

Limit & Foot Switches





Introduction

Salzer was established in 1985 with German Collaboration for Rotary switches to bring to the Indian Industry world class technology in Low voltage switchgear Products, coupled with dependability and excellence in service, to the delight of all end users.

We seek to understand the requirements of our clients and provide them the perfect electrical solution. All our ongoing developmental activities for innovative and value-added products are driven by this sense of responsibility.

With this in mind Salzer now introduces LIMIT & FOOT SWITCHES to the Indian and Global market.

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Limit Switches

SL 100 | 200 | 300 | 400 SERIES



SL 100 Series



SL 200 Series



SL 300 Series



SL 400 Series

Salient Features

SL 100 Series limit switches are designed to operate two circuits at a time with a single plunger. The operating head cannot be interchanged as the design is application dedicated. Transparent acrylic top cover allows inspection of the contacts.

SL 200 Series limit switches are compact type having 32mm width and offer complete interchangeability of the Enclosure and Actuator assembly throughout the series. A non-metallic plastic top cover is provided to avoid electric shock under abnormal conditions. These are oil tight and dust proof switches. In 200 Series all models are available in Snap and Normal action mechanisms.

SL 300 Series limit switches are Micro switches with pressure die-cast, aluminium housing. The Operating Head cannot be interchanged as the design is application dedicated. These Series limit switches have a special type of leaf roller lever with 60mm Long. The operating travel is much less compared to other series switches.

SL 400 Series limit switches are designed for double action in which two plungers are provided, one side. The mechanism is maintained type in which NC Contacts will open with one side plunger actuation and will remain in this condition till next actuation force is applied from the opposite side. During the actuation, the NO contact will close and vice versa. Only one specially designed, application dedicated, single pole double throw change over contact model is available in this series.

Application:

Textile Machines such as Comber, Blow Room Machinery

Textile Machine such as Draw, Ring & speed Frames. Blow Room, Carding Comber & Doffer Machines

Textile Machines such as Comber, Draw Frame, Blow Room & Carding Machines.

Textile Machines such as Speed Frame(LF 1400)



Technical Data as per Standard IEC 60947 5-1 of 1997

Technical Data	SL 100 Series Limit Switches	SL 200 Series Limit Switches	SL 300 Series Limit Switches	SL 400 Series Limit Switches
Design	4 Types of Operating Heads	8 Types of Operating Heads	4 Types of Operating Heads	Double Action
Contact Combination	2NO+2NC, DPDT Single Break	1NO+1NC, SPDT, Double Break	1NO+1NC, SPDT Single Break	
Mechanism	Snap Action	Snap / Normal Action	Snap Action	
Current & Voltage Rating	5A, 250V AC	10A, 500V AC	10A, 440V AC	10A, 440V AC
Cable Entry	G3/8 BSP - 2 Nos.	G 3/8 BSP - 3 Nos. Pg 9 - 3 Nos. M18x1.5 - 3 Nos.	1/2" BSP- 1 No. Pg 9 - 1 No.	1/2" BSP - 1 No. Conductors
Terminal Capacity Solid/stranded	2.5sq mm	2.5sq.mm	2.5 sq.mm	2.5 sq.mm
Electrical Protection (IP)	IP4X	IP65	IP4X	IP4X
Operating Force	900 Grams (max)	450 600g (max) 250 400g (max) SL 206, 208	900g (max)- SL 301, 302 600g (max)- SL 303	450 - 600g
Housing	Aluminium Pressure Die Casting			

SL **100** SERIES

SI Code	Wiring Diagram	Travel (mm& Degree)	Execution
SL101H Snap Action	<p>2 NO + 2 NC</p>		<p>Horizontal Roller Actuator</p>
SL102V Snap Action	<p>2 NO + 2 NC</p>		<p>Vertical Roller Actuator</p>

SL Code	Wiring	Travel (mm& Degree)	Execution
SL103LS Snap Action	<p>2 NO + 2 NC</p>		<p>Long Stem Horizontal Roller Actuator</p>
SL 104B Snap Action	<p>2 NO + 2 NC</p>		<p>Bellow Actuator</p>

SL 200 SERIES

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 201 Snap Action	<p>1 NO + 1 NC</p>		<p>Ball Actuator</p>
SL 201N NormalAction	<p>1 NO + 1 NC</p>		

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 202 Snap Action	1 NO + 1 NC 		Roller Actuator
SL 202N Normal Action	1 NO+ 1 NC 		
SL 203 Snap Action	1 NO + 1 NC 		Roller Lever Actuator
SL 203N Normal Action	1 NO + 1 NC 		
SL 204 Snap Action	1 NO + 1 NC 		Slipping Roller Lever Actuator
SL 204N Normal Action	1 NO + 1 NC 		
SL 205 Snap Action	1 NO + 1 NC 		Rotating Roller Lever Actuator
SL 205N Normal Action	1 NO + 1 NC 		

SL Code	Wiring	Travel (mm & Degree)	Execution
SL 206 Snap Action	1 NO + 1 NC 	0° 10° 20° 30° 	Spring Needle Actuator
SL 206N Normal Action	1 NO + 1 NC 	0° 10° 20° 30° 	
SL 207/1 Snap Action	1 NO + 1 NC 	0 1 2 3 4 5 5.5 	Angular Roller Lever Actuator (Right Side)
SL 207/1N Normal Action	1NO + 1NC 	0 1 2 3 4 5 6 	
SL 207/2 Snap Action	1NO + 1NC 	0 1 2 3 4 5 5.5 	Angular Roller Lever Actuator (Left Side)
SL 207/2N Normal Action	1NO + 1NC 	0 1 2 3 4 5 6 	

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 208 Snap Action	1 NO + 1 NC 		Long Roller Lever Actuator
SL 208N Normal Action	1 NO + 1 NC 		

SL 300 SERIES

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 301P Snap Action	1 NO + 1 NC 		Plunger Actuator
SL 302H Snap Action	1 NO + 1 NC 		Horizontal Roller Actuator
SL 302V Snap Action	1 NO + 1NC 		Vertical Roller Actuator

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 303 Snap Action	<p>1 NO+1 NC</p>		<p>Angular Leaf Roller Lever Actuator</p>

