

Limit Switches - Limit Type 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)

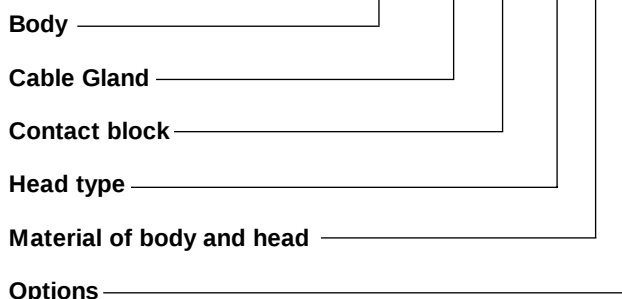
Product Description

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



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 mm² / 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

0,5mm² / AWG 20 to 2,5mm² / AWG 14

According to EN 50013

Contacts with positive opening operation as per

IEC 60947-5-1 chapter 3

Diagram for snap action contact:

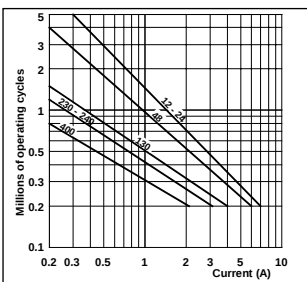
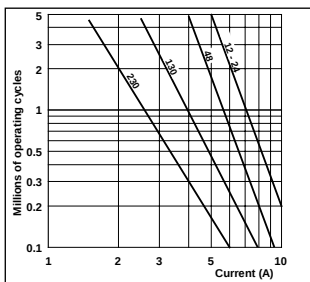


Diagram for slow action contact:



Electrical durability for DC-13 utilization category

Power breaking for a durability of 5 million operating cycles

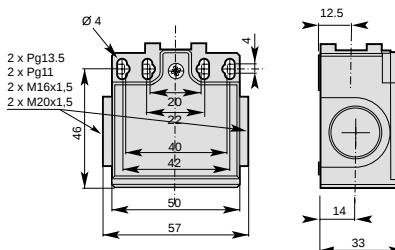
	Snap action	Slow action
Voltage 24V	9,5W	12W
Voltage 48V	6,8W	9W
Voltage 110V	3,6W	6W

Limit Switches - Limit Type (PS42) Plastic Body IP65

CARLO GAVAZZI

■ 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)

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

		S11 0 1.3 2.5 4.1 5.6 mm 21-22 13-14 13-14	T11 0 1.6 3.2 5.6 mm 21-22 13-14 2.5	O11 0 2.9 4.5 5.6 mm 21-22 13-14 1.5
		T02 0 1.5 3.1 5.6 mm 11-12 21-22	T20 0 1.4 5.6 mm 13-14 23-24	S02 0 1.3 2.4 4.0 5.6 mm 11-12 21-22 11-12 21-22

Conformity / (NC) /

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

PS42L-●▲PN-T00

PS42L-●▲P0-T00

PS42L-●▲PH-T00

		S11 0 2.5 4.7 7.6 9.6 mm 21-22 13-14 13-14	T11 0 3.2 6.0 9.6 mm 21-22 13-14 4.6	O11 0 5.3 8.2 9.6 mm 21-22 13-14 3.0
		T02 0 3.0 5.9 9.6 mm 11-12 21-22	T20 0 2.8 9.6 mm 13-14 23-24	S02 0 2.5 4.5 7.4 9.6 mm 11-12 21-22 11-12 21-22

Conformity / (NC) /

Max. Actuation speed 0.3ms

Min. force or torque 12N / 30Nm

Weight 105g

Roller Plunger

Code Metal roller
Nylon roller

PS42L-●▲PR-T00

PS42L-●▲P1-T00

		S11 0 4.9 9.0 14.5 21.0 mm 21-22 13-14 13-14	T11 0 6.0 10.5 21.0 mm 21-22 13-14 8.6	O11 0 10.2 14.6 21.0 mm 21-22 13-14 5.4
		T02 0 5.7 10.2 21.0 mm 11-12 21-22	T20 0 5.3 21.0 mm 13-14 23-24	S02 0 5.1 8.6 13.1 21.0 mm 11-12 21-22 11-12 21-22

