

Series SL1 Super Limit Switch



Features

- High sensitivity
- Long service life
- Safe travel indicator, ensuring simple setting of actuator movement
- Side panel or gang-mounting capability increases application possibilities
- Snap-in terminal enclosure provides simple, positive protection
- Optional neon/LED facilitates maintenance

Description

The SL 1 series of miniature limit switches consists of precise action, long life switches enclosed in zinc die-cast housings. Their high integrity sealing and multi-optional actuator and mounting configurations afford a unique versatility of application in the field of automatic machinery control.

Construction

SL 1 switches may be side-, panel-, or gang-mounted and a facility is provided for maintaining seal integrity whatever diameter of cable is used for wiring. The zinc die-cast housing is designed to provide a rugged and secure mounting and a snap-in terminal enclosure provides simple but effective protection. An optional extra facility is a neon or LED lamp which indicates when the switch operated. A low temperature operating version of the switch using silicon sealing material is also available.

Technical Data

Mechanical

Temperature range :	-10° C to +70° C
Protective Class :	IEC – IP-67 NEMA – Type 3, 4 and 13.
Mechanical Life :	10 × 10 ⁶ 2 × 10 ⁶ for SL 1-B Types

Permissible operating speed :

SL1-a, -d, -h – 0,02 mm/sec to 0,5 metre/sec.
SL1-m, -p – 0,06 mm/sec to 0,5 metre/sec.

Electrical

Type	Electrical Ratings
SL1- (Silver contacts)	5 A res., 3 A ind., 2 A motor, 125 Vac. 5 A res., 3 A ind., 1 A motor, 250 Vac. 5 A res., 3 A ind., 8, 14, 30 Vdc. 0,5 A res., 0,1 A ind., 115 Vdc. 0,25 A res., 0,05 A ind., 230 Vdc.
SL1- K (Gold contacts)	0,1 A 125 Vac. 0,1 A, 8, 14, 30 Vdc.*

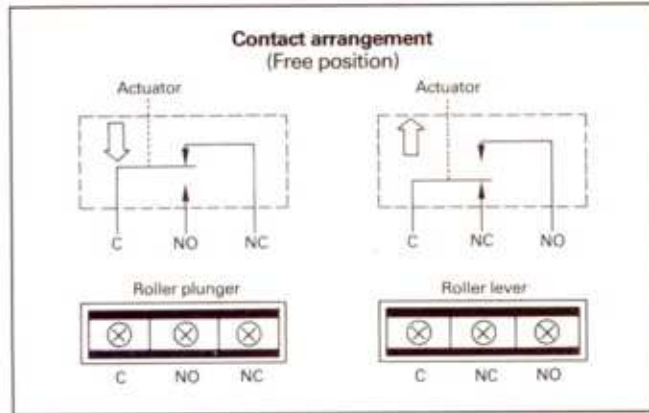
* The minimum handling rating is 1 mA-5 Vdc.

Electrical life

Silver contacts	0,3 million operations for resistive loads under 5 A at 250 Vac.
Gold contacts	5 million operations for resistive loads under 10 mA at 24 Vdc.

Circuitry

The roller lever types, in the free position, depress the basic switch plunger. This has the effect of reversing the N.C. and N.O. contact arrangements with respect to the straight or the roller plunger types as shown in the diagram.



Mounting

Panel mounting of the SL 1 switch is carried out by using the M14 bushing. The switch is secured by means of the two nuts supplied with each switch.



Side mounting is via two M4 holes. One hole is elongated to enable accurate alignment of the switch.

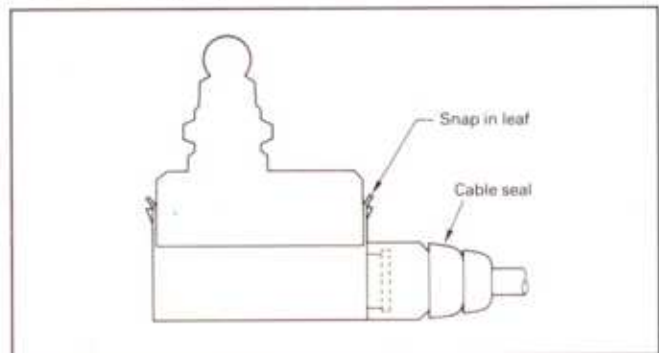


Gang mounting is achieved by using longer side-mounting screws. In the case where three or more switches are to be ganged, they should also be panel mounted.



Terminal cover

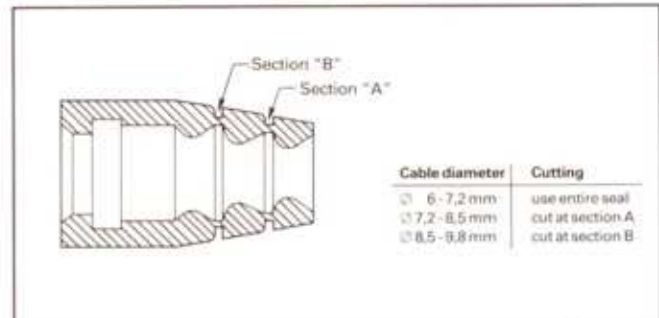
The SL 1 series terminal cover is quickly fitted or removed by means of two snap-action brackets which fit over lugs on the switch body. Cable exit to left or right of the switch is obtained by fitting the terminal cover in the appropriate direction.



