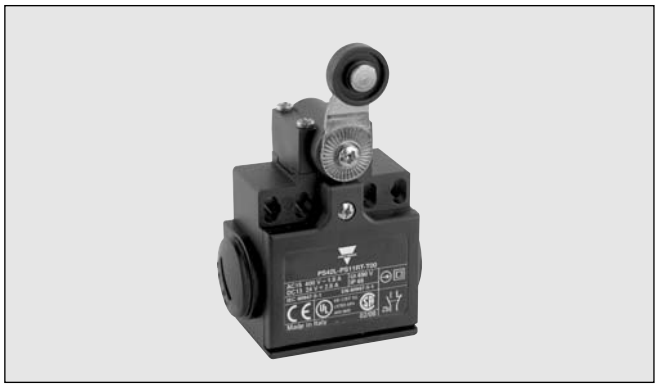
Limit Switches - Limit Type (PS42L)
Plastic Body IP65

CARLO GAVAZZI



- Double Insulation ⧈
- Degree of protection IP65
- Reinforced UL-V0 thermoplastic fiber-glass 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
- UL, CSA, CE
- Conform with IEC 947-5-1 (EN 60947-5-1)

Product Description

They are developed in order to be used for following operations:

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

Ordering Key

PS42L-PS11RT-T00

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

Description of the key codes

Cable Gland

M	M20
P	PG13.5
B	PG11
A	M16
N	1/2 NPT

Contact block

O11	1NO+1NC overlap slow(+)
S02	2NC snap(+)
S11	1NO+1NC snap(+)
T02	2NC slow(+)
T11	1NO+1NC slow(+)
T20	2NO slow

Material of body and head

T	Thermoplastic body and Thermoplastic head

Options

00	no option

Head type

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
LW	Stainless steel spring multidir actuator (cat Whisker)
LZ	Stainless steel spring actuator
P0	Metal plain PLUNGER
PH	Metal PLUNGER + gasket
PR	Metal roller PLUNGER
R1	Adj. LEVER with nylon roller
RH	Plastic roller LEVER on metal PLUNGER (left)
RJ	Plastic roller LEVER on metal PLUNGER + gasket (left)
RT	Nylon roller LEVER
W0	Ø50 (1.97”) rubber roller LEVER
W1	Adj. LEVER with Ø50 (1.97”) rubber roller

Technical Data

Standards	**IEC 60947-1, IEC 60947-5-1, EN 60947-1, EN 60947-5-1, UL508 and CSA C22-2 n°14**
Certifications – Approvals	**UL – CSA**
Air temperature near the device	
- during operation	**-25°C…+70°C/-13°F...+158°F**
- for storage	**-30°C…+80°C/-22°F...+176°F**
Climatic withstand	**According to IEC 68-2-3 and salty mist according to IEC 68-2-11**
Mounting positions	**All positions are authorized**
Shock withstand (according to IEC 68-2-27 and 60068-2-27) (1/2 sinusoidal shock for 11ms) no change in contact position	**50g/1.76oz** (except for PS42L with head type W0, W1: 25g)
Resistance to vibrations (acc.to IEC 68-2-6 and EN 60068-2-6)	**25g/0.88oz** (10…500Hz) no change in position of contacts greater than 100µs
Protection against electrical shocks (according to IEC 536)	**Class II**
Degree of protection (according to IEC 529 and EN 60529)	**IP65**
Consistency (measured over 1 milion operations)	**0.1mm/0.004"** (upon closing point)

Electrical Data

Rated insulation voltage U_i			
-according to IEC 60947-1 and EN 60947-1			**500V** (degree of pollution 3)
-according to UL 508, CSA C22-2 n°14			**A 600 Q600**
Rated impulse withstand voltage U_{imp} (according to IEC 60947-1 and EN 60947-1)			**6kV**
Conventional enclosed thermal current I_{the} (according to IEC 60947-1 and EN 60947-5-1) (θ≤40°C/104°F)			**10A**
Short-circuit protection - gG type fuses			**10A**
Rated operational current			
I_e / AC-15	- acc.to IEC 60947-5-1	24VAC (50/60Hz)	**10.0A**
		130VAC (50/60Hz)	**5.5A**
		230VAC (50/60Hz)	**3.1A**
		240VAC (50/60Hz)	**3.0A**
		400VAC (50/60Hz)	**1.8A**
	- acc.to UL 508, CSA C22 n°14		**A 600**
I_e / DC-13	- acc.to IEC 60947-5-1	24VDC	**2.8A**
		110VDC	**0.6A**
		250VDC	**0.27A**
	- acc.to UL 508, CSA C22 n°14		**Q 600**
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**
Connecting data of contact blocks			
Connecting terminals			**M3.5 (+,-) pozidriv 2 screw with cable clamp**
Connecting capacity 1 or 2 x mm² / AWG			**0.5mm² / AWG 20 to 2.5mm² / AWG 14**
Terminal marking			**According to EN 50013**
Positivity			Contacts with positive opening operation as per IEC 60947-5-1 chapter 3

