SDX5 OPTICAL SWITCH OPERATION MANUAL

FEATURE

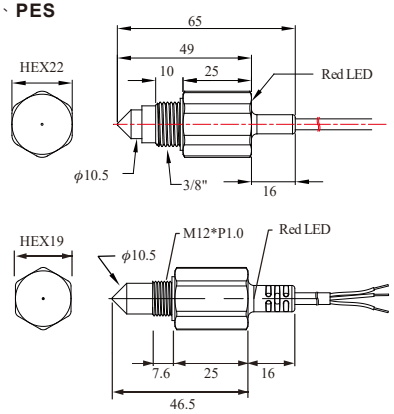
1. NPN, PNP open collector output to energize relay or PLC.
2. Housing material of PC, PES for acidity and alkaline; applicable in water, oil, liquid solution, liquor, alcohol....etc.
3. Over-current and reverse polarity protected
4. LED Status indication.

SPECIFICATION

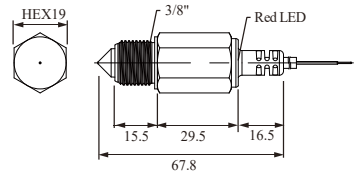
Housing Material: PC, PES,SUS304,SUS316
Sensible Tip Material: PC, PES
Protection Rating : IP67
Operation Temperature: -10~125°C
Ambient Temperature: -10~80°C
Operation Pressure:
Max.10kg/cm²(PC、PES)
Max. 40kg/cm² (SUS304、316)
Power Supply: 10~28 Vdc with reverse charge protection
Current consumption: < 15mA
Load Current: 100mA Max.
Overload Current Protection: 100mA
Connection Thread: M12x1.0 (PC、PES only)、3/8"PF、3/8"PT、3/8"NPT
Lead Wire: 2m CABLE(dia. 4) 3C PVC 24 AWG; custom made if over 2m

DIMENSION

PC、PES



SUS304、SUS316



APPLICATION EXAMPLE

Liquid Level Control:
In Fig.3 , two optical switches are installed individually in upper and lower level of the tank. When liquid rises to cover the upper optical switch, it will stop fill in liquid. When liquid drops down and lower optical switch is not covered by liquid, it will start filling up. Liquid has to be maintained in between upper and lower optical switches.
Motor Protection:
In Fig.4 , optical switch is installed in lower level of the tank to prevent pump burning caused by the lack of water/liquid.
*Avoid to install it near the corner region.

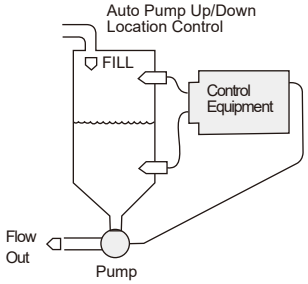


Fig.3

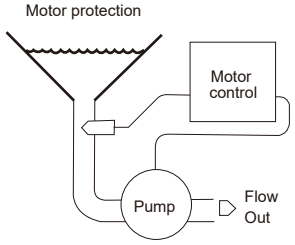
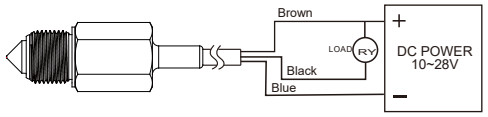


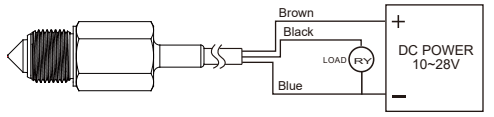
Fig.4

WIRING

NPN output



PNP output



CAUTION

- The recommended tightening torque for the standard sealing ring (O-ring) is 8-12 kgf-cm. This torque may vary depending on the internal pressure of the pipe/barrel or if the material is changed.
- Maximum Allowable Torque for the Casing:
  M12: 25kgf-cm (PC、PES); 3/8": 50kgf-cm (PC、PES),100kgf-cm (SUS304、SUS316)
- Power supply is 10~28Vdc. Color code: Brown for positive and blue for negative terminal.
- Optical switch is not recommended for operating in emulsion and phase-change liquids.
- Do not install sensor close to infrared sources.
- Tip of the optical sensor must be free at least 30mm from any reflective surfaces or other interferences. Like the tank wall (Fig.5.)
- Do not install the sensor in a stagnation point of the liquid.
- The sensor installed a thread casing when the sensor tip must be exposed.
- This product is not recommended for organic solution especially for viscous liquid which easy to stick on the optical surface (Fig.6.)
- We recommend the following installation below. The horizontal plane parallel to the 0° ~ 45° for optimal installation angle.(Fig.7.)

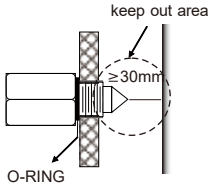


Fig.5

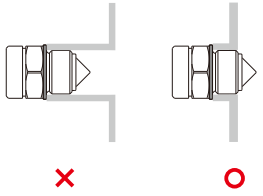


Fig.6

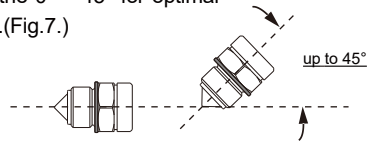


Fig.7

REGULAR MAINTENANCE

- Please clean the top part of optical switch with clean water regularly.
- Please do not use organic solution or scrub while washing to avoid scratches on the surface.

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