

Limit Switches - Safety Type with pull button reset Plastic Body IP65 and Metal Body IP66

CARLO GAVAZZI



- Double Insulation  (for thermoplastic type)
- High mechanical resistant
- Degree of protection IP65 (thermoplastic) IP66 (metal)
- Reinforced UL-V0 thermoplastic fiber-glass body
- Zinc alloy (Zamack) 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:

Ideal for detection and monitoring of faults in hoisting machines, electric lifts, freight elevators, escalators, conveyor belts, etc.

With manual reset comply with the requirements of standard EN 418 (safety of machinery - emergency stop). After actuating the

control device and overshooting the latching point, the N.C. safety contact(s) remain in the open position. Return to the initial operating state takes place by voluntary action on the pull button reset.

To detect or to monitor if a moving part is exceeding its allowed travelling path, and stop the equipment in case of malfunctioning.

Ordering Key

PS42K-PS11RT-T00

Body

Cable Gland

Contact block

Head type

Material of body and head

Options

Description of the key codes

Body

PS21K	PS 30mm (fix 20/22mm) 1 cable inlet with button reset
PS42K	PS 50mm (fix 40/42mm) 2 cable inlet with button reset

Cable Gland

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

Contact block

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

Head type

P0	metal plain PLUNGER
PR	metal roller PLUNGER
R3	adj LEVER with stell ball bearing
R4	plastic roller LEVER on metal PLUNGER (left) (only for PS21K)
LR	steel PLUNGER with nylon roller (only for PS42K)
RT	nylon roller LEVER

Material of body and head

T	Thermoplastic Body and Thermoplastic head
Y	Metal Body and Thermoplastic head

Options

00	no option
----	-----------

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

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)

Plastic Body

Metal body

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 (1/2sinusoidal shock for 11 ms) no change in contact position

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

Class II

Class I

IP65

IP66

0.1 mm (upon closing point)

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 60947-1 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 Q600

400V (degree of pollution 3)

A 300 Q 300

6

10

10

10

5.5

3.1

3

1.8

A 600

A 300

2.8

0.6

0,27

Q 600

Q 300

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:

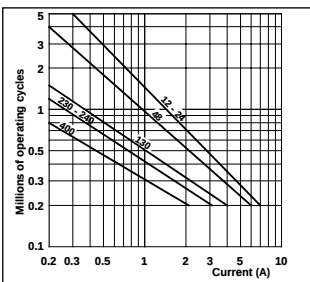
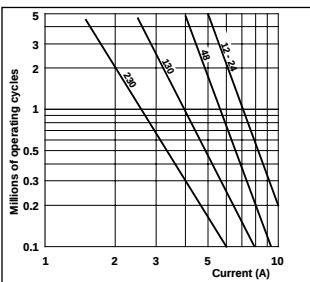


Diagram for slow action contact:



Electrical durability for DC-13 utilization category

Power breaking for a durability of 5 million operating cycles

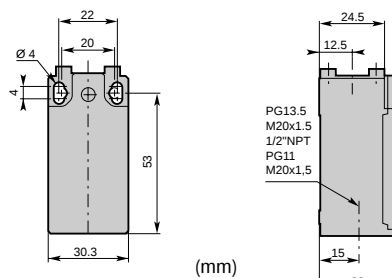
	Snap action	Slow action
Voltage 24V	9,5W	12W
Voltage 48V	6,8W	9W
Voltage 110V	3,6W	6W

Limit Switches - Safety Type (PS21K) Plastic Body IP65

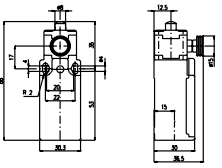
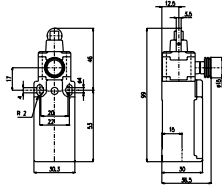
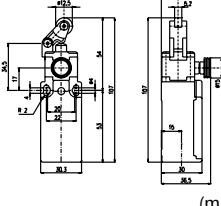
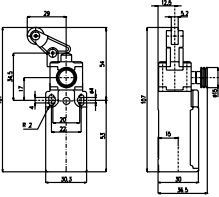
CARLO GAVAZZI

