

## Description

Safety limit switches with small latch (key), made of fiberglass reinforced UL-V0 thermoplastic material, offer double insulation and a degree of protection IP65. They are equipped with 1 N.C. + 1 N.O. or 2 N.C. contact blocks with dependent action and positive opening operation of the "N.C." contact(s).

These specific features make the limit switches ideal for monitoring and protection of industrial machines without inertia in which downtime is less than access time to the dangerous area. Use on sliding or pivoting protectors (covers, cases, doors, grids, etc.).

## Applications

Easy to use, the limit switches with small latch (key) offer specific qualities:

- Visible operation.
- Capability for strong current switching (conventional thermal current 10 A).
- Opening guaranteed of the "N.C." contact(s) when the small latch is withdrawn from the limit switch.
- Contact blocks with dependent action and positive opening operation of the "N.C." normally closed contact(s) (symbol ).
- Electrically separated contacts (Zb shape).
- Precision on operation positions (consistency).
- Immunity to electromagnetic disturbances.

- They contribute to protection of operators working on dangerous machines, by opening the control circuit. Withdrawal of the small latch (key) by opening the mobile protector causes immediate stopping of the machine drive.
- Associated with other standard limit switches and safety switching devices, they produce automatic control circuits meeting standard EN 954-1.
- They comply with the requirements of European Directives (Low Voltage, Machines and Electromagnetic Compatibility) and are conform to European and international standards.

### 2 operating head options:

- Adjustable every 90° (4 x ø 3 screws with (+,-) pozidriv 1 head)
- Pivoting from 0° to 360° (1 x M3 screw with Phillips head No. 1)

### Casing

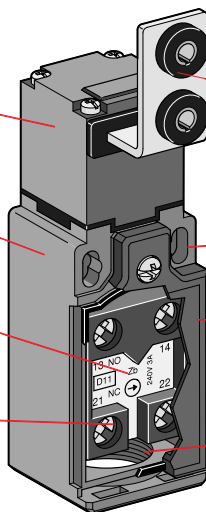
- 30 mm wide with standardised dimensions corresponding to EN 50047

### Blocks of 2 contacts

- Contact configuration: 1 N.O. + 1 N.C. or 2 N.C.
- Positive opening operation
- Contact dependent action
- Zb shape: the 2 contacts are electrically separated

### Connecting terminals

- M3.5 screw with (+,-) pozidriv 2 head
- Screw heads with captive cable clamps
- Marking conform to IEC 60947-1, IEC 60947-5-1, EN 50005 and EN 50013 standards



### 7 small latch (key) options to be ordered separately:

- Right angle key (13 or 22 mm fixing)
- Straight key (13 or 22 mm fixing)
- Straight key or right angle key with shock absorber
- Adjustable right angle key

### Casing fixing

- 2 x M4 screws in the top part

### Cover

- Closure by 1 x ø 3 screw with (+,-) pozidriv 1 head
- Gasket made in one part to prevent tightness breaks

### Electrical connection in various options:

- 1 x Pg 13.5 cable gland for LS30P
- 1 x Pg 11 cable gland for LS31P
- 1 x 1/2" NPT adaptor delivered not mounted for LS35P

## Catalog number explanation

Example :	<b>LS</b>	<b>35</b>	<b>P</b>	<b>80</b>	<b>D</b>	<b>11</b>	<b>- S</b>
Limit Switch .....	LS						S .....Safety device
Casing width: 30 mm.....		3					
Cable inlet:							Contact types:
1 cable inlet for Pg 13.5 cable gland .....							11 ..... 1 N.O. + 1 N.C. contacts
1 cable inlet for Pg 11 cable gland .....							02 ..... 2 N.C. contacts
1 x 1/2" NPT (adaptor) cable inlet .....							
Plastic casing.....			P				Snap action:
							B .....Zb Snap
Operating heads:							Dependent (slow) action:
Adjustable every 90° .....				80			L .....Zb Slow / Simultaneous
Continuously pivoting from 0° to 360° .....				81			D .....Zb Non-overlapping late make
							C .....Zb Overlapping early make

# Safety Limit Switches with Small Latch (Key)

Double Insulation - Plastic Casing NEMA-1 - 30 and 40 mm Width  
Metal Casing NEMA-4X - 30 and 40 mm Width

## Applications

Easy to use, the limit switches with small latch (key) offer specific qualities:

- Visible operation.
- Capability for strong current switching (conventional thermal current 10 A).
- Opening guaranteed of the "N.C." contact(s) when the small latch is withdrawn from the limit switch.
- Contact blocks with dependent action and positive opening operation of the "N.C." normally closed contact(s) (symbol ⊖).
- Electrically separated contacts.
- Precision on operation positions (consistency).
- Immunity to electromagnetic disturbances.

These specific features make the limit switches ideal for monitoring and protection of industrial machines without inertia in which down-time is less than access time to the dangerous area. Use on sliding or pivoting protectors (covers, cases, doors, grids, etc.).