Diagram for snap action contact:

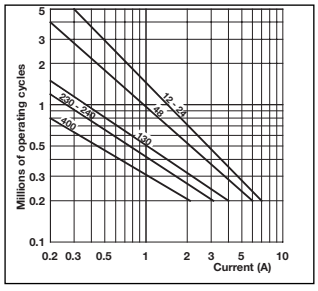
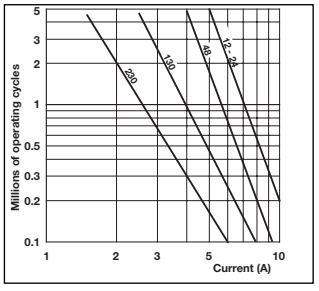


Diagram for slow action contact:



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

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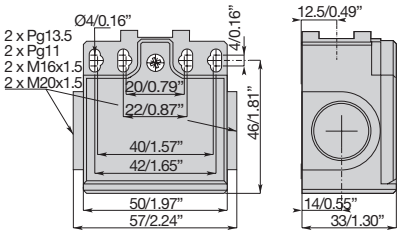
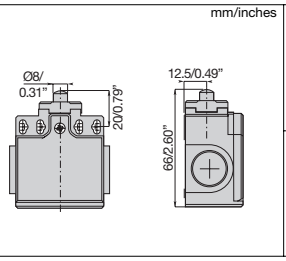
● Cable Gland

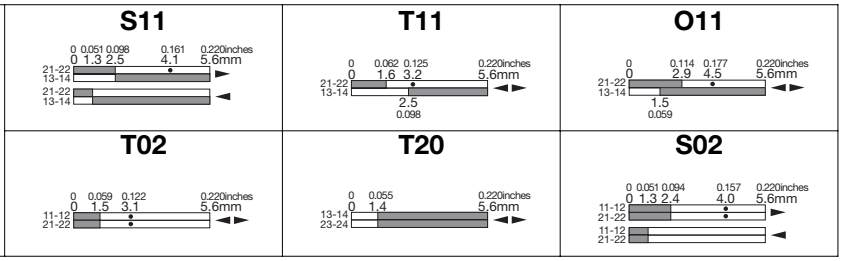


P = one cable inlet PG13.5 cable gland
M = one cable inlet M20x1.5 cable gland
N = one cable inlet 1/2" NPT cable gland
B = one cable inlet PG11 cable gland
A = one cable inlet M16x1.5 cable gland

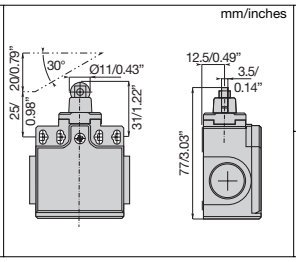
▲ Contact block (Zb type)

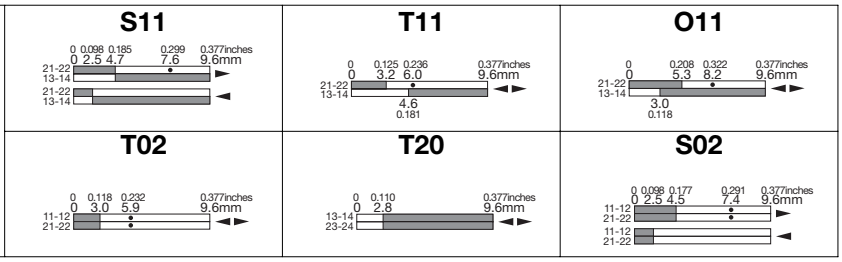
S11 (1NO+1NC) Snap Action	**T11** (1NO+1NC) Non overlapping Slow action	**O11** (1NO+1NC) Overlapping Slow Action
T02 (2NC) Slow Action	**T20** (2NO) Slow Action ⊗	**S02** (2NC) Snap Action



