kayse®

Installation and Operation Guide for PS Series Limit & Bistable Switches

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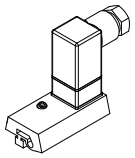
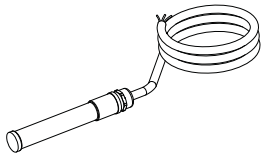
- READ THIS DOCUMENT CAREFULLY BEFORE COMMISSIONING THE DEVICE,
- ELECTRICAL CONNECTION OF THE DEVICE MUST BE MADE BY AUTHORIZED PERSONNEL OTHERWISE THERE IS DANGER OF SERIOUS INJURY OR DEATH,
- THIS DOCUMENT LATER SHOULD BE KEPT IN AN EASILY ACCESSIBLE PLACE,
- ENERGY STRICTLY SHOULD NOT BE GIVEN TO THE DEVICE EXCEPT FOR CONNECTION SCHEMA AND TECHNICAL INFORMATION GIVEN IN THIS GUIDE,
- APPLICATIONS DEFINED IN THIS GUIDE AS INAPPROPRIATE CAN TERMINATE WARRANTY OF PRODUCT,
- IF YOU THINK THIS GUIDE IS NOT HELPFULL PLEASE CONTACT US FROM OUR CONTACT INFORMATION,

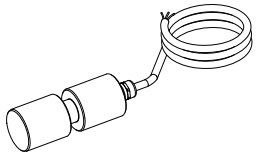
PS10
Limit Switches



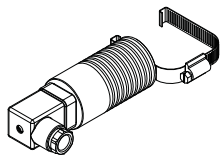
PS11
Limit Switches



PS2x Serisi
Bistabil Switches



PS3x Serisi
Limit Switches



1. GENERAL

1.1 PS1x and PS3x Series Limit Switches

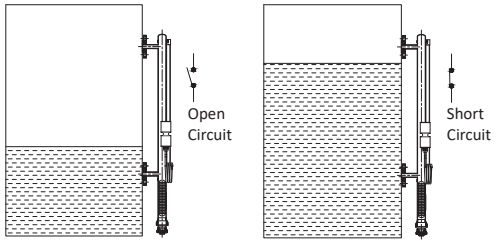
PS1x and PS3x Series Limit Switches are non-contact magnetic sensors used to communicate with LS20 controller or automation systems. Electrically contains NO (Normally Open) contact. Contact positions get closed with the magnetic field. It affects the contact position by showing magnetic field features in buoys contained in MLG Series Level Indicators.

PS1x PS3x Series Limit Switches do not have permanent structures. Therefore, they only give contacts when it is aligned with the level amount. In other cases, contacts are open circuit.

1.2 PS2x Series Bistable Switches

PS2x Series Bistable Switches are non-contact magnetic sensors used to communicate with automation systems. Electrically contains NO (Normally Open) contact. Their contact position with magnetic field changes permanently and they protect their positions. It affects the contact position by showing magnetic field features in buoys contained in MLG Series Level Indicators.

In cases where PS2x Series Limit Switches contacts have more liquid level than they had at the time of assembly, they are always in closed circuit. In cases where liquid is lower than the level of assembly contacts are in permanently open circuit.



1.3 Technical Datas

Motor, pump, on-off valve, solenoid valve, voice and / or light alarm **should not be controlled** with, PS1x Series Limit Switches **directly**. Otherwise the device can be out of service. It only can be used to give signals to LS20 controller or automation systems. **It can not be used in power levels of electrical circuits.**

1.3.1 PS10 Series Limit Switches Technical Informations

Switch Form	: 1 piece NO (Normally Open) Dry Contact
Switch Capacity	: 250 VAC – 200 VDC / 1,5A max.
Power Capacity	: 50W max.
Working Temp.	: -40 +125 °C
Storage Temp.	: -15 +60 °C
Electrical Conn.	: PG7 Socket Fittings with protection class of IP65 (external diameter 4,5-6mm max. 0,75 mm² cables can be connected)
Mechanical Conn.	: M4 Grub Screws Bolt Stabilizer channel type connection (it can be used in MLG series where only channeled connection can be made)

1.3.2 PS11 Series Limit Switches Technical Informations

Switch Form	: 1 piece NO (Normally Open) Dry Contact + NC (Normally Closed) Dry Contact
Switch Capacity	: 250 VAC – 250 VDC / 1A max.
Power Capacity	: 60W max.
Working Temp.	: -40 +125 °C
Storage Temp.	: -15 +60 °C
Electrical Conn.	: 2x0,75 mm² LIYCY Shielded Cable / 2 mt. Stn.
Mechanical Conn.	: Stainless Steel Special Connection Clamp