Conformity / (NC) /

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

PS42L-●▲RL-T00

PS42L-●▲RH-T00

PS42L-●▲RJ-T00

		S11 0 8.8 15.0 23.2 32.0 mm 21-22 13-14 13-14	T11 0 10.6 18.5 32.0 mm 21-22 13-14 15.1	O11 0 16.8 25.1 32.0 mm 21-22 13-14 9.4
		T02 0 9.6 17.8 32.0 mm 11-12 21-22	T20 0 9.2 32.0 mm 13-14 23-24	S02 0 8.8 14.6 22.8 32.0 mm 11-12 21-22 11-12 21-22

Conformity / (NC) /

Max. Actuation speed 1.0ms

Min. force or torque 7N / 24Nm

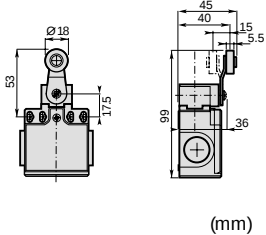
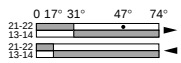
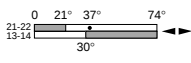
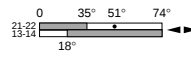
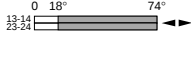
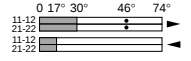
Weight 110g

Adjustable plastic roller lever on metal plunger

Code standard
with dust protection cup

PS42L-●▲LR-T00

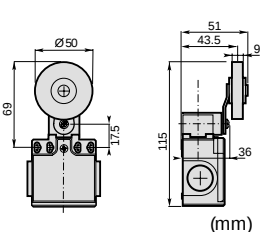
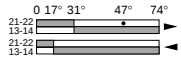
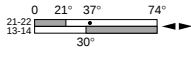
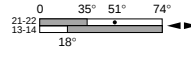
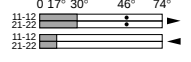
PS42L-●▲LO-T00

		S11 	T11 	O11 
		T02 	T20 	S02 

Conformity / $\rightarrow$ (NC) / $\rightarrow$
 Max. Actuation speed 1.5ms
 Min. force or torque 0.10N / 0.32Nm
 Weight 125g

Ø 18 Nylon roller lever
 Code

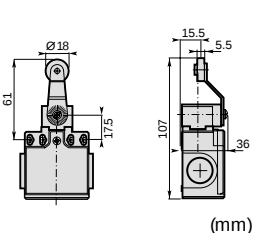
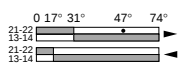
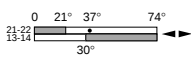
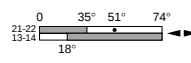
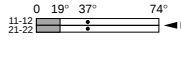
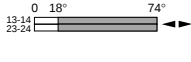
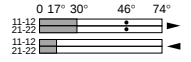
PS42L-  

		S11 	T11 	O11 
		T02 	T20 	S02 

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

Ø 50 Rubber roller lever
 Code

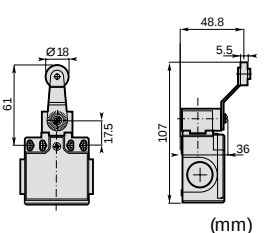
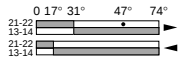
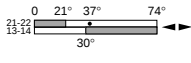
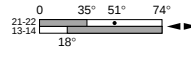
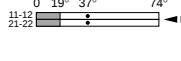
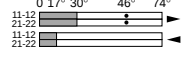
PS42L-  

		S11 	T11 	O11 
		T02 	T20 	S02 

Conformity / $\rightarrow$ (NC) / $\rightarrow$
 Max. Actuation speed 1.5ms
 Min. force or torque 0.10N / 0.32Nm
 Weight 125g

Ø 18 Nylon roller lever
 Code

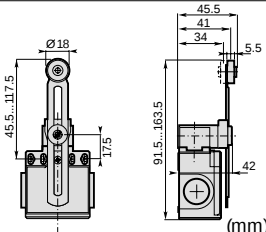
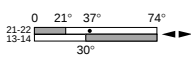
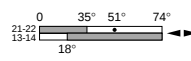
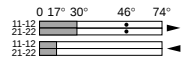
PS42L-  