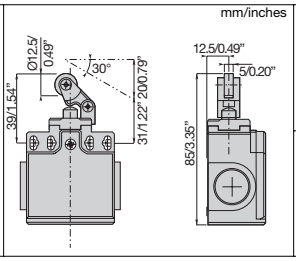


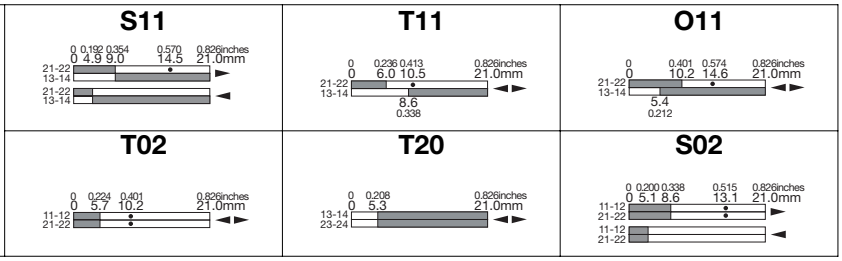
Conformity /⊖ (NC)	/ ⊖	**Plain Plunger**		
Max. Actuation speed	0.5m/s / 1.64ft/s	**Code**	Nylon plunger	**PS42L-● ▲PN-T00**
Min. force or torque	15N / 30Nm		Metal plunger	**PS42L-● ▲P0-T00**
Weight	100.0g / 3.527oz		Metal pl. with dust prot. cup	**PS42L-● ▲PH-T00**



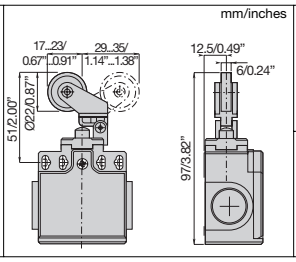


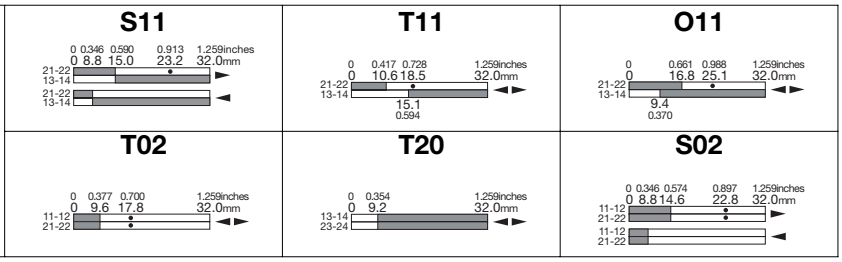
Conformity /⊖ (NC)	/ ⊖	**Roller Plunger**		
Max. Actuation speed	0.3m/s / 0.98ft/s	**Code**	Metal roller	**PS42L-● ▲PR-T00**
Min. force or torque	12N / 30Nm		Nylon roller	**PS42L-● ▲P1-T00**
Weight	105.0g / 3.704oz			



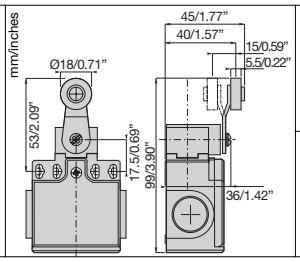


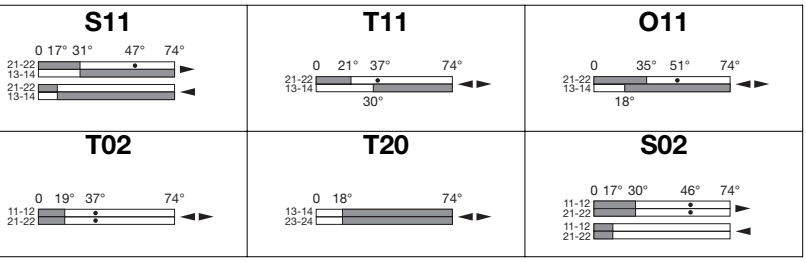
Conformity /⊖ (NC)	/ ⊖	**Plastic roller**		
Max. Actuation speed	1.0m/s / 3.28ft/s	**Code**	On plastic plunger	**PS42L-● ▲RL-T00**
Min. force or torque	7N / 24Nm		On metal plunger	**PS42L-● ▲RH-T00**
Weight	105.0g / 3.704oz		On metal pl. with dust prot. cup	**PS42L-● ▲RJ-T00**



