

MS Series Subminiature Snap-acting Switches

Features/Benefits

- Detect interlock and movement
- Different lever options
- Various operating forces
- Extended mechanical life
- UL approval on some designs
- Customization available
- RoHS compatible and compliant

Typical Applications

- Office equipment
- Consumer electronics
- Appliances
- Audio & visual equipment
- Medical
- Industrial meters



Specifications

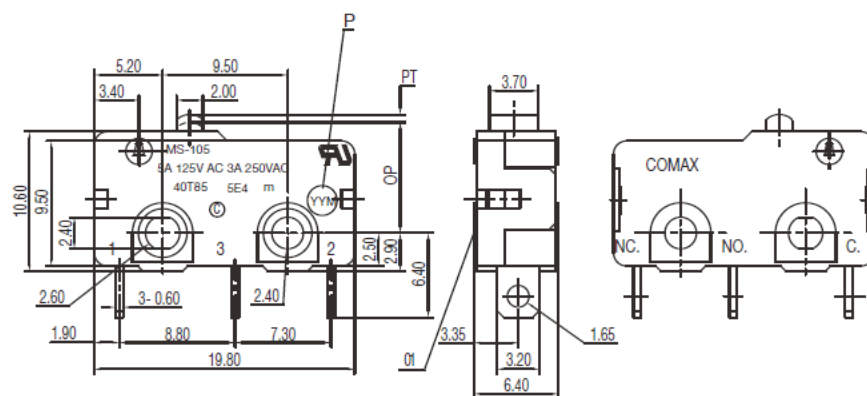
CONTACT ARRANGEMENT: SPDT
 CONTACT RATING: 5 A @ 125 VAC / 3 A @ 250 VAC
 OPERATING LIFE: 1,000,000 cycles without load
 6,000 cycles with load UL
 INITIAL CONTACT RESISTANCE: 100 mΩ max.
 INSULATION RESISTANCE: 100 MΩ min. @ 500 VDC
 DIELECTRIC STRENGTH: 1000 VAC (50-60 Hz)
 OPERATING TEMPERATURE: -40°C to + 85°C
 OPERATING FORCE: 130 ± 30 gf
 PRE-TRAVEL (PT): 0.6 mm max.
 OVERTRAVEL: 0.5 mm max.
 OPERATING POSITION (OP): 8.40 ± 0.40 mm

Materials

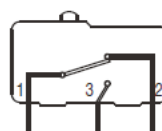
COVER: PBT (UL94V-0)
 HOUSING: PBT (UL94V-0)
 KNOB: PBT (UL94V-0)
 TERMINALS: Silver plated

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

PART NUMBER
MS-105A01

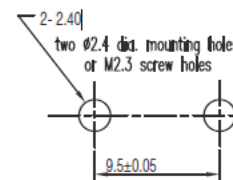


Circuit Diagram



SCHEMATIC

Mounting Holes

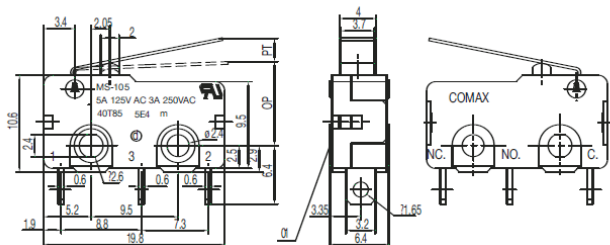


PIERCING PLAN

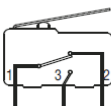
MS Series Subminiature Snap-acting Switches

PART NUMBER

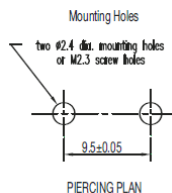
MS-105A01-01



Circuit Diagram



SCHEMATIC



PIERCING PLAN

Specifications

CONTACT ARRANGEMENT: SPDT
CONTACT RATING: 5 A @ 125 VAC / 3 A @ 250 VAC
OPERATING LIFE: 1,000,000 cycles without load
6,000 cycles with load UL
INITIAL CONTACT RESISTANCE: 100 mΩ max.
INSULATION RESISTANCE: 100 MΩ min. @ 500 VDC
DIELECTRIC STRENGTH: 1000 VAC (50-60 Hz)
OPERATING TEMPERATURE: -40°C to + 85°C
OPERATING FORCE: 65 ± 20 gf
PRE-TRAVEL (PT): 3.0 mm max.
OVERTRAVEL: 1.0 mm max.
OPERATING POSITION (OP): 9.40 ± 1.0 mm

