

# Limit Switches - Limit Type Plastic Body IP65



- 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 I<sub>th</sub> = 10A
- Rated insulation voltage U<sub>i</sub> = 500V
- UL, CSA, CE
- Conform with IEC 947-5-1 (EN 60947-5-1)

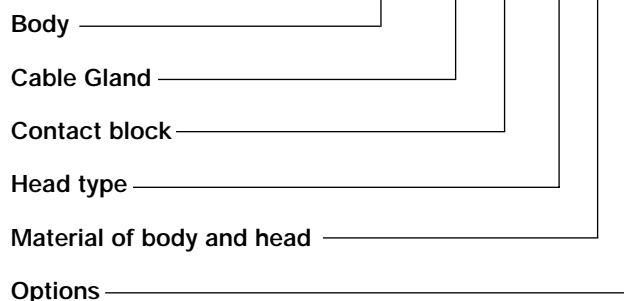
## Product Description

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**



## Description of the key codes

### Body

PS42L | PS 50mm (fix 40/42mm) 2 cable inlet for General Purpose

### 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

BE	nylon roller ext bent LEVER
BR	nylon roller int bent LEVER
L3	adj square (3x3) steel rod LEVER
LA	adj Ø3 rod LEVER stainless steel rod
LB	nylon actuator with stainless steel spring
LF	adj fiberglass rod LEVER Ø3
LG	adj fiberglass rod LEVER Ø6
LN	adj nylon rod LEVER
LO	steel PLUNGER with nylon roller+gasket
LP	multidir nylon actuator with stainless steel spring
LR	steel PLUNGER with nylon roller
LS	stainless steel spring multidir actuator
LW	Stainless steel spring multidir actuator (cat Whisker)
LZ	Stainless steel spring actuator
N6	pull wire for simple stop
P0	metal plain PLUNGER
P1	nylon roller PLUNGER
PH	metal PLUNGER +gasket
PN	nylon plain PLUNGER
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)
RL	plastic roller LEVER on plastic PLUNGER (left)
RT	nylon roller LEVER
SP	stainless steel lateral plain PLUNGER
SV	stainless steel lateral PLUNGER with vertical roller
W0	Ø50 rubber roller LEVER
W1	adj LEVER with Ø50 rubber roller
W2	adj LEVER with adj Ø50 rubber roller

## Technical Data

### Standards

### Certifications – Approvals

**Air temperature** near the device

- during operation °C  
- for storage °C

### Climatic withstand

### Mounting positions

**Shock withstand** (according to IEC 68-2-27 and 60068-2-27) g  
(1/2sinusoidal shock for 11 ms) no change in contact position

**Resistance to vibrations** (acc.to IEC 68-2-6 and EN 60068-2-6) g

**Protection against electrical shocks** (acc.to IEC 536)

**Degree of protection** (according to IEC 529 and EN 60529)

**Consistency** (measured over 1 million operations)

IEC 60947-1, IEC 60947-5-1, EN 60947-1, EN 60947-5-1,  
UL508 and CSA C22-2 n°14  
UL – CSA

-25 ... +70

-30 ... +80

According to IEC 68-2-3 and salty mist according to IEC 68-2-11

All positions are authorized

50g\*

25g (10...500Hz) no change in position of contacts greater than 100µs

Class II

IP65

0.1 mm (upon closing point)

\* except for PS21/PS42 with head type W0, W1: 25g.

## Electrical Data

### Rated insulation voltage $U_i$

-according to IEC 60947-1 and EN 60947-1

-according to UL 508, CSA C22-2 n°14

**Rated impulse withstand voltage  $U_{imp}$**  kV

(according to IEC 60947-1 and EN 60947-1)

**Conventional enclosed thermal current  $I_{the}$**  A

(according to IEC 60947-5-1 and EN 60947-5-1) ( $\theta \leq 40^\circ\text{C}$ )

**Short-circuit protection - gG type fuses** A

### Rated operational current

**$I_e$  / AC-15** - acc.to IEC 60947-5-1 24Vac (50/60 Hz) A

130Vac (50/60 Hz) A

230Vac (50/60 Hz) A

240Vac (50/60 Hz) A

400Vac (50/60 Hz) A

- acc.to UL 508, CSA C22 n°14

**$I_e$  / DC-13** - acc.to IEC 60947-5-1 24Vdc A

110Vdc A

250Vdc A

- acc.to UL 508, CSA C22 n°14

**Electrical durability** (according to IEC 60497-5-1 annex C)

- max. switching frequency Cycles/h

- load factor

### Connecting data of contact blocks

Connecting terminals

Connecting capacity 1 or 2 x mm<sup>2</sup> / AWG

Terminal marking

### Positivity

500V (degree of pollution 3)