		S11 	T11 	O11 
		T02 	T20 	S02 

Conformity / $\rightarrow$ (NC) / $\rightarrow$
 Max. Actuation speed 1.5ms
 Min. force or torque 0.10N / 0.32Nm
 Weight 125g

Ø 18 Nylon roller lever
 Code

PS42L-  

		S11 	T11 	O11 
		T02 	T20 	S02 

Conformity / $\rightarrow$ (NC) / $\rightarrow$
 Max. Actuation speed 1.5ms
 Min. force or torque 0.10N / 0.32Nm
 Weight 135g

Adjustable lever with Ø 18 nylon roller
 Code

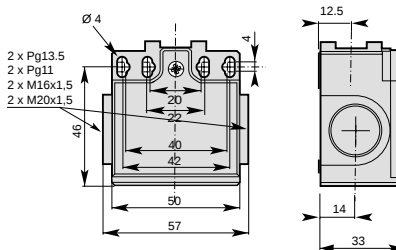
PS42L-  

Plastic Body IP65



☐ Cable Gland

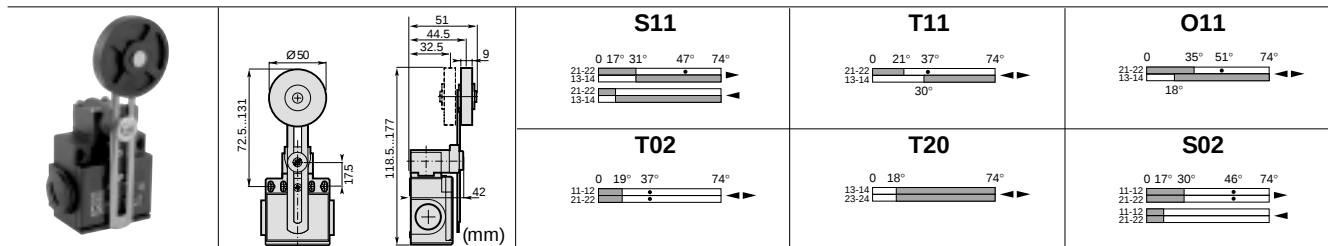
P = two cable inlet PG13.5 cable gland
M = two cable inlet M20x1.5 cable gland
N = two cable inlet 1/2" NPT cable gland
B = two cable inlet PG11 cable gland
A = two cable inlet M16x1.5 cable gland



▲ Contact block (Zb type)

(mm)

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 



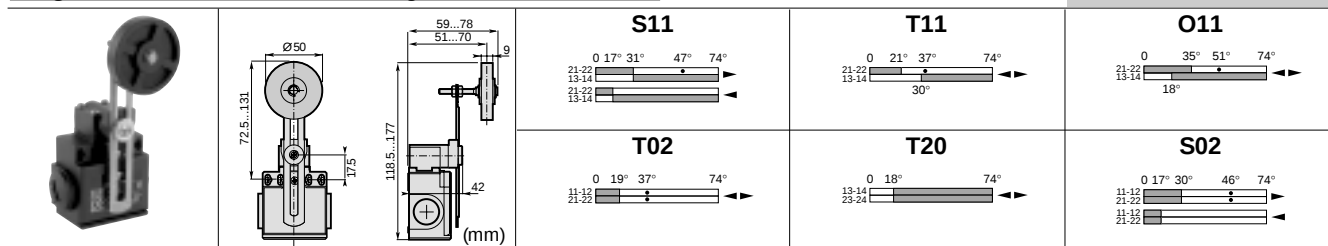
Conformity / → (NC)		/ →	
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Max. Actuation speed	1.5ms
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Min. force or torque	0.10N / 0.32Nm
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Adjustable lever with Ø 50 rubber roller

