

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 precise 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 mm ²	5 x AWG 18 5 x 0.5 < ... < 1 mm ²	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
2	2
1	1



01 Elevators



02 Material handling and conveyors



03 Industrial process

Logistic center and conveyer



Electrical panel



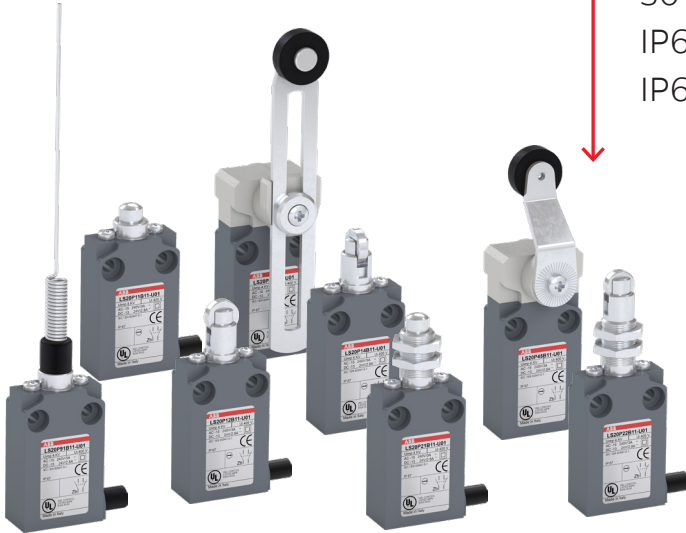
Warehouse

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 20 P 24 B 11 - U 01

- Pre-wired limit switch casing width: 30 mm** 2
- 1 cable output left / right 0
- 1 cable output bottom 1
- Plastic casing** ●
- Actuator** 10 ... 92 ●
- Snap action** B = Zb Snap ●
- Contact blocks** 11 = 1 N.O. + 1 N.C., up to 10 A ●
- Cable length** ● 01 = 1 m
- U = cable UL 62 - PVC

Cable inlet LS3.., LS4..



Limit Switch ●

LS 32 M 41 B 11

- 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
- Actuator** 10 ... 92 ●
- Snap action** B = Zb Snap ●
- Contact types** 11 = 1 N.O. + 1 N.C. contacts ●
- Metal casing

Double insulation □

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

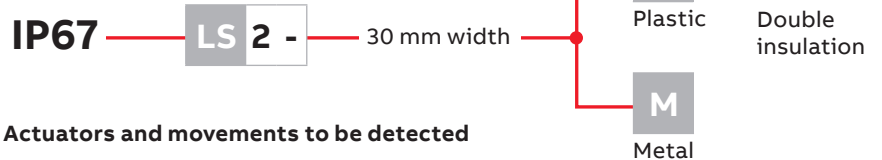
The degree of protection required for electrical equipment depends on the environmental characteristics.

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

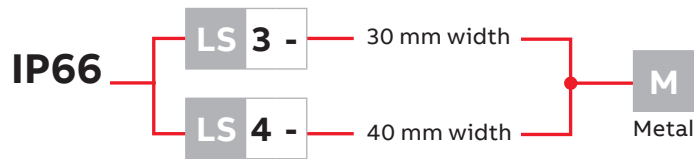
Actuator type	Symbol	Actuator number	Comments*
Plungers		10 11 21	Plastic or metal plunger
Roller plungers		12 13 14 15 22 24	Plastic or metal roller Roller or ball at the tip
Roller levers + plunger		31 32	For horizontal or vertical movement
Roller levers		41 42 45 46	Plastic, metal or rubber roller 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		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.



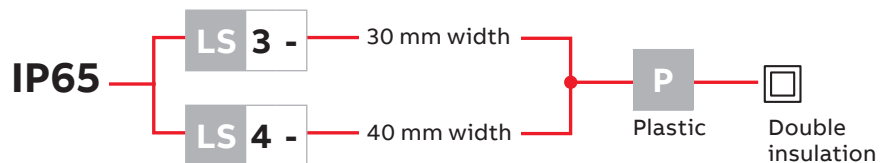
Actuators and movements to be detected

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



Actuators and movements to be detected

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



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








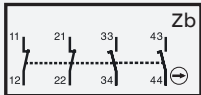
They are purpose-built detection devices thanks to these characteristics:

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

Description

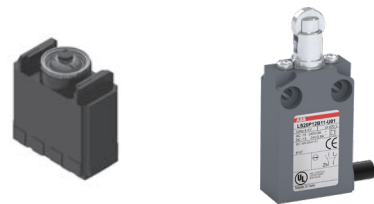
These limit switches, made in thermoplastic or metal material, sealed with epoxy resin at the base on the box, offer a degree of protection IP67.

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 

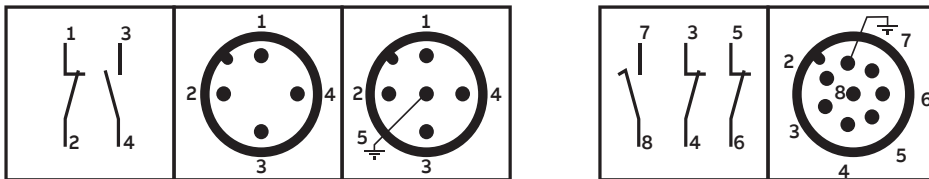
Microswitch types

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



M12 connector

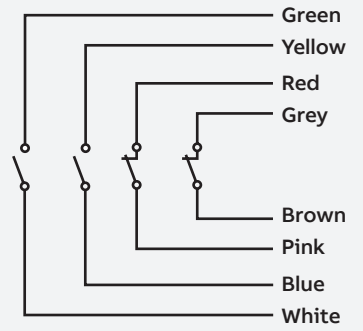
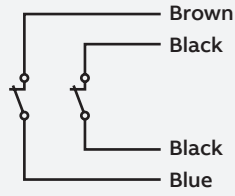
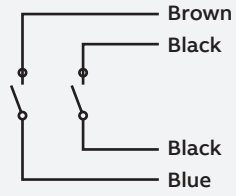
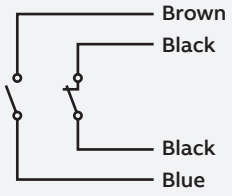
All the models can be supplied with integrated M12 connector (4, 5 and 8 poles). Metal casing is with 5 or 8 poles connector to electrical earth (ground).



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

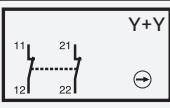
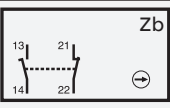
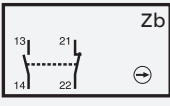
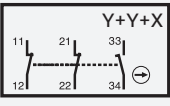
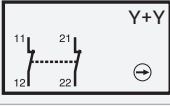
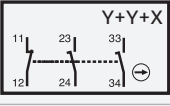
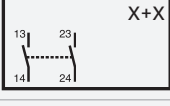
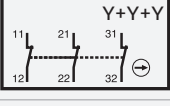
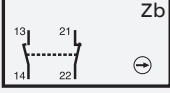
They are purpose-built detection devices thanks to these characteristics:

- 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			

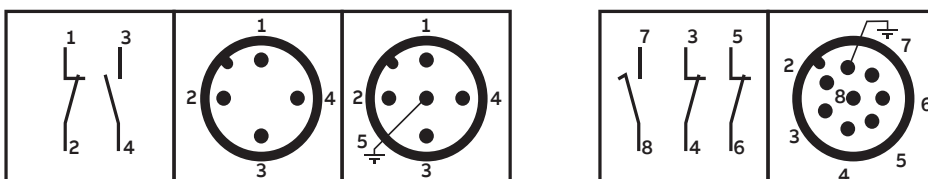
Microswitch types

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

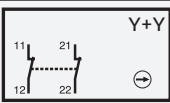
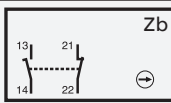
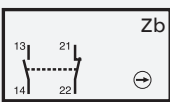
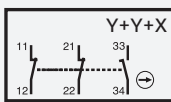
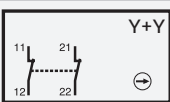
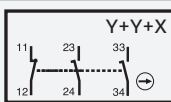
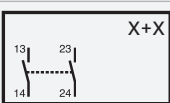
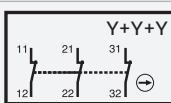
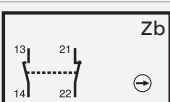
They are purpose-built detection devices thanks to these characteristics:

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

Description

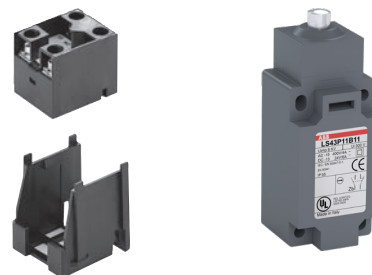
Limit switches, which are made of reinforced UL-VO thermoplastic or metal, offer double insulation and a degree of protection of IP65/IP66..

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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			

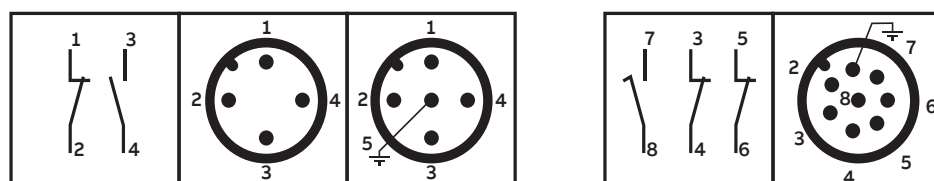
Microswitch types

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

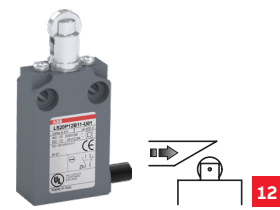
LS2..P – Compact, prewired – Plastic casing – IP67

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

LS2..P limit switches are used in applications where 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.

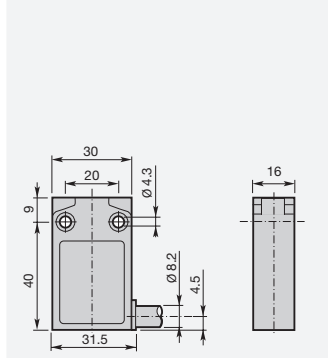


Actuator

Cable output left / right	LS20P11B11-U01	1SBV015911R3801	0.125
Cable output bottom	LS21P11B11-U01	1SBV016011R3801	0.125
(N.C. contact with positive opening operation)	☉		
Maximum actuation speed	0.5 m/s		
Min. force / torque actuation	15 N		
positive opening operation	30 N		

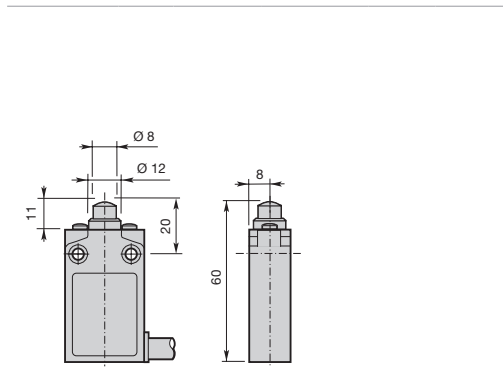
Operation Diagram			
Legend			

Dimensions (mm)



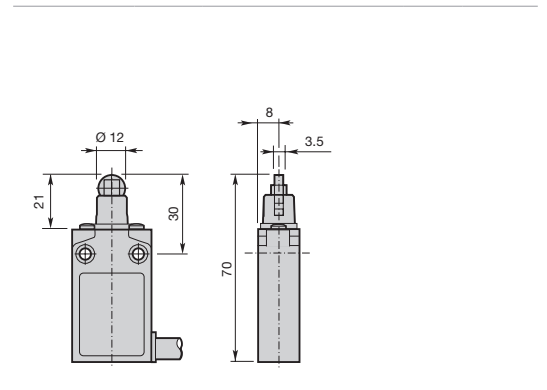
Plain plunger - Steel

Type	Order code	Weight (1 pce) kg
LS20P11B11-U01	1SBV015911R3801	0.125
LS21P11B11-U01	1SBV016011R3801	0.125
☉		
0.5 m/s		
15 N		
30 N		
	Zb	



Roller plunger - Steel

Type	Order code	Weight (1 pce) kg
LS20P12B11-U01	1SBV015912R3801	0.130
LS21P12B11-U01	1SBV016012R3801	0.130
☉		
0.1 m/s		
10 N		
30 N		
	Zb	



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

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

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

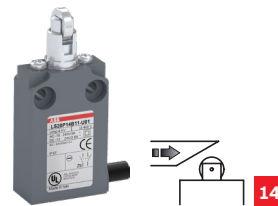
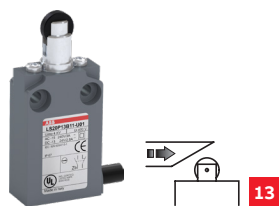
LS2..P – Compact, prewired – Plastic casing – IP67

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

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

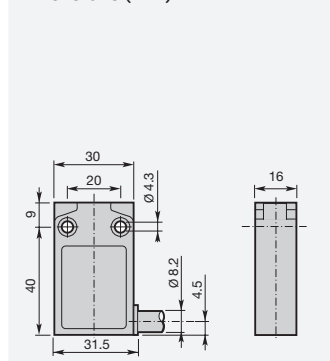


Actuator

Cable output left / right
Cable output bottom
⊙ (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation
positive opening operation

Operation Diagram
 Closed contact / Open contact

Dimensions (mm)



Roller plunger - Plastic

Type	Order code	Weight (1 pce) kg
LS20P13B11-U01	1SBV015913R3801	0.130
LS21P13B11-U01	1SBV016013R3801	0.130

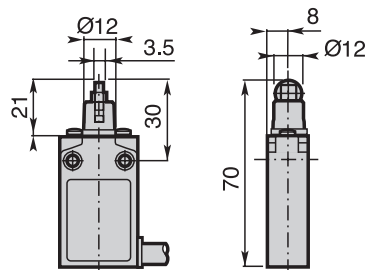
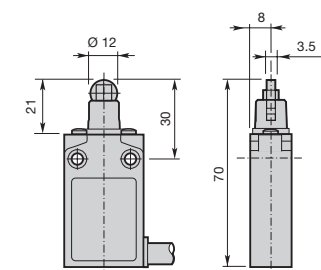
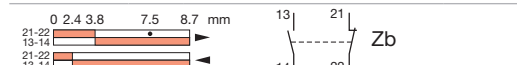
⊙	0.1 m/s	10 N	30 N
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90° Cross roller plunger - Steel

Type	Order code	Weight (1 pce) kg
LS20P14B11-U01	1SBV015914R3801	0.130
LS21P14B11-U01	1SBV016014R3801	0.130

⊙	0.1 m/s	10 N	30 N
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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 series. In grey are the ones available in this page.

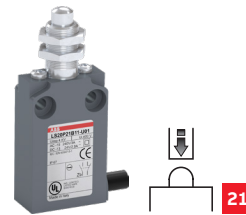
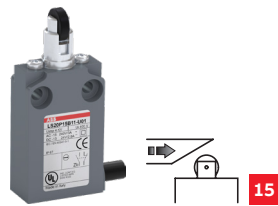
LS2..P – Compact, prewired – Plastic casing – IP67

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

LS2..P limit switches are used in applications where 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	
Cable output left / right	LS20P15B11-U01	1SBV015915R3801	0.130
Cable output bottom	LS21P15B11-U01	1SBV016015R3801	0.130
⊙ (N.C. contact with positive opening operation)	⊙		
Maximum actuation speed	0.1 m/s		
Min. force / torque actuation	10 N		
positive opening operation	30 N		

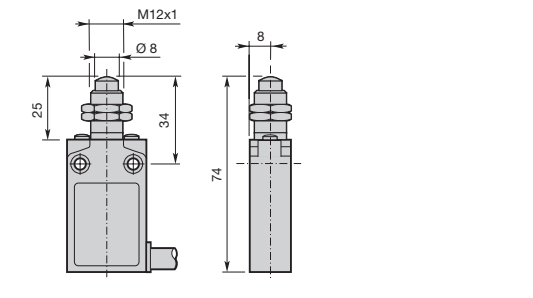
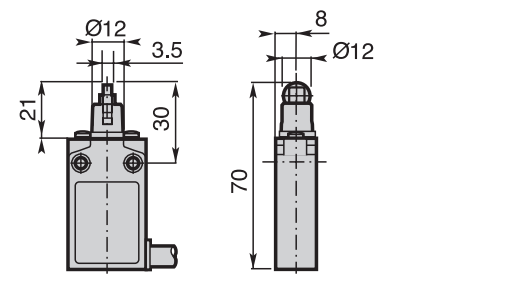
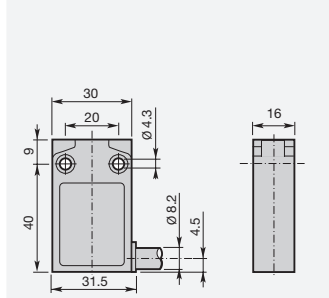
Type	Order code	Weight (1 pce) kg	
Cable output left / right	LS20P21B11-U01	1SBV015921R3801	0.140
Cable output bottom	LS21P21B11-U01	1SBV016021R3801	0.140
⊙ (N.C. contact with positive opening operation)	⊙		
Maximum actuation speed	0.5 m/s		
Min. force / torque actuation	15 N		
positive opening operation	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

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

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

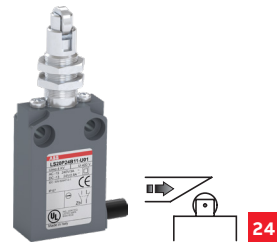
LS2..P – Compact, prewired – Plastic casing – IP67

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

LS2..P limit switches are used in applications where 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.