A 600, Q 600

6

10

10

10

5.5

3.1

3

1.8

A 600

2.8

0.6

0,27

Q 600

Utilization categories AC-15 and DC-13 (see curves and value below)

3600

0,5

M3,5 (+,-) pozidriv 2 screw with cable clamp

0,5mm<sup>2</sup> / AWG 20 to 2,5mm<sup>2</sup> / AWG 14

According to EN 50013

Contacts with positive opening operation as per

IEC 60947-5-1 chapter 3

Diagram for snap action contact:

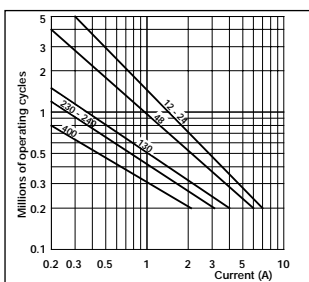
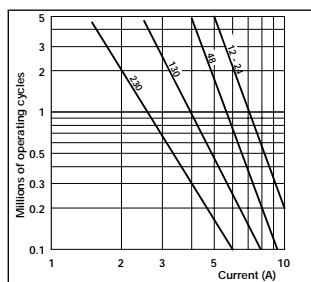


Diagram for slow action contact:



Electrical durability for DC-13 utilization category

Power breaking for a durability of 5 million operating cycles

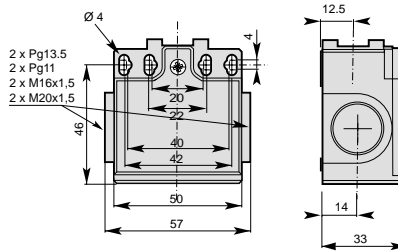
	Snap action	Slow action
Voltage 24V	9,5W	12W
Voltage 48V	6,8W	9W
Voltage 110V	3,6W	6W

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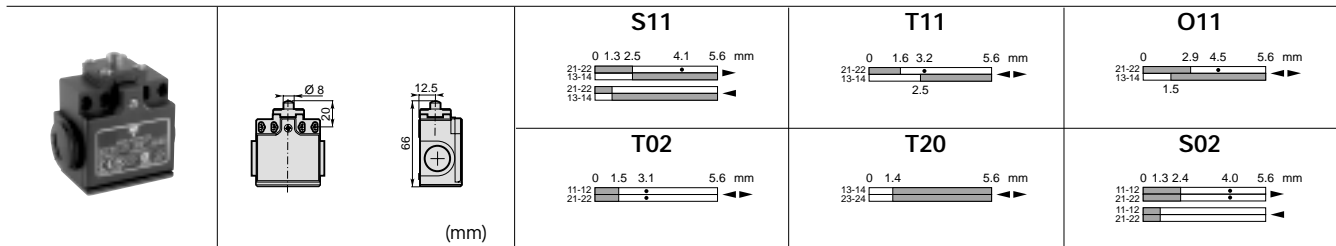
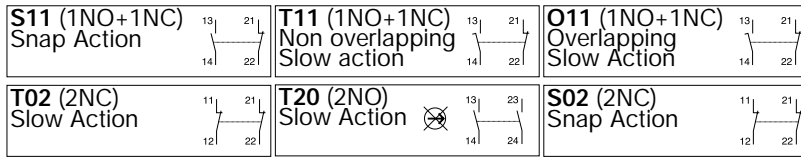
## ▣ Cable Gland

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



## ▲ Contact block (Zb type)

(mm)



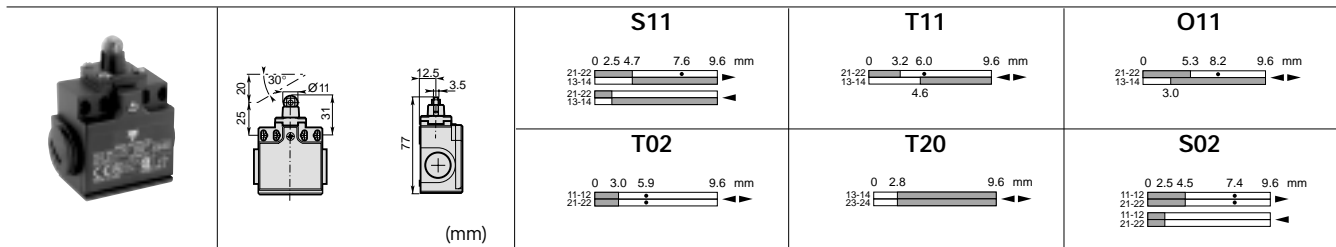
Conformity /  $\rightarrow$  (NC) /  $\rightarrow$

