MAIN CATALOG 2023

Limit switches

- Ready for anything
- Keep your installation running 24h a day
- Easy to use.

Limit switches

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Limit switches

ABB limit switches are the easiest reliable way to convert mechanical movements into electrical signals. Use our wide offer to match your application.

Reliable in extreme conditions

Ready for anything

Plastic or metal casing limit switches are designed to operate in the most difficult environments. A high degree of protection up to IP67 and the positive contact opening, guarantee reliable operation.

Continuous operation

Keep your installation running 24h a day

Limit switches secure your uptime. Their high mechanical durability can handle up to 30 million operations with contacts that are mechanically linked to actuators.

Easy to install

Easy to use

Limit switches are easy to install and to use thanks to their three different types of electrical connections and cable length, in order to satisfy every design specifications.

Limit Switches - Range overview

Product selection guide

Design		**Compact, Pre-wired**		**Standard**	
Material		Plastic	Metal	Plastic	Metal
Types		LS20P, LS21P	LS20M, LS21M	LS32P, LS33P, LS35P	LS32M, LS33M, LS35M
Dimensions (W x H x D)		30 x 49 x 16	30 x 49 x 16	30 x 53 x 30	30 x 55 x 33
Rounded values for body only. For precises dimensions with actuator, please refer to ordering details pages					
Degree of Protection		IP67	IP67	IP65	IP66
Double electrical insulation		yes	-	yes	-
Standards		IEC/EN 60947-1 IEC/EN60947-5-1 UL508 CSA C22-2 No. 14		IEC/EN 60947-1 IEC/EN60947-5-1 UL508 CSA C22-2 No. 14	
EN 50041		-		-	
EN 50047		-		Yes for Heads : 10, 11, 12, 13, 31 and 41 For shapes please see ordering details pages	
Contact block (1)		1 N.O. + 1 N.C.		1 N.O. + 1 N.C.	
Contact type (2)		Snap Action (Zb)		Snap Action (Zb)	
Cable entry / Cable type (3)		Bottom (LS21) or Side (LS20) entry		Bottom entry	
		UL 62 - PVC cable		1 x ISO M16x1.5	
		4 x AWG 18 4 x 0.75 < … < 1 mm²	5 x AWG 18 5 x 0.5 < … < 1 mm²	1 x ISO M20x1.5	
		Length : 1 m		1 x 1/2'' NPT	
Orientable Head		Yes for Heads : 41, 42, 45, 46, 51 and 71		yes	
Increment		180 °		90 °	
Heads type (4)	Plain plungers	2	2	2	1
	Roller Plungers	5	5	2	2
	Roller lever plunger	-	-	2	2
	Roller lever	5	5	2	2
	Adjustable roller lever	2	2	2	2
	Rod lever	1	1	2	2
	Spring Lever	2	2	2	2
Minimum order quantity		1	1	1	1

(1) Other configuration (2 N.C.) available on request. Please consult your ABB local sales organization.
(2) Other configuration (Slow Action : Simultaneous, Overlapping or non-overlapping) available on request. Please consult your ABB local sales organization.
(3) Other configuration (LS2. : Cable length up to 10 m; LS3., LS4. : Pg11 and Pg13.5 gland thread) available on request. Please consult your ABB local sales organization.
(4) Other configuration (rotated head, special material, …) available on request. Please consult your ABB local sales organization.
Note : Please note that extra Lead Time and Minimum Order Quantity may apply.

	Standard reinforced	
	Plastic	Metal
	LS43P, LS45P	LS43M, LS45M
	41 x 74 x 41	40 x 77 x 43
	IP65	IP66
	yes	-
	IEC/EN 60947-1 IEC/EN60947-5-1 UL508 CSA C22-2 No. 14	
	Yes for Heads : 11, 12, 13, 41, 42, 71 and 72 For shapes please see ordering details pages	
	-	
	1 N.O. + 1 N.C.	
	Snap Action (Zb)	
	Bottom entry	
	-	
	1 x ISO M20x1.5	
	1 x 1/2'' NPT	
	yes	
	90 °	
	1	1
	2	2
	2	2
	2	2
	2	2
	2	2
	2	2
	1	1

—
01 Elevators

—
02 Material handling and conveyors

—
03 Industrial process

Electrical panel

Logistic center and conveyer

Warehouse

Limit switches

LS2..

Compact

30 mm width - Prewired

IP67 - Plastic casing - Double insulation ⧈

IP67 - Metal casing

LS3..

Standard

30 mm width - Cable inlet

IP65 - Plastic casing - Double insulation ⧈

IP66 - Metal casing

LS4..

Standard reinforced

40 mm width - Cable inlet

IP65 - Plastic casing - Double insulation ⧈

IP66 - Metal casing

Limit switches

Limit switches are electromechanical devices. The contacts are mechanically linked to an actuator for visible operations. By combining different types of actuators and casings, our limit switches are perfectly suited to a large variety of applications.

Prewired LS2..

Limit Switch — LS 2 0 P 2 4 B 1 1 - U 0 1

Pre-wired limit switch casing width: 30 mm 2
1 cable output left / right 0
1 cable output bottom 1

Cable length
01 = 1 m

U = cable UL 62 - PVC

Plastic casing

Actuator
10 ... 92

Contact blocks
11 = 1 N.O. + 1 N.C., up to 10 A

Snap action
B = Zb Snap

Cable inlet LS3.., LS4..

Limit Switch — LS 3 2 M 4 1 B 1 1

Casing width: 30 mm 3
1 cable inlet M16 x 1.5 for ISO 16 cable gland..... 2
1 cable inlet M20 x 1.5 for ISO 20 cable gland 3
1 cable inlet by 1/2" NPT plastic adaptor delivered not mounted..... 5

Casing width: 40 mm 4
1 cable inlet M20 x 1.5 for ISO 20 cable gland..... 3
1 cable inlet for 1/2" NPT cable gland 5

Contact types
11 = 1 N.O. + 1 N.C. contacts

Snap action
B = Zb Snap

Actuator
10 ... 92

Metal casing

Double insulation ⧈

A **Class II** or **double insulated** electrical appliance does not require a safety connection to electrical earth (ground).

The degree of protection required for electrical equipment depends on the environmental characteristics.

Ingress Protection	First digit solids protection		Second digit liquids protection	
IP	6	Dust Tight	5	Low pressure water jet
			6	Powerful water jets
			7	Temporary immersion (up to 1 m)

Actuators and movements to be detected

Actuator type	Symbol	Actuator number	Comments*
Plungers		10 11 21	Plastic or metal plunger
Roller plungers		12 13 14 15 22 24	Plastic or metal roller Roller or ball at the tip
Roller levers + plunger	or	31 32	For horizontal or vertical movement
Roller levers		41 42 45 46	Plastic, metal or rubber roller Different roller diameters Different lever sizes and shape
Adjustable roller levers		51 52	Plastic, metal or rubber roller Different roller diameters
Rod Levers		71 72	Metal, fiber glass or nylon rod Different rod diameters
Spring rod levers	or	91 92	Plain or insulated spring tip

* NOTE : a same number can be a slightly different actuator from one range to the other. For accurate description of the actuator, please refer to the ordering details pages.
Ex : actuator n°13 is a plastic roller plunger for LS20 and LS30 but a metal roller plunger for LS40 ranges.

IP67 — LS 2 - — 30 mm width — P Plastic — Double insulation; M Metal

Actuators and movements to be detected

11 12 13 14 15 21 22 24 41
42 45 46 51 54 71 91 92

IP66 — LS 3 - — 30 mm width; LS 4 - — 40 mm width — M Metal

Actuators and movements to be detected

11 12 13 31 32 41 42
51 52 71 72 91 92

IP65 — LS 3 - — 30 mm width; LS 4 - — 40 mm width — P Plastic — Double insulation

Actuators and movements to be detected

10 11 12 13 31 32 41
42 51 52 71 72 91 92

Limit switches LS2 - Description

Applications

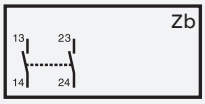
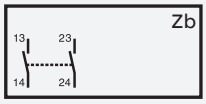
Easy to use, electromechanical limit switches offer specific qualities:
- Visible operation
- Able to switch strong currents (10 A conventional thermal current)
- Electrically separated contacts
- Precise operating points (consistency)
- Immune to electromagnetic disturbances

They are purpose-built detection devices thanks to these characteristics:
- Presence/absence
- Positioning and travel limit
- Objects passing/counting

Description

These limit switches, made in thermoplastic or metal material, sealed with epoxy resin at the base on the box, offer a degree of protection IP67.

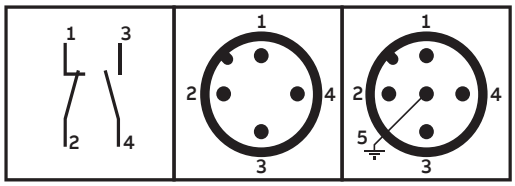
They comply with the requirements of European Directives (Low Voltage and RoHS) and are conform to European and International Standards.

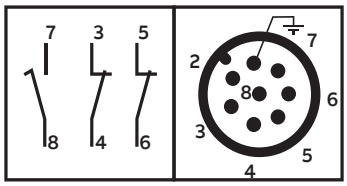
B11: Snap action 1NO+1NC		**D11:** Slow action break before make 1NO+1NC	
B02: Snap action 2NC		**D02:** Slow action 2NC	
B20: Snap action 2NO		**D20:** Slow action 2NO	
B22: Snap action 2NO+2NC		**D22:** Slow action break before make 2NO+2NC	

Microswitch types

Snap	Slow
B11: 1NO+1NC	**D11:** 1NO+1NC
B02: 2NC	**D02:** 2NC
B20: 2NO	**D20:** 2NO
B22: 2NO+2NC	**D22:** 2NO+2NC

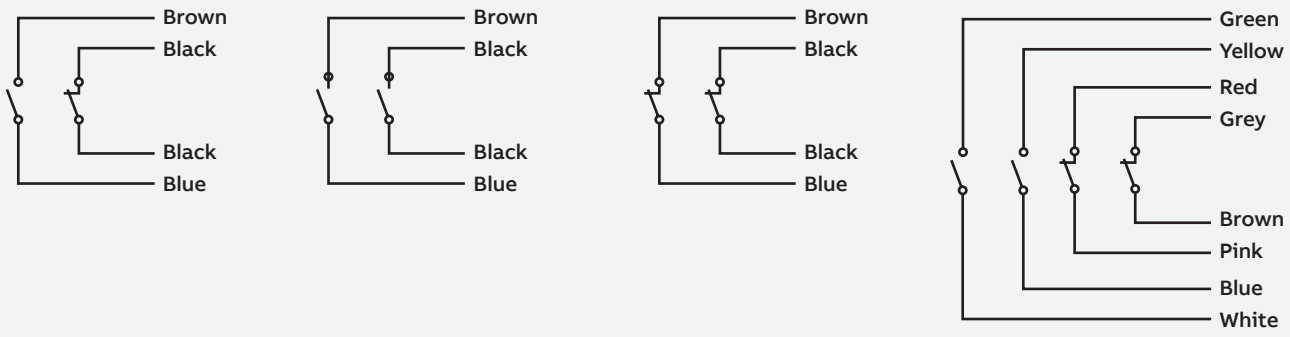
M12 connector
All the models can be supplied with integrated M12 connector (4, 5 and 8 poles). Metal casing is with 5 or 8 poles connector to electrical earth (ground).





Pre-wired connection
Offer the pre-wired cable from 1m to 12m.

pre-wired cable makings



Limit switches LS3 - Description

Applications

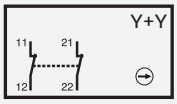
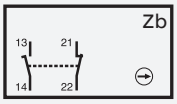
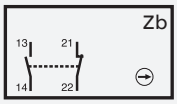
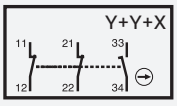
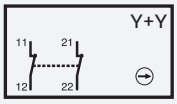
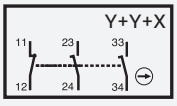
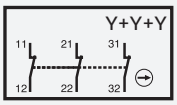
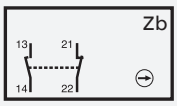
Easy to use, electromechanical limit switches offer specific qualities:
- Visible operation
- Able to switch strong currents (10 A conventional thermal current)
- Electrically separated contacts
- Precise operating points (consistency)
- Immune to electromagnetic disturbances

They are purpose-built detection devices thanks to these characteristics:
- Presence/absence
- Positioning and travel limit
- Objects passing/counting

Description

Limit switches, which are made of reinforced UL-VO thermoplastic or metal, offer double insulation and a degree of protection of IP65/IP66.

They comply with the requirements of European Directives (Low Voltage and RoHS) and are conform to European and International Standards.

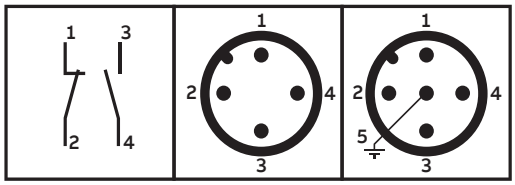
B02: Snap action 2NC		**D11:** Slow action break before make 1NO+1NC	
B11: Snap action 1NO+1NC		**D12P:** Slow action break before make 1NO+2NC	
L02: Slow action simultaneous 2NC		**D21P:** Slow action break before make 2NO+1NC	
L20: Slow action simultaneous 2NO		**L03P:** Slow action simultaneous 3NC	
C11: Slow action break before make 1NO+1NC			

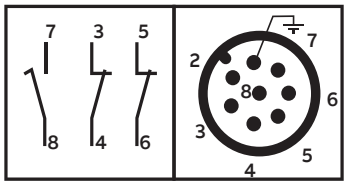
Microswitch types

Snap	Slow
B02: 2NC	**L02:** 2NC
B11: 1NO+1NC	**L20:** 2NO
	C11: 1NO+1NC
	D11: 1NO+1NC
	D12P: 1NO+2NC
	D21P: 2NO+1NC
	L03P: 3NC

M12 connector

All the models can be supplied with integrated M12 connector (4, 5 and 8 poles). Metal casing is with 5 or 8 poles connector to electrical earth (ground).





Limit switches LS4 - Description

Applications

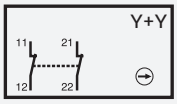
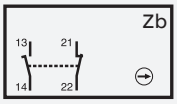
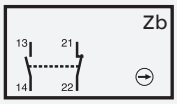
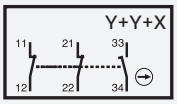
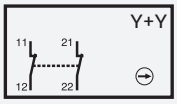
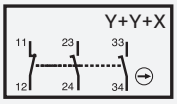
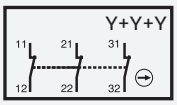
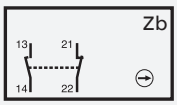
Easy to use, electromechanical limit switches offer specific qualities:
- Visible operation
- Able to switch strong currents (10 A conventional thermal current)
- Electrically separated contacts
- Precise operating points (consistency)
- Immune to electromagnetic disturbances

They are purpose-built detection devices thanks to these characteristics:
- Presence/absence
- Positioning and travel limit
- Objects passing/counting

Description

Limit switches, which are made of reinforced UL-VO thermoplastic or metal, offer double insulation and a degree of protection of IP65/IP66..

They comply with the requirements of European Directives (Low Voltage and RoHS) and are conform to European and International Standards.

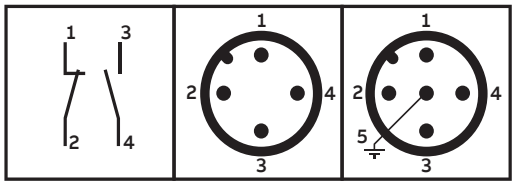
B02: Snap action 2NC		**D11:** Slow action break before make 1NO+1NC	
B11: Snap action 1NO+1NC		**D12P:** Slow action break before make 1NO+2NC	
L02: Slow action simultaneous 2NC		**D21P:** Slow action break before make 2NO+1NC	
L20: Slow action simultaneous 2NO		**L03P:** Slow action simultaneous 3NC	
C11: Slow action break before make 1NO+1NC			

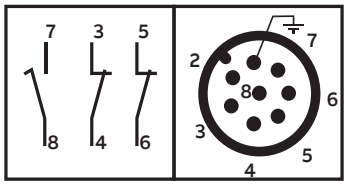
Microswitch types

Snap	Slow
B02: 2NC	**L02:** 2NC
B11: 1NO+1NC	**L20:** 2NO
	C11: 1NO+1NC
	D11: 1NO+1NC
	D12P: 1NO+2NC
	D21P: 2NO+1NC
	L03P: 3NC

M12 connector

All the models can be supplied with integrated M12 connector (4, 5 and 8 poles). Metal casing is with 5 or 8 poles connector to electrical earth (ground).





LS2.. Compact prewired limit switches

LS2..P compact prewired plastic casing - IP67

With actuators

18 Plain plunger - Steel
18 Roller plunger - Steel
19 Roller plunger - Plastic
19 90° Cross roller plunger - Steel
20 90° Cross roller plunger - Plastic
20 Plain plunger with M12 fixing nuts - Brass
21 Roller plunger with M12 fixing nuts - Steel
21 90° Cross roller plunger with M12 fixing nuts - Steel
22 Plastic roller lever Ø 14
22 Steel roller lever Ø 14
23 Plastic roller lever with bent lever Ø 18
23 Steel roller lever with bent lever Ø 18
24 Adjustable plastic roller lever Ø 18
24 Adjustable steel rod lever Ø 3
25 Spring rod
25 Spring rod with insulated tip

LS2..M compact prewired metal casing - IP67

With actuators

26 Plain plunger - Steel
26 Roller plunger - Steel
27 Roller plunger - Plastic
27 90° Cross roller plunger - Steel
28 90° Cross roller plunger - Plastic
28 Plain plunger with M12 fixing nuts - Brass
29 Roller plunger with M12 fixing nuts - Steel
29 90° Cross roller plunger with M12 fixing nuts - Steel
30 Plastic roller lever Ø 14
30 Steel roller lever Ø 14
31 Plastic roller lever with bent lever Ø 18
31 Steel roller lever with bent lever Ø 18
32 Adjustable plastic roller lever Ø 18
32 Adjustable steel rod lever Ø 3
33 Spring rod
33 Spring rod with insulated tip

34 Technical data

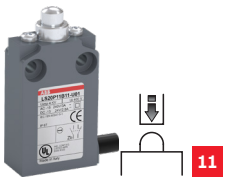
LS2..P – Compact, prewired – Plastic casing – IP67

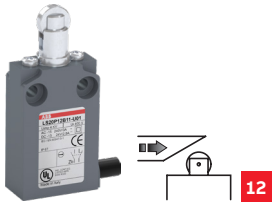
Double insulation ⧈ – 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

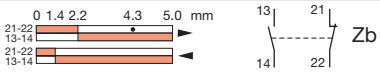
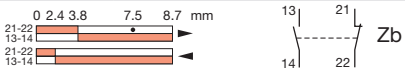
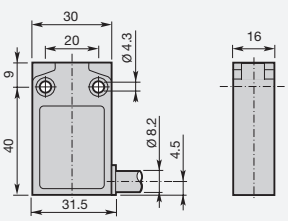
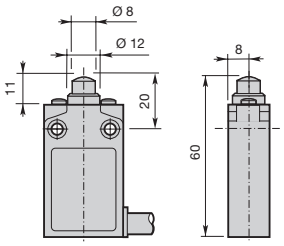
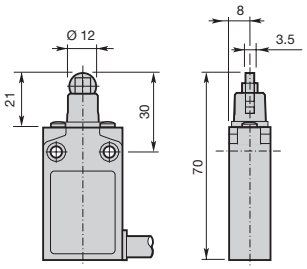
LS2..P limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.





