

# STANDARD

## Position limit switch



Cross position limit switch designed for controlling the movement of overhead travelling cranes, hoists and complex machine tools. Standard is used in building and industrial hoisting applications, in automation and in the entertainment industry.

### FEATURES

- Standard box size 80x70x39 mm, with 2 fixing holes.
- Positive opening NC contacts for safety functions.
- Mechanical life of switches: 1 million operations.
- Operation frequency: 3600 operations/hour max.
- IP protection degree: Standard is classified IP65 with specific cable clamp M20.
- Extreme temperature resistance: -25°C to +70°C.
- Enclosure and head in thermoplastic material.
- All materials and components used are wear resistant and guarantee protection of the unit against water and dust.

### OPTIONS

- 1 or 2 snap action switches with 1NO+1NC change-over contacts or slow action switches with 1NC contact.
- Heads with 15 different types of actuators for different applications.

### CERTIFICATIONS

- CE marking and EAC certification.



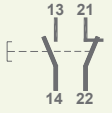
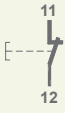
## CERTIFICATIONS

Conformity to Community Directives	2014/35/UE Low Voltage Directive
	2006/42/CE Machinery Directive
Conformity to CE Standards	EN 60204-1 Safety of machinery - Electrical equipment of machines
	EN 60947-1 Low-voltage switchgear and controlgear
	EN 60947-5-1 Low-voltage switchgear and controlgear - Control circuit devices and switching elements - Electromechanical control circuit devices
	EN 60529 Degrees of protection provided by enclosures
Markings and homologations	CE EAC

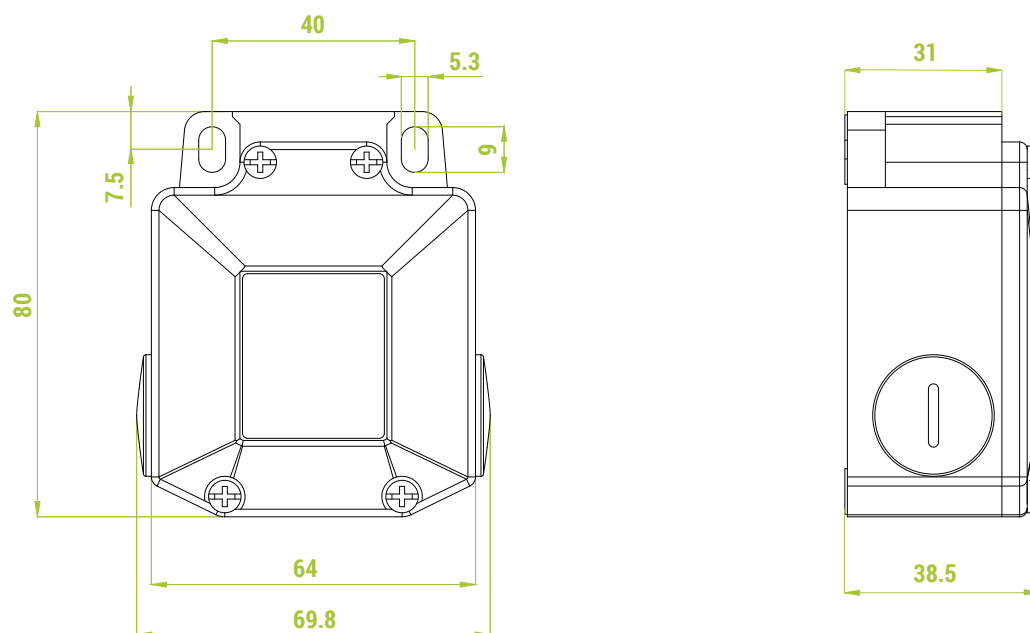
## GENERAL TECHNICAL SPECIFICATIONS

Ambient temperature	Storage -40°C/+70°C
	Operational -25°C/+70°C
IP protection degree	IP65 max. with dedicated cable clamp M20
Insulation category	Class II
Operation frequency	3600 operations/hour max
Cable entry	Cable clamp M20
Operating position	Any position