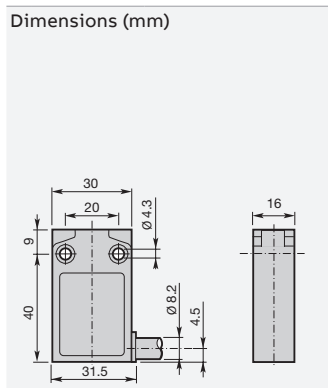
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.



Actuator

Cable output left / right
Cable output bottom
⊙ (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation
positive opening operation

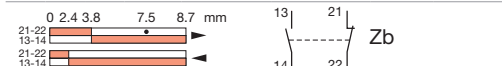
Operation Diagram
 Closed contact / Open contact



Roller plunger with M12 fixing nuts - Steel

Type	Order code	Weight (1 pce) kg
LS20P22B11-U01	1SBV015922R3801	0.145
LS21P22B11-U01	1SBV016022R3801	0.145

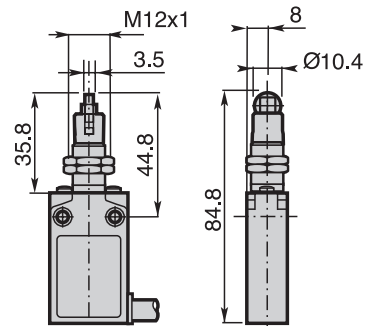
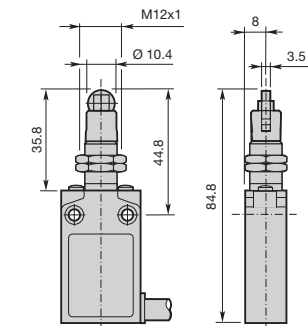
⊙	0.1 m/s	10 N	30 N
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90° Cross roller plunger with M12 fixing nuts - Steel

Type	Order code	Weight (1 pce) Kg
LS20P24B11-U01	1SBV015924R3801	0.145
LS21P24B11-U01	1SBV016024R3801	0.145

⊙	0.1 m/s	10 N	30 N
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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

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

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 where 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.

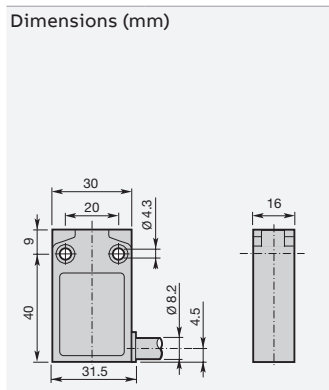
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.



Actuator

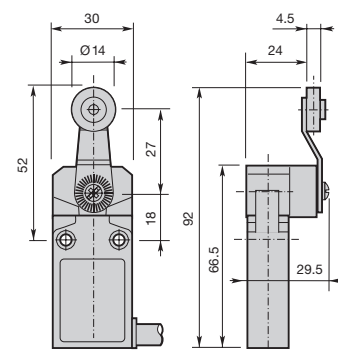
Cable output left / right	LS20P41B11-U01	1SBV015941R3801	0.175
Cable output bottom	LS21P41B11-U01	1SBV016041R3801	0.175
(N.C. contact with positive opening operation)	⊙		
Maximum actuation speed	1.5 m/s		
Min. force / torque actuation	0.08 N.m		
positive opening operation	0.28 N.m		

Operation Diagram
 Closed contact / Open contact



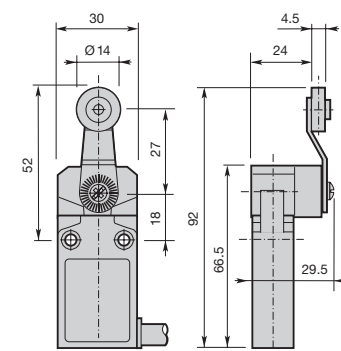
Plastic roller lever Ø 14

Type	Order code	Weight (1 pce) kg
⊙		



Steel roller lever Ø 14

Type	Order code	Weight (1 pce) kg
⊙		



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

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

Here is the full range of actuator available for the LS2-P series. 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 where 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.

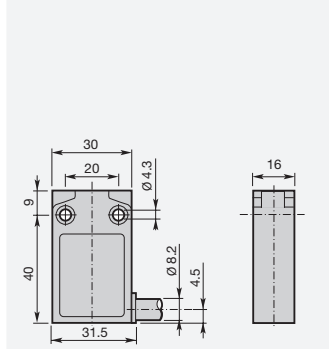


Actuator

Cable output left / right
Cable output bottom
⊙ (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation
positive opening operation

Operation Diagram
 Closed contact / Open contact

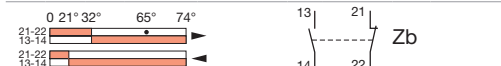
Dimensions (mm)



Plastic roller lever with bent lever Ø 18

Type	Order code	Weight (1 pce) kg
LS20P45B11-U01	1SBV015945R3801	0.180
LS21P45B11-U01	1SBV016045R3801	0.180

⊙	1.5 m/s	0.08 N.m	0.28 N.m
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Steel roller lever with bent lever Ø 18

Type	Order code	Weight (1 pce) kg
LS20P46B11-U01	1SBV015946R3801	0.180
LS21P46B11-U01	1SBV016046R3801	0.180

⊙	1.5 m/s	0.08 N.m	0.28 N.m
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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 where 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.

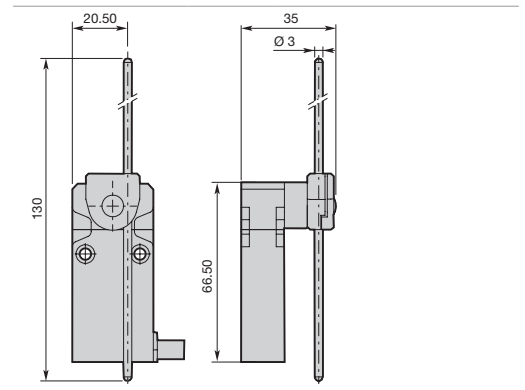
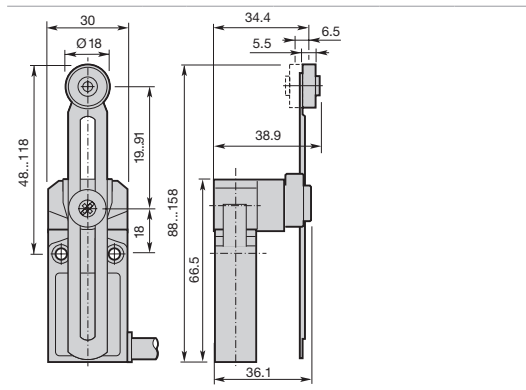
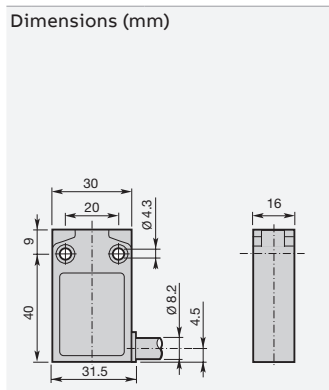
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material, sealed with epoxy for double insulation and IP67 protection.



Actuator	
Cable output left / right	LS20P51B11-U01
Cable output bottom	LS21P51B11-U01
⊙ (N.C. contact with positive opening operation)	⊙
Maximum actuation speed	1.5 m/s
Min. force / torque actuation	0.08 N.m
positive opening operation	0.28 N.m
Operation Diagram	

Adjustable plastic roller lever Ø 18		
Type	Order code	Weight (1 pce) kg
LS20P51B11-U01	1SBV015951R3801	0.190
LS21P51B11-U01	1SBV016051R3801	0.190
⊙		
Maximum actuation speed	1.5 m/s	
Min. force / torque actuation	0.08 N.m	
positive opening operation	0.28 N.m	

Adjustable steel rod lever Ø 3		
Type	Order code	Weight (1 pce) kg
LS20P71B11-U01	1SBV015971R3801	0.185
LS21P71B11-U01	1SBV016071R3801	0.185
⊙		
Maximum actuation speed	1.5 m/s	
Min. force / torque actuation	0.08 N.m	
positive opening operation	0.28 N.m	



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

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

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

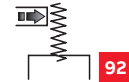
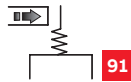
LS2..P – Compact, prewired – Plastic casing – IP67

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

LS2..P limit switches are used in applications where 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.

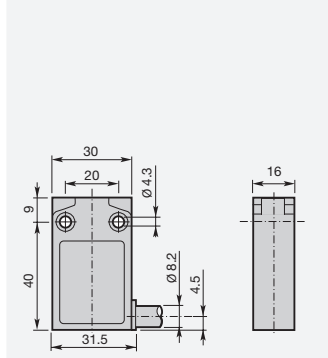


Actuator

Cable output left / right
Cable output bottom
⊙ (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation positive opening operation

Operation Diagram
 Closed contact / Open contact

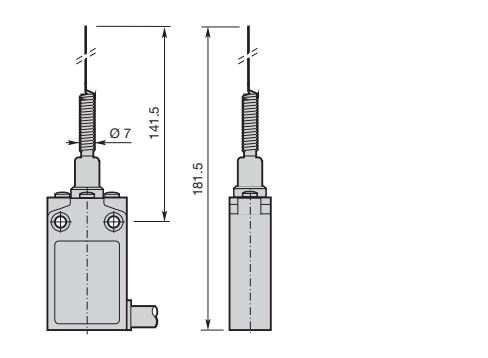
Dimensions (mm)



Spring rod

Type	Order code	Weight (1 pce) kg
LS20P91B11-U01	1SBV015991R3801	0.190
LS21P91B11-U01	1SBV016091R3801	0.190

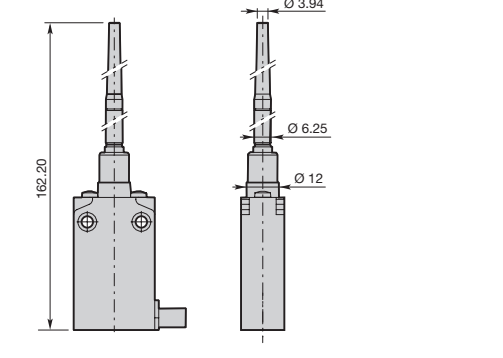
1.0 m/s
 0.10 N.m



Spring rod with insulated tip

Type	Order code	Weight (1 pce) kg
LS20P92B11-U01	1SBV015992R3801	0.195
LS21P92B11-U01	1SBV016092R3801	0.195

1.0 m/s
 0.10 N.m



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

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

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

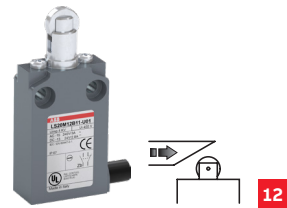
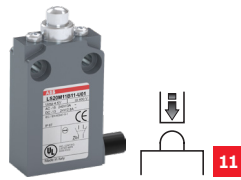
LS2..M – Compact, prewired – Metal Casing – IP67

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

LS2..M limit switches are used in applications where 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.

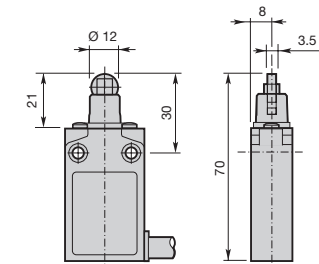
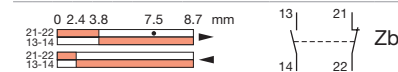
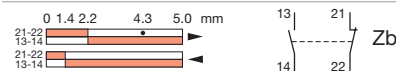
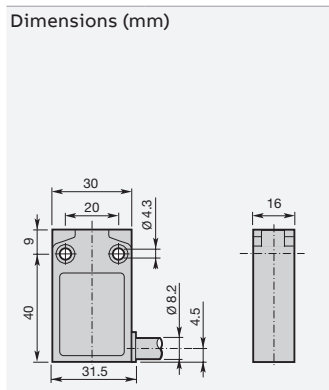
The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.



Actuator	
Cable output left / right	→ (N.C. contact with positive opening operation)
Cable output bottom	→
Maximum actuation speed	0.5 m/s
Min. force / torque actuation	15 N
positive opening operation	30 N

Plain plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS20M11B11-U01	1SBV015511R2601	0.175
LS21M11B11-U01	1SBV015611R2601	0.175
→		
0.5 m/s		
15 N		
30 N		

Roller plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS20M12B11-U01	1SBV015512R2601	0.180
LS21M12B11-U01	1SBV015612R2601	0.180
→		
0.1 m/s		
10 N		
30 N		



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.

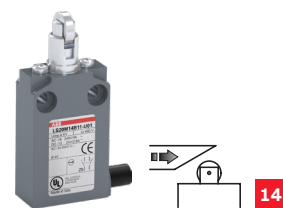
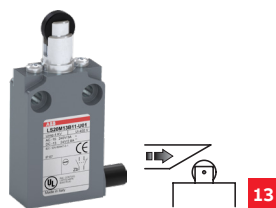
LS2..M – Compact, prewired – Metal Casing – IP67

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

LS2..M limit switches are used in applications where 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.

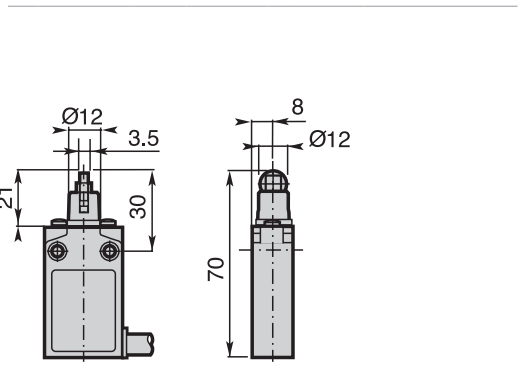
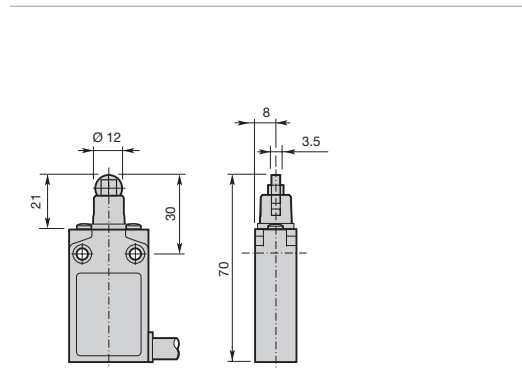
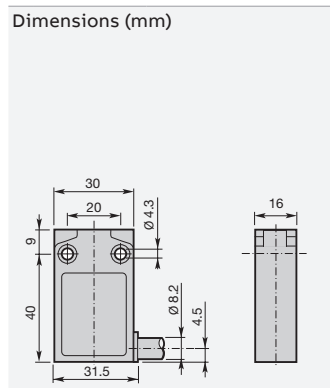
The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.



Actuator	
Cable output left / right	LS20M13B11-U01
Cable output bottom	LS21M13B11-U01
(N.C. contact with positive opening operation)	-
Maximum actuation speed	0.1 m/s
Min. force / torque actuation	10 N
positive opening operation	30 N

Roller plunger - Plastic		
Type	Order code	Weight (1 pce) kg
LS20M13B11-U01	1SBV015513R2601	0.180
LS21M13B11-U01	1SBV015613R2601	0.180
-	(N.C. contact with positive opening operation)	-
0.1 m/s	10 N	30 N

90° Cross roller plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS20M14B11-U01	1SBV015514R2601	0.180
LS21M14B11-U01	1SBV015614R2601	0.180
-	(N.C. contact with positive opening operation)	-
0.1 m/s	10 N	30 N



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 where 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

Plain plunger with M12 fixing nuts - Brass

Type	Order code	Weight (1 pce) kg	
Cable output left / right	LS20M15B11-U01	1SBV015515R2601	0.18
Cable output bottom	LS21M15B11-U01	1SBV015615R2601	0.18

Type	Order code	Weight (1 pce) kg	
Cable output left / right	LS20M21B11-U01	1SBV015521R2601	0.19
Cable output bottom	LS21M21B11-U01	1SBV015621R2601	0.19

Type	Order code	Weight (1 pce) kg	
Cable output left / right	LS20M21B11-U01	1SBV015521R2601	0.19
Cable output bottom	LS21M21B11-U01	1SBV015621R2601	0.19

⊙ (N.C. contact with positive opening operation)

⊙

⊙

Maximum actuation speed

0.1 m/s

0.5 m/s

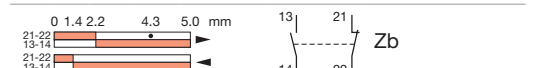
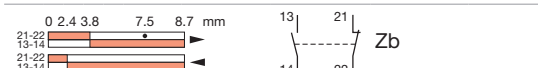
Min. force / torque actuation positive opening operation

10 N
30 N

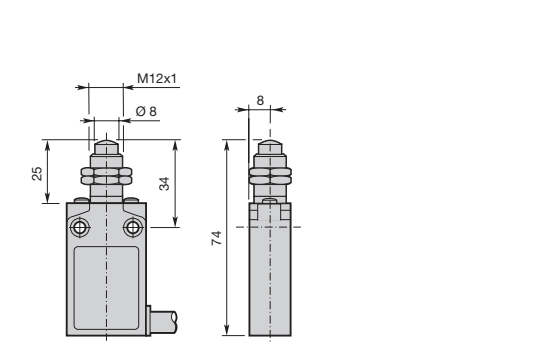
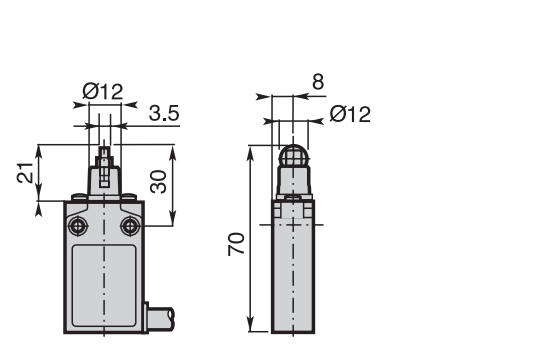
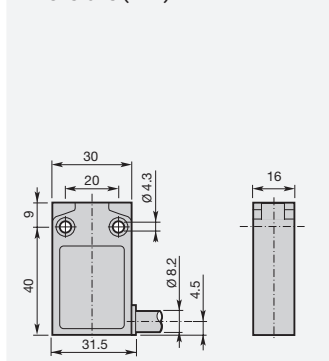
15 N
30 N

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

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

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

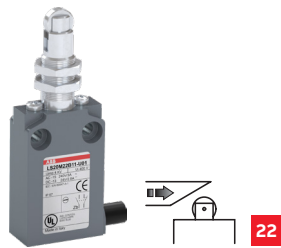
LS2..M – Compact, prewired – Metal Casing – IP67

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

LS2..M limit switches are used in applications where 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.

