

Limit Switch - Prewired Type Plastic Body



- Double Insulation □
- Sealed with epoxy resin at the base of the box
- Degree of protection IP67
- Thermoplastic material or diecast zinc alloy body
- Positive Opening Operation ➔
- Minimum Actuation Force/Torque
- Minimum Force to achieve Positive Opening Operation
- Precise operating points (consistency)
- Immune to electromagnetic disturbances
- Zb type contact blocks
- Current Ith = 10A
- Rated insulation voltage Ui = 500V
- CE, cULus
- Conform with IEC 947-5-1, EN 60947-5-1 standards and UL508

Product Description

They are developed with very compact size, to enable its mounting on machine's moving member during adverse environmental conditions and controlling their position.

Ordering Key

PS31M-CS11RT-T00

Body _____
 Cable Gland _____
 Contact block _____
 Head type _____
 Material of body and head _____
 Options _____

Description of the key codes

Cable gland

C	Prewired - std cable
U	Prewired - UL cable

Contact block

S11	1NO+1NC snap(+)
T11	1NO+1NC slow(+)

Material of body and head

T	Thermoplastic body and Thermoplastic head
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Options

00	no option
0L	with fixing nuts

Head type

BR	Nylon roller internal bent LEVER
L3	Adj. square □ 3 (□ 0.12") steel rod LEVER
LA	Adj. Ø3 (0.12") rod LEVER stainless steel rod
LB	Nylon actuator with stainless steel spring
LF	Adj. fiberglass rod LEVER Ø3 (0.12")
LG	Adj. fiberglass rod LEVER Ø6 (0.24")
LN	Adj. nylon rod LEVER
LP	Multidir. nylon actuator with stainless steel spring
LS	Stainless steel spring multidir actuator
P0	Metal plain PLUNGER
P8	Nylon cross roller PLUNGER with fixing nuts
P9	Cross metal roller PLUNGER
PH	Metal PLUNGER + gasket
PR	Metal roller PLUNGER
PY	Nylon roller PLUNGER
R1	Adj. LEVER with nylon roller
RO	Roller LEVER steel ball bearing
RS	Metal roller LEVER
RT	Nylon roller LEVER

Technical Data

Standards	Plastic Body
Certifications – Approvals	Devices conform with international IEC 947-5-1 and European EN 60947-5-1 standards, UL508
Air temperature near the device	cULus
- during operation	-25°C...+70°C / -13°F...+158°F
- for storage	-40°C...+70°C / -40°F...+158°F
Mounting positions	All positions are authorized
Protection against electrical shocks (according to IEC 536)	Class II
Degree of protection (according to IEC 529 and EN 60529)	IP67
Degree of protection (according to UL508)	Type 1 enclosure ("indoor use only")

Electrical Data

Rated insulation voltage U_i	Plastic Body
-according to IEC 60947-1 and EN 60947-1	400V (degree of pollution 3)
-according to UL 508	B 300, R 300
Rated impulse withstand voltage U_{imp} (according to IEC 60947-1 and EN 60947-1)	4kV
Conventional enclosed thermal current I_{the} (according to IEC 60947-1 and EN 60947-5-1) ($\theta \leq 40^\circ\text{C}/104^\circ\text{F}$)	5A
Short-circuit protection - gG type fuses	6A
Rated operational current	
I_e / AC-15 - acc.to IEC 60947-5-1	5.0A
24VAC (50/60 Hz)	3.0A
120VAC (50/60 Hz)	1.5A
240VAC (50/60 Hz)	B 300
- acc.to UL 508	1.1A
I_e / DC-13 - acc.to IEC 60947-5-1	0.22A
24VDC	0.1A
110VDC	R 300
250VDC	
- acc.to UL 508	
Electrical durability (according to IEC 60497-5-1 annex C)	Utilization categories AC-15 and DC-13 (see curves and value below)
- max. switching frequency Cycles/h	3600
- load factor	0.5
Mechanical durability	10 millions of operations

Diagram for snap action contact:

