

Limit Switch - Safety Type with pull button reset

Plastic Body IP65 and Metal Body IP66



- 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:

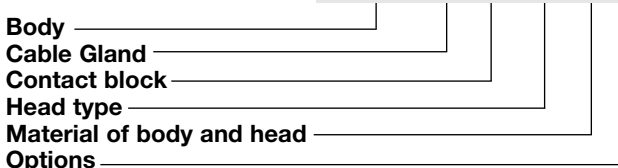
- Ideal for detection and monitoring of faults in hoisting machines, electric lifts, freight elevators, escalators, conveyor belts, etc.
- With manual reset comply with the requirements of standard EN 418 (safety of machinery - emergency stop). After actuating the control device and

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

PS21K-PS11RT-M00



Description of the key codes

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(+)

Material of body and head

T	Thermoplastic body and Thermoplastic head
Y	Metal body and Thermoplastic head

Head type

LR	Steel PLUNGER with nylon roller
P0	Metal plain PLUNGER
PR	Metal roller PLUNGER
R3	Adj. LEVER with steel ball bearing
R4	Plastic roller LEVER on metal PLUNGER (left)
RT	Nylon roller LEVER

Options

00	no option
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Technical Data

	Plastic Body	Metal Body
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 - for storage	-25°C...+70°C/-13°F...+158°F -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 (1/2 sinusoidal shock for 11ms) no change in contact position	
Resistance to vibrations (according 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	Class I
Degree of protection (according to IEC 529 and EN 60529)	IP65	IP66
Consistency (measured over 1 milion operations)	0.1mm/0.004" (upon closing point)	

Electrical Data

	Plastic Body	Metal Body
Rated insulation voltage U_i -according to IEC 60947-1 and EN 60947-1 -according to UL 508, CSA C22-2 n°14	500V (degree of pollution 3) A 600 Q 600	400V (degree of pollution 3) A 300 Q 300
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) ($\theta \leq 40^\circ\text{C}$)		10A
Short-circuit protection - gG type fuses		10A
Rated operational current		
I_e / AC-15 - acc.to IEC 60947-5-1	24VAC (50/60 Hz) 130VAC (50/60 Hz) 230VAC (50/60 Hz) 240VAC (50/60 Hz) 400VAC (50/60 Hz)	10.0A 5.5A 3.1A 3.0A 1.8A
	- acc.to UL 508, CSA C22 n°14	A 600 A 300
I_e / DC-13 - acc.to IEC 60947-5-1	24VDC 110VDC 250VDC	2.8A 0.6A 0.27A
	- acc.to UL 508, CSA C22 n°14	Q 600 Q 300
Electrical durability (according to IEC 60497-5-1 annex C) - max. switching frequency Cycles/h - load factor	Utilization categories AC-15 and DC-13 (see curves and value below) 3600 0.5	
Connecting data of contact blocks Connecting terminals Connecting capacity 1 or 2 x mm ² / AWG Terminal marking	M3.5 (+,-) pozidriv 2 screw with cable clamp 0.5mm² / AWG 20 to 2.5mm² / AWG 14 According to EN 50013	
Positivity	Contacts with positive opening operation as per IEC 60947-5-1 chapter 3	

Diagram for snap action contact:

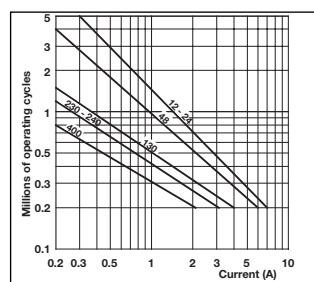
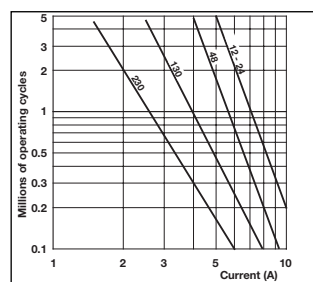


Diagram for slow action contact:



Electrical durability for DC-13 utilization category

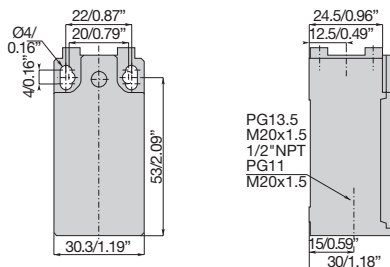
Power breaking for a durability of 5 million operating cycles		
	Snap action	Slow action
Voltage 24V	9.5W	12W
Voltage 48V	6.8W	9W
Voltage 110V	3.6W	6W

