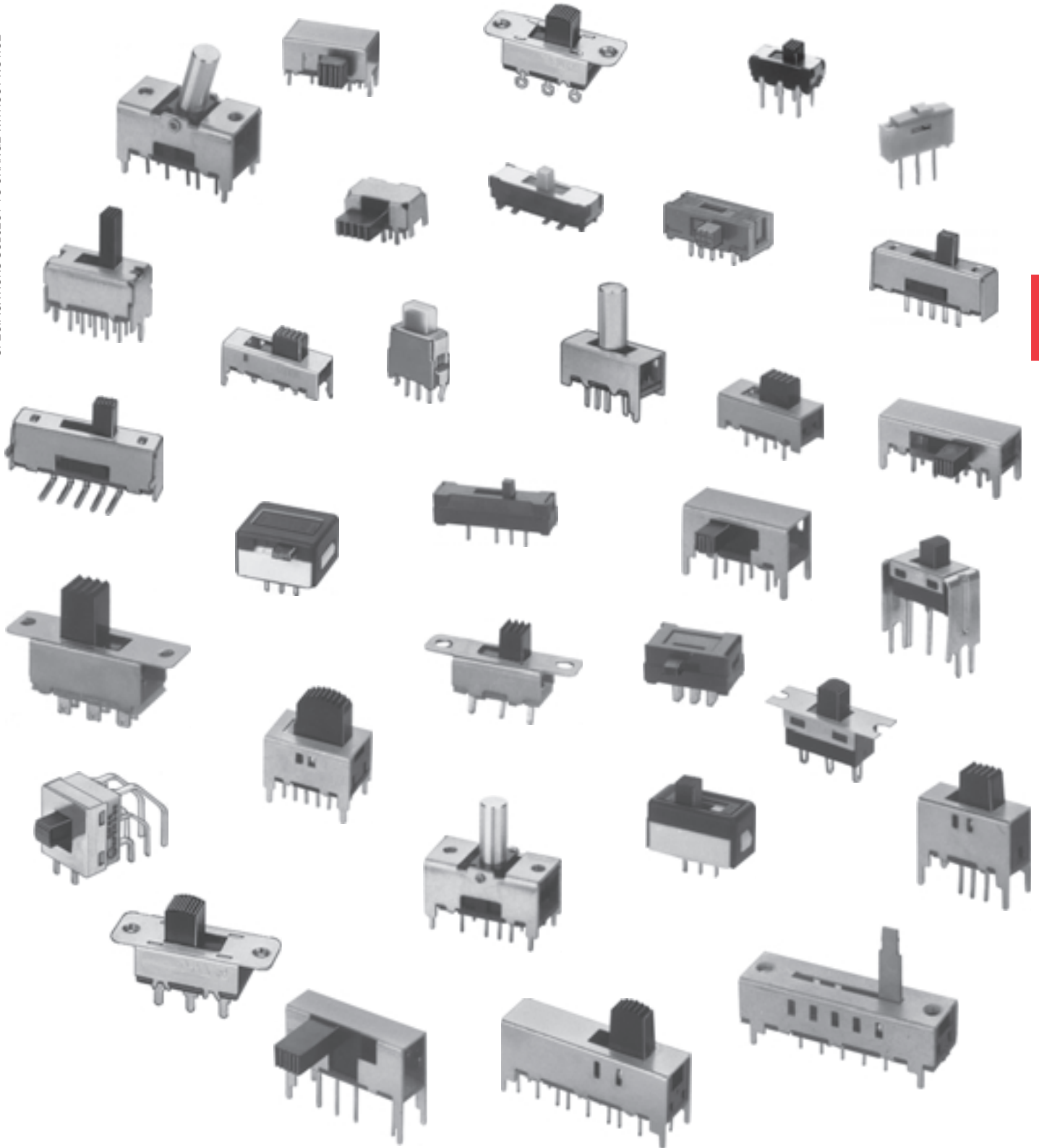


SLIDE SWITCHES

SEE PUSHBUTTON SWITCH SELECTION GUIDE ON NEXT PAGE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



SLIDE SWITCHES

SLIDE SWITCH SELECTION GUIDE: This catalog contains an extensive variety of slide switches with numerous options and accessories. To facilitate easy selection of the desired switch for your application, the guide on pages E2 & E3 lists the various Series with some key selection parameters.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

E

| MICROMINIATURE SLIDE SWITCHES | | | | | | | | |
|-------------------------------|------------|------------|---|-----------|-----------------|--------------------------|-------------------|---------|
| SERIES | POLES | POS-ITIONS | RATINGS | WASH-ABLE | LIFE CYCLES | MOUNTING | ACTUATION | PAGE(S) |
| TG (SMT) | 1 | 2&3 | 0.4 VA @ 20V | Yes | 60,000 | Surface | Vertical | E4-E7 |
| MJS | 1&2 | 2&3 | 100 ma @ 12VDC | No | 10,000 | P.C. thru-hole | Vert. & rt. angle | E8-E9 |
| MSSA & MSSB | 2 | 2 | 100 ma @ 30VDC or 125VAC & dry circuit | No | 10,000 | P.C. thru-hole | Vert. & rt. angle | E10 |
| MA | 1 | 2&3 | 300 ma @ 4VDC | No | 10,000 | Surface | Rt. angle | E11 |
| MHSS | 1&2 | 2 | 300 ma @ 6VDC | No | 5000 | P.C. thru-hole | Vert. & rt. angle | E12 |
| MS | 1,2&4 | 2&3 | 300 ma @ 6VDC | No | 10,000 | P.C. thru-hole & surface | Vert. & rt. angle | E13-E15 |
| MMPS <i>New!</i> | 1 | 2&3 | 300 ma @ 4VDC | No | 10,000 | Surface | Right angle | E15 |
| MMS | 1,2,4&6 | 2&3 | 300 ma @ 30VDC | No | 10,000 | P.C. thru-hole | Vert. & rt. angle | E16-E17 |
| TG | 1 | 2&3 | 500 ma @ 48V (AC or DC) & dry circuit | Some | 30,000 & 60,000 | P.C. thru-hole | Vert. & rt. angle | E18-E20 |
| NK | 1 | 2 | 500 ma @ 12V | No | 1000 | P.C. thru-hole | Vertical | E21 |
| MINIATURE SLIDE SWITCHES | | | | | | | | |
| SERIES | POLES | POS-ITIONS | RATINGS | WASH-ABLE | LIFE CYCLES | MOUNTING | ACTUATION | PAGE(S) |
| MSTS | 1&2 | 3 | 300 ma @ 28VDC | Yes | 10,000 | P.C. thru-hole | Vertical | E22 |
| MHS <i>New!</i> | 1&2 | 2&3 | 300 ma @ 30VDC | Yes | 10,000 | P.C. thru-hole | Vertical | E23-E26 |
| SLB | 1&2 | 2,3,4&5 | 300 ma @ 30VDC or 125 VAC | Yes | 10,000 | P.C. thru-hole | Vert. & rt. angle | E27-E34 |
| SLC | 1&2 | 2 | 300 ma @ 30VDC or 125 VAC | Yes | 10,000 | Panel | Vertical | E35 |
| SLG | 1 | 2 | 300 ma @ 30VDC or 125 VAC | Yes | 10,000 | P.C. thru-hole & panel | Vertical | E36 |
| SLA | 1&2 | 2 | 500 ma @ 125VAC | Yes | 10,000 | P.C. thru-hole & panel | Vertical | E37-E38 |
| SLE | 1&2 | 2 | 500 ma @ 125VAC | Yes | 10,000 | P.C. thru-hole & panel | Vertical | E38-E39 |
| G | 1&2 | 2&3 | 4 amps @ 125VAC, 2 amps @ 250 VAC or 3 amps @ 30 VDC & dry circuit | No | 20,000 - 60,000 | P.C. thru-hole & panel | Vert. & rt. angle | E40-E44 |
| 25000N | 1&2 | 2&3 | 4 amps @ 125 VAC, 2 amps @ 250 VAC or 3 amps @ 30 VDC & dry circuit | No | 10,000 - 20,000 | P.C. thru-hole | Vert. & rt. angle | E45-E49 |
| STANDARD SIZE SLIDE SWITCHES | | | | | | | | |
| SERIES | POLES | POS-ITIONS | RATINGS | WASH-ABLE | LIFE CYCLES | MOUNTING | ACTUATION | PAGE(S) |
| MSS | 1,2&4 | 2,3&4 | 300 ma @ 30VDC or 125 VAC & dry circuit | Yes | 10,000 | P.C. thru-hole | Vert. & rt. angle | E50-E52 |
| M | 1,2,4, 6&8 | 2&3 | 300 ma @30VDC or 125 VAC | Yes | 10,000 | P.C. thru-hole | Vert. & rt. angle | E53-E57 |
| PM | 1&2 | 2 | 6 amps @ 125 VAC or 3 amps @ 250 VAC | Yes | 10,000 | Panel | Vertical | E58 |

SLIDE SWITCHES

SLIDE SWITCH SELECTION GUIDE (CONT'D.)

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| MINIATURE PUSHBUTTON STYLE SLIDE SWITCHES | | | | | | | | | |
|---|--------------|----------------|--|---------------|----------------|----------------|-----------|---------|--|
| SERIES | POLES | POS- ITIONS | RATINGS | WASH- ABLE | LIFE CYCLES | MOUNTING | ACTUATION | PAGE(S) | |
| MPS | PB-1 SL-1 | PB-1 SL-3 | PB - 0.4 VA @ 20 V max. Slide - 300 ma @ 30VDC/125VAC | No | 100,000 | P.C. thru-hole | Rt. angle | E59 | |
| SINGLE POLE MULTI-POSITION SLIDE SWITCHES | | | | | | | | | |
| SERIES | POLES | POS- ITIONS | RATINGS | WASH- ABLE | LIFE CYCLES | MOUNTING | ACTUATION | PAGE(S) | |
| MSL | 1 | 3,5&6 | 200 ma @ 30VDC/125VAC | Yes | 10,000 | P.C. thru-hole | Vertical | E60 | |
| BATON TOGGLE STYLE SLIDE SWITCHES | | | | | | | | | |
| SERIES | POLES | POS- ITIONS | RATINGS | WASH- ABLE | LIFE CYCLES | MOUNTING | ACTUATION | PAGE(S) | |
| MBT | 2,4&6 | 2,3&4 | 300 ma @ 30VDC/125VAC | Yes | 10,000 | P.C. thru-hole | Toggle | E61-E63 | |

E

ALPHA-NUMERIC INDEX BY SERIES

| <u>SERIES</u> | <u>Page (s)</u> | <u>SERIES</u> | <u>Page (s)</u> |
|---------------|------------------|-----------------|------------------|
| G | E40 - E44 | MSSA | E10 |
| M | E53 - E57 | MSSB | E10 |
| MA | E11 | MSTS | E22 |
| MBT | E61 - E63 | NK | E21 |
| MHS | E23 - E26 | PM | E58 |
| MHSS | E12 | SLA | E37 - E38 |
| MMPS | E15 | SLB | E27 - E34 |
| MJS | E8 - E9 | SLC | E35 |
| MMS | E16 - E17 | SLE | E38 - E39 |
| MPS | E59 | SLG | E36 |
| MS | E13 - E15 | 25000N | E45 - E49 |
| MSL | E60 | TG | E18 - E20 |
| MSS | E50 - E52 | TG (SMT) | E4 - E7 |

TG SERIES - SMT WASHABLE TINY SLIDE SWITCHES

DESIGNED EXCLUSIVELY FOR SURFACE MOUNTING

SMT TG Series switches incorporate many desirable features that include:

- **Tape & reel packaging**
This type of packaging is recommended for:
 - economy
 - suitability for automated placement
 - handling of large quantities of components per packaging unit
 - positive component positioning
 - protection of terminals against damage during handling
 - high static resistance

- **Reflow solderable**
 - High temperature plastic materials
 - Tin plated grounding brackets
 - Tin-lead alloy over nickel terminal plating
 - Terminals turned outward to prevent the shadow effect in infrared soldering and to permit visual inspection of the solder joints
 - .021" (0.55mm) air gap between p.c. board and switch case
 - End stackable with .400" (10.16mm) pitch
 - Available with positioning pins to assure correct switch orientation during the reflow process and provide additional mechanical integrity

- **Washable**
Switches are designed to withstand cleaning processes, including hot water under pressure.

Surface mount devices (SMD) are subject to more stringent constraints of temperature, solderability, sealing and space savings than through-hole components.

To meet these requirements, APEM has designed a family of tiny surface mount switches that include TL Series toggle switches, TP Series pushbutton switches, TR Series rocker switches & TG Series slide switches. See toggle, pushbutton & rocker switch sections of catalog for TL, TP & TR Series respectively.