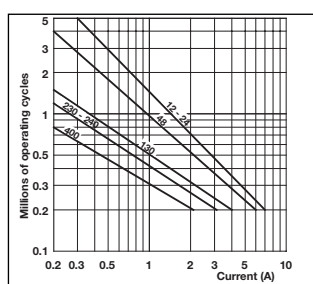
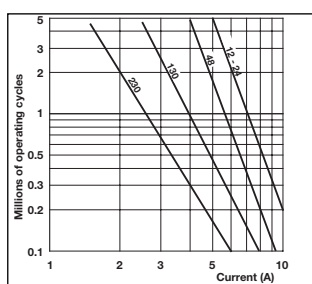


Diagram for slow action contact:



Electrical durability for DC-13 utilization category

Power breaking for a durability of 5 million operating cycles		
	Snap action	Slow action
Voltage 24V	9.5W	12W
Voltage 48V	6.8W	9W
Voltage 110V	3.6W	6W

Limit Switches - Miniature Type (PS31M) Plastic Body IP67

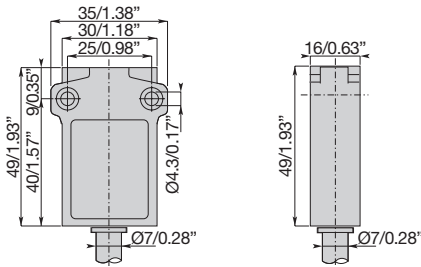


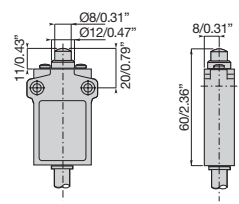
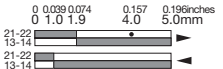
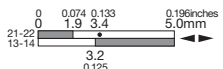
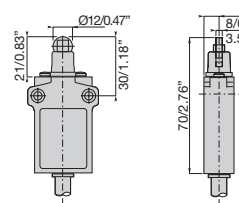
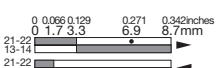
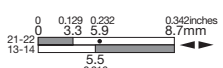
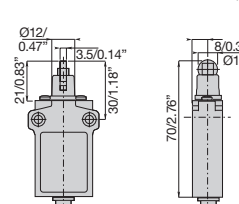
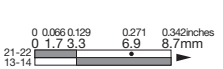
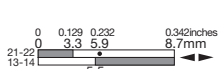
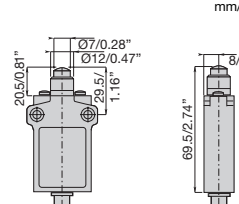
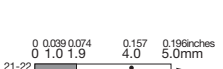
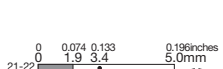
Cable Gland

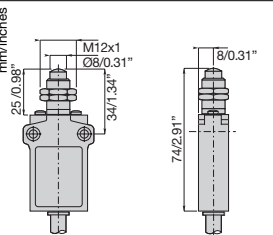
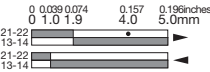
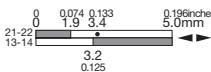
- C = Pre-wired standard cable (PVC) 4x0.75 mm² Length: 1m
(Different lenghts available on request)
- U = Pre-wired UL cable 4x0.75 mm² Length: 1m
(Different lenghts available on request)

Contact block (Zb type)