SL 400 SERIES

SI Code	Wiring	Travel (mm& Degree)	Execution
SL 401 Snap Action	<p>1 NO+1 NC</p>		<p>Double Plunger Actuator</p>

NOTES

SL 600 SERIES



SL 600 Series



SL 602 Series



SL 603 Series



SL 609 Series

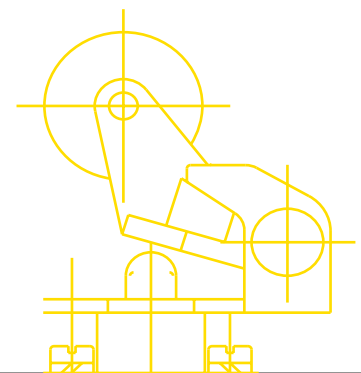
Salient Features

SL 600 Series Limit Switches are designed to having 34mm width, with specially designed head which rotates in steps of 90° in are available with Steel Rollers for flexibility in four directions and allows actuating rod from any of the 4 directions. The switches are actuated by push rod, normal roller lever, angular roller lever, crank lever etc. The roller is made of high grade wear resistant moulded phenolic material. In addition, Fork type in Line Rollers, Fork type Offset Rollers, 76mm Long Roller Lever and 32.0 to 82.5mm Adjustable Roller Lever Operating Heads..

SL 600 Series Limit Switch Enclosure are interchangeable in types SL 601, SL 602, SL 603, SL 604, SL 607 and SL 608. The Operating Heads of SL 600 Series Limit Switches Like Rotating Roller Lever, Fork Type in Line Rollers, Fork Type Offset Rollers, 76mm Long Roller Lever are interchangeable with the enclosure for SL 605. The Boxes and Actuator Assemblies of SL 606 and SL 609 are not interchangeable with the rest of the SL 600 Series.

SL 600 Series Limit Switches offers a variety of Degree of Protection from IPXX to IP65 and also a range of contact arrangement to provide operational flexibility and economics.

Application: Injection Moulding Machines, Hoists & Cranes Machine Tools, Textile Machines and SPM's.



SL 600 SERIES

Technical Data as per Standard IEC 60947 5-1 of 1997

Technical Data	SL 600 Series Limit Switches						
Utilisation category	AC 15 and DC 13						
Design	13 Types of Operating Heads						
Contact Combination	1 NO+1NC, Single Pole, Double Throw, Double Break						
Mechanism	Snap Action or Normal Action or Extended Stroke or Overlapping						
Current & Voltage Rating	10A, 500V AC, or 10A, 600V DC						
Thermal Current (Ith)	10A						
Permissible Ambient Temperature	-40 Degree C to +85 Degree C						
Frequency of Operation	6000 Cycles per hour						
Mechanical Life	15 Million Switching Cycles						
Contact Life AC	Breaking Current (Amps.)		1	3	6	10	
	Switching Cycles in Million	Normal Action	15	5	2.5	1	
		Snap Action	11	4	1.8	0.7	
Making & Breaking Capacity	AC 15 duty, ie at 40-60 Hz, P.F. of 0.3 (lag) to 1						
	Voltage V (AC)	Rated Operating Current(Ie)Amps		Rated Making Capacity (Amps)		Rated Breaking Capacity (Amps)	
		NA	SA	NA	SA	NA	SA
	24	6	3	90	30	60	30
	120	6	3	90	30	60	30
	240	6	3	90	30	60	30
	380	6	3	90	30	60	30
480	4	3	90	30	60	30	
500	4	3	90	30	60	30	
Cable Entry	M20 x 1.5-3 Nos or 1/2" NPT						
Terminal Capacity	2.5 Sqmm Solid / Stranded Conductors						
Protection	IP XX with Open Contacts, IP 4X with Protective Cover IP 43 with Aluminum Enclosure IP 65 with Aluminum Enclosure incorporating Seals						
Operating Force	600 Grams to 1200 Grams						
Housing	Aluminum Pressure Die Casting						
Application	Injection Moulding Machines, Hoists & Cranes. Machine Tools, Textile Machines and SPM's						

Spares

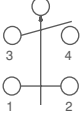
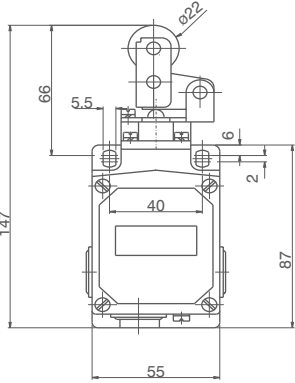
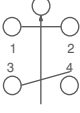

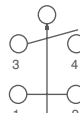
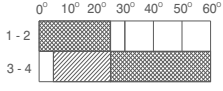
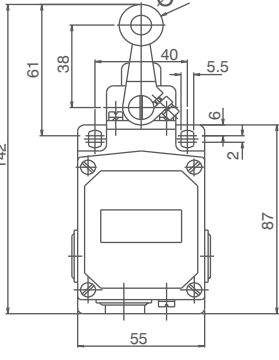
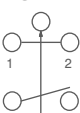
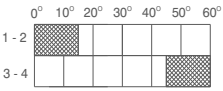
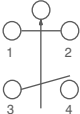
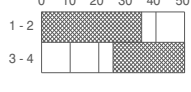
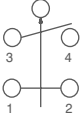
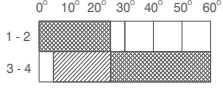
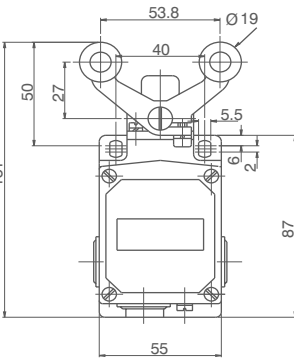
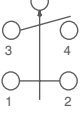

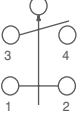
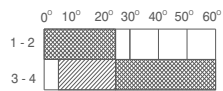
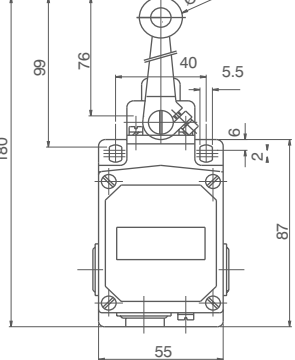
Contact Block	Complete Box	Operating Head	Operating Lever
SL 600	SL 601BH	SL 600NLR	SL 700L1
SL 600N	SL 605BH	SL 600SLR	SL 700L2
SL 600NE	SL 607BH	SL 600ALR	SL 700LA
SL 600NOL	SL 609BH	SL 600AR	SL 700LF & SL 700LFO

