

General Specifications

Electrical Capacity (Resistive Load)

Power Level: 6A @ 125V AC or 3A @ 250V AC

Other Ratings

Contact Resistance: 10 milliohms maximum

Insulation Resistance: 1,000 megohms minimum @ 500V DC

Dielectric Strength: 1,000V AC minimum between contacts for 1 minute minimum;
1,500V AC minimum between contacts & case for 1 minute minimum

Mechanical Life: 50,000 operations minimum

Electrical Life: 25,000 operations minimum

Contact Timing: Nonshorting (break-before-make)

Total Travel: .087" (2.2mm)

Materials & Finishes

Actuator: Polyamide (UL94V-0)

Frame: Stainless steel

Case: Glass fiber reinforced diallyl phthalate resin (UL94V-0)

Movable Contacts: Silver alloy

Stationary Contacts: Silver capped copper with silver plating

Terminals: Copper or brass with silver plating

Environmental Data

Operating Temp Range: -10°C through +55°C (+14°F through +131°F)

Humidity: 90 ~ 95% humidity for 240 hours @ 40°C (104°F)

Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range
& returning in 1 minute; 3 right angled directions for 2 hours

Shock: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Processing

Soldering Time & Temp: Wave Soldering Recommended (PC version): See Profile A in Supplement section.

Manual Soldering: See Profile A in Supplement section.

Note: Lever must be in center position while soldering.

Cleaning: These devices are not process sealed. Hand clean locally using alcohol based solution.

Standards & Certifications

Flammability Standards: UL94V-0 rated actuator & case

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

Distinctive Characteristics

Bright, LED illumination at top of actuator.

Over-center actuator block and plunger design gives crisp actuation, diminishes sparking, and increases operating life.

Guide interlocked with actuator block prevents window locking and maintains correct plunger alignment to assure contact stability.

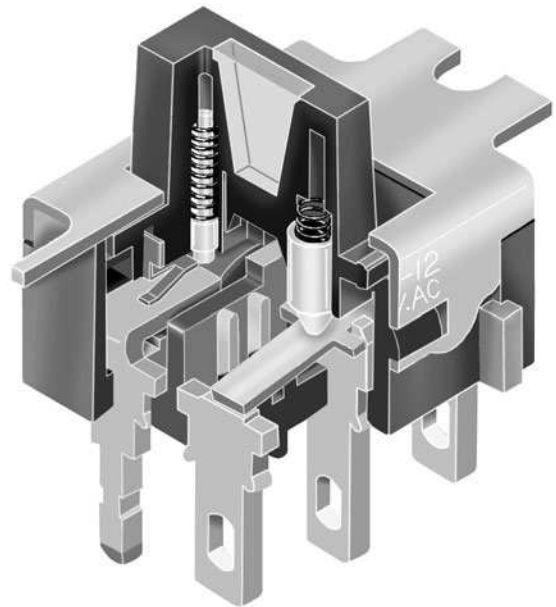
Antijamming design protects contacts from damage due to excessive downward force on the actuator.

High internal barriers between poles and insulating sheet between case and actuator block give added protection to contacts.

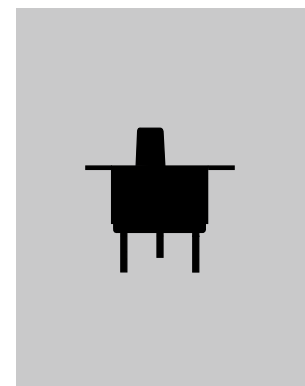
Prominent external insulating barriers increase insulation resistance and dielectric strength.

Epoxy sealed terminals prevent entry of flux, solvents, and other contaminants.

Clinching of frame to case well above base and terminals provides 1,500V dielectric strength.