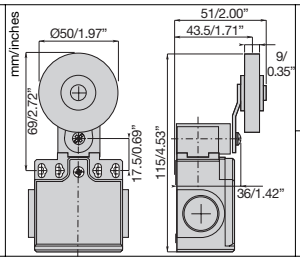


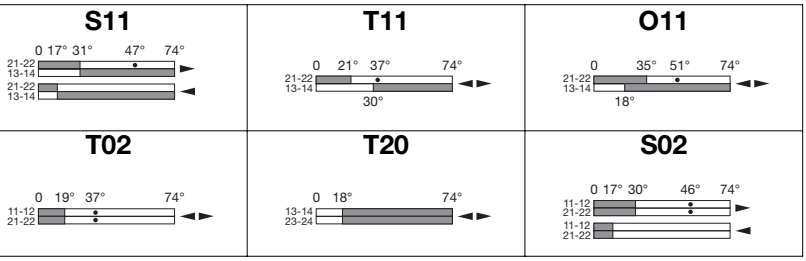
Conformity /⊖ (NC)	/ ⊖	**Adjustable plastic roller lever on metal plunger**		
Max. Actuation speed	1.0m/s / 3.28ft/s	**Code**	Standard	**PS42L-● ▲LR-T00**
Min. force or torque	7N / 24Nm		With dust protection cup	**PS42L-● ▲LO-T00**
Weight	110.0g / 3.880oz			



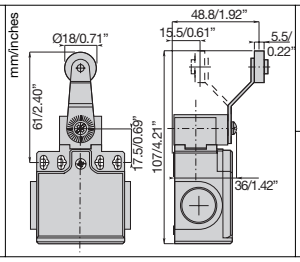


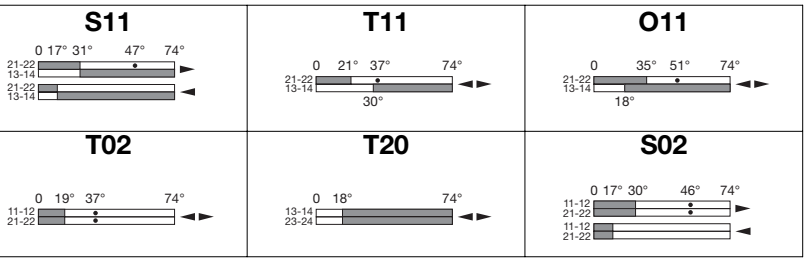
Conformity /⊖ (NC)	/ ⊖	**Ø18 (0.71") Nylon roller lever**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**PS42L-● ▲RT-T00**
Min. force or torque	0.10N / 0.32Nm		
Weight	125.0g / 4.409oz		



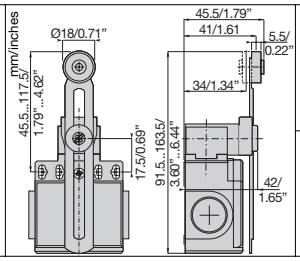


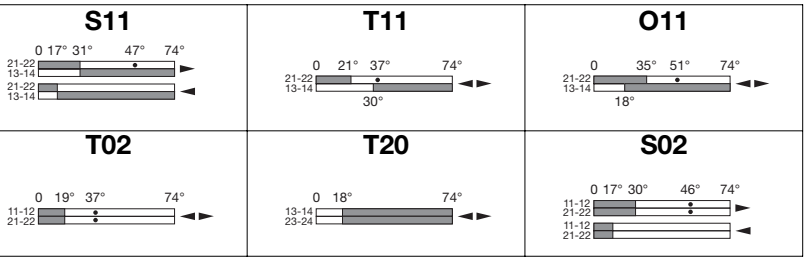
Conformity /⊖ (NC)	/ ⊖	**Ø50 (1.97") Rubber roller lever**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**PS42L-● ▲W0-T00**
Min. force or torque	0.10N / 0.32Nm		
Weight	145.0g / 5.115oz		



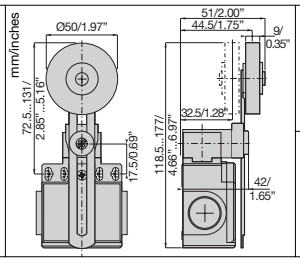


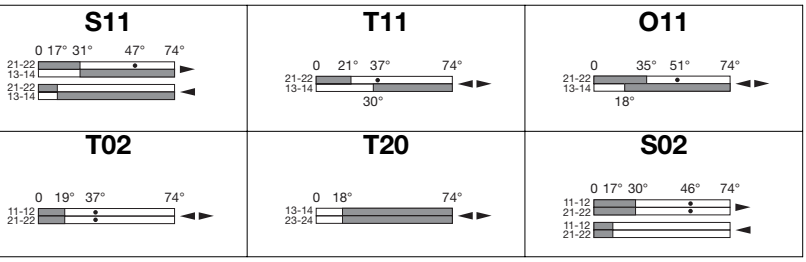
Conformity /⊖ (NC)	/ ⊖	**Ø18 (0.71") Roller bent lever**		
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**External**	**PS42L-● ▲BE-T00**
Min. force or torque	0.10N / 0.32Nm		**Internal**	**PS42L-● ▲BR-T00**
Weight	125.0g / 4.409oz			