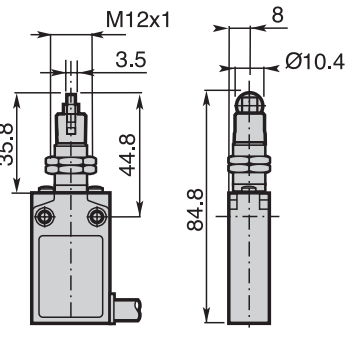
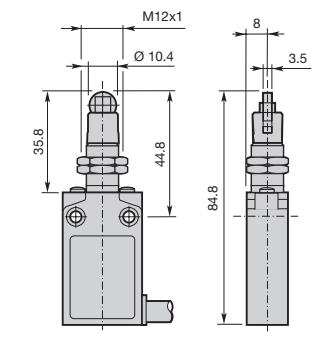
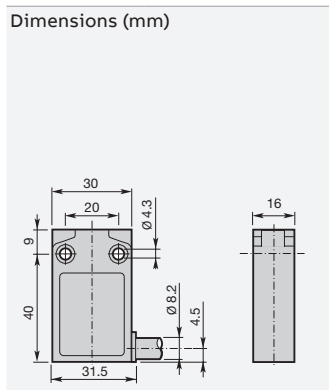
The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.



Actuator	
Cable output left / right	
Cable output bottom	
(N.C. contact with positive opening operation)	
Maximum actuation speed	0.1 m/s
Min. force / torque actuation	10 N
positive opening operation	30 N
Operation Diagram	
Closed contact / Open contact	

Roller plunger with M12 fixing nuts - Steel		
Type	Order code	Weight (1 pce) kg
LS20M22B11-U01	1SBV015522R2601	0.195
LS21M22B11-U01	1SBV015622R2601	0.195
	(N.C. contact with positive opening operation)	
	0.1 m/s	
	10 N	
	30 N	

90° Cross roller plunger with M12 fixing nuts - Steel		
Type	Order code	Weight (1 pce) kg
LS20M24B11-U01	1SBV015524R2601	0.195
LS21M24B11-U01	1SBV015624R2601	0.195
	(N.C. contact with positive opening operation)	
	0.1 m/s	
	10 N	
	30 N	



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

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

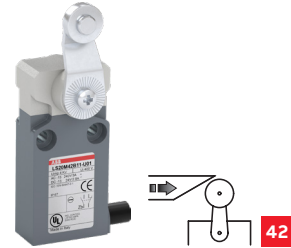
Here is the full range of actuator available for the LS2..M serie. In grey are the ones available in this page.

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 where 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.

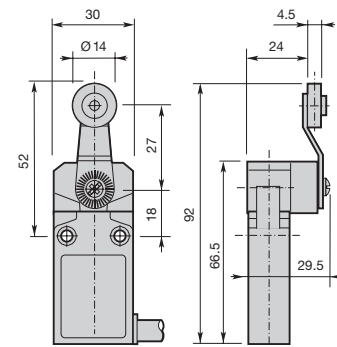
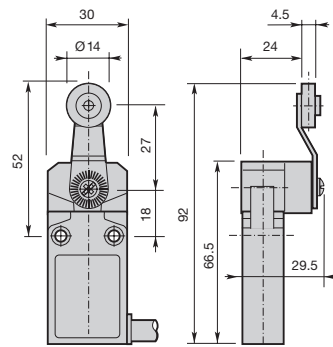
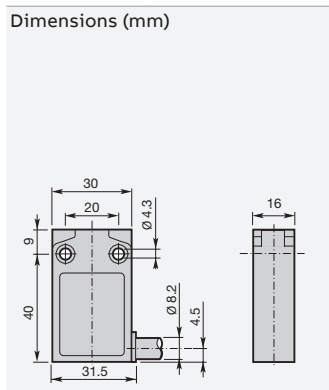
The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.



Actuator	
Cable output left / right	→
Cable output bottom	⬇
(N.C. contact with positive opening operation)	⊖ →
Maximum actuation speed	1.5 m/s
Min. force / torque actuation	0.08 N.m
positive opening operation	0.28 N.m
Operation Diagram	

Plastic roller lever Ø 14		
Type	Order code	Weight (1 pce) kg
LS20M41B11-U01	1SBV015541R2601	0.225
LS21M41B11-U01	1SBV015641R2601	0.225
→	⊖ →	
1.5 m/s		
0.08 N.m		
0.28 N.m		

Steel roller lever Ø 14		
Type	Order code	Weight (1 pce) kg
LS20M42B11-U01	1SBV015542R2601	0.225
LS21M42B11-U01	1SBV015642R2601	0.225
→	⊖ →	
1.5 m/s		
0.08 N.m		
0.28 N.m		



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 where high degree of protection is needed along with limited mounting space.

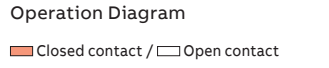
The cable coming out of the side or the bottom makes it easier to align the actuator for the application without bending the cable.

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.

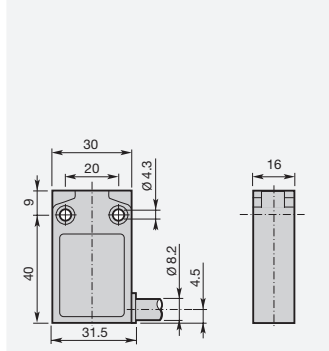


Actuator

Cable output left / right	LS20M45B11-U01	1SBV015545R2601	0.23
Cable output bottom	LS21M45B11-U01	1SBV015645R2601	0.23
(N.C. contact with positive opening operation)	-	⊙	-
Maximum actuation speed	1.5 m/s		
Min. force / torque actuation	0.08 N.m		
positive opening operation	0.28 N.m		

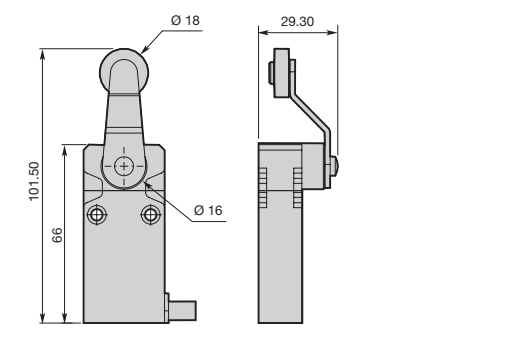


Dimensions (mm)



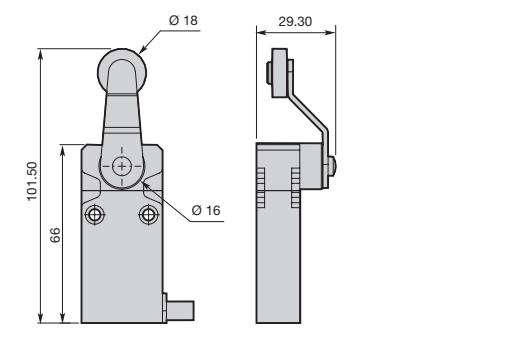
Plastic roller lever with bent lever Ø 18

Type	Order code	Weight (1 pce) kg
LS20M45B11-U01	1SBV015545R2601	0.23
LS21M45B11-U01	1SBV015645R2601	0.23
-	⊙	-
1.5 m/s		
0.08 N.m		
0.28 N.m		



Steel roller lever with bent lever Ø 18

Type	Order code	Weight (1 pce) kg
LS20M46B11-U01	1SBV015546R2601	0.23
LS21M46B11-U01	1SBV015646R2601	0.23
-	⊙	-
1.5 m/s		
0.08 N.m		
0.28 N.m		



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

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

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 where 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.



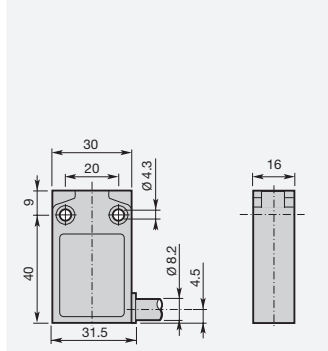
Actuator

Cable output left / right	LS20M51B11-U01	1SBV015551R2601	0.24
Cable output bottom	LS21M51B11-U01	1SBV015651R2601	0.24
(N.C. contact with positive opening operation)	-	→	
Maximum actuation speed	1.5 m/s		
Min. force / torque actuation	0.08 N.m		
positive opening operation	0.28 N.m		

Operation Diagram

■ Closed contact / □ Open contact

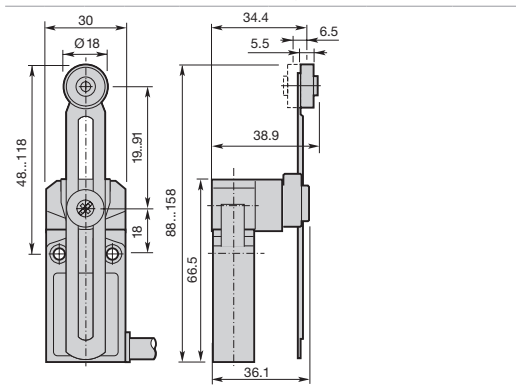
Dimensions (mm)



Adjustable plastic roller lever Ø 18

Type	Order code	Weight (1 pce) kg	
→	LS20M51B11-U01	1SBV015551R2601	0.24
→	LS21M51B11-U01	1SBV015651R2601	0.24

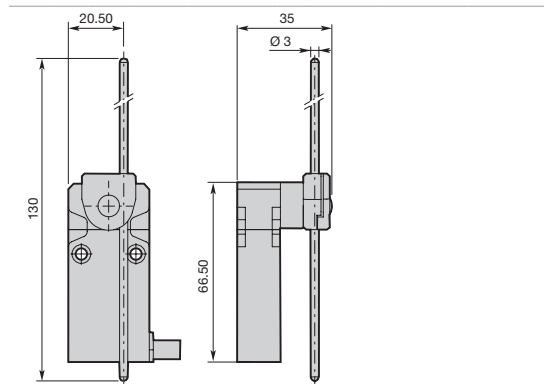
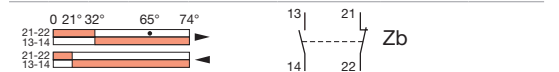
-	→	
1.5 m/s		
0.08 N.m		
0.28 N.m		



Adjustable steel rod lever Ø 3

Type	Order code	Weight (1 pce) kg	
→	LS20M71B11-U01	1SBV015571R2601	0.235
→	LS21M71B11-U01	1SBV015671R2601	0.235

-	→	
1.5 m/s		
0.08 N.m		
0.28 N.m		



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

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

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 where 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.

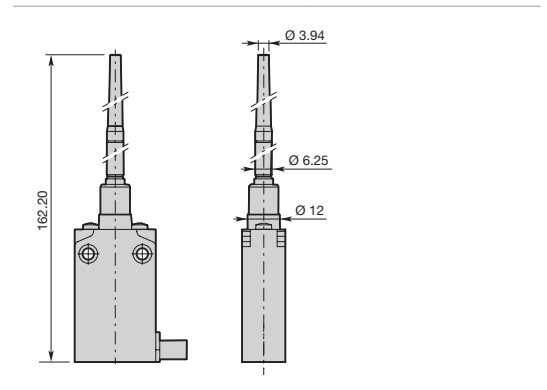
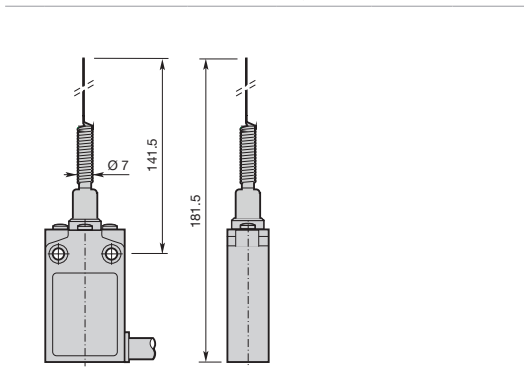
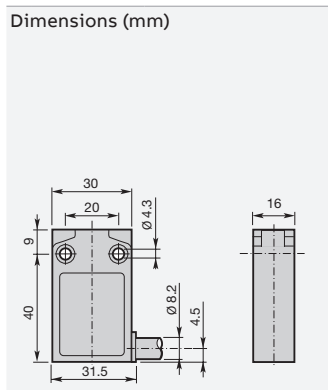
The 30 mm bodies are made of zinc alloy material (Zamak), sealed with epoxy resin for IP67 protection. The high degree of protection and the high resistance to corrosion allows them to be mounted outside.



Actuator	
Cable output left / right	LS20M91B11-U01
Cable output bottom	LS21M91B11-U01
(N.C. contact with positive opening operation)	-
Maximum actuation speed	1.0 m/s
Min. force / torque actuation positive opening operation	0.10 N.m
Operation Diagram	-
Closed contact / Open contact	-

Spring rod		
Type	Order code	Weight (1 pce) kg
LS20M91B11-U01	1SBV015591R2601	0.245
LS21M91B11-U01	1SBV015691R2601	0.245
-	(N.C. contact with positive opening operation)	-
1.0 m/s	Maximum actuation speed	1.0 m/s
0.10 N.m	Min. force / torque actuation positive opening operation	0.10 N.m
-	Operation Diagram	-
-	Closed contact / Open contact	-

Spring rod steel with insulated tip		
Type	Order code	Weight (1 pce) kg
LS20M92B11-U01	1SBV015592R2601	0.245
LS21M92B11-U01	1SBV015692R2601	0.245
-	(N.C. contact with positive opening operation)	-
1.0 m/s	Maximum actuation speed	1.0 m/s
0.10 N.m	Min. force / torque actuation positive opening operation	0.10 N.m
-	Operation Diagram	-
-	Closed contact / Open contact	-



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

Plain plunger - Steel	90° Cross roller plunger - Steel	Roller plunger with M12 fixing nuts - Steel	Steel roller lever Ø 14	Adjustable Ø 18 plastic roller lever	Spring rod with insulated tip
Roller plunger - Steel	90° Cross roller plunger - Plastic	90° Cross roller plunger with M12 fixing nuts - Steel	Plastic roller lever with bent lever Ø 18	Adjustable steel rod lever Ø 3	
Roller plunger - Plastic	Plain plunger with M12 fixing nuts - Brass	Plastic roller lever Ø 14	Steel roller lever with bent lever Ø 18	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 U_i	400 V (degree of pollution 3)	
Rated impulse withstand voltage U_{imp} (acc. to IEC 60947-1 and EN 60947-1)	4 kV	
Conventional enclosed thermal current I_{th} acc. to IEC 60947-5-1 and EN 60947-5-1) $\theta < 40$ °C	10 A	
Short-circuit protection gG type fuses	10 A / 500 V	
Rated operational current		
le / 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	
le / 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	m Ω	25
Pre-wired connection	mm ² / AWG	4 x 0.75 mm ² / AWG18 5 x 0.75 mm ² / 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

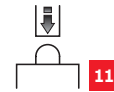
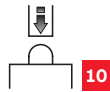
53 Technical data

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.