TG SERIES - SMT WASHABLE TINY SLIDE SWITCHES

ELECTRICAL SPECIFICATIONS

| | |
|--|--|
| Contact ratings (resistive lds.): | 0.4 VA at 20 V max. (AC or DC) |
| Minimum load: | 10 mA at 50 mV or 10µA at 5 VD |
| Initial contact resistance: | 20 milliohms maximum |
| Insulation resistance: | 1000 MΩ min. at 500 VDC |
| Dielectric strength: | 1000 V rms between terminals & frame. 500 V rms between terminals |
| Electrical life (at full load): | 2 position switches: 60,000 cycles 3 position switches: 30,000 cycles |
| Static resistance: | 10 KV (Schaffner equipment) |

GENERAL SPECIFICATIONS

| | |
|-------------------------------------|-------------------------------------|
| Travel: | .102" (2.60mm) |
| Operating temperature range: | -40°C to +85°C |
| Moisture resistance: | 21 days per IEC 512-6 test 11c |
| Vibration resistance: | 10-500 Hz/10g per IEC 512-4 test 6d |
| Shock resistance: | 50 g per IEC 512-4 test 6c |

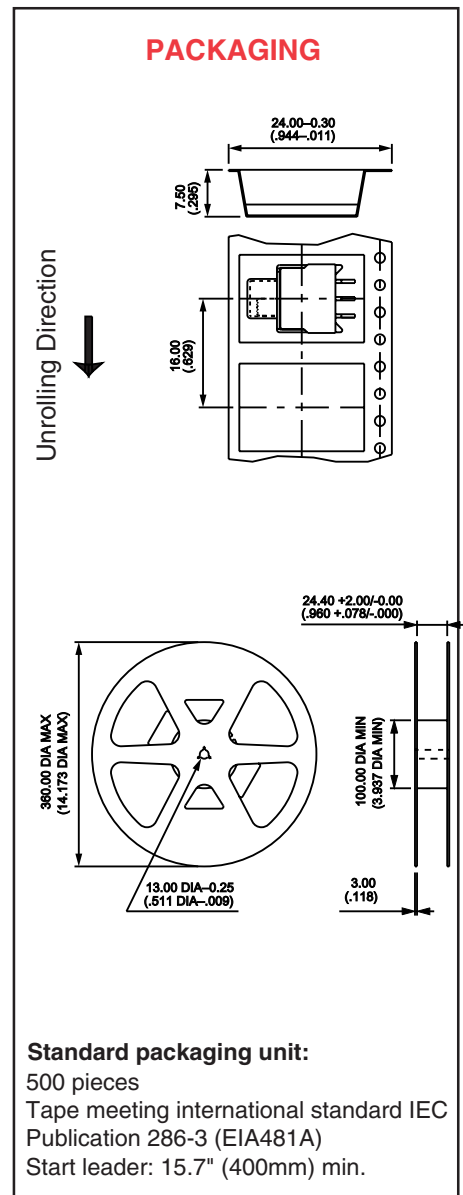
MATERIALS

| | |
|----------------------------|--|
| Case: | High temperature plastic UL94V-0 |
| Actuator: | High temperature plastic UL94V-0 |
| Grounding brackets: | Tin plated steel (includes positioning pins) |
| Contacts: | Gold plated brass |
| Terminals: | Brass with tin-lead alloy over nickel plate |
| Terminal seal: | Epoxy |

SOLDERING AND CLEANING

| | |
|--------------------------|---|
| Reflow soldering: | Infrared, vapor phase and infrared convection |
| Washable: | Per IEA-RS448-2: water and detergent - preferred. Solvents. |

PACKAGING



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

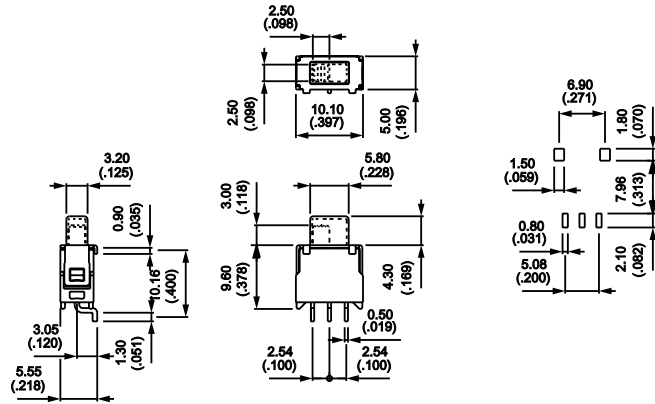
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TG SERIES - SMT WASHABLE TINY SLIDE SWITCHES

Single pole slide switches



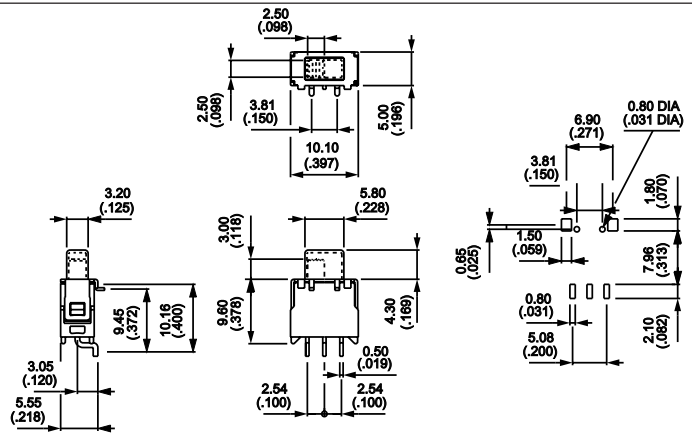
| MODEL NO. | CIRCUIT |
|-------------|-----------|
| TG36WS80050 | ON - ON |
| TG39WS80050 | ON OFF ON |



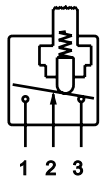
Single pole slide switches with positioning pins



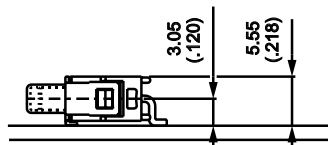
| MODEL NO. | CIRCUIT |
|-------------|-----------|
| TG36WS80065 | ON - ON |
| TG39WS80065 | ON OFF ON |



SWITCH ACTION



P.C. BOARD DIMENSIONS



LED INDICATOR IN TINY PACKAGE

ELECTRICAL SPECIFICATIONS

Forward voltage: Red; 3.0 volts at 10 milliamps (2V typical)
Green; 3.0 volts at 20 milliamps (2.2V typical)
Yellow; 3.0 volts at 10 milliamps (2.1V typical)

Reverse voltage: 5.0 volts minimum

Viewing angle (total): 90°

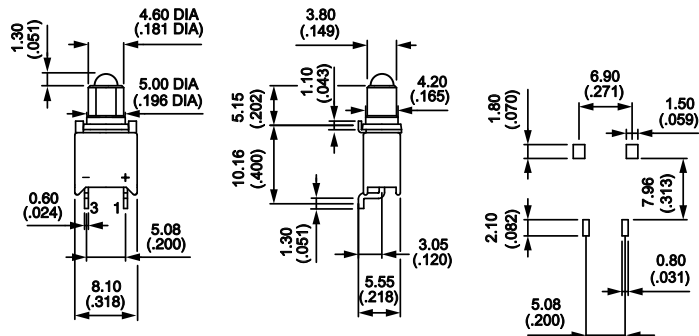
Wavelength: Red; 635 nm
Green; 565 nm
Yellow; 585 nm

PACKAGING

Tape & reel



| MODEL NO. | COLOR |
|-------------|--------|
| TV01WS00100 | Red |
| TV02WS00100 | Green |
| TV03WS00100 | Yellow |



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

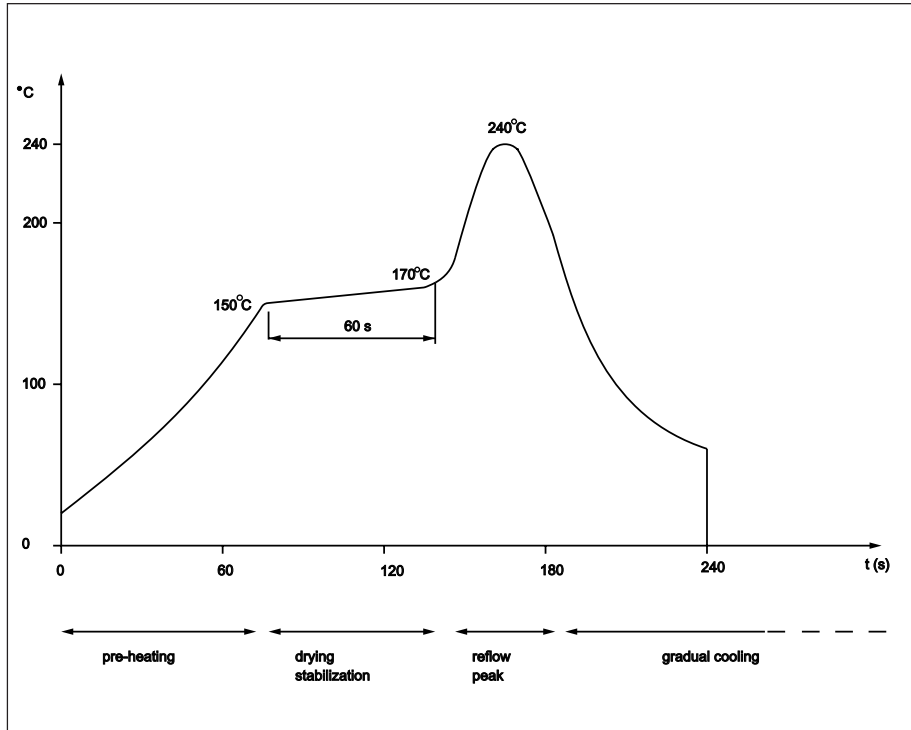
TG SERIES - SMT WASHABLE TINY SLIDE SWITCHES

REFLOW SOLDERING - STANDARD PROFILE

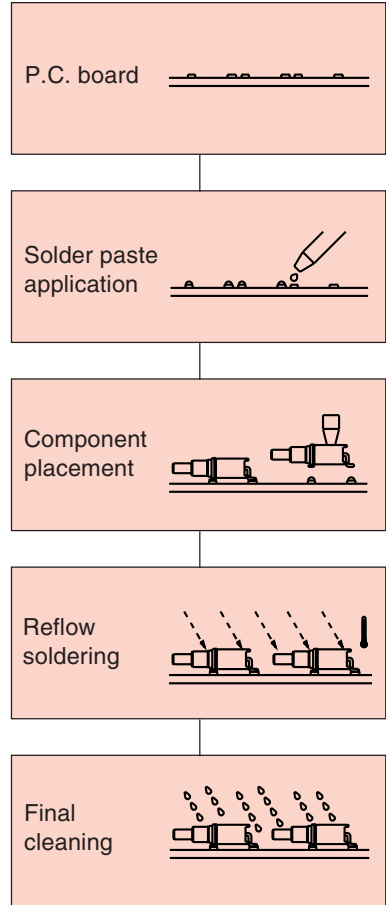
The printed circuit board, carried by a conveyor belt, travels through the reflow soldering oven and experiences the following programmed cycles:

- pre-heat to a maximum of 200°C for 30 seconds
- reflow at a maximum of 245°C for 10 seconds
- final cleaning

TEMPERATURE/TIME PROFILE (typical)



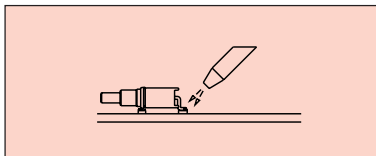
PROCESSING STEPS



E

P.C. BOARD REWORK RECOMMENDATIONS

Hot air reflow technique is preferred. Avoid the use of a soldering iron.



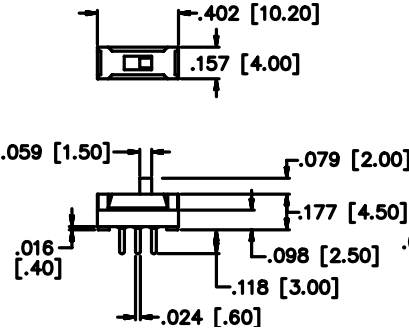
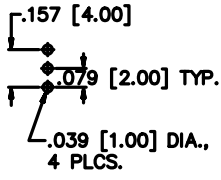
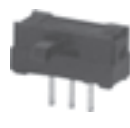
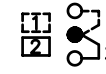
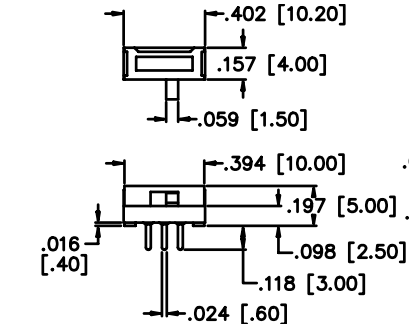
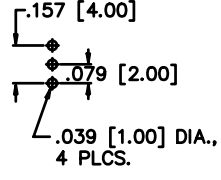
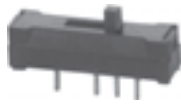
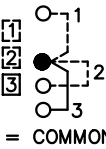
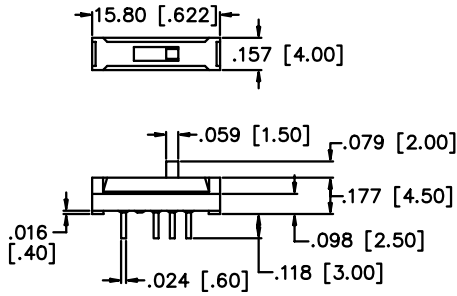
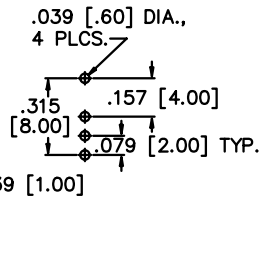


Caution: Excessive and/or repeated high temperature exposure may affect switch performance & reliability.

MJS Series

Microminiature Slide Switches

| SPECIFICATIONS | FEATURES |
|--|--|
| <p>Contact rating: 100 mA at 12 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: 225g (average)</p> <p>Solder heat resistance: 260°C max. for 5 seconds</p> <p>Washing not recommended</p> | <ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Molded-in terminals minimize flux or solder entry. ● Molded-in high temperature phenolic base. ● Low Profile. |
| MATERIALS | |
| <p>Contacts & terminals: Silver plated</p> <p>Case & actuator: Thermoplastic</p> <p>Terminal seal: Molded-in</p> | |




| MODEL NO. | 1P2T |
|---|---|
| MJS12 | |
|  <p>VERTICAL ACTUATOR</p> | <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p style="text-align: center;">1P2T</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>● = COMMON</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> |
| MODEL NO. | 1P2T |
| MJS12R | |
|  <p>RIGHT ANGLE ACTUATOR</p> | <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p style="text-align: center;">1P2T</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>● = COMMON</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> |
| MODEL NO. | 1P3T |
| MJS13 | |
|  <p>VERTICAL ACTUATOR</p> | <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p style="text-align: center;">1P3T</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>● = COMMON</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MJS Series

Microminiature Slide Switches


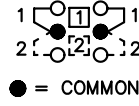
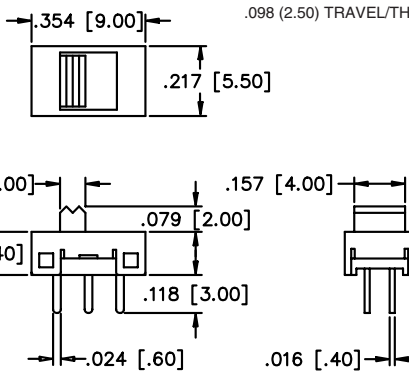
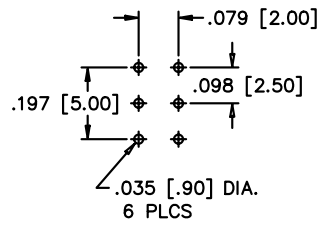
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