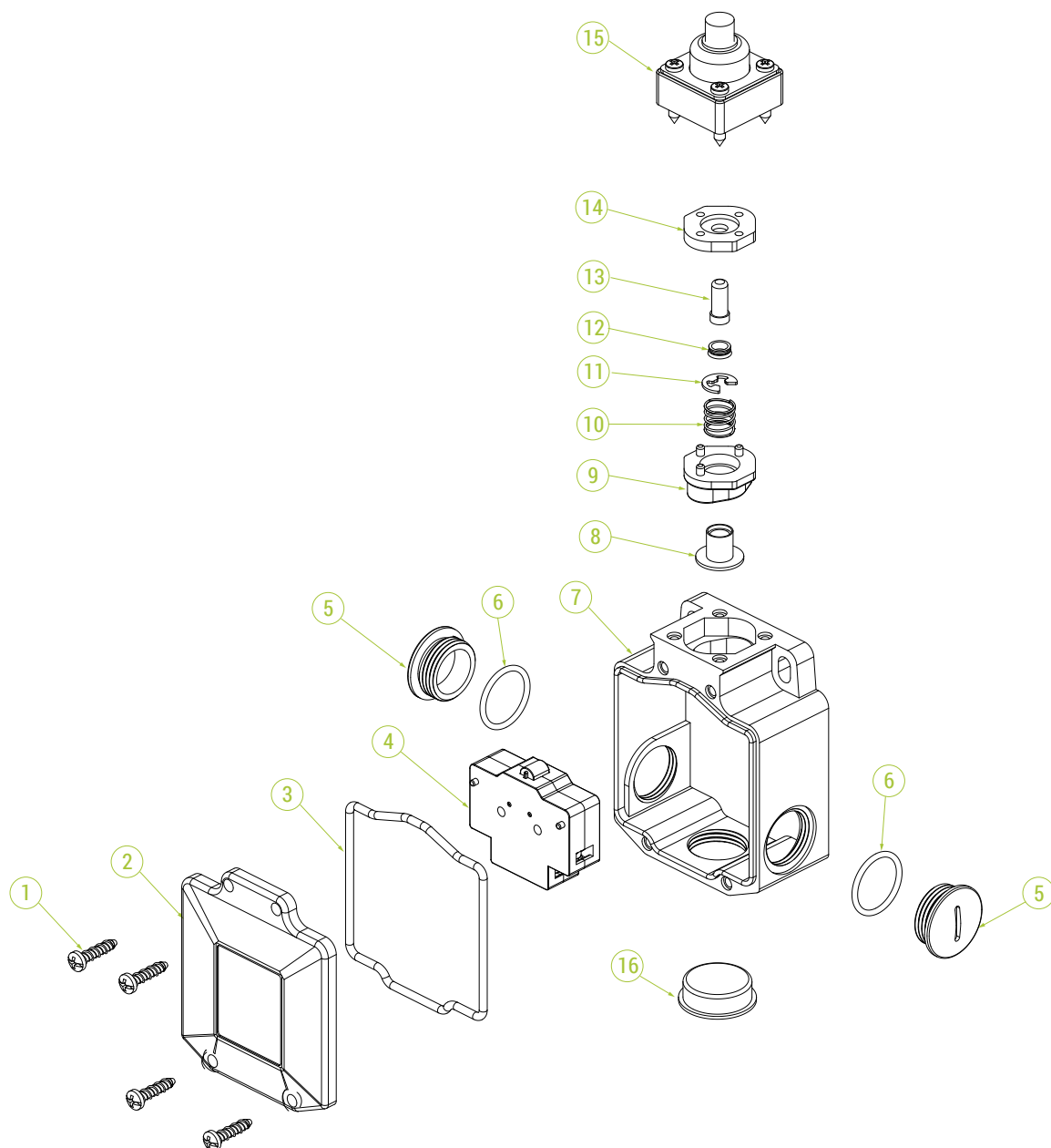
## TECHNICAL SPECIFICATIONS OF THE MICROSWITCHES

Code	PRSL0036XX	PRSL0037XX
Utilisation category	AC 15	
Rated operational current	3 A	
Rated operational voltage	250 Vac	
Rated thermal current	10 A	
Rated insulation voltage	300 Vac	
Mechanical life	1x10 <sup>6</sup> operations	
Connections	Screw-type terminal	
Wires	1x2.5 mm <sup>2</sup> , 2x1.5 mm <sup>2</sup> (UL - (c)UL: conduttori in rame (CU) 60°C o 75°C con cavo 16-18 AWG)	
Tightening torque	0.8 Nm	
Microswitch type	Double break, snap action	Double break, slow action
Contacts	1NO+1NC (All NC contacts are of the positive opening operation type  )	1NO+1NC (All NC contacts are of the positive opening operation type  )
Scheme		
Markings and homologations	CE cULus EAC	

## OVERALL DIMENSIONS (mm)

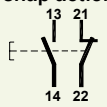