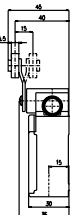
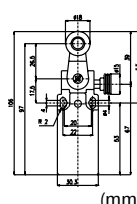
■ Cable Gland

- 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)

		(mm)	S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
			T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity / (NC) EN 50047 / (C)			Steel plunger with reset			PS21K-00P0-T00
Max. Actuation speed 0.5ms			Code			
Min. force or torque 9N / 44Nm						
Weight 97g						
		(mm)	S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
			T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity / (NC) EN 50047 / (C)			Steel plunger with nylon roller with reset			PS21K-00PR-T00
Max. Actuation speed 0.3ms			Code			
Min. force or torque 12N / 41Nm						
Weight 99g						
		(mm)	S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
			T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity / (NC) EN 50047 / (C)			Plastic roller lever on metal plunger with reset			PS21K-00R3-T00
Max. Actuation speed 1.0ms			Code			
Min. force or torque 7Nm / 24Nm						
Weight 102g						
		(mm)	S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
			T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity / (NC) EN 50047 / (C)			Plastic roller lever on metal plunger with reset			PS21K-00R4-T00
Max. Actuation speed 1.0ms			Code			
Min. force or torque 7Nm / 24Nm						
Weight 103g						

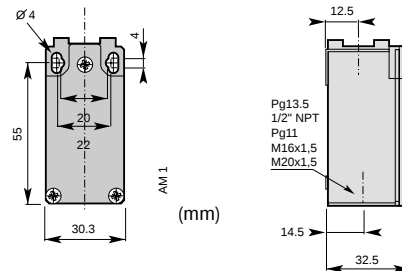
		 (mm)	S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
			T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)			EN 50047 / 			PS21K-   RT-T00
Max. Actuation speed			1.5ms			
Min. force or torque			0.10N / 0.32Nm			
Weight			102g			

Limit Switches - Safety Type (PS21K) Metal Body IP66

CARLO GAVAZZI

• 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

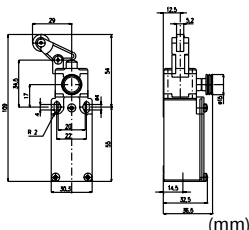


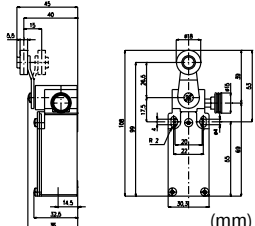
▲ Contact block (Zb type)

	
---	--

			S11 (1NO+1NC) Snap Action			S02 (2NC) Snap Action	
			T11 (1NO+1NC) Non overlapping Slow action			T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 		Steel plunger with nylon roller with reset			
Max. Actuation speed		0.3ms		Code			
Min. force or torque		12N / 41Nm		PS21K-PR-Y00			
Weight		196g					

	
---	--

		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 			
Max. Actuation speed		1.0ms			
Min. force or torque		7Nm / 24Nm			
Weight		199g			
		Plastic roller lever on metal plunger with reset			
		Code		PS21K-   R4-Y00	

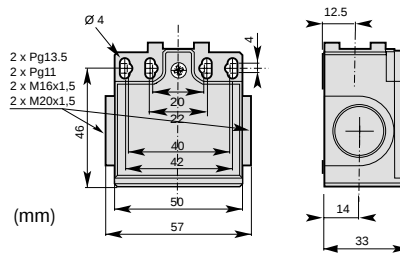
		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 		Lever with nylon roller with reset	
Max. Actuation speed		1.5ms		Code PS21K-RT-Y00	
Min. force or torque		0.10N / 0.32Nm			
Weight		198g			