Actuator	Plain plunger - Steel			Roller plunger - Steel		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20P11B11-U01	1SBV015911R3801	0.125	LS20P12B11-U01	1SBV015912R3801	0.130
Cable output bottom	LS21P11B11-U01	1SBV016011R3801	0.125	LS21P12B11-U01	1SBV016012R3801	0.130
⊖ (N.C. contact with positive opening operation)	⊖			⊖		
Maximum actuation speed	0.5 m/s			0.1 m/s		
Min. force / torque						
actuation	15 N			10 N		
positive opening operation	30 N			30 N		
Operation Diagram						
Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable plastic roller lever Ø 18	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2-P serie. In grey are the ones available in this page.

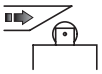
LS2..P – Compact, prewired – Plastic casing – IP67

Double insulation ⧈ – 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

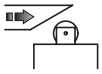
LS2..P limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.

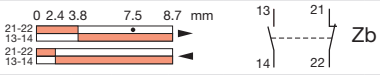


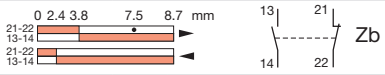
13



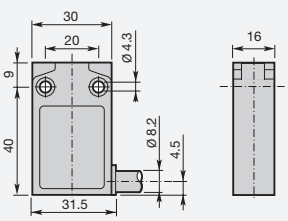
14

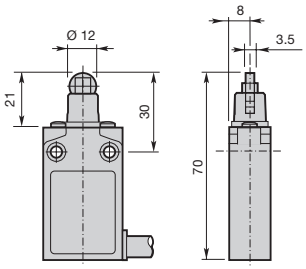
Actuator	Roller plunger - Plastic			90° Cross roller plunger - Steel		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20P13B11-U01	1SBV015913R3801	0.130	LS20P14B11-U01	1SBV015914R3801	0.130
Cable output bottom	LS21P13B11-U01	1SBV016013R3801	0.130	LS21P14B11-U01	1SBV016014R3801	0.130
(N.C. contact with positive opening operation)						
Maximum actuation speed	0.1 m/s			0.1 m/s		
Min. force / torque						
actuation	10 N			10 N		
positive opening operation	30 N			30 N		
Operation Diagram						
Closed contact / Open contact						

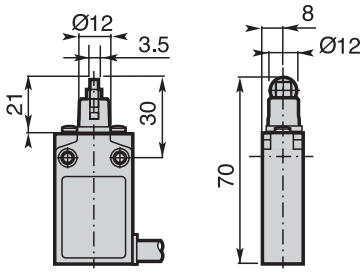




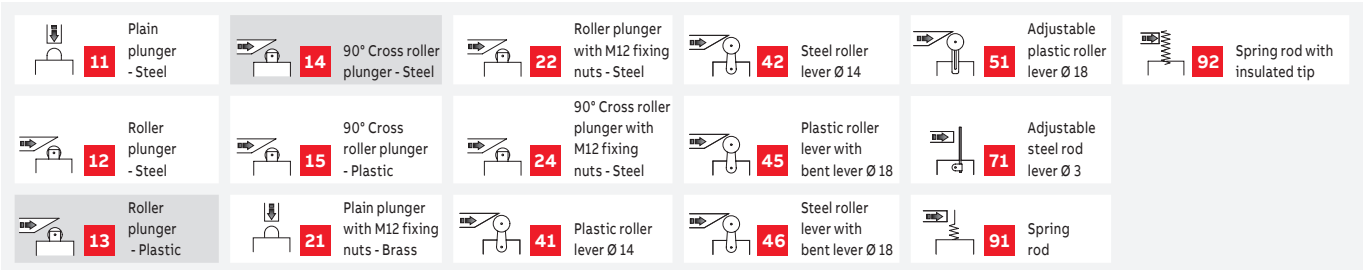
Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply



Here is the full range of actuator available for the LS2-P serie. In grey are the ones available in this page.

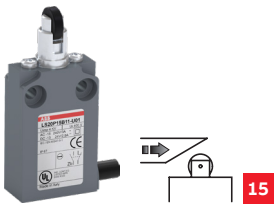
LS2..P – Compact, prewired – Plastic casing – IP67

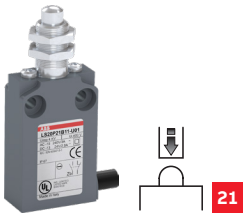
Double insulation ⧈ – 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

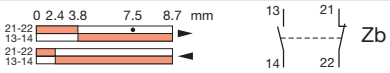
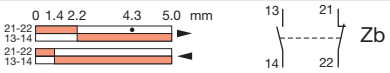
LS2..P limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

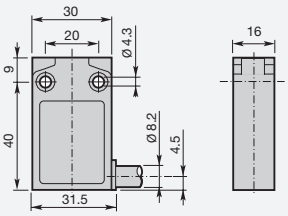
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.

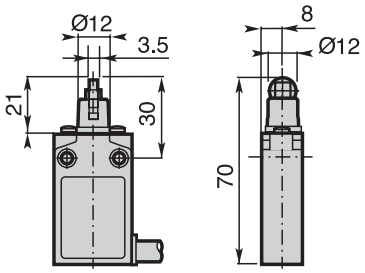


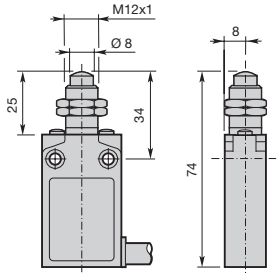


Actuator	90° Cross roller plunger - Plastic			Plain plunger with M12 fixing nuts - Brass		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20P15B11-U01	1SBV015915R3801	0.130	LS20P21B11-U01	1SBV015921R3801	0.140
Cable output bottom	LS21P15B11-U01	1SBV016015R3801	0.130	LS21P21B11-U01	1SBV016021R3801	0.140
(N.C. contact with positive opening operation)						
Maximum actuation speed	0.1 m/s			0.5 m/s		
Min. force / torque						
actuation	10 N			15 N		
positive opening operation	30 N			30 N		
Operation Diagram Closed contact / Open contact						

Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable plastic roller lever Ø 18	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2-P serie. In grey are the ones available in this page.

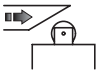
LS2..P – Compact, prewired – Plastic casing – IP67

Double insulation ⧈ – 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

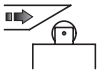
LS2..P limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.

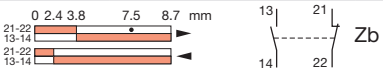


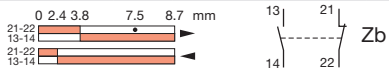
22



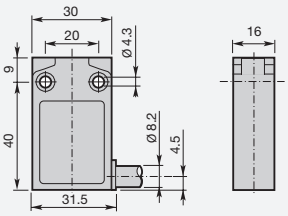
24

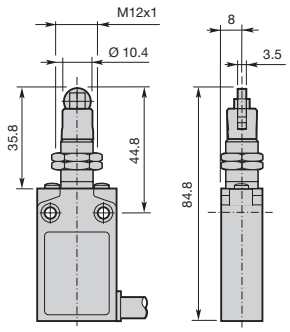
Actuator	Roller plunger with M12 fixing nuts - Steel			90° Cross roller plunger with M12 fixing nuts - Steel		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** Kg
Cable output left / right	LS20P22B11-U01	1SBV015922R3801	0.145	LS20P24B11-U01	1SBV015924R3801	0.145
Cable output bottom	LS21P22B11-U01	1SBV016022R3801	0.145	LS21P24B11-U01	1SBV016024R3801	0.145
(N.C. contact with positive opening operation)						
Maximum actuation speed	0.1 m/s			0.1 m/s		
Min. force / torque						
actuation	10 N			10 N		
positive opening operation	30 N			30 N		
Operation Diagram						
Closed contact / Open contact						

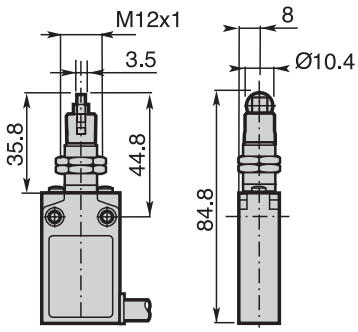




Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable plastic roller lever Ø 18	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2-P serie. In grey are the ones available in this page.

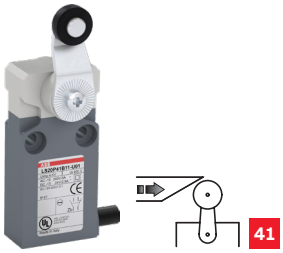
LS2..P – Compact, prewired – Plastic casing – IP67

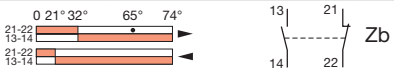
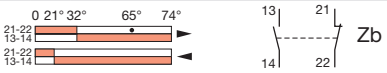
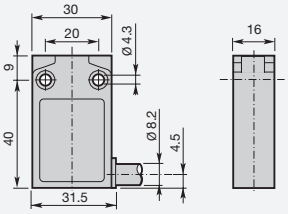
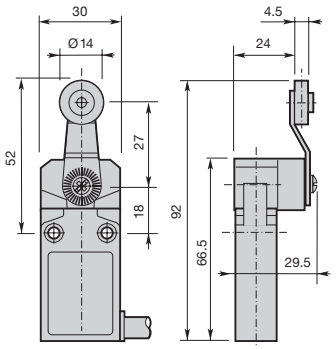
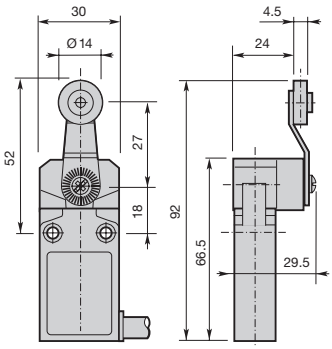
Double insulation ⧈ – 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS2..P limit switches are used in applications were high degree of protection is needed along with limited mounting space.

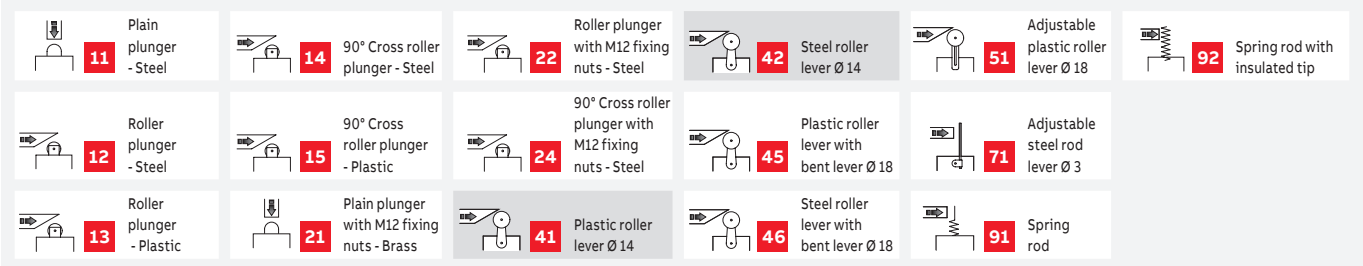
The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.



Actuator	Plastic roller lever Ø 14			Steel roller lever Ø 14		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Cable output left / right	LS20P41B11-U01	1SBV015941R3801	0.175	LS20P42B11-U01	1SBV015942R3801	0.175
Cable output bottom	LS21P41B11-U01	1SBV016041R3801	0.175	LS21P42B11-U01	1SBV016042R3801	0.175
(N.C. contact with positive opening operation)						
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.08 N.m			0.08 N.m		
positive opening operation	0.28 N.m			0.28 N.m		
Operation Diagram						
Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply



Here is the full range of actuator available for the LS2-P serie. In grey are the ones available in this page.

LS2..P – Compact, prewired – Plastic casing – IP67

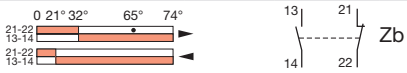
Double insulation ⧈ – 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

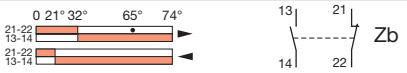
LS2..P limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

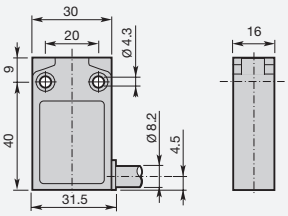
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.

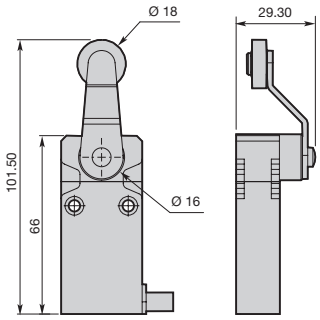
Actuator	Plastic roller lever with bent lever Ø 18			Steel roller lever with bent lever Ø 18		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Cable output left / right	LS20P45B11-U01	1SBV015945R3801	0.180	LS20P46B11-U01	1SBV015946R3801	0.180
Cable output bottom	LS21P45B11-U01	1SBV016045R3801	0.180	LS21P46B11-U01	1SBV016046R3801	0.180
(N.C. contact with positive opening operation)						
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.08 N.m			0.08 N.m		
positive opening operation	0.28 N.m			0.28 N.m		
Operation Diagram						
Closed contact / Open contact						

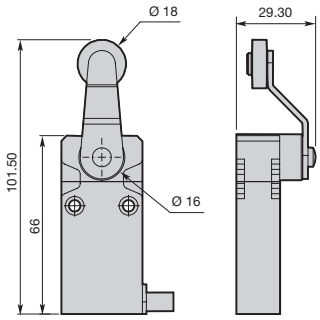




Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable plastic roller lever Ø 18	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2-P serie. In grey are the ones available in this page.

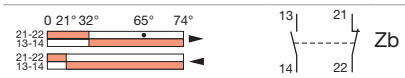
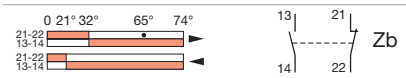
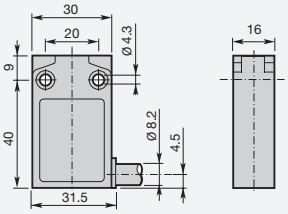
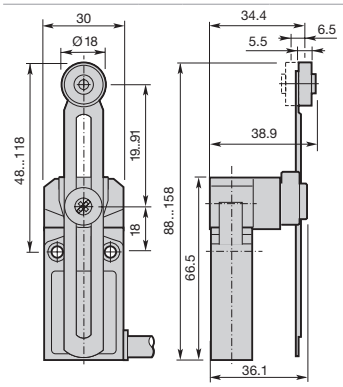
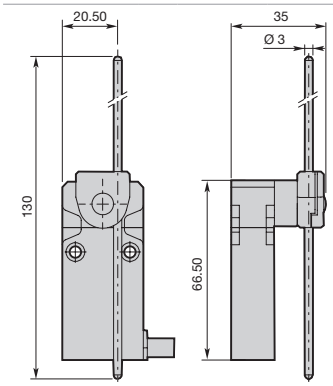
LS2..P – Compact, prewired – Plastic casing – IP67

Double insulation ⧈ – 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS2..P limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.

Actuator	Adjustable plastic roller lever Ø 18			Adjustable steel rod lever Ø 3		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Cable output left / right	LS20P51B11-U01	1SBV015951R3801	0.190	LS20P71B11-U01	1SBV015971R3801	0.185
Cable output bottom	LS21P51B11-U01	1SBV016051R3801	0.190	LS21P71B11-U01	1SBV016071R3801	0.185
⊖ (N.C. contact with positive opening operation)	⊖			⊖		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.08 N.m			0.08 N.m		
positive opening operation	0.28 N.m			0.28 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm)						
						

Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable plastic roller lever Ø 18	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2-P serie. In grey are the ones available in this page.

LS2..P – Compact, prewired – Plastic casing – IP67

Double insulation ⧈ – 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

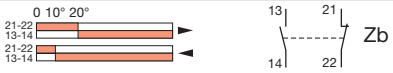
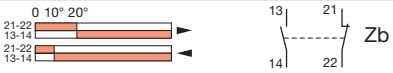
LS2..P limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

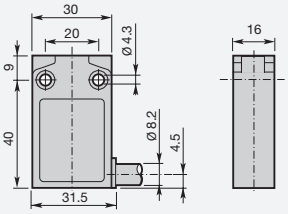
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.

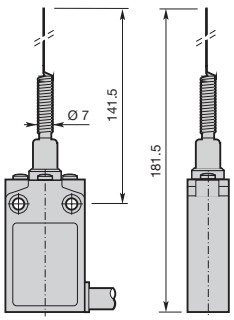
91

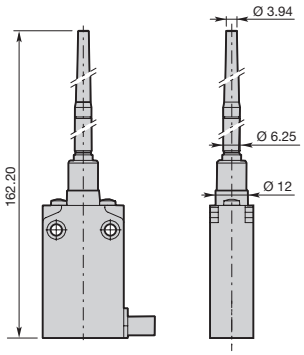
92

Actuator	Spring rod			Spring rod with insulated tip		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20P91B11-U01	1SBV015991R3801	0.190	LS20P92B11-U01	1SBV015992R3801	0.195
Cable output bottom	LS21P91B11-U01	1SBV016091R3801	0.190	LS21P92B11-U01	1SBV016092R3801	0.195
⊖ (N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1.0 m/s			1.0 m/s		
Min. force / torque						
actuation	0.10 N.m			0.10 N.m		
positive opening operation	–			–		
Operation Diagram						
Closed contact / Open contact						

Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable plastic roller lever Ø 18	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2-P serie. In grey are the ones available in this page.

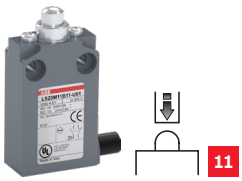
LS2..M – Compact, prewired – Metal Casing – IP67

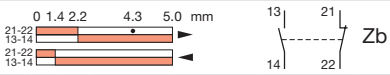
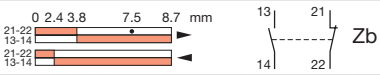
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts 30 mm width

LS2..M limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

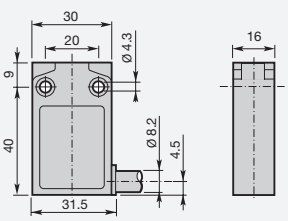
The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.