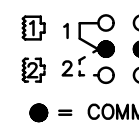
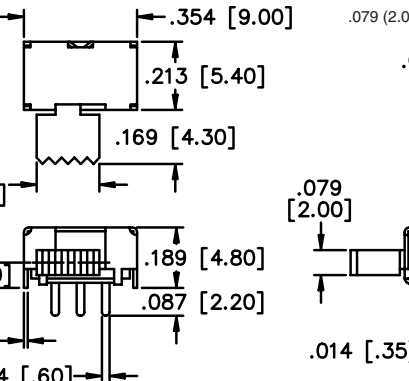
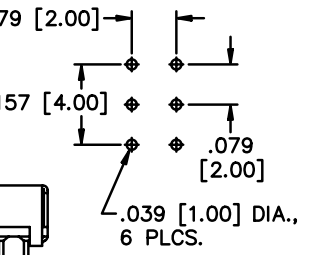
| | |
|---|---|
| <p>MODEL NO.</p> <p>MJS13R</p> <div style="text-align: center;">  </div> <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p>1P3T</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Schematic diagram showing a 1P3T switch with terminals 1, 2, and 3. Terminal 2 is marked as common.</p> <p>● = COMMON</p> </div> <div style="width: 35%;"> <p>Mechanical outline showing dimensions: .622 [15.80], .157 [4.00], .059 [1.50], .016 [.40], .197 [5.00], .098 [2.50], .118 [3.00], .024 [.60], .138 [3.50], .039 [1.00], .016 [.40].</p> </div> <div style="width: 30%;"> <p>P.C. Board layout showing dimensions: .315 [8.00], .157 [4.00], .079 [2.00] TYP., .039 [1.00] DIA., 4 PLCS.</p> </div> </div> |
| <p>MODEL NO.</p> <p>MJS22</p> <div style="text-align: center;">  </div> <p style="text-align: center;">VERTICAL ACTUATOR</p> | <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p>2P2T</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Schematic diagram showing a 2P2T switch with terminals 1 and 2 on both sides. Terminal 2 is marked as common.</p> <p>● = COMMON</p> </div> <div style="width: 35%;"> <p>Mechanical outline showing dimensions: .236 [6.00], .394 [10.00], .098 [2.50], .059 [1.50], .177 [4.50], .047 [1.20], .079 [2.00], .024 [.60], .118 [3.00], .016 [.40].</p> </div> <div style="width: 30%;"> <p>P.C. Board layout showing dimensions: .157 [4.00], .079 [2.00], .079 [2.00], .039 [1.00] DIA., 6 PLCS.</p> </div> </div> |
| <p>MODEL NO.</p> <p>MJS22R</p> <div style="text-align: center;">  </div> <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <p style="text-align: right;">.079 (2.00) TRAVEL/THROW</p> <p>2P2T</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Schematic diagram showing a 2P2T switch with terminals 1 and 2 on both sides. Terminal 2 is marked as common.</p> <p>● = COMMON</p> </div> <div style="width: 35%;"> <p>Mechanical outline showing dimensions: .236 [6.00], .059 [1.50], .394 [10.00], .098 [2.50], .197 [5.00], .118 [3.00], .016 [.40], .024 [.60] TYP., .138 [3.50], .039 [1.00], .016 [.40].</p> </div> <div style="width: 30%;"> <p>P.C. Board layout showing dimensions: .079 [2.00], .157 [4.00], .079 [2.00], .039 [1.00] DIA., 6 PLCS.</p> </div> </div> |

E

MSSA & MSSB Series

Microminiature Slide Switches

| SPECIFICATIONS | | FEATURES | | |
|---|--------|--|---|---|
| <p>Contact ratings: Gold; 0.4 Volt-Amps (VA) max. at 20 V max. (AC or DC) Silver; 100 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 30 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 250 VDC</p> <p>Dielectric strength: 250 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: 250g ± 150g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p> | | <ul style="list-style-type: none"> ● Low Profile. ● Epoxy sealed terminals. ● Cosmetic molded case. | | |
| MODEL NO. PLATING | | MATERIALS | | |
| MSSA22 | SILVER | Contacts & terminals: Gold or silver available (see contact ratings) | | |
| MSSA22G | GOLD | Housing and Actuator: Thermoplastic | | |
| | | Base: High temperature thermoplastic | | |
| | | Terminal seal: Epoxy | | |
| <p>2P2T</p>  <p>VERTICAL ACTUATOR</p> | |  <p>SCHMATIC</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |

| SPECIFICATIONS | | FEATURES | | |
|---|--------|--|--|--|
| <p>Contact ratings: Gold; 0.4 Volt-Amps (VA) max. at 20 V max. (AC or DC) Silver; 100 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 250 VDC</p> <p>Dielectric strength: 250 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: 200g ± 150g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p> | | <ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Low Profile. ● Epoxy sealed terminals. | | |
| MODEL NO. PLATING | | MATERIALS | | |
| MSSB22R | SILVER | Contacts & terminals: Gold or silver available (see contact ratings) | | |
| MSSB22RG | GOLD | Housing: Tin plated steel | | |
| | | Actuator: Thermoplastic | | |
| | | Base: Phenolic laminated sheet | | |
| | | Terminal seal: Epoxy | | |
| <p>2P2T</p>  <p>RIGHT ANGLE ACTUATOR</p> | |  <p>SCHMATIC</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |


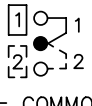
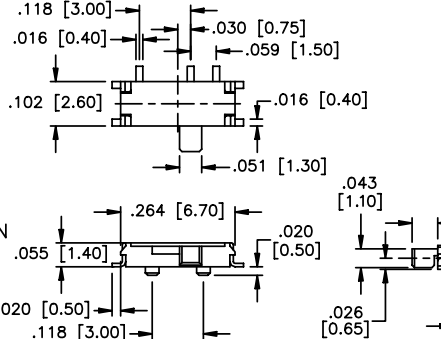
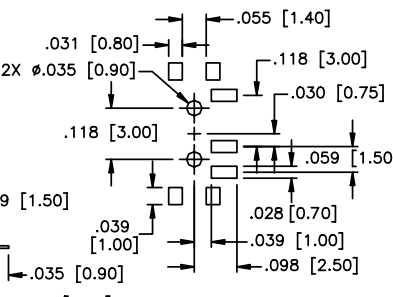
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



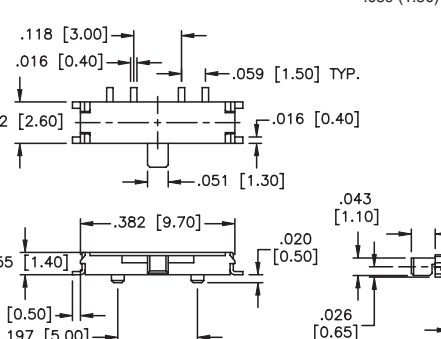
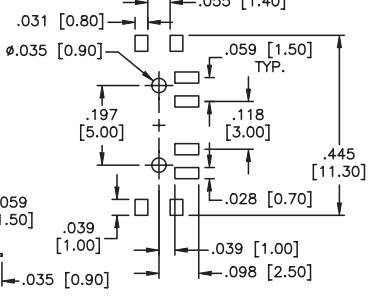
MA Series

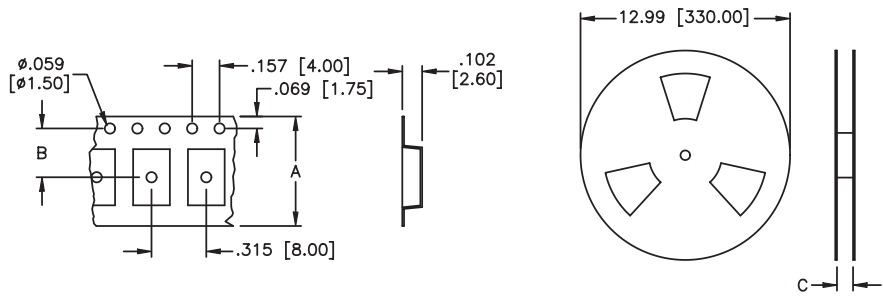
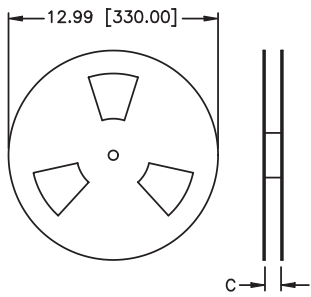
Microminiature Memory Card Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| SPECIFICATIONS | FEATURES |
|---|--|
| <p>Contact rating: 300 mA at 4 VDC</p> <p>Initial contact resistance: 70 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 100 VDC</p> <p>Dielectric strength: 100 VAC for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: 200g ± 100g</p> <p>Solder heat resistance: Reflow - 260°C max. for 1 min. Manual - iron temperature 305 °C max. for 6 seconds.</p> <p>Washing not recommended</p> | <ul style="list-style-type: none"> ● Ultra-compact size. ● Low Profile. ● Surface mounting with restraining bosses. ● Reflow or hand solderable. |
| MATERIALS | |
| <p>Contacts: Silver plated beryllium copper</p> <p>Terminals: Silver plated brass</p> <p>Base: Liquid crystal polymer Cover: Tin plated steel</p> <p>Actuator: Liquid crystal polymer</p> | |

| MODEL NO. | .059 (1.50) TRAVEL/THROW | | |
|--|--|--|--|
| MA12R | | | |
|  <p>RIGHT ANGLE ACTUATOR</p> | <p>1P2T</p>  <p>● = COMMON</p> <p>SCHMATIC</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |

| MODEL NO. | .059 (1.50) TRAVEL/THROW | | |
|--|--|---|---|
| MA13R | | | |
| <p style="color: red; font-weight: bold;">New!</p>  <p>RIGHT ANGLE ACTUATOR</p> | <p>1P3T</p>  <p>● = COMMON</p> <p>SCHMATIC</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |


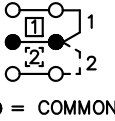
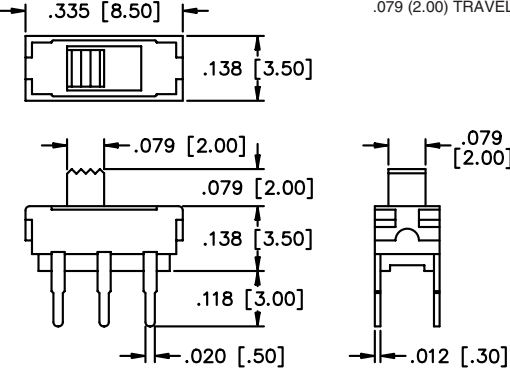
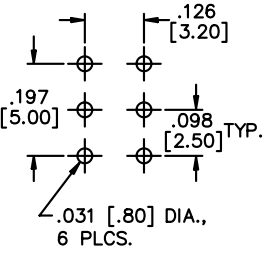

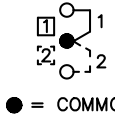
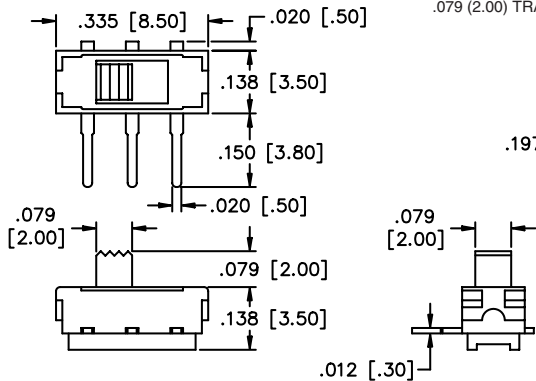
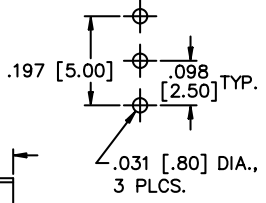

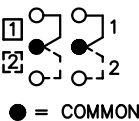
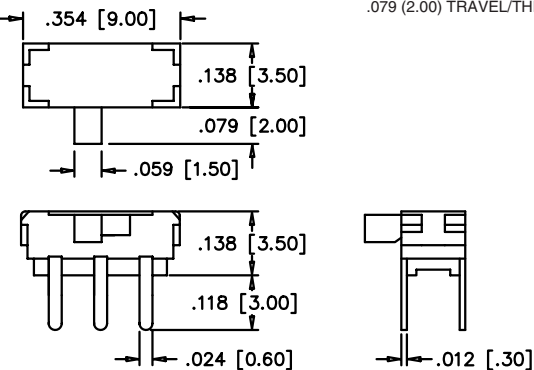
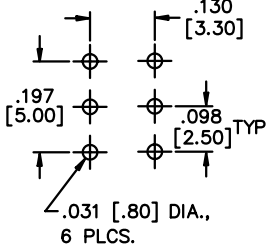
| MODEL NO. | CARRIER TAPE | | REEL DIMENSIONS | | | | | | | | | | | | |
|--|--|-------------|---|--------|----------|-------------|------------|-------------|----------|-------------|-------------|-------------|--|--|--|
| MA12R/TR MA13R/TR | | | | | | | | | | | | | | | |
| Same as above models except supplied on tape & reel as shown. |  | |  | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Model No.</th> <th>Dim. A</th> <th>Dim. B</th> <th>Dim. C</th> </tr> </thead> <tbody> <tr> <td>MA12R/TR</td> <td>.630 (16.0)</td> <td>.217 (5.5)</td> <td>.646 (16.4)</td> </tr> <tr> <td>MA13R/TR</td> <td>.945 (24.0)</td> <td>.453 (11.5)</td> <td>.960 (24.4)</td> </tr> </tbody> </table> | Model No. | Dim. A | Dim. B | Dim. C | MA12R/TR | .630 (16.0) | .217 (5.5) | .646 (16.4) | MA13R/TR | .945 (24.0) | .453 (11.5) | .960 (24.4) | | | |
| Model No. | Dim. A | Dim. B | Dim. C | | | | | | | | | | | | |
| MA12R/TR | .630 (16.0) | .217 (5.5) | .646 (16.4) | | | | | | | | | | | | |
| MA13R/TR | .945 (24.0) | .453 (11.5) | .960 (24.4) | | | | | | | | | | | | |

MHSS Series

Microminiature Slide Switches

| SPECIFICATIONS | FEATURES |
|--|--|
| <p>Contact ratings: 300 mA at 6 VDC</p> <p>Initial contact resistance: 60 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 100 VDC</p> <p>Dielectric strength: 100 VAC for 1 minute</p> <p>Electrical life: 5000 cycles min.</p> <p>Operating temperature range: -20°C to +70°C</p> <p>Solder heat resistance: 350°C max. for 3 seconds</p> <p>Washing not recommended</p> | <ul style="list-style-type: none"> ● Excellent tactile feed-back (detent action). ● Molded-in terminals minimize flux or solder entry. ● Ultra-compact case size. ● Low profile. |
| | MATERIALS |
| | <p>Contacts & terminals: Silver plated</p> <p>Case: 30% Glass filled nylon, type 6/6, black</p> <p>Actuator: Nylon, type 6/6, black (blue for MHSS2220 only)</p> |