Conformity /⊖ (NC)	/ ⊖	**Adjustable lever with Ø18 (0.71") nylon roller**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**PS42L-● ▲R1-T00**
Min. force or torque	0.10N / 0.32Nm		
Weight	135.0g / 4.762oz		





Conformity /⊖ (NC)	/ ⊖	**Adjustable lever with Ø50 (1.97") rubber roller**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**PS42L-● ▲W1-T00**
Min. force or torque	0.10N / 0.32Nm		
Weight	155.0g / 5.467oz		

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Plastic Body IP65

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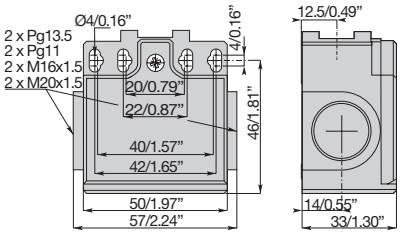
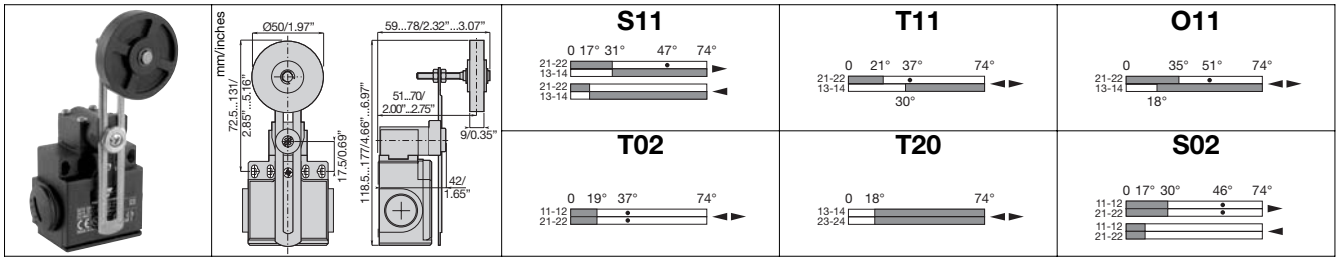
● Cable Gland



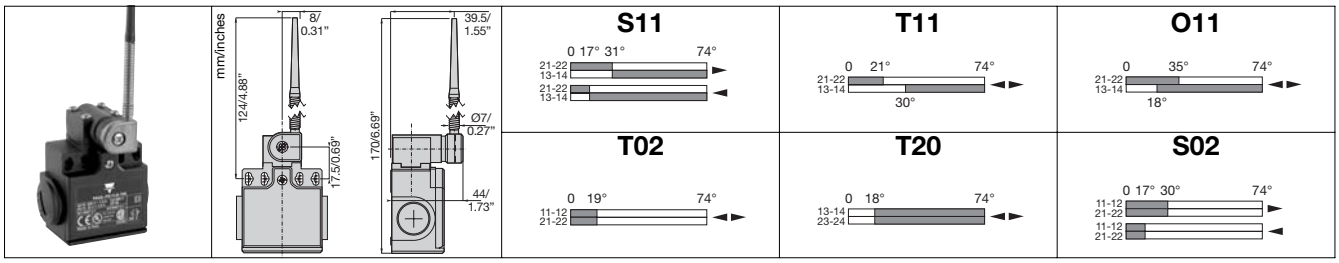
P = one cable inlet PG13.5 cable gland
M = one cable inlet M20x1.5 cable gland
N = one cable inlet 1/2" NPT cable gland
B = one cable inlet PG11 cable gland
A = one cable inlet M16x1.5 cable gland

▲ Contact block (Zb type)

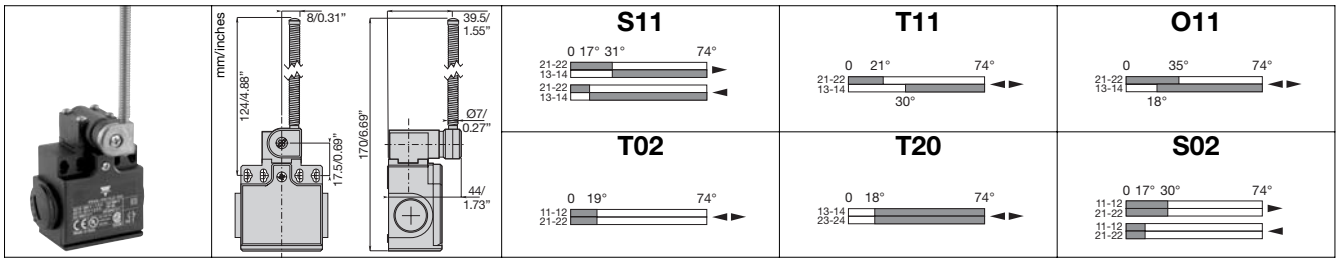
S11 (1NO+1NC) Snap Action	**T11** (1NO+1NC) Non overlapping Slow action	**O11** (1NO+1NC) Overlapping Slow Action
T02 (2NC) Slow Action	**T20** (2NO) Slow Action	**S02** (2NC) Snap Action



