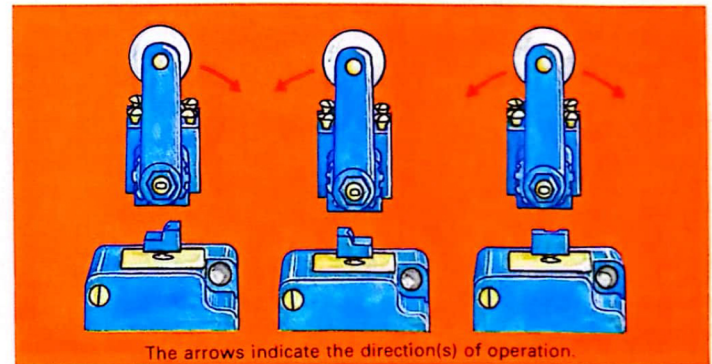
## Available Styles

1. Plain steel plunger with circlip to prevent excessive overtravel.
2. Rotary action lever assemblies with a, stainless steel rod, b, plastic lever and free-running roller or c, slotted steel lever with plastic, free-running roller.

All actuator heads consist of a metal casting, the actuator assembly, overtravel and spring return mechanisms, 'O' ring sealing, mechanical linkage to the switch body and retaining screws.

## Rotary Action Operation

A choice of operational directions is available; the switch can operate when the lever is turned clockwise, with free movement in the opposite direction, or counter-clockwise, again with free movement in the opposite direction, or it can operate when the lever is turned in either direction. This is dependent upon the position of the cam-follower situated at the top of the switch body as shown below:



## Mounting

The actuator head sits on the top of the switch body casting and is secured by four screws. Rotary action heads may be mounted so that the lever points in any of four directions.

## Lever Adjustments

Rotary action lever actuators are adjustable through 360° in vernier controlled steps of 1.5°. Adjustments are quickly and easily accomplished when the actuator spindle self-locking nut is loosened sufficiently to free the vernier components. Rod and slotted lever actuators may also be adjusted for effective length; slacken the spindle nut, slide the actuator to the desired position and retighten the nut.

# Environmental Data

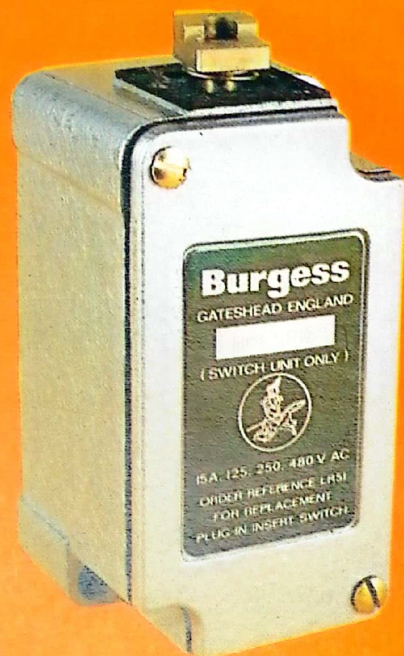
It is recommended that PTFE tape or an approved compound should be applied to conduit or cable gland before screwing it into the conduit entry. When the actuator head is mounted correctly to the switch body and when the whole installation has been completed in the recommended manner, then the limit switch assembly is sealed against the ingress of dust and liquid splashing to the degree indicated by IP65 and NEMA type 13.

# Cross References

L3 and L6 series limit switches – previous page and pages 170-174.  
Metal housed micro switches – pages 56-61.

# Burgess Limit Switches L25 Series

**L25 Limit Switch Bodies**  
**ML2500** 20 mm ISO Conduit Entry  
**CL2500** 1/2 in NPS Conduit Entry



Each switch body is supplied complete with a plug-in switching module and it may be used with any actuator head listed at the bottom of this page and on the next page. The head should be ordered separately

<b>Mechanism</b>	Single-pole, double-break, changeover, snap-action. The plug-in module can be replaced quickly without disturbing the wiring
<b>Electrical Rating</b>	Recommended maximum 15A on 125 or 250 Vac. Full ratings appear on page 65
<b>Terminals</b>	Four 6-32 screws with cup washers. Terminals and plug-in switch module socket are carried on a one-piece phenolic moulding which may be removed for 'open air' wiring during installation
<b>Earth/Ground</b>	Internal screw accessible when one-piece moulded lining is removed
<b>Housing</b>	Metal casting with removable metal front cover
<b>Mounting</b>	Two $\varnothing 6.6 + 0.26$ mm (0.26 in) diametrically opposed holes
<b>Conduit Entry</b>	At base of casting, tapped as indicated by ordering reference
<b>Operating Characteristics</b>	See Actuator Heads
<b>Mechanical Life</b>	See Actuator Heads
<b>Enclosure</b>	(Installed with Actuator Head in recommended manner) IP65, NEMA type 13
<b>Temperature</b>	-10° to +85°C
<b>Weight</b>	300 g max
<b>Replacement Plug-in Switching Module</b>	LR51, see below
<b>Approvals*</b>	CSA

*L25 Series Limit Switches are described on pages 64-65*