Actual Size



Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

H Slides

Tactiles

Tilt

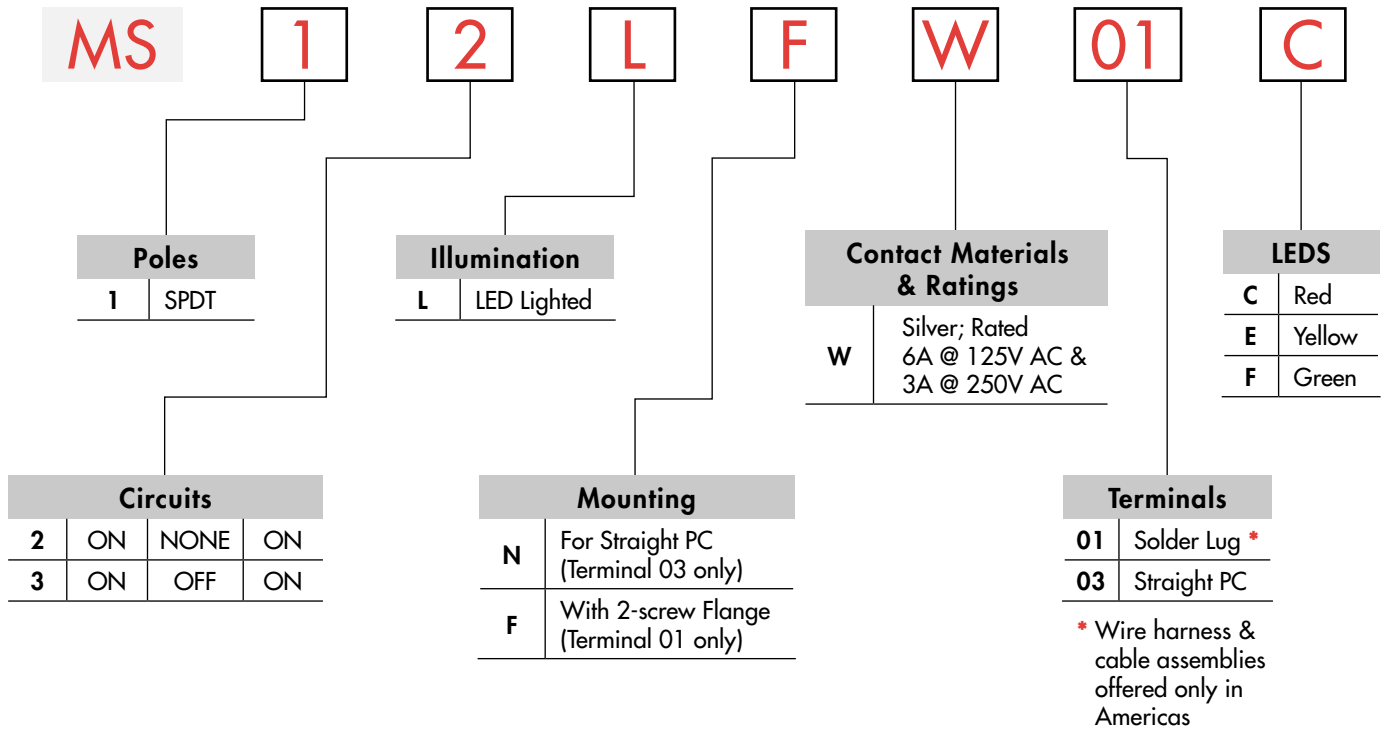
Touch

Indicators

Accessories

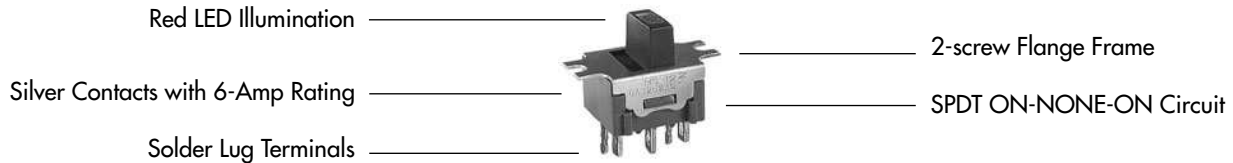
Supplement

TYPICAL SWITCH ORDERING EXAMPLE



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

MS12LFW01C



POLES & CIRCUITS

| Pole | Model | Slide Position | | | Connected Terminals | | | Throw & Schematics |
|------|-------|----------------|--------|-------|---------------------|--------|-------|---|
| | | Left | Center | Right | Left | Center | Right | |
| SP | MS12 | ON | NONE | ON | 2-1 | OPEN | 2-3 | Note: Terminal numbers are not actually on the switch. LED circuit is isolated and requires an external connection. |
| | MS13 | ON | OFF | ON | | | | |