Add suffix before B "N" for Normal action contacts, "NE" for Extended stroke contacts, "NE" for Overlapping contacts

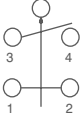
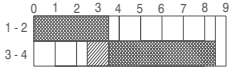
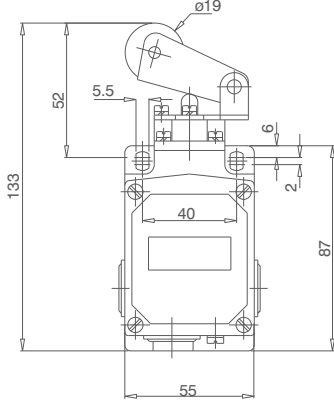
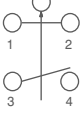
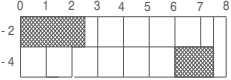
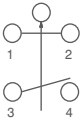
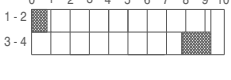
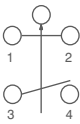
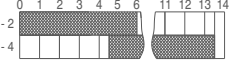
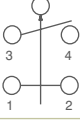
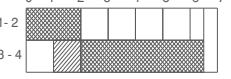
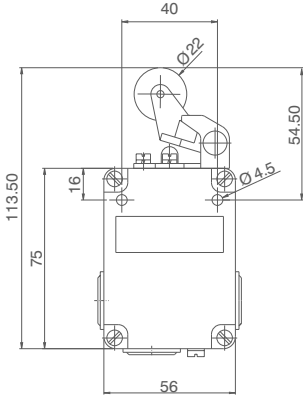
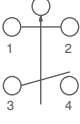
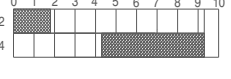
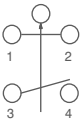
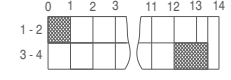
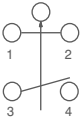
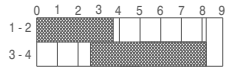
SL Code	Wiring	Travel (mm& Degree)	Execution
SL 600 Snap Action	1 NO + 1 NC 		Only Push Rod Operated, without Housing IP XX
SL 600 N Normal Action	1 NO + 1 NC 		Only Push Rod Operated, Without Housing IP XX
SL 600 NE Extended Stroke	1 NO + 1 NC 		
SL 600 NOL Over Lapping	1 NO + 1 NC 		
SL 601 Snap Action	1 NO + 1 NC 		Push Rod Operated IP 65
SL 601N Normal Action	1 NO + 1 NC 		
SL 601NE Extended Stroke	1 NO + 1 NC 		
SL 601NOL Over Lapping	1 NO + 1 NC 		

Add suffix 'P' for Switches with Plastic Protective Covers for IP 4x protection ie. PC 600P, PC 600 NP etc.,

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 602 Snap Action	1 NO + 1 NC 		Horizontal Roller Actuator IP 65
SL 602N Normal Action	1 NO + 1 NC 		
SL 602NE Extended Stroke	1 NO + 1 NC 		
SL 602NOL Over Lapping	1 NO + 1 NC 		
SL 603 Snap Action	1 NO+1 NC 		Roller Lever Actuator IP 65
SL 603N Normal Action	1 NO+1 NC 		
SL 603NE Extended Stroke	1 NO+1 NC 		
SL 603NOL Over Lapping	1 NO+1 NC 		

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 604 Snap Action	1 NO+1 NC 		In Die Cast Aluminium Housing with Slipping Roller Lever Actuator IP65 
SL 604N Normal Action	1 NO+1 NC 		
SL 605 Snap Action	1 NO+1 NC 		In Die Cast Aluminium Housing, with Rotating Roller Lever Actuator IP65 
SL 605N Normal Action	1 NO+1 NC 		
SL 605NOL Over Lapping	1 NO+1 NC 		
SL 605F Snap Action	1 NO+1 NC 		In Diecast Alum Housing, with Fork Type in line Roller Lever IP65 
SL 605FO Snap Action	1 NO+1 NC 		
SL 605L Snap Action	1 NO+1 NC 		In Diecast Aluminium Housing, With 76mm Rotating Roller Lever Actuator IP 65 

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 605A Snap Action	1 NO+1 NC 		In Die Cast Aluminium Housing, with Rotating Adjustable Roller Lever IP 65
SL 606 Snap Action	1 NO + 1 NC 		In Die Cast Aluminium Housing, with Spring Needle Actuator IP65
SL 606N Normal Action	1 NO + 1 NC 		
SL 607 Snap Action	1 NO + 1 NC 		In Die Cast Aluminium Housing, with Angular Lever Actuator IP 65
SL 607N Normal Action	1 NO + 1 NC 		
SL 607NE Extended Stroke	1 NO + 1 NC 		
SL 607NOL Over Lapping	1 NO + 1 NC 		

SL code	Wiring	Travel (mm & Degree)	Execution
SL 608 Snap Action	1 NO + 1 NC 		<p>In Die Cast Aluminium Housing, with Long Roller Lever Actuator IP65</p> 
SL 608N Normal Action	1 NO + 1 NC 		
SL 608NE Extended Stroke	1 NO + 1 NC 		
SL 608NOL Over Lapping	1 NO + 1 NC 		
SL 609 Snap Action	1 NO + 1 NC 		<p>In Die Cast Aluminium Housing, With Short Roller Lever Actuator IP 43</p> 
SL 609N Normal Action	1 NO + 1 NC 		
SL 609NE Extended Stroke	1 NO + 1 NC 		
SL 609NOL Over Lapping	1 NO + 1 NC 		

SL 700 SERIES



SL 702 Series



SL 705 Series



SL 709 Series

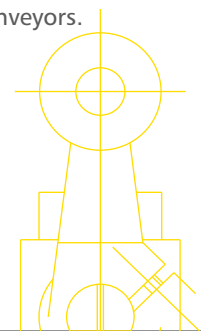
Salient Features

SL 700 Series limit switches with "Set Back" head design and with Shorter, Stronger mounting screws to provide greater structural rigidity between the operating head and the switch. The Aluminium pressure die cast enclosure adds to the strength and this range is able to handle higher operating force.

