

# Metal Limit switches



## Limit Switches

Metal casing, 40mm & 60mm  
Assembled  
Components



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### Description

Limit switches are made of aluminum alloy and have a degree of protection of IP 66 and UL type 4X.

The casings come in 2 dimensions:

- LS45M, 40mm width.
- LS65M, 60mm width.

UL Listed #E191693

### Applications

Easy to use, electromechanical limit switches offer specific qualities:

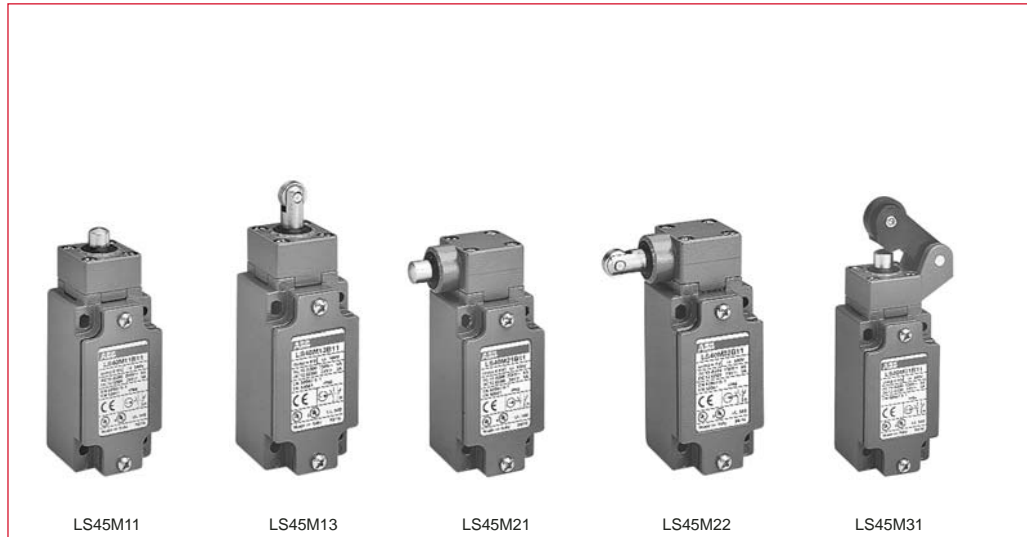
- Visible operation.
- Able to switch strong currents (10 A conventional thermal current).
- Electrically separated contacts.
- Precise operating points (consistency).
- Immune to electromagnetic disturbances.

Limit switches used for these mechanical applications:

- Presence/absence.
- Positioning and travel limit.
- Objects passing/counting.

**Selection guide**  
IP 66, UL Type 4X  
40mm & 60mm

**40mm width — LS45M**



LS45M11

LS45M13

LS45M21

LS45M22

LS45M31

CENELEC conformity

EN 50 041

EN 50 041

EN 50 041

EN 50 041

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Actuating device and actuation type

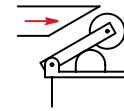
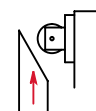
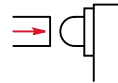
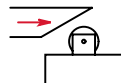
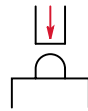
Plain plunger

Roller plunger

Plain plunger

Roller plunger

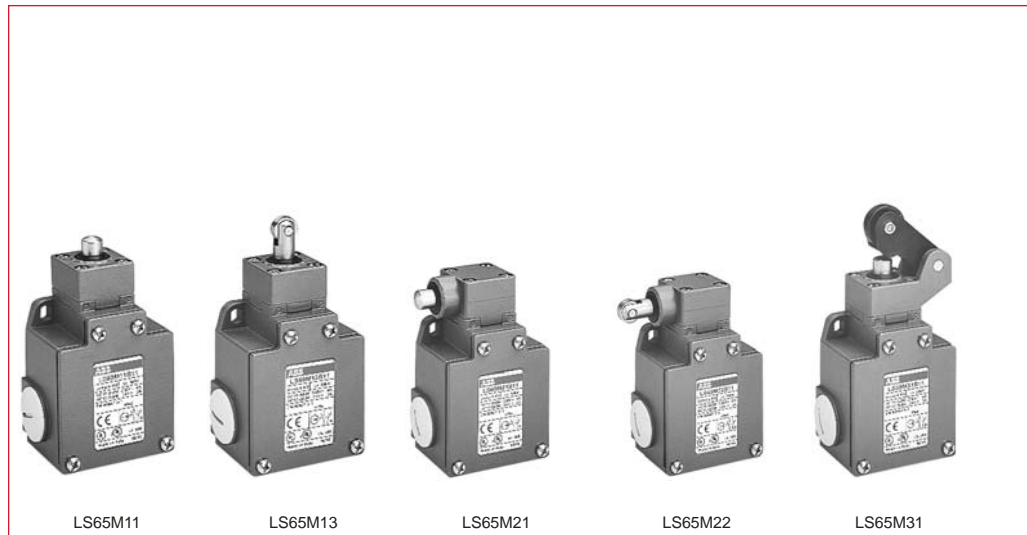
Roller lever



Positive contact opening



**60mm width — LS65M**



LS65M11

LS65M13

LS65M21

LS65M22

LS65M31

Actuating device and actuation type

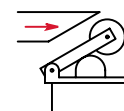
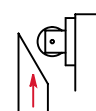
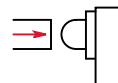
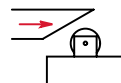
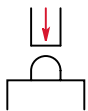
Plain plunger

Roller plunger

Plain plunger

Roller plunger

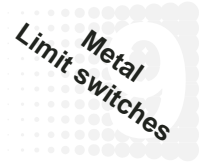
Roller lever



Positive contact opening



**Selection guide**  
**IP 66, UL Type 4X**  
**40mm & 60mm**



LS45M41

LS45M51

LS45M54

LS45M61

LS45M72

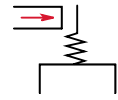
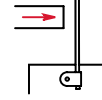
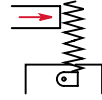
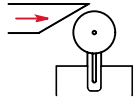
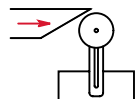
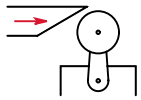
LS45M91

EN 50 041  
 Roller lever

Adjustable roller levers

Adjustable flexible and rigid rod levers

Flexible rod



LS65M41

LS65M51

LS65M54

LS65M61

LS65M72

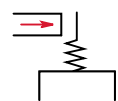
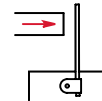
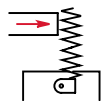
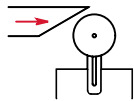
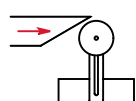
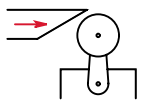
LS65M91

Roller lever

Adjustable roller levers

Adjustable flexible and rigid rod levers

Flexible rod



## General information

### IP66, UL Type 4X

### 40mm & 60mm

#### Applications

Easy to use, electromechanical limit switches offer specific qualities:

- Visible operation.
- Able to switch strong currents (10 A conventional thermal current).
- Electrically separated contacts.
- Precise operating points (consistency).
- Immune to electromagnetic disturbances.