Code

PS42L- W1-T00

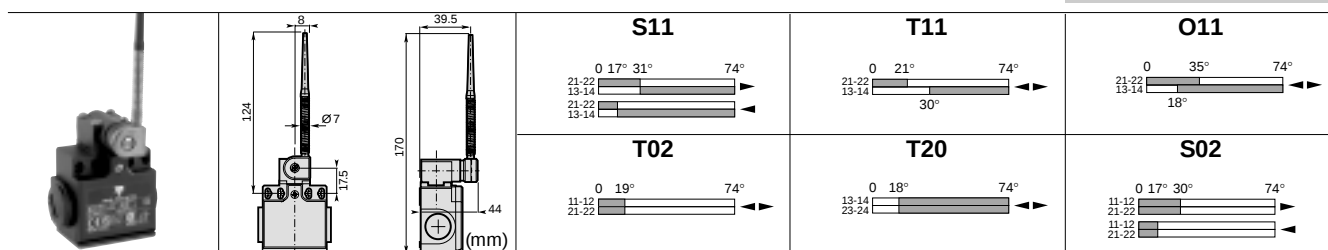
Conformity / → (NC)		/ →	
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Max. Actuation speed	1.5ms
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Min. force or torque	0.10N / 0.32Nm
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Adjustable lever with adjustable Ø 50 rubber roller

Code

PS42L- W2-T00

Conformity /	(NC)	/
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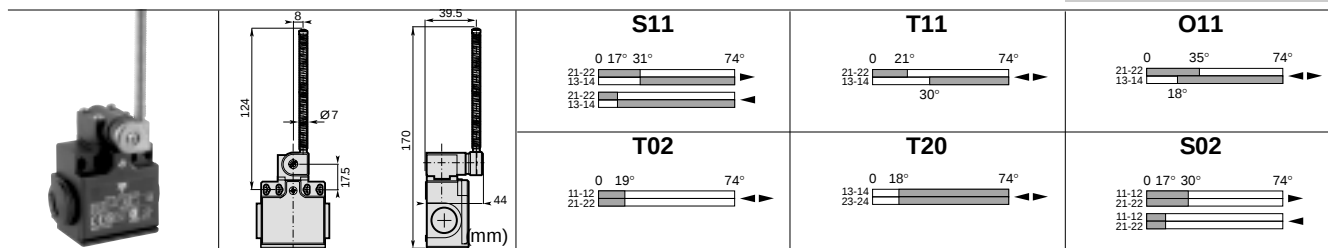
Max. Actuation speed	1.5ms
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Min. force or torque	0.10N / -
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Weight	135g
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Nylon actuator with stainless steel spring

Code

PS42L-   LB-T00

Conformity /	(NC)	/
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Max. Actuation speed	1.5ms
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Min. force or torque	0.10N / -
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Weight	135g
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Stainless steel spring actuator

CodePS42L-   LZ-T00

		S11 	T11 	O11
		T02 	T20 	S02

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

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-LA-T00
PS42L-LF-T00
PS42L-L3-T00