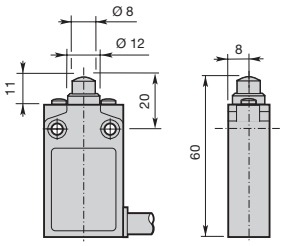


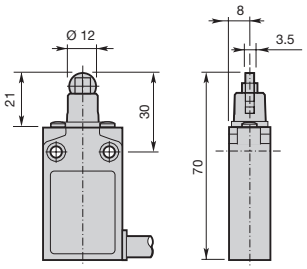
Actuator	Plain plunger - Steel			Roller plunger - Steel		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20M11B11-U01	1SBV015511R2601	0.175	LS20M12B11-U01	1SBV015512R2601	0.180
Cable output bottom	LS21M11B11-U01	1SBV015611R2601	0.175	LS21M12B11-U01	1SBV015612R2601	0.180
(N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	0.5 m/s			0.1 m/s		
Min. force / torque						
actuation	15 N			10 N		
positive opening operation	30 N			30 N		
Operation Diagram						

Closed contact / Open contact

Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable Ø 18 plastic roller lever	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

LS2..M – Compact, prewired – Metal Casing – IP67

30 mm width – 1 N.O. + 1 N.C. Snap Action contacts 30 mm width

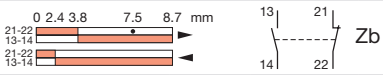
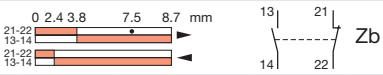
LS2..M limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.

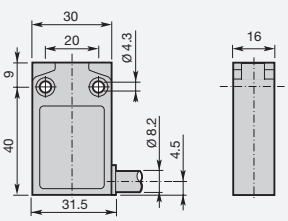
13

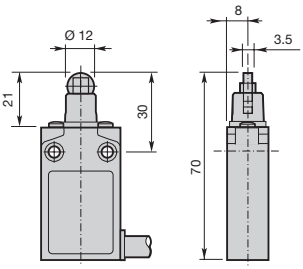
14

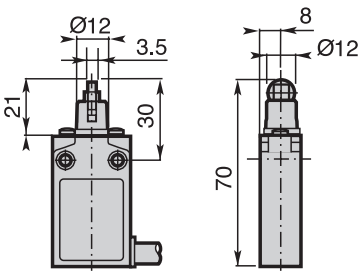
Actuator	Roller plunger - Plastic			90° Cross roller plunger - Steel		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20M13B11-U01	1SBV015513R2601	0.180	LS20M14B11-U01	1SBV015514R2601	0.180
Cable output bottom	LS21M13B11-U01	1SBV015613R2601	0.180	LS21M14B11-U01	1SBV015614R2601	0.180
(N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	0.1 m/s			0.1 m/s		
Min. force / torque						
actuation	10 N			10 N		
positive opening operation	30 N			30 N		
Operation Diagram						

Closed contact / Open contact

Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable Ø 18 plastic roller lever	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

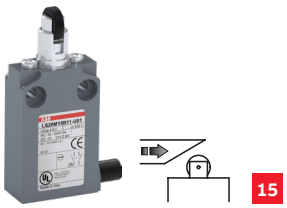
LS2..M – Compact, prewired – Metal Casing – IP67

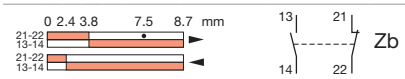
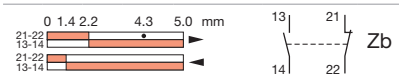
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts 30 mm width

LS2..M limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

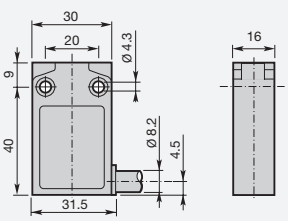
The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.

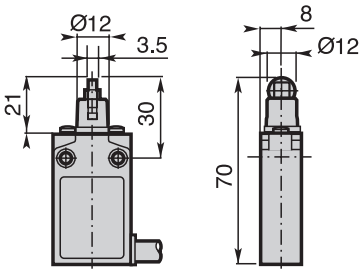


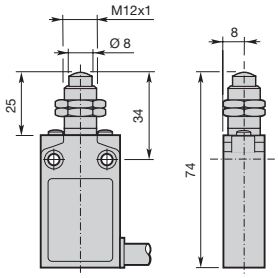
Actuator	90° Cross roller plunger - Plastic (15)			Plain plunger with M12 fixing nuts - Brass (21)		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Cable output left / right	LS20M15B11-U01	1SBV015515R2601	0.18	LS20M21B11-U01	1SBV015521R2601	0.19
Cable output bottom	LS21M15B11-U01	1SBV015615R2601	0.18	LS21M21B11-U01	1SBV015621R2601	0.19
(N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	0.1 m/s			0.5 m/s		
Min. force / torque						
actuation	10 N			15 N		
positive opening operation	30 N			30 N		
Operation Diagram						

Closed contact / Open contact

Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable Ø 18 plastic roller lever	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

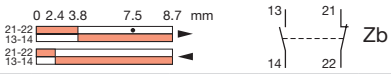
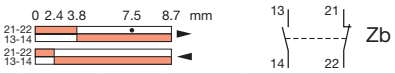
LS2..M – Compact, prewired – Metal Casing – IP67

30 mm width – 1 N.O. + 1 N.C. Snap Action contacts 30 mm width

LS2..M limit switches are used in applications were high degree of protection is needed along with limited mounting space.

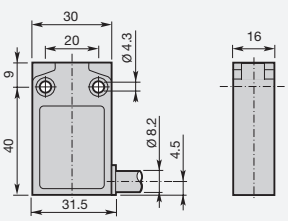
The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

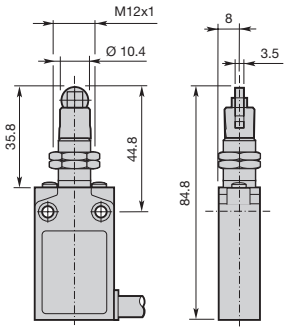
The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.

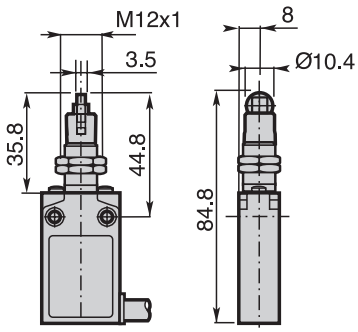
Actuator	Roller plunger with M12 fixing nuts - Steel			90° Cross roller plunger with M12 fixing nuts - Steel		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20M22B11-U01	1SBV015522R2601	0.195	LS20M24B11-U01	1SBV015524R2601	0.195
Cable output bottom	LS21M22B11-U01	1SBV015622R2601	0.195	LS21M24B11-U01	1SBV015624R2601	0.195
(N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	0.1 m/s			0.1 m/s		
Min. force / torque						
actuation	10 N			10 N		
positive opening operation	30 N			30 N		
Operation Diagram						

Closed contact / Open contact

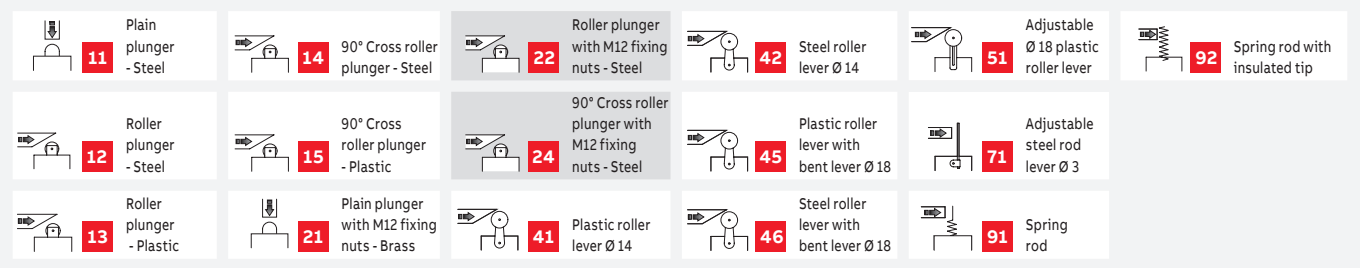
Dimensions (mm)







Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply



Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

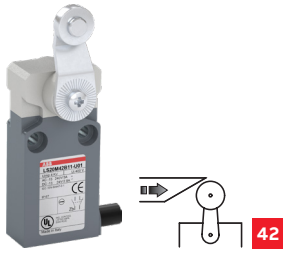
LS2..M – Compact, prewired – Metal Casing – IP67

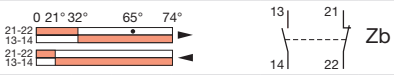
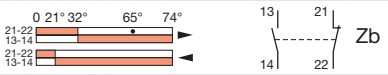
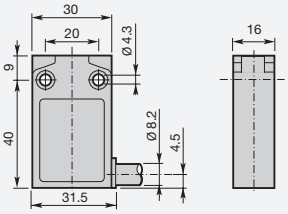
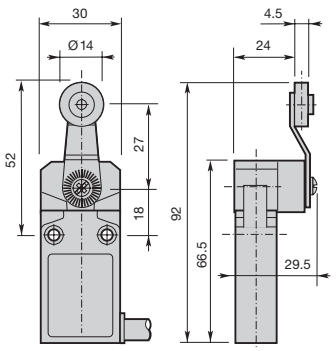
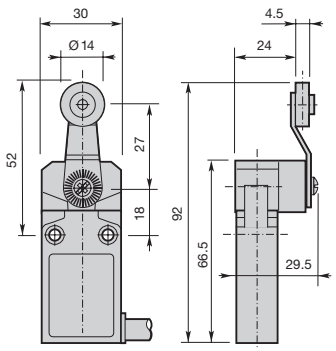
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts 30 mm width

LS2..M limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.



Actuator	Plastic roller lever Ø 14			Steel roller lever Ø 14		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20M41B11-U01	1SBV015541R2601	0.225	LS20M42B11-U01	1SBV015542R2601	0.225
Cable output bottom	LS21M41B11-U01	1SBV015641R2601	0.225	LS21M42B11-U01	1SBV015642R2601	0.225
(N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.08 N.m			0.08 N.m		
positive opening operation	0.28 N.m			0.28 N.m		
Operation Diagram						
Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable Ø 18 plastic roller lever	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

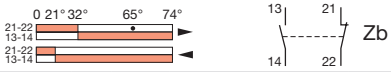
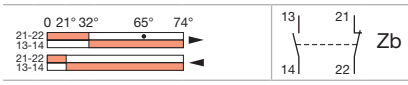
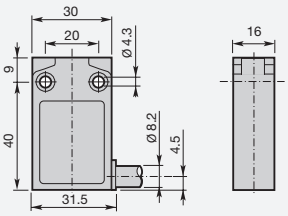
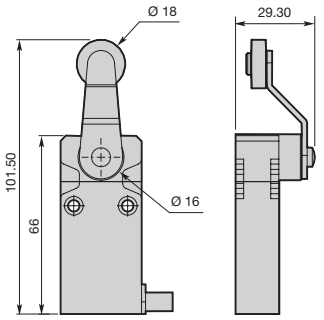
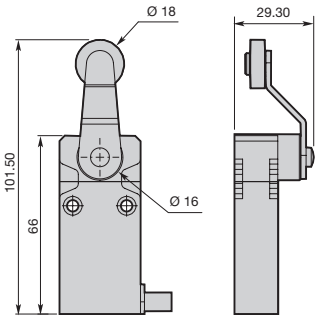
LS2..M – Compact, prewired – Metal Casing – IP67

30 mm width – 1 N.O. + 1 N.C. Snap Action contacts 30 mm width

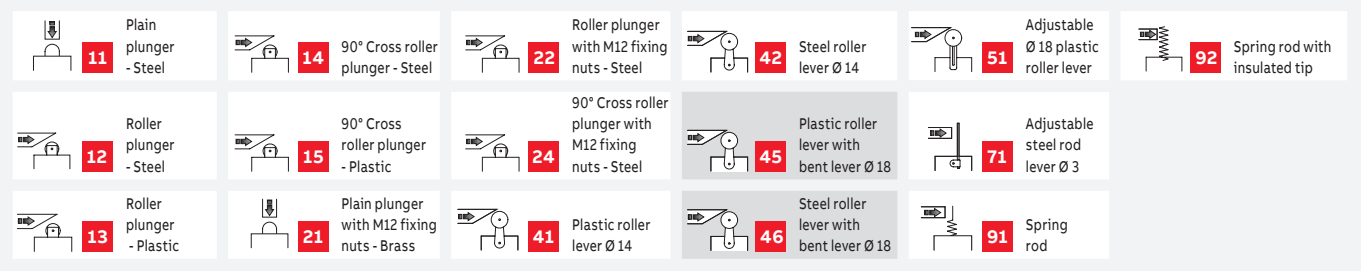
LS2..M limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.

Actuator	Plastic roller lever with bent lever Ø 18			Steel roller lever with bent lever Ø 18		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20M45B11-U01	1SBV015545R2601	0.23	LS20M46B11-U01	1SBV015546R2601	0.23
Cable output bottom	LS21M45B11-U01	1SBV015645R2601	0.23	LS21M46B11-U01	1SBV015646R2601	0.23
(N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.08 N.m			0.08 N.m		
positive opening operation	0.28 N.m			0.28 N.m		
Operation Diagram						
Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply



Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

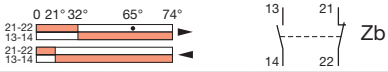
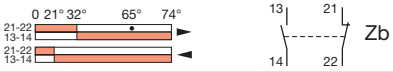
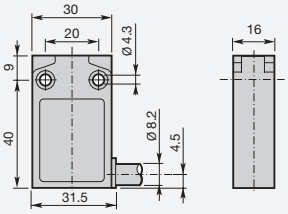
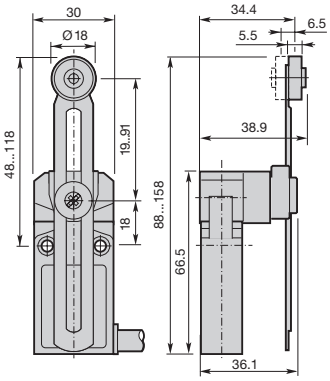
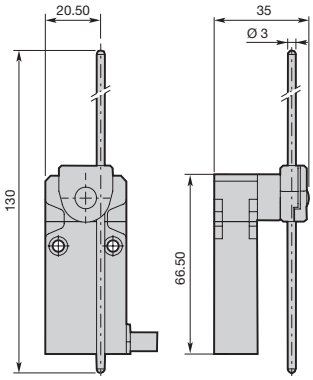
LS2..M – Compact, prewired – Metal Casing – IP67

30 mm width – 1 N.O. + 1 N.C. Snap Action contacts 30 mm width

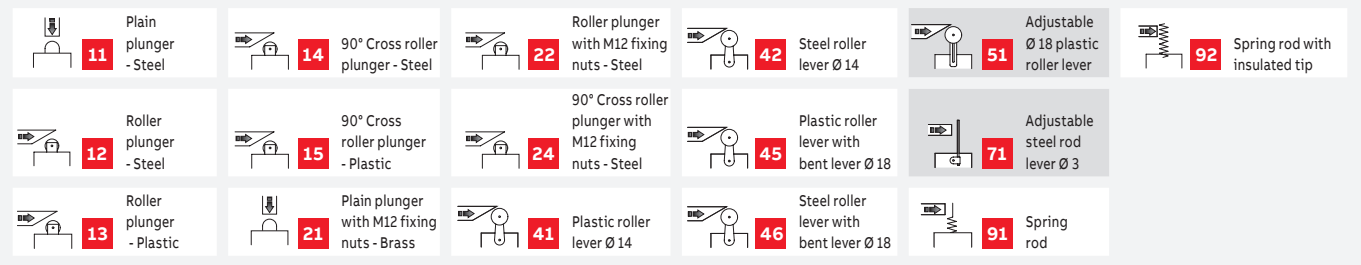
LS2..M limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.

Actuator	Adjustable plastic roller lever Ø 18			Adjustable steel rod lever Ø 3		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20M51B11-U01	1SBV015551R2601	0.24	LS20M71B11-U01	1SBV015571R2601	0.235
Cable output bottom	LS21M51B11-U01	1SBV015651R2601	0.24	LS21M71B11-U01	1SBV015671R2601	0.235
(N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.08 N.m			0.08 N.m		
positive opening operation	0.28 N.m			0.28 N.m		
Operation Diagram						
Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply



Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

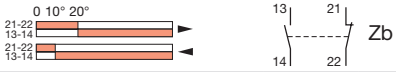
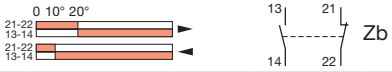
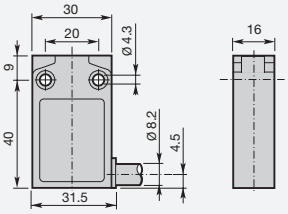
LS2..M – Compact, prewired – Metal Casing – IP67

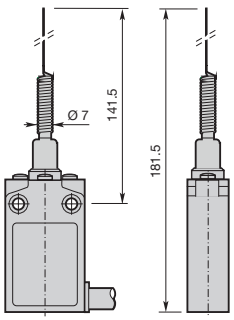
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts 30 mm width

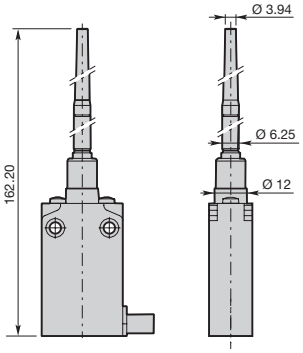
LS2..M limit switches are used in applications were high degree of protection is needed along with limited mounting space.

The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.

Actuator	Spring rod			Spring rod steel with insulated tip		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Cable output left / right	LS20M91B11-U01	1SBV015591R2601	0.245	LS20M92B11-U01	1SBV015592R2601	0.245
Cable output bottom	LS21M91B11-U01	1SBV015691R2601	0.245	LS21M92B11-U01	1SBV015692R2601	0.245
(N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1.0 m/s			1.0 m/s		
Min. force / torque						
actuation	0.10 N.m			0.10 N.m		
positive opening operation	– N			– N		
Operation Diagram Closed contact / Open contact						
Dimensions (mm)						





Note : For other configuration 2 N.C. contacts, longer cable or type of connection, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply

11 Plain plunger - Steel	14 90° Cross roller plunger - Steel	22 Roller plunger with M12 fixing nuts - Steel	42 Steel roller lever Ø 14	51 Adjustable Ø 18 plastic roller lever	92 Spring rod with insulated tip
12 Roller plunger - Steel	15 90° Cross roller plunger - Plastic	24 90° Cross roller plunger with M12 fixing nuts - Steel	45 Plastic roller lever with bent lever Ø 18	71 Adjustable steel rod lever Ø 3	
13 Roller plunger - Plastic	21 Plain plunger with M12 fixing nuts - Brass	41 Plastic roller lever Ø 14	46 Steel roller lever with bent lever Ø 18	91 Spring rod	

Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

LS2..P.. , LS2..M..