E

| | | | |
|---|--|--|--|
| MODEL NO. | | | |
| MHSS1104 | | | |
|  | <p>1P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> | <p>.079 (2.00) TRAVEL/THROW</p>  <p>P.C. BOARD LAYOUT</p> |
| VERTICAL ACTUATOR | SCHEMATIC | | |
| MODEL NO. | | | |
| MHSS1105 | | | |
|  | <p>1P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> | <p>.079 (2.00) TRAVEL/THROW</p>  <p>P.C. BOARD LAYOUT</p> |
| RIGHT ANGLE ACTUATOR | SCHEMATIC | | |
| MODEL NO. | | | |
| MHSS2220 | | | |
|  | <p>2P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> | <p>.079 (2.00) TRAVEL/THROW</p>  <p>P.C. BOARD LAYOUT</p> |
| RIGHT ANGLE ACTUATOR | SCHEMATIC | | |

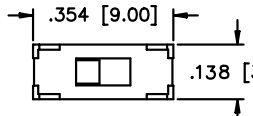

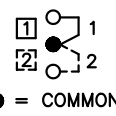
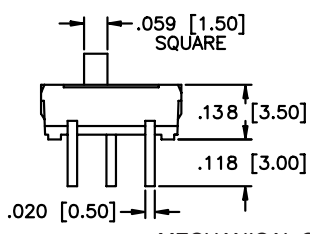
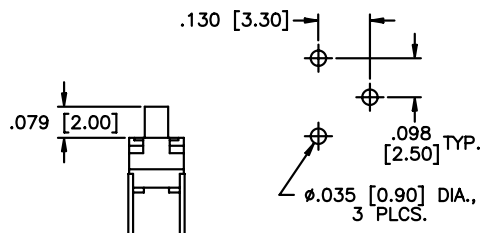
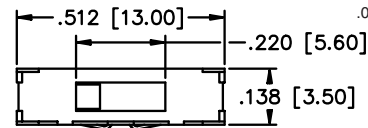

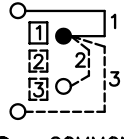
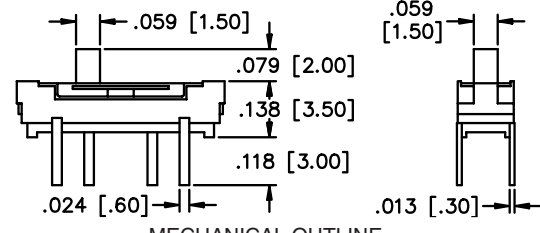
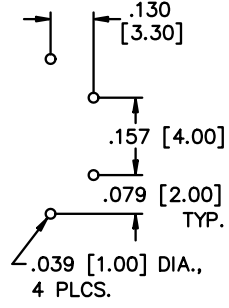
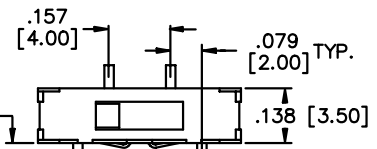

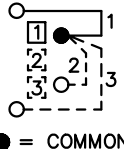
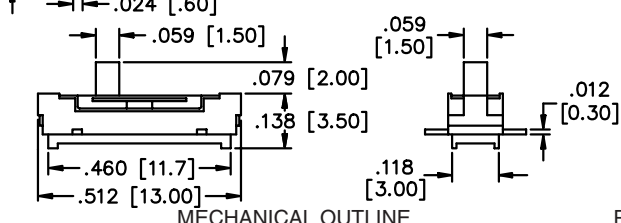
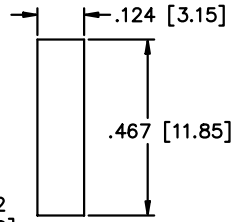
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MS Series

Microminiature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


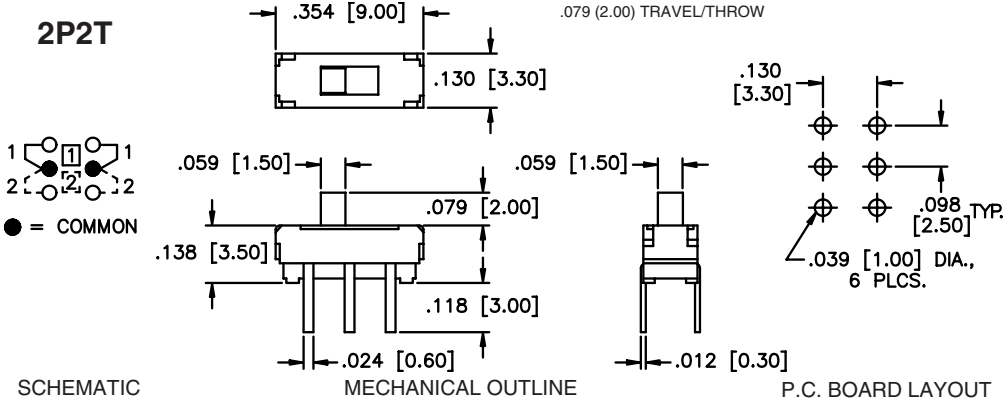

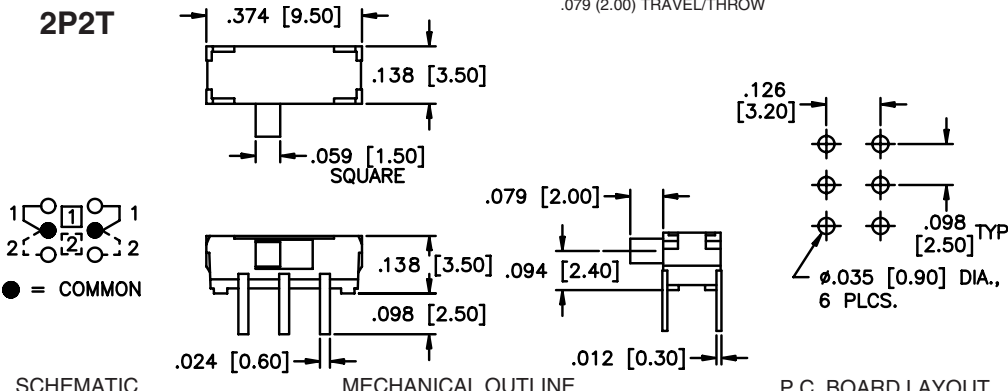

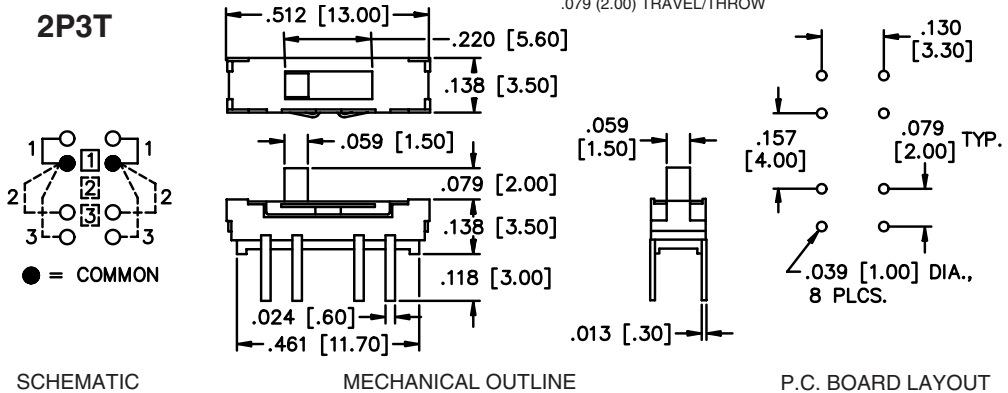

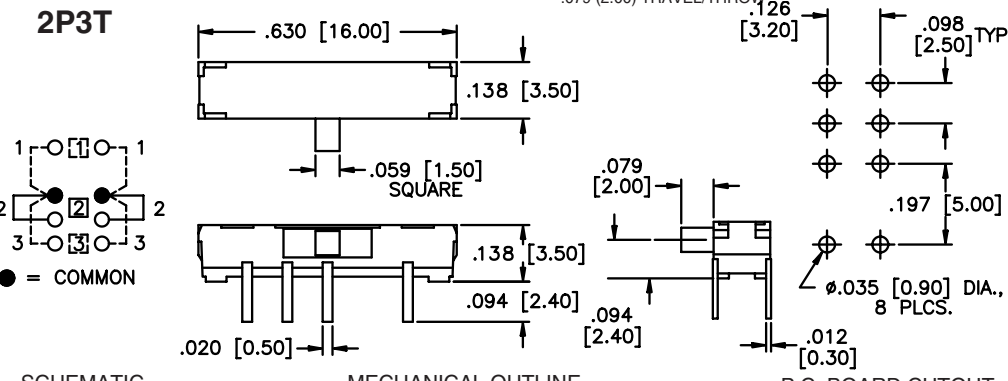
| SPECIFICATIONS | FEATURES |
|---|--|
| <p>Contact rating: 300 mA at 6 VDC</p> <p>Initial contact resistance: 70 milliohms max.</p> <p>Insulation resistance: 100 megohms max. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p> | <ul style="list-style-type: none"> ● Low profile. ● Insert molded terminals. ● Stainless steel cover. |
| | MATERIALS |
| | <p>Contacts & terminals: Silver plated</p> <p>Cover: Stainless steel</p> <p>Actuator: Thermoplastic</p> <p>Base: High temperature thermoplastic Terminal seal: Insert molded</p> |

| MODEL NO. | | | |
|---|---|---|--|
| MS12 | 1P2T |  <p style="text-align: right; font-size: small;">.079 (2.00) TRAVEL/THROW</p> | |
|  |  <p>● = COMMON</p> |  <p style="text-align: center;">MECHANICAL OUTLINE</p> |  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MS13 | 1P3T |  <p style="text-align: right; font-size: small;">.079 (2.00) TRAVEL/THROW</p> | |
|  |  <p>● = COMMON</p> |  <p style="text-align: center;">MECHANICAL OUTLINE</p> |  <p style="text-align: center;">P.C. BOARD CUTOUT</p> |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD CUTOUT |
| MS13S | 1P3T |  <p style="text-align: right; font-size: small;">.079 (2.00) TRAVEL/THROW</p> | |
|  |  <p>● = COMMON</p> |  <p style="text-align: center;">MECHANICAL OUTLINE</p> |  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |

MS Series

Microminiature Slide Switches

E

| | |
|---|--|
| <p>MODEL NO. MS22</p>  <p>VERTICAL ACTUATOR</p> | <p>2P2T</p> <p>.079 (2.00) TRAVEL/THROW</p>  <p>SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> |
| <p>MODEL NO. MS22R</p>  <p>RIGHT ANGLE ACTUATOR</p> | <p>2P2T</p> <p>.079 (2.00) TRAVEL/THROW</p>  <p>SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> |
| <p>MODEL NO. MS23</p>  <p>VERTICAL ACTUATOR</p> | <p>2P3T</p> <p>.079 (2.00) TRAVEL/THROW</p>  <p>SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> |
| <p>MODEL NO. MS23R</p>  <p>RIGHT ANGLE ACTUATOR</p> | <p>2P3T</p> <p>.079 (2.00) TRAVEL/THROW</p>  <p>SCHMATIC MECHANICAL OUTLINE P.C. BOARD CUTOUT</p> |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|----------------------|--------------------------------------|---------------------------|--------------------------|
| MODEL NO. | <p>2P3T</p> <p>● = COMMON</p> | <p>MECHANICAL OUTLINE</p> | <p>P.C. BOARD CUTOUT</p> |
| MS23S | | | |
| VERTICAL ACTUATOR | | | |
| MODEL NO. | <p>4P2T</p> <p>● = COMMON</p> | <p>MECHANICAL OUTLINE</p> | <p>P.C. BOARD LAYOUT</p> |
| MS42R | | | |
| RIGHT ANGLE ACTUATOR | | | |



New!

MMPS Series Microminiature Pushbutton Style Slide Switches

| | |
|---|--|
| SPECIFICATIONS | FEATURES |
| <p>Contact rating: 300 mA at 4 VDC</p> <p>Initial contact resistance: 70 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 100 VDC</p> <p>Dielectric strength: 100 VAC for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: Pushbutton; 200g average Slide; 275g average</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p> | <ul style="list-style-type: none"> ● Surface mounting configuration. ● Combination momentary pushbutton & slide switch mechanism. ● Ultra-low profile & ultra-compact case. ● Molded-in terminal seal. |
| | MATERIALS |
| | <p>Contacts: Gold plated copper alloy</p> <p>Frame: Stainless steel Actuator: 6/6 Nylon or PA</p> <p>Base: High temperature PPS</p> <p>Terminal seal: Molded-in</p> |


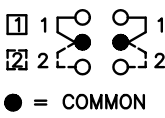
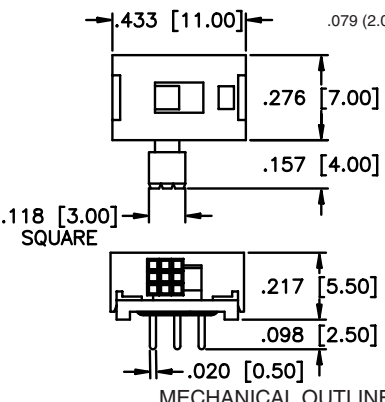
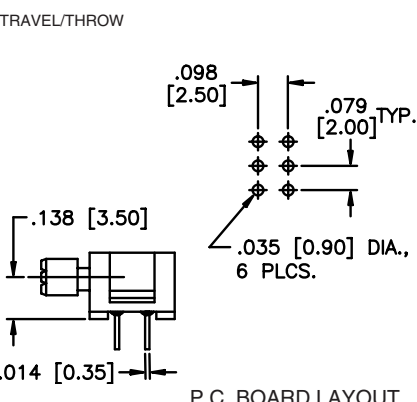

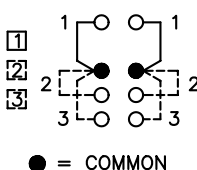
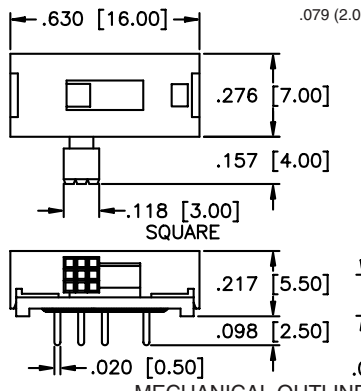
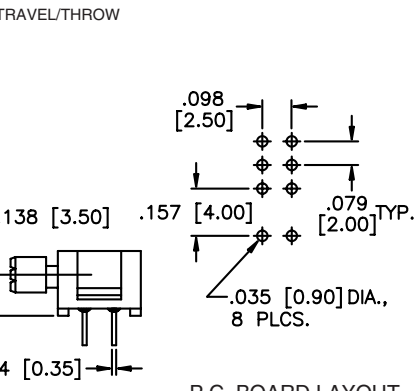