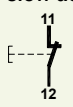
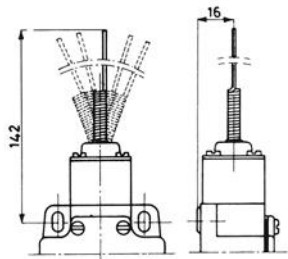
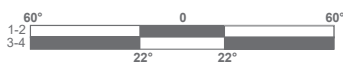
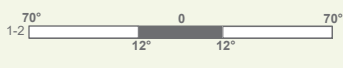
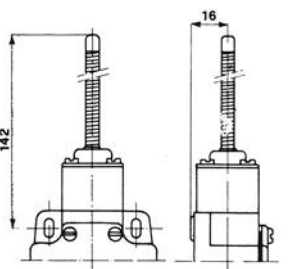
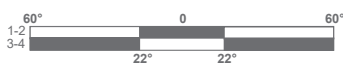
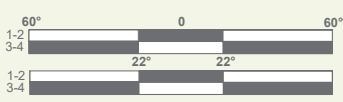
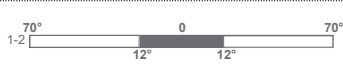
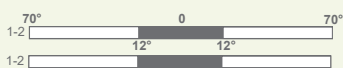
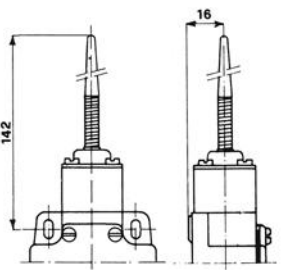
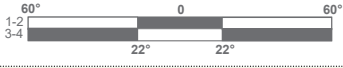
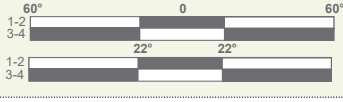
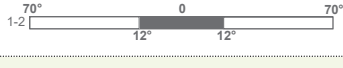

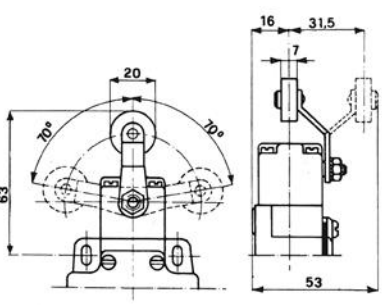
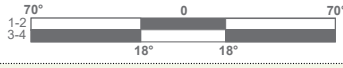
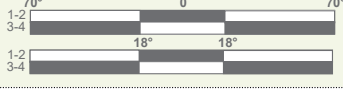
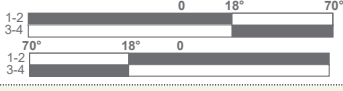
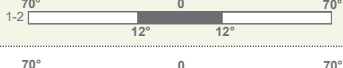
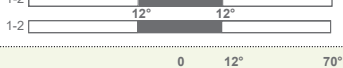