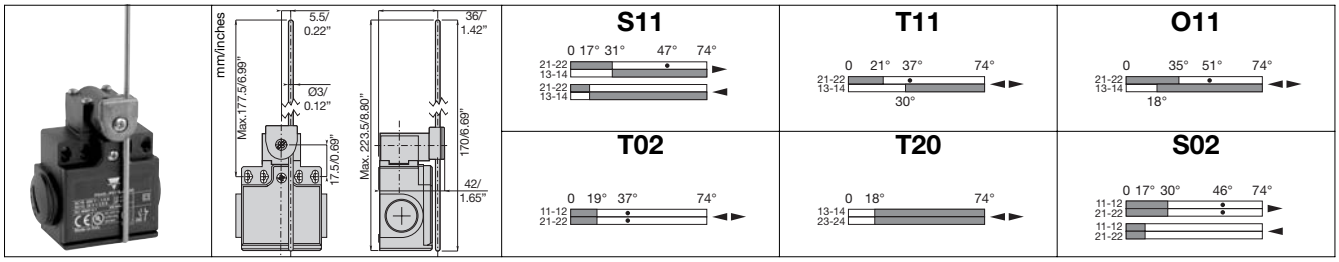
Conformity /⊖ (NC)	/ ⊖	**Adjustable lever with adjustable Ø50 (1.97") rubber roller**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**PS42L-● ▲W2-T00**
Min. force or torque	0.10N / 0.32Nm		
Weight	155.0g / 5.467oz		



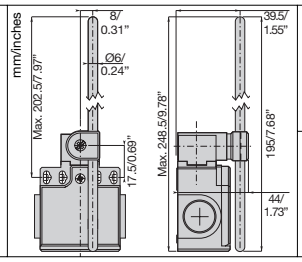
Conformity /⊖ (NC)	/ ⊖	**Nylon actuator with stainless steel spring**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**PS42L-● ▲LB-T00**
Min. force or torque	0.10N / -		
Weight	135.0g / 4.762oz		

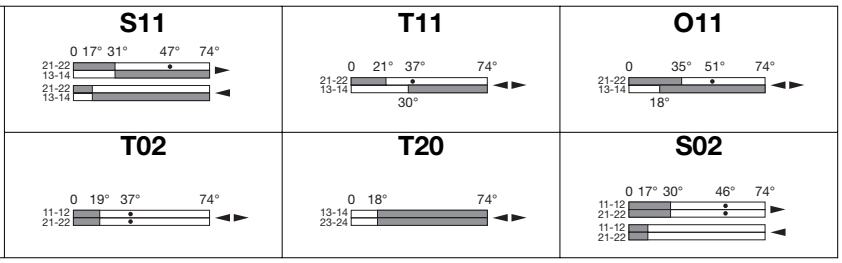


Conformity /⊖ (NC)	/ ⊖	**Stainless steel spring actuator**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**PS42L-● ▲LZ-T00**
Min. force or torque	0.10N / -		
Weight	135.0g / 4.762oz		

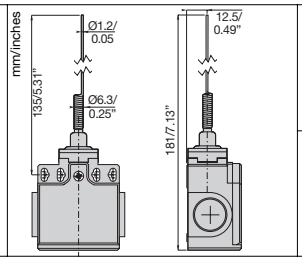


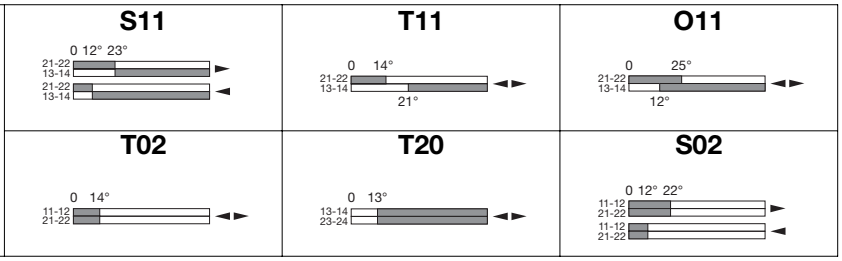
Conformity /⊖ (NC)	/ ⊖	**Adjustable rod lever**		
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	Stainless steel rod Ø3 (0.12")	**PS42L-● ▲LA-T00**
Min. force or torque	0.10N / 0.32Nm		Fiberglass rod Ø3 (0.12")	**PS42L-● ▲LF-T00**
Weight	130.0g / 4.586oz		Square steel rod □3 (□ 0.12")	**PS42L-● ▲L3-T00**