Limit Switches - Safety Type (PS21K) Plastic Body IP65



● 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	
T02 (2NC) Slow Action		S02 (2NC) Snap Action	

		S11		T11	
		T02		S02	

Conformity / (NC)	EN 50047 / (NC)	Steel plunger with reset	
Max. Actuation speed	0.5m/s / 1.64ft/s	Code	PS21K-●▲P0-T00
Min. force or torque	9N / 44Nm		
Weight	97.0g / 3.819oz		

		S11		T11	
		T02		S02	

Conformity / (NC)	EN 50047 / (NC)	Steel plunger with nylon roller with reset	
Max. Actuation speed	0.3m/s / 0.98ft/s	Code	PS21K-●▲PR-T00
Min. force or torque	12N / 41Nm		
Weight	99.0g / 3.492oz		

		S11		T11	
		T02		S02	

Conformity / (NC)	EN 50047 / (NC)	Plastic roller lever on metal plunger with reset	
Max. Actuation speed	1.0m/s / 3.28ft/s	Code	PS21K-●▲R3-T00
Min. force or torque	7N / 24Nm		
Weight	102.0g / 4.016oz		

		S11		T11	
		T02		S02	

Conformity / (NC)	EN 50047 / (NC)	Plastic roller lever on metal plunger with reset	
Max. Actuation speed	1.0m/s / 3.28ft/s	Code	PS21K-●▲R4-T00
Min. force or torque	7N / 24Nm		
Weight	103.0g / 4.055oz		

Limit Switches - Safety Type (PS21K) Metal Body IP66

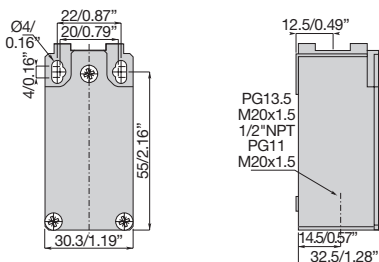


● Cable Gland

- 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	
T02 (2NC) Slow Action		S02 (2NC) Snap Action	



		S11 	T11

Conformity / (NC)	EN 50047 / (NC)	Steel plunger with reset	
Max. Actuation speed	0.5m/s / 1.64ft/s	Code	PS21K-●▲P0-Y00
Min. force or torque	9N / 44Nm		
Weight	193g / 7.598oz		

		S11 	T11

Conformity / (NC)	EN 50047 / (NC)	Steel plunger with nylon roller with reset	
Max. Actuation speed	0.3m/s / 0.98ft/s	Code	PS21K-●▲PR-Y00
Min. force or torque	12N / 41Nm		
Weight	196.0g / 7.716oz		

		S11 	T11

Conformity / (NC)	EN 50047 / (NC)	Plastic roller lever on metal plunger with reset	
Max. Actuation speed	1.0m/s / 3.28ft/s	Code	PS21K-●▲R3-Y00
Min. force or torque	7N / 24Nm		
Weight	199.0g / 7.835oz		

		S11 	T11

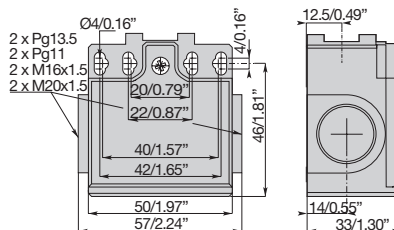
Conformity / (NC)	EN 50047 / (NC)	Plastic roller lever on metal plunger with reset	
Max. Actuation speed	1.0m/s / 3.28ft/s	Code	PS21K-●▲R4-Y00
Min. force or torque	7N / 24Nm		
Weight	199.0g / 7.835oz		

Limit Switches - Safety Type (PS42K) Plastic Body IP65



● 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	
T02 (2NC) Slow Action		S02 (2NC) Snap Action	

		S11		T11	
		T02		S02	

Conformity / (NC)	EN 50047 / (C)	Steel plunger with reset	
Max. Actuation speed	0.5m/s / 1.64ft/s	Code	PS42K-●▲P0-T00
Min. force or torque	9N / 44Nm		
Weight	126g / 4.961oz		

