



# TANGO

## ROD POSITION LIMIT SWITCH

### PRODUCT DESCRIPTION

Tango is a position limit switch designed to control overhead travelling cranes, hoists and machine tools. It operates as auxiliary controller of electrical motors through power interfaces, such as contactors or PLCs.

Tango is the latest generation of position limit switches: the peculiar design and the use of high performing polymers ensure high resistance and endurance under the heaviest utilisation conditions.

Its design and overall dimensions facilitate installation and maintenance operations.

Both the enclosure and the head of Tango are made of

thermoplastic material (nylon reinforced with fibreglass) ensuring wear resistance and protecting the equipment against water and dust. X-type rods can move to 4 maintained positions.

Inner components are made of techno-polymers guaranteeing a long life-cycle and constant performance even at extreme temperatures.


Tango is equipped with 1NC slow action switches or, upon request, 1NO switches.

All switches are of the positive opening type, thus suitable for safety functions.

### GENERAL TECHNICAL SPECIFICATIONS

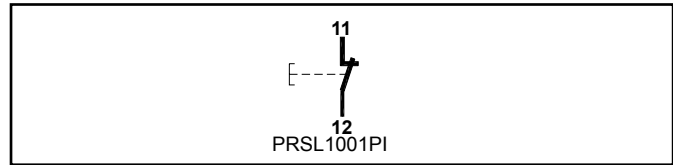
- Conformity to Community Directives: 2006/95/CE 2006/42/CE
- Conformity to Standards: EN 60204-1 EN 60947-1 EN 60947-5-1 EN 60529
- Storage ambient temperature:  $-40^{\circ}\text{C}/+70^{\circ}\text{C}$
- Operational ambient temperature:  $-25^{\circ}\text{C}/+70^{\circ}\text{C}$
- Protection degree: IP 65
- Insulation category: Class II
- Cable entry: cable clamp M20
- Operation frequency: 3600 operations/hour max
- Markings and homologations: **CE**

### TECHNICAL SPECIFICATIONS OF THE MICROSWITCHES

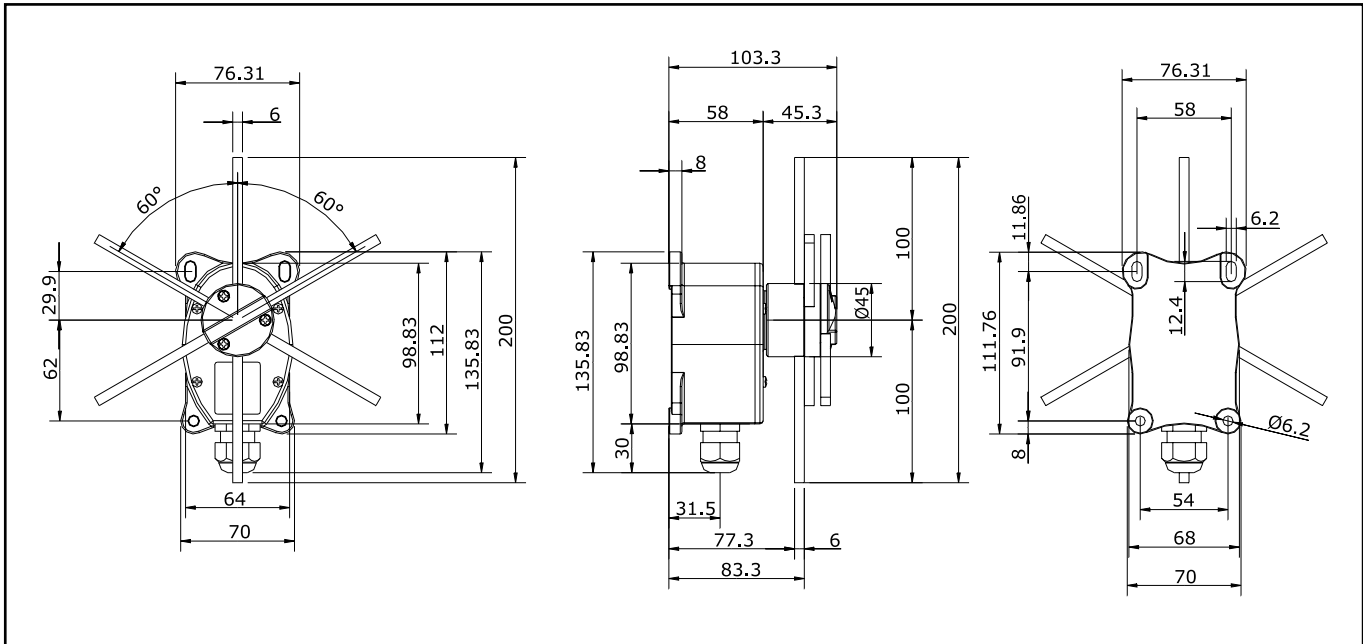
- Utilisation category: AC 15
- Rated operational current: 3 A
- Rated operational voltage: 250 V
- Rated thermal current: 10 A
- Rated insulation voltage: 500 V~
- Mechanical life:  $1 \times 10^6$  operations
- Terminal referencing: according to EN 50013
- Connections: screw-type terminals
- Wires:  $1 \times 2.5 \text{ mm}^2$ ,  $2 \times 1.5 \text{ mm}^2$   
(UL - (c)UL: use 60 or 70 °C copper (CU) conductor and wire size No. 16-18 AWG)
- Tightening torque: 0.6 Nm
- Markings and homologations: **CE** 