Cable Seal

The cable seal will cater for cable from 6 mm to 9,8 mm dia. The seal is cut at the appropriate section to maintain seal integrity.

Cable Seal Cutting

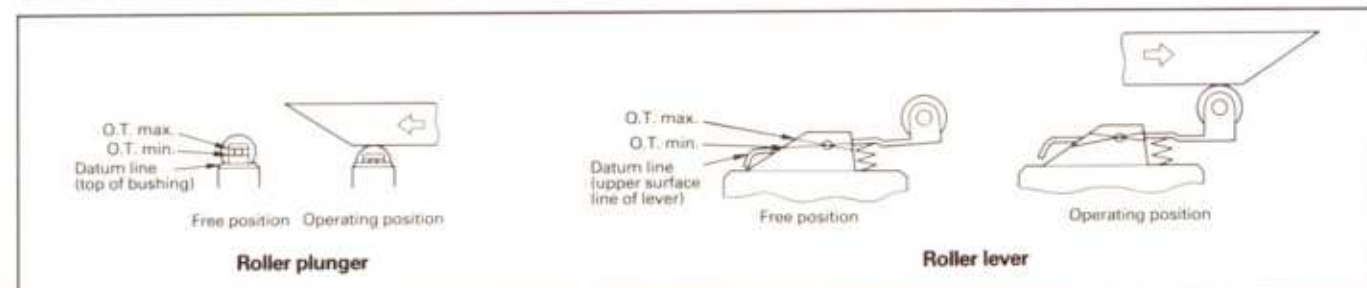


For cable diameters of 9 mm to 10,5 mm a further seal is provided (see catalogue listings).

Overtravel Setting

Each switch in the range has a safe travel indication marked on the actuator. In order to achieve correct overtravel setting, plunger types

should be set so that the upper surface of the switch bushing is in the safe travel zone; in the case of roller lever types, the thickness of the lever should be in the safe travel zone.







Catalogue Listing

SL1- ■ ■ ■ ■ ■ ■



Actuator		Extension	
A	Roller plunger	L	Low temperature use
B	Roller plunger with seal boot	EXG2	Neon indicator with prewire
D	Cross roller plunger	FXG2	LED indicator with prewired cable
H	Straight plunger	Type of contact	
P	Roller lever	None	Silver
M	Oneway roller lever	K	Gold clad, cross point

Ordering guide

	Catalogue listing	Actuator	Operating Force (max.)	Release Force (min.)	Pre-travel (max.)	Overtravel (min.)	Differential Travel (max.)	Drawing No.
	SL 1-A **	Roller plunger	1200 g	500 g	1,5 mm	3 mm	0,1 mm	1
	SL 1-B **	Roller plunger with seal boot	1200 g	500 g	1,5 mm	3 mm	0,1 mm	2
	SL 1-D **	Cross roller plunger	1200 g	500 g	1,5 mm	3 mm	0,1 mm	3
	SL 1-H **	Straight plunger	1200 g	500 g	1,5 mm	3 mm	0,1 mm	4

* For special applications SL 1 switches are available with gold contacts. To order this version add the letter "K" immediately after the actuator coding, e.g. SL 1-AK.

** A low temperature version of the SL 1 switch is also available in all standard listings. The switch is operable to -50° C in the roller plunger version and to -40° C in the roller lever version. Order this version by adding the suffix "L" to the ordering code e.g. SL 1-AL.

	Catalogue listing	Actuator	Operating Force (max.)	Release Force (min.)	Pre-travel (max.)	Overtravel (min.)	Differential Travel (max.)	Drawing No.
	SL 1-M**	One-way roller lever	400 g	80 g	2 mm	4 mm	0,3 mm	5
	SL 1-P**	Roller lever	400 g	80 g	2 mm	4 mm	0,3 mm	6
	SL 1-PA5 Cable Seal for 9 to 10,5 mm dia. cables		Delivery of this item is in quantities of 10 per pack					7

* For special applications SL 1 switches are available with gold contacts. To order this version add the letter "K" immediately after the actuator coding, e.g. SL 1-AK.

* A low temperature version of the SL 1 switch is also available in all standard listings. The switch is operable to -50° C in the roller plunger version and to -40° C in the roller lever version. Order this version by adding the suffix "L" to the ordering code e.g. SL 1-AL.

Illuminated version

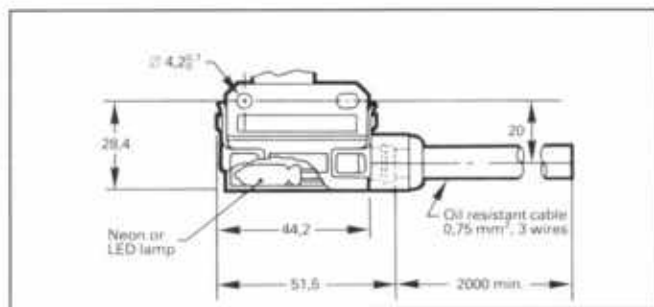
A prewired version of the SL 1 switch with indicator lamp is available in all standard listings.



Cable is 3 core 0,75 mm and 2 metres in length.

Order SL 1-EXG2 For Neon Lamp (Suitable for use on 100 Vac to 250 Vac only) Silver contacts.

Order SL 1-KFXG2 For Led Lamp (Suitable for use on 24 Vdc only) Gold clad contacts.



Dimensions

