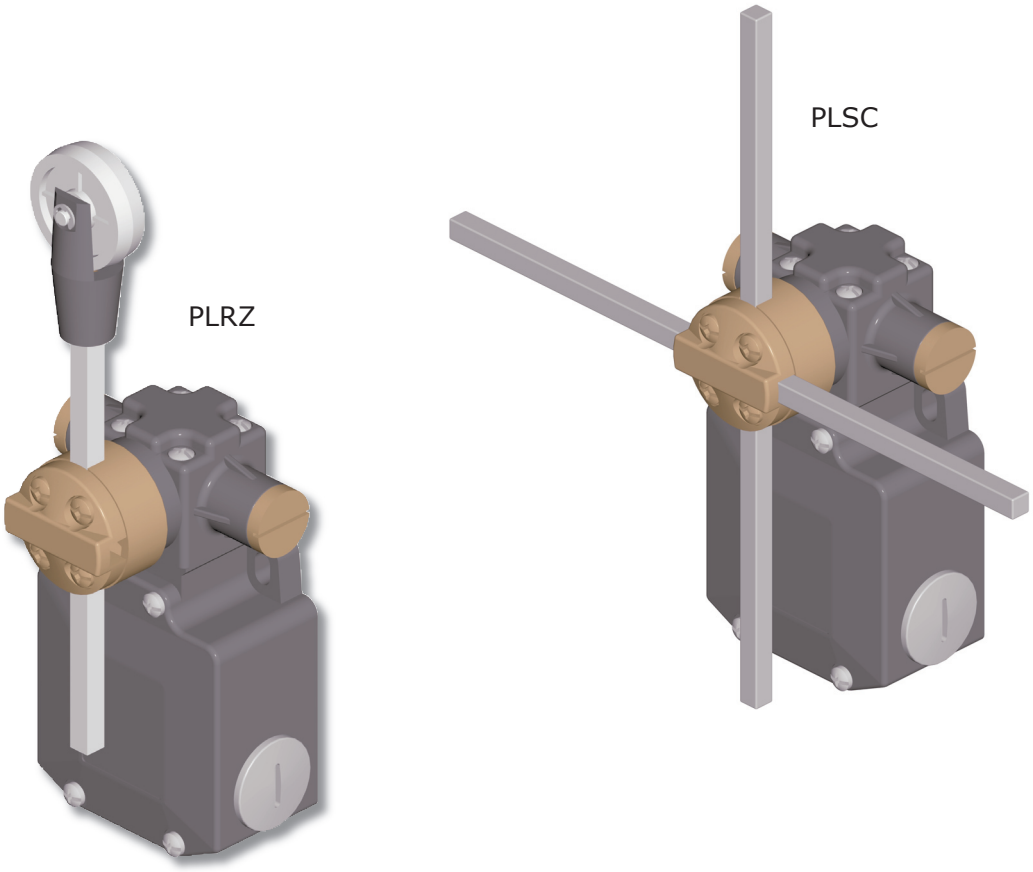
Position Limit Switches PLRZ-PLSC



Position limit switches are designed to control the movement of overhead travelling cranes, hoists and machine tools. They operate as auxiliary controllers of electrical motors through power interfaces, such as contactors or PLCs.

Both the enclosure and the head of the limit switches are made of thermoplastic material (nylon reinforced with fibre glass). Materials and components ensure high resistance and endurance and protect the equipment against water and dust.

The PLSC series has “T” or “Cross” rods which may move to 3 or 4 maintained positions, while the PLRZ series features a single rod or a rod with roller with spring return movements.

The limit switches are equipped with 1NO+1NC snap action switches or, upon request, with 1NC slow action switches. All switches are of the positive opening type, thus suitable for safety functions.

Meyer Industrie-Electronic GmbH – MEYLE
Carl-Bosch-Straße 8 Tel.: +49 5481-9385-0 Internet: www.meyle.de
49525 Lengerich/Germany Fax: +49 5481-9385-12 E-Mail: sales@meyle.de