Max. Actuation speed	0.5ms
Min. force or torque	15N / 30Nm
Weight	100g

Plain Plunger

Code	Nylon plunger Metal plunger Metal pl. with dust prot. cup
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PS42L-	PN-T00
PS42L-	P0-T00
PS42L-	PH-T00



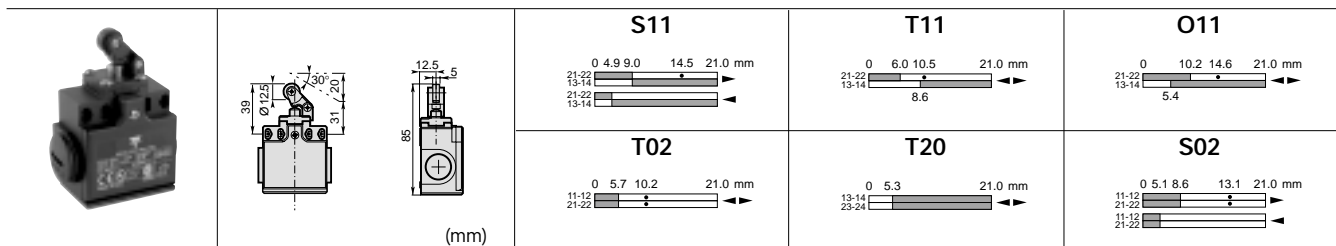
Conformity /  $\rightarrow$  (NC) /  $\rightarrow$

Max. Actuation speed	0.3ms
Min. force or torque	12N / 30Nm
Weight	105g

Roller Plunger

Code	Metal roller Nylon roller
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PS42L-	PR-T00
PS42L-	P1-T00



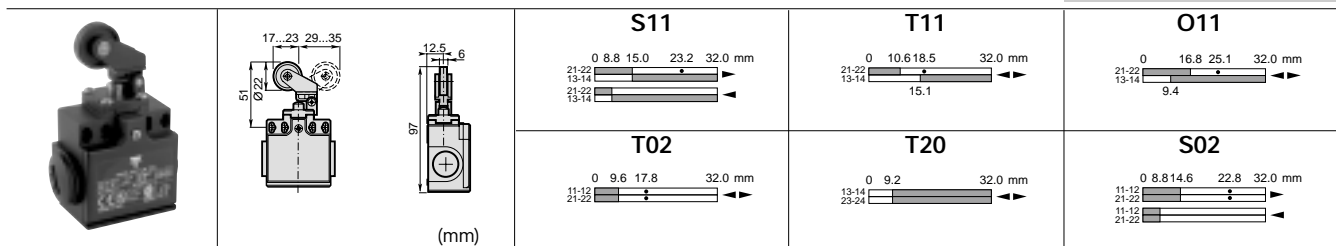
Conformity /  $\rightarrow$  (NC) /  $\rightarrow$

Max. Actuation speed	1.0ms
Min. force or torque	7N / 24Nm
Weight	105g

Plastic roller

Code	on plastic plunger on metal plunger on metal pl. with dust prot. cup
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PS42L-	RL-T00
PS42L-	RH-T00
PS42L-	RJ-T00



Conformity /  $\rightarrow$  (NC) /  $\rightarrow$

Max. Actuation speed	1.0ms
Min. force or torque	7N / 24Nm
Weight	110g

Adjustable plastic roller lever on metal plunger

Code	standard with dust protection cup
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PS42L-	LR-T00
PS42L-	LO-T00

			<b>S11</b>	<b>T11</b>	<b>O11</b>
		(mm)	<b>T02</b>	<b>T20</b>	<b>S02</b>

Conformity /  $\rightarrow$  (NC) /  $\rightarrow$  **Ø 18 Nylon roller lever**  
 Max. Actuation speed 1.5ms **Code**  
 Min. force or torque 0.10N / 0.32Nm **PS42L-RT-T00**  
 Weight 125g

			<b>S11</b>	<b>T11</b>	<b>O11</b>
		(mm)	<b>T02</b>	<b>T20</b>	<b>S02</b>

Conformity /  $\rightarrow$  (NC) /  $\rightarrow$  **Ø 50 Rubber roller lever**  
 Max. Actuation speed 1.5ms **Code**  
 Min. force or torque 0.10N / 0.32Nm **PS42L-W0-T00**  
 Weight 145g

			<b>S11</b>	<b>T11</b>	<b>O11</b>
		(mm)	<b>T02</b>	<b>T20</b>	<b>S02</b>

Conformity /  $\rightarrow$  (NC) /  $\rightarrow$  **Ø 18 Nylon roller lever**  
 Max. Actuation speed 1.5ms **Code**  
 Min. force or torque 0.10N / 0.32Nm **PS42L-BR-T00**  
 Weight 125g

