Positioning Switches - Non Contact

Overview

Feature
- The contact type switch can detect objects in given positions regardless of material and color.
- Non contact structure utilizing the magnet detection IC (Hall effect element).
- Able to detect with low contact force.

Basic Structure
When the contact shaft strokes, the magnet moves and the hall effect element outputs a signal.

Specifications
- Type Stroke
- Power Supply Voltage: DC 5–24V
- Current Consumption: 100mA or less
- Operating Temperature: 0–80°C
- Hysteresis: 0.1% or less
- Service Life: 1.0 million times or more
- Frequency Response: 1.5/3/6
- Vibration Resistance: 10–55Hz, Full Wave Amplitude 1.5mm in Respective X, Y, Z Direction
- AC 500V 50/60Hz, 1 min. between each Terminal and Case
- Dielectric Strength: 0–60°C
- Operating Temperature
- Service Life:
- Hysteresis: 0.1 or less
- Contact Logic: Repeatability 0.02 or less
- Contact Angle: Vertical (without indication)
- Operation Frequency: 1 Time/sec.
- Repeatability: 0.02 or less
- Contact Angle: Vertical (without indication)
- Operation Frequency: 1 Time/sec.

Schematics

Design Precautions
- Contact Angle
  - The contact angle to the switch should be within ±2°.
  - Stroke
  - Do not force the contacts beyond the end of the stroke.
  - Do not apply any force that will cause rotation of the contact.
- Effects of Magnetic Field
  - Do not use the switch in a strong magnetic field. A magnetic field over 1000 gauss will cause the switch to malfunction.
- Cautions on Installation
  - Cable Failure at Inlet
  - Do not apply excessive stress to the cable inlet of the switch case. The solder of cable could be damaged resulting in signal output failures.
  - Nut Tightening Torque
  - Tighten MI under 1.6 m. Tighten MI and M14 under 2.76 m.
- Wiring Precautions
  - Reverse polarity connection prohibited
  - Connect the wires correctly in accordance with the circuit diagram. Never connect the power supply in reversed polarity.
  - Driving Relays
  - When a relay (under 12 mA) is driven, connect a reversed diode in parallel.

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