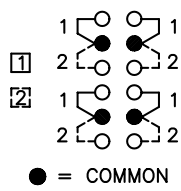
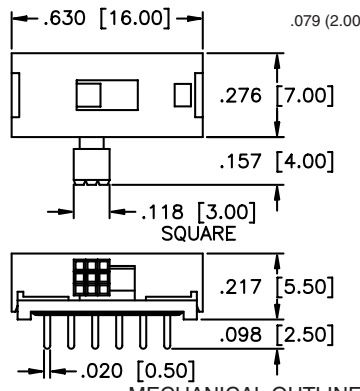
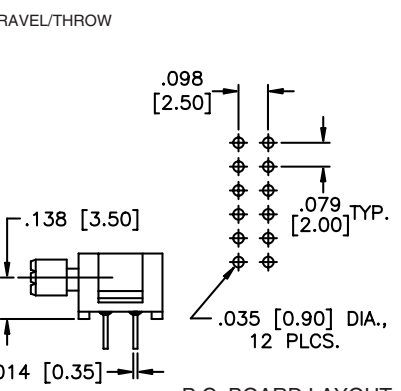
| | | | |
|----------------------|---|---------------------------|--------------------------|
| MODEL NO. | <p>1P2T, (PB) 1P3T, (Slide)</p> <p>● = COMMON</p> | <p>MECHANICAL OUTLINE</p> | <p>P.C. BOARD LAYOUT</p> |
| MMPS101 | | | |
| RIGHT ANGLE ACTUATOR | | | |

MMS Series

Microminiature Slide Switches

| SPECIFICATIONS | FEATURES |
|--|---|
| <p>Contact ratings: 300 mA at 30 VDC</p> <p>Initial contact resistance: 25 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +70°C</p> <p>Solder heat resistance: 255°C max. for 5 seconds max.</p> <p>Washing not recommended</p> | <ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Low Profile. ● Epoxy sealed terminals. ● Cosmetic molded case. |
| MATERIALS | |
| <p>Contacts & terminals: Silver plated</p> <p>Case: Polyacetal</p> <p>Actuator: PBT Base: Glass filled PBT</p> <p>Terminal seal: Epoxy or phenol resin</p> | |

E





| MODEL NO. | | | |
|---|--|--|--|
| MMS22R | | | |
|  | <p>2P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| MODEL NO. | | | |
| MMS23R | | | |
|  | <p>2P3T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| MODEL NO. | | | |
| MMS42R | | | |
|  | <p>4P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

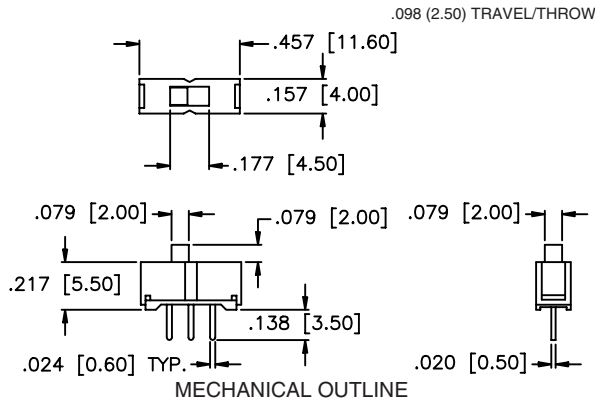
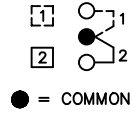
MMS Series

Microminiature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|---|--|--|--|
| MODEL NO. | | | |
| MMS1208 | | | |
|  | | | |
| VERTICAL ACTUATOR | | | |
| MODEL NO. | | | |
| MMS2214 | | | |
|  | | | |
| VERTICAL ACTUATOR | | | |
| MODEL NO. | | | |
| MMS42 | | | |
|  | | | |
| VERTICAL ACTUATOR | | | |
| MODEL NO. | | | |
| MMS6202 | | | |
|  | | | |
| VERTICAL ACTUATOR | | | |

1P2T

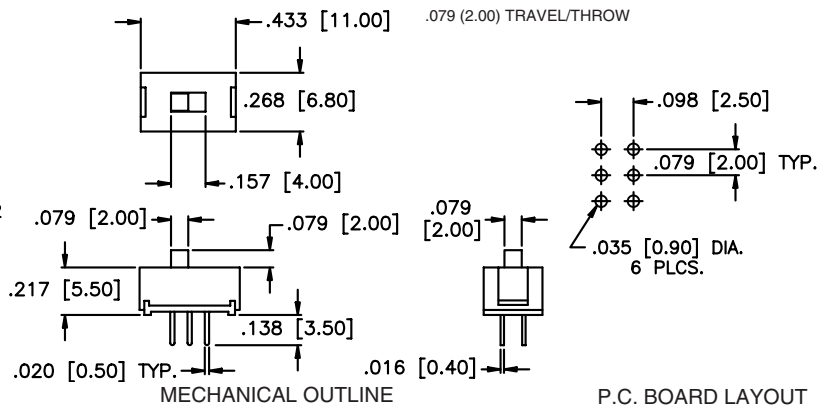
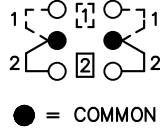


SCHMATIC

MECHANICAL OUTLINE

P.C. BOARD LAYOUT

2P2T

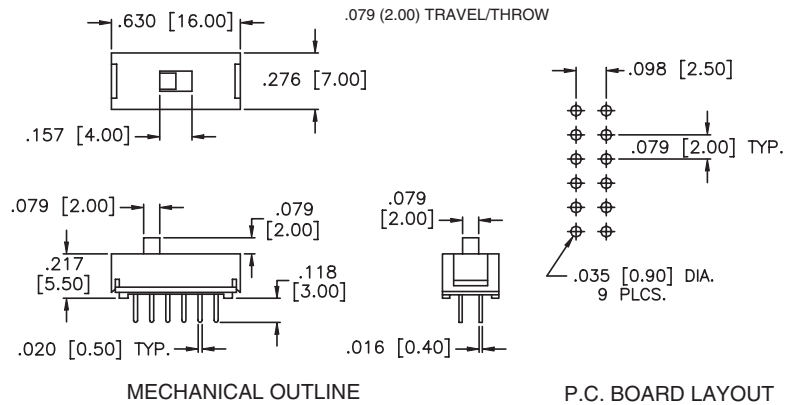
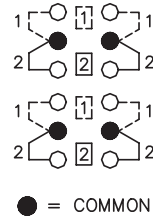


SCHMATIC

MECHANICAL OUTLINE

P.C. BOARD LAYOUT

4P2T

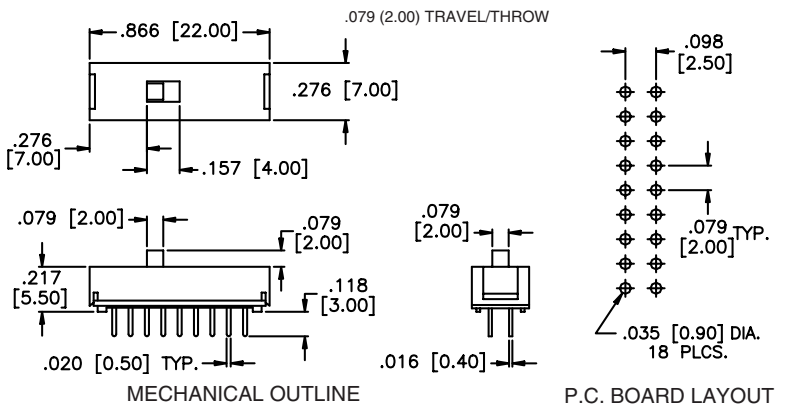
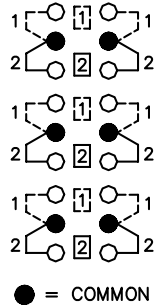


SCHMATIC

MECHANICAL OUTLINE

P.C. BOARD LAYOUT

6P2T



SCHMATIC

MECHANICAL OUTLINE

P.C. BOARD LAYOUT

TG Series

Microminiature Slide Switches

| SPECIFICATIONS | FEATURES |
|--|---|
| <p>Contact ratings: Gold; 0.4 Volt-Amps max. at 20 V max. Silver; 500 mA at 48 V max. (AC or DC)</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 1000 megohms min. at 500 VDC</p> <p>Dielectric strength: 1000 V rms min. between terms. and ground plate (and bracket)</p> <p>Electrical life: 2 position switches-60,000 cycles min. 3 position switches-30,000 cycles min.</p> <p>Operating temperature range: -30°C to +85°C</p> <p>Solder heat resistance: 260°C for 5 seconds max.</p> <p>Washing: Permissible (with model option 50)</p> | <ul style="list-style-type: none"> ● Ultra-compact case size. ● Washable models. ● SPDT maintained action with long electrical life. ● See additional options on pg. E20. |
| MATERIALS | |
| <p>Contacts & terminals: Gold or silver available (see contact ratings)</p> <p>Actuator: Thermoplastic</p> <p>Ground plate & bracket: Tin plated steel</p> <p>Case: Flame retardant thermoplastic Terminal seal: Epoxy</p> <p>Washable seal: Translucent silicone rubber (with model option 50)</p> | |

E

| MODEL NO. | PLATING | ACTION | STRAIGHT P.C. TERMINALS - STANDARD MODELS |
|---------------------------|---------|-----------|--|
| TG36P000000 | Gold | on - on | <div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="width: 45%;"> <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%;"> <p>TRAVEL/THROW; .102 (2.60)</p> <p>P.C. BOARD LAYOUT</p> </div> </div> |
| TG39P000000 | Gold | on off on | |
| TG36P010000 | Silver | on - on | |
| TG39P010000 | Silver | on off on | |
| | | | |
| MODEL NO. | PLATING | ACTION | STRAIGHT P.C. TERMINALS - WASHABLE MODELS |
| TG36P000050 | Gold | on - on | <div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="width: 45%;"> <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%;"> <p>TRAVEL/THROW; .102 (2.60)</p> <p>P.C. BOARD LAYOUT</p> </div> </div> |
| TG39P000050 | Gold | on off on | |
| TG36P010050 | Silver | on - on | |
| TG39P010050 | Silver | on off on | |
| <p>PROCESS COMPATIBLE</p> | | | |
| MODEL NO. | PLATING | ACTION | STRAIGHT P.C. TERMINALS - BRACKET MTG. - STANDARD MODELS |
| TG36Y000000 | Gold | on - on | <div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="width: 45%;"> <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%;"> <p>TRAVEL/THROW; .102 (2.60)</p> <p>P.C. BOARD LAYOUT</p> </div> </div> |
| TG39Y000000 | Gold | on off on | |
| TG36Y010000 | Silver | on - on | |
| TG39Y010000 | Silver | on off on | |
| | | | |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

TG Series

Microminiature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| MODEL NO. | PLATING | ACTION | STRAIGHT P.C. TERMINALS - BRACKET MTG. - WASHABLE MODELS | TRAVEL/THROW; .102 (2.60) | |
|---------------------------|---------|-----------|---|---------------------------|--------------------------|
| TG36Y000050 | Gold | on - on | <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> | <p>MECHANICAL OUTLINE</p> | |
| TG39Y000050 | Gold | on off on | | | <p>P.C. BOARD LAYOUT</p> |
| TG36Y010050 | Silver | on - on | | | |
| TG39Y010050 | Silver | on off on | | | |
| <p>PROCESS COMPATIBLE</p> | | | | | |
| MODEL NO. | PLATING | ACTION | RIGHT ANGLE TERMINALS - HORIZONTAL MTG. - STANDARD MODELS | TRAVEL/THROW; .102 (2.60) | |
| TG36W000000 | Gold | on - on | <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> | <p>MECHANICAL OUTLINE</p> | |
| TG39W000000 | Gold | on off on | | | <p>P.C. BOARD LAYOUT</p> |
| TG36W010000 | Silver | on - on | | | |
| TG39W010000 | Silver | on off on | | | |
| <p>PROCESS COMPATIBLE</p> | | | | | |
| MODEL NO. | PLATING | ACTION | RIGHT ANGLE TERMINALS - HORIZONTAL MTG. - WASHABLE MODELS | TRAVEL/THROW; .102 (2.60) | |
| TG36W000050 | Gold | on - on | <p>FUNCTION (see page e 20)</p> <p>● = COMMON</p> | <p>P.C. BOARD LAYOUT</p> | |
| TG39W000050 | Gold | on off on | | | |
| TG36W010050 | Silver | on - on | | | |
| TG39W010050 | Silver | on off on | | | |
| <p>PROCESS COMPATIBLE</p> | | | | | |

General tolerances for all TG Series drawings - ± .012" (0.3 mm)

TG Series

Microminiature Slide Switches

Additional ordering information: Commonly ordered models are shown on preceeding pages with complete model numbers and specifications. Below is an order format that enables you to 'build your own switch' and specify the correct switch model number by simply selecting from all available options shown and filling in the boxes.