			<b>S11</b>	<b>T11</b>	<b>O11</b>
		(mm)	<b>T02</b>	<b>T20</b>	<b>S02</b>

Conformity /  $\rightarrow$  (NC) /  $\rightarrow$  **Ø 18 Nylon roller lever**  
 Max. Actuation speed 1.5ms **Code**  
 Min. force or torque 0.10N / 0.32Nm **PS42L-BE-T00**  
 Weight 125g

			<b>S11</b>	<b>T11</b>	<b>O11</b>
		(mm)	<b>T02</b>	<b>T20</b>	<b>S02</b>

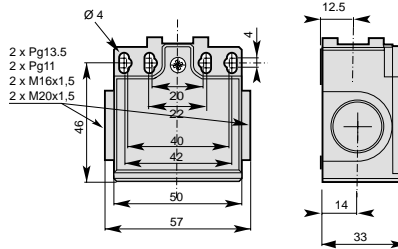
Conformity /  $\rightarrow$  (NC) /  $\rightarrow$  **Adjustable lever with Ø 18 nylon roller**  
 Max. Actuation speed 1.5ms **Code**  
 Min. force or torque 0.10N / 0.32Nm **PS42L-R1-T00**  
 Weight 135g

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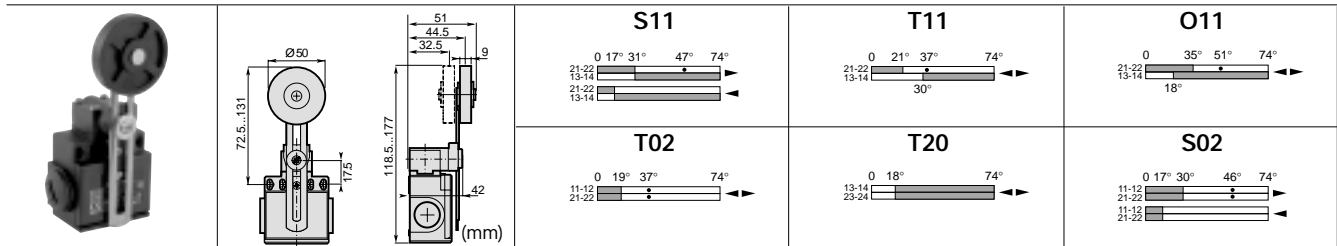
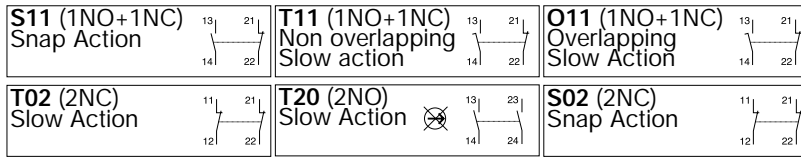
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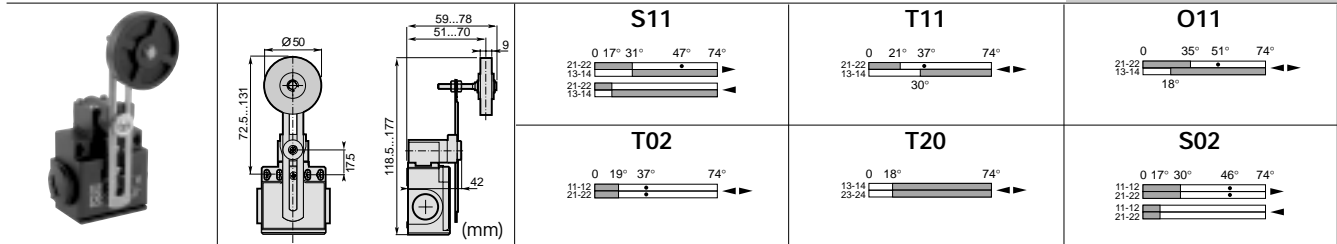
## ▲ Contact block (Zb type)

(mm)



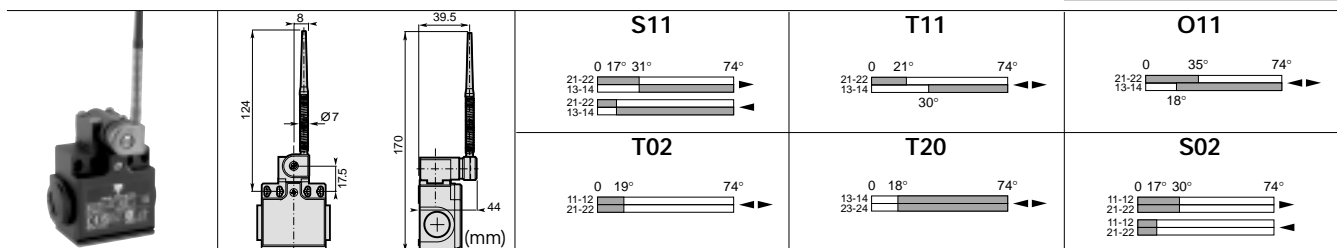
Conformity /  $\Rightarrow$  (NC) /  $\Leftarrow$   
 Max. Actuation speed 1.5ms  
 Min. force or torque 0.10N / 0.32Nm  
 Weight 155g