		S11 	T11 	O11
		T02 	T20 	S02

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

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-LN-T00
PS42L-LG-T00

		S11 	T11 	O11
		T02 	T20 	S02

Conformity / $\rightarrow$ (NC) /

Max. Actuation speed 1.0ms
Min. force or torque 0.12N / -
Weight 110g

Stainless steel spring multidirectional actuator

Code

PS42L-LW-T00

		S11 	T11 	O11
		T02 	T20 	S02

Conformity / $\rightarrow$ (NC) /

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-LP-T00
PS42L-LS-T00

		S11 	T11 	O11
		T02 	T20 	

Conformity / $\rightarrow$ (NC) /

Max. Actuation speed 0.5ms
Min. force or torque 30N / -
Weight 145g

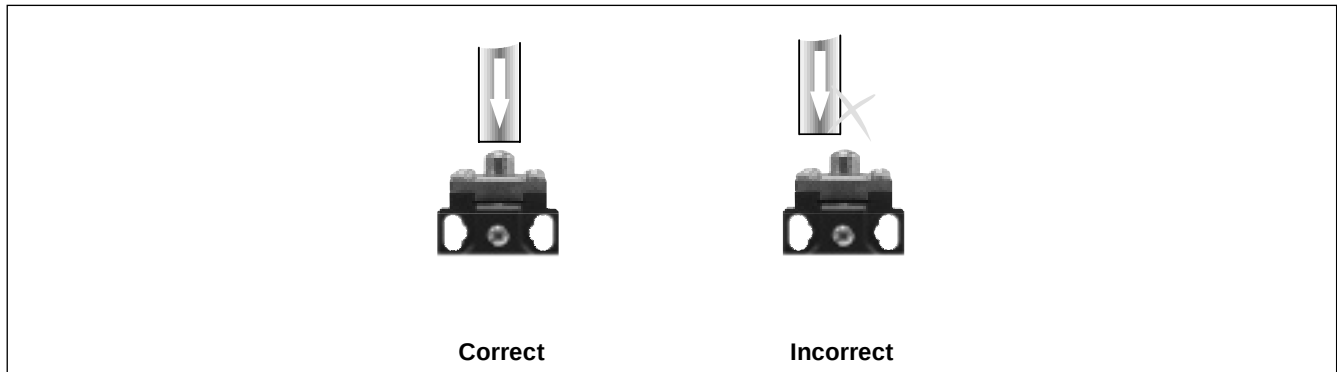
Pull action with ring

Code

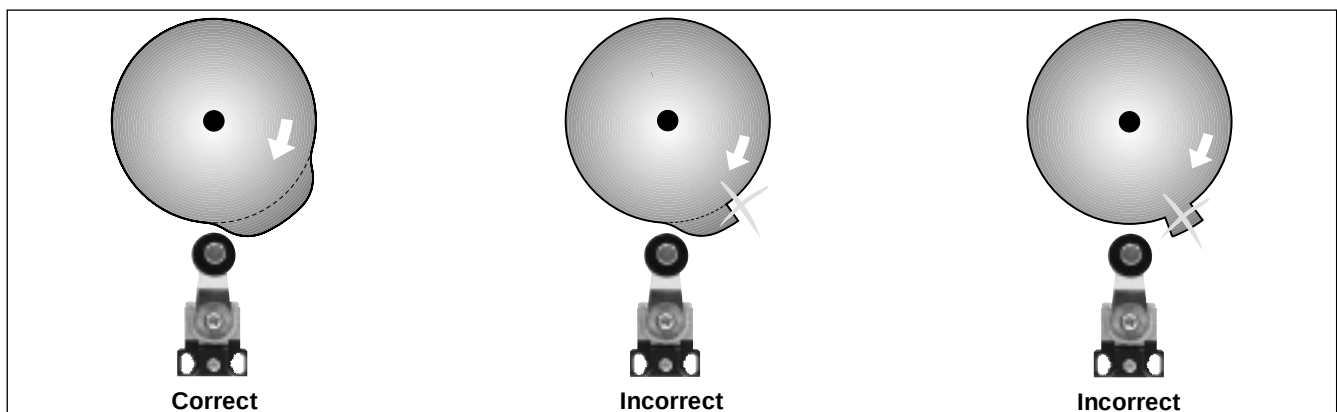
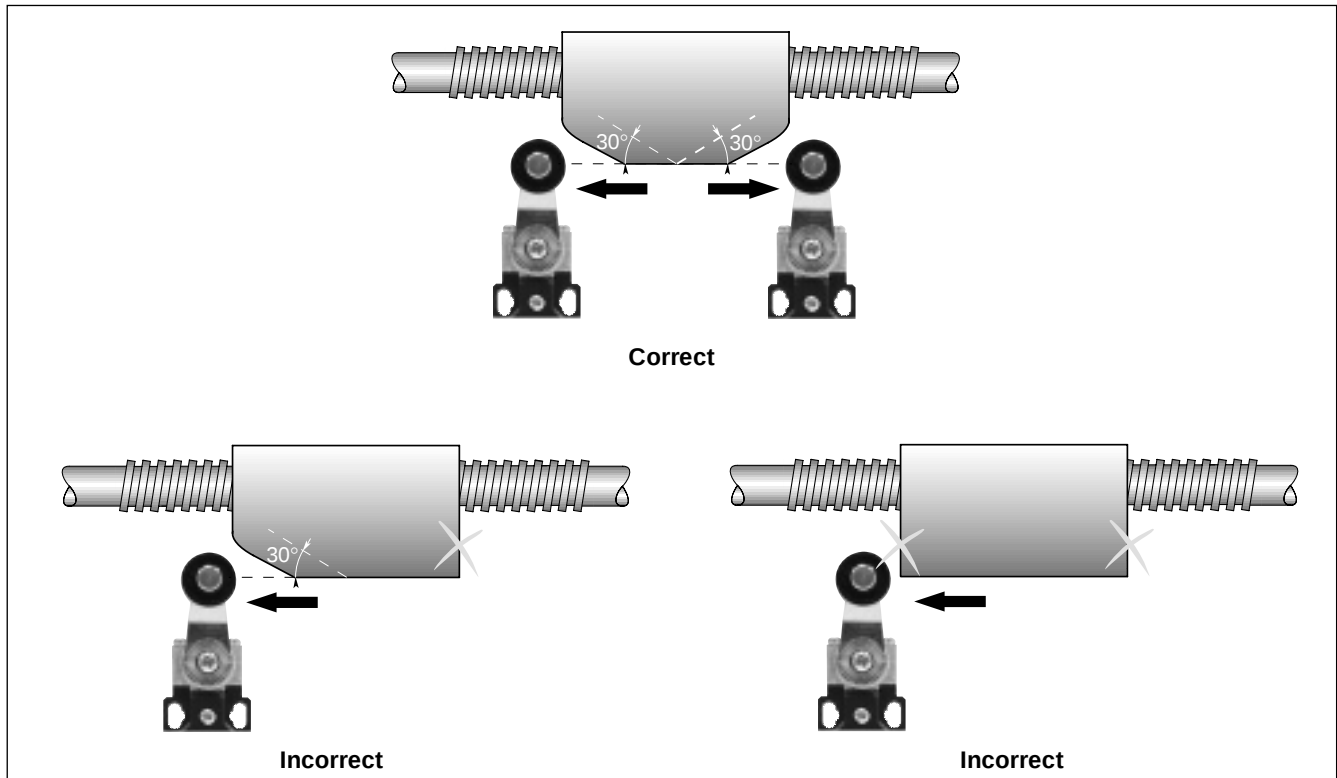
PS42L-N6-T00