'BUILD YOUR OWN SWITCH' ORDER FORMAT

Fill in boxes shown with options selected from below.
Allowable options for each box are shown under each respective box.

| Series | Poles | Function | Terms. | Contact & Term. Mat'l. | Actuator | Model |
|---|--------------------------------|--------------------------------|---|--------------------------------|---|---|
| <input type="text" value="T"/> <input type="text" value="G"/> | <input type="text" value="3"/> | <input type="text" value="6"/> | <input type="text" value="P"/> <input type="text" value="0"/> | <input type="text" value="0"/> | <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="0"/> <input type="text" value="0"/> |
| | | <input type="text" value="9"/> | <input type="text" value="Y"/> <input type="text" value="0"/> | <input type="text" value="1"/> | <input type="text" value="1"/> <input type="text" value="0"/> | <input type="text" value="5"/> <input type="text" value="0"/> |
| | | | <input type="text" value="W"/> <input type="text" value="0"/> | <input type="text" value="3"/> | | |
| | | | <input type="text" value="M"/> <input type="text" value="W"/> | <input type="text" value="8"/> | | |
| | | | | <input type="text" value="9"/> | | |

Poles: 3 = Single Pole

Functions: 6 = ON - ON 9 = ON OFF ON

Terminals: P 0 = Straight printed circuit terminals
 Y 0 = Straight printed circuit terminals, bracket mtg.
 W 0 = Right angle printed circuit terminals, horizontal mtg. with bracket
 M W = Wirewrap terminals

Contact & terminal materials: 0 = Brass, gold plated (standard)
 1 = Brass, silver plated
 3 = Brass, gold plated (1.27 microns gold)
 8 = Brass contacts, gold plated and tin plated terminals
 9 = Brass contacts, gold plated (1.27 microns gold) and tin plated terminals

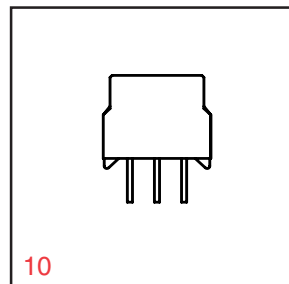
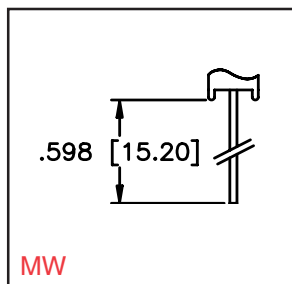
Actuators: 0 0 = High (standard)
 1 0 = Flush

Model: 0 0 = Standard
 5 0 = Washable

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

E

Options MW (wirewrap terminals) and 10 (flush actuator)




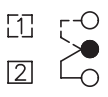
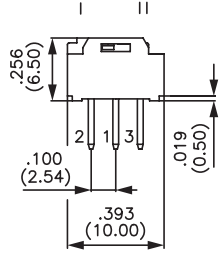
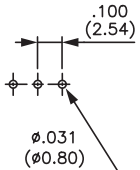
New!
Raised actuator


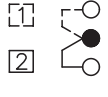
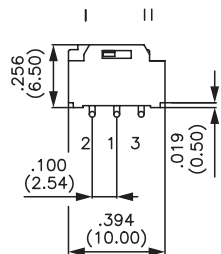
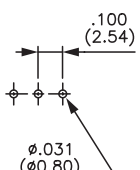
NK Series

Microminiature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

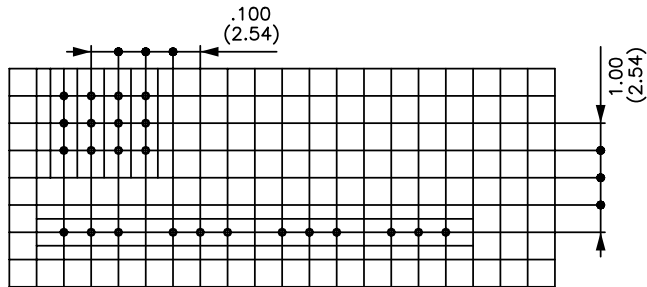
| SPECIFICATIONS | FEATURES |
|---|---|
| <p>Contact rating: 500 mA 12V max. - 1mA 10 mV min.</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 10,000 MΩ min. at 500VDC</p> <p>Dielectric strength: 250 Vrms between terminals 2000 Vrms between adjacent poles placed side by side</p> <p>Electrical life: 2,000 cycles min.</p> <p>Operating temperature range: -40°C to +85°C</p> <p>Solder heat resistance: 250°C max. for 5 seconds</p> <p>Washing not recommended</p> | <ul style="list-style-type: none"> ● Cost effective. ● Flush or raised actuator. ● Wave solderable, flux sealed. ● Through-hole round terminals, straight or right angle. ● Stackable in X & Y directions (with straight terminals). |
| | MATERIALS |
| | <p>Contacts & terminals: Gold over nickel plated</p> <p>Case: PBT, glass filled (UL94V-0)</p> <p>Actuator: PBT, glass filled (UL94V-0)</p> |

| MODEL NO. | | | |
|---|--|--|---|
| NK236 Flush actuator (shown) NK236H Raised actuator | | | |
|  <p>VERTICAL ACTUATOR</p> | <p>1P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |

| MODEL NO. | | | |
|--|--|---|--|
| NK236W Flush actuator NK236WH Raised actuator (shown) | | | |
|  <p>RIGHT ANGLE TERMINALS</p> | <p>1P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |

EXAMPLE OF PRINTED CIRCUIT BOARD LAYOUT FOR STACKING UNITS

Pitch = .100" (2.54mm)




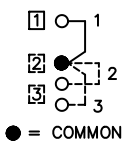
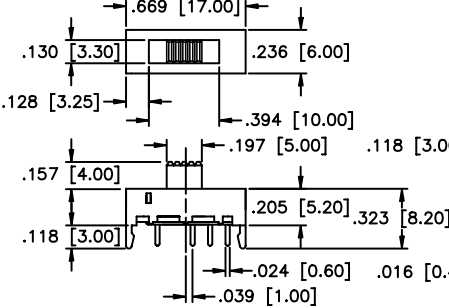
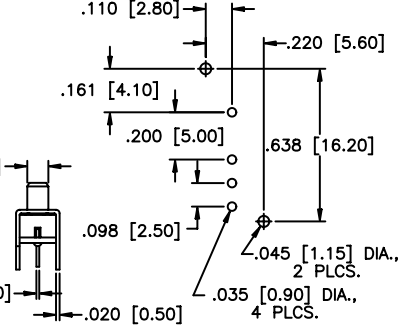

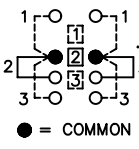
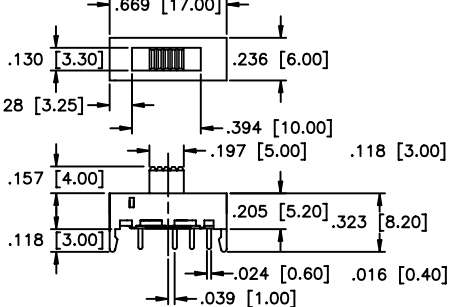
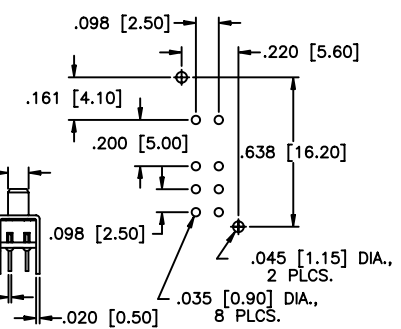
E

MSTS Series

Miniature Slide Switches

| SPECIFICATIONS | FEATURES |
|--|--|
| Contact rating: 300 mA at 28 VDC Initial contact resistance: 20 milliohms max. Insulation resistance: 100 megohms min. at 500 VDC Dielectric strength: 500 VAC for 1 minute Electrical life: 10,000 cycles min. Operating temperature range: -20°C to +85°C Solder heat resistance: 250°C max. for 5 seconds Actuation force: 200-600 grams Solvent washing permissible | <ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Snap-in p.c. mounting bracket design. ● Positive spring loaded ball detent mechanism. ● Epoxy sealed terminals. ● Gold plated contacts available - consult factory. |
| | MATERIALS |
| | Contacts & terminals: Silver plated brass Housing: Zinc plated steel Actuator: Polyacetal, color black Base: Phenolic laminated sheet Terminal seal: Epoxy |

E

| | | | |
|---|---|--|---|
| MODEL NO. | .098 (2.50) TRAVEL/THROW | | |
| MSTS1332K | 1P3T | | |
|  |  <p>● = COMMON</p> |  |  |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | .098 (2.50) TRAVEL/THROW | | |
| MSTS2332K | 2P3T | | |
|  |  <p>● = COMMON</p> |  |  |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


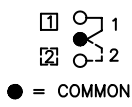
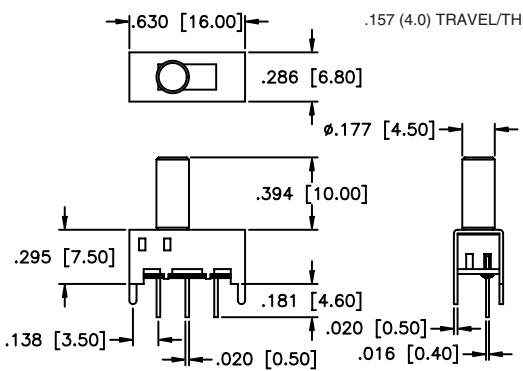
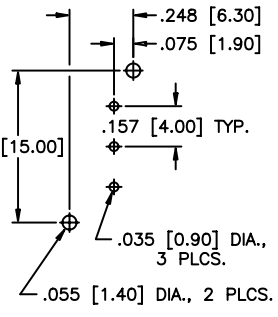

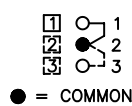
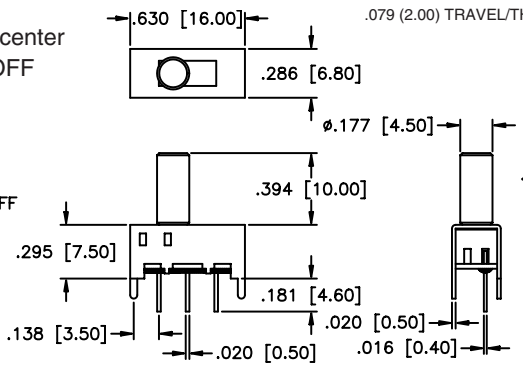
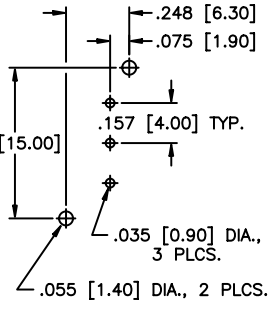

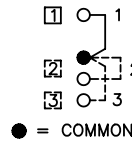
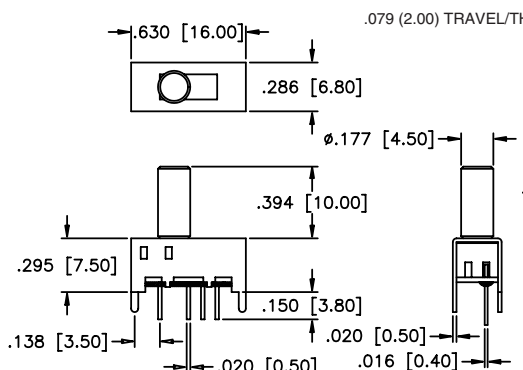
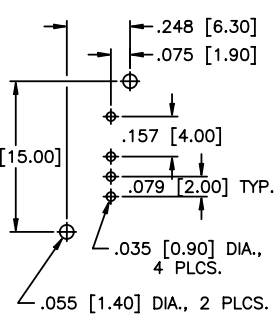
MHS Series

Miniature Slide Switches

with aluminum actuator

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| SPECIFICATIONS | FEATURES |
|--|--|
| <p>Contact rating: 300 mA at 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 VAC for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Actuation force: 250 ±150 grams</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Positive spring loaded ball detent mechanism. ● Epoxy sealed terminals. |
| MATERIALS | |
| <p>Contacts & terminals: Silver plated brass</p> <p>Housing: Tin plated steel</p> <p>Actuator: Aluminum alloy</p> <p>Base: Phenolic laminated sheet</p> | <p>Terminal seal: Epoxy</p> |


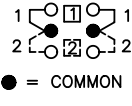
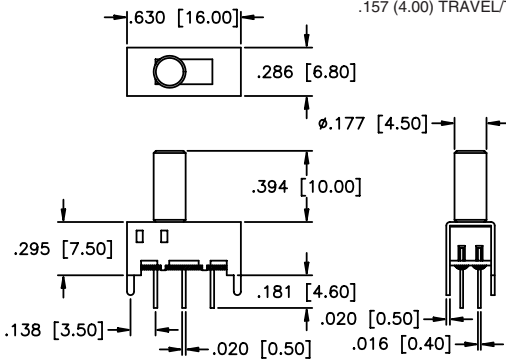
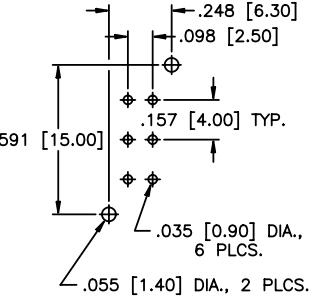

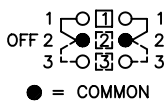
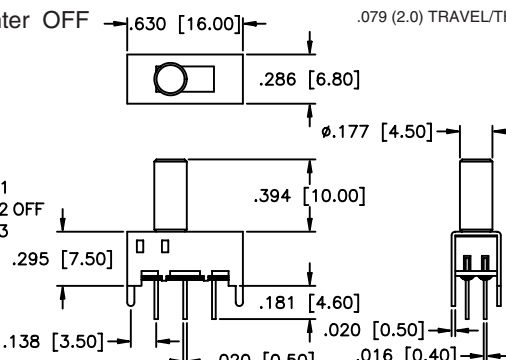
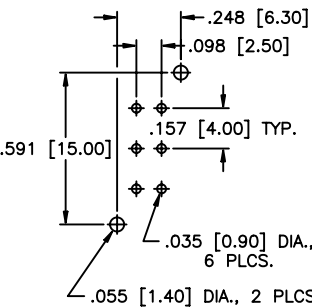

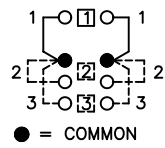
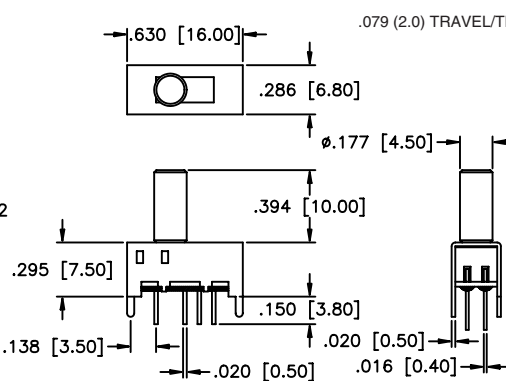
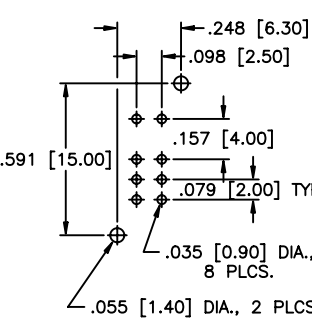
| MODEL NO. | 1P2T |
|--|--|
| MHS122K | |
|  <p>VERTICAL ACTUATOR</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <p>1P2T</p>  <p>● = COMMON</p> </div> <div style="width: 50%; text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%; text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> |
| MODEL NO. | 1P2T w/center OFF |
| MHS123K | |
|  <p>VERTICAL ACTUATOR</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <p>1P2T w/center OFF</p>  <p>● = COMMON</p> </div> <div style="width: 50%; text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%; text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> |
| MODEL NO. | 1P3T |
| MHS133K | |
|  <p>VERTICAL ACTUATOR</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <p>1P3T</p>  <p>● = COMMON</p> </div> <div style="width: 50%; text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="width: 25%; text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> |

E

MHS Series

Miniature Slide Switches

with aluminum actuator

| | |
|---|--|
| <p>MODEL NO.</p> <p>MHS222K</p> <div style="text-align: center;">  </div> <p style="text-align: center;">VERTICAL ACTUATOR</p> | <p style="text-align: center;">2P2T</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>● = COMMON</p> </div> <div style="width: 35%; text-align: center;">  <p style="text-align: right;">.157 (4.00) TRAVEL/THROW</p> </div> <div style="width: 30%; text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT </div> |
| <p>MODEL NO.</p> <p>MHS223K</p> <div style="text-align: center;">  </div> <p style="text-align: center;">VERTICAL ACTUATOR</p> | <p style="text-align: center;">2P2T w/center OFF</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>● = COMMON</p> </div> <div style="width: 35%; text-align: center;">  <p style="text-align: right;">.079 (2.0) TRAVEL/THROW</p> </div> <div style="width: 30%; text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT </div> |
| <p>MODEL NO.</p> <p>MHS233K</p> <div style="text-align: center;">  </div> <p style="text-align: center;">VERTICAL ACTUATOR</p> | <p style="text-align: center;">2P3T</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>● = COMMON</p> </div> <div style="width: 35%; text-align: center;">  <p style="text-align: right;">.079 (2.0) TRAVEL/THROW</p> </div> <div style="width: 30%; text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT </div> |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

New!