Limit switches used for these mechanical applications:

- Presence/absence.
- Positioning and travel limit.
- Objects passing/counting.

#### Description

Limit switches, which are made of aluminum alloy, have a degree of protection of IP 66 and UL Type 4X.

The casings come in 2 dimensions:

- 40mm width
  - LS40M
  - LS45M
- 60mm width
  - LS65M

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#### Casing

- 40mm width with standardized dimensions according to EN 50041
- 60mm width

#### Mounting the casing

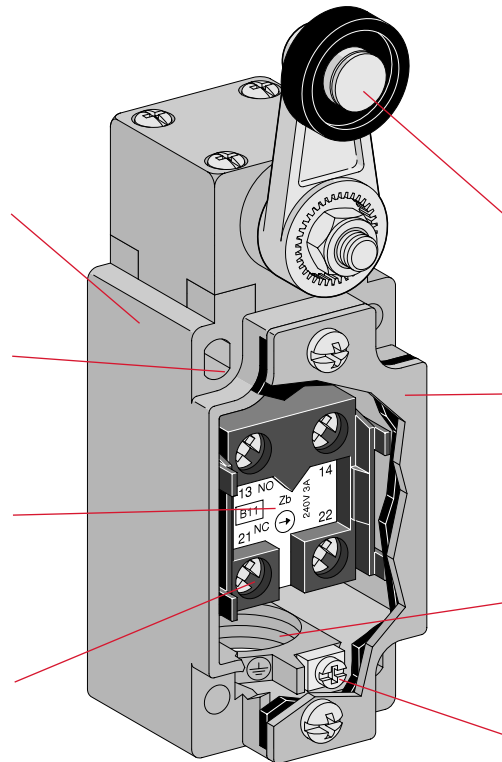
- 2 or 4 x M5 screws for 40mm width
- 2 x M5 screws for 60mm width

#### Block of 2 contacts

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

#### Connecting terminals

- M3.5 (+,-) pozidriv 2 screw
- Screw heads with captive cable clamp
- Markings conform with IEC 947-1, IEC 947-5-1, EN 50005 and 50013 standards



#### A variety of operating heads

- Plain plunger
  - Roller plunger
  - Roller lever, adjustable or not, etc.
- Assembled using 4 x M4 screws for 40 & 60mm widths

#### Cover

- Closed using 2 x M4 screws for 40mm width
  - Closed using 4 x M4 screws for 60mm width
- One piece sealing gasket to ensure tightness

#### Electrical connection

- 1 x pg 13.5 cable gland for 40mm width – LS40M
- 1 x 1/2" NPT cable gland – LS45M
- 3 x pg 13.5 cable glands for 60mm width – LS60M
- 3 x 1/2" NPT cable glands for 60mm width – LS65M

#### Terminal for protective conductor placed near the cable inlet and marked

- M3.5 (+,-) pozidriv 2 screw
- Screw head with captive cable clamp

#### Catalog number explanation

#### Limit switch

#### Casing width

- 40 = 40mm width+1 cable inlet for Pg13.5 cable gland
- 45 = 40mm width+1/2" NPT cable gland
- 60 = 60mm width+3 cable inlets for Pg13.5 cable glands
- 65 = 60mm width+3 1/2" NPT cable glands

Metal casing

Operating heads: codes 11 – 93

**LS 45 M 41 B 11**

#### Contact block

- 11: 1 N.O. contact + 1 N.C. contact
- 20: 2 N.O. contacts
- 02: 2 N.C. contacts

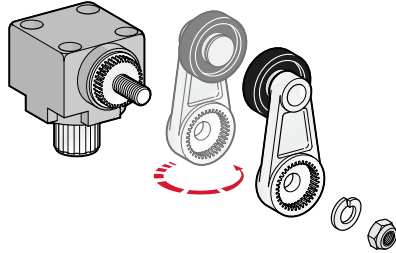
B: Zb Snap action

L: Zb Slow action (contact dependent)

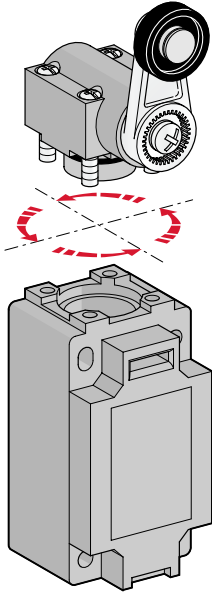
D: Zb Slow action non—overlapping late make

C: Zb Slow action overlapping early make

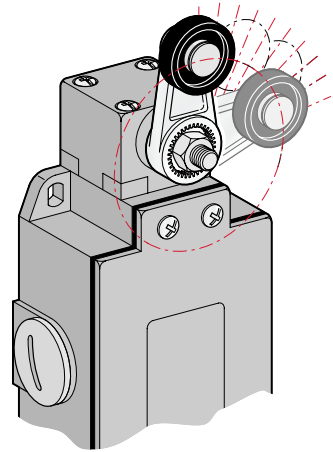
**General information**  
**Implementation**  
**IP66, UL Type 4X, 40mm & 60mm**