SL 700 Series Limit Switches are completely oil tight, water tight and dust proof, with a shaft seal between the lever and the head. Internal seal between the head and the enclosure and an external seal between the cover and the body. The Contact structure has solid thermoplastic barriers between terminals to prevent short circuiting. Terminals have ample wiring space for easier wiring and are serrated to give a firm grip to the straight wire. The complete unit can be removed and replaced without the risk of changing the operating characteristics of the limit switches.

SL 700 Series Limit Switches are available with a variety of operating heads to meet various applications. Rotary Lever and Fork lever operating heads may be used on maintained type contacts.

Application: Injection Moulding Machines, Hoists & Cranes. Machine Tools, Textile Machines and Conveyors.



Technical Data as per Standard IEC 60947 5-1 of 1997

Technical Data	SL 700 Series Limit Switches								
Design	11 Types of Operating Heads								
Contact Combination	1NO+1NC, Single Pole, Double Throw, Double Break								
Mechanism	Snap Action								
Current & Voltage Rating	10A, 600V AC, 250V DC								
Utilization Category	AC15 and DC 13 as per IEC 60947-5-1 of 1997								
Thermal Current (Ith)	10A								
Insulation Voltage	600V AC, 250V DC								
AC 15 Rating	6A at 120V, 3A at 240V, 1.5A at 480V, 1.2A at 6000V								
DC 13 Rating	0.5A at 125V, 0.3A at 250V								
Frequency of Operation	2500 operations per hour								
Mechanical Life	20 x 10 ⁶ Operations								
Cable Entry	¾" UNF - 1 No.								
Terminal Capacity	2.5 Sqmm Solid / Stranded								
Protection	IP 65 for all 700 Series								
Housing	Aluminium Pressure Die Casting								
Operating Force	<table border="1"> <tr> <td>0.285 Kg.</td> <td>SL 706/1</td> </tr> <tr> <td>0.500 Kg.</td> <td>SL 705M, SL 707/2M, SL 708M, SL 709M, SL 706/2M</td> </tr> <tr> <td>1.000 Kg.</td> <td>SL 705, SL 706/2, SL 707/1, SL 707/2, SL 708, SL 709</td> </tr> <tr> <td>2.000 Kg.</td> <td>SL 701, SL 702, SL 703, SL 704</td> </tr> </table>	0.285 Kg.	SL 706/1	0.500 Kg.	SL 705M, SL 707/2M, SL 708M, SL 709M, SL 706/2M	1.000 Kg.	SL 705, SL 706/2, SL 707/1, SL 707/2, SL 708, SL 709	2.000 Kg.	SL 701, SL 702, SL 703, SL 704
0.285 Kg.	SL 706/1								
0.500 Kg.	SL 705M, SL 707/2M, SL 708M, SL 709M, SL 706/2M								
1.000 Kg.	SL 705, SL 706/2, SL 707/1, SL 707/2, SL 708, SL 709								
2.000 Kg.	SL 701, SL 702, SL 703, SL 704								
Application	Injection Moulding Machines, Hoists & Cranes. Machine Tools, Textile Machines and Conveyers.								

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 701 Snap Action	<p>INO+INC</p>		<p>Top Plunger (Push button Adjustable) Spring Return</p>
SL 702	<p>INO+INC</p>		<p>Top Push Roller Spring Return</p>

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 703 Snap Action	<p>INO+INC</p>		<p>Side Plunger (Push Button Adjustable) Spring Return</p>
SL 704 Snap Action	<p>INO+INC</p>		<p>Side Push Roller Spring Return</p>
SL 705 Snap Action	<p>INO+INC</p>		<p>38 mm Long, Rotating Roller Lever Spring Return / Maintained</p>
SL 705M Snap Action	<p>INO+INC</p>		
SL 706/1 Snap Action	<p>INO+INC</p>		<p>Nylon Cat Whisker Spring Return</p>

SL Code	Wiring	Travel (mm& Degree)	Execution
SL706/2 Snap Action	INO+INC 		Steel Cat Whisker Spring Return / Maintained
SL 706/2M Snap Action	INO+INC 		
SL707/1 Snap Action	INO+INC 		Fork Type Inline Roller Lever Spring Return/Maintained
SL 707/1M Snap Action	INO+INC 		
SL 707/2 Snap Action	INO+INC 		Fork Type Offset Roller Lever Spring Return / Maintained
SL 707/2M Snap Action	INO+INC 		
SL 708 Snap Action	INO+INC 		76mm Long Rotating Roller Lever Spring Return / Maintained
SL 708M Snap Action	INO+INC 		

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 709 Snap Action	INO+INC 		Rotating Adjustable Roller Lever (32mm-82.5mm) Spring Return / Maintained
SL 709M Snap Action	INO+INC 		

NOTES

SL 900 SERIES



SL 901N/902N Series



SL 902N-3A Series



SL 902N-7A Series

Salient Features

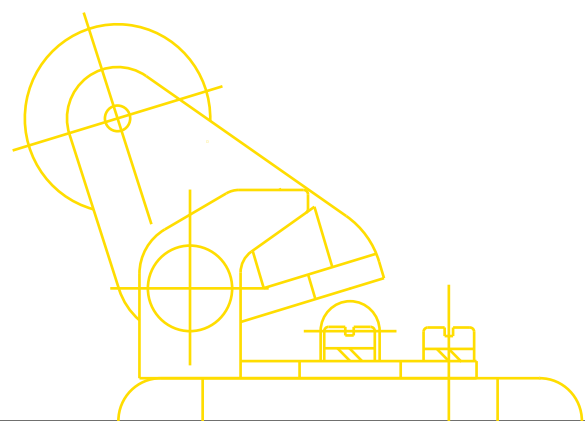
SL 900Series limit switches are designed to having 34mm width, Heavy Duty Range in Aluminium Pressure die cast enclosures.

SL 900 Series Limit switches are available in Two type of contact element are 1NO+2NC and 2NO+1NC with 3 sets of contacts.