Utilization precautions

Plain plunger

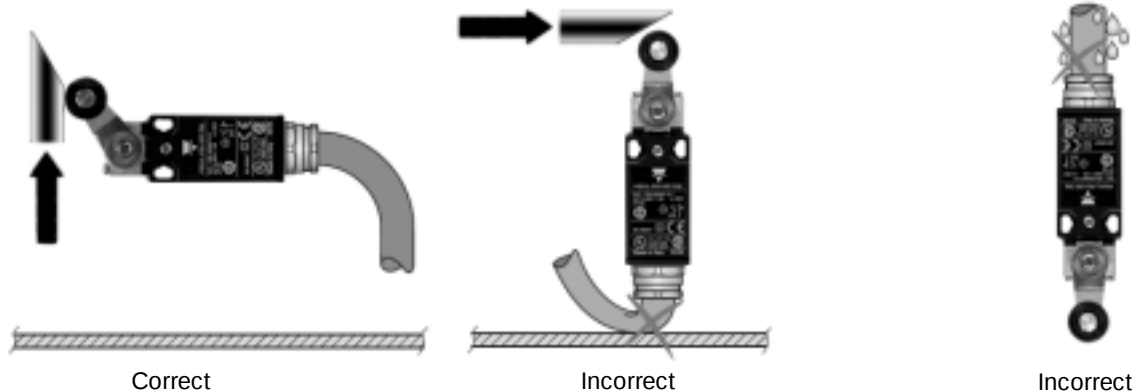


Roller plunger or Roller lever



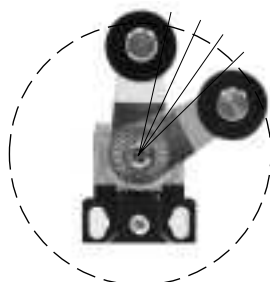
Utilization precautions

Electrical connection and mounting



Adjustement

Position adjustement of lever



Free position adjustement 10 in 10° of lever

Position adjustement of lever and head