Technical data

General technical data

	Plastic casing	Metal casing
Standards	IEC 60947-1, IEC 60947-5-1, EN 60947-1, EN 60947-5-1, UL 508	
Certifications - Approvals	cULus-	
Air temperature near the device		
during operation	– 25 ... + 70 °C	
for storage	– 40 ... + 70 °C	
Mounting positions	All positions are authorized	
Protection against electrical shocks (acc. to IEC 61140)	Class II - double insulation	Class I
Degree of protection (acc. to IEC 60529 and EN 60529)	IP67	
Degree of protection (acc. to UL 50 and NEMA)	Type 1 Enclosure (indoor use)	Type 4 - 4x - 6 Enclosure (Outdoor use)
Minimum bending radius	49 mm	
Tightening torque		
Operating head	0.5Nm, max 0.7Nm	0.6Nm, max 0.7Nm
Actuator	0.5Nm, max 0.8Nm	0.5Nm, max 0.8Nm

Electrical data

Rated insulation voltage Ui			400 V (degree of pollution 3)	
Rated impulse withstand voltage Uimp (acc. to IEC 60947-1 and EN 60947-1)			4 kV	
Conventional enclosed thermal current Ith acc. to IEC 60947-5-1 and EN 60947-5-1) θ < 40 °C			10 A	
Short-circuit protection gG type fuses			10 A / 500 V	
Rated operational current				
Ie / AC-15	acc. to IEC 60947-5-1	24 V - 50/60 Hz	10 A	
		120 V - 50/60 Hz	6 A	
		240 V - 50/60 Hz	3 A	
	acc. to UL 508		B300	
Ie / DC-13	acc. to IEC 60947-5-1	24 V DC	2.8 A	
		125 V DC	0.55 A	
		250 V DC	0.27 A	
	acc. to UL 508		R 300	
Positivity			Contacts with positive opening operation as per IEC 60947-5-1 chapter 3 and EN 60947-5-1	
Resistance between contacts		mΩ	25	
Pre-wired connection		mm² / AWG	4 x 0.75 mm² / AWG18	5 x 0.75 mm² / AWG18
Terminal marking			N.C. : Black/Black - N.O. : Blue / brown	
Mechanical durability			10 millions of operations	
Electrical durability				
	max. switching frequency		3600 cycles/h	
B10d			20 millions of operations	

LS3.. standard limit switches

LS3..P Standard plastic casing - IP65

With actuators

38 Plain plunger - Plastic
38 Plain plunger - Steel
39 Roller plunger - Steel
39 Roller plunger - Plastic
40 Roller lever + plunger - Horizontal
40 Roller lever + plunger - Vertical
41 Plastic roller lever Ø 18
41 Plastic rubber lever Ø 50
42 Adjustable plastic roller lever Ø 18
42 Adjustable rubber roller lever Ø 50
43 Adjustable steel rod lever Ø 3
43 Adjustable fiber glass rod lever Ø 3
44 Spring rod
44 Spring rod with insulated tip

LS3..M Standard metal casing - IP66

With actuators

46 Plain plunger - Steel
46 Roller plunger - Steel
47 Roller plunger - Plastic
47 Roller lever + plunger - Horizontal
48 Roller lever + plunger - Vertical
48 Plastic roller lever Ø 18
49 Plastic rubber lever Ø 50
49 Adjustable plastic roller lever Ø 18
50 Adjustable rubber roller lever Ø 50
50 Adjustable steel rod lever Ø 3
51 Adjustable fiber glass rod lever Ø 3
51 Spring rod
52 Spring rod with insulated tip

53 Technical data

LS3..P – Standard – Plastic Casing – IP65

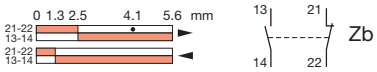
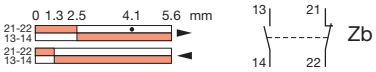
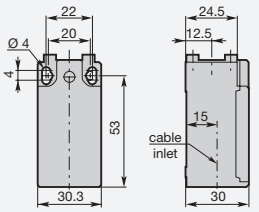
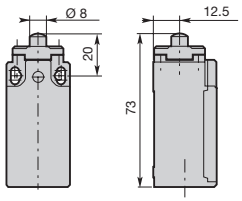
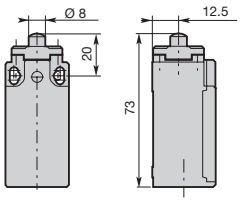
Double insulation ⧈ - 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..P limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

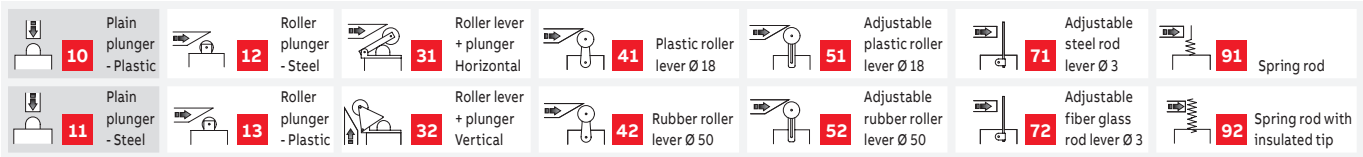
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.

10

11

Actuator	Plain plunger - Plastic			Plain plunger - Steel		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32P10B11	1SBV010310R1211	0.07	LS32P11B11	1SBV010311R1211	0.07
Iso 20	LS33P10B11	1SBV012210R1211	0.07	LS33P11B11	1SBV012211R1211	0.07
1/2" NPT	LS35P10B11	1SBV012110R1211	0.08	LS35P11B11	1SBV012111R1211	0.08
Conformity / (N.C. contact with positive opening operation)	EN 50047 (B shape)			EN 50047 (B shape)		
Maximum actuation speed	0.5 m/s			0.5 m/s		
Min. force / torque						
actuation	15 N			15 N		
positive opening operation	30 N			30 N		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



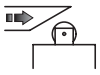
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

LS3..P – Standard – Plastic Casing – IP65

Double insulation ⧈ - 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..P limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.



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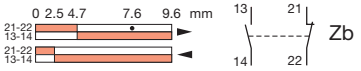
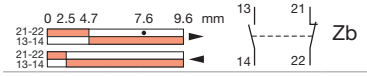
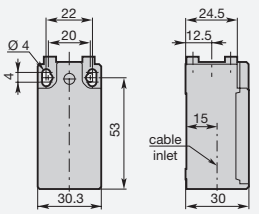
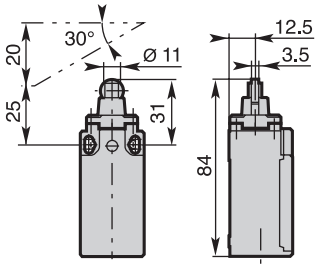
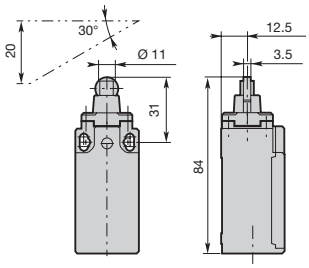
Actuator	Roller plunger - Steel			Roller plunger - Plastic		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32P12B11	1SBV010312R1211	0.075	LS32P13B11	1SBV010313R1211	0.075
Iso 20	LS33P12B11	1SBV012212R1211	0.075	LS33P13B11	1SBV012213R1211	0.075
1/2" NPT	LS35P12B11	1SBV012112R1211	0.085	LS35P13B11	1SBV012113R1211	0.085
Conformity / (N.C. contact with positive opening operation)	EN 50047 (C shape)			EN 50047 (C shape)		
Maximum actuation speed	0.3 m/s			0.3 m/s		
Min. force / torque						
actuation	12 N			12 N		
positive opening operation	30 N			30 N		
Operation Diagram						
Closed contact / Open contact						
Dimensions (mm, Inches)						





Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.

10 Plain plunger - Plastic	12 Roller plunger - Steel	31 Roller lever + plunger Horizontal	41 Plastic roller lever Ø 18	51 Adjustable plastic roller lever Ø 18	71 Adjustable steel rod lever Ø 3	91 Spring rod
11 Plain plunger - Steel	13 Roller plunger - Plastic	32 Roller lever + plunger Vertical	42 Rubber roller lever Ø 50	52 Adjustable rubber roller lever Ø 50	72 Adjustable fiber glass rod lever Ø 3	92 Spring rod with insulated tip

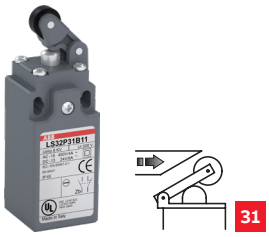
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

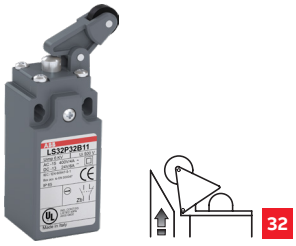
LS3..P – Standard – Plastic Casing – IP65

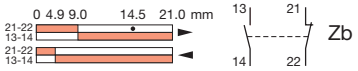
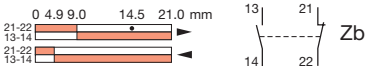
Double insulation ⧈ - 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..P limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

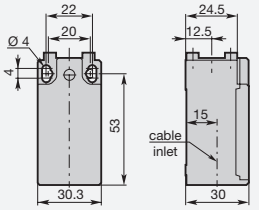
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.

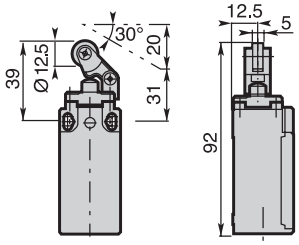


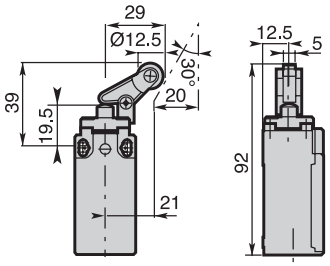


Actuator	Roller lever + plunger - Horizontal			Roller lever + plunger - Vertical		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order**	**Weight (1 pce)** kg
Iso 16	LS32P31B11	1SBV010331R1211	0.075	LS32P32B11	1SBV010332R1211	0.08
Iso 20	LS33P31B11	1SBV012231R1211	0.075	LS33P32B11	1SBV012232R1211	0.08
1/2" NPT	LS35P31B11	1SBV012131R1211	0.085	LS35P32B11	1SBV012132R1211	0.09
Conformity / ⊖ (N.C. contact with positive opening operation)	EN 50047 (E shape) ⊖			⊖		
Maximum actuation speed	1 m/s			1 m/s		
Min. force / torque						
actuation	7 N			7 N		
positive opening operation	24 N			24 N		
Operation Diagram Closed contact / Open contact						

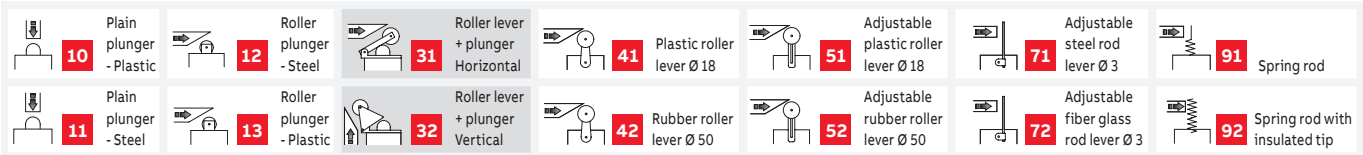
Dimensions (mm, Inches)







Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



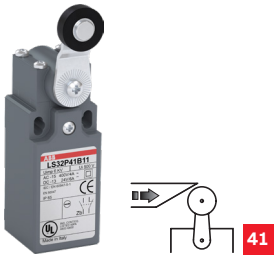
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

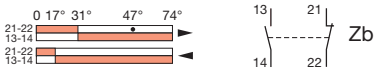
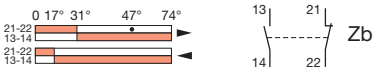
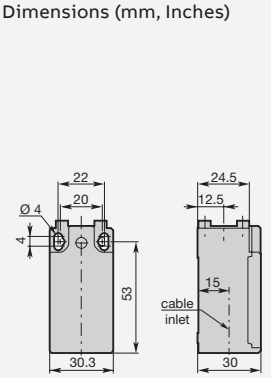
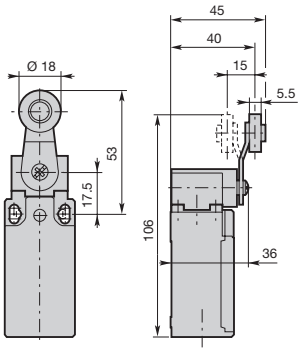
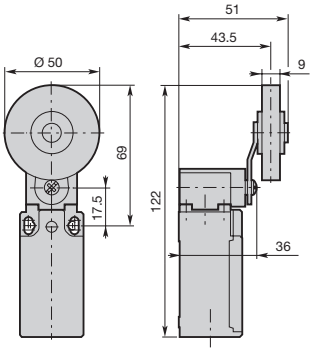
LS3..P – Standard – Plastic Casing – IP65

Double insulation ⧈ - 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

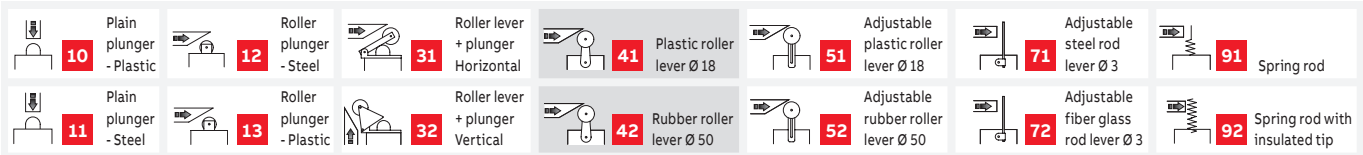
LS3..P limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.



Actuator	Plastic roller lever Ø 18			Rubber roller lever Ø 50		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32P41B11	1SBV010341R1211	0.095	LS32P42B11	1SBV010342R1211	0.115
Iso 20	LS33P41B11	1SBV012241R1211	0.095	LS33P42B11	1SBV012242R1211	0.115
1/2" NPT	LS35P41B11	1SBV012141R1211	0.105	LS35P42B11	1SBV012142R1211	0.125
Conformity / (N.C. contact with positive opening operation)	EN 50047 (A shape)					
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.1 N.m			0.1 N.m		
positive opening operation	0.32 N.m			0.32 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



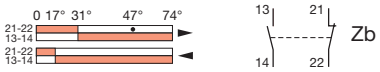
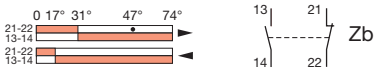
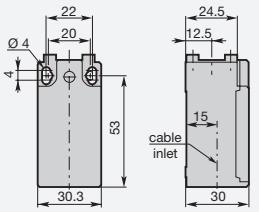
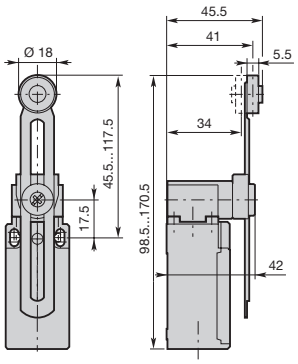
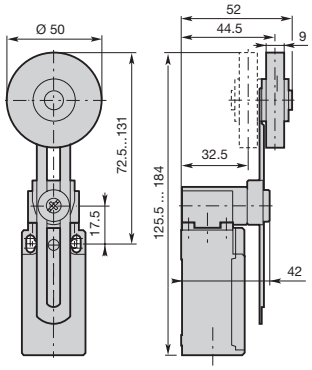
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

LS3..P – Standard – Plastic Casing – IP65

Double insulation ⧈ - 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..P limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.

Actuator	Adjustable plastic roller lever Ø 18			Adjustable rubber roller lever Ø 50		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32P51B11	1SBV010351R1211	0.105	LS32P52B11	1SBV010352R1211	0.125
Iso 20	LS33P51B11	1SBV012251R1211	0.105	LS33P52B11	1SBV012252R1211	0.125
1/2" NPT	LS35P51B11	1SBV012151R1211	0.115	LS35P52B11	1SBV012152R1211	0.135
Conformity / ⊖ (N.C. contact with positive opening operation)	⊖			⊖		
Maximum actuation speed	1.0 m/s			1, 5 m/s		
Min. force / torque						
actuation	0.1 N.m			0.1 N.m		
positive opening operation	0.32 N.m			0.32 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						
						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.

10 Plain plunger - Plastic	12 Roller plunger - Steel	31 Roller lever + plunger Horizontal	41 Plastic roller lever Ø 18	51 Adjustable plastic roller lever Ø 18	71 Adjustable steel rod lever Ø 3	91 Spring rod
11 Plain plunger - Steel	13 Roller plunger - Plastic	32 Roller lever + plunger Vertical	42 Rubber roller lever Ø 50	52 Adjustable rubber roller lever Ø 50	72 Adjustable fiber glass rod lever Ø 3	92 Spring rod with insulated tip

Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

LS3..P – Standard – Plastic Casing – IP65

Double insulation ⧈ - 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..P limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.

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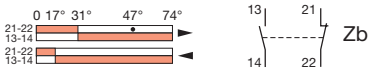
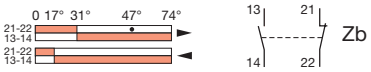
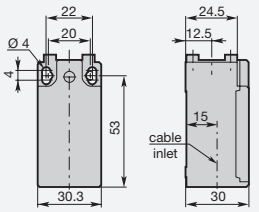
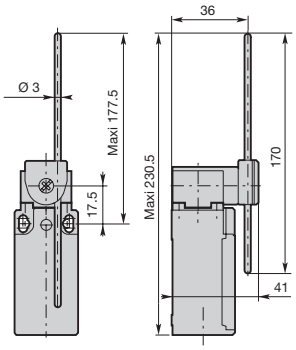
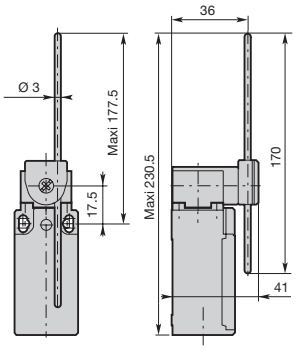
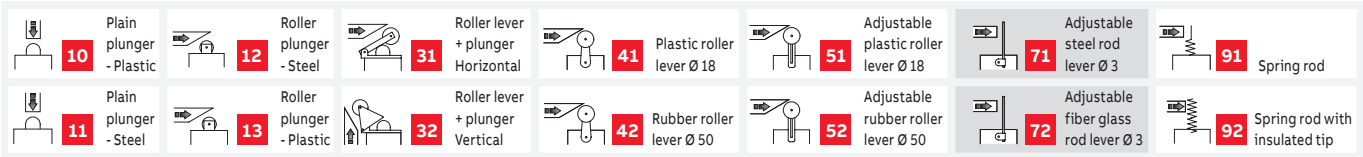
Actuator	Adjustable steel rod lever Ø 3			Adjustable fiber glass rod lever Ø 3		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32P71B11	1SBV010371R1211	0.105	LS32P72B11	1SBV010372R1211	0.105
Iso 20	LS33P71B11	1SBV012271R1211	0.105	LS33P72B11	1SBV012272R1211	0.105
1/2" NPT	LS35P71B11	1SBV012171R1211	0.115	LS35P72B11	1SBV012172R1211	0.115
Conformity / ⊖ (N.C. contact with positive opening operation)	– ⊖			– ⊖		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.1 N			0.1 N		
positive opening operation	0.32 N.m			0.32 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						





Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



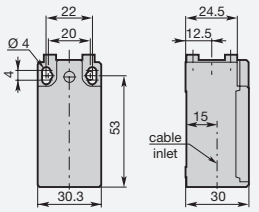
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

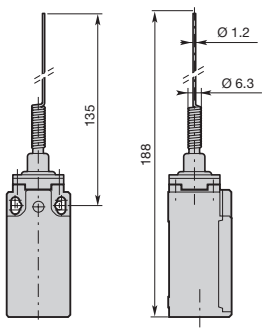
LS3..P – Standard – Plastic Casing – IP65

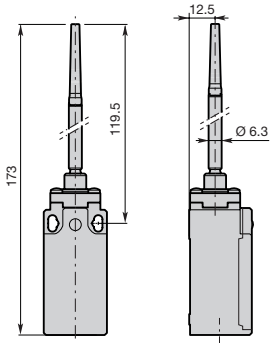
Double insulation ⧈ - 30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..P limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.