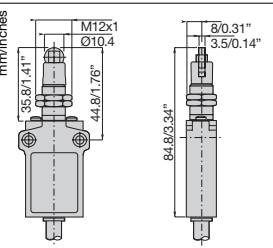
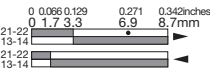
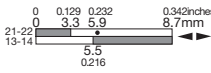
S11 (1NO+1NC) Snap Action		T11 (1NO+1NC) Non overlapping Slow action	
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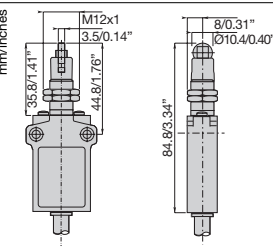
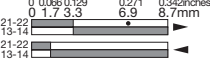
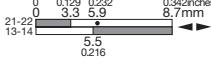
		S11 	T11 
Conformity /  (NC)	/ 	Plain Plunger	
Max. Actuation speed	0.5m/s / 1.64ft/s	Code	PS31M-P0-T00
Min. force or torque	15N / 30Nm		
Weight	125.0g / 4.921oz		
		S11 	T11 
Conformity /  (NC)	/ 	Roller Plunger	
Max. Actuation speed	0.1m/s / 0.33ft/s	Code Metal Roller	PS31M-PR-T00
Min. force or torque	10N / 30Nm	Nylon Roller	PS31M-PY-T00
Weight	130.0g / 5.118oz		
		S11 	T11 
Conformity /  (NC)	/ 	Cross roller plunger	
Max. Actuation speed	0.1m/s / 0.33ft/s	Code Metal Roller	PS31M-P9-T00
Min. force or torque	10N / 30Nm	Nylon Roller	PS31M-P8-T00
Weight	130.0g / 5.118oz		
		S11 	T11 
Conformity /  (NC)	/ 	Plain plunger with dust protection cup	
Max. Actuation speed	0.5m/s / 1.64ft/s	Code	PS31M-PH-T00
Min. force or torque	15N / 30Nm		
Weight	130.0g / 5.118oz		

		S11 	T11 
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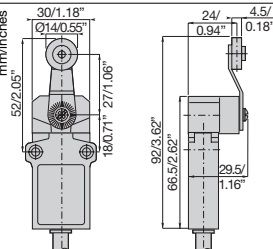
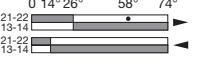
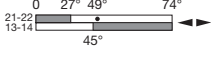
Conformity / (NC)	/ (NC)	Pain plunger with fixing nuts	
Max. Actuation speed	0.5m/s / 1.64ft/s	Code	PS31M-●▲P0-T0L
Min. force or torque	15N / 30Nm		
Weight	140.0g / 4.938oz		

		S11 	T11 
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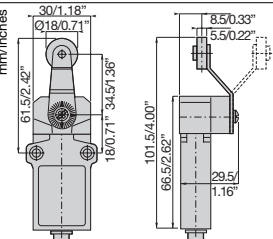
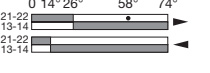
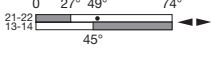
Conformity / (NC)	/ (NC)	Roller plunger with fixing nuts	
Max. Actuation speed	0.1m/s / 0.33ft/s	Code Metal Roller	PS31M-●▲PR-T0L
Min. force or torque	10N / 30Nm	Nylon Roller	PS31M-●▲PY-T0L
Weight	145.0g / 5.115oz		

		S11 	T11 
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Conformity / (NC)	/ (NC)	Cross roller plunger with fixing nuts	
Max. Actuation speed	0.1m/s / 0.33ft/s	Code	PS31M-●▲P9-T0L
Min. force or torque	10N / 30Nm		PS31M-●▲P8-T0L
Weight	145.0g / 5.115oz		

		S11 	T11 
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Conformity / (NC)	/ (NC)	Ø14 (0.55") roller lever	
Max. Actuation speed	1.5m/s / 4.92ft/s	Code Nylon Rollerv	PS31M-●▲RT-T00
Min. force or torque	0.08N / 0.28Nm	Metal Roller	PS31M-●▲RS-T00
Weight	175.0g / 6.173oz	Ball Bearing	PS31M-●▲RO-T00