MHS Series Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| SPECIFICATIONS | FEATURES |
|--|--|
| <p>Contact rating: 300 mA at 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 VAC for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Actuation force: 250 ±150 grams</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Positive spring loaded ball detent mechanism. ● Epoxy sealed terminals. |
| | MATERIALS |
| | <p>Contacts & terminals: Silver plated brass</p> <p>Housing: Tin plated steel</p> <p>Actuator: Polyacetal</p> <p>Base: Phenolic laminated sheet</p> <p style="text-align: right;">Terminal seal: Epoxy</p> |

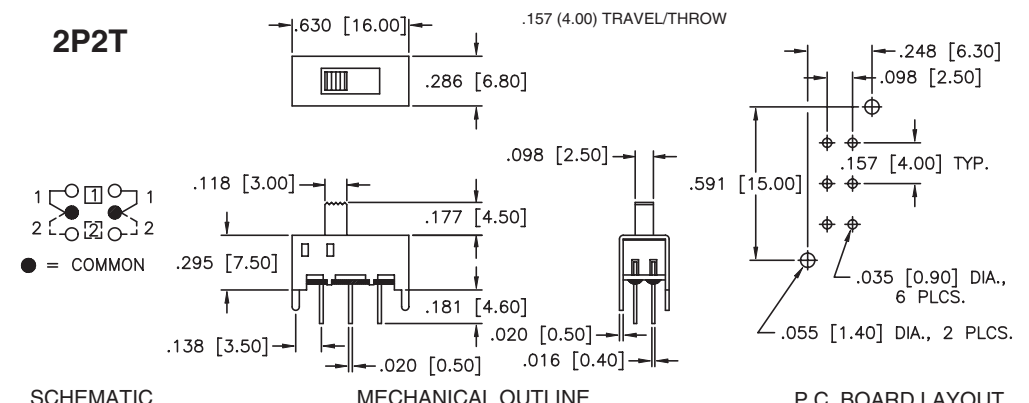
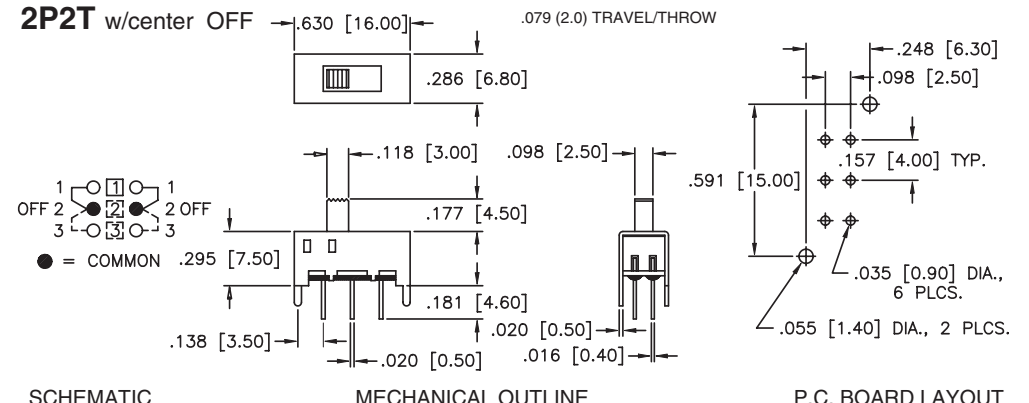
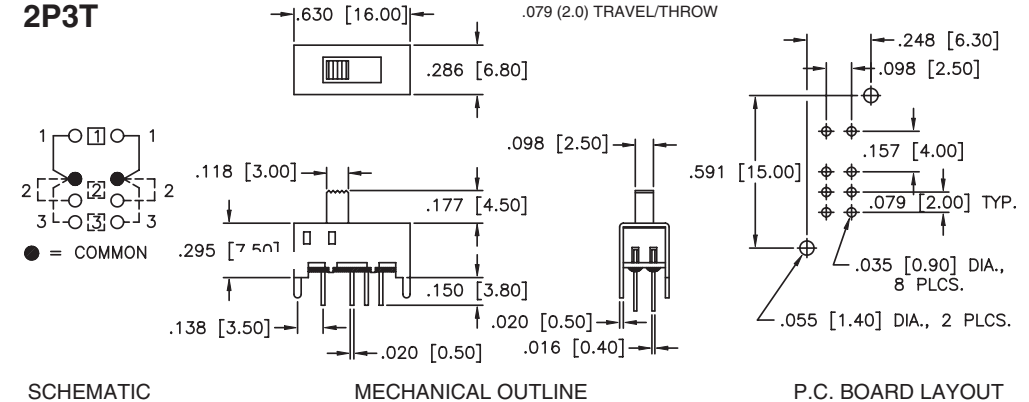
| | | | |
|----------------------------|--------------------------|--------------------|-------------------|
| MODEL NO. MHS122 | 1P2T | | |
| <p>VERTICAL ACTUATOR</p> | <p>SCHMATIC</p> | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. MHS123 | 1P2T w/center OFF | | |
| <p>VERTICAL ACTUATOR</p> | <p>SCHMATIC</p> | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. MHS133 | 1P3T | | |
| <p>VERTICAL ACTUATOR</p> | <p>SCHMATIC</p> | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |

E

MHS Series

Miniature Slide Switches

New!

| | |
|--|--|
| <p>MODEL NO.</p> <p>MHS222</p> | <p>2P2T</p>  <p>Schematic: Shows a 2P2T configuration with two common terminals (indicated by a black dot) and two normally open terminals.</p> <p>Mechanical Outline: Shows dimensions: .630 [16.00] (width), .286 [6.80] (height), .157 [4.00] TRAVEL/THROW, .118 [3.00] (actuator height), .177 [4.50] (actuator length), .295 [7.50] (base height), .138 [3.50] (base width), .181 [4.60] (base length), .020 [0.50] (lead length), .098 [2.50] (lead height), .016 [0.40] (lead width).</p> <p>P.C. Board Layout: Shows dimensions: .248 [6.30] (terminal width), .098 [2.50] (terminal spacing), .157 [4.00] TYP. (terminal length), .591 [15.00] (total length), .035 [0.90] DIA., 6 PLCS. (terminal diameter and count), .055 [1.40] DIA., 2 PLCS. (mounting hole diameter and count).</p> |
| <p>MODEL NO.</p> <p>MHS223</p> | <p>2P2T w/center OFF</p>  <p>Schematic: Shows a 2P2T w/center OFF configuration with two common terminals (indicated by a black dot) and two normally open terminals, plus a center OFF position.</p> <p>Mechanical Outline: Shows dimensions: .630 [16.00] (width), .286 [6.80] (height), .079 [2.0] TRAVEL/THROW, .118 [3.00] (actuator height), .177 [4.50] (actuator length), .295 [7.50] (base height), .138 [3.50] (base width), .181 [4.60] (base length), .020 [0.50] (lead length), .098 [2.50] (lead height), .016 [0.40] (lead width).</p> <p>P.C. Board Layout: Shows dimensions: .248 [6.30] (terminal width), .098 [2.50] (terminal spacing), .157 [4.00] TYP. (terminal length), .591 [15.00] (total length), .035 [0.90] DIA., 6 PLCS. (terminal diameter and count), .055 [1.40] DIA., 2 PLCS. (mounting hole diameter and count).</p> |
| <p>MODEL NO.</p> <p>MHS233</p> | <p>2P3T</p>  <p>Schematic: Shows a 2P3T configuration with two common terminals (indicated by a black dot) and three normally open terminals.</p> <p>Mechanical Outline: Shows dimensions: .630 [16.00] (width), .286 [6.80] (height), .079 [2.0] TRAVEL/THROW, .118 [3.00] (actuator height), .177 [4.50] (actuator length), .295 [7.50] (base height), .138 [3.50] (base width), .150 [3.80] (base length), .020 [0.50] (lead length), .098 [2.50] (lead height), .016 [0.40] (lead width).</p> <p>P.C. Board Layout: Shows dimensions: .248 [6.30] (terminal width), .098 [2.50] (terminal spacing), .157 [4.00] (terminal length), .079 [2.00] TYP. (terminal length), .591 [15.00] (total length), .035 [0.90] DIA., 8 PLCS. (terminal diameter and count), .055 [1.40] DIA., 2 PLCS. (mounting hole diameter and count).</p> |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


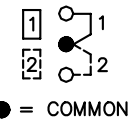
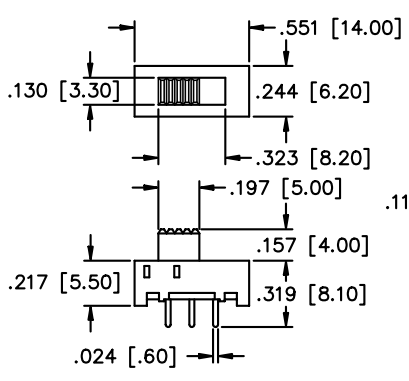
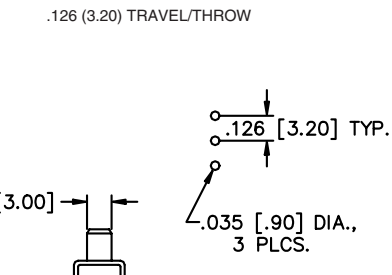

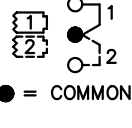
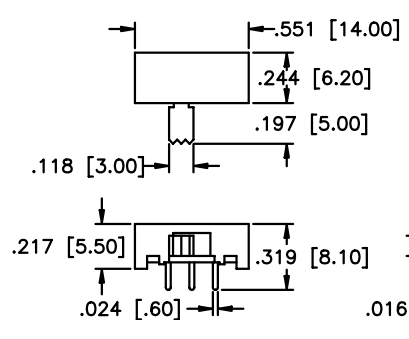
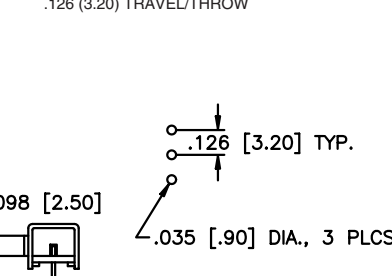
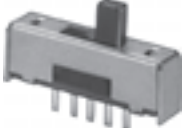
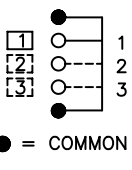
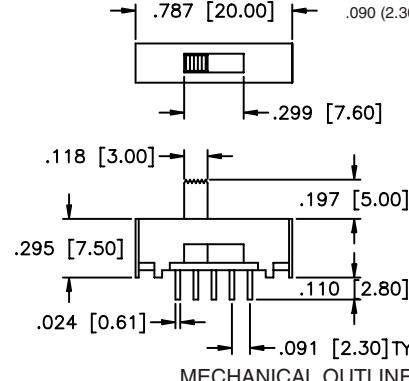
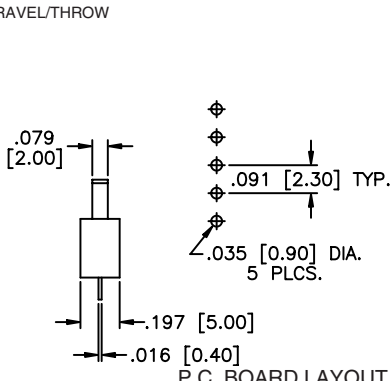
SLB Series

(with p.c. board stand-off bracket)

Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| SPECIFICATIONS | FEATURES |
|---|--|
| <p>Contact ratings: 300 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Actuation force: 220g ± 100g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Positive spring loaded ball detent mechanism. ● Epoxy sealed terminals. |
| MATERIALS | |
| <p>Contacts & terminals: Silver plated</p> <p>Frame: Zinc plated steel</p> <p>Actuator: Thermoplastic</p> <p>Base: Phenolic laminated sheet</p> | <p>Terminal seal: Epoxy</p> |

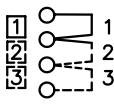
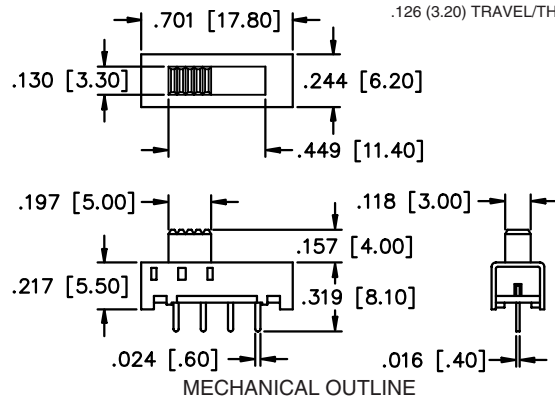
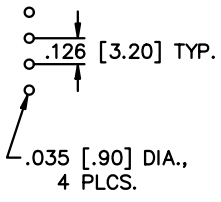