Lever round turning  
 LS40M, LS45M, LS60M & LS65M

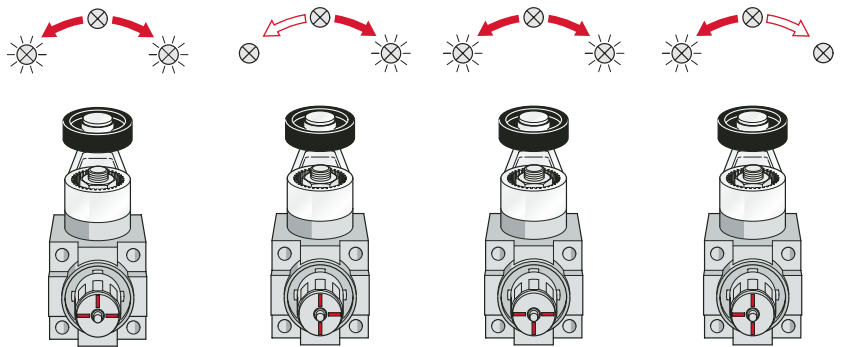
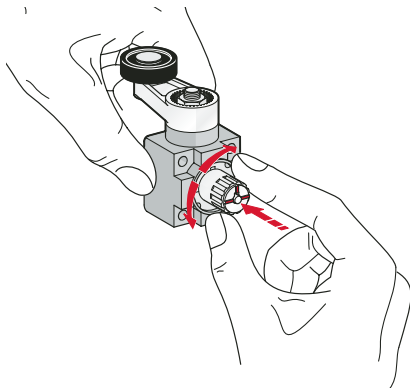


Head orientation



Free position adjustment 9 in 9° of lever

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Operating mode selection

# Assembled IP66, UL Type 4X 40mm

## Movement to be detected



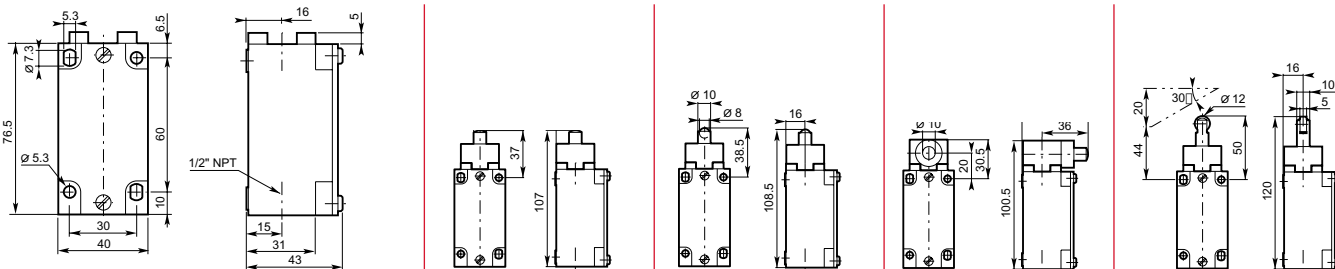
## Operating head type

	Stainless steel plain plunger	Stainless steel ball plunger	Stainless steel lateral plain plunger	Stainless steel roller plunger
Conformity / (N.C. contact with positive opening operation)	EN 50 041	EN 50 041	EN 50 041	EN 50 041
Maximum actuation speed	m/s 0.5	0.5	0.5	0.5
Min. force: - actuation	N 22	22	30	16
- positive opening operation	N 66	66	70	48

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	Stainless steel plain plunger	Stainless steel ball plunger	Stainless steel lateral plain plunger	Stainless steel roller plunger
<b>Snap action contacts</b>	<b>LS45M11B11</b> List price \$ 38	<b>LS45M12B11</b> List price \$ 41	<b>LS45M21B11</b> List price \$ 41	<b>LS45M13B11</b> List price \$ 44
	Operation diagram 0 0.8 1.9 4.5 6.5 mm	Operation diagram 0 0.8 1.9 4.5 6.5 mm	Operation diagram 0 0.9 2.1 4.9 7.1 mm	Operation diagram 0 1.5 3.5 8.4 12.1 mm
<b>Non-overlapping Slow action contacts</b>	<b>LS45M11D11</b> List price 41	<b>LS45M12D11</b> List price 44	<b>LS45M21D11</b> List price 44	<b>LS45M13D11</b> List price 48
	Operation diagram 0 1.5 2.9 6.5 mm 2.7	Operation diagram 0 1.5 2.9 6.5 mm 2.7	Operation diagram 0 1.8 3.5 7.9 mm 3.2	Operation diagram 0 3.5 6.8 15.2 mm 6.3
<b>Overlapping Slow action contacts</b>	<b>LS45M11C11</b> List price 42	<b>LS45M12C11</b> List price 45	<b>LS45M21C11</b> List price 45	<b>LS45M13C11</b> List price 49
	Operation diagram 0 2.6 4.0 6.5 mm 1.5	Operation diagram 0 2.6 4.0 6.5 mm 1.5	Operation diagram 0 3.2 4.9 7.9 mm 1.8	Operation diagram 0 6.1 9.3 15.2 mm 3.5
<b>Slow action contacts</b>	<b>LS45M11L02</b> List price 42	<b>LS45M12L02</b> List price 45	<b>LS45M21L02</b> List price 45	<b>LS45M13L02</b> List price 49
	Operation diagram 0 1.3 2.7 6.5 mm	Operation diagram 0 1.3 2.7 6.5 mm	Operation diagram 0 1.6 3.3 7.9 mm	Operation diagram 0 3.0 6.3 15.2 mm
<b>Slow action contacts</b>	<b>LS45M11L20</b> List price 42	<b>LS45M12L20</b> List price 45	<b>LS45M21L20</b> List price 45	<b>LS45M13L20</b> List price 49
	Operation diagram 0 1.3 6.5 mm	Operation diagram 0 1.3 6.5 mm	Operation diagram 0 1.6 7.9 mm	Operation diagram 0 3.0 15.2 mm
<b>Snap action contacts</b>	<b>LS45M11B02</b> List price 42	<b>LS45M12B02</b> List price 45	<b>LS45M21B02</b> List price 45	<b>LS45M13B02</b> List price 49
	Operation diagram 0 0.8 1.9 4.5 6.5 mm	Operation diagram 0 0.8 1.9 4.5 6.5 mm	Operation diagram 0 0.9 2.1 4.9 7.1 mm	Operation diagram 0 1.5 3.5 8.4 12.1 mm
Weight (packing per unit)	kg 0.240	0.240	0.260	0.240