Limit Switches - Safety Type (PS42K) Plastic Body IP65

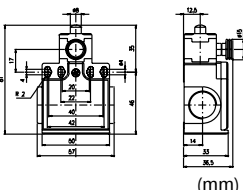
CARLO GAVAZZI

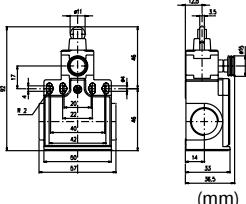
■ Cable Gland

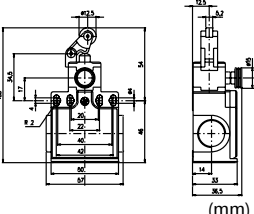
- P** = two cable inlet PG13.5 cable gland
M = two cable inlet M20x1.5 cable gland
N = two cable inlet 1/2" NPT cable gland
B = two cable inlet PG11 cable gland
A = two cable inlet M16x1.5 cable gland

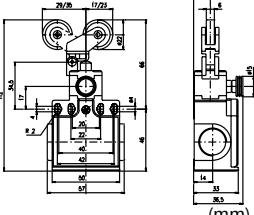


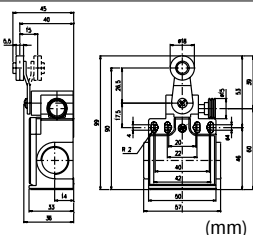
▲ Contact block (Zb type)

		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 		Steel plunger with reset Code PS42K-P0-T00	
Max. Actuation speed		0.5ms			
Min. force or torque		9N / 44Nm			
Weight		126g			

		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 		Steel plunger with nylon roller with reset	
Max. Actuation speed		0.3ms		Code	
Min. force or torque		12N / 41Nm		PS42K-   PR-T00	
Weight		128g			

		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 			
Max. Actuation speed		1.0ms			
Min. force or torque		7Nm / 24Nm			
Weight		131g			
		Plastic roller lever on metal plunger with reset			
		Code PS42K-   R3-T00			

		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 			
Max. Actuation speed		1.0ms			
Min. force or torque		7Nm / 24Nm			
Weight		138g			
		Plastic roller lever on metal plunger with reset			
		Code		PS42K-   LR-T00	

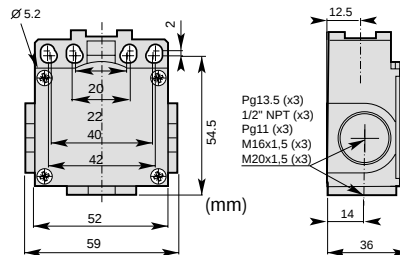
	 (mm)	S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 		Lever with nylon roller with reset	
Max. Actuation speed		1.5ms		Code PS42K-RT-T00	
Min. force or torque		0.10N / 0.32Nm			
Weight		129g			

Limit Switches - Safety Type (PS42K) Metal Body IP66

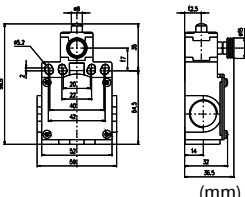
CARLO GAVAZZI

■ Cable Gland

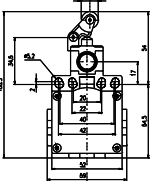
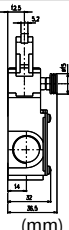
- P** = three cable inlet PG13.5 cable gland
M = three cable inlet M20x1.5 cable gland
N = three cable inlet 1/2" NPT cable gland
B = three cable inlet PG11 cable gland
A = three cable inlet M16x1.5 cable gland

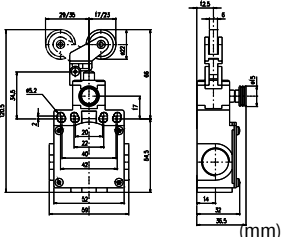


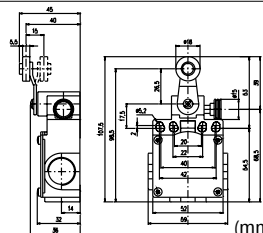
▲ Contact block (Zb type)

		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 			
Max. Actuation speed		0.5ms			
Min. force or torque		9N / 44Nm			
Weight		295g			
		Steel plunger with reset		PS42K-P0-Y00	
		Code			

		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /		EN 50047 /		Steel plunger with nylon roller with reset	
Max. Actuation speed		0.3ms		Code	
Min. force or torque		12N / 41Nm		PS42K-	
Weight		298g		PR-Y00	