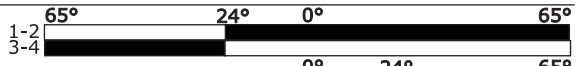
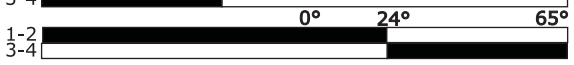
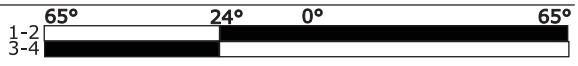
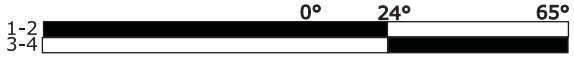
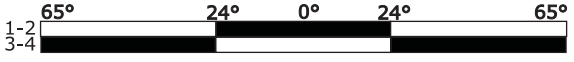
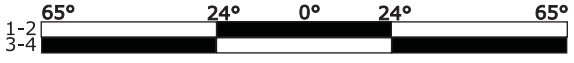
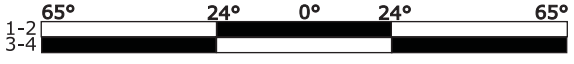
Technical Specifications

Conformity to Community Directives	73/23/CEE 93/68/CEE
Conformity to Standards	EN 60204-1 EN 60947-1 EN60947-5-1 EN 60529 IEC 536
Ambient temperature	Storage -40°C/+70°C Operational -25°C/+70°C
Protection degree	IP 65
Insulation category	Class II
Cable entry	Cable clamp M20
Operation frequency	3600 operations/hour max.

Technical Specifications of the Switches

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	$1x10^6$ operations
Terminal referencing	According to EN 50013
Connections	Screw-type terminals
Wires	1x2.5 mm^2, 2x1.5 mm^2 (UL - (c)UL: use 60 or 75 °C copper (CU) conductor and wire size No. 16-18 AWG)
Tightening torque	0.8 Nm

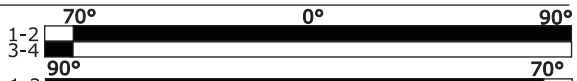
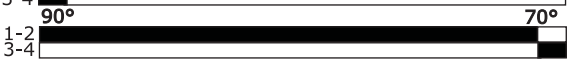
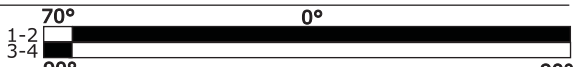
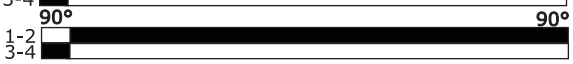
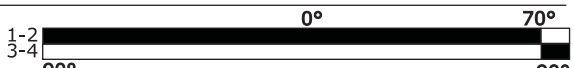
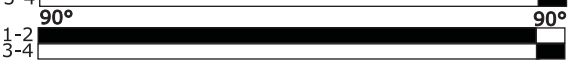
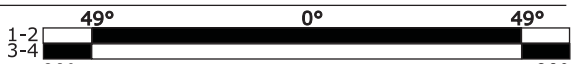
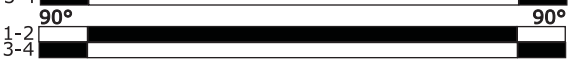
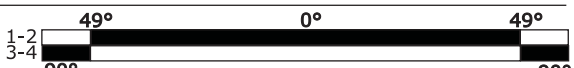
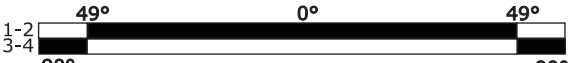
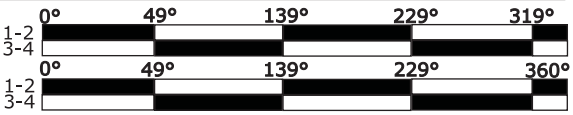
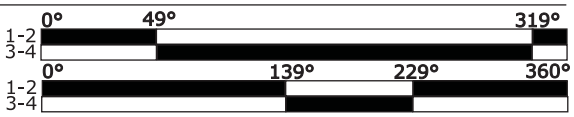
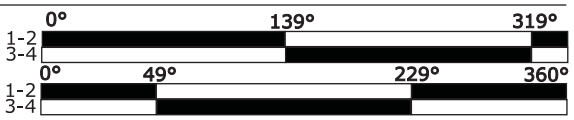
PLRZ Limit Switch Codes

Code	Rod	Positions	Actuating Travel
MY700.100	Rod	Spring return	
MY700.200	Rod and roller	Spring return	
MY701.100	Rod	Spring return	
MY701.200	Rod and roller	Spring return	
MY702.100	Rod	Spring return	
MY702.200	Rod and roller	Spring return	
MY703.100	Rod	Spring return	
MY703.200	Rod and roller	Spring return	
MY704.100	Rod	Spring return	
MY704.200	Rod and roller	Spring return	
MY705.100	Rod	Spring return	
MY705.200	Rod and roller	Spring return	

The limit switches are equipped with 1NO+1NC switches MY0036XX.