Adjustable lever with  $\varnothing$  50 rubber roller  
 Code PS42L---W1-T00



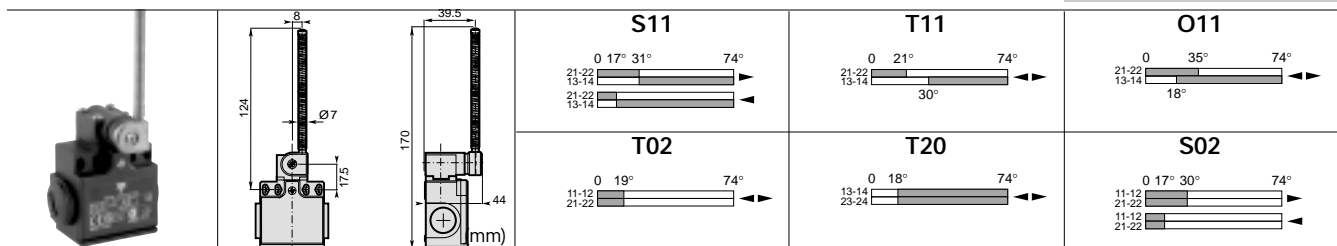
Conformity /  $\Rightarrow$  (NC) /  $\Leftarrow$   
 Max. Actuation speed 1.5ms  
 Min. force or torque 0.10N / 0.32Nm  
 Weight 155g

Adjustable lever with adjustable  $\varnothing$  50 rubber roller  
 Code PS42L---W2-T00



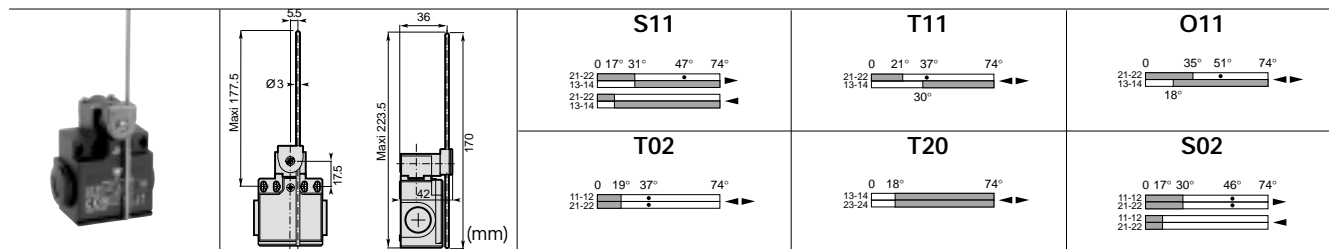
Conformity /  $\Rightarrow$  (NC) /  $\Leftarrow$   
 Max. Actuation speed 1.5ms  
 Min. force or torque 0.10N / -  
 Weight 135g

Nylon actuator with stainless steel spring  
 Code PS42L---LB-T00



Conformity /  $\Rightarrow$  (NC) /  $\Leftarrow$   
 Max. Actuation speed 1.5ms  
 Min. force or torque 0.10N / -  
 Weight 135g

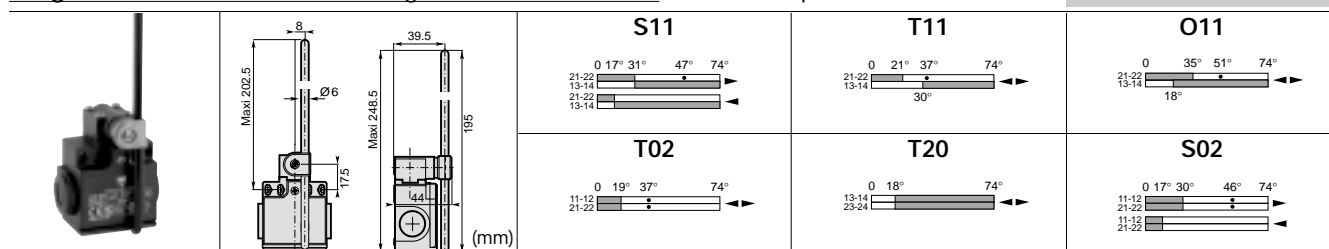
Stainless steel spring actuator  
 Code PS42L---LZ-T00



Conformity /  $\rightarrow$  (NC) /  $\leftarrow$   
 Max. Actuation speed 1.5ms  
 Min. force or torque 0.10N / 0.32  
 Weight 130g