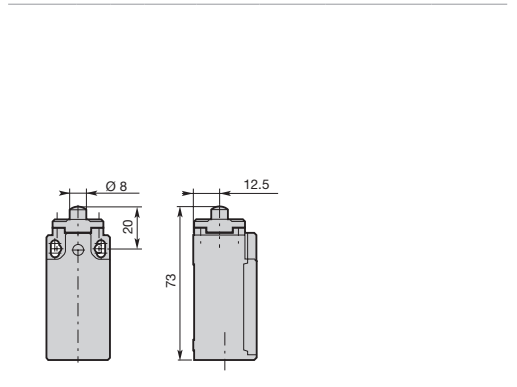
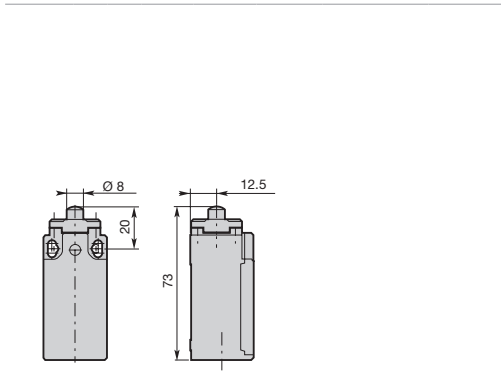
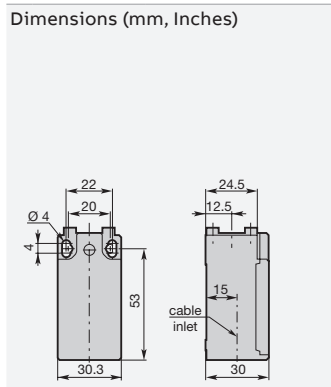
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.



Actuator	
Iso 16	
Iso 20	
1/2" NPT	
Conformity / (N.C. contact with positive opening operation)	
Maximum actuation speed	0.5 m/s
Min. force / torque actuation positive opening operation	15 N 30 N
Operation Diagram	
Closed contact / Open contact	

Plain plunger - Plastic		
Type	Order code	Weight (1 pce) kg
LS32P10B11	1SBV010310R1211	0.07
LS33P10B11	1SBV012210R1211	0.07
LS35P10B11	1SBV012110R1211	0.08
EN 50047 (B shape)		
0.5 m/s		
15 N 30 N		

Plain plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS32P11B11	1SBV010311R1211	0.07
LS33P11B11	1SBV012211R1211	0.07
LS35P11B11	1SBV012111R1211	0.08
EN 50047 (B shape)		
0.5 m/s		
15 N 30 N		



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

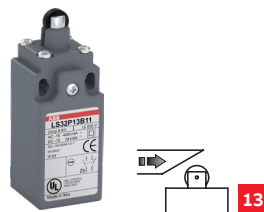
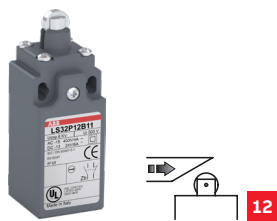
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

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.

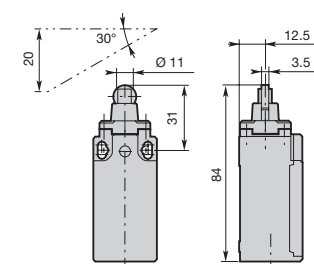
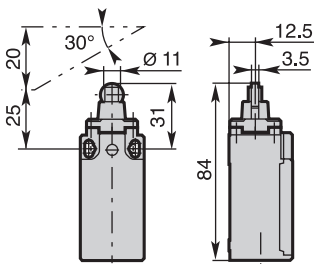
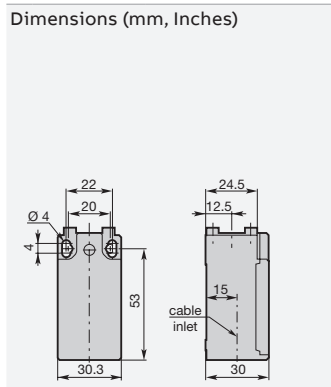
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.



Actuator	
Iso 16	
Iso 20	
1/2" NPT	
Conformity / (N.C. contact with positive opening operation)	
Maximum actuation speed	0.3 m/s
Min. force / torque actuation positive opening operation	12 N 30 N
Operation Diagram	

Roller plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS32P12B11	1SBV010312R1211	0.075
LS33P12B11	1SBV012212R1211	0.075
LS35P12B11	1SBV012112R1211	0.085
EN 50047 (C shape) ⊕		
0.3 m/s		
12 N 30 N		

Roller plunger - Plastic		
Type	Order code	Weight (1 pce) kg
LS32P13B11	1SBV010313R1211	0.075
LS33P13B11	1SBV012213R1211	0.075
LS35P13B11	1SBV012113R1211	0.085
EN 50047 (C shape) ⊕		
0.3 m/s		
12 N 30 N		



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.

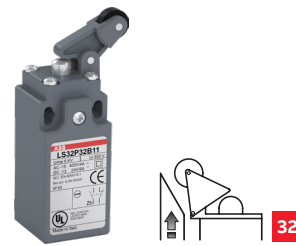
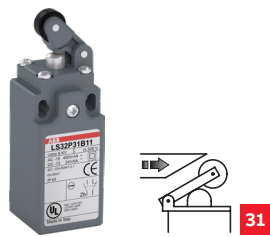
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

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.

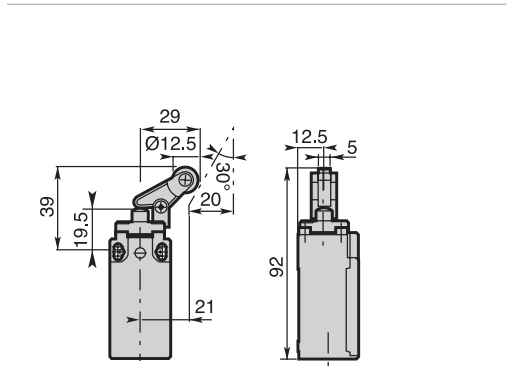
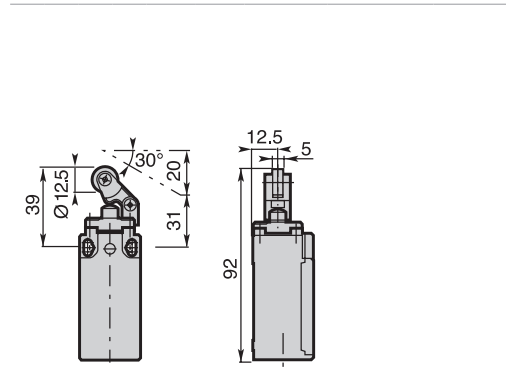
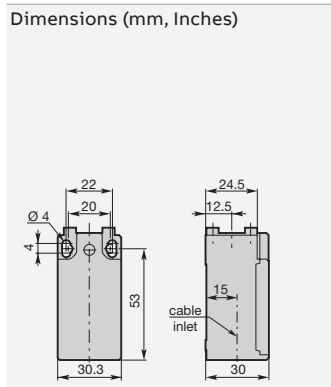
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.



Actuator	
Iso 16	
Iso 20	
1/2" NPT	
Conformity / (N.C. contact with positive opening operation)	
Maximum actuation speed	1 m/s
Min. force / torque actuation positive opening operation	7 N 24 N
Operation Diagram	
Closed contact / Open contact	

Roller lever + plunger - Horizontal		
Type	Order code	Weight (1 pce) kg
LS32P31B11	1SBV010331R1211	0.075
LS33P31B11	1SBV012231R1211	0.075
LS35P31B11	1SBV012131R1211	0.085
EN 50047 (E shape)		
1 m/s		
7 N 24 N		

Roller lever + plunger - Vertical		
Type	Order	Weight (1 pce) kg
LS32P32B11	1SBV010332R1211	0.08
LS33P32B11	1SBV012232R1211	0.08
LS35P32B11	1SBV012132R1211	0.09
1 m/s		
7 N 24 N		



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.

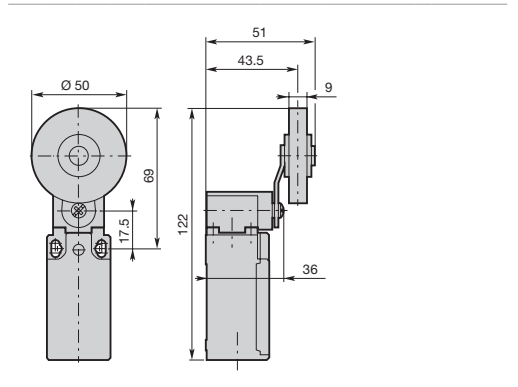
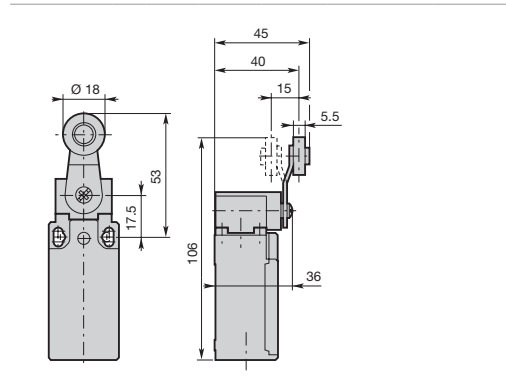
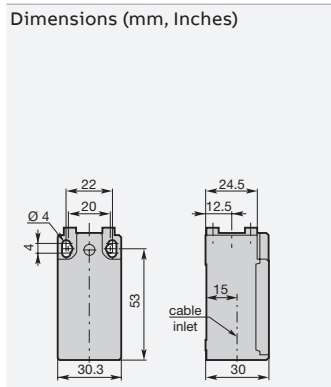
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.



Actuator	
Iso 16	
Iso 20	
1/2" NPT	
Conformity / (N.C. contact with positive opening operation)	
Maximum actuation speed	
Min. force / torque actuation positive opening operation	
Operation Diagram	
Closed contact / Open contact	

Plastic roller lever Ø 18		
Type	Order code	Weight (1 pce) kg
LS32P41B11	1SBV010341R1211	0.095
LS33P41B11	1SBV012241R1211	0.095
LS35P41B11	1SBV012141R1211	0.105
EN 50047 (A shape)		
1.5 m/s		
0.1 N.m		
0.32 N.m		

Rubber roller lever Ø 50		
Type	Order code	Weight (1 pce) kg
LS32P42B11	1SBV010342R1211	0.115
LS33P42B11	1SBV012242R1211	0.115
LS35P42B11	1SBV012142R1211	0.125
(N.C. contact with positive opening operation)		
1.5 m/s		
0.1 N.m		
0.32 N.m		



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.

Plain plunger - Plastic	Roller plunger - Steel	Roller lever + plunger Horizontal	Plastic roller lever Ø 18	Adjustable plastic roller lever Ø 18	Adjustable steel rod lever Ø 3	Spring rod
Plain plunger - Steel	Roller plunger - Plastic	Roller lever + plunger Vertical	Rubber roller lever Ø 50	Adjustable rubber roller lever Ø 50	Adjustable fiber glass rod lever Ø 3	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.

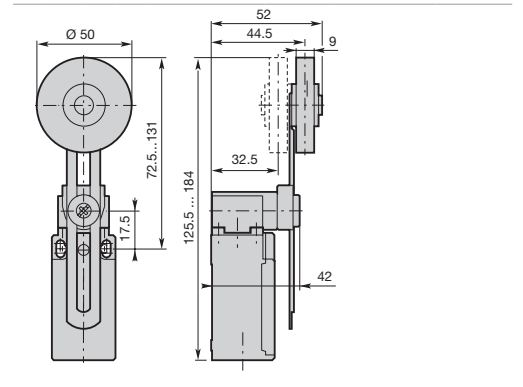
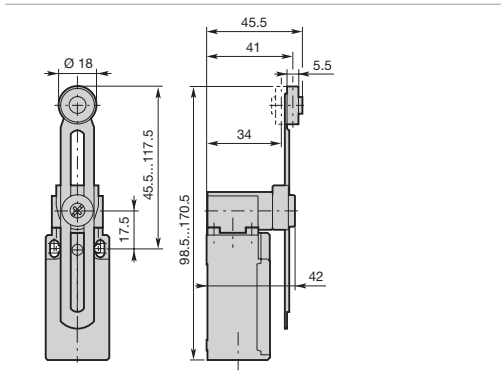
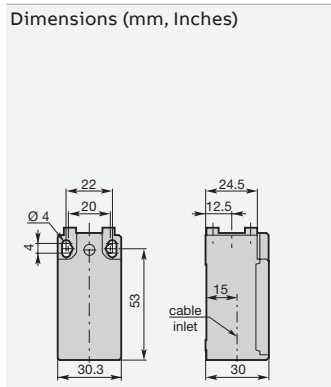
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.



Actuator	
Iso 16	
Iso 20	
1/2" NPT	
Conformity / (N.C. contact with positive opening operation)	
Maximum actuation speed	1.0 m/s
Min. force / torque actuation positive opening operation	0.1 N.m 0.32 N.m
Operation Diagram	

Adjustable plastic roller lever Ø 18		
Type	Order code	Weight (1 pce) kg
LS32P51B11	1SBV010351R1211	0.105
LS33P51B11	1SBV012251R1211	0.105
LS35P51B11	1SBV012151R1211	0.115
Maximum actuation speed	1.0 m/s	
Min. force / torque actuation positive opening operation	0.1 N.m 0.32 N.m	
Operation Diagram		

Adjustable rubber roller lever Ø 50		
Type	Order code	Weight (1 pce) kg
LS32P52B11	1SBV010352R1211	0.125
LS33P52B11	1SBV012252R1211	0.125
LS35P52B11	1SBV012152R1211	0.135
Maximum actuation speed	1, 5 m/s	
Min. force / torque actuation positive opening operation	0.1 N.m 0.32 N.m	
Operation Diagram		



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.

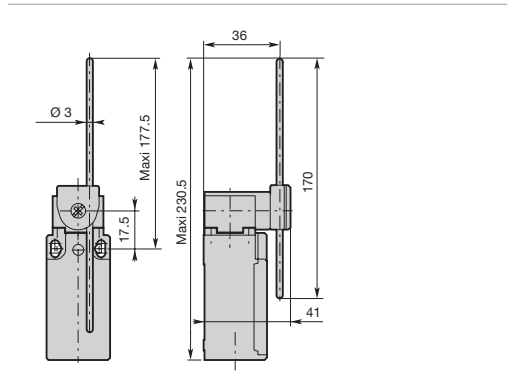
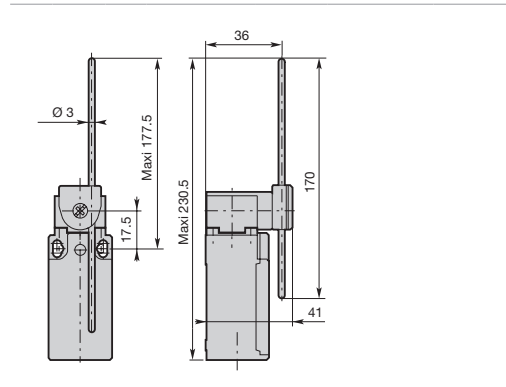
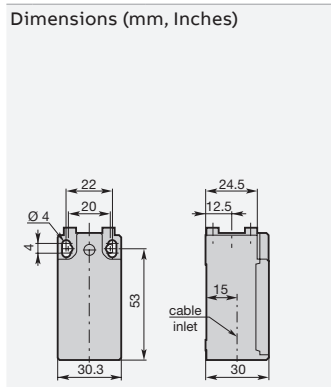
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.



Actuator	
Iso 16	LS32P71B11
Iso 20	LS33P71B11
1/2" NPT	LS35P71B11
Conformity / (N.C. contact with positive opening operation)	-
Maximum actuation speed	1.5 m/s
Min. force / torque actuation positive opening operation	0.1 N 0.32 N.m
Operation Diagram	

Adjustable steel rod lever Ø 3		
Type	Order code	Weight (1 pce) kg
LS32P71B11	1SBV010371R1211	0.105
LS33P71B11	1SBV012271R1211	0.105
LS35P71B11	1SBV012171R1211	0.115
-		
1.5 m/s		
0.1 N 0.32 N.m		

Adjustable fiber glass rod lever Ø 3		
Type	Order code	Weight (1 pce) kg
LS32P72B11	1SBV010372R1211	0.105
LS33P72B11	1SBV012272R1211	0.105
LS35P72B11	1SBV012172R1211	0.115
-		
1.5 m/s		
0.1 N 0.32 N.m		




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.

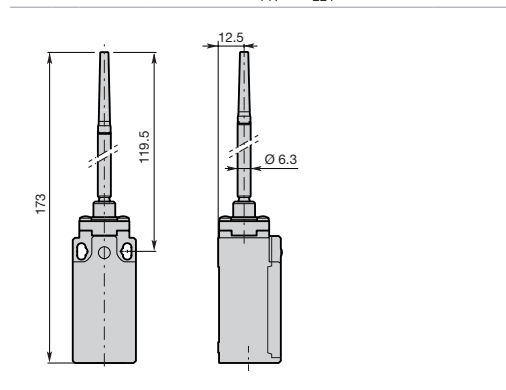
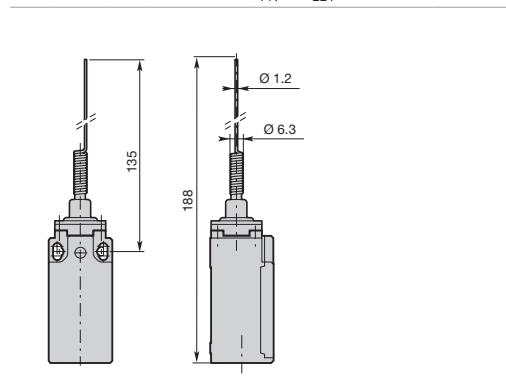
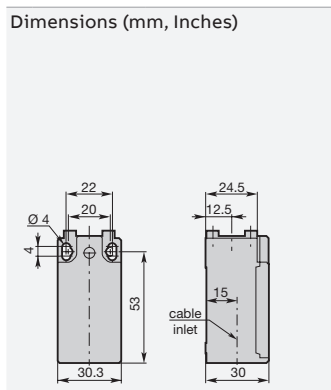
The 30 mm wide bodies are made of fiber-glass reinforced UL-V0 material for double insulation and IP65 protection.

