## EXPLODED DRAWING

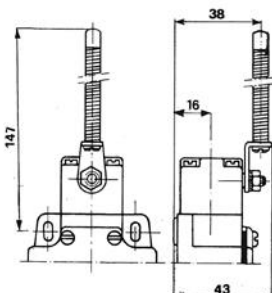
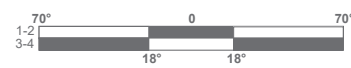
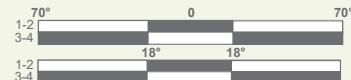
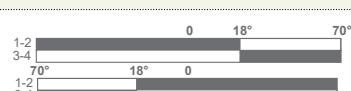
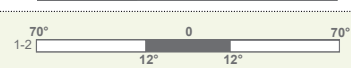
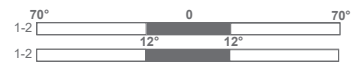
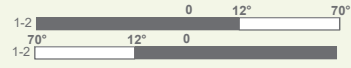
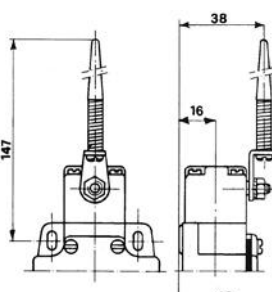
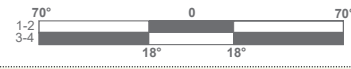
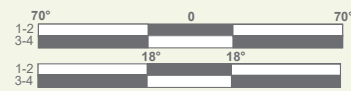
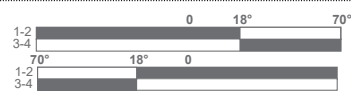
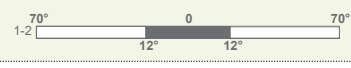
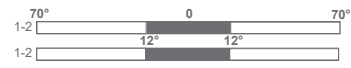
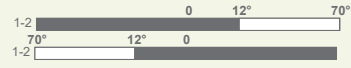
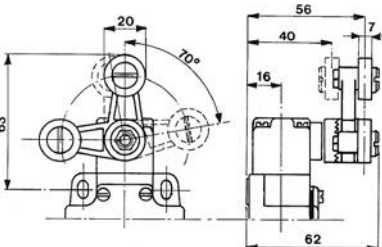
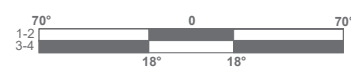
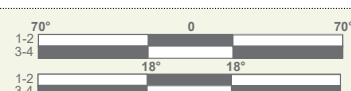
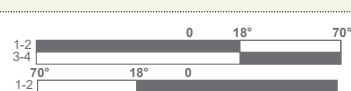
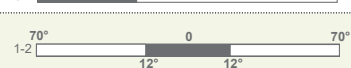
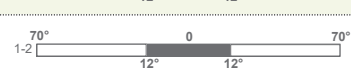
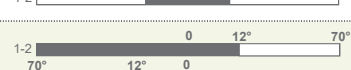