## Dimensions (mm)

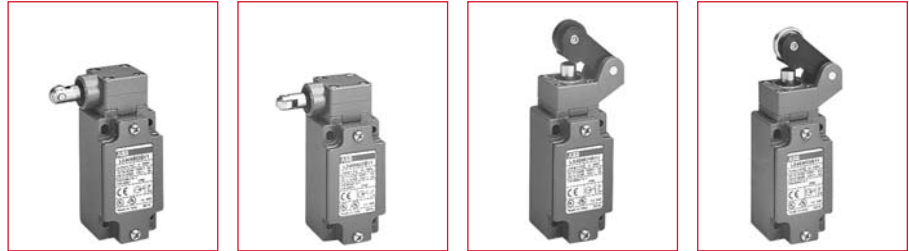


# Assembled IP66, UL Type 4X 40mm

Metal  
Limit switches

## Movement to be detected

## 30° Cam translation movement



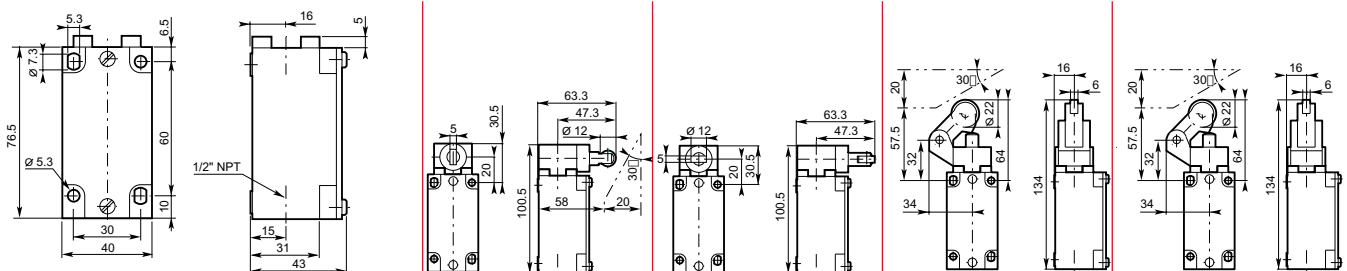
## Operating head type

	Lateral plunger with vertical roller	Lateral plunger with horizontal roller	ø 22 Polyamide roller lever	ø 22 Stainless steel roller lever
Conformity / (N.C. contact with positive opening operation)	EN 50 041	EN 50 041		
Maximum actuation speed m/s	0.5	0.5	1.5	1.5
Min. force: - actuation	N 30	N 30	12	12
- positive opening operation	N 70	N 70	40	40

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Contacts	Catalog number	List price	LS45M22B11	LS45M23B11	LS45M31B11	LS45M32B11
Snap action contacts 13-14, 21-22, Zb	Catalog number	List price	LS45M22B11	LS45M23B11	LS45M31B11	LS45M32B11
	List price		\$ 45	\$ 45	\$ 43	\$ 50
Operation diagram			0 1.6 3.8 9.0 13.0 mm	0 1.6 3.8 9.0 13.0 mm	0 1.9 4.6 10.9 15.8 mm	0 1.9 4.6 10.9 15.8 mm
Non-overlapping Slow action contacts 13-14, 21-22, Zb	Catalog number	List price	LS45M22D11	LS45M23D11	LS45M31D11	LS45M32D11
	List price		48	48	46	53
Operation diagram			0 4.2 8.1 18.1 mm	0 4.2 8.1 18.1 mm	0 3.0 5.8 13.0 mm	0 3.0 5.8 13.0 mm
Overlapping Slow action contacts 13-14, 21-22, Zb	Catalog number	List price	LS45M22C11	LS45M23C11	LS45M31C11	LS45M32C11
	List price		50	50	47	55
Operation diagram			0 7.2 11.1 18.1 mm	0 7.2 11.1 18.1 mm	0 5.2 8.0 13.0 mm	0 5.2 8.0 13.0 mm
Slow action contacts 11-12, 21-22, Zb	Catalog number	List price	LS45M22L02	LS45M23L02	LS45M31L02	LS45M32L02
	List price		50	50	47	55
Operation diagram			0 3.6 7.5 18.1 mm	0 3.6 7.5 18.1 mm	0 2.6 5.4 13.0 mm	0 2.6 5.4 13.0 mm
Slow action contacts 13-14, 23-24, Zb	Catalog number	List price	LS45M22L20	LS45M23L20	LS45M31L20	LS45M32L20
	List price		50	50	47	55
Operation diagram			0 3.6 18.1 mm	0 3.6 18.1 mm	0 2.6 13.0 mm	0 2.6 13.0 mm
Snap action contacts 11-12, 21-22, Zb	Catalog number	List price	LS45M22B02	LS45M23B02	LS45M31B02	LS45M32B02
	List price		50	50	47	55
Operation diagram			0 1.6 3.8 9.0 13.0 mm	0 1.6 3.8 9.0 13.0 mm	0 1.9 4.6 10.9 15.8 mm	0 1.9 4.6 10.9 15.8 mm
Weight (packing per unit)	kg		0.265	0.265	0.275	0.280

## Dimensions (mm)



# Assembled IP66, UL Type 4X 40mm

## Movement to be detected

### Unidirectional

### 30° Cam translation movement



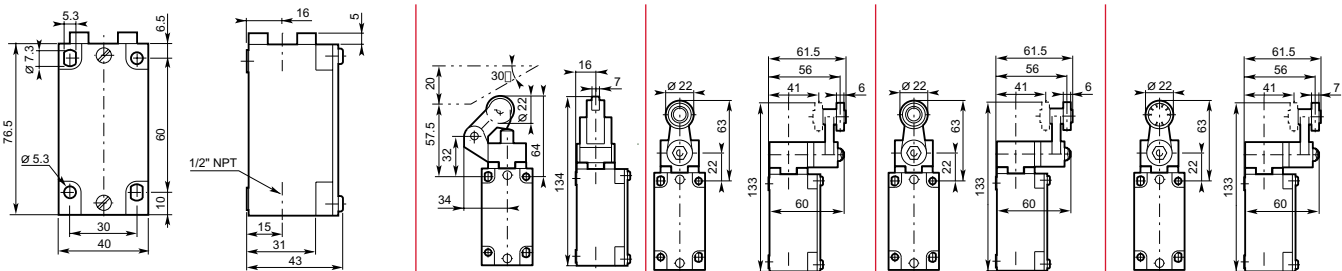
## Operating head type

	ø 22 Ball-bearing roller lever	ø 22 Polyamide roller lever	ø 22 Stainless steel roller lever	ø 22 Ball-bearing roller lever
Conformity / $\ominus$ (N.C. contact with positive opening operation)		EN 50 041	EN 50 041	EN 50 041
Maximum actuation speed m/s	1.5	1.5	1.5	1.5
Min. force/torque:				
- actuation	12 N	0.15 N.m	0.15 N.m	0.15 N.m
- positive opening operation	40 N	0.44 N.m	0.44 N.m	0.44 N.m