**Adjustable rod lever**  
 Code stainless steel rod  $\varnothing$ 3  
 fiberglass rod  $\varnothing$ 3  
 square steel rod 3x3

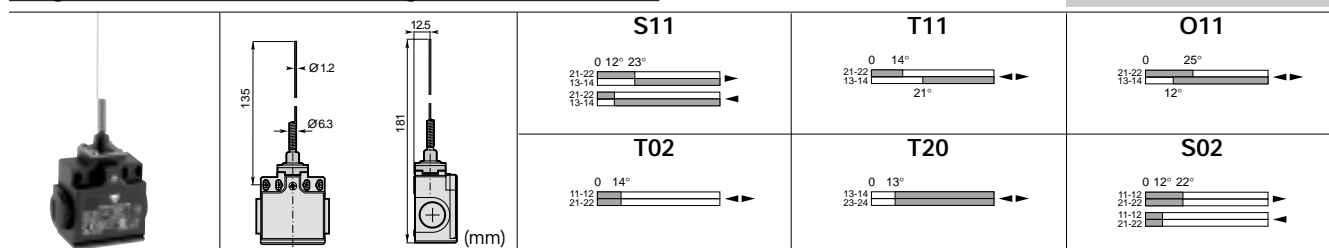
PS42L- $\bullet$  $\blacktriangle$ LA-T00  
 PS42L- $\bullet$  $\blacktriangle$ LF-T00  
 PS42L- $\bullet$  $\blacktriangle$ L3-T00



Conformity /  $\rightarrow$  (NC) /  $\leftarrow$   
 Max. Actuation speed 1.5ms  
 Min. force or torque 0.10N / 0.32Nm  
 Weight 145g

**Adjustable  $\varnothing$  6 rod lever**  
 Code nylon rod  
 fiberglass rod

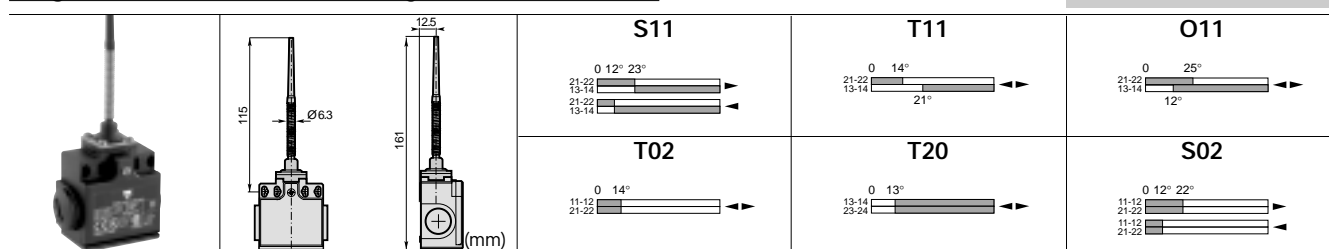
PS42L- $\bullet$  $\blacktriangle$ LN-T00  
 PS42L- $\bullet$  $\blacktriangle$ LG-T00



Conformity /  $\rightarrow$  (NC) /  $\leftarrow$   
 Max. Actuation speed 1.0ms  
 Min. force or torque 0.12N / -  
 Weight 110g

**Stainless steel spring multidirectional actuator**  
 Code

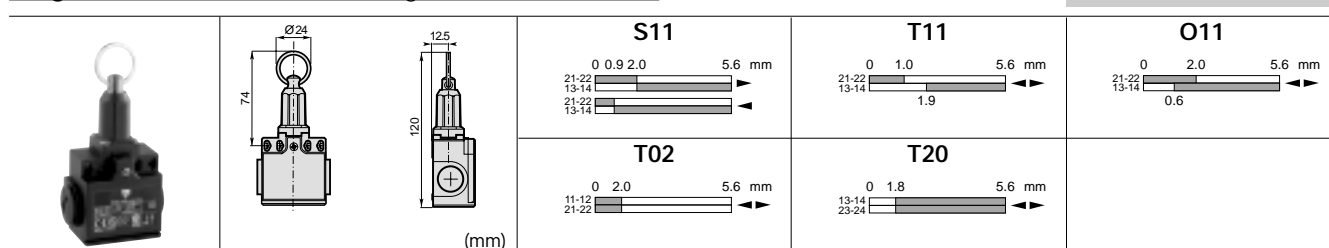
PS42L- $\bullet$  $\blacktriangle$ LW-T00



Conformity /  $\rightarrow$  (NC) /  $\leftarrow$   
 Max. Actuation speed 1.0ms  
 Min. force or torque 0.12N / -  
 Weight 115g