		S11		T11	
		T02		S02	

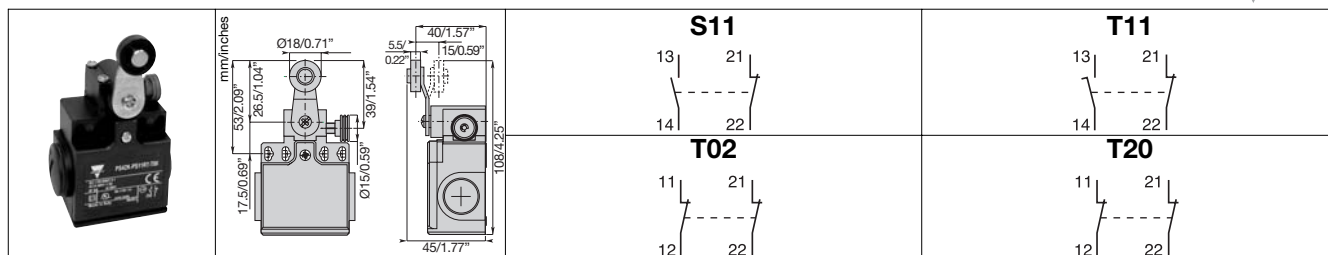
Conformity / (NC)	EN 50047 / (C)	Steel plunger with nylon roller with reset	
Max. Actuation speed	0.3m/s / 0.98ft/s	Code	PS42K-●▲PR-T00
Min. force or torque	12N / 41Nm		
Weight	128.0g / 5.039oz		

		S11		T11	
		T02		S02	

Conformity / (NC)	EN 50047 / (C)	Plastic roller lever on metal plunger with reset	
Max. Actuation speed	1.0m/s / 3.28ft/s	Code	PS42K-●▲R3-T00
Min. force or torque	7N / 24Nm		
Weight	131.0g / 5.157oz		

		S11		T11	
		T02		S02	

Conformity / (NC)	EN 50047 / (C)	Plastic roller lever on metal plunger with reset	
Max. Actuation speed	1.0m/s / 3.28ft/s	Code	PS42K-●▲LR-T00
Min. force or torque	7N / 24Nm		
Weight	138.0g / 5.433oz		



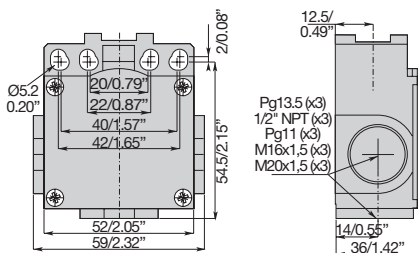
Conformity / (↔) (NC)	EN 50047 / (↔)	Lever with nylon roller with reset	
Max. Actuation speed	1.5m/s / 4.92ft/s	Code	PS42K-●▲RT-T00
Min. force or torque	0.10N / 0.32Nm		
Weight	129.0g / 5.079oz		

Limit Switches - Safety Type (PS42K) Metal Body IP65



● 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	
T02 (2NC) Slow Action		S02 (2NC) Snap Action	

		S11	T11
		T02	S02

Conformity / (NC)	EN 50047 / (N)	Steel plunger with reset	
Max. Actuation speed	0.5m/s / 1.64ft/s	Code	PS42K-●▲P0-Y00
Min. force or torque	9N / 44Nm		
Weight	295g / 11.614oz		

		S11	T11
		T02	S02

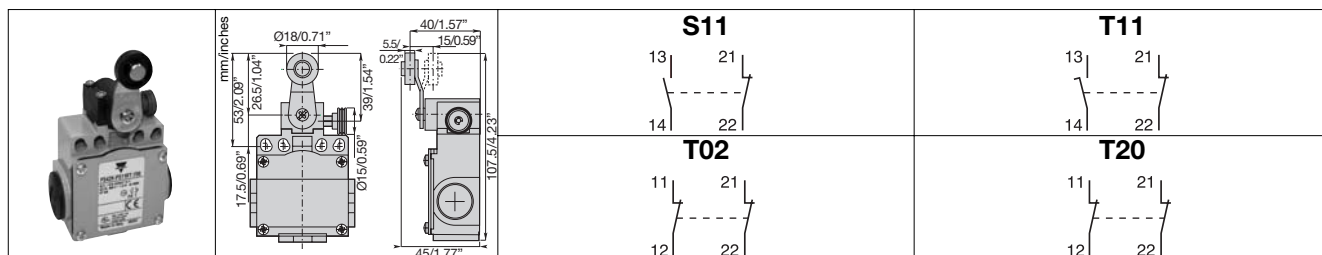
Conformity / (NC)	EN 50047 / (N)	Steel plunger with nylon roller with reset	
Max. Actuation speed	0.3m/s / 0.98ft/s	Code	PS42K-●▲PR-Y00
Min. force or torque	12N / 41Nm		
Weight	298.0g / 11.732oz		