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	LS45M33B11 \$ 45	LS45M41B11 \$ 50	LS45M42B11 \$ 57	LS45M43B11 \$ 53	
Snap action contacts 	Catalog number List price	LS45M33D11 49	LS45M41D11 53	LS45M42D11 61	LS45M43D11 57
Non-overlapping slow action contacts 	Catalog number List price	LS45M33C11 50	LS45M41C11 55	LS45M42C11 63	LS45M43C11 58
Overlapping slow action contacts 	Catalog number List price	LS45M33L02 50	LS45M41L02 55	LS45M42L02 63	LS45M43L02 58
Slow action contacts 	Catalog number List price	LS45M33L20 50	LS45M41L20 55	LS45M42L20 63	LS45M43L20 58
Slow action contacts 	Catalog number List price	LS45M33B02 50	LS45M41B02 55	LS45M42B02 63	LS45M43B02 58
Snap action contacts 	Catalog number List price	Weight (packing per unit) kg			
		0.280	0.280	0.280	0.280

## Dimensions (mm)

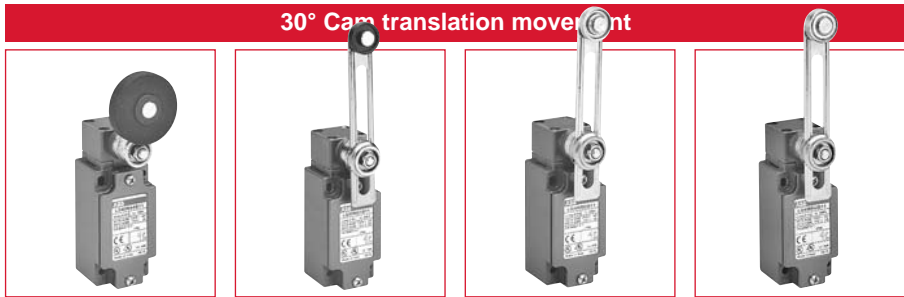




# Assembled IP66, UL Type 4X 40mm

Metal  
Limit switches

## Movement to be detected

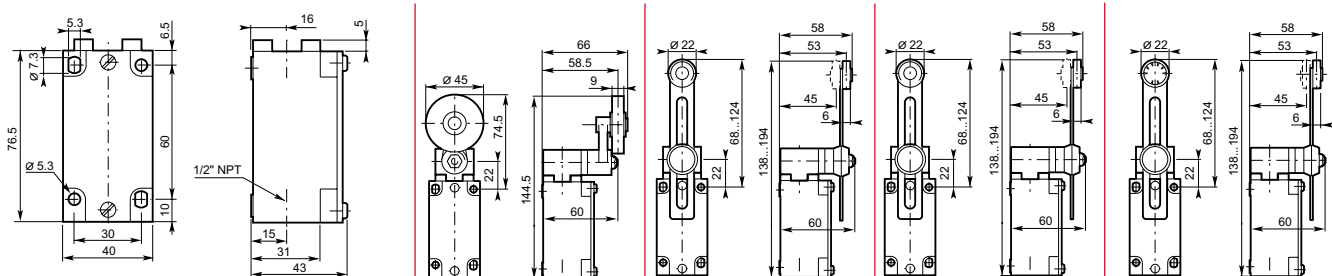


## Operating head type

	ø 45 Rubber roller lever	Adjustable ø 22 polyamide roller lever	Adjustable ø 22 stainless steel roller lever	Adjustable ø 22 stainless steel ball-bearing roller lever
Conformity /  (N.C. contact with positive opening operation)				
Maximum actuation speed	1.5 m/s	1.5 m/s	1.5 m/s	1.5 m/s
Min. torque: - actuation	0.15 N.m	0.15 N.m	0.15 N.m	0.15 N.m
- positive opening operation	-	-	-	-

	Catalog number	LS45M44B11	LS45M51B11	LS45M52B11	LS45M53B11
Snap action contacts	List price	\$ 51	\$ 51	\$ 59	\$ 55
	Operation diagram				
Non-overlapping slow action contacts	Catalog number	LS45M44D11	LS45M51D11	LS45M52D11	LS45M53D11
List price	55	55	63	59	
	Operation diagram				
Overlapping slow action contacts	Catalog number	LS45M44C11	LS45M51C11	LS45M52C11	LS45M53C11
List price	57	57	65	61	
	Operation diagram				
Slow action contacts	Catalog number	LS45M44L02	LS45M51L02	LS45M52L02	LS45M53L02
List price	57	57	65	61	
	Operation diagram				
Slow action contacts	Catalog number	LS45M44L20	LS45M51L20	LS45M52L20	LS45M53L20
List price	57	57	65	61	
	Operation diagram				
Snap action contacts	Catalog number	LS45M44B02	LS45M51B02	LS45M52B02	LS45M53B02
List price	57	57	65	61	
	Operation diagram				
Weight (packing per unit)	kg	0.310	0.290	0.300	0.300

## Dimensions (mm)



# Assembled IP66, UL Type 4X 40mm

## Movement to be detected



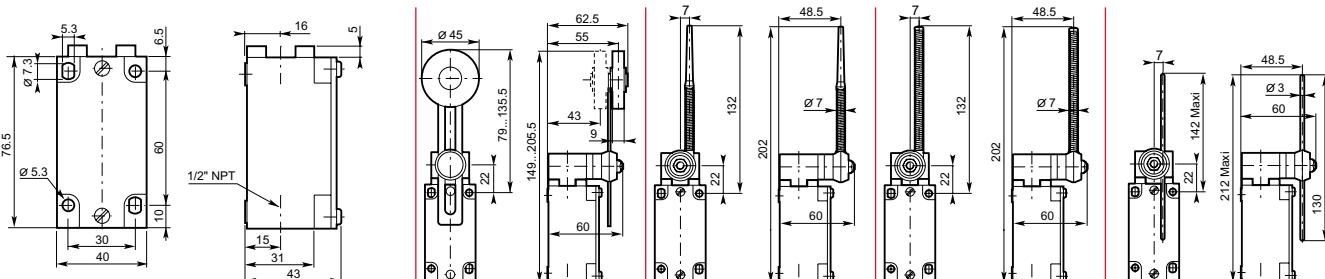
## Operating head type

	Adjustable $\varnothing$ 45 rubber roller lever	Flexible lever with insulated end	Coil spring lever	Adjustable $\varnothing$ 3 stainless steel rod lever
Conformity /  (N.C. contact with positive opening operation)				EN 50 041
Maximum actuation speed	m/s 1.5	1.5	1.5	0.5
Min. torque: - actuation	N.m 0.15	0.15	0.15	0.15
- positive opening operation	N.m -	-	-	-