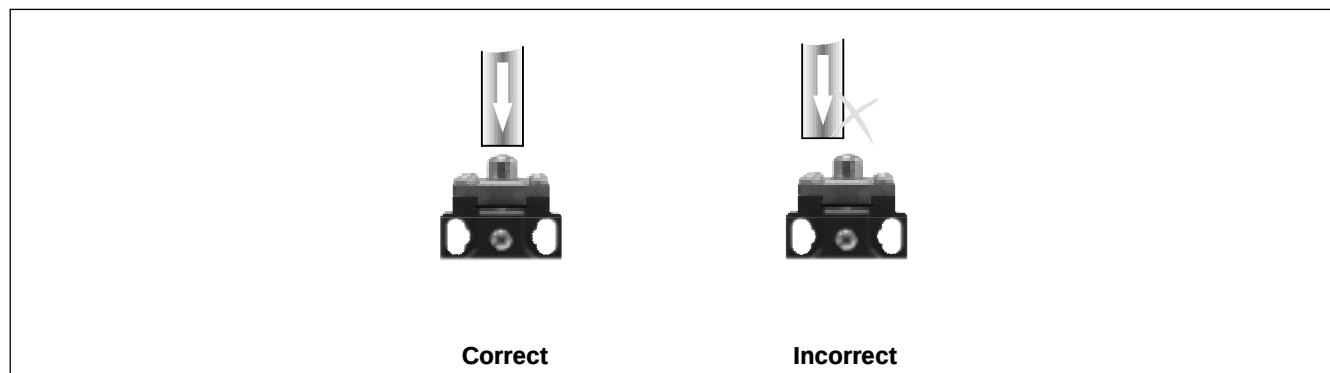
			S11 (1NO+1NC) Snap Action			S02 (2NC) Snap Action	
			T11 (1NO+1NC) Non overlapping Slow action			T02 (2NC) Slow Action	
Conformity /  (NC)			EN 50047 / 				
Max. Actuation speed			1.0ms				
Min. force or torque			7Nm / 24Nm				
Weight			301g				
			Plastic roller lever on metal plunger with reset				
			Code				
			PS42K-R3-Y00				

		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 			
Max. Actuation speed		1.0ms			
Min. force or torque		7Nm / 24Nm			
Weight		307g			
		Plastic roller lever on metal plunger with reset			
		Code PS42K-   LR-Y00			