SL 900 Series Limit Switches Enclosure and actuator assembly are interchangeable for Models SL 901N-1A, SL 901N-3A and SL 901N-7A.

SL 900Series Limit Switch Operating Heads are Normal Roller Lever, Angular Roller Lever and Heavy duty Horizontal Roller.

Series Limit Switches offers a variety of Degree of Protection from IPXX to IP 65.



SL 900 SERIES

Technical Data as per Standard ICE 60947 5-1 of 1997

Technical Data	SL 900 Series Limit Switches				
Design	4 Types of Operating Heads				
Contact Combination	1 NO+2NC, 2NO+1NC				
Mechanism	Normal Action or Overlapping				
Current & Voltage Rating	10A, 500V AC				
Thermal Current (Ith)	10A				
Permissible Ambient Temperature	40 Degree C to 85 Degree C				
Frequency of Operation	6000 Cycles per hour				
Mechanical Life	15 Million Operations				
Contact Life AC	Breaking Current Amps.	1	3	6	10
	Switching Cycles in Million Normal Action	15	25	5	1
Making and Breaking capacity	AC 15 Duty ie 40-60 HZ, P.F. of 0.3 log to 1				
	Operating Voltage V	Rated Operating Current(Ie)Amps Normal Action	Rated Making Capacity(Amp) Normal Action	Rated Breaking Capacity(Amp) Normal Action	
	24	6	90	60	
	120	6	90	60	
	240	6	90	60	
	380	6	90	60	
	480	4	90	60	
	500	4	90	60	
Cable Entry	½" BSP & M20 x 1.5				
Terminal Capacity	2.5 Sqmm Solid / Stranded Conductors				
Protection	IP XX with Open Contacts IP 4X with Protective Cover IP 43 with Aluminum Enclosure				
Operating Force	750 Grams to 1000 Grams				
Housing	Aluminum Die Casting				
Application	Injection Moulding Machines, Hoists & Cranes. Machine Tools, Textile Machines and Conveyers.				

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 901N Normal Action	1 NO + 2 NC 		Only Push Rod Operated, No Aluminium Housing IP XX
SL 901NOL Over Lapping	1 NO + 2 NC 		
SL 902N Normal Action	2 NO + 1 NC 		Only Push Rod Operated, No Aluminium Housing IPXX
SL 902NOL Over Lapping	2 NO + 1 NC 		
SL 901N-1A Normal Action	1 NO + 2 NC 		Complete in Die Cast Aluminium Housing Push Rod Operated IP 43
SL 901N-1AOL Over Lapping	1 NO + 2 NC 		
SL 902N-1A Normal Action	2 NO + 1 NC 		
SL 902N-1AOL Over Lapping	2 NO + 1 NC 		

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 901N-3A Normal Action	1 NO + 2 NC 		<p>Complete in Die Cast Aluminium Housing With Normal Roller Lever Actuator IP 43</p>
SL 901N-3AOL Over Lapping	1 NO + 2 NC 		
SL 902N-3A Normal Action	2 NO + 1 NC 		
SL 902N-3AOL Over Lapping	2 NO + 1 NC 		
SL 901N-7A Normal Action	1 NO + 2 NC 		<p>Angular Roller Lever Actuator IP43</p>
SL 901N-7AOL Over Lapping	1 NO + 2 NC 		
SL 902N-7A Normal Action	2 NO + 1 NC 		
SL 902N-7AOL Over Lapping	2 NO + 1 NC 		

SL Code	Wiring	Travel (mm& Degree)	Execution
SL 901N-10A Normal Action	1 NO + 2 NC 		<p>Complete in Die Cast Aluminium Housing with Horizontal Roller Actuator (Heave Duty) IP 43</p>
SL 901N-10AOL Over Lapping	1 NO + 2 NC 		
SL 902N-10A Normal Action	2 NO + 1 NC 		
SL 902N-10AOL Over Lapping	2 NO + 1 NC 		

Spares

Contact Block Code No.	Complete Box Code No.	Operating Head Code No.
SL 901N	SL 901NB	SL 600NLR (Normal Roller Lever)
SL 902N	SL 902NB	
SL 901NOL	SL 901NOLB	SL 600ALR (Angular Roller Lever)
SL 902NOL	SL 902NOLB	

NOTES

SL 1500 SERIES



SL 1500-1A Series



SL 1502-2AH Series



SL 1503-1AR Series

Salient Features

SL 1500 Series Precision Limit Switches available in 16 types are compact, reliable durable and accurate having 1NO+1NC (Single Pole) and 2NO+2NC (Double pole) change over contacts to facilitate selection and application for your specific needs.

- Movable contact assembly with two coiled springs provides quick make and quick break action.
- Absence of zero contact pressure ensures not-teasing action even with an extremely slow operation motion.
- Light weight phosphor bronze contact carrier with silver contacts, assure long life on high load applications.
- Silver contacts, definite wiping action and high contact pressure assure reliability on dry circuit applications.
- Phenolic moulded case provides great physical strength, high arc resisting capacity and semi dust proof.
- High degree of versatility as wide variety of operating heads available with individual mounting.

Push Button Plunger: The oil tight constructed plunger mechanism prevents any ingress of oil including coolant. The position of switch mounting is adjustable with the two lock nuts provided.

Roller Plunger: The Similar oil tight constructed roller plunger either inline with the contact block or right angles to it, allows the cam or any other devices to operate in any of the four directions.

Roller Lever: Roller Lever with a steel roller mounted on either top and right hand side or top and left hand side provides operation in both sides.

Six Inch Lever: Operators provide either top and right hand mounting or top and left hand mounting. The lever may be cut or bent to any desired length or shape to satisfy the user requirements.