## LIMIT SWITCHES

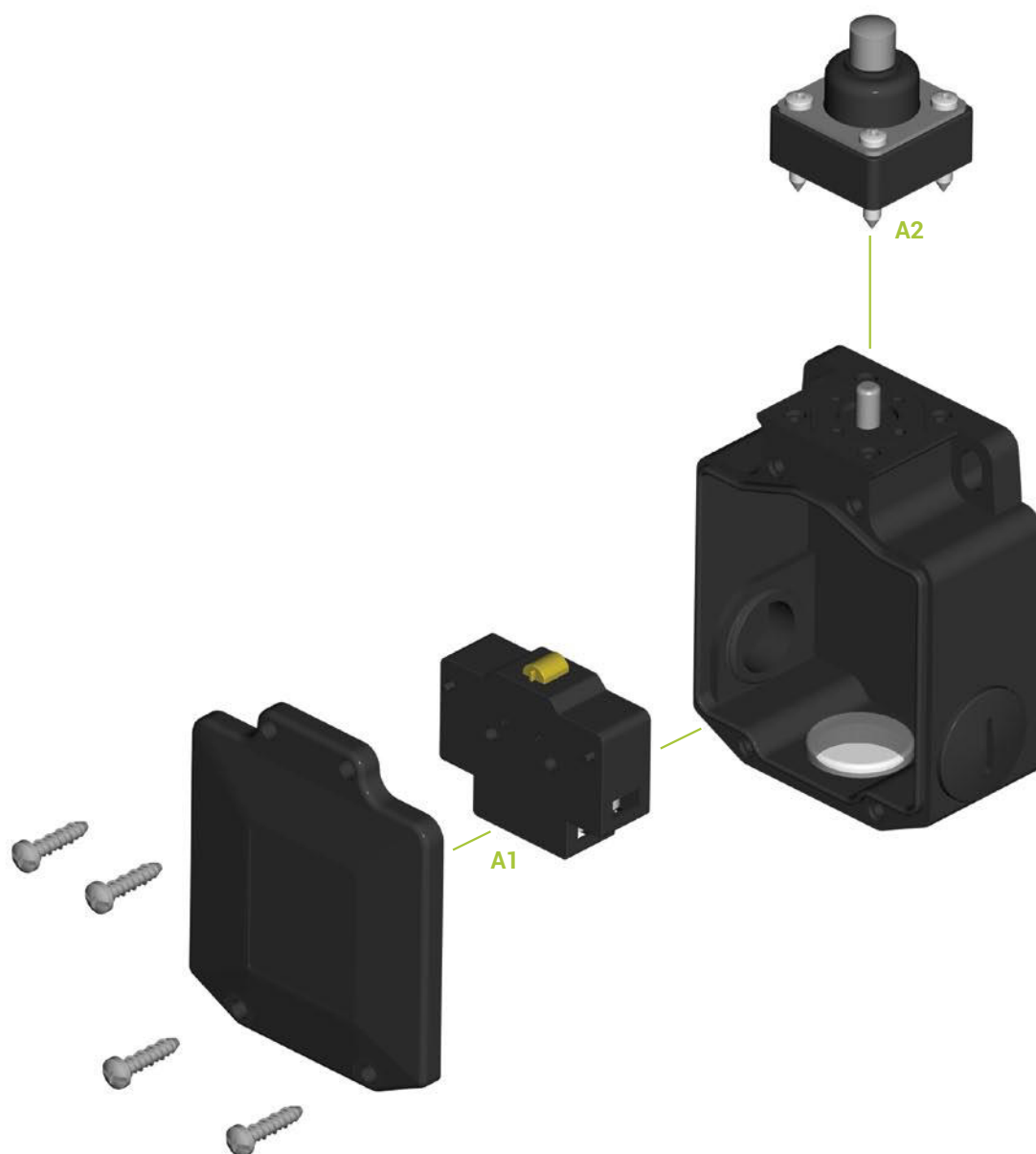
Description and overall dimensions (mm)	Switch type		Actuating travel	Code
	PRSL0036XX 1NO+1NC snap action	PRSL0037XX 1NC slow action		
<b>Plunger</b>  	1	-		PF33770100
	2	-		PF33770200
	-	1		PF33770600
	-	2		PF33770700
<b>Ball plunger</b>  	1	-		PF33771100
	2	-		PF33771200
	-	1		PF33771600
	-	2		PF33771700
<b>Roller plunger</b>  	1	-		PF33772100
	2	-		PF33772200
	-	1		PF33772600
	-	2		PF33772700
<b>Central roller lever</b>  	1	-		PF33773100
	2	-		PF33773200
	-	1		PF33773600
	-	2		PF33773700
<b>Angular roller lever</b>  	1	-		PF33774100
	2	-		PF33774200
	-	1		PF33774600
	-	2		PF33774700

Description and overall dimensions (mm)	Switch type		Actuating travel	Code
	PRSL0036XX 1NO+1NC snap action	PRSL0037XX 1NC slow action		
				
Flexible rod		1	-	 PF33775100
		-	1	 PF33775600
Central stiffened spring rod		1	-	 PF33776100
		2	-	 PF33776200
		-	1	 PF33776600
		-	2	 PF33776700
Central spring rod with ferrule		1	-	 PF33777100
		2	-	 PF33777200
		-	1	 PF33777600
		-	2	 PF33777700
Central roller iron lever		1	-	 PF33780100
		2	-	 PF33780200
		2	-	 PF33780400
		-	1	 PF33780600
		-	2	 PF33780700
		-	2	 PF33780900