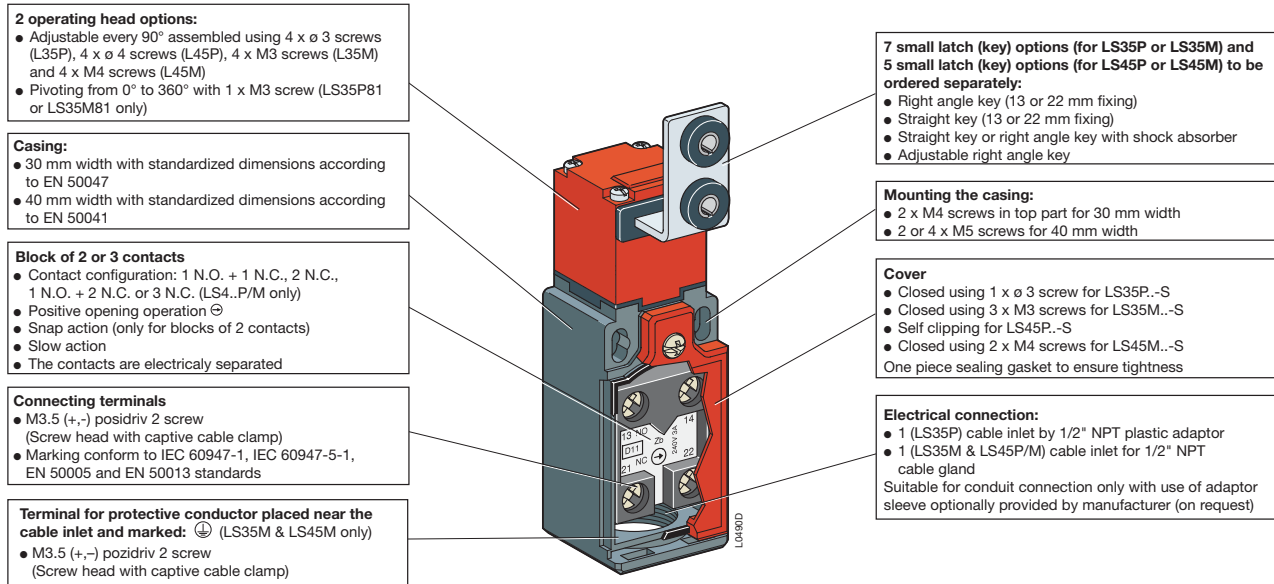
- They contribute to protection of operators working on dangerous machines, by opening the control circuit. Withdrawal of the small latch (key) by opening the mobile protector causes immediate stopping of the machine drive.
- Associated with other standard limit switches and safety switching devices, they produce automatic control circuits meeting standard EN 954-1.
- They comply with the requirements of European Directives (Low Voltage, Machines and Electromagnetic Compatibility) and are conform to European and international standards.

## Description

**LS35P.-S** (30 mm width) and **LS45P.-S** (40 mm width) safety limit switches with key, which are made of fibre-glass reinforced UL-V0 thermo-plastic material, offer double insulation □ and a degree of protection NEMA-1.

**LS35M.-S** (30 mm width) safety limit switches with key, which are made of zinc alloy (zamak), have a degree of protection NEMA-4X.

**LS45M.-S** (40 mm width) safety limit switches with key, which are made of aluminium alloy, have a degree of protection NEMA-4X.



## Type

Example :



Limit Switch.....	LS	S.....Safety device
Casing width: 30 mm.....	3	Contact types:
1 cable inlet by 1/2" NPT plastic adaptor (LS35P) or 1/2" NPT for cable gland (LS35M).....	5	11 ..... 1 N.O. + 1 N.C. contacts
Casing width: 40 mm.....	4	12 ..... 1 N.O. + 2 N.C. contacts (LS45P. or LS45M.. only)
1 cable inlet for 1/2" NPT cable gland.....	5	02 ..... 2 N.C. contacts
Plastic casing.....	P	03 ..... 3 N.C. contacts (LS45P. or LS45M.. only)
Metal casing.....	M	Snap action:
		B .....Zb Snap (for 1 N.O. + 1 N.C. and 2 N.C. contacts only)
		Dependent (slow) action:
		L .....Slow / Simultaneous
		D .....Zb Non-overlapping late make
		C .....Zb Overlapping early make (for 1 N.O. + 1 N.C. contacts only)
		Operating heads: (see panorama)
		80 .....Adjustable every 90°
		81 .....Continuously pivoting from 0° to 360° (LS35P & LS35M only)

# Safety Limit Switches with Small Latch (Key)

Metal Casing NEMA-4X - 30 and 40 mm Width  
Plastic Casing NEMA-1 - 30 and 40 mm Width

LS35P: 1 cable inlet by 1/2" NPT plastic adaptor  
LS35M: 1 cable inlet for 1/2" NPT cable gland

Plastic Casing - NEMA-1 - 30 mm Width  
Metal Casing - NEMA-4X - 30 mm Width

## Ordering Details - Product without Small Latch (Key)

Contact blocks	Catalog number	List price
 D11		
 L02		

### Plastic Limit Switches with Adjustable Head Every 90°

1	-	LS35P80D11-S
-	1	LS35P80L02-S

### Metal Limit Switches with Adjustable Head Every 90°

1	-	LS35M80D11-S
-	1	LS35M80L02-S

LS45M: 1 cable inlet for 1/2" NPT cable gland

## Ordering Details - Product without Small Latch (Key)

Contact blocks	Catalog number	List price
 D12		
 L03		

### Plastic Limit Switches with Adjustable Head Every 90°

1	-	LS45P80D12-S
-	1	LS45P80L03-S

### Metal Limit Switches with Adjustable Head Every 90°

1	-	LS45M80D12-S
-	1	LS45M80L03-S

## Ordering Details - Small Latch (Key)

Description of key	Fixing mm	Catalog number	List price
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### Small Latch (Keys) for LS3..P. or LS3..M..

Right angle key	13	LSA30P05
Straight key	13	LSA30P06
Right angle key with shock absorber	15	LSA30P07
Straight key with shock absorber	15	LSA30P08
Adjustable angle key	40	LSA30P09

### Small Latch (Keys) for LS4..P. or LS4..M..

Right angle key	13	LSA40X05
Straight key	13	LSA40X06
Right angle key with shock absorber	15	LSA40X07
Straight key with shock absorber	15	LSA40X08
Adjustable angle key	40	LSA40X09



LS35P80D11-S



LS35M80D11-S



LS45P80D12-S



LS45M80D12-S



LSA30P08