Actuator	
Iso 16	
Iso 20	
1/2" NPT	
Conformity /  (N.C. contact with positive opening operation)	
Maximum actuation speed	1 m/s
Min. force / torque actuation positive opening operation	0.12 N.m - N.m
Operation Diagram	
 Closed contact /  Open contact	

Spring rod		
Type	Order code	Weight (1 pce) kg
LS32P91B11	1SBV010391R1211	0.08
LS33P91B11	1SBV012291R1211	0.08
LS35P91B11	1SBV012191R1211	0.09
-	-	-
1 m/s		
0.12 N.m		
- N.m		

Spring rod with insulated tip		
Type	Order code	Weight (1 pce) kg
LS32P92B11	1SBV010392R1211	0.085
LS33P92B11	1SBV012292R1211	0.085
LS35P92B11	1SBV012192R1211	0.095
-	-	-
1 m/s		
0.12 N.m		
- N.m		



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

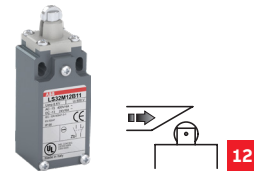
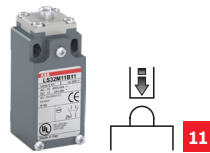
Here is the full range of actuator available for the LS3..P serie. In grey are the ones available in this page.

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.

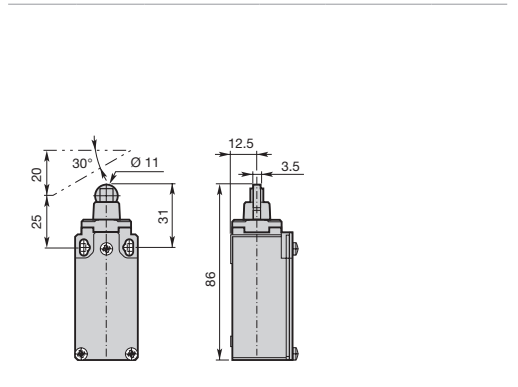
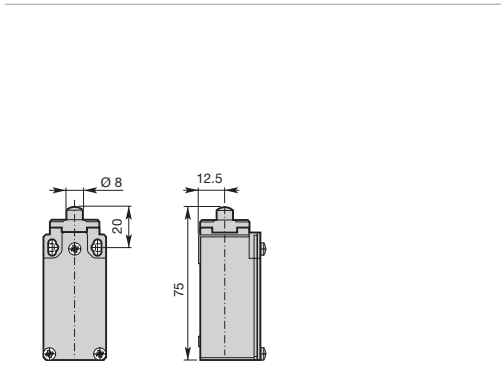
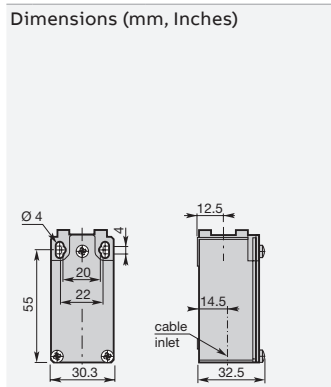
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.



Actuator	
Iso 16	
Iso 20	
1/2" NPT	
Conformity / \rightarrow (N.C. contact with positive opening operation)	
Maximum actuation speed	0.5 m/s
Min. force / torque actuation positive opening operation	15 N 30 N
Operation Diagram	
Closed contact / Open contact	

Plain plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS32M11B11	1SBV011911R1211	0.18
LS33M11B11	1SBV013811R1211	0.18
LS35M11B11	1SBV013711R1211	0.18
EN 50047 (B shape) \rightarrow		
0.5 m/s		
15 N 30 N		

Roller plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS32M12B11	1SBV011912R1211	0.19
LS33M12B11	1SBV013812R1211	0.19
LS35M12B11	1SBV013712R1211	0.19
EN 50047 (C shape) \rightarrow		
0.3 m/s		
12 N 30 N		



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.

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
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	

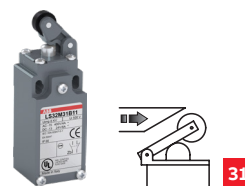
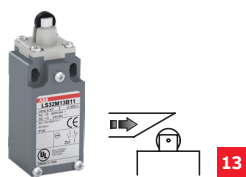
Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

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.

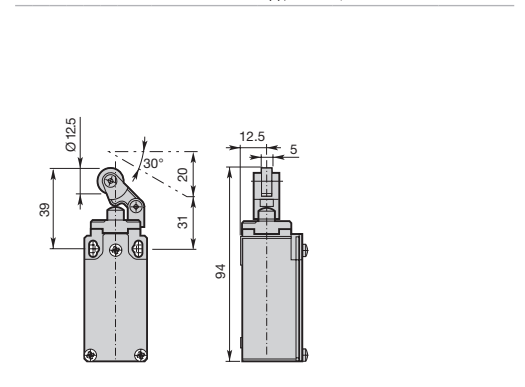
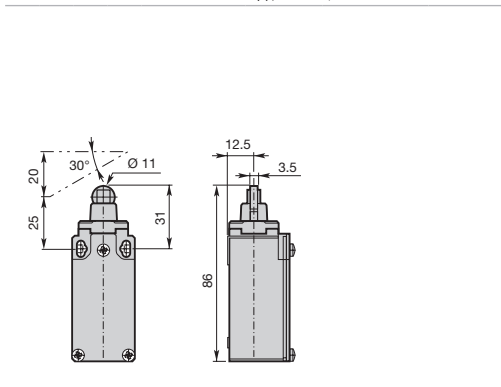
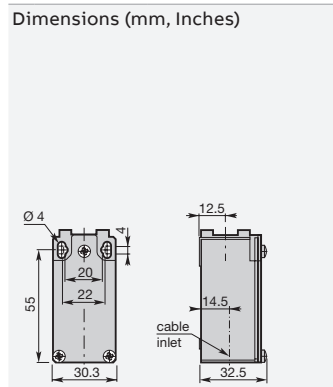
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.



Actuator
Iso 16
Iso 20
1/2" NPT
Conformity / \rightarrow (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation positive opening operation
Operation Diagram

Roller plunger - Plastic		
Type	Order code	Weight (1 pce) kg
LS32M13B11	1SBV011913R1211	0.19
LS33M13B11	1SBV013813R1211	0.19
LS35M13B11	1SBV013713R1211	0.19
EN 50047 (C shape) \rightarrow		
0.3 m/s		
12 N		
30 N		

Roller lever + plunger - Horizontal		
Type	Order code	Weight (1 pce) kg
LS32M31B11	1SBV011931R1211	0.175
LS33M31B11	1SBV013831R1211	0.175
LS35M31B11	1SBV013731R1211	0.175
EN 50047 (E shape) \rightarrow		
1 m/s		
7 N		
24 N		



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.

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

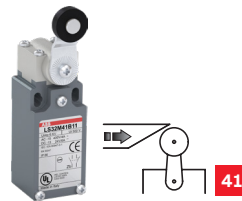
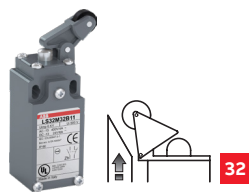
Here is the full range of actuator available for the LS3..M serie. In grey are the ones available in this page.

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.

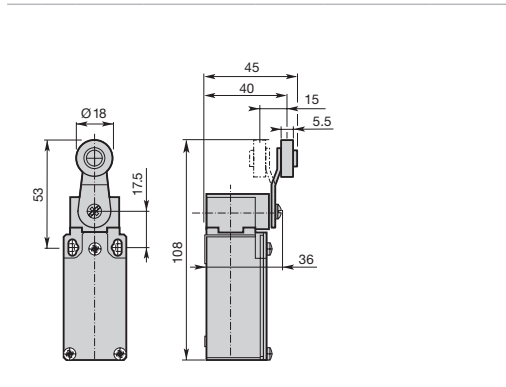
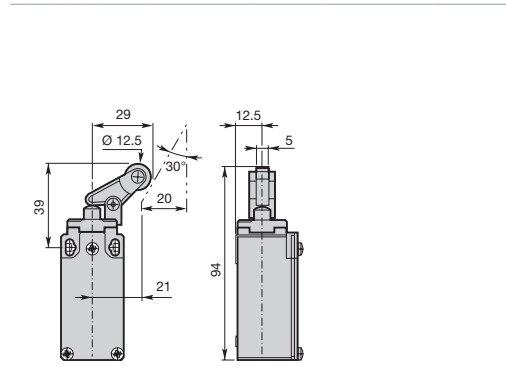
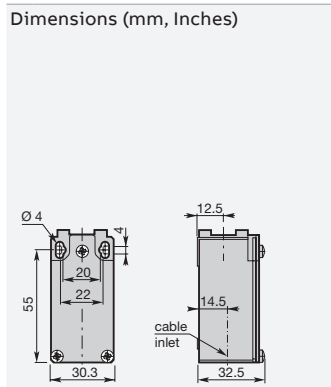
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.



Actuator	
Iso 16	
Iso 20	
1/2" NPT	
Conformity / \rightarrow (N.C. contact with positive opening operation)	
Maximum actuation speed	1 m/s
Min. force / torque actuation	7 N
positive opening operation	24 N
Operation Diagram	
Closed contact / Open contact	

Roller lever + plunger - Vertical		
Type	Order code	Weight (1 pce) kg
LS32M32B11	1SBV011932R1211	0.18
LS33M32B11	1SBV013832R1211	0.18
LS35M32B11	1SBV013732R1211	0.18
-	\rightarrow	
1 m/s		
7 N		
24 N		

Plastic roller lever Ø 18		
Type	Order code	Weight (1 pce) kg
LS32M41B11	1SBV011941R1211	0.235
LS33M41B11	1SBV013841R1211	0.235
LS35M41B11	1SBV013741R1211	0.235
EN 50047 (A shape) \rightarrow		
1.5 m/s		
0.1 N.m		
0.32 N.m		



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.

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
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	

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.

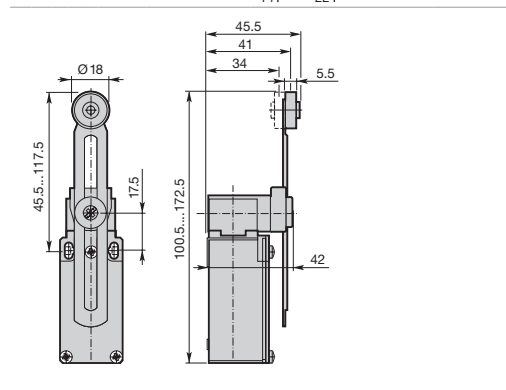
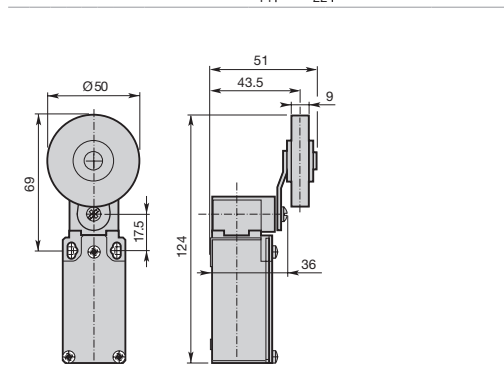
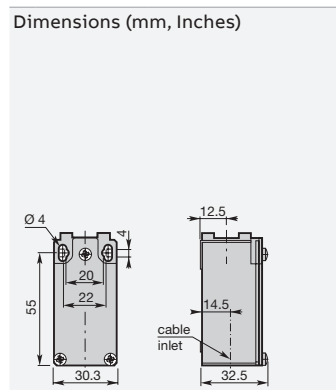
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.



Actuator	
Iso 16	LS32M42B11
Iso 20	LS33M42B11
1/2" NPT	LS35M42B11
Conformity / (N.C. contact with positive opening operation)	-
Maximum actuation speed	1.5 m/s
Min. force / torque actuation positive opening operation	0.1 N.m 0.32 N.m
Operation Diagram	

Plastic rubber roller lever Ø 50		
Type	Order code	Weight (1 pce) kg
Iso 16	LS32M42B11	0.255
Iso 20	LS33M42B11	0.255
1/2" NPT	LS35M42B11	0.255
Conformity / (N.C. contact with positive opening operation)	-	
Maximum actuation speed	1.5 m/s	
Min. force / torque actuation positive opening operation	0.1 N.m 0.32 N.m	
Operation Diagram		

Adjustable plastic roller lever Ø 18		
Type	Order code	Weight (1 pce) kg
Iso 16	LS32M51B11	0.245
Iso 20	LS33M51B11	0.245
1/2" NPT	LS35M51B11	0.245
Conformity / (N.C. contact with positive opening operation)	-	
Maximum actuation speed	1.5 m/s	
Min. force / torque actuation positive opening operation	0.1 N.m 0.32 N.m	
Operation Diagram		



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.

Plain plunger - Steel	Roller plunger - Plastic	Roller lever + plunger Vertical	Rubber roller lever Ø 50	Adjustable rubber roller lever Ø 50	Adjustable fiber glass rod lever Ø 3	Spring rod with insulated tip
Roller plunger - Steel	Roller lever + plunger Horizontal	Plastic roller lever Ø 18	Adjustable plastic roller lever Ø 18	Adjustable steel rod lever Ø 3	Spring rod	

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.

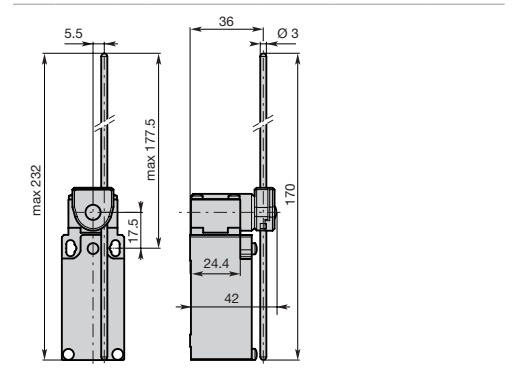
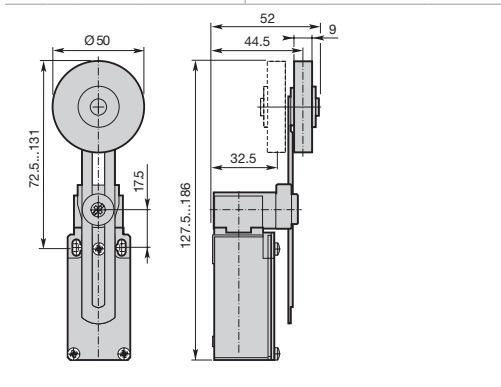
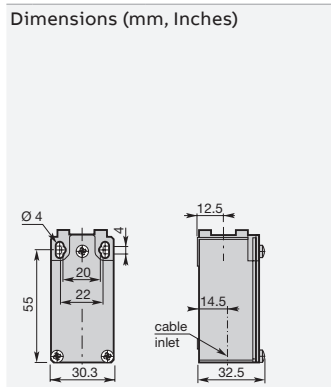
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.



Actuator	
Iso 16	15°
Iso 20	20°
1/2" NPT	20°
Conformity / (N.C. contact with positive opening operation)	
Maximum actuation speed	1.5 m/s
Min. force / torque actuation positive opening operation	0.1 N.m
Operation Diagram	
Closed contact / Open contact	

Adjustable rubber roller lever Ø 50		
Type	Order code	Weight (1 pce) kg
LS32M52B11	1SBV011952R1211	0.265
LS33M52B11	1SBV013852R1211	0.265
LS35M52B11	1SBV013752R1211	0.265
-		
Maximum actuation speed	1.5 m/s	
Min. force / torque actuation positive opening operation	0.1 N.m	
Operation Diagram		
Closed contact / Open contact		

Adjustable steel rod lever Ø 3		
Type	Order code	Weight (1 pce) kg
LS32M71B11	1SBV011971R1211	0.245
LS33M71B11	1SBV013871R1211	0.245
LS35M71B11	1SBV013771R1211	0.245
-		
Maximum actuation speed	1.5 m/s	
Min. force / torque actuation positive opening operation	0.1 N.m	
Operation Diagram		
Closed contact / Open contact		



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.

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
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	

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.