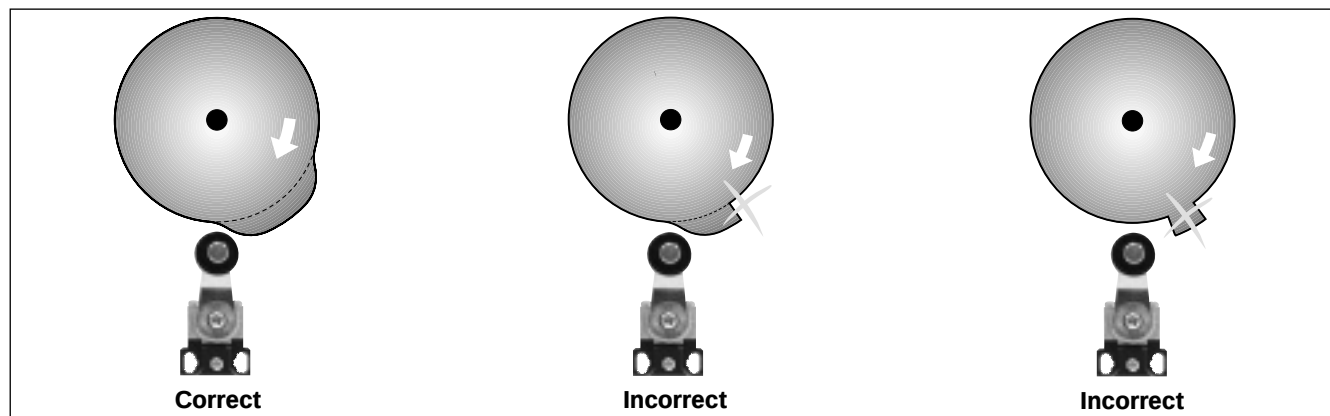
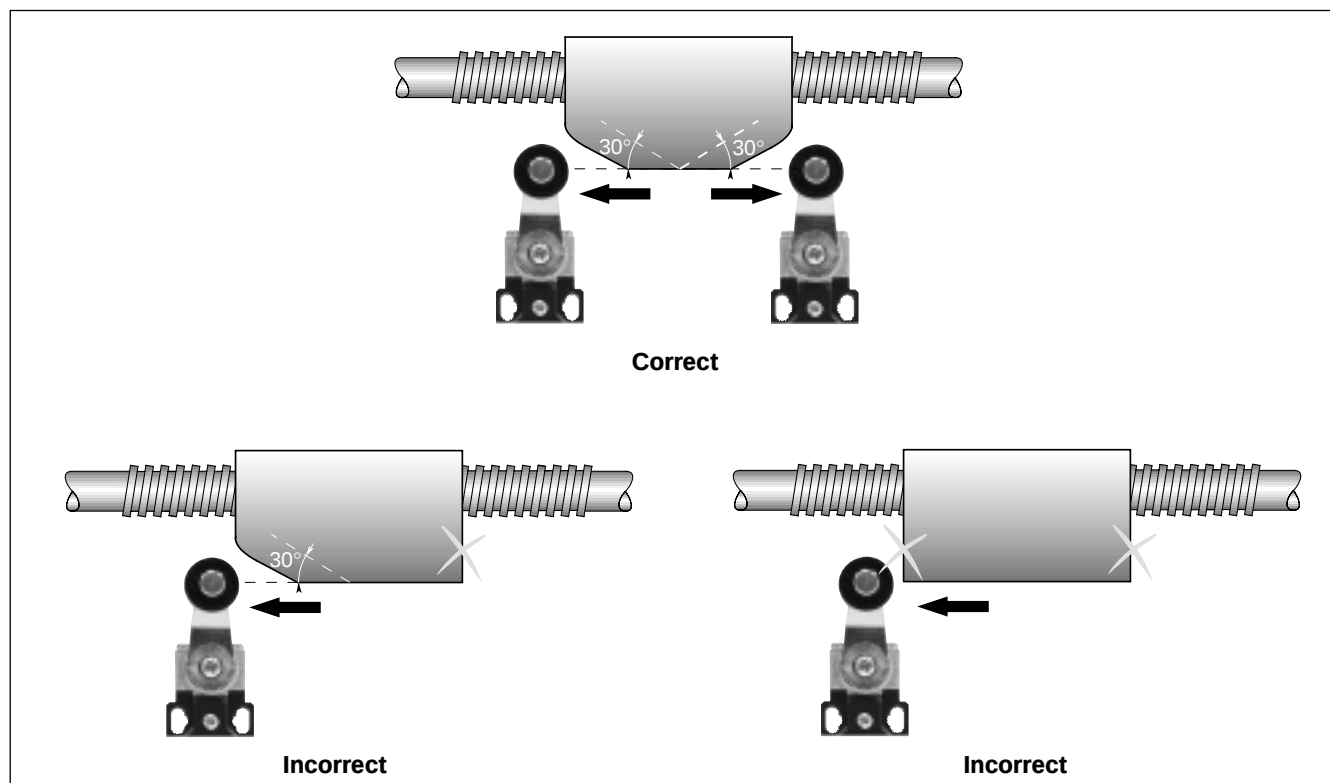
		S11 (1NO+1NC) Snap Action		S02 (2NC) Snap Action	
		T11 (1NO+1NC) Non overlapping Slow action		T02 (2NC) Slow Action	
Conformity /  (NC)		EN 50047 / 		Lever with nylon roller with reset	
Max. Actuation speed		1.5ms		Code PS42K-RT-Y00	
Min. force or torque		0.10N / 0.32Nm			
Weight		299g			