Actuator	Spring rod			Spring rod with insulated tip		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32P91B11	1SBV010391R1211	0.08	LS32P92B11	1SBV010392R1211	0.085
Iso 20	LS33P91B11	1SBV012291R1211	0.08	LS33P92B11	1SBV012292R1211	0.085
1/2" NPT	LS35P91B11	1SBV012191R1211	0.09	LS35P92B11	1SBV012192R1211	0.095
Conformity / ⊖ (N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1 m/s			1 m/s		
Min. force / torque						
actuation	0.12 N.m			0.12 N.m		
positive opening operation	- N.m			- N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						





Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.

10 Plain plunger - Plastic	12 Roller plunger - Steel	31 Roller lever + plunger Horizontal	41 Plastic roller lever Ø 18	51 Adjustable plastic roller lever Ø 18	71 Adjustable steel rod lever Ø 3	91 Spring rod
11 Plain plunger - Steel	13 Roller plunger - Plastic	32 Roller lever + plunger Vertical	42 Rubber roller lever Ø 50	52 Adjustable rubber roller lever Ø 50	72 Adjustable fiber glass rod lever Ø 3	92 Spring rod with insulated tip

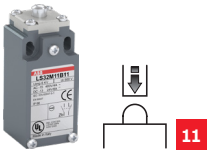
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

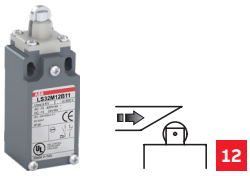
LS3..M – Standard – Metal Casing – IP66

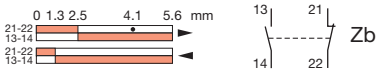
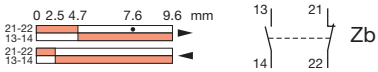
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..M limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

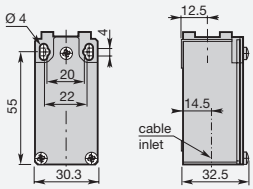
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.

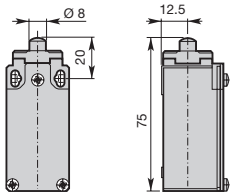


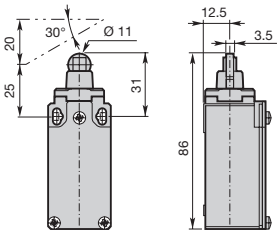


Actuator	Plain plunger - Steel			Roller plunger - Steel		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32M11B11	1SBV011911R1211	0.18	LS32M12B11	1SBV011912R1211	0.19
Iso 20	LS33M11B11	1SBV013811R1211	0.18	LS33M12B11	1SBV013812R1211	0.19
1/2" NPT	LS35M11B11	1SBV013711R1211	0.18	LS35M12B11	1SBV013712R1211	0.19
Conformity / (N.C. contact with positive opening operation)	EN 50047 (B shape)			EN 50047 (C shape)		
Maximum actuation speed	0.5 m/s			0.3 m/s		
Min. force / torque						
actuation	15 N			12 N		
positive opening operation	30 N			30 N		
Operation Diagram Closed contact / Open contact						

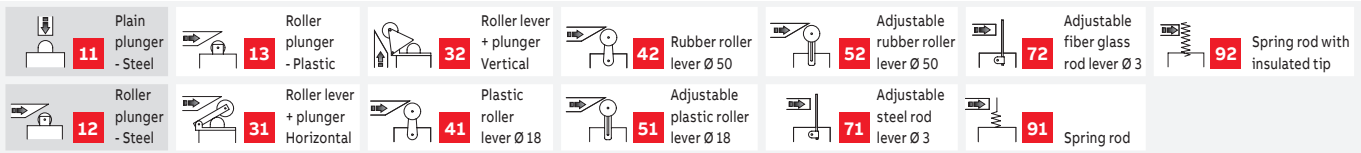
Dimensions (mm, Inches)







Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



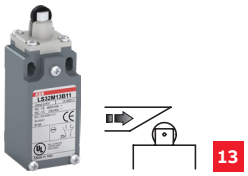
Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

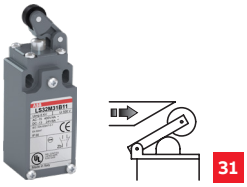
LS3..M – Standard – Metal Casing – IP66

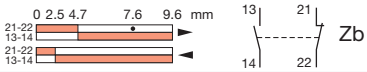
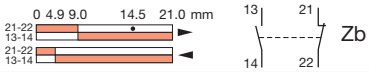
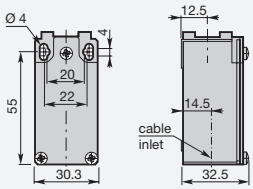
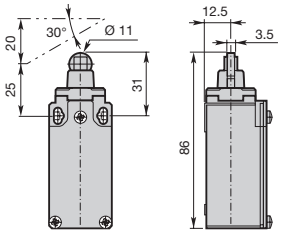
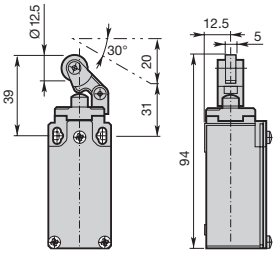
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..M limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

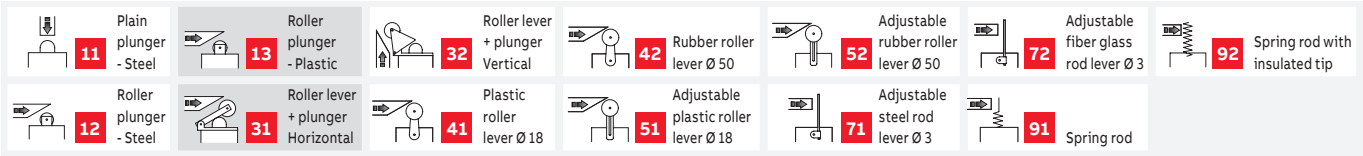
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.





Actuator	Roller plunger - Plastic			Roller lever + plunger - Horizontal		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Iso 16	LS32M13B11	1SBV011913R1211	0.19	LS32M31B11	1SBV011931R1211	0.175
Iso 20	LS33M13B11	1SBV013813R1211	0.19	LS33M31B11	1SBV013831R1211	0.175
1/2" NPT	LS35M13B11	1SBV013713R1211	0.19	LS35M31B11	1SBV013731R1211	0.175
Conformity / (N.C. contact with positive opening operation)	EN 50047 (C shape)			EN 50047 (E shape)		
Maximum actuation speed	0.3 m/s			1 m/s		
Min. force / torque						
actuation	12 N			7 N		
positive opening operation	30 N			24 N		
Operation Diagram						
Closed contact / Open contact						
Dimensions (mm, Inches)	 					

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



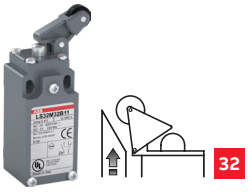
Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

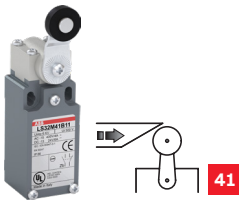
LS3..M – Standard – Metal Casing – IP66

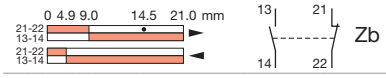
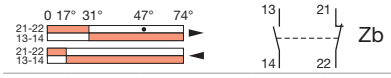
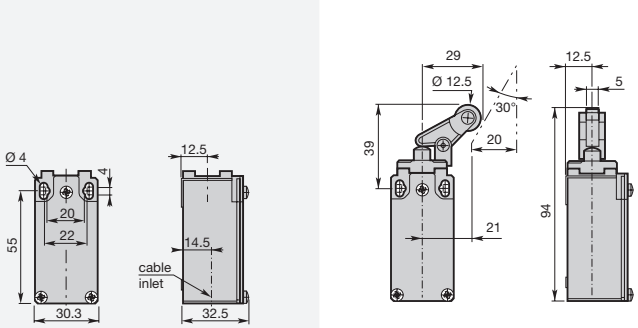
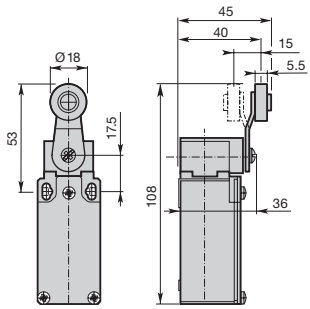
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..M limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

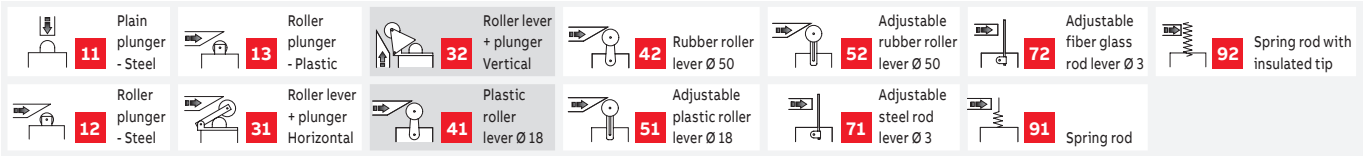
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.





Actuator	Roller lever + plunger - Vertical			Plastic roller lever Ø 18		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32M32B11	1SBV011932R1211	0.18	LS32M41B11	1SBV011941R1211	0.235
Iso 20	LS33M32B11	1SBV013832R1211	0.18	LS33M41B11	1SBV013841R1211	0.235
1/2" NPT	LS35M32B11	1SBV013732R1211	0.18	LS35M41B11	1SBV013741R1211	0.235
Conformity / (N.C. contact with positive opening operation)	–			EN 50047 (A shape)		
Maximum actuation speed	1 m/s			1.5 m/s		
Min. force / torque						
actuation	7 N			0.1 N.m		
positive opening operation	24 N			0.32 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



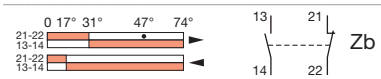
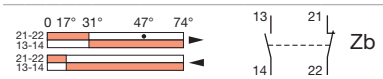
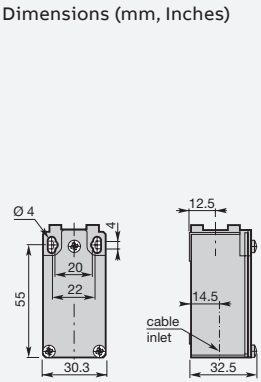
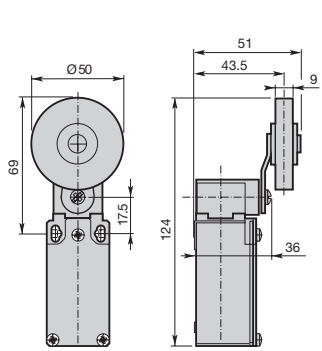
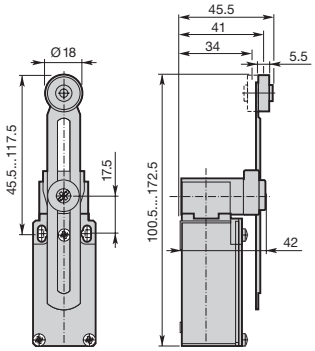
Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

LS3..M – Standard – Metal Casing – IP66

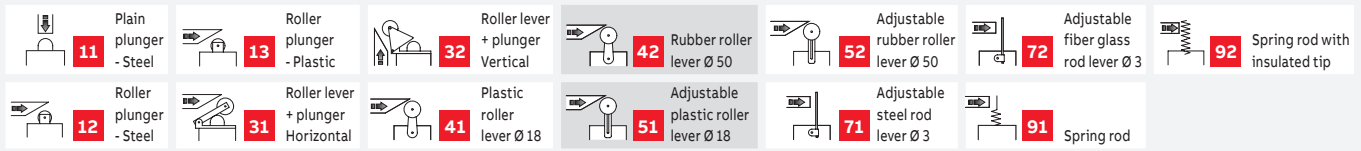
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..M limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.

Actuator	Plastic rubber roller lever Ø 50			Adjustable plastic roller lever Ø 18		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32M42B11	1SBV011942R1211	0.255	LS32M51B11	1SBV011951R1211	0.245
Iso 20	LS33M42B11	1SBV013842R1211	0.255	LS33M51B11	1SBV013851R1211	0.245
1/2" NPT	LS35M42B11	1SBV013742R1211	0.255	LS35M51B11	1SBV013751R1211	0.245
Conformity / (N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.1 N.m			0.1 N.m		
positive opening operation	0.32 N.m			0.32 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



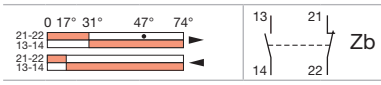
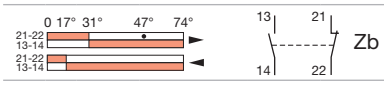
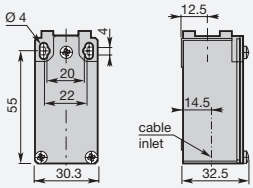
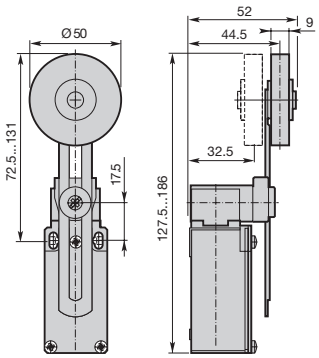
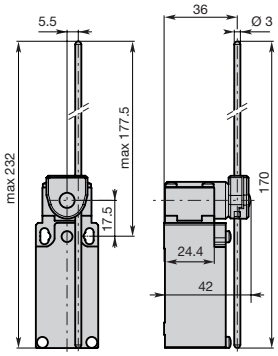
Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

LS3..M – Standard – Metal Casing – IP66

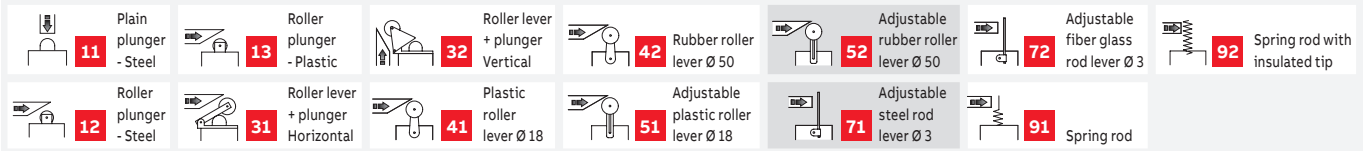
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..M limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.

Actuator	Adjustable rubber roller lever Ø 50			Adjustable steel rod lever Ø 3		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32M52B11	1SBV011952R1211	0.265	LS32M71B11	1SBV011971R1211	0.245
Iso 20	LS33M52B11	1SBV013852R1211	0.265	LS33M71B11	1SBV013871R1211	0.245
1/2" NPT	LS35M52B11	1SBV013752R1211	0.265	LS35M71B11	1SBV013771R1211	0.245
Conformity / (N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.1 N.m			0.1 N.m		
positive opening operation	0.32 N.m			0.32 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						
						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



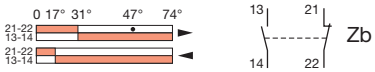
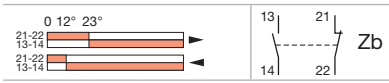
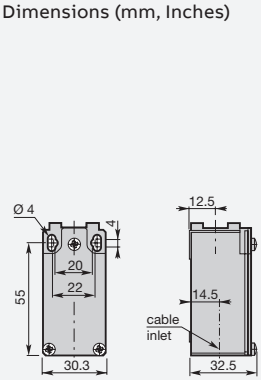
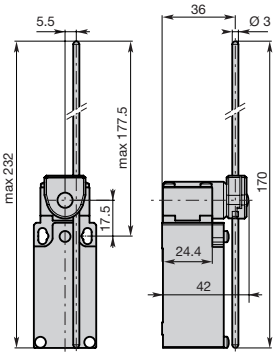
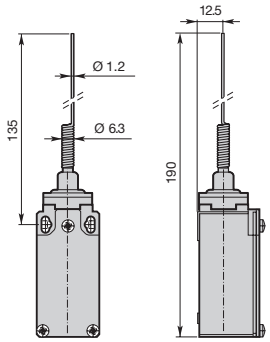
Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

LS3..M – Standard – Metal Casing – IP66

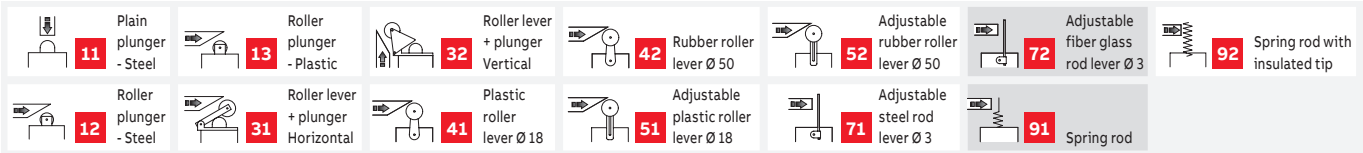
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..M limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.

Actuator	Adjustable fiber glass rod lever Ø 3			Spring rod		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Iso 16	LS32M72B11	1SBV011972R1211	0.245	LS32M91B11	1SBV011991R1211	0.18
Iso 20	LS33M72B11	1SBV013872R1211	0.245	LS33M91B11	1SBV013891R1211	0.18
1/2" NPT	LS35M72B11	1SBV013772R1211	0.245	LS35M91B11	1SBV013791R1211	0.18
Conformity / (N.C. contact with positive opening operation)	–			–		
Maximum actuation speed	1.5 m/s			1 m/s		
Min. force / torque						
actuation	0.1 N.m			0.12 N.m		
positive opening operation	0.32 N.m			– N.m		
Operation Diagram						
Closed contact / Open contact						
Dimensions (mm, Inches)						
						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



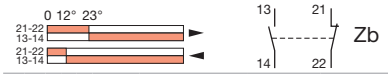
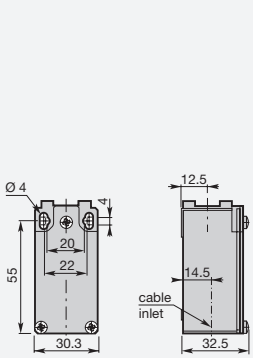
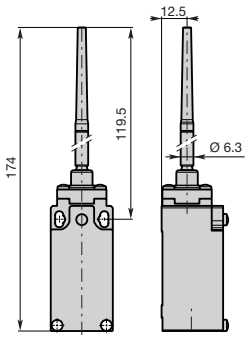
Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

LS3..M – Standard – Metal Casing – IP66

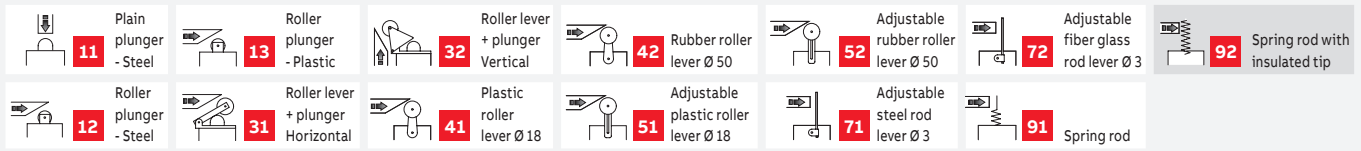
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS3..M limit switches are used in main applications for an easy and reliable movement detection. The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.