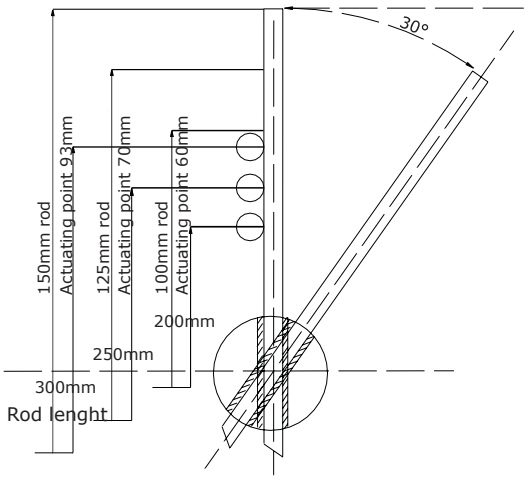
Meyer Industrie-Electronic GmbH – MEYLE
Carl-Bosch-Straße 8 Tel.: +49 5481-9385-0 Internet: www.meyle.de
49525 Lengerich/Germany Fax: +49 5481-9385-12 E-Mail: sales@meyle.de

PLSC Limit Switch Codes

Code	Rod	Positions	Actuating Travel
MY710.100	T-type	3 maintained	
MY710.200	Cross	3 maintained	
MY711.100	T-type	3 maintained	
MY711.200	Cross	3 maintained	
MY712.100	T-type	3 maintained	
MY712.200	Cross	3 maintained	
MY713.100	T-type	3 maintained	
MY713.200	Cross	3 maintained	
MY714.100	T-type	3 maintained	
MY714.200	Cross	3 maintained	
MY715.100	T-type	3 maintained	
MY715.200	Cross	3 maintained	
MY750.100	Cross	4 maintained	
MY751.100	Cross	4 maintained	
MY752.100	Cross	4 maintained	

The limit switches are equipped with 1NO+1NC switches MY0036XX.

Maximum Actuating Dimensions



T-type rod - Cross rod with 3 maintained positions

Pre-travel angle for rotation contact operation	70°-49°
Maximum rotation angle for each maintained position	90°
Average angle for the mechanical tripping	48°

Rod - Rod and Roller

Pre-travel angle for rotation contact operation	24°
Maximum rotation angle	65°

Cross rod with 4 maintained positions

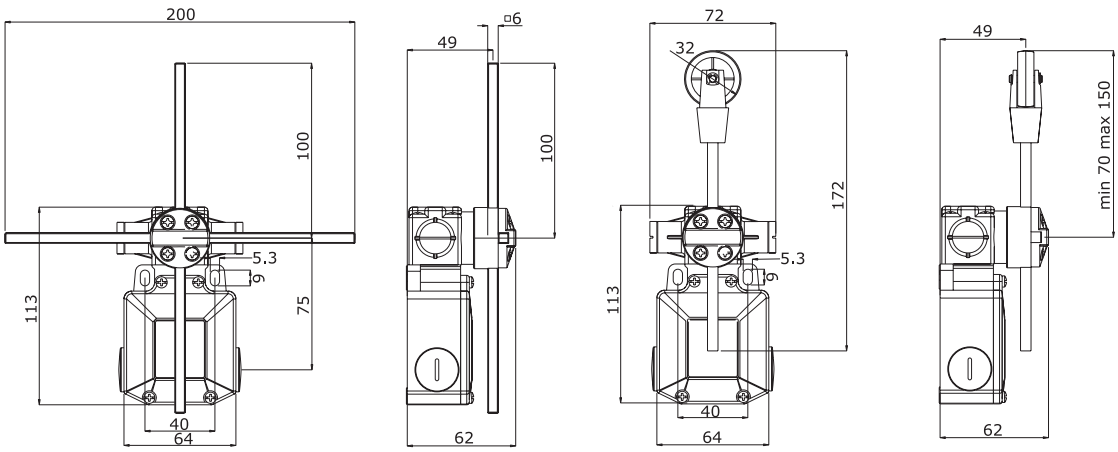
Pre-travel angle for rotation contact operation	49°
Maximum rotation angle for each maintained position	90°
Average angle for the mechanical tripping	48°
Maintained positions each	90°

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.