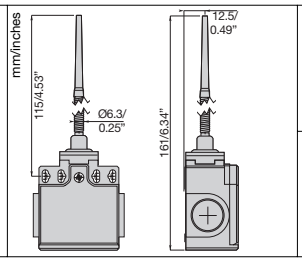


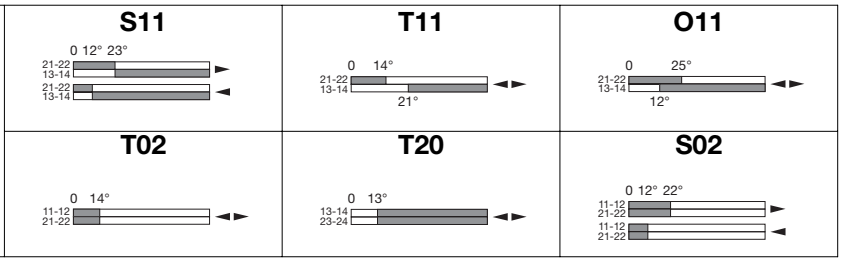
Conformity /⊖ (NC)	/ ⊖	**Adjustable Ø6 (0.24") rod lever**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code** Nylon rod	**PS42L- ● ▲ LN-T00**
Min. force or torque	0.10N / 0.32Nm	Fiberglass rod	**PS42L- ● ▲ LG-T00**
Weight	145.0g / 5.115oz		



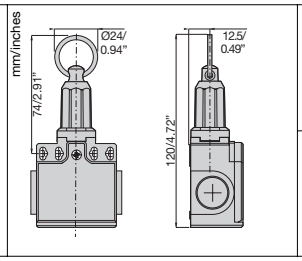


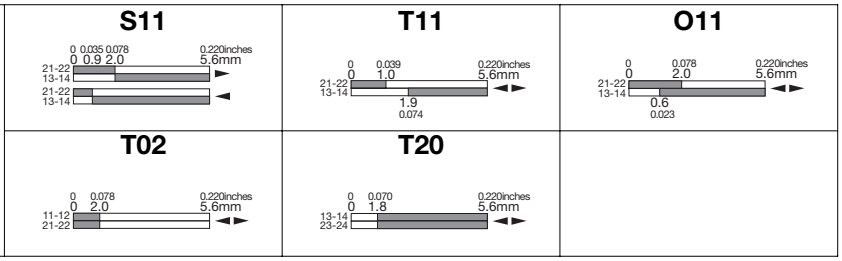
Conformity /⊖ (NC)	/ ⊖	**Stainless steel spring**	
Max. Actuation speed	1.5m/s / 4.92ft/s	**Code**	**PS42L- ● ▲ LW-T00**
Min. force or torque	0.12N / -		
Weight	110.0g / 3.880oz		





Conformity /⊖ (NC)	/ ⊖	**Multidirectional stainless steel spring**	
Max. Actuation speed	1.0m/s / 3.28ft/s	**Code** Nylon actuator	**PS42L- ● ▲ LP-T00**
Min. force or torque	0.12N / -	Stainless steel spring actuator	**PS42L- ● ▲ LS-T00**
Weight	115.0g / 4.056oz		





Conformity /⊖ (NC)	/ ⊖	**Pull action with ring**	
Max. Actuation speed	0.5m/s / 1.64ft/s	**Code**	**PS42L- ● ▲ N6-T00**
Min. force or torque	30N / -		
Weight	145.0g / 5.115oz		

Accessories for Pull Wire Limit Switches

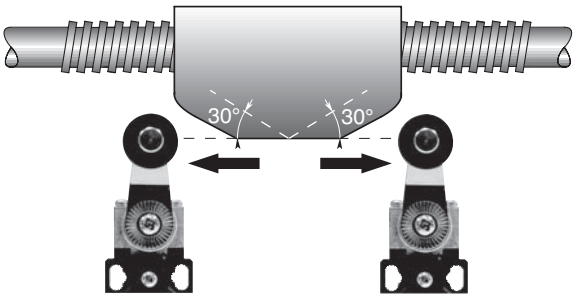
			
OCC 8 Stay bolt	**MOR 05** Rope Clamp	**RED 05** Rope Eye	**FUN 05** Rope 5mm x 100m 0.20" x 328.08ft