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	Catalog number	LS45M54B11	LS45M61B11	LS45M62B11	LS45M71B11
Snap action contacts	Catalog number	LS45M54B11	LS45M61B11	LS45M62B11	LS45M71B11
	List price	\$ 53	\$ 50	\$ 50	\$ 47
	Operation diagram				
Non-overlapping Slow action contacts	Catalog number	LS45M54D11	LS45M61D11	LS45M62D11	LS45M71D11
	List price	57	53	53	51
	Operation diagram				
Overlapping Slow action contacts	Catalog number	LS45M54C11	LS45M61C11	LS45M62C11	LS45M71C11
	List price	58	55	55	53
	Operation diagram				
Slow action contacts	Catalog number	LS45M54L02	LS45M61L02	LS45M62L02	LS45M71L02
	List price	58	55	55	53
	Operation diagram				
Slow action contacts	Catalog number	LS45M54L20	LS45M61L20	LS45M62L20	LS45M71L20
	List price	58	55	55	53
	Operation diagram				
Snap action contacts	Catalog number	LS45M54B02	LS45M61B02	LS45M62B02	LS45M71B02
	List price	58	55	55	53
	Operation diagram				
Weight (packing per unit)	kg	0.315	0.290	0.295	0.285

## Dimensions (mm)



# Assembled IP66, UL Type 4X 40mm

Metal  
Limit switches

## Movement to be detected

### Translation (cont.)



### Multidirectional

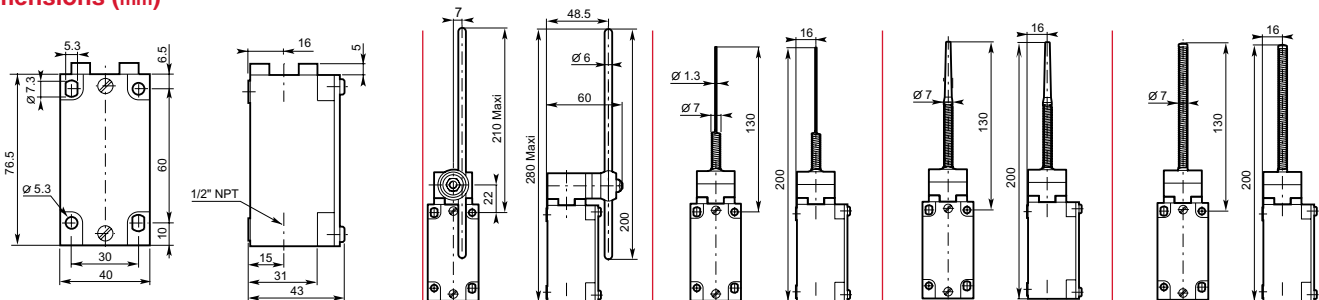


## Operating head type

	Adjustable Ø 6 polyamide rod lever	Spring rod	Flexible rod with insulated end	Coil spring rod
Conformity /  (N.C. contact with positive opening operation)	EN 50 041			
Maximum actuation speed	m/s 1.5	1	1	1
Min. torque: - actuation	N.m 0.15	0.18	0.18	0.18
- positive opening operation	N.m -	-	-	-

		LS45M72B11 \$ 47	LS45M91B11 \$ 41	LS45M92B11 \$ 43	LS45M93B11 \$ 42
Snap action contacts	Catalog number	LS45M72B11	LS45M91B11	LS45M92B11	LS45M93B11
	List price	\$ 47	\$ 41	\$ 43	\$ 42
	Operation diagram				
Non-overlapping Slow action contacts	Catalog number	LS45M72D11	LS45M91D11	LS45M92D11	LS45M93D11
	List price	50	43	46	45
	Operation diagram				
Overlapping Slow action contacts	Catalog number	LS45M72C11	LS45M91C11	LS45M92C11	LS45M93C11
	List price	52	45	47	47
	Operation diagram				
Slow action contacts	Catalog number	LS45M72L02	LS45M91L02	LS45M92L02	LS45M93L02
	List price	52	45	47	47
	Operation diagram				
Slow action contacts	Catalog number	LS45M72L20	LS45M91L20	LS45M92L20	LS45M93L20
	List price	52	45	47	47
	Operation diagram				
Snap action contacts	Catalog number	LS45M72B02	LS45M91B02	LS45M92B02	LS45M93B02
	List price	52	45	47	47
	Operation diagram				
Weight (packing per unit)	kg	0.285	0.235	0.235	0.235

## Dimensions (mm)



# Components

## IP66, UL Type 4X

### 40mm



LS45M00B11

#### Bodies with contact block for rectilinear or angular motion heads

**LS 45 M 00 B 11**

Limit Switch.....	LS						<b>Contacts</b>
Casing width: 40 mm .....		4					11 .....1 N.O. + 1 N.C. contacts
<b>Cable inlet:</b>							02 .....2 N.C. contacts
1 cable inlet for Pg 13.5 cable gland.....				0			20 .....2 N.O. contacts
1 cable inlet M20 x 1.5 for ISO 20 cable gland.....				3			
1 cable inlet for 1/2" NPT .....				5			
<b>Metal casing</b> .....					M		<b>Snap action</b>
<b>Without operating head</b> .....							B .....Zb Snap
							<b>Dependent (slow) action</b>
							L .....Zb Slow / Simultaneous
							D .....Zb Non-overlapping late make
							C .....Zb Overlapping early make

#### Operating heads

**LS T E 4 1**

Limit Switch.....	LS						
Operating head .....		T					References of heads:
<b>For Metal casing 40 mm or 60 mm width</b> .....					E		11 ... 13 .....with rectilinear movement (plain plunger, steel ball plunger or roller plunger)
							21 ... 23 .....with rectilinear movement (with lateral plain or roller plunger)
							31 ... 33 .....with rectilinear movement (with roller lever on steel plunger)
							40 .....with angular movement (without actuator) actuator to be ordered separately
							41 ... 44 .....with angular movement (roller lever)
							50 .....with angular movement (without actuator)
							51 ... 54 .....with angular movement (adjustable roller lever)
							61, 62 .....flexible lever (spring)
							71, 72, 73 .....adjustable lever (rod)
							91 ... 93 .....multidirectional angular movement (spring rod)