Actuator	Spring rod with insulated tip		
	Type	**Order code**	**Weight (1 pce)** kg
Iso 16	LS32M92B11	1SBV011992R1211	0.185
Iso 20	LS33M92B11	1SBV013892R1211	0.185
1/2" NPT	LS35M92B11	1SBV013792R1211	0.185
Conformity / (N.C. contact with positive opening operation)	–		
Maximum actuation speed	1 m/s		
Min. force / torque			
actuation	0.12 N.m		
positive opening operation	– N.m		
Operation Diagram Closed contact / Open contact			
Dimensions (mm, Inches)	 		

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

LS3..P.., LS3..M..

Technical data

General technical data

	Plastic casing	Metal casing
Standards	IEC 60947-1, IEC 60947-5-1, EN 60947-1, EN 60947-5-1, UL 508	
Certifications - Approvals	cULus-	
Air temperature near the device		
during operation	– 25 ... + 70 °C	
for storage	– 30 ... + 80 °C	
Mounting positions	All positions are authorized	
Protection against electrical shocks (acc. to IEC 536)	Class II - double insulation	Class I
Degree of protection (acc. to IEC 529 and EN 60529)	IP65	IP66 (1)
Tightening torque		
Cover	0.5Nm, max 0.8Nm	0.8Nm, max 0.9Nm
Operating head	0.5Nm, max 0.7Nm	0.6Nm, max 0.7Nm
Actuator	0.5Nm, max 0.8Nm	0.5Nm, max 0.8Nm
Microswitch	0.8Nm, max 0.9Nm	0.8Nm, max 0.9Nm

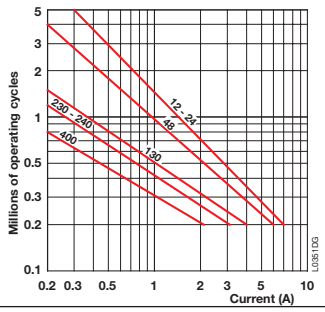
Electrical data

Rated insulation voltage Ui			500 V (degree of pollution 3)	
Rated impulse withstand voltage Uimp (acc. to IEC 60947-1 and EN 60947-1)			6 kV	
Conventional enclosed thermal current Ith acc. to IEC 60947-5-1 and EN 60947-5-1) θ < 40 °C			10 A	
Short-circuit protection gG type fuses			10 A	
Rated operational current				
Ie / AC-15	acc. to IEC 60947-5-1	24 V	10 A	
		120 V	6 A	
		400 V	4 A	
	acc. to UL 508		A600	A300
Ie / DC-13	acc. to IEC 60947-5-1	24 V	6 A	
		125 V	0.55 A	
		250 V	0.4 A	
	acc. to UL 508		Q600	Q300
Positivity			Contacts with positive opening operation as per IEC 60947-5-1 chapter 3 and EN 60947-5-1	
Resistance between contacts		mΩ	25	
Mechanical durability		millions of operations		
		LS3...	15 : with actuators 10, 11, 12, 31, 32 10 : with actuators 13, 41, 42, 51, 52, 71, 72 > 5 : with actuators 91, 92	15 : with actuators 11, 12, 31, 32 10 : with actuators 13, 41, 42, 51, 52, 71, 72 > 5 : with actuators 91, 92
Electrical durability (acc. to IEC 60947-5-1 appendix C)				
	max. switching frequency		3600 cycles/h	
Connecting data of contact blocks				
	Connecting terminals		M3.5 (+,–) pozidriv 2 screw with cable clamp	
	Connecting capacity	1 or 2 x mm2	0.75 mm² ... 2.5 mm²	
	Terminal marking		According to IEC60947-5-1	
B10d			30 millions of operations	

(1) Except for LS3..M52, LS3..M92, the degree of protection is IP65.

Electrical durability for AC-15 utilization category

Snap action



Electrical durability for DC-13 utilization category

		Snap action
		Power breaking for a durability of 5 million operating cycles
Voltage	24 V	9.5 W
Voltage	48 V	6.8 W
Voltage	110 V	3.6 W

LS4.. Standard reinforced limit switches

LS4..P Standard reinforced plastic casing - IP65

With actuators

56 Plain plunger - Steel
56 Ball roller plunger - Steel
57 Roller plunger - Steel
57 Plastic roller lever + plunger - Horizontal
58 Steel roller lever + plunger - Horizontal
58 Plastic roller lever Ø 22
59 Steel roller lever Ø 22
59 Adjustable plastic roller lever Ø 22
60 Adjustable steel roller lever Ø 22
60 Adjustable steel rod lever Ø 3
61 Adjustable nylon rod lever Ø 6
61 Spring rod
62 Spring rod with insulated tip

LS4..M Standard reinforced metal casing - IP66

With actuators

64 Plain plunger - Steel
64 Ball roller plunger - Steel
65 Roller plunger - Steel
65 Plastic roller lever + plunger - Horizontal
66 Steel roller lever + plunger - Horizontal
66 Plastic roller lever Ø 22
67 Steel roller lever Ø 22
67 Adjustable plastic roller lever Ø 22
68 Adjustable steel roller lever Ø 22
68 Adjustable steel rod lever Ø 3
69 Adjustable nylon rod lever Ø 6
69 Spring rod
70 Spring rod with insulated tip

71 Technical data

LS4..P – Standard reinforced – Plastic Casing – IP65

Double insulation ⧈ - 40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS4..P limit switches are used in every applications especially when products will be mounted in harsh environment.

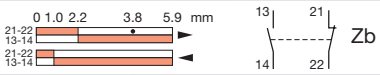
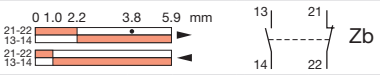
The 4 mounting holes and the thick plastic body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

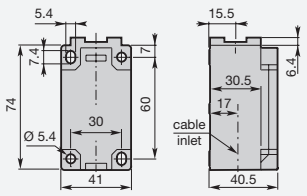
The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.

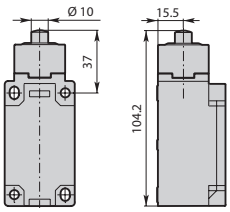
11

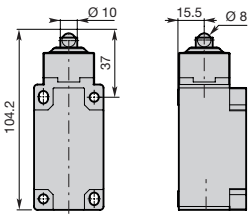
12

Actuator	Plain plunger - Steel			Ball roller plunger - Steel		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Iso 20	LS43P11B11	1SBV010711R1211	0.145	LS43P12B11	1SVB010712R1211	#N/A
1/2" NPT	LS45P11B11	1SBV012411R1211	0.145	LS45P12B11	1SBV012412R1211	0.145
Conformity ⊖ / (N.C. contact with positive opening operation)	EN 50041 (B shape) ⊖			EN 50041 (B shape) ⊖		
Maximum actuation speed	0.5 m/s			0.5 m/s		
Min. force / torque						
actuation	14 N			14 N		
positive opening operation	40 N			40 N		
Operation Diagram Closed contact / Open contact						

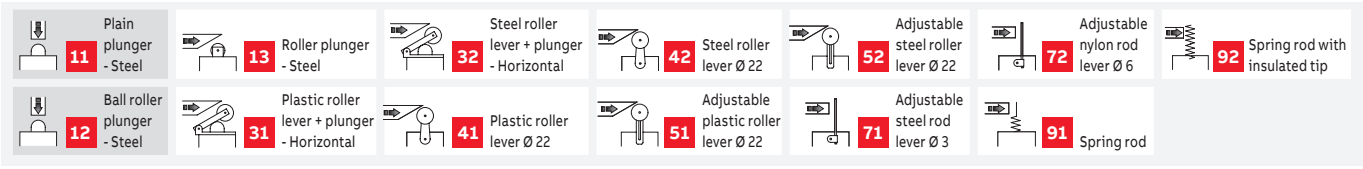
Dimensions (mm, Inches)







Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

LS4..P – Standard reinforced – Plastic Casing – IP65

Double insulation ⧈ - 40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS4..P limit switches are used in every applications especially when products will be mounted in harsh environment.

The 4 mounting holes and the thick plastic body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.

13

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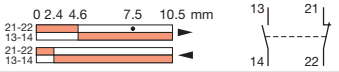
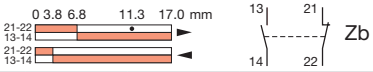
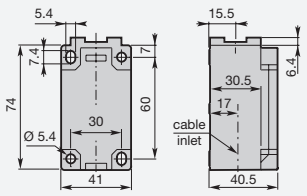
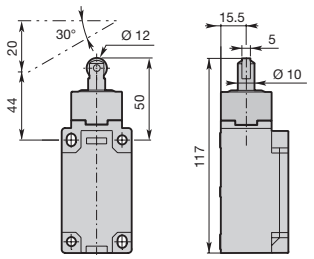
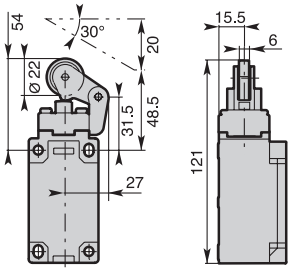
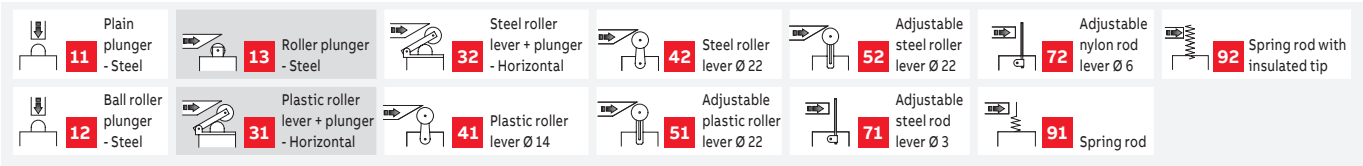
Actuator	Roller plunger - Steel			Plastic roller lever + plunger - Horizontal		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43P13B11	1SBV010713R1211	0.15	LS43P31B11	1SBV010731R1211	0.185
1/2" NPT	LS45P13B11	1SBV012413R1211	0.15	LS45P31B11	1SBV012431R1211	0.185
Conformity ⊖ / (N.C. contact with positive opening operation)	EN 50041 (C shape) ⊖			– ⊖		
Maximum actuation speed	0.5 m/s			1 m/s		
Min. force / torque						
actuation	14 N			8 N		
positive opening operation	40 N			30 N		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						
						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

LS4..P – Standard reinforced – Plastic Casing – IP65

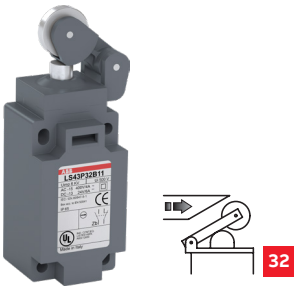
Double insulation ⧈ - 40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

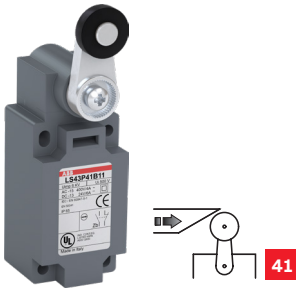
LS4..P limit switches are used in every applications especially when products will be mounted in harsh environment.

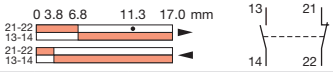
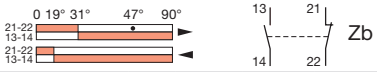
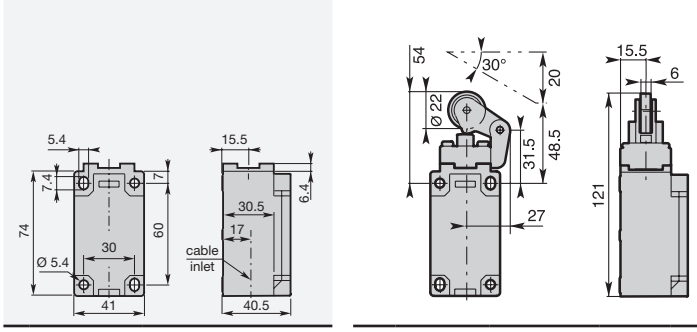
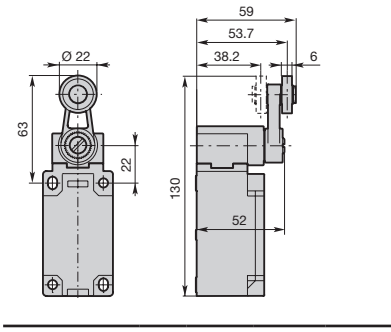
The 4 mounting holes and the thick plastic body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

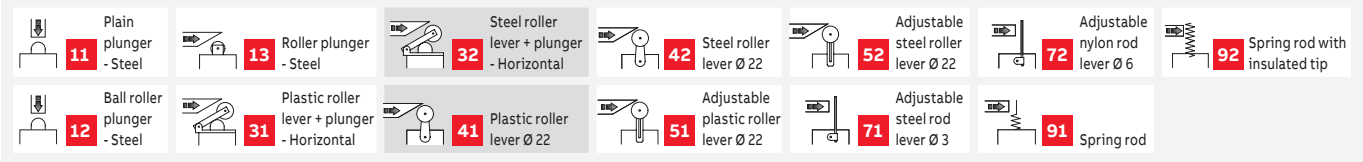
The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.





Actuator	Steel roller lever + plunger - Horizontal			Plastic roller lever Ø 22		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Iso 20	LS43P32B11	1SBV010732R1211	0.185	LS43P41B11	1SBV010741R1211	0.2
1/2" NPT	LS45P32B11	1SBV012432R1211	0.185	LS45P41B11	1SBV012441R1211	0.2
Conformity ⊕ / (N.C. contact with positive opening operation)	– ⊕			EN 50041 (A shape) ⊕		
Maximum actuation speed	1 m/s			1.5 m/s		
Min. force / torque						
actuation	8 N			0.15 N.m		
positive opening operation	30 N			0.3 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

LS4..P – Standard reinforced – Plastic Casing – IP65

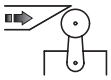
Double insulation ⧈ - 40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS4..P limit switches are used in every applications especially when products will be mounted in harsh environment.

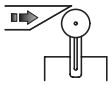
The 4 mounting holes and the thick plastic body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

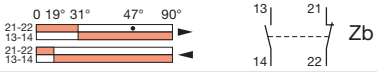
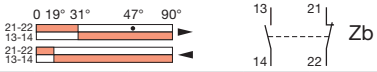
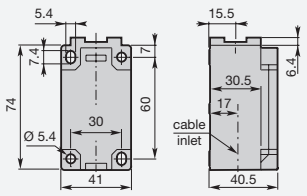
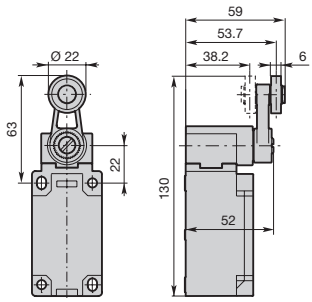
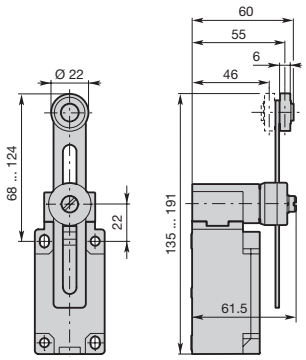
The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.



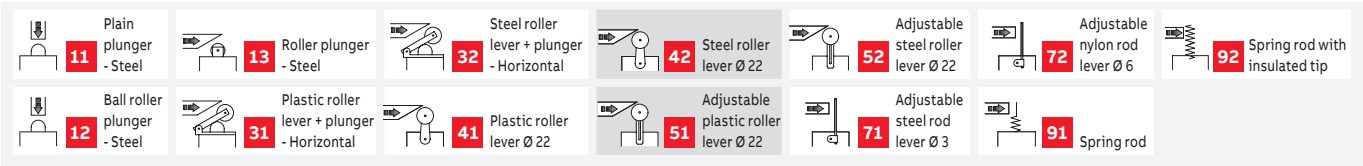
42



51

Actuator	Steel roller lever Ø 22			Adjustable plastic roller lever Ø 22		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43P42B11	1SBV010742R1211	0.2	LS43P51B11	1SBV010751R1211	0.195
1/2" NPT	LS45P42B11	1SBV012442R1211	0.2	LS45P51B11	1SBV012451R1211	0.195
Conformity ⊕ / (N.C. contact with positive opening operation)	EN 50041 (A shape) ⊕			– ⊕		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.15 N.m			0.15 N.m		
positive opening operation	0.3 N.m			0.3 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

LS4..P – Standard reinforced – Plastic Casing – IP65

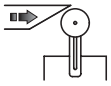
Double insulation ⧈ - 40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS4..P limit switches are used in every applications especially when products will be mounted in harsh environment.

The 4 mounting holes and the thick plastic body make it the more resistant of our range.

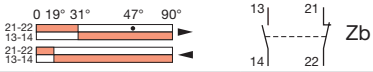
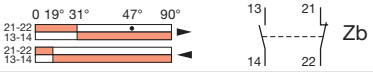
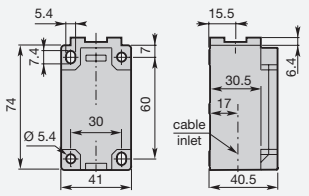
The cable inlet on the bottom is threaded to allow the use of a cable gland.

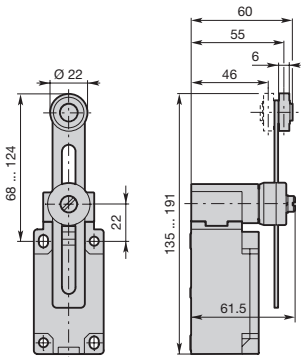
The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.

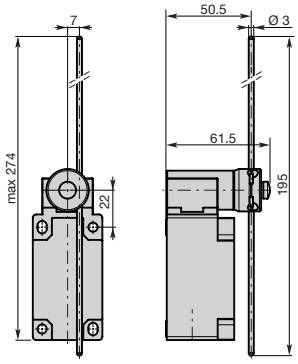


52

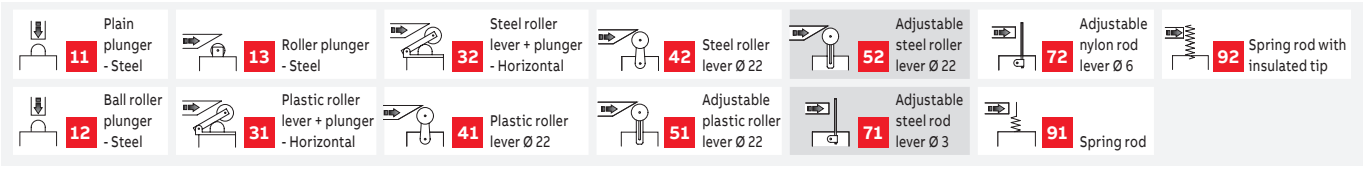
71

Actuator	Adjustable steel roller lever Ø 22			Adjustable steel rod lever Ø 3		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43P52B11	1SBV010752R1211	0.195	LS43P71B11	1SBV010771R1211	0.185
1/2" NPT	LS45P52B11	1SBV012452R1211	0.195	LS45P71B11	1SBV012471R1211	0.185
Conformity ⊕ / (N.C. contact with positive opening operation)	– ⊕			EN 50041 (D shape) ⊕		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.15 N.m			0.15 N.m		
positive opening operation	0.3 N.m			0.3 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						





Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

LS4..P – Standard reinforced – Plastic Casing – IP65

Double insulation ⧈ - 40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS4..P limit switches are used in every applications especially when products will be mounted in harsh environment.