**Multidirectional stainless steel spring**  
 Code nylon actuator  
 stainless steel spring actuator

PS42L- $\bullet$  $\blacktriangle$ LP-T00  
 PS42L- $\bullet$  $\blacktriangle$ LS-T00



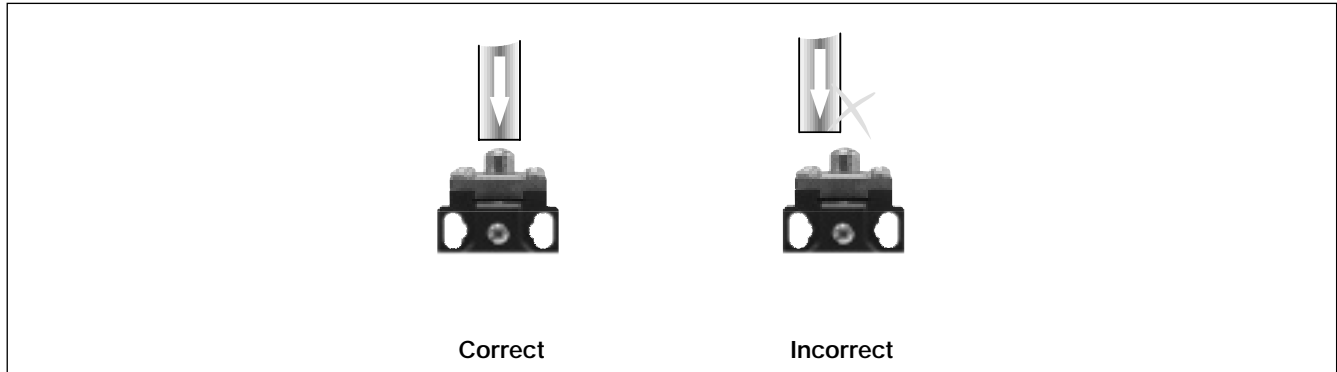
Conformity /  $\rightarrow$  (NC) /  $\leftarrow$   
 Max. Actuation speed 0.5ms  
 Min. force or torque 30N / -  
 Weight 145g