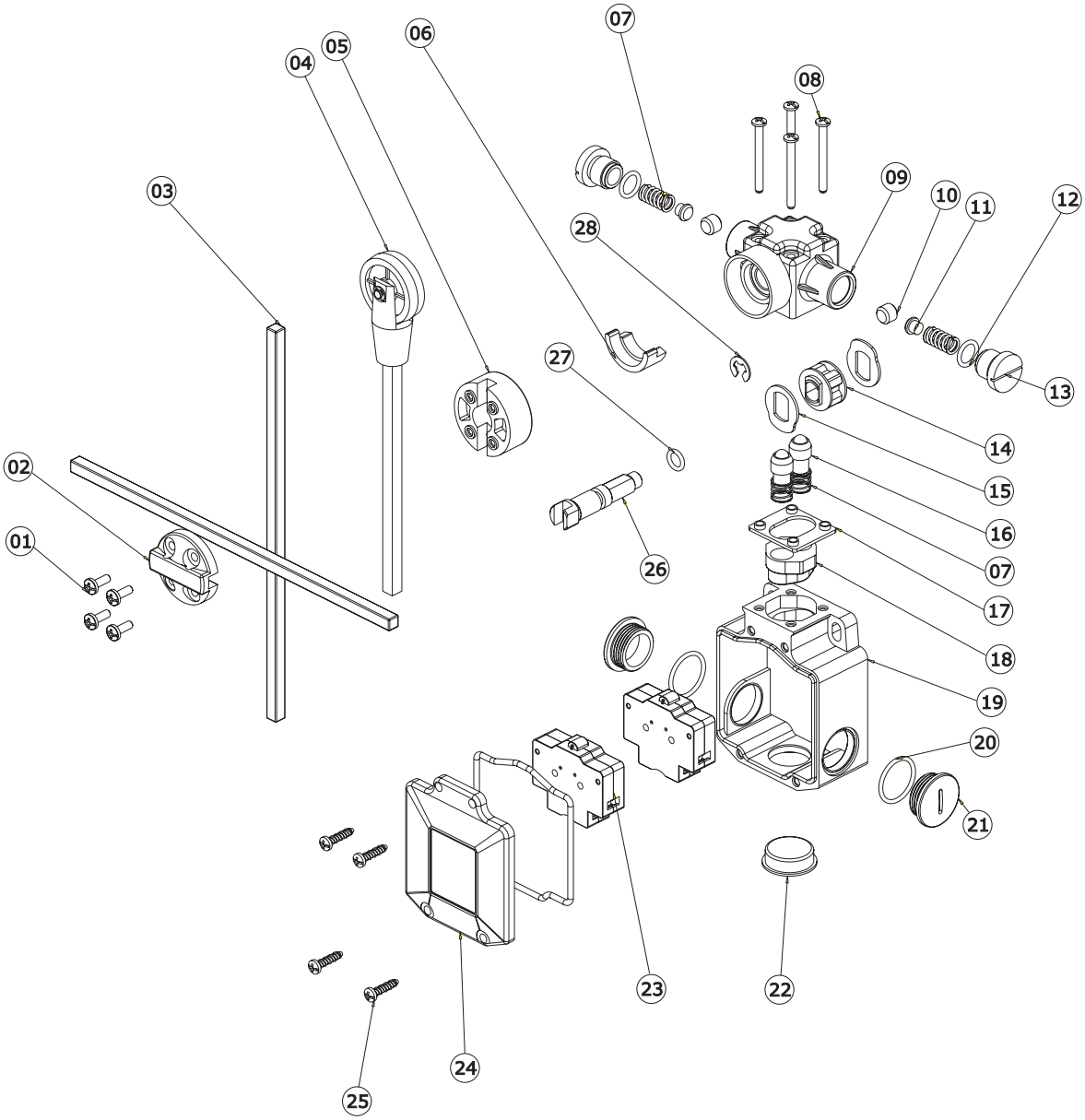
IMPORTANT: the maximum impact speed is 1.35 m/s, refering to the ideal impact points showed in the drawing.