Description and overall dimensions (mm)	Switch type		Actuating travel	Code
	PRSL0036XX 1NO+1NC snap action	PRSL0037XX 1NC slow action		
	1	-		PF33782100
	2	-		PF33782200
	2	-		PF33782400
	-	1		PF33782600
	-	2		PF33782700
	-	2		PF33782900
	1	-		PF33783100
	2	-		PF33783200
	2	-		PF33783400
	-	1		PF33783600
	-	2		PF33783700
	-	2		PF33783900
	1	-		PF33784100
	2	-		PF33784200
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

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	-	2		PF33785700
	-	2		PF33785900
	1	-		PF33786100
	2	-		PF33786200
	2	-		PF33786400
	-	1		PF33786600
	-	2		PF33786700
	-	2		PF33786900
	1	-		PF33787100
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## ASSEMBLY DRAWING

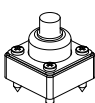


## COMPONENTS

## Switches

Ref.	Drawing	Description	Scheme	Code
A1		1NO+1NC snap action switch		PRSL0036XX
		1NC slow action switch		PRSL0037XX

## Accessories

Ref.	Drawing	Description	Code
A2		Head	PF337__TE The head code is the same of the corresponding limit switch code, ending with TE instead of 00



## USE AND MAINTENANCE INSTRUCTIONS

*The Standard position limit switch is an electromechanical device for low voltage control circuits (EN 60947-1, EN 60947-5-1) to be used as electrical equipment on machines (EN 60204-1) in compliance with the fundamental requirements of the Low Voltage Directive 2014/35/UE and of the Machine Directive 2006/42/CE.*

The limit switch is designed for use in industrial environments under even severe climatic conditions (operational temperature from  $-25^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  suitable for use in tropical environment). The equipment is not suitable for use in environments with potentially explosive atmosphere, corrosive agents or a high percentage of sodium chloride (saline fog). Oils, acids or solvents may damage the equipment. Do not connect more than one phase to each switch. Do not oil or grease the control elements or the switches; avoid using them for cleaning.

The installation of the limit switch shall be carried out by expert and trained personnel. Wiring shall be properly done according to the current instructions.

Prior to the installation and the maintenance of the limit switch, the main power of the machinery shall be turned off.

### Steps for the proper installation of the limit switch

- First, position the limit switch so that the machine or one arm of it strikes or pushes, depending on the limit switch type, the rod, the lever, the spring or the piston on the head of the limit switch. Follow the instructions carefully with regards to the positions indicated in the maximum actuating dimensions and travel in the technical documentation.
- Mark the fastening holes on the supporting wall and drill the holes. After fastening, make sure the rod is perfectly vertical, that the rods (03) are securely fastened in the head and that the points of impact are as verified previously.
- Loosen the fixing screw and remove the cover.
- Insert the cable into the limit switch through the cable clamp (not supplied).

- Strip the cable to a length suitable for wiring the switches.
- Tape the stripped part of the cable.
- Clamp the wire into the cable clamp.
- Connect the switches according to the contact scheme printed on the switches or on the technical documentation.
- Close the limit switch checking the proper positioning of the rubber in the cover and tighten the screws.

### Periodic maintenance steps

- Make sure the limit switch is securely fastened in place and the fasteners are tightened properly.
- Make sure there are no infiltrations of water through the wire clamp (not supplied) and that the rubber sleeve is intact and flexible.
- Open the cover and check that the gasket is intact and flat in its housing.
- Check that the switches are properly wired and the terminals securely fastened; test the on/off mechanism manually.
- Make sure the head turns or is pushed without forcing, that it is clean and moves without uncertainty between one position and the next; make sure the screws on the head are properly tightened. If there is any difficulty in switching and positioning the head, replace the limit switch.
- Check the conditions of the levers or pistons and make sure they are positioned correctly: if the levers are not perfectly straight they should be replaced and repositioned carefully in accordance with the specifications.

In case any component of the limit switch is modified, the validity of the markings and the guarantee on the equipment are annulled. Should any component need replacement, use original spare parts only.

TER declines all responsibility for damages caused by the improper use or installation of the equipment.