## FEATURES OF THE SWITCHES

The snap action single switch PRSL0036XX has 1 NO + 1 NC change over contacts with 2 connecting terminals each. The switches have the following reference for internal wiring.



## OVERALL DIMENSIONS



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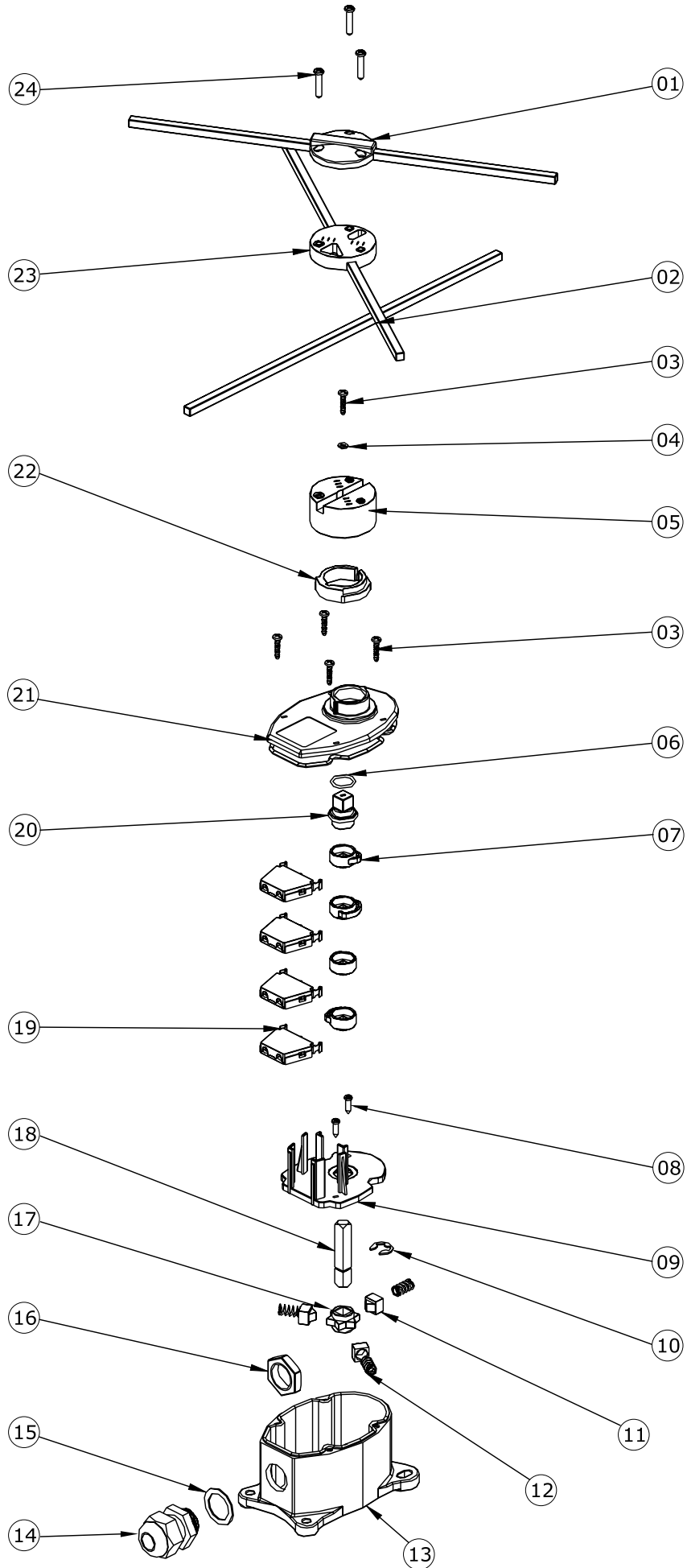
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**COMPONENTS**