Utilization precautions

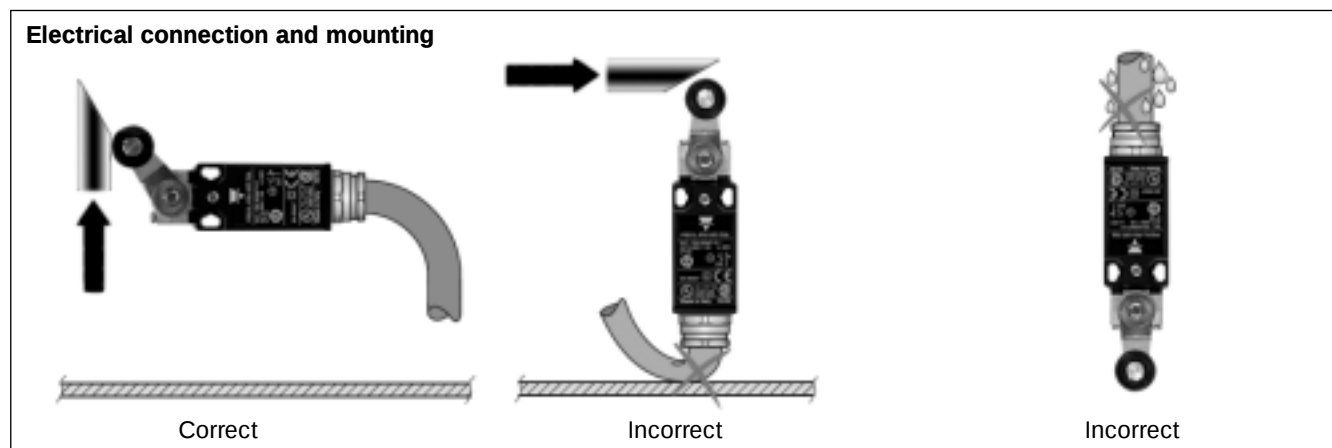
Plain plunger



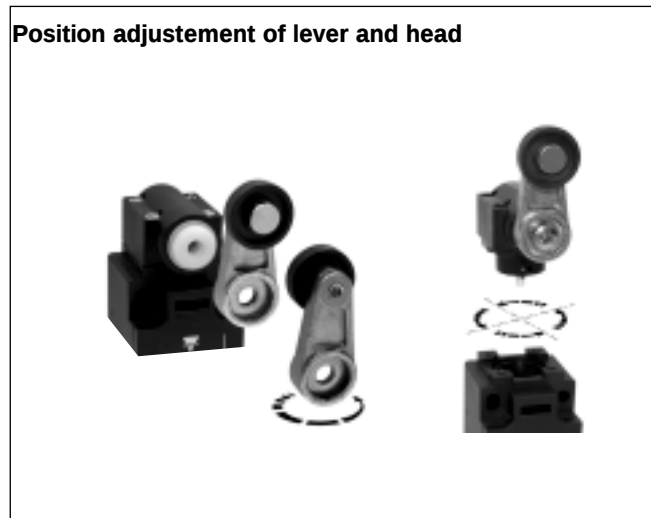
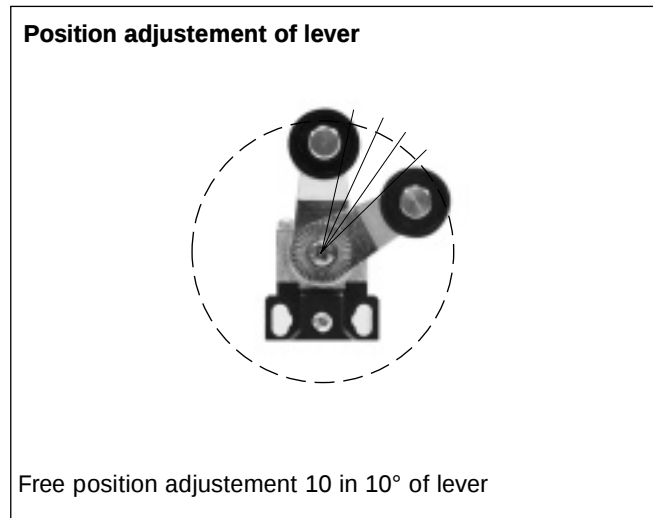
Roller plunger or Roller lever