CONTACT MATERIALS & RATINGS



Silver over Silver

Power Level

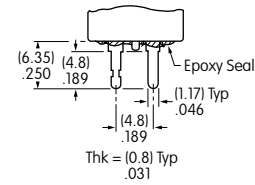
6A @ 125V AC & 3A @ 250V AC

MOUNTING TYPES & TERMINALS

N Straight PC Mount
(Combines with
Straight PC Terminal
03 only)



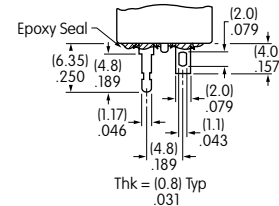
03 Straight PC



F 2-screw Flange
(Combines with Solder
Lug Terminal 01 only)



01 Solder Lug

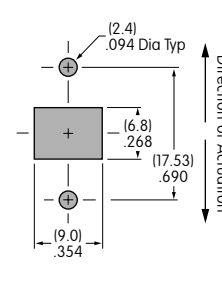
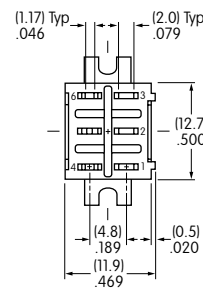
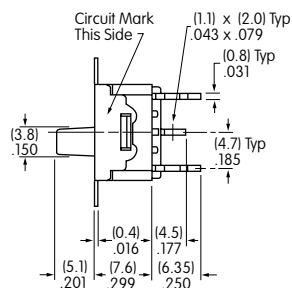
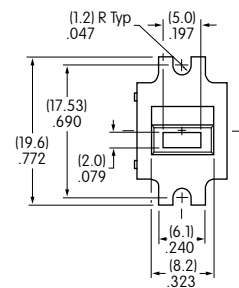


LED COLORS & SPECIFICATIONS

LEDs are supplied as an integral part of the switch (not available separately). The lamp circuit is independent of switch operation. Electrical specifications shown are determined at a basic temperature of 25°C. If the source voltage exceeds the rated voltage, a ballast resistor is required. The resistor value can be calculated by using the formula given in the Supplement.

| | | C Red | E Yellow | F Green |
|-----------------------------------|--------------|--------------|-----------------|----------------|
| Forward Peak Current | I_{FM} | 30mA | 30mA | 25mA |
| Typical Forward Current | I_F | 16mA | 16mA | 16mA |
| Forward Voltage | V_F | 1.98V | 2.06V | 2.16V |
| Reverse Peak Voltage | V_{RM} | 5V | 5V | 5V |
| Current Reduction Rate Above 25°C | ΔI_F | 0.40mA/°C | 0.42mA/°C | 0.33mA/°C |
| Ambient Temperature Range | | -15° ~ +60°C | | |

TYPICAL SWITCH DIMENSIONS

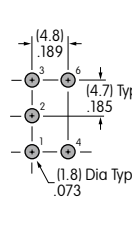
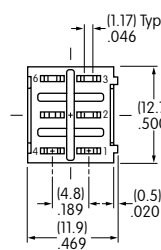
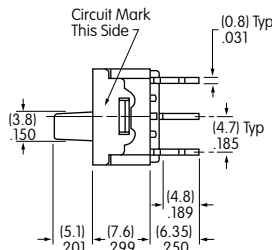
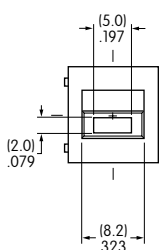


Actuator in LEFT Position

Maximum Panel Thickness .197" (5.0mm)

MS12LFW01C

Straight PC Terminals



Actuator in LEFT Position

Maximum Panel Thickness .197" (5.0mm)

MS12LNW03C