		S11	T11
		T02	S02

Conformity / (NC)	EN 50047 / (N)	Plastic roller lever on metal plunger with reset	
Max. Actuation speed	1.0m/s / 3.28ft/s	Code	PS42K-●▲R3-Y00
Min. force or torque	7N / 24Nm		
Weight	301.0g / 11.850oz		

		S11	T11
		T02	S02

Conformity / (NC)	EN 50047 / (N)	Plastic roller lever on metal plunger with reset	
Max. Actuation speed	1.0m/s / 3.28ft/s	Code	PS42K-●▲LR-Y00
Min. force or torque	7N / 24Nm		
Weight	307.0g / 12.087oz		



Conformity / (NC)	EN 50047 / (C)	Lever with nylon roller with reset	
Max. Actuation speed	1.5m/s / 4.92ft/s	Code	PS42K-●▲ RT-Y00
Min. force or torque	0.10N / 0.32Nm		
Weight	299.0g / 11.772oz		

Utilization precautions

Plain plunger

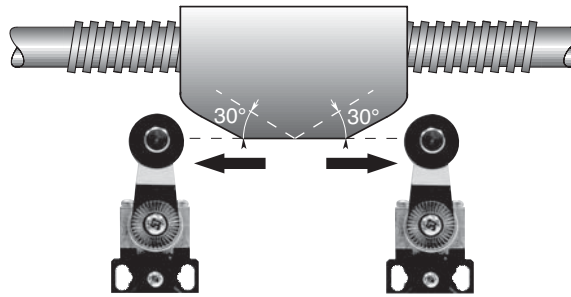


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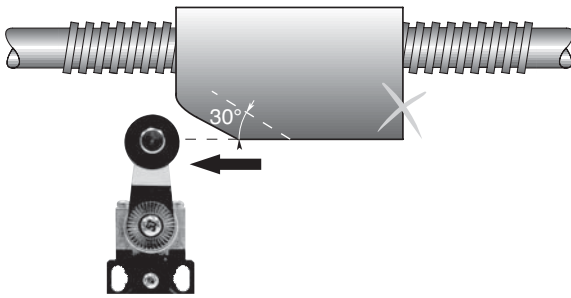


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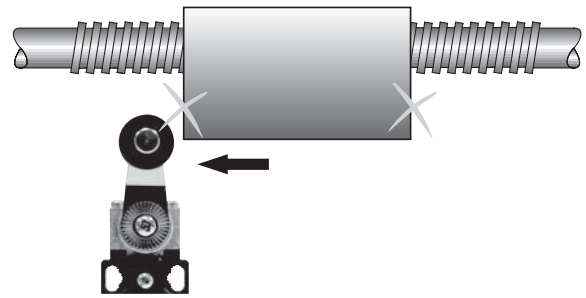
Roller plunger or Roller lever



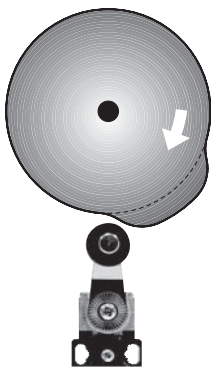
Correct



Incorrect



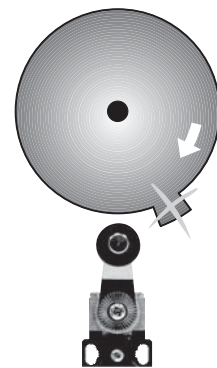
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Correct