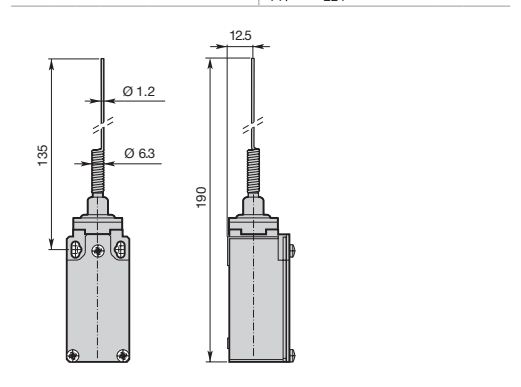
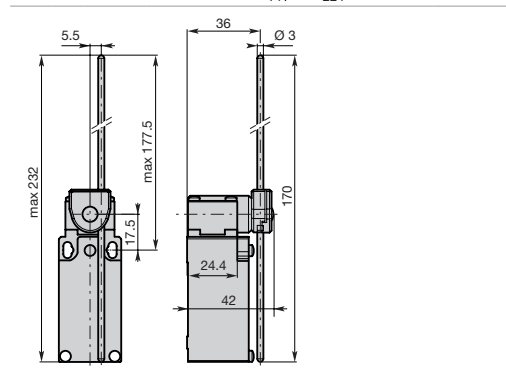
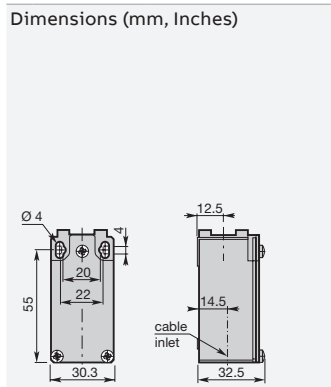
The 30 mm wide bodies are made of zinc alloy material (Zamak) with IP66 protection.



Actuator
Iso 16
Iso 20
1/2" NPT
Conformity / \rightarrow (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation positive opening operation
Operation Diagram
■ Closed contact / □ Open contact

Adjustable fiber glass rod lever Ø 3		
Type	Order code	Weight (1 pce) kg
LS32M72B11	1SBV011972R1211	0.245
LS33M72B11	1SBV013872R1211	0.245
LS35M72B11	1SBV013772R1211	0.245
-	\rightarrow	
1.5 m/s		
0.1 N.m		
0.32 N.m		

Spring rod		
Type	Order code	Weight (1 pce) kg
LS32M91B11	1SBV011991R1211	0.18
LS33M91B11	1SBV013891R1211	0.18
LS35M91B11	1SBV013791R1211	0.18
-	\rightarrow	
1 m/s		
0.12 N.m		
- N.m		



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.

Plain plunger - Steel	Roller plunger - Plastic	Roller lever + plunger Vertical	Rubber roller lever Ø 50	Adjustable rubber roller lever Ø 50	Adjustable fiber glass rod lever Ø 3	Spring rod with insulated tip
Roller plunger - Steel	Roller lever + plunger Horizontal	Plastic roller lever Ø 18	Adjustable plastic roller lever Ø 18	Adjustable steel rod lever Ø 3	Spring rod	

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

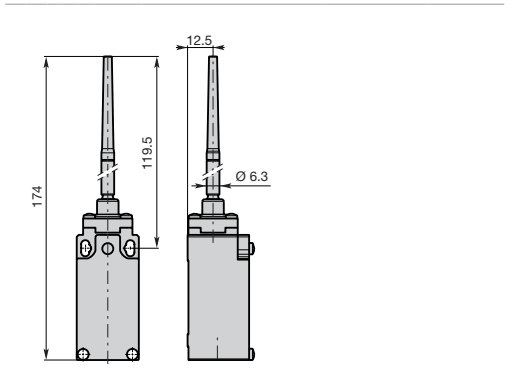
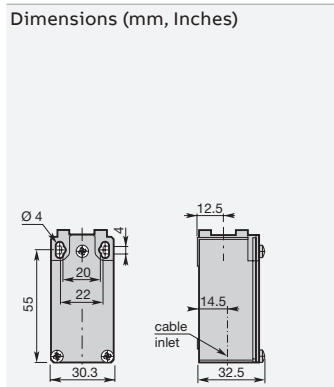
30 mm width – 1 N.O. + 1 N.C. Snap Action contacts

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			



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.

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
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	

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

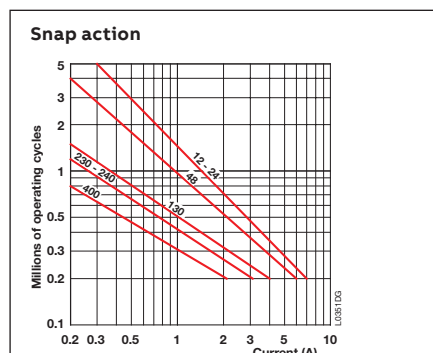
	Plastic casing	Metal casing
Standards	IEC 60947-1, IEC 60947-5-1, EN 60947-1, EN 60947-5-1, UL 508	
Certifications - Approvals	cULus-	
Air temperature near the device during operation	- 25 ... + 70 °C	
for storage	- 30 ... + 80 °C	
Mounting positions	All positions are authorized	
Protection against electrical 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 U_i	500 V (degree of pollution 3)	
Rated impulse withstand voltage U_{imp} (acc. to IEC 60947-1 and EN 60947-1)	6 kV	
Conventional enclosed thermal current I_{th} acc. to IEC 60947-5-1 and EN 60947-5-1) $\theta < 40\text{ °C}$	10 A	
Short-circuit protection gG type fuses	10 A	
Rated operational current		
le / 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
le / 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 mm ²	0.75 mm ² ... 2.5 mm ²
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



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

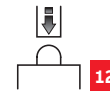
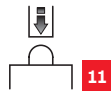
71 Technical data

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.

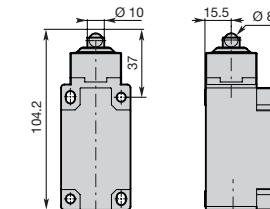
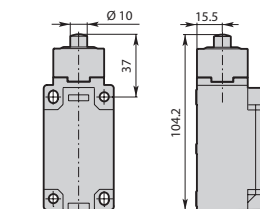
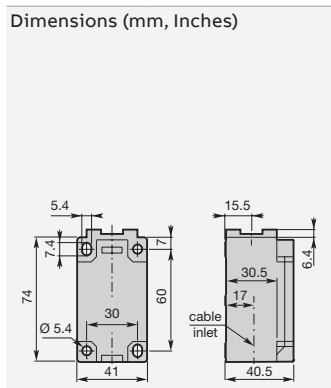
The cable inlet on the bottom is threaded to allow the use of a cable gland. The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.



Actuator	
Iso 20	
1/2" NPT	
Conformity (CE) / (N.C. contact with positive opening operation)	
Maximum actuation speed	0.5 m/s
Min. force / torque actuation	14 N
positive opening operation	40 N
Operation Diagram	

Plain plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS43P11B11	1SBV010711R1211	0.145
LS45P11B11	1SBV012411R1211	0.145
EN 50041 (B shape)		
Maximum actuation speed	0.5 m/s	
Min. force / torque actuation	14 N	
positive opening operation	40 N	
Operation Diagram		

Ball roller plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS43P12B11	1SVB010712R1211	#N/A
LS45P12B11	1SBV012412R1211	0.145
EN 50041 (B shape)		
Maximum actuation speed	0.5 m/s	
Min. force / torque actuation	14 N	
positive opening operation	40 N	
Operation Diagram		



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.

Plain plunger - Steel	Roller plunger - Steel	Steel roller lever + plunger - Horizontal	Steel roller lever Ø 22	Adjustable steel roller lever Ø 22	Adjustable nylon rod lever Ø 6	Spring rod with insulated tip
Ball roller plunger - Steel	Plastic roller lever + plunger - Horizontal	Plastic roller lever Ø 22	Adjustable plastic roller lever Ø 22	Adjustable steel rod lever Ø 3	Spring rod	

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.

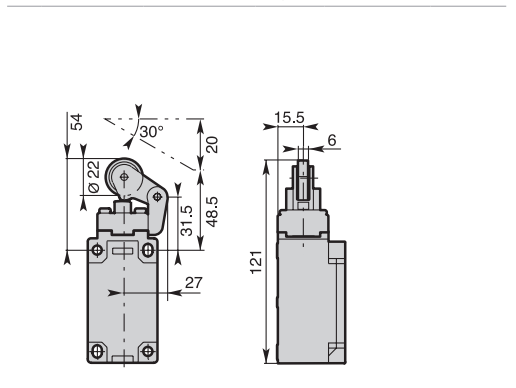
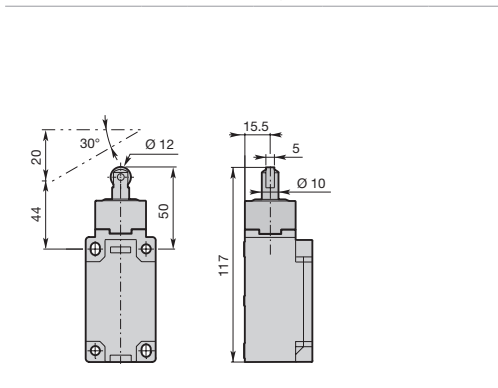
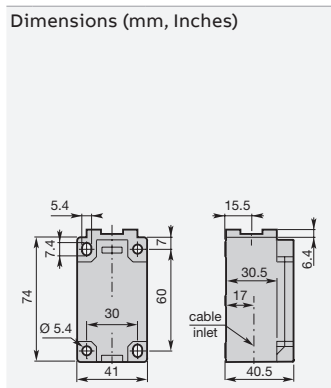
The cable inlet on the bottom is threaded to allow the use of a cable gland. The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.



Actuator
Iso 20
1/2" NPT
Conformity (C) / (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation
positive opening operation
Operation Diagram

Roller plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS43P13B11	1SBV010713R1211	0.15
LS45P13B11	1SBV012413R1211	0.15
EN 50041 (C shape)	(C)	
Maximum actuation speed	0.5 m/s	
Min. force / torque actuation	14 N	
positive opening operation	40 N	
Operation Diagram		

Plastic roller lever + plunger - Horizontal		
Type	Order code	Weight (1 pce) kg
LS43P31B11	1SBV010731R1211	0.185
LS45P31B11	1SBV012431R1211	0.185
Conformity (C)	(C)	
Maximum actuation speed	1 m/s	
Min. force / torque actuation	8 N	
positive opening operation	30 N	
Operation Diagram		




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.

11 Plain plunger - Steel	13 Roller plunger - Steel	32 Steel roller lever + plunger - Horizontal	42 Steel roller lever Ø 22	52 Adjustable steel roller lever Ø 22	72 Adjustable nylon rod lever Ø 6	92 Spring rod with insulated tip
12 Ball roller plunger - Steel	31 Plastic roller lever + plunger - Horizontal	41 Plastic roller lever Ø 14	51 Adjustable plastic roller lever Ø 22	71 Adjustable steel rod lever Ø 3	91 Spring rod	

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

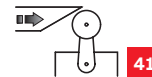
Double insulation  - 40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

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.

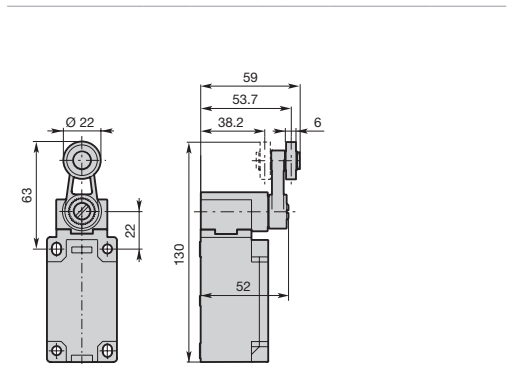
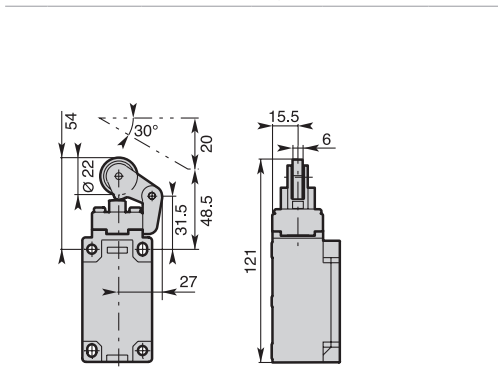
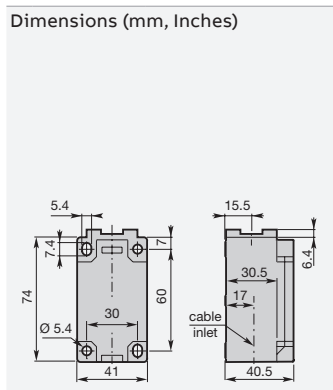


32
















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	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						



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.

 11 Plain plunger - Steel	 13 Roller plunger - Steel	 32 Steel roller lever + plunger - Horizontal	 42 Steel roller lever Ø 22	 52 Adjustable steel roller lever Ø 22	 72 Adjustable nylon rod lever Ø 6	 92 Spring rod with insulated tip
 12 Ball roller plunger - Steel	 31 Plastic roller lever + plunger - Horizontal	 41 Plastic roller lever Ø 22	 51 Adjustable plastic roller lever Ø 22	 71 Adjustable steel rod lever Ø 3	 91 Spring rod	

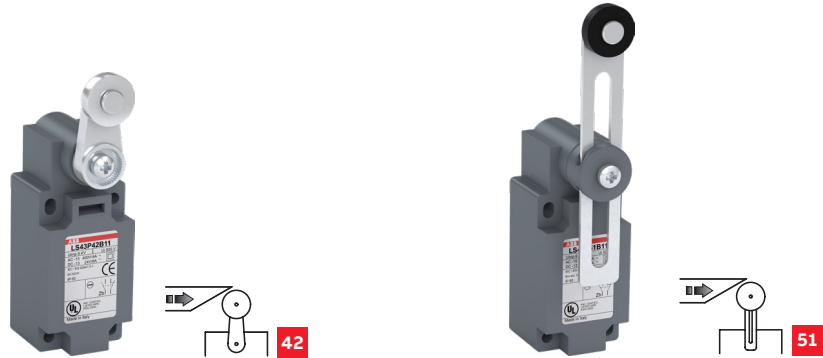
Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

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.

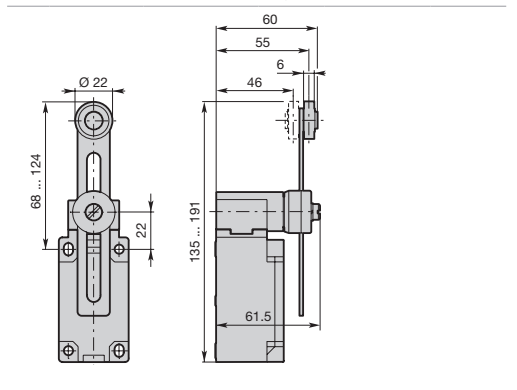
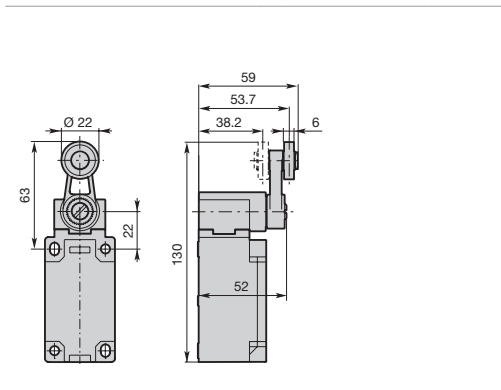
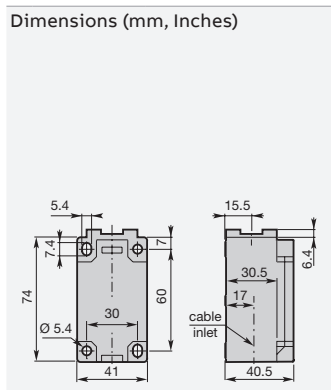
The cable inlet on the bottom is threaded to allow the use of a cable gland. The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.



Actuator	
Iso 20	
1/2" NPT	
Conformity (→) / (N.C. contact with positive opening operation)	
Maximum actuation speed	
Min. force / torque actuation	
positive opening operation	
Operation Diagram	
■ Closed contact / □ Open contact	

Steel roller lever Ø 22		
Type	Order code	Weight (1 pce) kg
LS43P42B11	1SBV010742R1211	0.2
LS45P42B11	1SBV012442R1211	0.2
EN 50041 (A shape)	(→)	
1.5 m/s		
0.15 N.m		
0.3 N.m		

Adjustable plastic roller lever Ø 22		
Type	Order code	Weight (1 pce) kg
LS43P51B11	1SBV010751R1211	0.195
LS45P51B11	1SBV012451R1211	0.195
-	(→)	
1.5 m/s		
0.15 N.m		
0.3 N.m		



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.

Plain plunger - Steel	Roller plunger - Steel	Steel roller lever + plunger - Horizontal	Steel roller lever Ø 22	Adjustable steel roller lever Ø 22	Adjustable nylon rod lever Ø 6	Spring rod with insulated tip
Ball roller plunger - Steel	Plastic roller lever + plunger - Horizontal	Plastic roller lever Ø 22	Adjustable plastic roller lever Ø 22	Adjustable steel rod lever Ø 3	Spring rod	

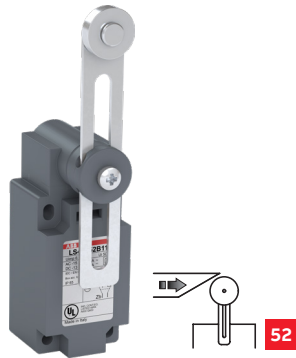
Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

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.