		S11 	T11 
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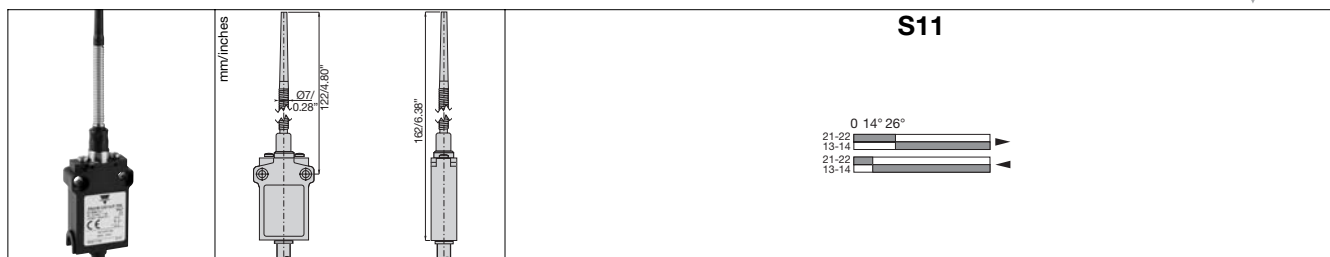
Conformity / (NC)	/ (NC)	Ø18 (0.71") Nylon roller lever	
Max. Actuation speed	1.5m/s / 4.92ft/s	Code	PS31M-●▲BR-T00
Min. force or torque	0.08N / 0.28Nm		
Weight	180.0g / 6.349oz		

CARLO GAVAZZI

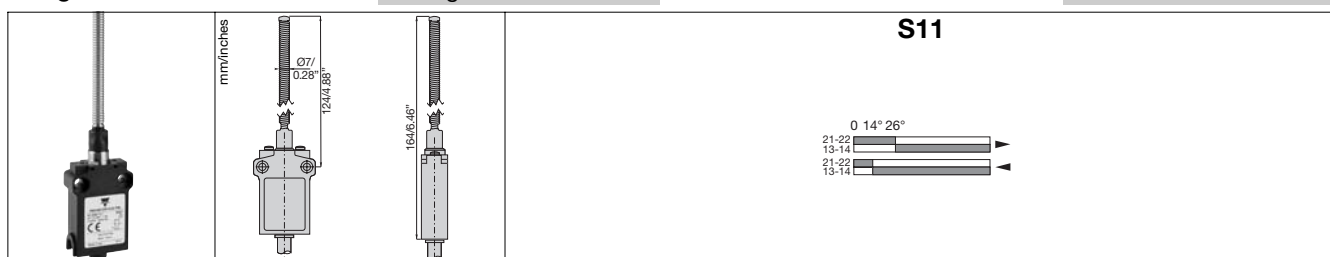
Contact block (Zb type)

T11 (1NO+1NC)
Non overlapping
Slow action

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Conformity /	(NC)	/	Multidirectional nylon actuator with stainless steel spring
Max. Actuation speed		1.0m/s / 3.28ft/s	Code
Min. force or torque		0.10N / -	PS31M-●▲LP-T00
Weight		195.0g / 6.878oz	



Conformity /	(NC)	/	Multidirectional actuator with stainless steel spring
Max. Actuation speed		1.0m/s / 3.28ft/s	Code
Min. force or torque		10N / -	PS31M-●▲LS-T00
Weight		200.0g / 7.055oz	

Utilization precautions

Plain plunger

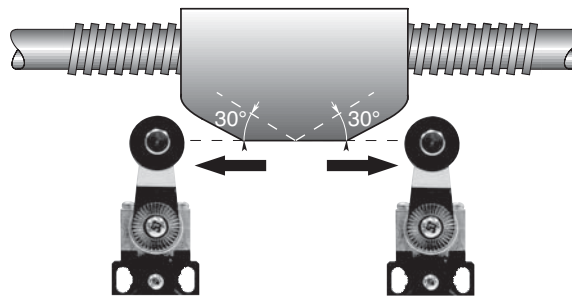


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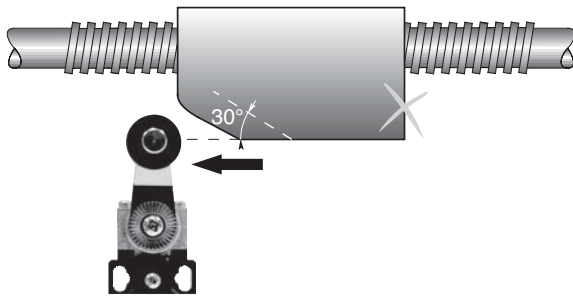