1.3.3 PS2x Series Bistable Switches Technical Informations

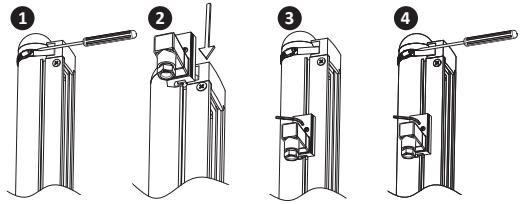
Switch Form	: 1 piece NO (Normally Open) Dry Contact
Switch Capacity	: 230 VAC – 230 VDC / 3A max.
Power Capacity	: 150W max.
Working Temp.	: -40 +100 °C
Storage Temp.	: -15 +60 °C
Conn. with Socket	: PG11 Socket Fittings with protection class of IP65 (external diameter 6-9 mm max. 1,50 mm² cables can be connected)
Conn. with Cable	: 2x0,75 mm² LIYCY Shielded Cable / 2 mt. Stn.
Mechanical Conn.	: Stainless Steel Special Connection Clamp

1.3.4 PS3x Series Limit Switches Technical Informations

Switch Form	: 1 piece NO (Normally Open) Dry Contact (NC Normally Closed Contact is Optional)
Switch Capacity	: 250 VAC – 200 VDC / 1,5A max.
Power Capacity	: 50W max.
Working Temp.	: -40 +125 °C (Up to 250 °C on MLG Series)
Storage Temp.	: -15 +60 °C
Conn. with Socket	: PG11 Socket Fittings with protection class of IP65 (external diameter 6-9 mm max. 1,50 mm² cables can be connected)
Conn. with Cable	: 3x0,75 mm² SIMH Silicon Cablo / 2 mt. Stn.
Mechanical Conn.	: Stainless Steel Special Connection Clamp

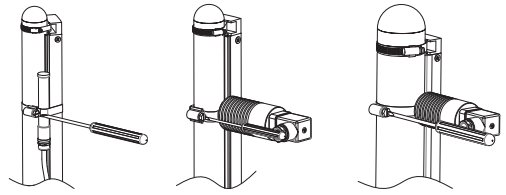
2. MOUNTING

2.1 Assembly of PS10 Limit Switch to MLG Series Level Gauges

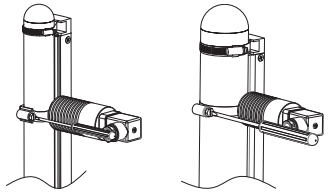


1. Remove the clamp of indicator profile with a suitable screwdriver,
2. Install PS10 Limit Switch how socket part is facing down,
3. Fix the product with a 2mm allen key,
4. Fix the clamp of indicator profile with a suitable screwdriver again.

2.2 Assembly of PS11, PS30, PS31 Limit Switches and PS20, PS21 Bistable Switches to MLG Series Level Gauges



PS11 Mounting | PS30 Mounting | PS31 Mounting



PS20 Mounting | PS21 Mounting

PS11, PS30, PS31, PS20 ve PS21 models are fixing with a special clamp. It must fix a suitable screwdriver or socket wrench.

PS2x Series Bistable Switches should be connected as cable and socket connection faces down. Otherwise the device may not work.

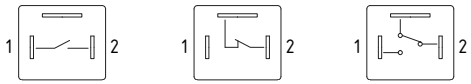
2.3 Environment for Assembly and Working Conditions

PS1x, PS2x and PS3x Series Limit Switches can be used everywhere where MLG Series level indicators are used. However socket models are not advised for outside usage because of their service of life. When it is used, definitely socket part should be isolated (IP65 protection cover). There is no problem for using caballed models at outside.

Also PS2x Series Bistable Switches should not be used in vibration/stroke environments. Their contact positions can change undesirably.

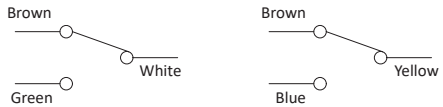
3. ELECTRICAL CONNECTIONS

3.1 Electrical Connections for Socket Models



NO (Normally Open) Contact Models | NC (Normally Closed) Contact Models | NO + NC (Changeover) Contact Models

3.2 Electrical Connections for Cable Models



LIYCY Cables | SIMH Cables

4. MALFUNCTION

4.1 Electrical Tests of PS1x and PS3x Series Limit Switches

They give contact only when they are at the same point with level amount. When the amount is above or below the level than contact is in open circuit. For the testing process, put an external magnet or the magnet side of the buoy located in the MLG Series Limit Switch Level Indicator Devices closer to the body of Limit switch and touches it, short circuit should be read at Ω level of measuring device (the resistance value close to zero). If contact situation does not change tough you put magnet closer to product than device may be malfunctioning.

4.2 Electrical Tests of PS2x Series Bistable Switches

Touching an external magnet or level indicator buoys to the Bistable switches may not give an accurate result. Thus test should be carried out on MLG Series level indicators. Before starting the operation Bistable Switch clamp should be loosened and it should be loose enough to move manually.

at Ω level of measuring device,

- Short circuit should be read (the resistance value close to zero) when is under Bistable switch buoy level,
- Open circuit should be read when it is over Bistable switch buoy level,

Even if you move the device to pass the level of buoy from level indicator and you can not get above given measures than device may be malfunctioning.

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