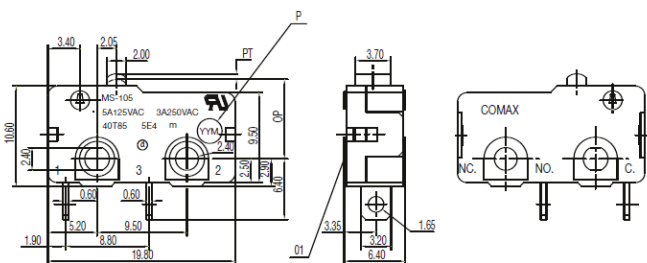
Materials

COVER: PBT (UL94V-0)
HOUSING: PBT (UL94V-0)
KNOB: PBT (UL94V-0)
TERMINALS: Silver plated

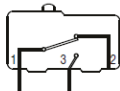
NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

PART NUMBER

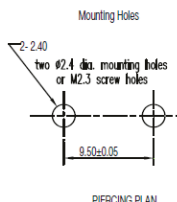
MS-105B01



Circuit Diagram



SCHEMATIC



PIERCING PLAN

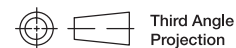
Specifications

CONTACT ARRANGEMENT: SPST
CONTACT RATING: 5 A @ 125 VAC / 3 A @ 250 VAC
OPERATING LIFE: 1,000,000 cycles without load
6,000 cycles with load UL
INITIAL CONTACT RESISTANCE: 100 mΩ max.
INSULATION RESISTANCE: 100 MΩ min. @ 500 VDC
DIELECTRIC STRENGTH: 1000 VAC (50-60 Hz)
OPERATING TEMPERATURE: -40°C to + 85°C
OPERATING FORCE: 230 ± 50 gf
PRE-TRAVEL (PT): 0.6 mm max.
OVERTRAVEL: 0.5 mm max.
OPERATING POSITION (OP): 8.40 ± 0.40 mm

Materials

COVER: PBT (UL94V-0)
HOUSING: PBT (UL94V-0)
KNOB: PBT (UL94V-0)
TERMINALS: Silver plated

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.



Third Angle
Projection

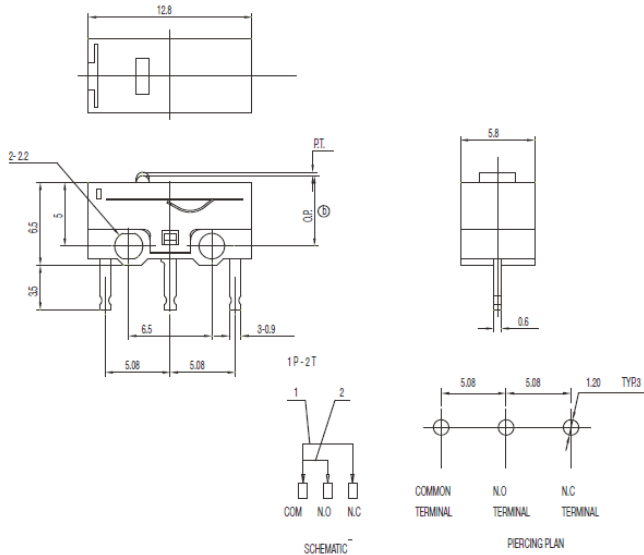
Dimensions are shown: Inch (mm)

Specifications and dimensions subject to change

MS Series Subminiature Snap-acting Switches

PART NUMBER

MS-118305



Specifications

CONTACT ARRANGEMENT: SPDT
 CONTACT RATING: 0.1 A @ 30 VDC
 OPERATING LIFE: 500,000 cycles without load
 50,000 cycles with load
 INITIAL CONTACT RESISTANCE: 50 mΩ max.
 INSULATION RESISTANCE: 100 MΩ min. @ 500 VDC
 DIELECTRIC STRENGTH: 1000 VAC (50-60 Hz)
 OPERATING TEMPERATURE: -20°C to + 70°C
 OPERATING FORCE: 70 ± 40 gf
 PRE-TRAVEL (PT): 0.50 mm max.
 OVERTRAVEL: 0.5 mm min.
 OPERATING POSITION (OP): 5.50 ± 0.30 mm