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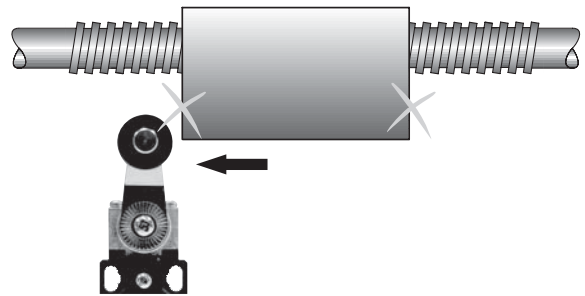
Roller plunger or Roller lever



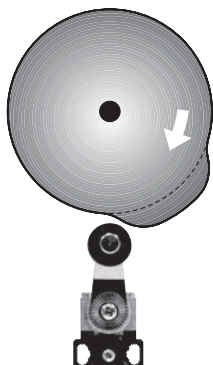
Correct



Incorrect



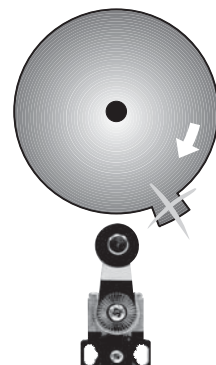
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Correct



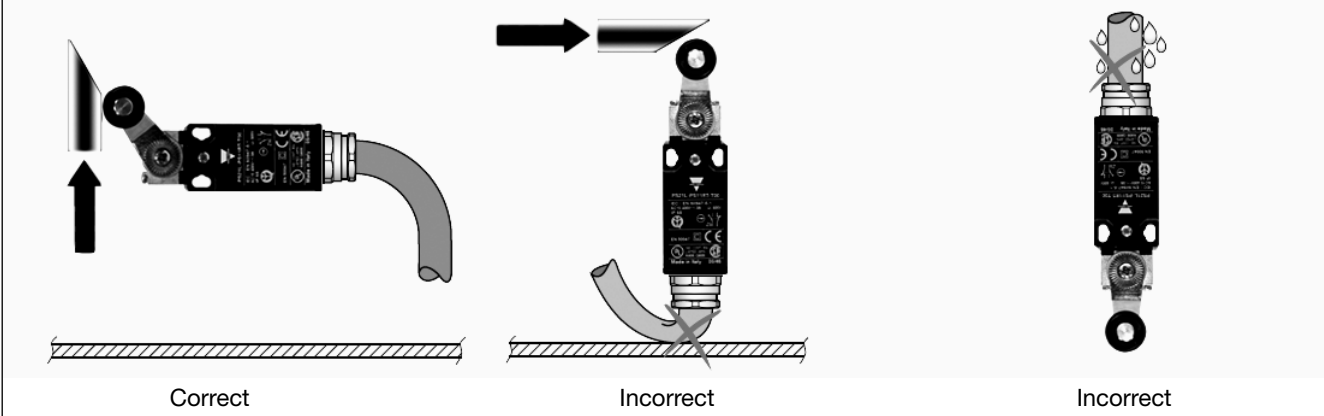
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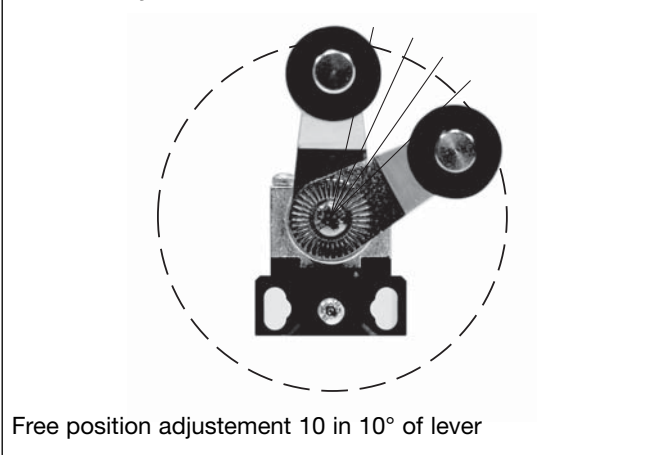
Utilization precautions

Electrical connection and mounting



Adjustement

Position ajustement of lever



Position ajustement of lever and head