Utilization precautions



Adjustement



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Carlo Gavazzi:](#)

[PS42K-NT11R3-Y00](#) [PS21K-NS11RT-T00](#) [PS21K-NS02R4-Y00](#) [PS21K-NS02PR-Y00](#) [PS21K-NT02R1-T00](#)
[PS21K-NS02R3-T00](#) [PS21K-NS02RT-Y00](#) [PS21K-NS02R3-Y00](#) [PS21K-NS02R4-T00](#) [PS21K-NS11PR-T00](#) [PS42K-](#)
[NT02R3-T00](#) [PS42K-NS11RT-T00](#) [PS42K-NT02P0-Y00](#) [PS21K-NS02RT-T00](#) [PS21K-NT11R3-Y00](#) [PS42K-NS02RT-](#)
[Y00](#) [PS21K-NT02PR-T00](#) [PS21K-NT11R4-T00](#) [PS42K-NT11RT-Y00](#) [PS21K-NT11PR-Y00](#) [PS42K-NS11RT-Y00](#)
[PS21K-NT02R3-Y00](#) [PS42K-NT02RT-T00](#) [PS21K-NT11R4-Y00](#) [PS21K-PS11RT-T00](#) [PS21K-NT02R4-T00](#) [PS42K-](#)
[NS11R3-Y00](#) [PS21K-NT02P0-Y00](#) [PS42K-NT11PR-T00](#) [PS42K-NT11RT-T00](#) [PS21K-NS02PR-T00](#) [PS21K-](#)
[PT11PR-Y00](#) [PS42K-NS02R3-T00](#) [PS42K-NS02PR-T00](#) [PS21K-PS11RT-Y00](#) [PS42K-NS11P0-Y00](#) [PS42K-](#)
[NT02PR-T00](#) [PS42K-NS02P0-Y00](#) [PS42K-NT11P0-Y00](#) [PS21K-NT11RT-T00](#) [PS21K-NT11R3-T00](#) [PS42K-NT11LR-](#)
[Y00](#) [PS21K-NS11P0-T00](#) [PS42K-NS02PR-Y00](#) [PS21K-PT02RT-T00](#) [PS42K-NS11R3-T00](#) [PS42K-NT11R3-T00](#)
[PS21K-NS11R3-Y00](#) [PS42K-NS11PR-T00](#) [PS21K-NS11P0-Y00](#) [PS42K-NS02RT-T00](#) [PS21K-NT02RT-T00](#) [PS21K-](#)
[NT11P0-Y00](#) [PS42K-NS11LR-Y00](#) [PS42K-NT02LR-T00](#) [PS21K-NT02PR-Y00](#) [PS21K-NS11R3-T00](#) [PS42K-NS02LR-](#)
[T00](#) [PS42K-NT11PR-Y00](#) [PS21K-NS02R1-Y00](#) [PS42K-NT02P0-T00](#) [PS21K-NT11RT-Y00](#) [PS42K-NS02P0-T00](#)
[PS21K-NT02P0-T00](#) [PS42K-NT02PR-Y00](#) [PS21K-NS02P0-Y00](#) [PS21K-NT11PR-T00](#) [PS21K-NT02R4-Y00](#) [PS42K-](#)
[NS11P0-T00](#) [PS21K-NS11R4-Y00](#) [PS42K-NT11LR-T00](#) [PS42K-NT11P0-T00](#) [PS42K-NS02R3-Y00](#) [PS21K-NT02R3-](#)
[T00](#) [PS21K-NS11RT-Y00](#) [PS42K-NT02R3-Y00](#) [PS42K-NT02LR-Y00](#) [PS42K-NS11LR-T00](#) [PS42K-NS02LR-Y00](#)
[PS21K-NT11P0-T00](#) [PS42K-NS11PR-Y00](#) [PS42K-NT02RT-Y00](#) [PS21K-NS02P0-T00](#) [PS21K-NS11R4-T00](#) [PS21K-](#)
[NT02RT-Y00](#) [PS21K-NS11PR-Y00](#)