The 4 mounting holes and the thick plastic body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.

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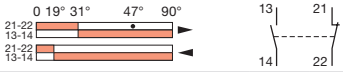
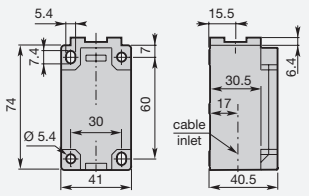
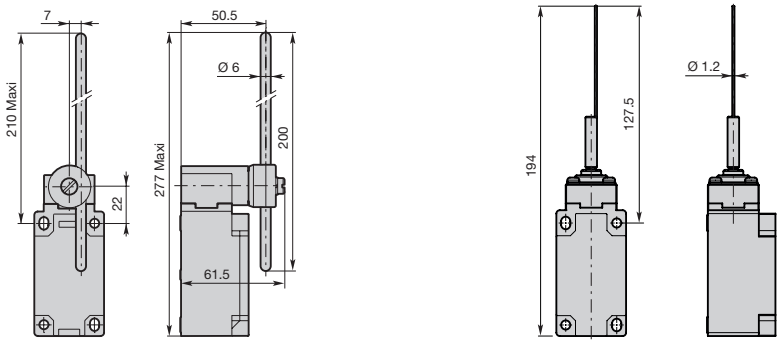
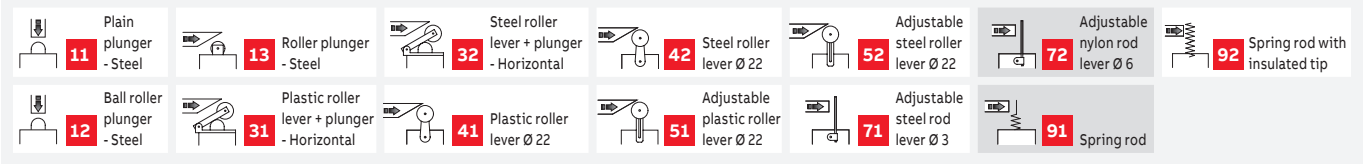
91

Actuator	Adjustable nylon rod lever Ø 6			Spring rod		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43P72B11	1SBV010772R1211	0.185	LS43P91B11	1SBV010791R1211	0.15
1/2" NPT	LS45P72B11	1SBV012472R1211	0.185	LS45P91B11	1SBV012491R1211	0.15
Conformity ⊕ / (N.C. contact with positive opening operation)	EN 50041 (D shape) ⊕			–		
Maximum actuation speed	1.5 m/s			1 m/s		
Min. force / torque						
actuation	0.15 N.m			0.18 N.m		
positive opening operation	0.3 N.m			– N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm, Inches)						



Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

LS4..P – Standard reinforced – Plastic Casing – IP65

Double insulation ⧈ - 40 mm width – 1 N.O. + 1 N.C Snap Action contacts

LS4..P limit switches are used in every applications especially when products will be mounted in harsh environment.

The 4 mounting holes and the thick plastic body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.

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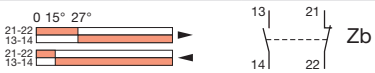
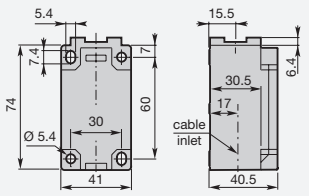
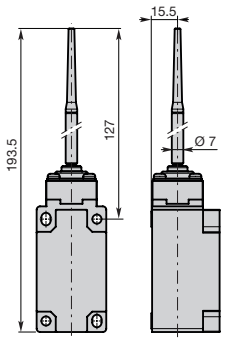
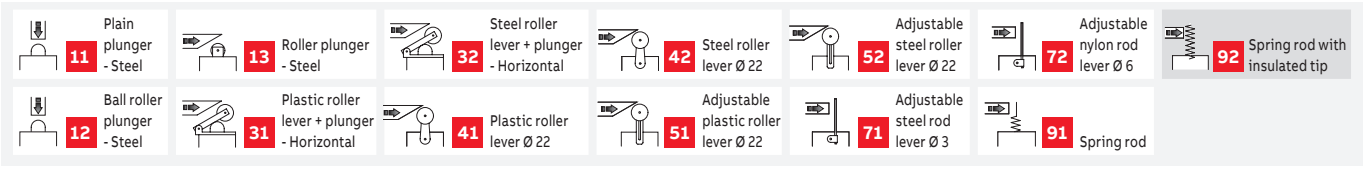
Actuator	Spring rod with insulated tip		
	Type	Order code	Weight (1 pce) kg
Iso 20	LS43P92B11	1SBV010792R1211	0.155
1/2" NPT	LS45P92B11	1SBV012492R1211	0.155
Conformity ⊖ / (N.C. contact with positive opening operation)	–		
Maximum actuation speed	1 m/s		
Min. force / torque			
actuation	0.18 N.m		
positive opening operation	– N.m		
Operation Diagram Closed contact / Open contact			

Dimensions (mm, Inches)





Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

LS4..M – Standard reinforced – Metal Casing – IP66

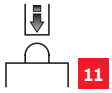
40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

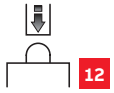
LS4..M limit switches are used in every applications especially when products will be mounted in harsh environment.

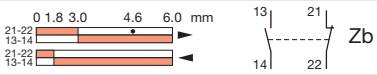
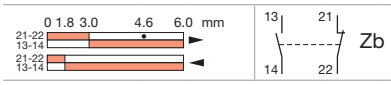
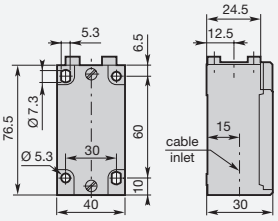
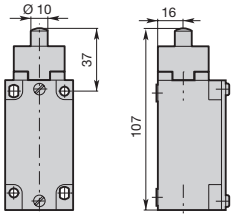
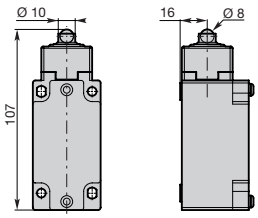
The 4 mounting holes and the thick metal body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

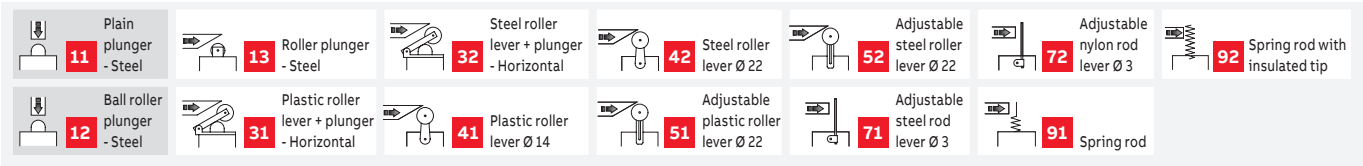
The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).





Actuator	Plain plunger - Steel			Ball plunger - Steel		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Iso 20	LS43M11B11	1SBV011611R1211	0.24	LS43M12B11	1SBV011612R1211	0.24
1/2" NPT	LS45M11B11	1SBV013111R1211	0.24	LS45M12B11	1SBV013112R1211	0.24
Conformity / (N.C. contact with positive opening operation)	EN 50041 (B shape)			EN 50041 (B shape)		
Maximum actuation speed	0.5 m/s			0.5 m/s		
Min. force / torque						
actuation	30 N			30 N		
positive opening operation	45 N			45 N		
Operation Diagram Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

LS4..M – Standard reinforced – Metal Casing – IP66

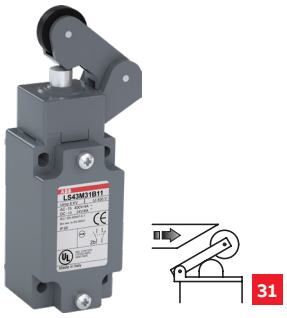
40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

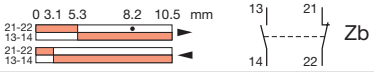
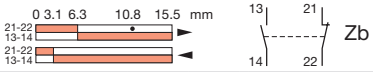
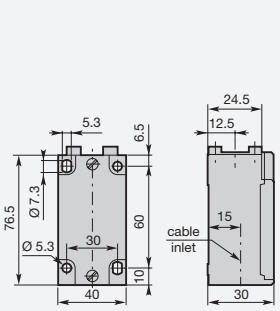
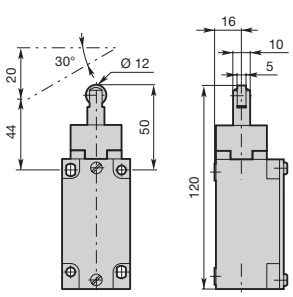
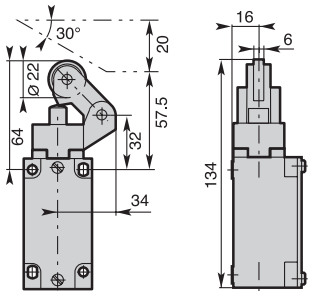
LS4..M limit switches are used in every applications especially when products will be mounted in harsh environment.

The 4 mounting holes and the thick metal body make it the more resistant of our range.

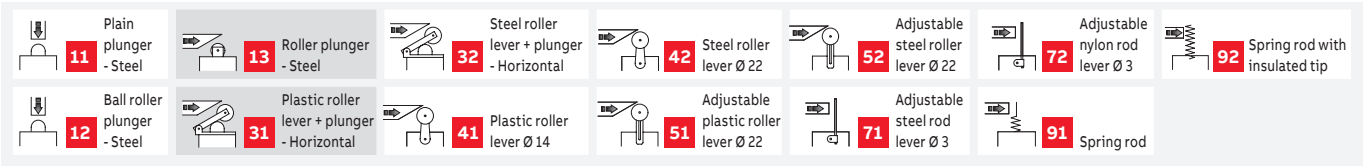
The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).



Actuator	Roller plunger - Steel			Plastic roller lever + plunger - Horizontal		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43M13B11	1SBV011613R1211	0.245	LS43M31B11	1SBV011631R1211	0.28
1/2" NPT	LS45M13B11	1SBV013113R1211	0.245	LS45M31B11	1SBV013131R1211	0.28
Conformity / (N.C. contact with positive opening operation)	EN 50041 (C shape)					
Maximum actuation speed	0.5 m/s			1.5 m/s		
Min. force / torque						
actuation	22 N			12 N		
positive opening operation	40 N			40 N		
Operation Diagram Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

LS4..M – Standard reinforced – Metal Casing – IP66

40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS4..M limit switches are used in every applications especially when products will be mounted in harsh environment.

The 4 mounting holes and the thick metal body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).

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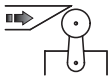
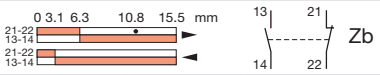
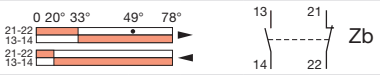
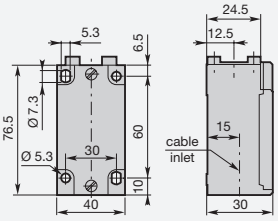
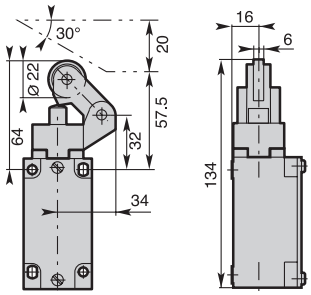
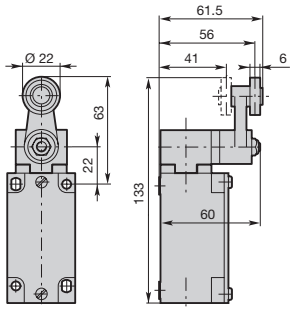
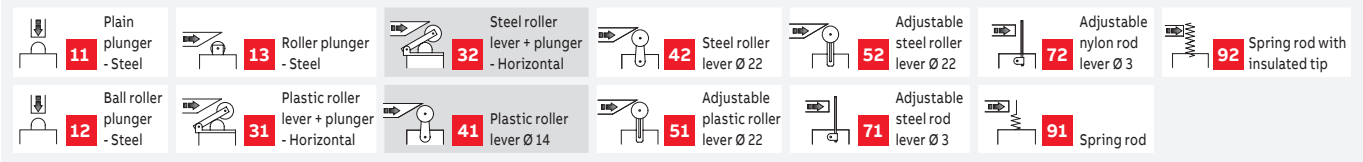


41

Actuator	Steel roller lever + plunger - Horizontal			Plastic roller lever Ø 22		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43M32B11	1SBV011632R1211	0.28	LS43M41B11	1SBV011641R1211	0.3
1/2" NPT	LS45M32B11	1SBV013132R1211	0.28	LS45M41B11	1SBV013141R1211	0.3
Conformity / (N.C. contact with positive opening operation)				EN 50041 (A shape)		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	12 N			0.15 N.m		
positive opening operation	40 N			0.3 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

LS4..M – Standard reinforced – Metal Casing – IP66

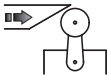
40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS4..M limit switches are used in every applications especially when products will be mounted in harsh environment.

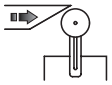
The 4 mounting holes and the thick metal body make it the more resistant of our range.

The cable inlet on the bottom is threaded to allow the use of a cable gland.

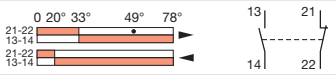
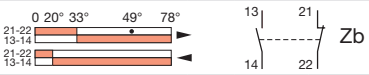
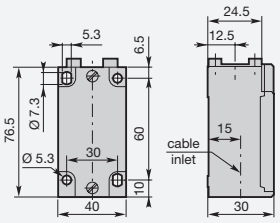
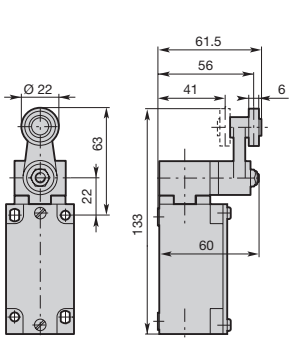
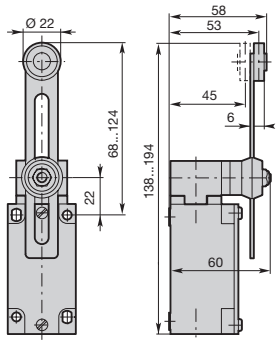
The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).



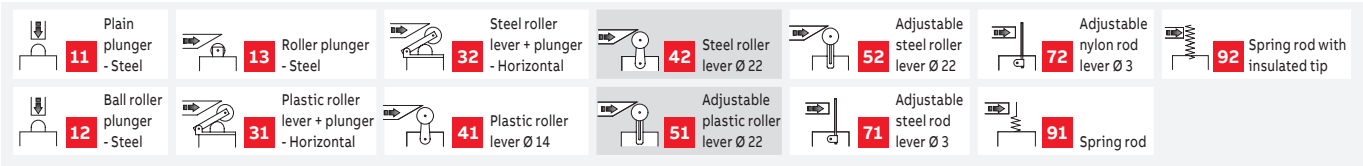
42



51

Actuator	Steel roller leverØ 22			Adjustable plastic roller lever Ø 22		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43M42B11	1SBV011642R1211	0.3	LS43M51B11	1SBV011651R1211	0.32
1/2" NPT	LS45M42B11	1SBV013142R1211	0.3	LS45M51B11	1SBV013151R1211	0.32
Conformity ⊖ / (N.C. contact with positive opening operation)	EN 50041 (A shape) ⊖			⊖		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.15 N.m			0.15 N.m		
positive opening operation	0.3 N.m			0.3 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

LS4..M – Standard reinforced – Metal Casing – IP66

40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

LS4..M limit switches are used in every applications especially when products will be mounted in harsh environment.

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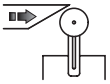
The cable inlet on the bottom is threaded to allow the use of a cable gland.

The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).



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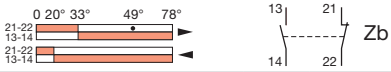
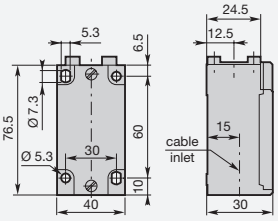
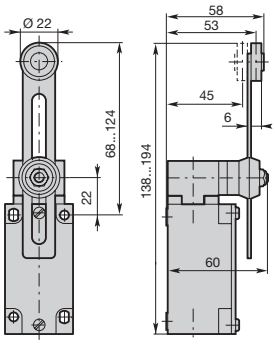
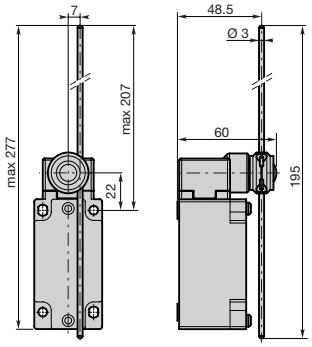
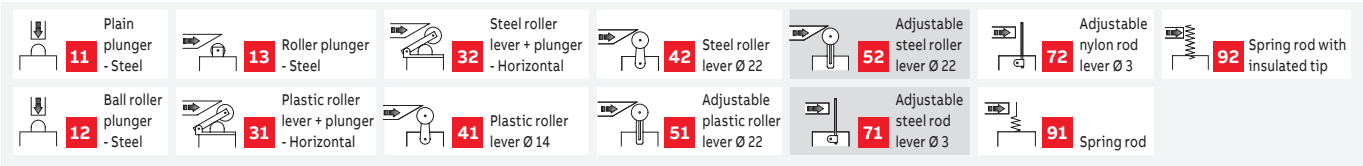
Actuator	Adjustable steel roller lever Ø 22			Adjustable steel rod lever Ø 3		
	Type	Order code	Weight (1 pce) kg	Type	Order code	Weight (1 pce) kg
Iso 20	LS43M52B11	1SBV011652R1211	0.32	LS43M71B11	1SBV011671R1211	0.305
1/2" NPT	LS45M52B11	1SBV013152R1211	0.32	LS45M71B11	1SBV013171R1211	0.305
Conformity / (N.C. contact with positive opening operation)				EN 50041 (D shape)		
Maximum actuation speed	1.5 m/s			1.5 m/s		
Min. force / torque						
actuation	0.15 N.m			0.15 N.m		
positive opening operation	0.3 N.m			0.3 N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



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LS4..M – Standard reinforced – Metal Casing – IP66

40 mm width – 1 N.O. + 1 N.C. Snap action contacts

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The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).