LSTE41



LSA40X54

#### Separate actuators (Roller lever, adjustable roller or rod levers, etc.)

**LS A 40 X 54**

Limit Switch.....	LS						<b>Reference of actuators:</b>
Actuator (roller) .....		A					41 ... 44 .....non-adjustable roller lever
Casing width: 40 mm .....					40		51 ... 54 .....adjustable roller lever
							61, 62 .....flexible lever (spring)
							71, 72, 73 .....adjustable lever (rod)
							<b>For casing:</b>
							M .....Metal
							P .....Plastic
							X .....Plastic or metal

#### Separate contact blocks

**LS C 40 X B 11**

Limit Switch .....	LS						<b>Contacts</b>
Contact blocks .....		C					11 .....1 N.O. + 1 N.C. contacts
Casing width: 40 mm .....					40		02 .....2 N.C. contacts
							20 .....2 N.O. contacts
<b>For casing:</b>							<b>Snap action:</b>
Metal.....					M		B .....Zb Snap
Plastic.....					P		<b>Dependent (slow) action:</b>
Plastic or metal.....					X		L .....Zb Slow / Simultaneous
							D .....Zb Non-overlapping late make
							C .....Zb Overlapping early make



LSC40XB11

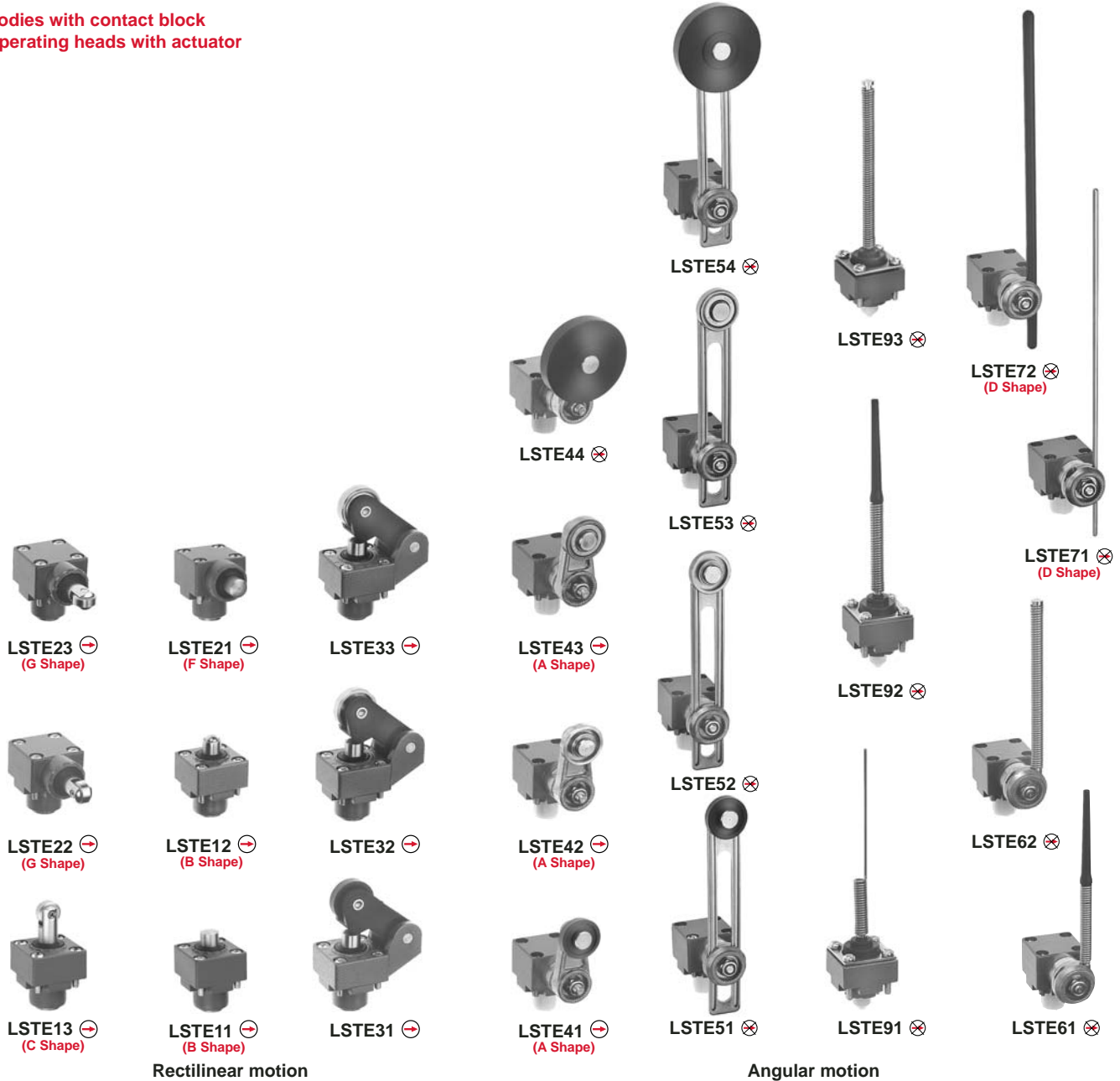
# Components

## IP66, UL Type 4X

### 40mm

Metal  
Limit switches

- Bodies with contact block
- Operating heads with actuator



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#### LSTE... rectilinear motion heads

- To be actuated from end. With plunger (plain, lateral plain or ball): LSTE11, LSTE12 and LSTE21.
- To be actuated by 30° cam translation. With roller plunger: LSTE13, LSTE22 and LSTE23.
- To be actuated unidirectionally by 30° cam translation. With roller lever on stainless steel plunger: LSTE31 ... LSTE33.

#### LSTE... angular motion heads

- To be actuated by 30° cam translation. With roller lever: LSTE41 ... LSTE54.
- To be actuated by fully directional translation movement. With rod or spring lever: LSTE61 ... LSTE72.
- To be actuated multidirectionally. With spring rod: LSTE91 ... LSTE93.



#### Bodies with contact block

- ⊕ LS45M00B11, LS45M00D11, LS45M00C11, LS45M00L02, LS45M00B02
- ⊗ LS45M00L20

⊕ : Suitable for positive opening operation (IEC 60947-5-1 and EN 50041).