Utilization precautions

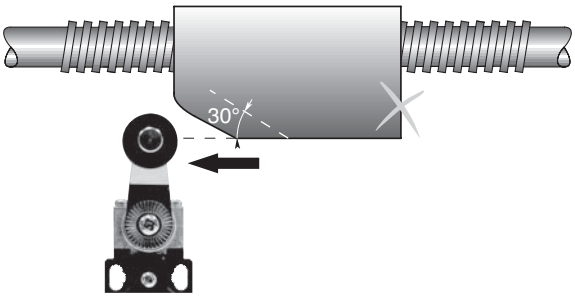
Plain plunger

Correct Incorrect

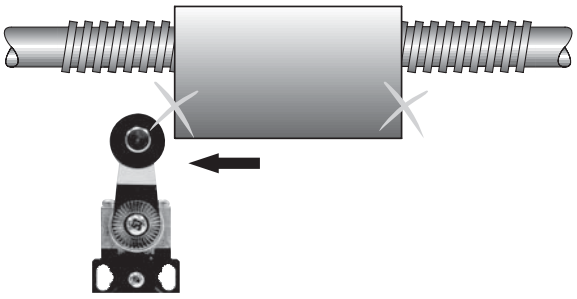
Roller plunger or Roller lever



Correct



Incorrect

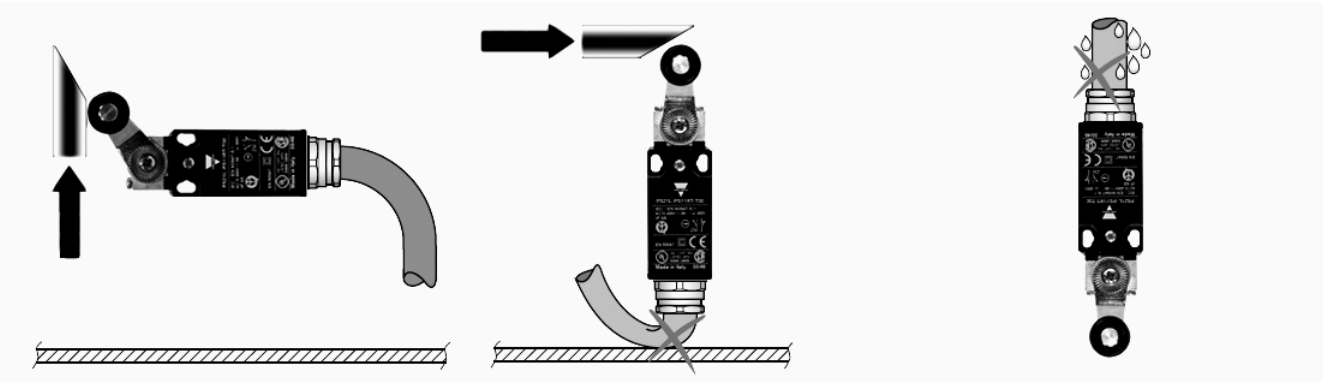


Incorrect

Correct Incorrect Incorrect

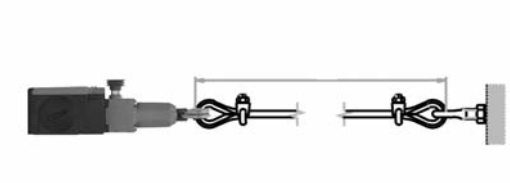
Utilization precautions

Electrical connection and mounting

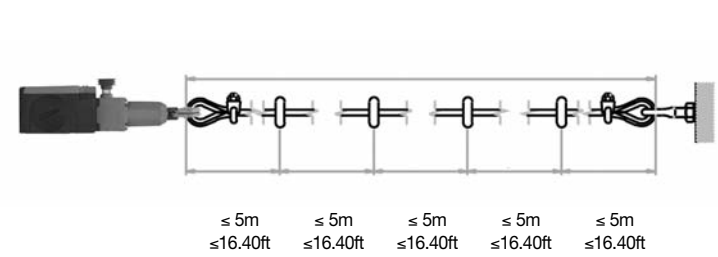


Correct | Incorrect | Incorrect

Maximum lenght application of pullwire head



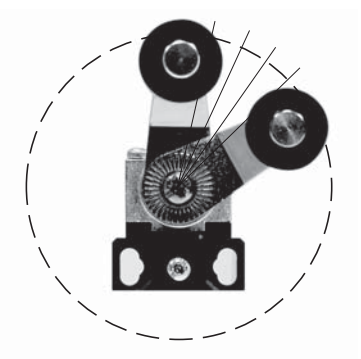
PS31: 16m/52.49ft max.



PS31: 25m/82.02ft max.

Adjustement

Position adjustement of lever



Position adjustement of lever and head