Reference	Code	Description
01	PRSL9023PI	Upper rod support
02	PRTO3006PE PRTO3011PE PRTO3012PE	Rod 6x6x200 mm Rod 6x6x250 mm Rod 6x6x300 mm
03	PRVI0097PE	Screw 4x16 UNI9707-Z-TZ
04	PRRN1012PE	Washer
05	PRSL9022PI	Lower rod support
06	PRGU0048PE	O-Ring
07	PRSL7162PI PRSL7163PI PRSL7164PI PRSL7165PI PRSL7166PI	Cam 60° left Cam 60° right Cam 110° left Cam 110° right Cam for right-left slowing
08	PRVI0051PE	Screw 3.5x12 UNI 9707-Z-TZ
09	PRSL8732PI	Microswitch support plate
10	PRRN1102PE	Elastic ring
11	PRSL7081PI	Pin for notch
12	PRMO2022PE	Spring
13	PRSL5080PI	Enclosure
14	PRPS0064PE	Cable clamp M20
15	PRGU0008PE	Cable clamp gasket
16	PRDA1004PE	Cable clamp locking nut
17	PRSL7161PI	Wheel for notches
18	PRTO0020PE	Shaft
19	PRSL1000PI PRSL1001PI	1NO switch 1NC switch
20	PRSL9674PI	Drive bush
21	PRSL5594PI	Cover with rubber
22	PRSL8552PI	Ring for rod support
23	PRSL9021PI	Middle rod support
24	PRVI0126PE	Screw 4x20

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## STANDARD LIMIT SWITCH CODES

Code	N°of switches	Rod length	Actuating travel
PF48020001 PF48020005 PF48020006	2 2 2	300mm 250mm 200mm	<p>11-12 <math>0^{\circ}</math> <math>34^{\circ}</math></p> <p>11-12 <math>34^{\circ}</math> <math>0^{\circ}</math></p>
PF48030001 PF48030002 PF48030003	3 3 3	300mm 250mm 200mm	<p>11-12 <math>94^{\circ}</math> <math>0^{\circ}</math></p> <p>11-12 <math>0^{\circ}</math> <math>94^{\circ}</math></p> <p>11-12 <math>34^{\circ}</math> <math>0^{\circ}</math> <math>34^{\circ}</math></p>
PF48040001 PF48040006 PF48040007	4 4 4	300mm 250mm 200mm	<p>11-12 <math>0^{\circ}</math> <math>94^{\circ}</math></p> <p>11-12 <math>0^{\circ}</math> <math>34^{\circ}</math></p> <p>11-12 <math>94^{\circ}</math> <math>0^{\circ}</math></p> <p>11-12 <math>34^{\circ}</math> <math>0^{\circ}</math></p>

## MAXIMUM ACTUATING DIMENSIONS

### Rods with 4 maintained positions

- Pre-travel angle for rotation contact operation:  $34^{\circ}$
- Maximum rotation angle for each maintained position:  $60^{\circ}$
- Average angle for the mechanical tripping:  $30^{\circ}$
- Maintained positions each:  $60^{\circ}$

In order to ensure proper operations, the dimensions shall not be increased; anyhow, they can be decreased, taking into account that the closer the impact point is to the center of the head, the higher the impact and the mechanical wear of rod and shaft are.