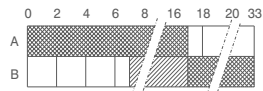
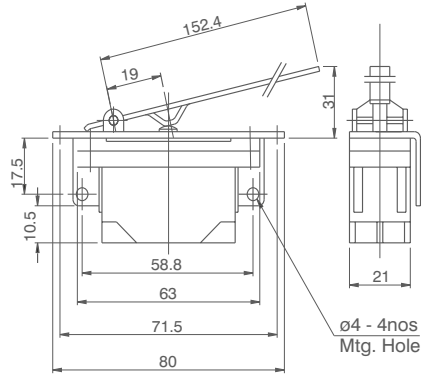
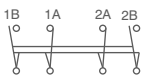
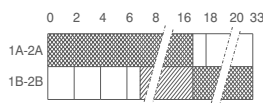

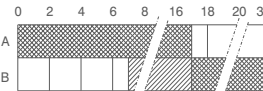
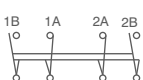
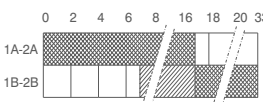


Technical Data as per Standard IEC 60947 5-1 of 1997

Technical Data	SL 1500 Series Limit Switches
Design	7 Types of Operating Heads
Contact Combination	Single Pole - 1NO+1NC, Double Pole - 2NO+2NC
Mechanism	Snap Action
Electrical Rating	10A, 600 V AC
Utilization Category	AC 15 and DC 13
Frequency of Operation	2500 Operations / hours(Max)
Terminal Capacity	2.5 sq.mm Solid / Stranded Conductors
Electrical Protection	Dust Proof without operator IP 65 from the top for plunger type IP 4X from the top for lever type
Mechanical Life	20 Millions operations without operator & 10 Millions operations with operator
Operating Force	0.400 Kg (min) & 0.600 Kg (max)
Application	Machine Tools with different attachments, contact blocks for foot switches and contact blocks for micro adjustable limit switches

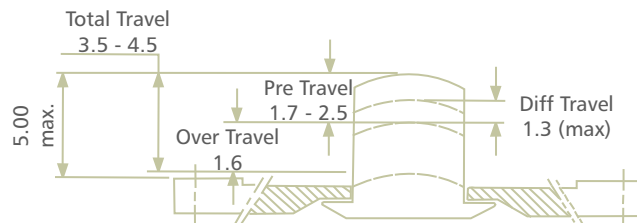
SL Code	Wiring	Travel (mm& Degree)	Execution
SL 1500-1A Snap Action	1NO + 1NC 		Only Contact Block without Operator - Dust Proof
SL 1500-2A Snap Action	2NO + 2NC 		
SL 1501-1A Snap Action	1NO + 1NC 		Top Push Button Operator IP65 From The Top
SL 1501-2A Snap Action	2NO + 2NC 		

SL Code	Wiring	Travel (mm& Degree)	Execution
SL1502-1AH Snap Action	1NO + 1NC 		Top Push Roller Operator Horizontal IP 65 From The Top
SL 1502-2AH Snap Action	2NO + 2NC 		
SL 1502-1AV Snap Action	1NO + 1NC 		Top Push Roller Operator Vertical IP 65 From The Top
SL 1502-2AV Snap Action	2NO + 2NC 		
SL 1503-1AL Snap Action	1NO + 1NC 		Roller Lever Operator Left Hand Mounting IP 4X From The Top
SL 1503-2AL Snap Action	2NO + 2NC 		
SL 1503-1AR Snap Action	1NO + 1NC 		Roller Lever Operator Right Hand Mounting IP 4X From The Top
SL 1503-2AR Snap Action	2NO + 2NC 		

SL Code	Wiring	Travel (mm& Degree)	Execution
SL1504-1AL Snap Action	1NO + 1NC 		<p>Six Inch Lever Operator Left Hand Mounting IP 4X From The Top</p> 
SL 1504-2AL Snap Action	2NO + 2NC 		
SL 1504-1AR Snap Action	1NO + 1NC 		
SL 1504-2AR Snap Action	2NO + 2NC 		

Operational Current & Voltage

Ac 15 Rating	Single Pole (1no+1nc)	Double Pole (2no+2nc)	Dc 13 Rating	Single Throw	Double Throw	Single Throw	Double Throw
120 V	6.0 A	4.5 A	125 V	2.2 A	0.5 A	1.1 A	0.2 A
240 V	3.0 A	2.2 A	250 V	1.1 A	0.3 A	0.5 A	0.1 A
480 V	1.5 A	1.2 A	600 V	0.4 A	0.1 A	0.2 A	---
600 V	1.2 A	0.9 A					



The repeat accuracy of individual switch rip point is such that after millions of operations they do not drift more than 0.01mm.

Selection Chart

Description	Catalogue Code
1NO + 1NC Contact Block	SL 1500-1A
2NO + 2NC Contact Block	SL 1500-2A
1NO + 1NC Contact Block with Top Push Button Operator	SL 1501-1A
1NO + 1NC Contact Block with Top Push Roller Operator in-Line with Contact Block	SL 1502 - 1AH
1NO + 1NC Contact Block with Top Push Roller Operator at Right angles to Contact Block	SL 1502 - 1AV
1NO + 1NC Contact Block with Roller Lever Operator (Left Hand Mounting)	SL 1503 - 1AL
1NO + 1NC Contact Block with Roller Lever Operator (Right Hand Mounting)	SL 1503 - 1AR
1NO + 1NC Contact Block with 6 inch Lever Operator (Left Hand Mounting)	SL 1504 - 1AL
1NO + 1NC Contact Block with 6 inch Lever Operator (Right Hand Mounting)	SL 1504 - 1AR

Spares

Operator Assembly	Catalogue Code
Top push button Operator	SL 1500 TPB
Top Push roller assembled in line with contact block	SL 1500 TRH
Top push roller assembled at right angles to contact block	SL 1500 TRV
Roller lever, right hand mounting	SL 1500 RLR
Roller lever, left hand mounting	SL 1500 RLL
Six inch lever, right hand mounting	SL 1500 SLR
Six inch lever, left hand mounting	SL 1500 SLL

* For Switches with 2NO + 2NC Contact Block replace with 2A instead of 1A to the Catalogue Code.