**Pull action with ring**  
 Code

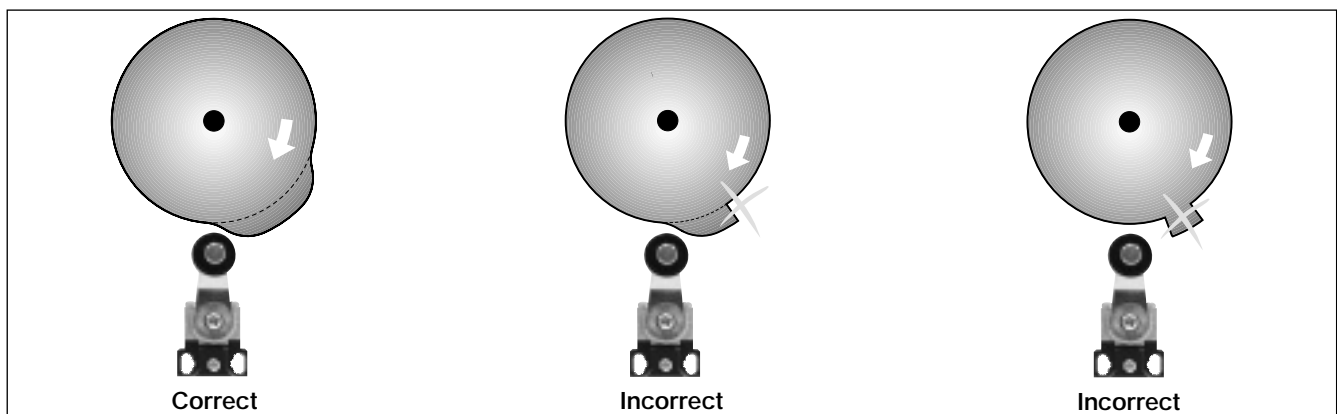
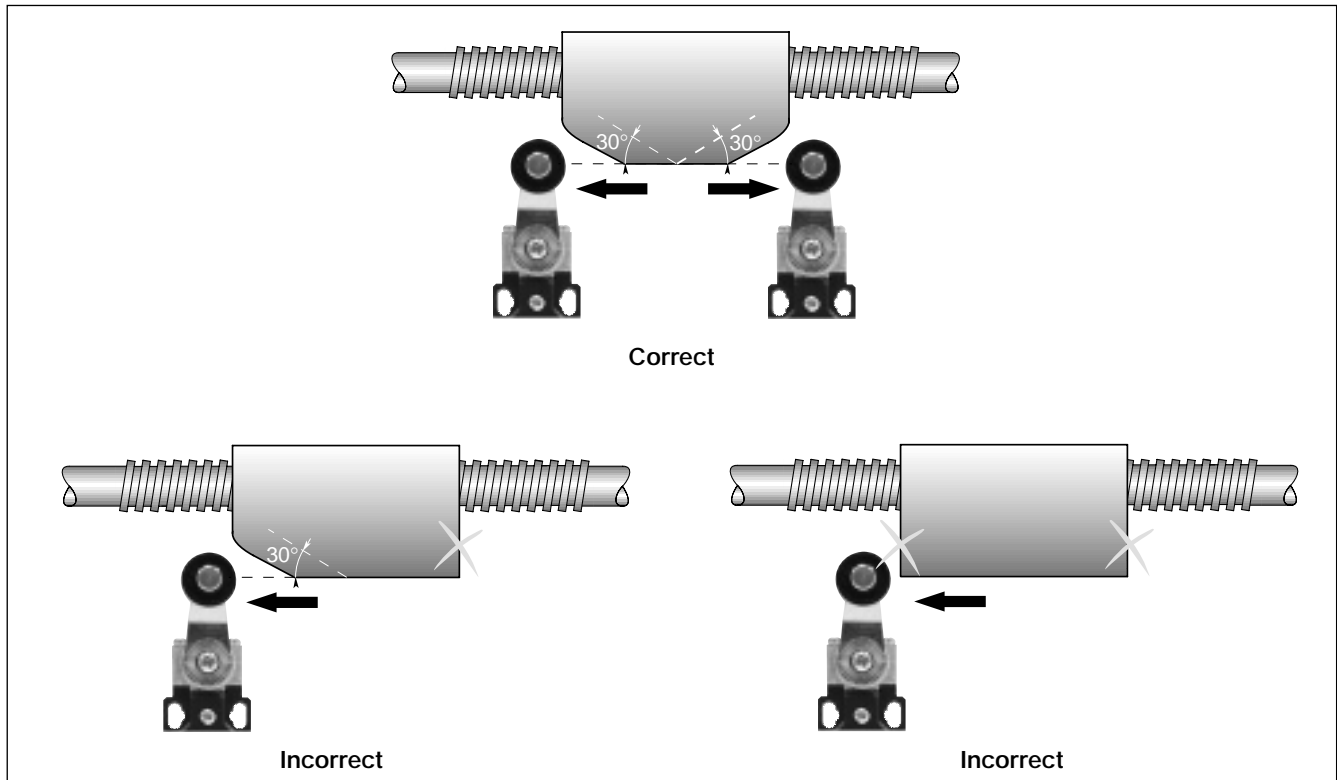
PS42L- $\bullet$  $\blacktriangle$ N6-T00

## Utilization precautions

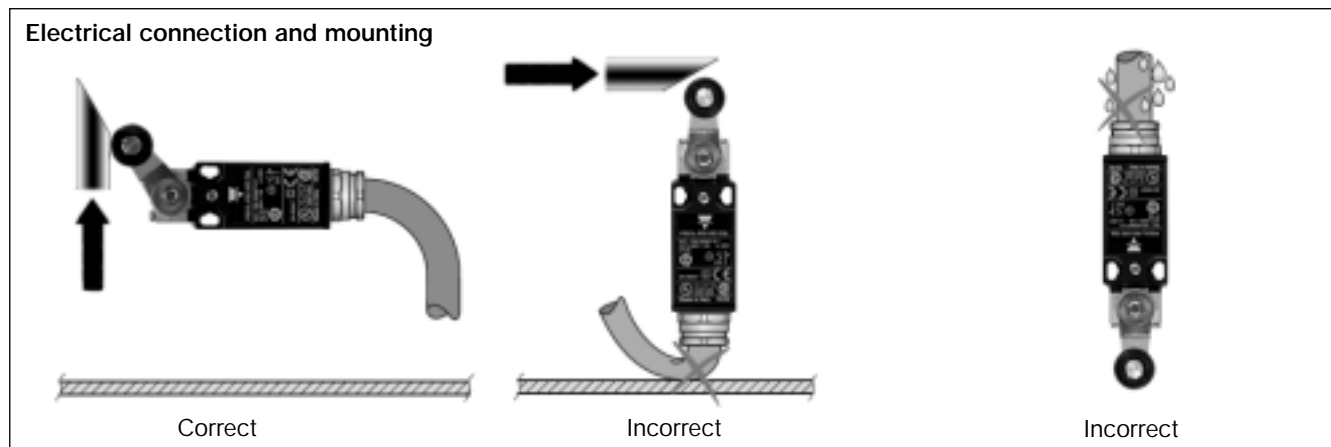
### Plain plunger



### Roller plunger or Roller lever



## Utilization precautions



## Adjustement