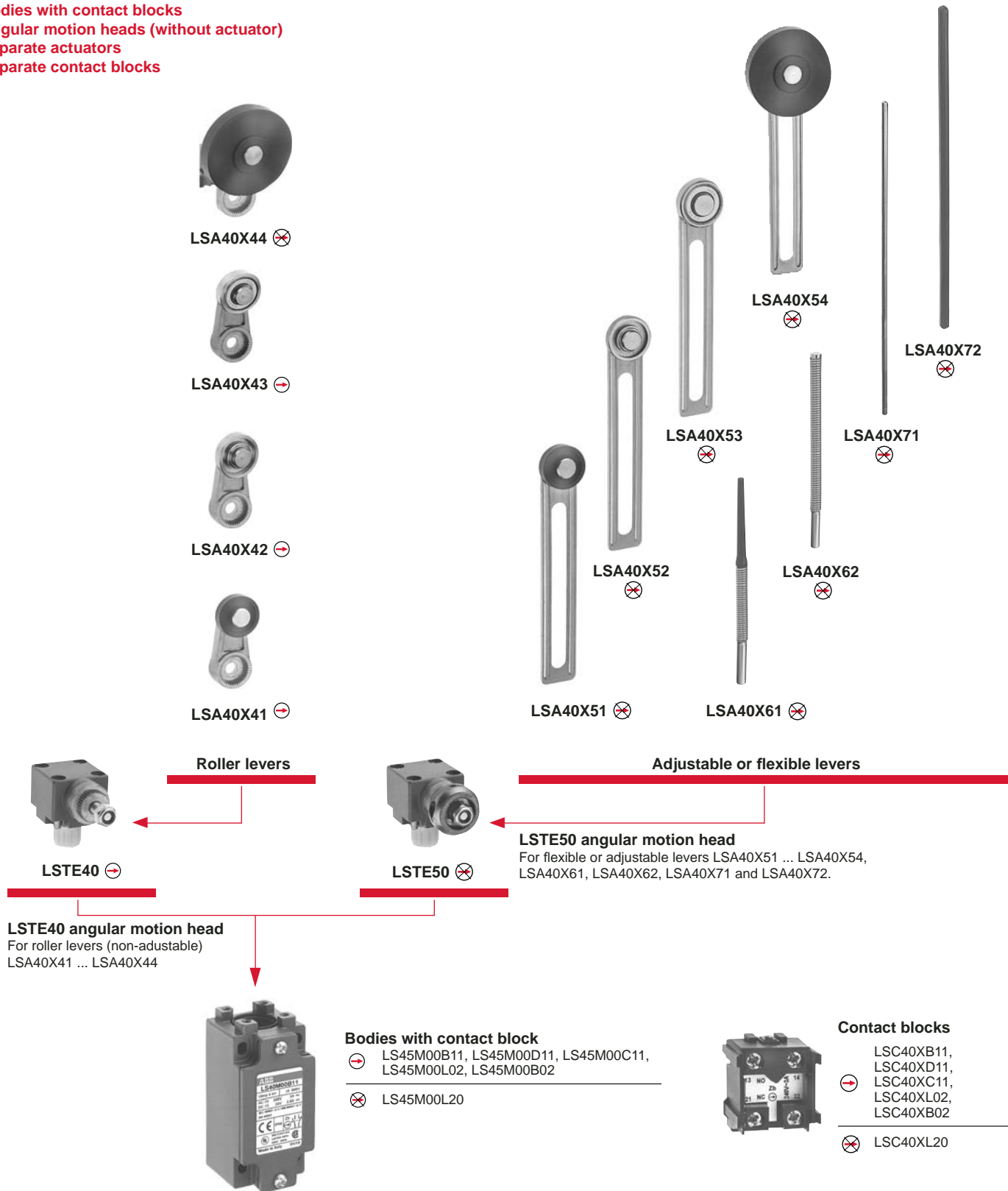
**Warning!** The positive opening operation of limit switch is only guaranteed if the elements noted with ⊕ are fitted.

## Components

IP66, UL Type 4X  
40mm

- Bodies with contact blocks
- Angular motion heads (without actuator)
- Separate actuators
- Separate contact blocks

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(+) : Suitable for positive opening operation (IEC 60947-5-1)

**Warning!** The positive opening operation of limit switch is only guaranteed if the elements noted with (+) are fitted.

# Components

## IP66, UL Type 4X

### 40mm

Metal  
Limit switches

⊕ "N.C." contact with positive opening operation or element (subassembly, head, lever) suitable for positive opening operation.

**Warning! The positive opening operation of limit switch is only guaranteed if the elements noted with ⊕ are fitted.**



LS40M00B11



LSTE11



LSTE21



LSTE13

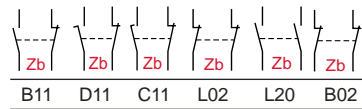


LSTE22



LSTE32

Contact blocks



Positive opening operation

Actuation speed max. m/s

Unit weight kg (1 pc)

Catalog number

List price

Contact blocks						Positive opening operation	Actuation speed max. m/s	Unit weight kg (1 pc)	Catalog number	List price
B11	D11	C11	L02	L20	B02					
<b>Bodies with contact block for rectilinear or angular motion heads</b>										
1						⊕	—	0.168	LS45M00B11	\$ 28
	1					⊕	—	0.168	LS45M00D11	29
		1				⊕	—	0.168	LS45M00C11	30
			1			⊕	—	0.168	LS45M00L02	30
				1		⊗	—	0.168	LS45M00L20	30
					1	⊕	—	0.168	LS45M00B02	30
<b>Rectilinear motion heads with actuator</b>										
<b>To be actuated from end</b>										
Stainless steel plain plunger						⊕	0.5	0.077	LSTE11	14
Stainless steel ball plunger						⊕	0.5	0.076	LSTE12	17
Stainless steel lateral plain plunger						⊕	0.5	0.093	LSTE21	17
<b>To be actuated by 30° cam</b>										
Stainless steel roller plunger						⊕	0.5	0.084	LSTE13	20
Stainless steel lateral plunger with vertical roller						⊕	0.5	0.098	LSTE22	21
Stainless steel lateral plunger with horizontal roller						⊕	0.5	0.098	LSTE23	21
<b>To be actuated unidirectionally by 30° cam</b>										
∅ 22mm polyamide roller lever on stainless steel plunger						⊕	1.5	0.111	LSTE31	19
∅ 22mm stainless steel roller lever on stainless steel plunger						⊕	1.5	0.121	LSTE32	26
∅ 22mm steel ball-bearing roller lever on stainless steel plunger						⊕	1.5	0.122	LSTE33	21

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