Non-Contact Positioning Switches

Overview

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

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

Specifications
- 10 MΩ or Less
- <10 mA

Endurance Test Conditions
- 25°C
- 10 Million Times or More
- 0.02 or less
- 0.1 or Less
- 10 MΩ or Less

Schematics

Precautions for Use
- Although the switches are intended to be trouble-free, incorporate a redundant safety measure such as a duplex circuit to avoid a serious accident or spread of damage caused by a malfunction or failure of the switch.

Design Precautions
- Contact Angle
  - The shortest contact angle to the switch should be within ±2°.
  - Do not force the contacts beyond the end of the stroke.
  - Do not apply any force that will cause rotation of the contact.
  - Do not use the switch in a strong magnetic field. A magnetic field over 1,000 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 cable or the switch case could be damaged resulting in signal output failure.
  - If the cable is not fixed, fasten at appropriate midway points to avoid strains on cable inlet.

Wiring Precautions
- Reverse Polarity Connection Prohibited
  - Connect the wires correctly in accordance with the circuit diagram. Never connect the power supply in reversed polarity.
  - When a relay (under 12 mA) is driven, connect a reversed diode in parallel.

Contact Positioning Switches

Contact Positioning Switches – Bolt (P07)

Protocol
- M6 x 0.75
- 0.5 mm from Tip (Repeatability 0.02)
- 0.5 mm from Tip (Repeatability 0.02)
- M8 x 0.75
- 0.7 mm from Tip
- Stroke: 3

Contact Positioning Switches – Flat (P08)

Protocol
- M6 x 0.75
- 0.5 mm from Tip (Repeatability 0.02)

Contact Positioning Switches – 2-Signal (P09)

Protocol
- M6 x 0.75
- (Repeatability 0.02)