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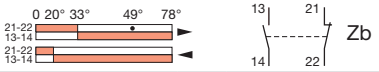
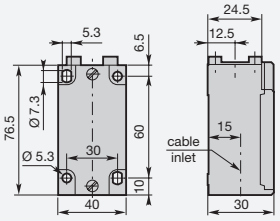
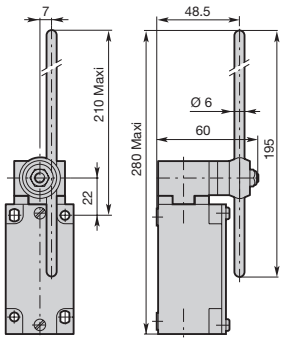
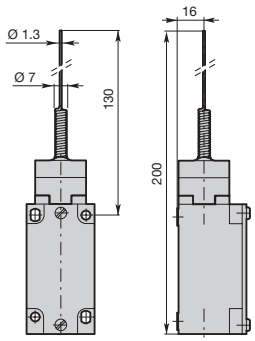
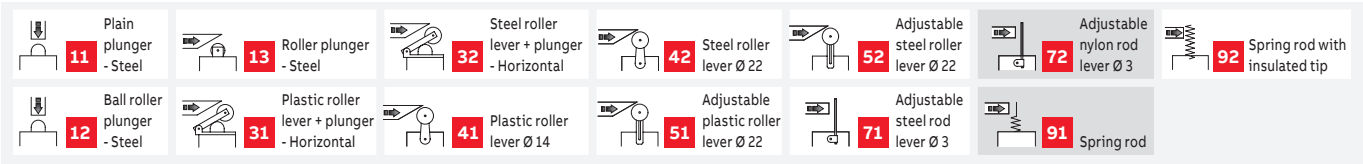
Actuator	Adjustable nylon rod lever Ø 6			Spring rod		
	Type	**Order code**	**Weight (1 pce)** kg	**Type**	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43M72B11	1SBV011672R1211	0.305	LS43M91B11	1SBV011691R1211	0.23
1/2" NPT	LS45M72B11	1SBV013172R1211	0.305	LS45M91B11	1SBV013191R1211	0.23
Conformity / (N.C. contact with positive opening operation)	EN 50041 (D shape)			–		
Maximum actuation speed	1.5 m/s			1 m/s		
Min. force / torque						
actuation	0.15 N.m			0.18 N.m		
positive opening operation	0.3 N.m			– N.m		
Operation Diagram Closed contact / Open contact						
Dimensions (mm)						

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

LS4..M – Standard reinforced – Metal Casing – IP66

40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

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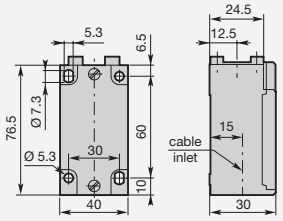
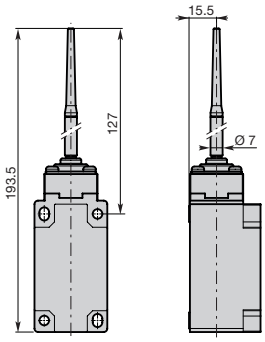
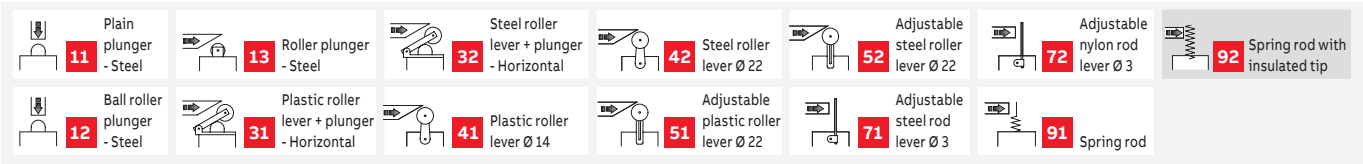
Actuator	Spring rod with insulated tip		
	Type	**Order code**	**Weight (1 pce)** kg
Iso 20	LS43M92B11	1SBV011692R1211	0.23
1/2" NPT	LS45M92B11	1SBV013192R1211	0.23
Conformity ⊖ / (N.C. contact with positive opening operation)	–		
Maximum actuation speed	1 m/s		
Min. force / torque			
actuation	0.18 N.m		
positive opening operation	– N.m		
Operation Diagram Closed contact / Open contact			
Dimensions (mm)	 		

Note : For other configuration 2 N.C. contacts, Pg cable thread, please consult your ABB local sales organization. Please note that minimum ordering quantity and longer lead time might apply.



Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

LS4..P.., LS4..M..

Technical data

General technical data

	Plastic casing	Metal casing
Standards	IEC 60947-1, IEC 60947-5-1, EN 60947-1, EN 60947-5-1, UL 508	
Certifications - Approvals	cULus-	
Air temperature near the device		
during operation	– 25 ... + 70 °C	
for storage	– 30 ... + 80 °C	
Mounting positions	All positions are authorized	
Protection against electrical shocks (acc. to IEC 536)	Class II - double insulation	Class I
Degree of protection (acc. to IEC 529 and EN 60529)	IP65	IP66 (1)
Tightening torque		
Cover	0.5Nm, max 0.8Nm	0.8Nm, max 0.9Nm
Operating head	0.5Nm, max 0.7Nm	0.6Nm, max 0.7Nm
Actuator	0.5Nm, max 0.8Nm	0.5Nm, max 0.8Nm
Microswitch	0.8Nm, max 0.9Nm	0.8Nm, max 0.9Nm

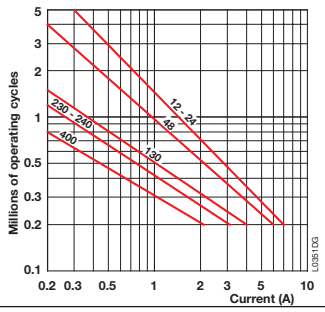
Electrical data

Rated insulation voltage Ui			500 V (degree of pollution 3)	
Rated impulse withstand voltage Uimp (acc. to IEC 60947-1 and EN 60947-1)			6 kV	
Conventional enclosed thermal current Ith acc. to IEC 60947-5-1 and EN 60947-5-1) θ < 40 °C			10 A	
Short-circuit protection gG type fuses			10 A	
Rated operational current				
Ie / AC-15	acc. to IEC 60947-5-1	24 V - 50/60 Hz	10 A	
		120 V - 50/60 Hz	6 A	
		400 V - 50/60 Hz	4 A	
	acc. to UL 508		A600	A300
Ie / DC-13	acc. to IEC 60947-5-1	24 V DC	6 A	
		125 V DC	0.55 A	
		250 V DC	0.4 A	
	acc. to UL 508		Q600	Q300
Positivity			Contacts with positive opening operation as per IEC 60947-5-1 chapter 3 and EN 60947-5-1	
Resistance between contacts		mΩ	25	
Mechanical durability		millions of operations		
		LS4...	15 : with actuators 11, 12, 31, 32 10 : with actuators 13, 41, 42, 51, 52, 71, 72 > 5 : with actuators 91, 92	30 : with actuators 11, 12, 13, 31, 32 25 : with actuators 41, 42, 51, 52, 71, 72 10 : with actuators 91, 92
Electrical durability (acc. to IEC 60947-5-1 appendix C)				
max. switching frequency			3600 cycles/h	
Connecting data of contact blocks				
Connecting terminals			M3.5 (+,–) pozidriv 2 screw with cable clamp	
Connecting capacity		1 or 2 x mm2	0.75 mm² ... 2.5 mm²	
Terminal marking			According to IEC60947-5-1	
B10d			30 millions of operations	

(1) Except for LS3..M52, LS3..M92, LS4..M72 and LS4..M92 : the degree of protection is IP65.

Electrical durability for AC-15 utilization category

Snap action



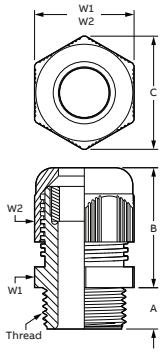
Electrical durability for DC-13 utilization category

		Snap action
		Power breaking for a durability of 5 million operating cycles
Voltage	24 V	9.5 W
Voltage	48 V	6.8 W
Voltage	110 V	3.6 W

Cable glands - NCG series

Nylon, general purpose

Nylon cable glands for general purpose use, OEM and industrial/commercial applications.



Certifications / Standards	Conform to
(Refer to tables for certifications details)	UL514B / CSA C222.2 No18.3 (see table for details)
	EN 62444
	RoHS (Restriction of Hazardous Substances Directive) 2011/65/EU Incorporating 2015/863 amendment to Annex II
	WEEE (Waste Electrical Electronic Equipment Directive) 2002/96/EC
	LVD (Low Voltage Directive) 2014/35/EU

Working temperature

Normal use: -20 to +100 °C (-4 to +21 °F)

Short term: -30 to +150 °C (-22 to +302 °C)

Chemical resistance guide

See publication TDS000081

Ingress protection	Material
To ensure ingress protection, use suitable gasket and lock nut when inquired.	Halogen free nylon (PA6) construction
	Available in Black, Grey and light grey
IP66	Chloropene seals
IP68 (5 bar, 30 mins	
NEMA 4	

ISO Thread glands

Thread size	Cable Ø (mm)	Color	Compatibility	Type	Order code	A	B	C	W1	W2
M16x1.5	2 ... 6	Black	LS32...	NCG-M161B	7TCA303070R0036	8	26.5	21.9	19	19
M16x1.5	2 ... 6	Grey	LS32...	NCG-M161G	7TCA303070R0157	8	26.5	21.9	19	19
M16x1.5	2 ... 6	Light Grey	LS32...	NCG-M161LG	7TCA303070R0079	8	26.5	21.9	19	19
M16x1.5	4 ... 8	Black	LS32...	NCG-M162B	7TCA303070R0038	8	26.5	21.9	19	19
M16x1.5	4 ... 8	Grey	LS32...	NCG-M162G	7TCA303070R0159	8	26.5	21.9	19	19
M16x1.5	4 ... 8	Light Grey	LS32...	NCG-M162LG	7TCA303070R0081	8	26.5	21.9	19	19
M16x1.5	5 ... 10	Black	LS32...	NCG-M163B	7TCA303070R0040	10	30	25	22	22
M16x1.5	5 ... 10	Grey	LS32...	NCG-M163G	7TCA303070R0161	10	30	25	22	22
M16x1.5	5 ... 10	Light Grey	LS32...	NCG-M163LG	7TCA303070R0083	10	30	25	22	22
M20x1.5	5 ... 9	Black	LS33..., LS43...	NCG-M201B	7TCA303070R0042	10	30	27	24	24
M20x1.5	5 ... 9	Grey	LS33..., LS43...	NCG-M201G	7TCA303070R0163	10	30	27	24	24
M20x1.5	5 ... 9	Light Grey	LS33..., LS43...	NCG-M201LG	7TCA303070R0085	10	30	27	24	24
M20x1.5	6 ... 12	Black	LS33..., LS43...	NCG-M202B	7TCA303070R0044	10	30	27	24	24
M20x1.5	6 ... 12	Grey	LS33..., LS43...	NCG-M202G	7TCA303070R0165	10	30	27	24	24
M20x1.5	6 ... 12	Light Grey	LS33..., LS43...	NCG-M202LG	7TCA303070R0087	10	30	27	24	24
M20x1.5	10 ... 14	Black	LS33..., LS43...	NCG-M203B	7TCA303070R0046	10	33.5	31	27	27
M20x1.5	10 ... 14	Grey	LS33..., LS43...	NCG-M203G	7TCA303070R0167	10	33.5	31	27	27
M20x1.5	10 ... 14	Light Grey	LS33..., LS43...	NCG-M203LG	7TCA303070R0089	10	33.5	31	27	27

NPT Thread glands

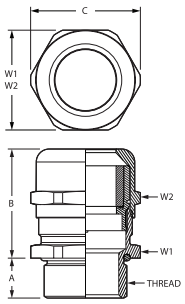
Thread size	Cable Ø (mm)	Color	Compatibility	Type	Order code	A	B	C	W1	W2
1/2" NPT	5 ... 9	Black	LS35..., LS45...	NCG-0501B	7TCA303070R0055	15	30	27	24	24
1/2" NPT	5 ... 9	Grey	LS35..., LS45...	NCG-0501G	7TCA303070R0192	15	30	27	24	24
1/2" NPT	5 ... 9	Light Grey	LS35..., LS45...	NCG-0501LG	7TCA303070R0131	15	30	27	24	24
1/2" NPT	6 ... 12	Black	LS35..., LS45...	NCG-0502B	7TCA303070R0056	15	30	27	24	24
1/2" NPT	6 ... 12	Grey	LS35..., LS45...	NCG-0502G	7TCA303070R0193	15	30	27	24	24
1/2" NPT	6 ... 12	Light Grey	LS35..., LS45...	NCG-0502LG	7TCA303070R0132	15	30	27	24	24
1/2" NPT	10 ... 14	Black	LS35..., LS45...	NCG-0503B	7TCA303070R0057	15	33.5	30.9	27	27
1/2" NPT	10 ... 14	Grey	LS35..., LS45...	NCG-0503G	7TCA303070R0194	15	33.5	30.9	27	27
1/2" NPT	10 ... 14	Light Grey	LS35..., LS45...	NCG-0503LG	7TCA303070R0133	15	33.5	30.9	27	27

NOTE : For LS 35P and LS45P, the thread is 10 mm deep. the cable gland will not be completely screwed inside the thread.

Cable glands - BCG series

Brass, general purpose

Nylon cable glands for general purpose use, OEM and industrial/commercial applications.



Certifications / Standards	Conform to
CE, cULus, c RCM us	UL / CSA C222.2 No18.3 (see table for details)
	EN 62444
	RoHS (Restriction of Hazardous Substances Directive) 2011/65/EU Incorporating 2015/863 amendment to Annex II
	WEEE (Waste Electrical Electronic Equipment Directive) 2002/96/EC
	LVD (Low Voltage Directive) 2014/35/EU

Working temperature
Normal use: -20 to +100 °C (-4 to +21 °F)
Short term: -30 to +150 °C (-22 to +302 °C)

Chemical resistance guide
See publication TDS000081

Ingress protection	Material
To ensure ingress protection, use suitable gasket and lock nut when inquired.	Nickel plated brass construction
IP66	Chloropene seals
IP68 (5 bar, 30 mins	
NEMA 4	

ISO Thread glands

Dimensions	Thread size	Cable Ø (mm)	Color	Compatibility	Type	Order code	A	B	C	W1	W2
	M16x1.5	2 ... 6	Brass	LS32...	BCG-M161	7TCA303030R0005	7	23	20	18	17
	M16x1.5	4 ... 8	Brass	LS32...	BCG-M162	7TCA303030R0007	7	23	20	18	17
	M16x1.5	5 ... 10	Brass	LS32...	BCG-M163	7TCA303030R0009	7	28.5	22	20	20
	M20x1.5	5 ... 9	Brass	LS33..., LS43...	BCG-M201	7TCA303030R0010	8	26	24.5	22	22
	M20x1.5	6 ... 12	Brass	LS33..., LS43...	BCG-M202	7TCA303030R0001	8	26	24.5	22	22
	M20x1.5	10 ... 14	Brass	LS33..., LS43...	BCG-M203	7TCA303030R0013	8	28	26.8	24	24

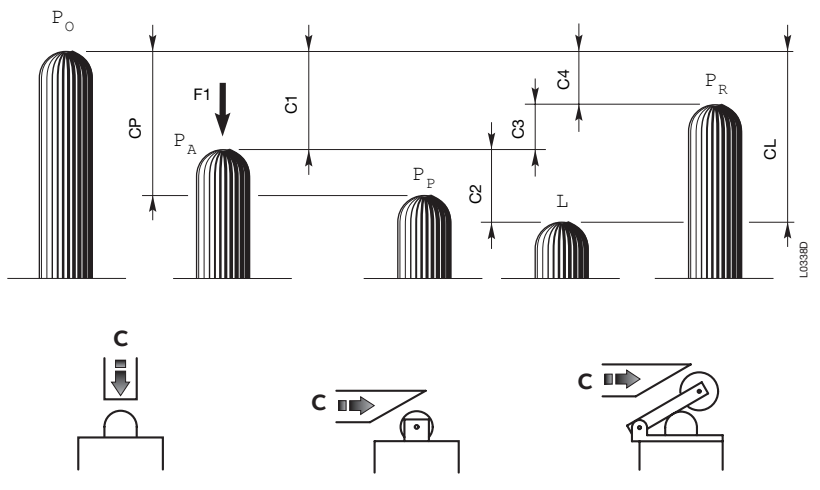
NPT Thread glands

	Thread size	Cable Ø (mm)	Color	Compatibility	Type	Order code	A	B	C	W1	W2
	1/2" NPT	5 ... 9	Brass	LS35..., LS45...	BCG-0501	7TCA303030R0056	13	25.5	24.5	22	22
	1/2" NPT	6 ... 12	Brass	LS35..., LS45...	BCG-0502	7TCA303030R0057	13	25.5	24.5	22	22
	1/2" NPT	10 ... 14	Brass	LS35..., LS45...	BCG-0503	7TCA303030R0058	13	28	26.8	24	24

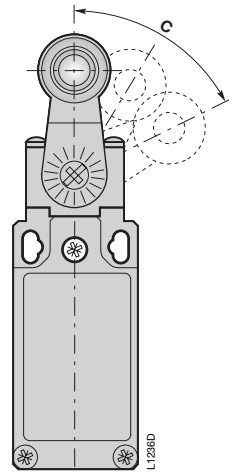
NOTE : For LS 35P and LS45P, the thread is 10 mm deep. the cable gland will not be completely screwed inside the thread.

Limit Switches Plastic or Metal Casing

Travel and Operation Diagrams



C: Travel in millimetres



C: Travel in degrees

P_O	**Free position** position of the switch actuator when no external force is exerted on it.
P_A	**Operating position** position of the switch actuator, under the effect of force **F1**, when the contacts leave their initial free position.
P_P	**Positive opening position** position of the switch actuator from which positive opening is ensured.
L	**Max. travel position** maximum acceptable travel position of the switch actuator under the effect of a force **F1**.
C_1	**Pre-travel** (average travel) distance between the free position P_O and the operating position P_A.

C_P	**Positive opening travel** minimum travel of the switch actuator, from the free position, to ensure positive opening operation of the normally closed contact (N.C.).
C_2	**Over-travel** (average travel) distance between the operating position P_A and the max. travel position **L**.
C_L	**Max. travel (maximum travel)** distance between the free position P_O and the max. travel position **L**.
C_3	**Differential travel (C1-C4)** (average travel) travel difference of the switch actuator between the operating position P_A and the release position P_R.
C_4	**Release travel** (average travel) distance between the release position P_R and the free position P_O.

Examples

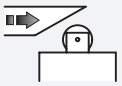
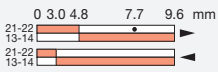
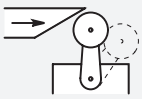
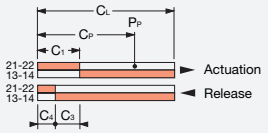
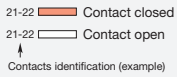
LS32M13B11 (snap action contacts)		Diagram in millimetres/cam travel 
LS32M41B11 (snap action contacts)		Diagram in degrees/lever rotation

Diagram for snap action contacts:



Contacts position



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