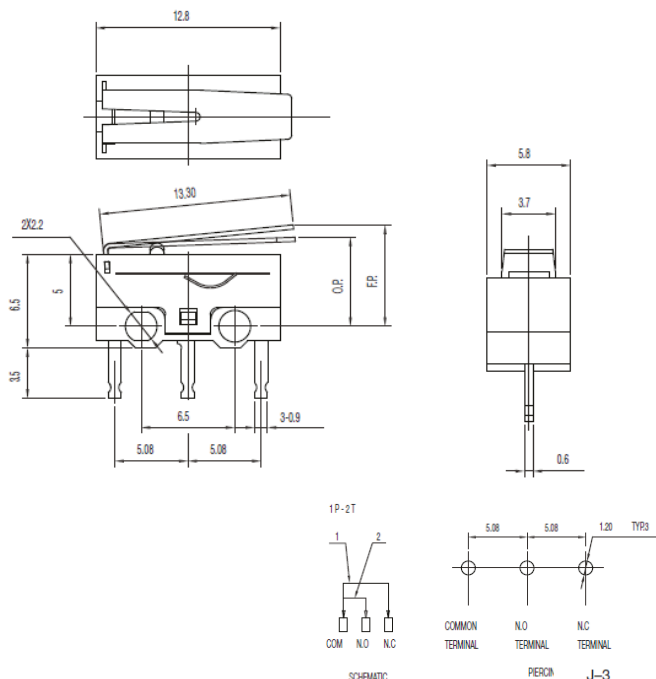
Materials

COVER: PBT (UL94V-0)
 HOUSING: PBT (UL94V-0)
 KNOB: PBT (UL94V-0)
 TERMINALS: Silver plated

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

PART NUMBER

MS-118305-A



Specifications

CONTACT ARRANGEMENT: SPDT
 CONTACT RATING: 0.1 A @ 30 VDC
 OPERATING LIFE: 500,000 cycles without load
 50,000 cycles with load
 INITIAL CONTACT RESISTANCE: 50 mΩ max.
 INSULATION RESISTANCE: 100 MΩ min. @ 500 VDC
 DIELECTRIC STRENGTH: 1000 VAC (50-60 Hz)
 OPERATING TEMPERATURE: -20°C to + 70°C
 OPERATING FORCE: 25 ± 15 gf
 OVERTRAVEL: 0.5 mm min.
 OPERATING POSITION (OP): 6.0 ± 0.80 mm
 FREE POSITION (FP): 8.5mm max.

Materials

COVER: PBT (UL94V-0)
 HOUSING: PBT (UL94V-0)
 KNOB: PBT (UL94V-0)
 TERMINALS: Silver plated

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Snap-acting

The technical drawings of the 1P-2T relay include:

- Top View:** Shows a rectangular component with a width of 12.8. A central slot is visible.
- Side View (Left):** Shows the profile of the relay with dimensions: 6.5 (total height), 5 (height to the top of the coil), 3.5 (height to the bottom of the coil), 2.7 (height to the bottom of the base), 1.8 (height to the bottom of the base), 6.5 (width of the base), 3-2 (width of the base), 4.8 (width of the base), and 4.8 (width of the base). The label "1P-2T" is present.
- Side View (Right):** Shows the profile of the relay with dimensions: 5.8 (total height), 2.8 (height to the top of the coil), and 0.6 (height to the bottom of the base).
- Front View:** Shows the front of the relay with dimensions: 6.5 (width of the base), 3-2 (width of the base), 4.8 (width of the base), and 4.8 (width of the base).
- Schematic Diagram:** Shows the internal wiring of the relay. It includes a common terminal (COM) and two normally open terminals (N.O. and N.C.). The terminals are labeled 1 and 2.
- Piercing Plan:** Shows the layout of the terminals. The terminals are labeled COMMON, N.O. TERMINAL, and N.C. TERMINAL.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

The technical drawings of the 1P-2T relay include:

- Top View:** Shows the relay's footprint with a width of 12.8 and a depth of 13.30. It features a central rectangular component and two circular mounting holes.
- Side View:** Shows the relay's profile with a total height of 5.8 and a base width of 3.7. It includes a mounting tab with a width of 0.6.
- Front View:** A detailed view of the relay's front face, showing the internal components and the mounting holes. Dimensions include a total width of 6.5, a central width of 4.8, and a mounting hole diameter of 2.7. The mounting holes are spaced 4.8 apart.
- Schematic Diagram:** A wiring diagram showing the relay's internal connections. It includes a common terminal (COM) and two normally open terminals (NO and NC).
- Piercing Plan:** A diagram showing the relay's internal components and the mounting holes, with labels for COMMON, NO, and NC terminals.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