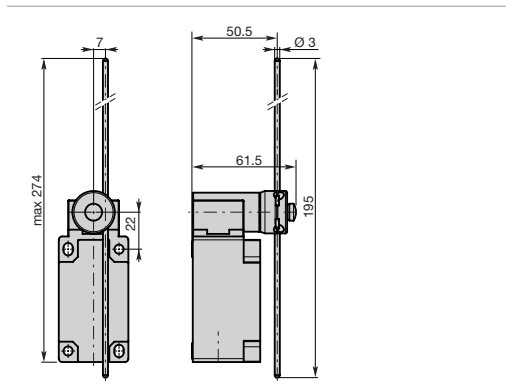
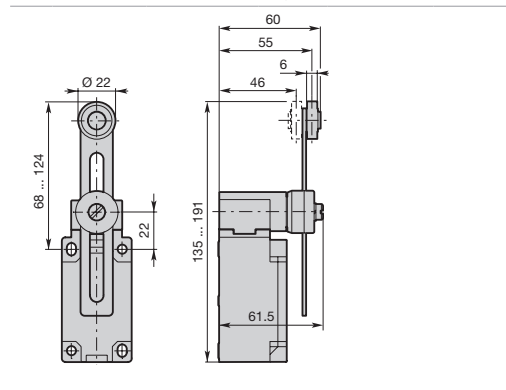
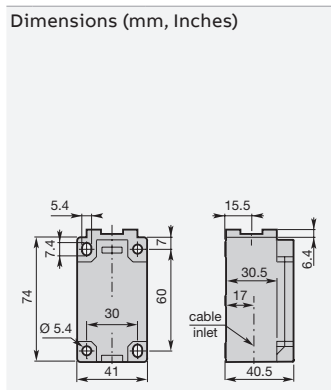
The cable inlet on the bottom is threaded to allow the use of a cable gland. The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.



Actuator	
Iso 20	
1/2" NPT	
Conformity (D) / (N.C. contact with positive opening operation)	
Maximum actuation speed	1.5 m/s
Min. force / torque actuation	0.15 N.m
positive opening operation	0.3 N.m
Operation Diagram	

Adjustable steel roller lever Ø 22		
Type	Order code	Weight (1 pce) kg
LS43P52B11	1SBV010752R1211	0.195
LS45P52B11	1SBV012452R1211	0.195
	(D)	
1.5 m/s		
0.15 N.m		
0.3 N.m		

Adjustable steel rod lever Ø 3		
Type	Order code	Weight (1 pce) kg
LS43P71B11	1SBV010771R1211	0.185
LS45P71B11	1SBV012471R1211	0.185
	(D)	
1.5 m/s		
0.15 N.m		
0.3 N.m		



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.

Plain plunger - Steel	Roller plunger - Steel	Steel roller lever + plunger - Horizontal	Steel roller lever Ø 22	Adjustable steel roller lever Ø 22	Adjustable nylon rod lever Ø 6	Spring rod with insulated tip
Ball roller plunger - Steel	Plastic roller lever + plunger - Horizontal	Plastic roller lever Ø 22	Adjustable plastic roller lever Ø 22	Adjustable steel rod lever Ø 3	Spring rod	

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

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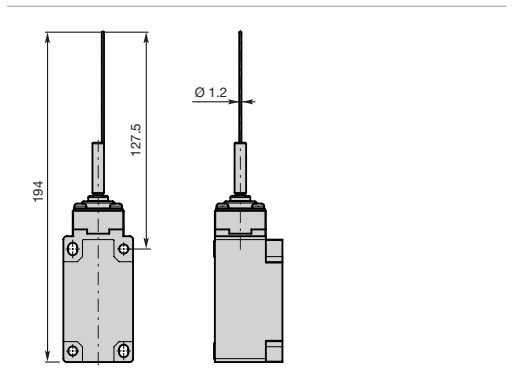
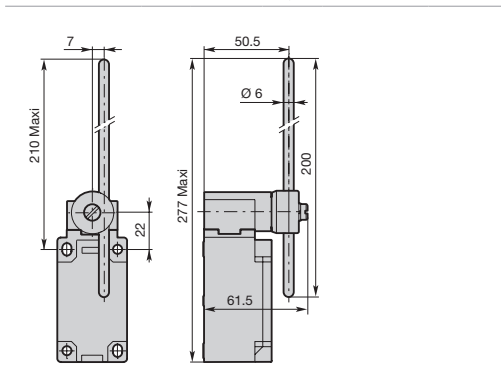
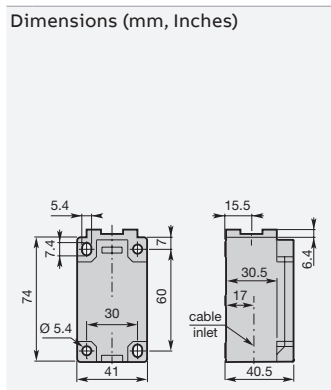
The cable inlet on the bottom is threaded to allow the use of a cable gland. The 40 mm wide bodies are made of fiber-glass reinforced UL-V0 material and offer double insulation and IP65 protection.



Actuator
Iso 20
1/2" NPT
Conformity (D) / (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation
positive opening operation
Operation Diagram

Adjustable nylon rod lever Ø 6		
Type	Order code	Weight (1 pce) kg
LS43P72B11	1SBV010772R1211	0.185
LS45P72B11	1SBV012472R1211	0.185
EN 50041 (D shape) (D)		
1.5 m/s		
0.15 N.m		
0.3 N.m		

Spring rod		
Type	Order code	Weight (1 pce) kg
LS43P91B11	1SBV010791R1211	0.15
LS45P91B11	1SBV012491R1211	0.15
-		
1 m/s		
0.18 N.m		
- N.m		



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.

11 Plain plunger - Steel	13 Roller plunger - Steel	32 Steel roller lever + plunger - Horizontal	42 Steel roller lever Ø 22	52 Adjustable steel roller lever Ø 22	72 Adjustable nylon rod lever Ø 6	92 Spring rod with insulated tip
12 Ball roller plunger - Steel	31 Plastic roller lever + plunger - Horizontal	41 Plastic roller lever Ø 22	51 Adjustable plastic roller lever Ø 22	71 Adjustable steel rod lever Ø 3	91 Spring rod	

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

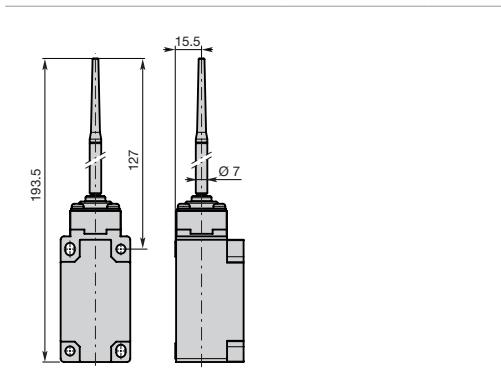
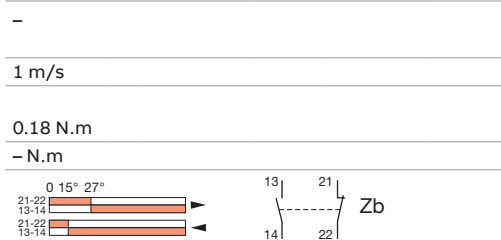
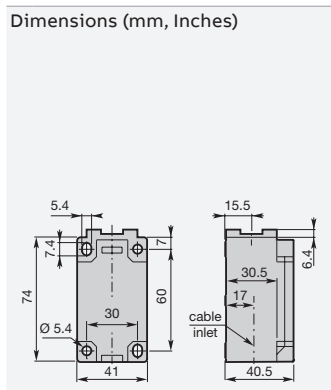
LS4..P limit switches are used in every applications especially when products will be mounted in harsh environment. The 4 mounting holes and the thick plastic body make it the more resistant of our range.

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
Iso 20
1/2" NPT
Conformity \rightarrow / (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation
positive opening operation
Operation Diagram
■ Closed contact / □ Open contact

Spring rod with insulated tip		
Type	Order code	Weight (1 pce) kg
LS43P92B11	1SBV010792R1211	0.155
LS45P92B11	1SBV012492R1211	0.155



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.

Plain plunger - Steel 11	Roller plunger - Steel 13	Steel roller lever + plunger - Horizontal 32	Steel roller lever Ø 22 42	Adjustable steel roller lever Ø 22 52	Adjustable nylon rod lever Ø 6 72	Spring rod with insulated tip 92
Ball roller plunger - Steel 12	Plastic roller lever + plunger - Horizontal 31	Plastic roller lever Ø 22 41	Adjustable plastic roller lever Ø 22 51	Adjustable steel rod lever Ø 3 71	Spring rod 91	

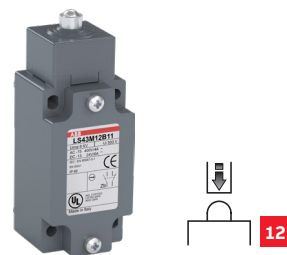
Here is the full range of actuator available for the LS4..P serie. In grey are the ones available in this page.

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).

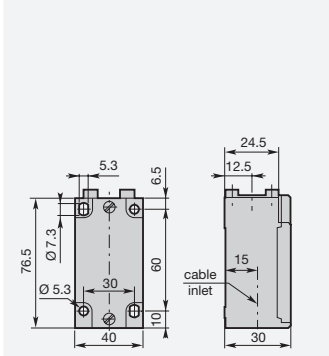


Actuator

Iso 20
1/2" NPT
Conformity (CE) / (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation
positive opening operation

Operation Diagram
■ Closed contact / □ Open contact

Dimensions (mm)



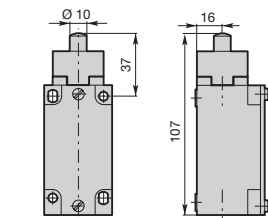
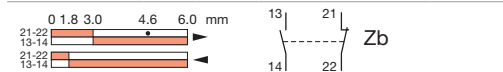
Plain plunger - Steel

Type	Order code	Weight (1 pce) kg
LS43M11B11	1SBV011611R1211	0.24
LS45M11B11	1SBV013111R1211	0.24

EN 50041 (B shape) (CE)

0.5 m/s

30 N
45 N



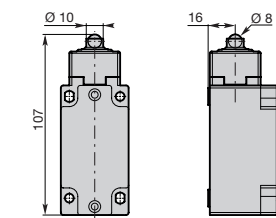
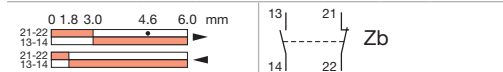
Ball plunger - Steel

Type	Order code	Weight (1 pce) kg
LS43M12B11	1SBV011612R1211	0.24
LS45M12B11	1SBV013112R1211	0.24

EN 50041 (B shape) (CE)

0.5 m/s

30 N
45 N



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.

Plain plunger - Steel	Roller plunger - Steel	Steel roller lever + plunger - Horizontal	Steel roller lever Ø 22	Adjustable steel roller lever Ø 22	Adjustable nylon rod lever Ø 3	Spring rod with insulated tip
Ball roller plunger - Steel	Plastic roller lever + plunger - Horizontal	Plastic roller lever Ø 14	Adjustable plastic roller lever Ø 22	Adjustable steel rod lever Ø 3	Spring rod	

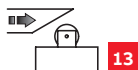
Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

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

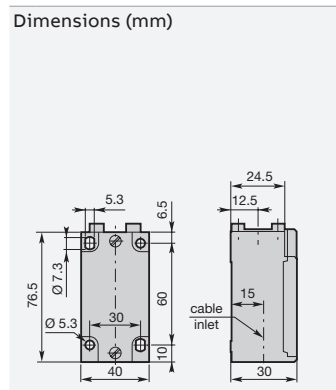
40 mm width – 1 N.O. + 1 N.C. Snap Action contacts

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.

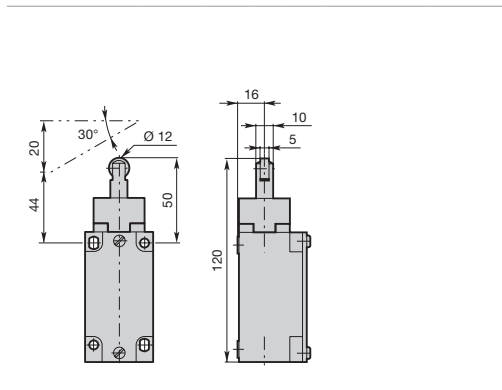
The cable inlet on the bottom is threaded to allow the use of a cable gland. The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).



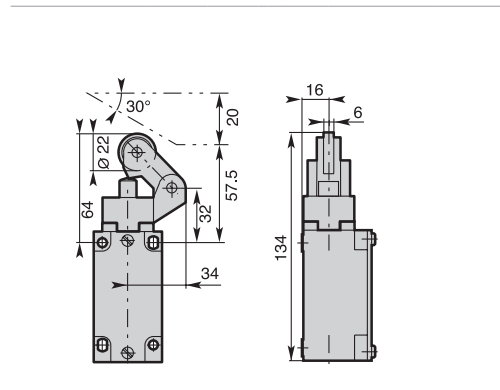
Actuator
Iso 20
1/2" NPT
Conformity (⊕) / (N.C. contact with positive opening operation)
Maximum actuation speed
Min. force / torque actuation
positive opening operation
Operation Diagram



Roller plunger - Steel		
Type	Order code	Weight (1 pce) kg
LS43M13B11	1SBV011613R1211	0.245
LS45M13B11	1SBV013113R1211	0.245
EN 50041 (C shape) (⊕)		
0.5 m/s		
22 N		
40 N		



Plastic roller lever + plunger - Horizontal		
Type	Order code	Weight (1 pce) kg
LS43M31B11	1SBV011631R1211	0.28
LS45M31B11	1SBV013131R1211	0.28
(⊕)		
1.5 m/s		
12 N		
40 N		



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.

11 Plain plunger - Steel	13 Roller plunger - Steel	32 Steel roller lever + plunger - Horizontal	42 Steel roller lever Ø 22	52 Adjustable steel roller lever Ø 22	72 Adjustable nylon rod lever Ø 3	92 Spring rod with insulated tip
12 Ball roller plunger - Steel	31 Plastic roller lever + plunger - Horizontal	41 Plastic roller lever Ø 14	51 Adjustable plastic roller lever Ø 22	71 Adjustable steel rod lever Ø 3	91 Spring rod	

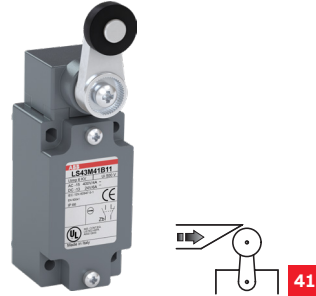
Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

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).

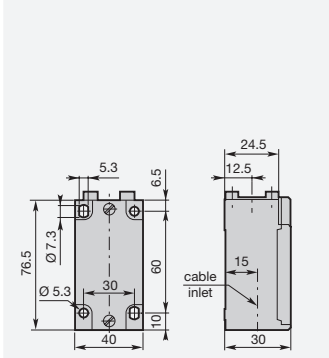


Actuator

Iso 20
 1/2" NPT
 Conformity \rightarrow / (N.C. contact with positive opening operation)
 Maximum actuation speed
 Min. force / torque
 actuation
 positive opening operation

Operation Diagram
 Closed contact / Open contact

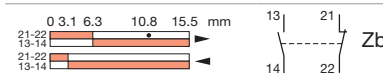
Dimensions (mm)



Steel roller lever + plunger - Horizontal

Type	Order code	Weight (1 pce) kg
LS43M32B11	1SBV011632R1211	0.28
LS45M32B11	1SBV013132R1211	0.28

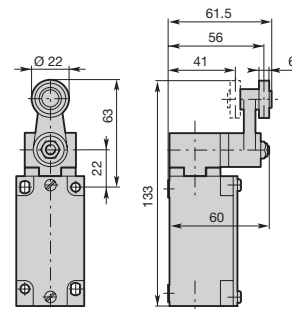
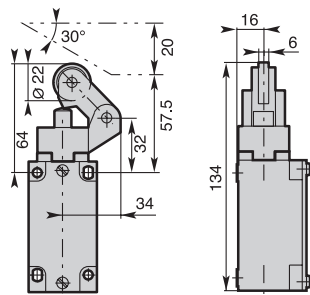
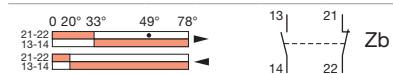
\rightarrow
 1.5 m/s
 12 N
 40 N



Plastic roller lever Ø 22

Type	Order code	Weight (1 pce) kg
LS43M41B11	1SBV011641R1211	0.3
LS45M41B11	1SBV013141R1211	0.3

EN 50041 (A shape) \rightarrow
 1.5 m/s
 0.15 N.m
 0.3 N.m



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.