Foot Switches



Foot Switches

SFFS **1** | **2** | **3** | **3M** | **4** SERIES



SFFS1 SERIES



SFFS2/H1G SERIES



SFFS2/H1S SERIES



SFFS3 SERIES



SFFS4 SERIES

Technical Data As Per IEC 60947-5-1 of 1997

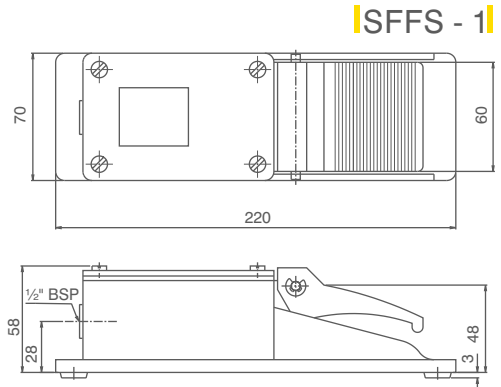
Type of Foot Switch	SFFS-1	SFFS-2	SFFS-3	SFFS-3M	SFFS-4
Type of Contact Block	SL 600	SL 600 or SL 1500	Micro Switch	Micro Switch	SL 600
Utilization Category	AC 15 DC 13	AC 15 DC 13	AC 15 DC 13	AC 15 DC 13	AC 15 DC 13
Thermal Current I _{th}	10 A	10 A	10 A	10 A	10 A
Insulation Voltage U _i	600V AC	600V AC	250V AC	125V AC	600V AC
Contact Combination	1NO+1NC SPDT - DB**	1NO+1NC or 2NO+2NC	1NO+1NC SPDT - SB*	1NO+1NC SPDT - SB*	1NO+1NC SPDT - DB**
Terminal Capacity	2.5 Sq.mm	2.5 Sq.mm	2.5 Sq.mm	2.5 Sq mm	2.5 Sq.mm
Enclosure Category	IP 65	IP 65	IP 43	IP 43	IP 65
Mech & Electrical Life	5 x 10 ⁶	5 x 10 ⁶	5 x 10 ⁶	5 x 10 ⁶	5 x 10 ⁶
Cable Entry	1/2" BSP	1" BS Conduit	With Cable	With Cable	3/4 " UNF
Weight in Kgs	0.900 Switch Only 2.100 With Shield	1.600 Plain Cover 2.000 With Guard 2.800 With Shield	0.500 Switch Only 1.500 With Shield	0.500 Switch Only 1.500 With Shield	1.600 Switch Only 3.700 With Shield

* SPDT - SB → Single Pole Double Through, Single Break

** SPDT - DB → Single Pole Double Through, Double Break

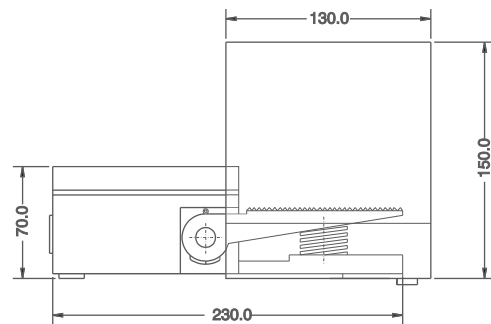
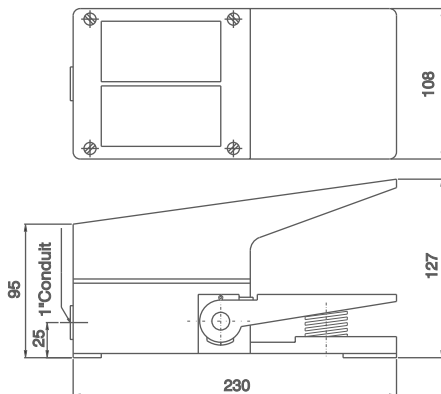
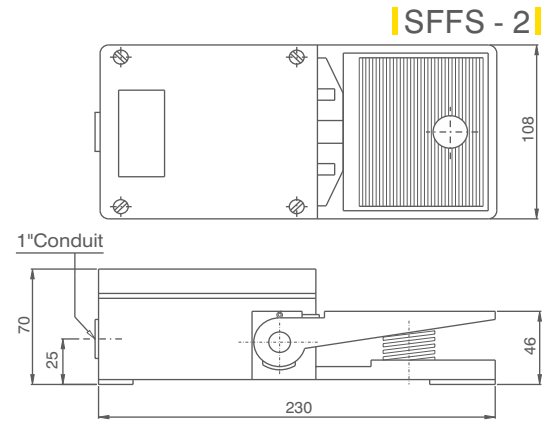
Compact Foot Switch **SFFS- 1**

- One Contact Block of 1NO + 1NC, and is Provided with a Horizontal Plunger Actuated by a Pedal.
- Rubber Cushion provided at the bottom of the housing enable to place the Switch anywhere with vibration free performance.
- Steel top cover is provided with oil sealing gasket so as to avoid accidental damages to the Switch.
- A gasket between housing and cover, and a friction type seal on the actuator plunger assure water and oil tight performance. These Switches are also available with Sheet Metal Shield (SFFS-1/WSD)



Heavy Duty Foot Switch **SFFS- 2**

- Accommodate two contact blocks of either SL 600 Series or SL1500 Series limit Switch.
- Three Point Mounting Bosses for Mounting on the Floor and four rubber cushions are provided according to customers choice.
- When two contact blocks are supplied, adjustment of the lever assembly provides simultaneous or differential tripping of the contact blocks.
- A safety spring within the enclosure assures treadle spring return in case of the main spring under the treadle gets damaged.
- Three types of top covers are available as plain cover, guard and shield.
- The selection of the cover depends on the degree of protection desired, to prevent accidental treadle operation.



SFFS Series Foot Switches without Guard

SFFS 2/H1	H1 - PC 600 Limit Switch Element 1NO + 1NC (Single element)
SFFS /H11	H11 - PC 600 Limit Switch Element 1NO + 1NC (Two element)
SFFS /H11Z	H11Z - PC 600 Limit Switch Element 1NO + 1NC (Two element) 3 position Foot switch
SFFS /P1	P1 - Precision Limit Switch Element 1NO+1NC (Single element)
SFFS /P11	P11 - Precision Limit Switch Element 1NO+1NC (Two element)
SFFS 2/P11Z	P11Z - Precision Limit Switch Element 1NO+1NC (Two element) 3 position Foot switch
SFFS 2/P2	P2 - Precision Limit Switch Element 2NO+2NC (Single element)
SFFS 2/P22	P22 - Precision Limit Switch Element 2NO+2NC (Two element)
SFFS 2/P22Z	P22Z - Precision Limit Switch Element 2NO+2NC (Two element) 3 position Foot switch