Meyer Industrie-Electronic GmbH – MEYLE
Carl-Bosch-Straße 8 Tel.: +49 5481-9385-0 Internet: www.meyle.de
49525 Lengerich/Germany Fax: +49 5481-9385-12 E-Mail: sales@meyle.de

Overall Dimensions



Detailed Drawing



Meyer Industrie-Electronic GmbH – MEYLE
Carl-Bosch-Straße 8 Tel.: +49 5481-9385-0 Internet: www.meyle.de
49525 Lengerich/Germany Fax: +49 5481-9385-12 E-Mail: sales@meyle.de

Components

Reference	Description
01	Screw M4x10
02	Cross support plate
03	Rod 6x6x200 mm
04	Rod 6x6x130 mm with roller
05	Cross support
06	180° stop sector
07	Spring
08	Screw 3.5x35
09	X-FSC spring return head
10	Trip pin
11	Pin pushing plug
12	O-ring
13	Head plug
14	Four point cylinder for tripping
15	Cam
16	Shere holding piston
17	Head gasket
18	Piston holder support
19	Enclosure
20	O-ring
21	Threaded plug M20
22	Plug
23	Snap action 1NO+1NC switch
24	Cover with gasket
25	Screw 3.9x16
26	Shaft for head
27	O-ring
28	Elastic ring

Meyer Industrie-Electronic GmbH – MEYLE
Carl-Bosch-Straße 8 Tel.: +49 54 81-93 85-0 Internet: www.meyle.de
49525 Lengerich/Germany Fax: +49 54 81-93 85-12 E-Mail: sales@meyle.de

Use and Maintenance Instructions

The limit switches PLRZ and PLSC are electromechanical devices for low voltage control circuits (EN 60947-1, EN 60947-5-1) for use as electric equipment on machines (EN 60204-1) in compliance with the essential requisites of the Low Voltage Directive 73/23/EEC and the Machine Directive 89/392/EEC.

The limit switch is designed for use in industrial environments with even very severe climatic conditions (working temperatures from -25°C to +70°C and is suitable for use in tropical environments). The equipment is not suitable for use in environments with a potentially explosive atmosphere, in the presence of corrosive agents or high percentage of sodium chloride (saline mist). Contact with oil, acids and solvents may damage the equipment. The limit switches is not suitable for use in environments with a potentially explosive atmosphere.

Maintenance

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(s) and that the rubber sleeve is intact and flexible.
Open the lid (24) and check that the gasket is intact and flat in its housing.
Check that the switches (23) are properly wired and the terminals securely fastened; test the on/off mechanism by hand.
Make sure the head turns without forcing, that it is clean and moves without uncertainty between one position and the next; make sure the screws (01) 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 rods (03 and make sure they are positioned correctly: if the rods are not perfectly straight they should be replaced and repositioned carefully in accordance with the specifications.

NOTE: FOLLOW THE INSTRUCTIONS CAREFULLY WITH REGARD TO THE SPEED AND POSITION OF THE RODS INDICATED IN THE MAXIMUM DRIVE MEASUREMENTS. FAILURE TO FOLLOW THE SPECIFICATIONS INDICATED MAY JEOPARDIZE THE FUNCTION AND SAFETY OF THE SYSTEM.

Installation

Important: for correct operations, install the device far from sources of heat that could raise its temperature higher than 70°C.
First, position the limit switch so that the machine or one arm of it strikes the rod (03) in the positions indicated in the maximum drive measurements; make sure the wires are not taut, twisted and/or force into excessive curvatures.
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.
Proceed with electric wiring taking care to tighten the terminals on the switches (23), after manually checking the on/off function.
Tighten the terminal screws with a torque of 0.8 Nm; insertability of wires into the terminals 1x2,5 mm^2 - 2x1,5mm^2 (UL - (c)UL: use 60 or 75°C conductor and wire size No. 16-18 AWG, stranded or solid).
Close the lid (24) taking care to position the gasket in its housing.
Tighten the wire clamp taking care to see that the rubber inside adheres to the sheathing on the wire.
The installation will be complete after checking once or twice that the machine is properly slowed and/or stopped by the limit switch installed.

Any change to parts of the limit switch will invalidate the rating plate data and identification of the device, and render the warranty null and void. In case of replacement of any part, use only original replacements.

MEYLE is not liable for damages caused by improper use of the device and installation which is not made correctly.

Meyer Industrie-Electronic GmbH – MEYLE
Carl-Bosch-Straße 8 Tel.: +49 5481-9385-0 Internet: www.meyle.de
49525 Lengerich/Germany Fax: +49 5481-9385-12 E-Mail: sales@meyle.de