Plain plunger - Steel 11	Roller plunger - Steel 13	Steel roller lever + plunger - Horizontal 32	Steel roller lever Ø 22 42	Adjustable steel roller lever Ø 22 52	Adjustable nylon rod lever Ø 3 72	Spring rod with insulated tip 92
Ball roller plunger - Steel 12	Plastic roller lever + plunger - Horizontal 31	Plastic roller lever Ø 14 41	Adjustable plastic roller lever Ø 22 51	Adjustable steel rod lever Ø 3 71	Spring rod 91	

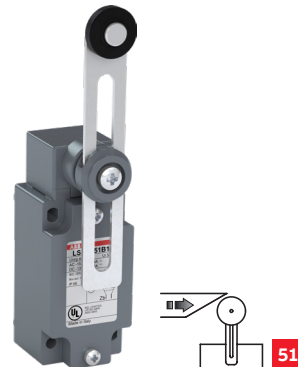
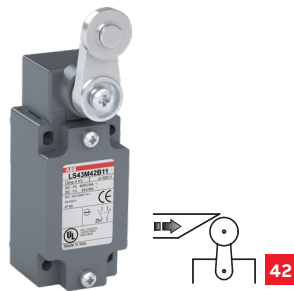
Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

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.

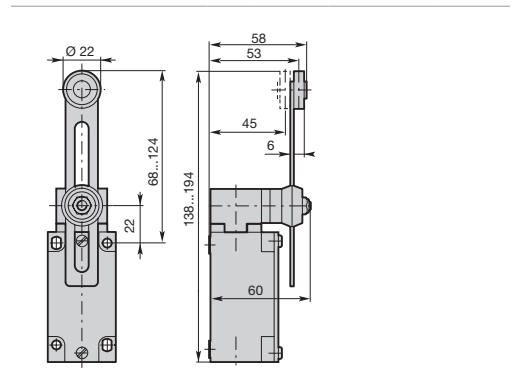
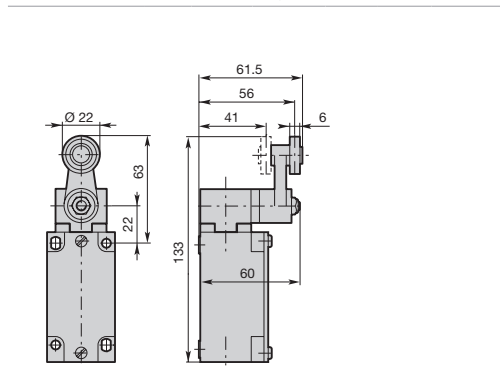
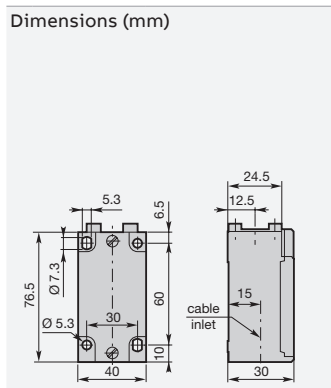
The cable inlet on the bottom is threaded to allow the use of a cable gland. The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).



Actuator	
Iso 20	1/2" NPT
Conformity \rightarrow / (N.C. contact with positive opening operation)	
Maximum actuation speed	
Min. force / torque actuation	
positive opening operation	
Operation Diagram	
Closed contact / Open contact	

Steel roller lever $\varnothing 22$		
Type	Order code	Weight (1 pce) kg
LS43M42B11	1SBV011642R1211	0.3
LS45M42B11	1SBV013142R1211	0.3
EN 50041 (A shape)		\rightarrow
1.5 m/s		
0.15 N.m		
0.3 N.m		

Adjustable plastic roller lever $\varnothing 22$		
Type	Order code	Weight (1 pce) kg
LS43M51B11	1SBV011651R1211	0.32
LS45M51B11	1SBV013151R1211	0.32
		\rightarrow
1.5 m/s		
0.15 N.m		
0.3 N.m		



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.

Plain plunger - Steel	Roller plunger - Steel	Steel roller lever + plunger - Horizontal	Steel roller lever $\varnothing 22$	Adjustable steel roller lever $\varnothing 22$	Adjustable nylon rod lever $\varnothing 3$	Spring rod with insulated tip
Ball roller plunger - Steel	Plastic roller lever + plunger - Horizontal	Plastic roller lever $\varnothing 14$	Adjustable plastic roller lever $\varnothing 22$	Adjustable steel rod lever $\varnothing 3$	Spring rod	

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.

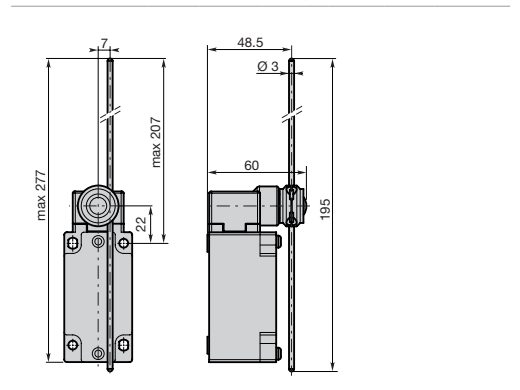
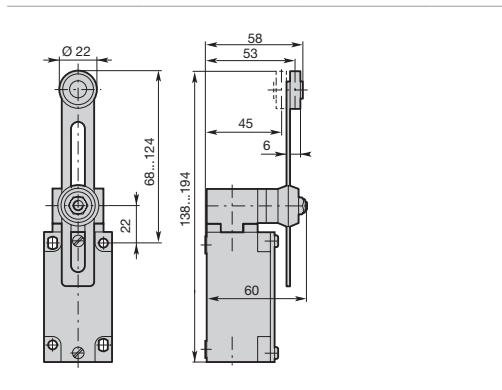
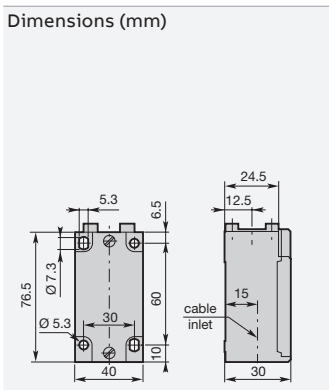
The cable inlet on the bottom is threaded to allow the use of a cable gland. The 40 mm wide bodies are made of zinc alloy material (Zamak) and offer a high degree of protection (IP66).



Actuator	
Iso 20	
1/2" NPT	
Conformity \rightarrow / (N.C. contact with positive opening operation)	
Maximum actuation speed	1.5 m/s
Min. force / torque	
actuation	0.15 N.m
positive opening operation	0.3 N.m
Operation Diagram	

Adjustable steel roller lever Ø 22		
Type	Order code	Weight (1 pce) kg
LS43M52B11	1SBV011652R1211	0.32
LS45M52B11	1SBV013152R1211	0.32

Adjustable steel rod lever Ø 3		
Type	Order code	Weight (1 pce) kg
LS43M71B11	1SBV011671R1211	0.305
LS45M71B11	1SBV013171R1211	0.305
EN 50041 (D shape) \rightarrow		
1.5 m/s		
0.15 N.m		
0.3 N.m		



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.

Plain plunger - Steel 11	Roller plunger - Steel 13	Steel roller lever + plunger - Horizontal 32	Steel roller lever Ø 22 42	Adjustable steel roller lever Ø 22 52	Adjustable nylon rod lever Ø 3 72	Spring rod with insulated tip 92
Ball roller plunger - Steel 12	Plastic roller lever + plunger - Horizontal 31	Plastic roller lever Ø 14 41	Adjustable plastic roller lever Ø 22 51	Adjustable steel rod lever Ø 3 71	Spring rod 91	

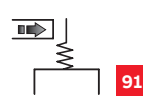
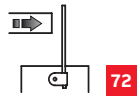
Here is the full range of actuator available for the LS4..M serie. In grey are the ones available in this page.

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).

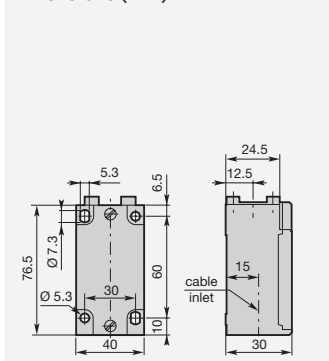


Actuator

Iso 20
 1/2" NPT
 Conformity (→) / (N.C. contact with positive opening operation)
 Maximum actuation speed
 Min. force / torque
 actuation
 positive opening operation

Operation Diagram
 Closed contact / Open contact

Dimensions (mm)



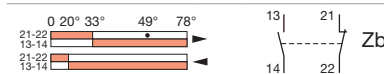
Adjustable nylon rod lever Ø 6

Type	Order code	Weight (1 pce) kg
LS43M72B11	1SBV011672R1211	0.305
LS45M72B11	1SBV013172R1211	0.305

EN 50041 (D shape) (→)

1.5 m/s

0.15 N.m
 0.3 N.m

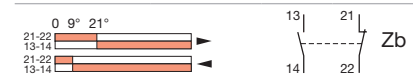


Spring rod

Type	Order code	Weight (1 pce) kg
LS43M91B11	1SBV011691R1211	0.23
LS45M91B11	1SBV013191R1211	0.23

1 m/s

0.18 N.m
 - N.m



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).

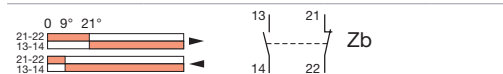


Actuator

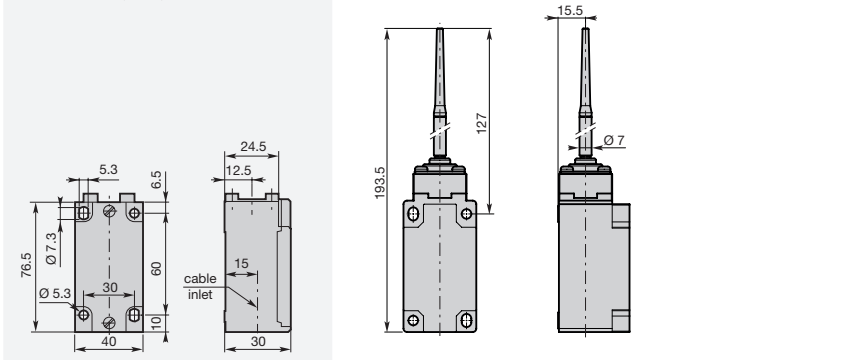
Spring rod with insulated tip

	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 positive opening operation	0.18 N.m - N.m		

Operation Diagram



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.

Plain plunger - Steel 11	Roller plunger - Steel 13	Steel roller lever + plunger - Horizontal 32	Steel roller lever Ø 22 42	Adjustable steel roller lever Ø 22 52	Adjustable nylon rod lever Ø 3 72	Spring rod with insulated tip 92
Ball roller plunger - Steel 12	Plastic roller lever + plunger - Horizontal 31	Plastic roller lever Ø 14 41	Adjustable plastic roller lever Ø 22 51	Adjustable steel rod lever Ø 3 71	Spring rod 91	

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

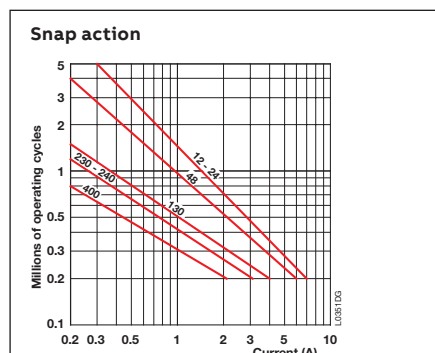
	Plastic casing	Metal casing
Standards	IEC 60947-1, IEC 60947-5-1, EN 60947-1, EN 60947-5-1, UL 508	
Certifications - Approvals	cULus-	
Air temperature near the device during operation	- 25 ... + 70 °C	
for storage	- 30 ... + 80 °C	
Mounting positions	All positions are authorized	
Protection against electrical 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 U_i	500 V (degree of pollution 3)	
Rated impulse withstand voltage U_{imp} (acc. to IEC 60947-1 and EN 60947-1)	6 kV	
Conventional enclosed thermal current I_{th} acc. to IEC 60947-5-1 and EN 60947-5-1) $\theta < 40\text{ °C}$	10 A	
Short-circuit protection gG type fuses	10 A	
Rated operational current		
I_e / 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		A300
I_e / 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		Q300
Positivity	Contacts with positive opening operation as per IEC 60947-5-1 chapter 3 and EN 60947-5-1	
Resistance between contacts	m Ω	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 mm ²	0.75 mm ² ... 2.5 mm ²
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



Electrical durability for DC-13 utilization category

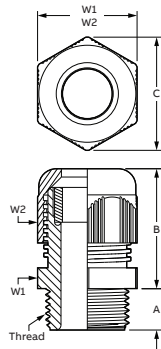
Snap action	
Power breaking for a durability of 5 million operating cycles	
Voltage	24 V
	9.5 W
Voltage	48 V
	6.8 W
Voltage	110 V
	3.6 W

Cable glands - NCG series

Nylon, general purpose



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



Certifications / Standards

(Refer to tables for certifications details)

Conform to

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

To ensure ingress protection, use suitable gasket and lock nut when inquired.

IP66

IP68 (5 bar, 30 mins)

NEMA 4

Material

Halogen free nylon (PA6) construction

Available in Black, Grey and light grey

Chloroprene seals

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

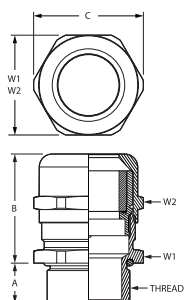
NOTE : For LS 35P and LS45P, the thread is 10 mm deep, the cable gland will not be completely screwed inside the thread.

Cable glands - BCG series

Brass, general purpose



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



Certifications / Standards



Conform to

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

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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

To ensure ingress protection, use suitable gasket and lock nut when inquired.

IP66

IP68 (5 bar, 30 mins)

NEMA 4

Material

Nickel plated brass construction

Chloroprene seals

ISO Thread glands

Dimensions	Thread size	Cable Ø		Color	Compatibility	Type	Order code	A	B	C	W1	W2
		Thread size	(mm)									
	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	

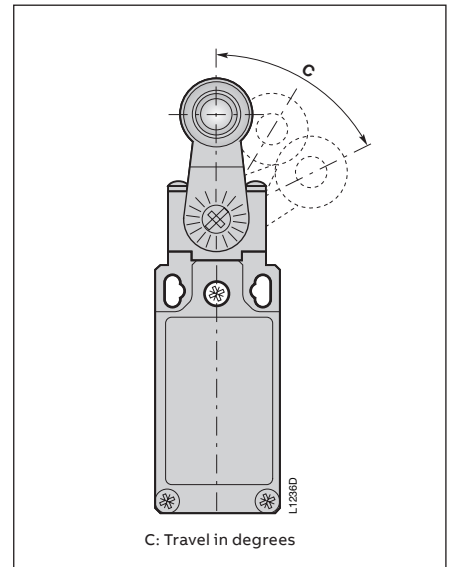
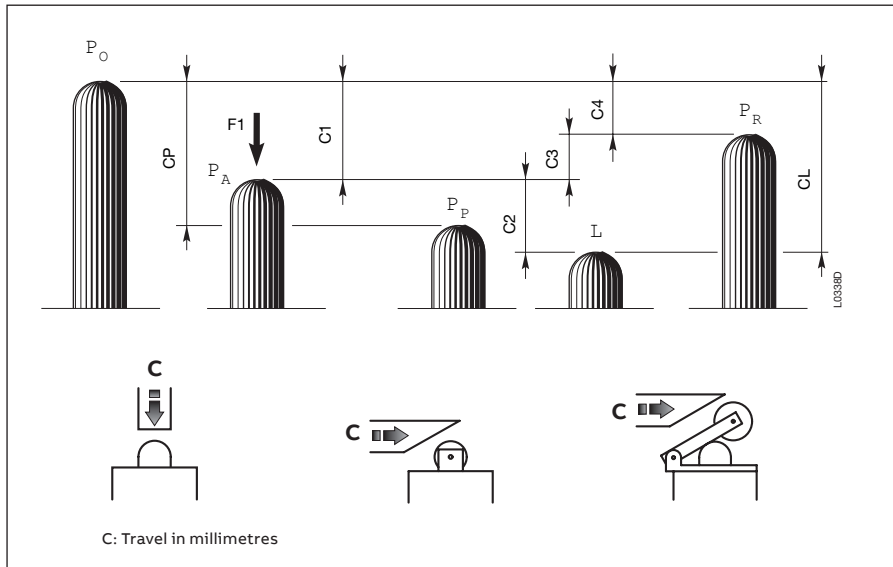
NPT Thread glands

Thread size	Cable Ø		Color	Compatibility	Type	Order code	A	B	C	W1	W2
	Thread size	(mm)									
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



- 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**.

- C₁ 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.).

- C₂ 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**.

- C₃ Differential travel (C₁-C₄) (average travel)**
travel difference of the switch actuator between the operating position **P_A** and the release position **P_R**.

- C₄ Release travel (average travel)**
distance between the release position **P_R** and the free position **P_o**.

Examples

LS32M13B11
(snap action contacts)

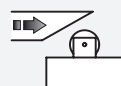
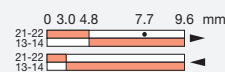


Diagram in millimetres/cam travel



LS32M41B11
(snap action contacts)

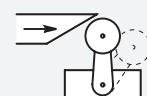


Diagram in degrees/lever rotation

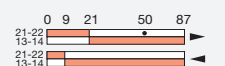
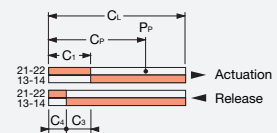


Diagram for snap action contacts:



Contacts position

- 21-22 Contact closed
 - 21-22 Contact open
- ↑
Contacts identification (example)



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ABB France

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Low Voltage Products and Systems

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**You can find the address of your local sales organization
on the ABB home page**



<http://new.abb.com/low-voltage>

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