

Position switch

# Lever limit switch

## LHP<sub>x-xx/x-R</sub>



## Installation and operating instructions

**Principle:** Before any work shall be carried out it has to be checked that the circuits are isolated and any specific and general security instruction has been fulfilled.

Lever limit switches of this type commutate (switch over) if their actuation lever will be displaced to right or left side by an actuating bar or cam. Actuation of the contacts is being effected independent on the direction of actuation in snap-action characteristic (dependent on the direction only the versions LHP<sub>x-xx/x-R2</sub>). The maximum displacement angle of the actuation lever is 75°. Reset happens automatically when the actuation lever turns back to the middle, neutral position. The optional latching mechanism (type figure „w“), prevents automatical reset after actuation. Release after latching by manually lifting the blue lever. The mounting position is free.

**Pre-mounting:** Erect the switch onto its feet that way that the identification plate is on the left side. Screw out the screw of the shaft showing to you together with the washer by aid of a 10 mm wrench. Take the enclosed roller lever that way that the decreased bore is at your side. Pin this lever with roller in the suitable direction (4x90° transposable) onto the free shaft end and tighten with the previously screwed out screw and disc with a torque of 8 Nm.

**Mounting:** Put the switch on a plane and stable console. Fixing of the switch is to be effected with two suitable screws at the forked foot, max. width 11mm. The actuating bar should be dimensioned in such a way that the bar displaces the lever at least 20mm in the height ( $h_{min}$ ).

**Electical installation:** Open lid by loosening the four slotted hexagonal screws in the lid. Depending on the switch type there are up to four micro switches inside. The corresponding function of each contact is being printed on each micro switch. The versions LHP-xx/x-8R as well as LHP-xx/x-8R2 incorporate a terminal strip wired according to customers demands. Two M25-threaded wholes are for cable inlet (for sealing use cable glands like our type KV-M25K). Wire the contacts according to your requirements. Afterwards put on the cover again and tighten screws with a torque of 3 Nm. Tighten the cable glands according to the instructions of the manufacturer, however, at a maximum torque of 6 Nm.

**Check:** Check any electrical and mechanical function after completion of installation and afterwards in regular intervals. Pay special attention to the clearance between the roller of the actuation lever and his shaft. The clearance should not exceed 2mm.

**Maintenance:** There is no need for any maintenance works.

### Technical Data

Conforms to standards	EN 60 947-5-1, EN 60204, EN 60529, DIN VDE 0168
Ith Thermal Current	10A
Rating	Silber: 400VAC 6A / 230VAC 8A / 24VDC 10A / 80VDC 3 A
Minimum Current	Gold: 1mA bei 6VDC
Utilisation Category	Silber: AC-15 230V 1A      DC-13 110V 500mA Gold: AC-12 230V 250mA    DC-12 110V 250mA
Ui Rated Insul Voltage	400V
Uimp Rated Impuls	4kV
Height of actuation bar	min. 20mm, max. 65mm
B <sub>10</sub> EN13849 / IEC61508	Switch equipped with latching: 80000 cycles without latching: depending on the actuation speed! for example: at 1,5m/s 200000 cycles at lower speeds up to 500000 cycles
Cable entries	2 x M25 threaded holes, max 6Nm
Type of protection	IP67
Housing material	fibre glass reinforced polyester (LHP,...), cast iron (LHM.....)
Weight	2.3 kg (LHP.....), 5.9 kg (LHM.....)
Fixing	2 long holes for M10-screws
Operating temperature	-40°C up to +85°C