SFFS Series Foot Switches with Guard

SFFS 2/H1G	H1G - PC 600 Limit Switch Element 1NO + 1NC (Single element) with Guard
SFFS 2/H11G	H11G - PC 600 Limit Switch Element 1NO + 1NC (Two element) with Guard
SFFS 2/H11GZ	H11GZ - PC 600 Limit Switch Element 1NO + 1NC (Two element) 3 position Foot switch with Guard
SFFS 2/P1G	P1G - Precision Limit Switch Element 1NO+1NC (Single element) with Guard
SFFS 2/P11G	P11G - Precision Limit Switch Element 1NO+1NC (Two element) with Guard
SFFS 2/P11GZ	P11GZ - Precision Limit Switch Element 1NO+1NC (Two element) 3 position Foot switch with Guard
SFFS 2/P2G	P2G - Precision Limit Switch Element 2NO+2NC (Single element) with Guard
SFFS 2/P22G	P22G - Precision Limit Switch Element 2NO+2NC (Two element) with Guard
SFFS 2/P22GZ	P22GZ - Precision Limit Switch Element 2NO+2NC (Two element) 3 position Foot switch with Guard

SFFS Series Foot Switches with Shield

SFFS 2/H1S	H1S - PC 600 Limit Switch Element 1NO + 1NC (Single element) with SHIELD
SFFS 2/H11S	H11S - PC 600 Limit Switch Element 1NO + 1NC (Two element) with SHIELD
SFFS 2/H11SZ	H11SZ - PC 600 Limit Switch Element 1NO + 1NC (Two element) 3 position Foot switch with SHIELD
SFFS 2/P1S	P1S - Precision Limit Switch Element 1NO+1NC (Single element) with SHIELD
SFFS 2/P11S	P11S - Precision Limit Switch Element 1NO+1NC (Two element) with SHIELD
SFFS 2/P11SZ	P11SZ - Precision Limit Switch Element 1NO+1NC (Two element) 3 position Foot switch with SHIELD
SFFS 2/P2S	P2S - Precision Limit Switch Element 2NO+2NC (Single element) with SHIELD
SFFS 2/P22S	P22S - Precision Limit Switch Element 2NO+2NC (Two element) with SHIELD
SFFS 2/P22Sz	P22Sz - Precision Limit Switch Element 2NO+2NC (Two element) 3 position Foot switch with SHIELD

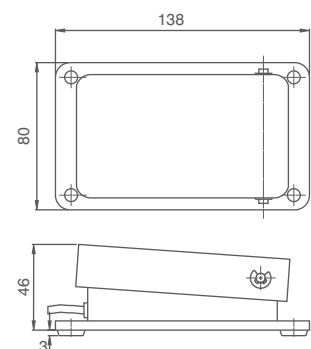
Domestic Foot Switch **SFFS-3**

Small Micro Switch for press to ON and release to OFF operations. Another model of press to ON and press to OFF model is also available on specific requirements.

Two meter long cable is connected with the Switch for easy wiring without dismantling the housing.

Four Rubber bushes are provided for good support on earth and a cable gland is provided for gripping the cable.

SFFS-3/SFFS-3 PO



Mini Foot Switch SFFS-3M

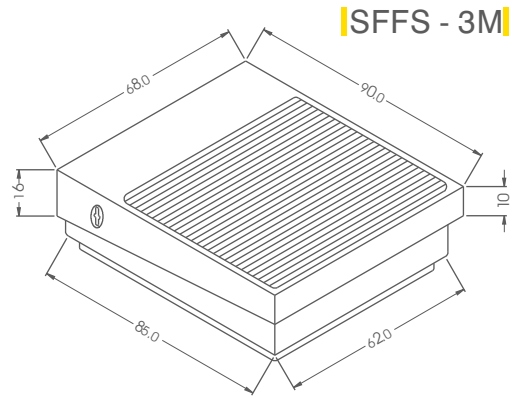
Micro Switch for press to ON and release to OFF operations. Rubber matt Provided on Top and Bottom gives Good Support for foot.

A strain relief arrangement with 2m Long Cable is provided for each Switch.

Available with the Shield to Prevent accidental treadle operation.

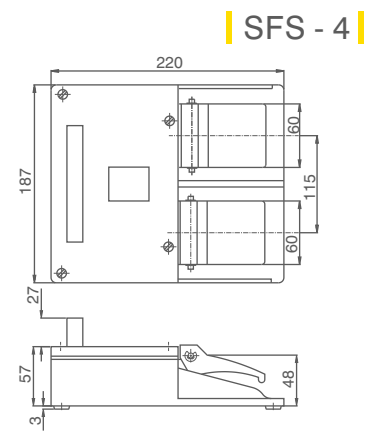
These Foot Switches are applicable for both Domestic and Medical applications.

* Add suffix "WSD" for Switch with Shield.

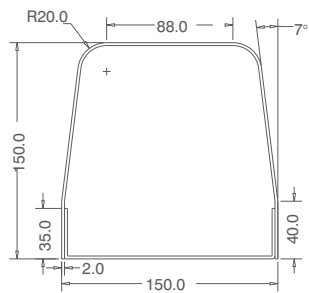


Meditwin SFFS-4

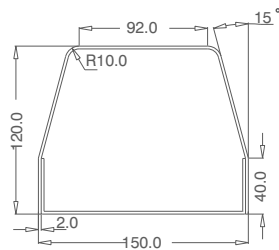
For specific requirements where the contact blocks are to be independently controlled, a double pedal Switch is available. The two pedals are attached to a single housing and can be operated individually to control two independent contact blocks. A conduit entry (3/4" UNF) is supplied with the Foot Switch. A handle is fixed on the top of the cover for easy handling of the Switch wherever required. These Switches are also available with Shield.



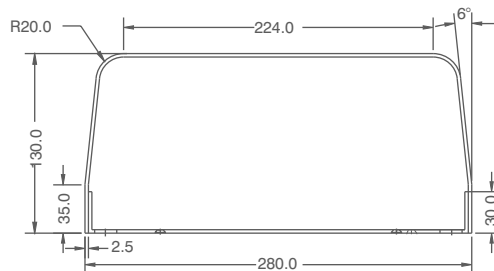
SHIELD FOR SFS-1 & SFS-2



SHIELD FOR SFS-3M



SHIELD FOR SFS-4



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