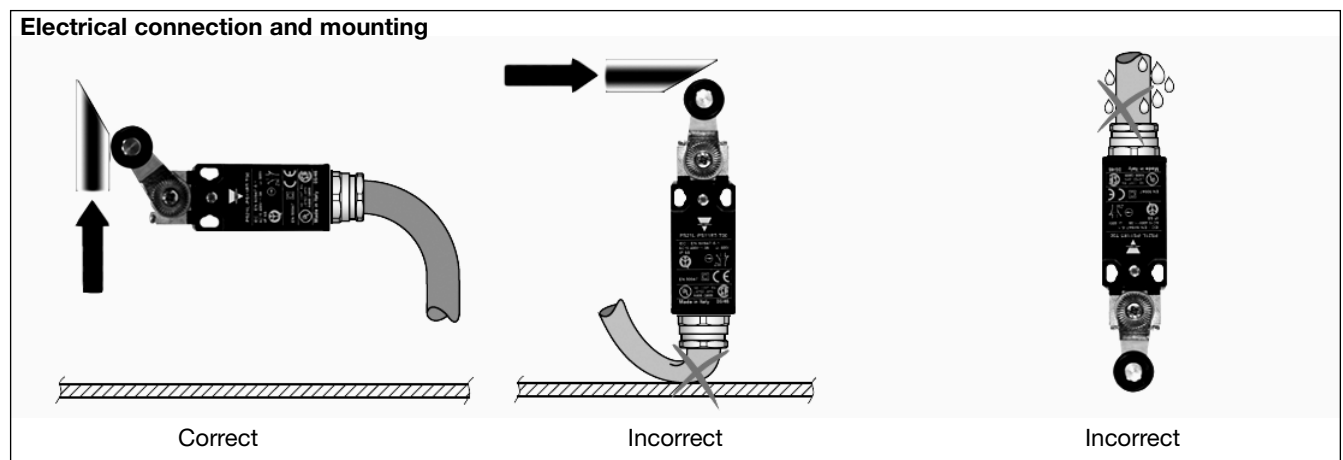


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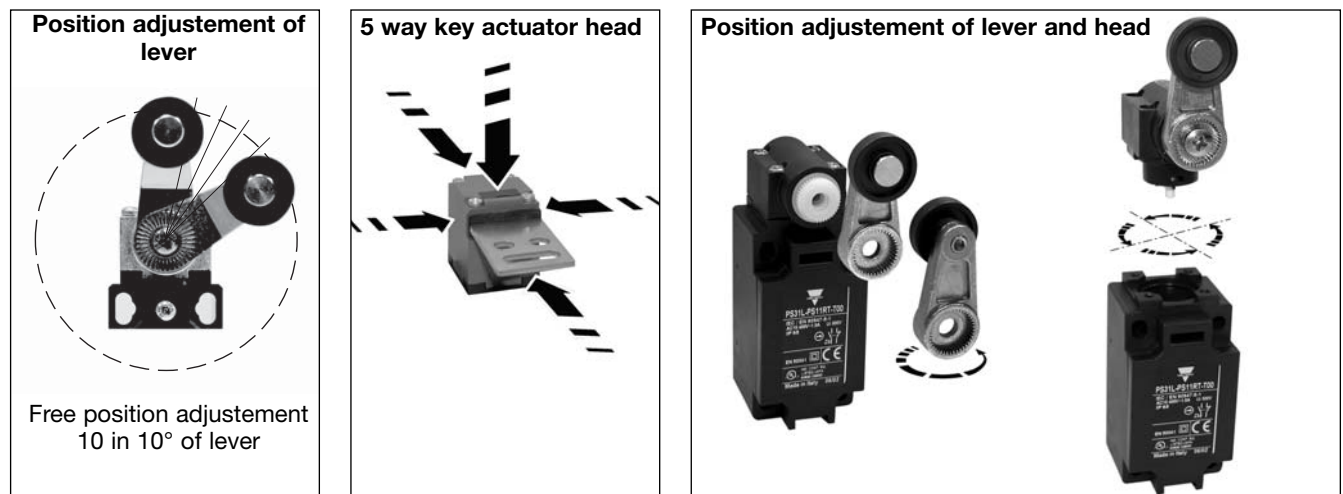


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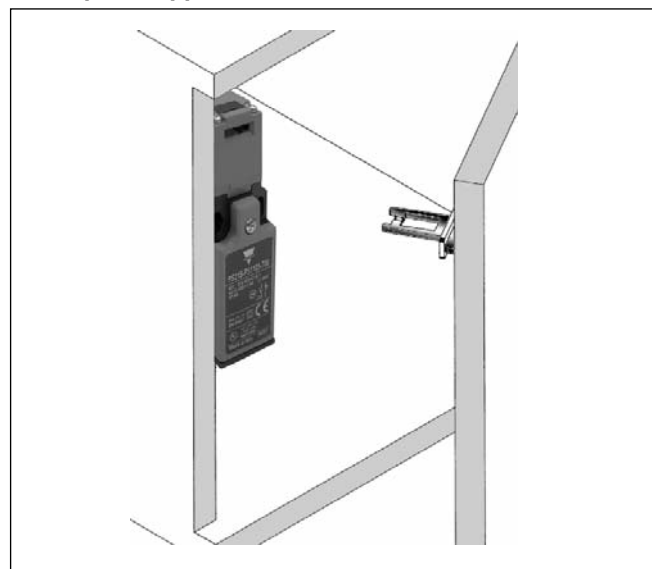
Utilization precautions



Adjustment



Example of applications



Key actuator type