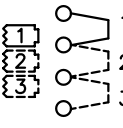
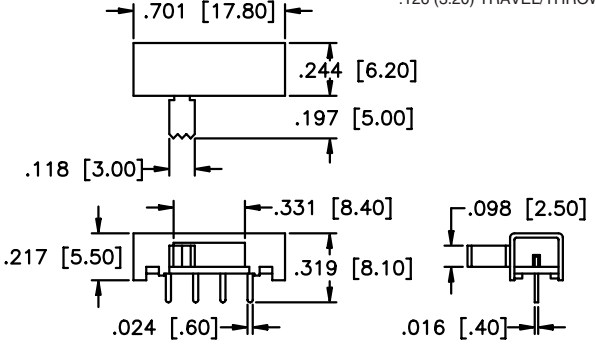
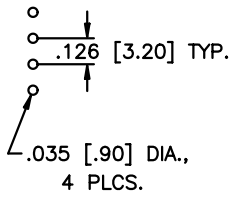

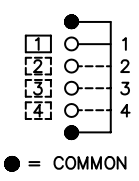
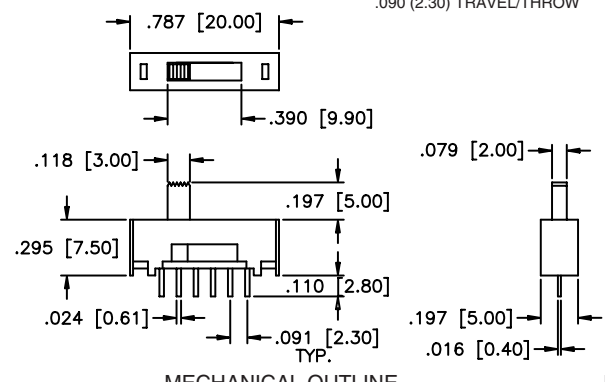
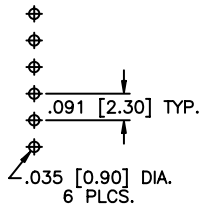
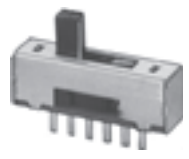
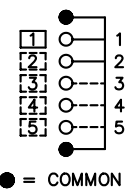
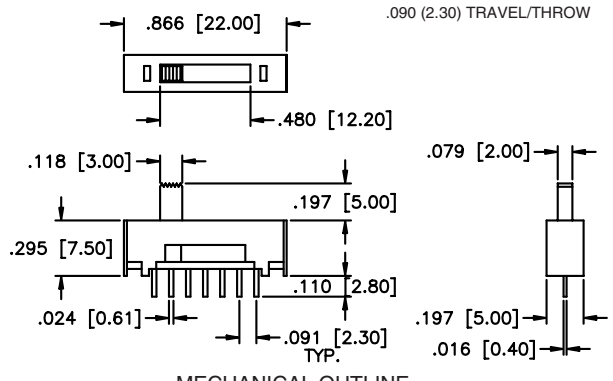
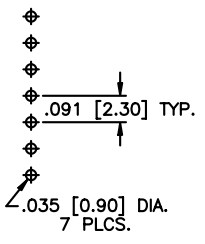
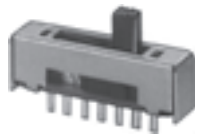
| MODEL NO. | 1P2T | | |
|---|---|--|---|
| SLB12814 | | | |
|  |  <p>● = COMMON</p> |  |  |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | 1P2T | | |
| SLB1281R5 | | | |
|  |  <p>● = COMMON</p> |  |  |
| RIGHT ANGLE ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | 1P3T | | |
| SLB1370 | | | |
|  |  <p>● = COMMON</p> |  |  |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |

E

SLB Series

(with p.c. board stand-off bracket)

Miniature Slide Switches

| | | | | |
|--|--|--|--|--|
| <p>MODEL NO.</p> <p>SLB13814</p> | <p>1P3T</p>  |  <p style="text-align: center;">MECHANICAL OUTLINE</p> |  <p style="text-align: center;">P.C. BOARD LAYOUT</p> | |
|  <p style="text-align: center;">VERTICAL ACTUATOR</p> | <p>MODEL NO.</p> <p>SLB1381R5</p> | <p>1P3T</p>  |  <p style="text-align: center;">MECHANICAL OUTLINE</p> |  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
|  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <p>MODEL NO.</p> <p>SLB1470</p> | <p>1P4T</p>  <p>● = COMMON</p> |  <p style="text-align: center;">MECHANICAL OUTLINE</p> |  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
|  <p style="text-align: center;">VERTICAL ACTUATOR</p> | <p>MODEL NO.</p> <p>SLB1570</p> | <p>1P5T</p>  <p>● = COMMON</p> |  <p style="text-align: center;">MECHANICAL OUTLINE</p> |  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
|  <p style="text-align: center;">VERTICAL ACTUATOR</p> | | | | |


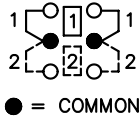
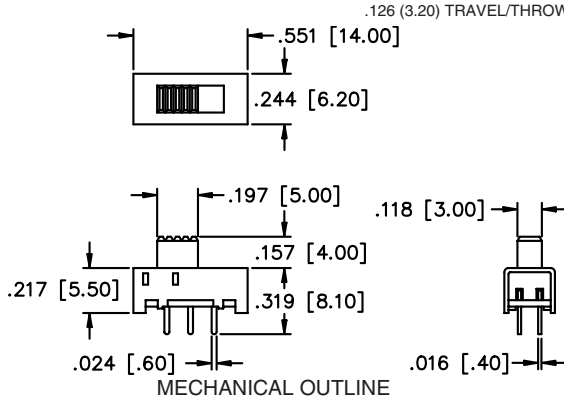
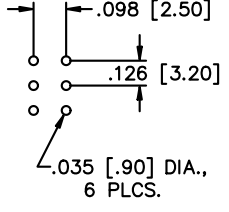

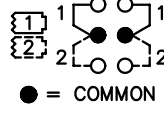
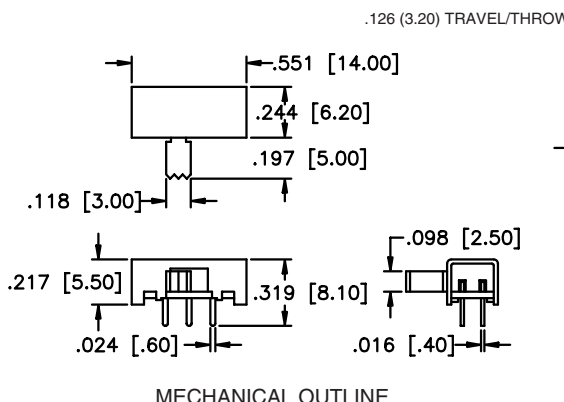
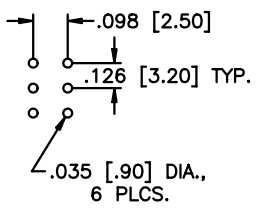

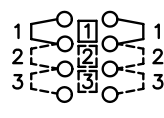
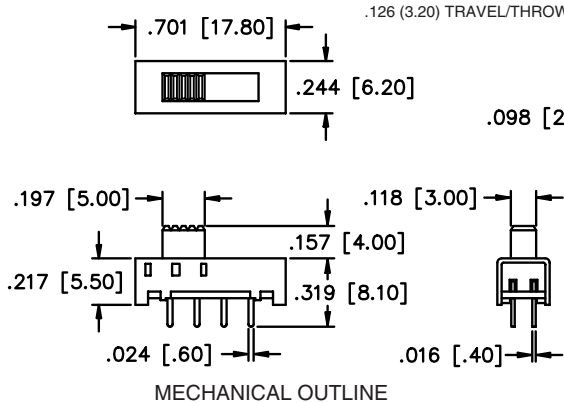
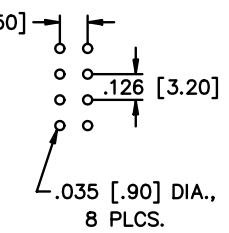

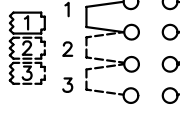
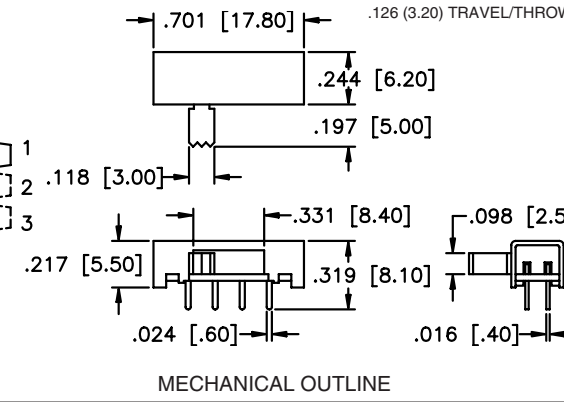
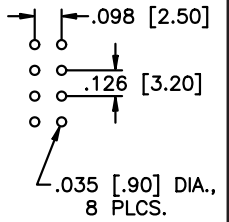
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SLB Series

(with p.c. board stand-off bracket)

Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|---|--|--|---|
| MODEL NO. | | | |
| SLB22814 | | | |
|  | 2P2T  ● = COMMON |  |  |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | | | |
| SLB2281R5 | | | |
|  | 2P2T  ● = COMMON |  |  |
| RIGHT ANGLE ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | | | |
| SLB23814 | | | |
|  | 2P3T  ● = COMMON |  |  |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | | | |
| SLB2381R5 | | | |
|  | 2P3T  ● = COMMON |  |  |
| RIGHT ANGLE ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |

E

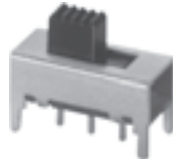
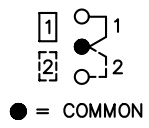
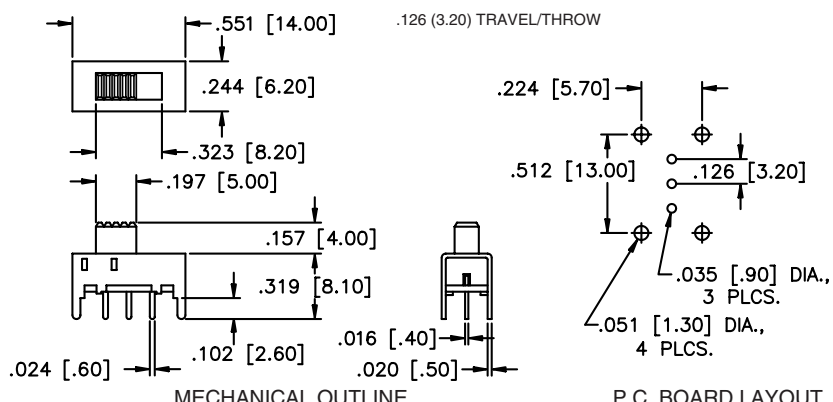
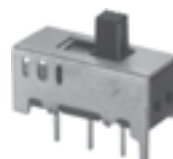
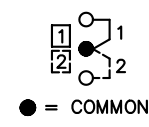
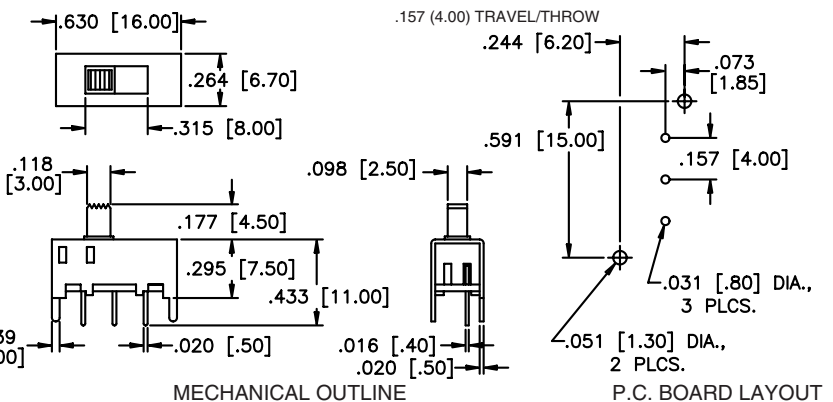

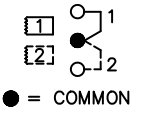
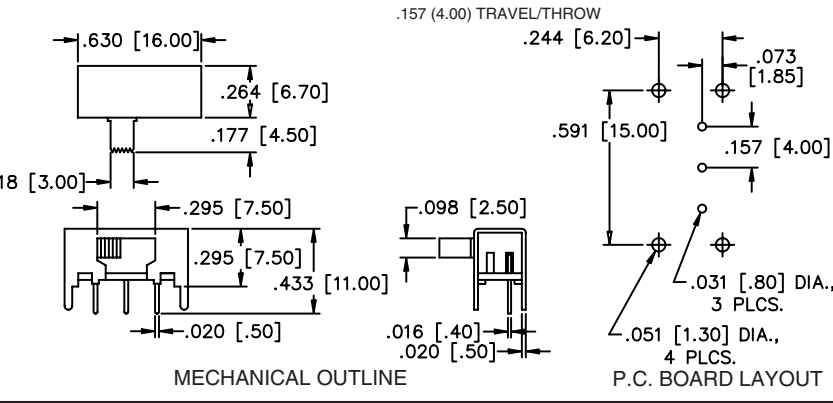
SLB Series

(with thru- p.c. board hole mounting bracket)

Miniature Slide Switches

| SPECIFICATIONS | FEATURES |
|---|--|
| <p>Contact ratings: 300 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Actuation force: 220g ± 100g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Positive spring loaded ball detent mechanism. ● Epoxy sealed terminals. |
| | MATERIALS |
| | <p>Contacts & terminals: Silver plated</p> <p>Frame: Zinc plated steel</p> <p>Actuator: Thermoplastic</p> <p>Base: Phenolic laminated sheet</p> <p style="text-align: right;">Terminal seal: Epoxy</p> |

E

| MODEL NO. | | | |
|---|--|---|--|
| SLB12804 | | | |
|  | <p>1P2T</p>  <p>● = COMMON</p> | <p>.126 (3.20) TRAVEL/THROW</p>  <p>SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> | |
| SLB124145 | | | |
|  | <p>1P2T</p>  <p>● = COMMON</p> | <p>.157 (4.00) TRAVEL/THROW</p>  <p>SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> | |
| SLB1240R45 | | | |
|  | <p>1P2T</p>  <p>● = COMMON</p> | <p>.157 (4.00) TRAVEL/THROW</p>  <p>SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> | |
| RIGHT ANGLE ACTUATOR | | | |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SLB Series

(with thru- p.c. board hole mounting bracket)

Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

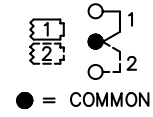
MODEL NO.

SLB1280R5

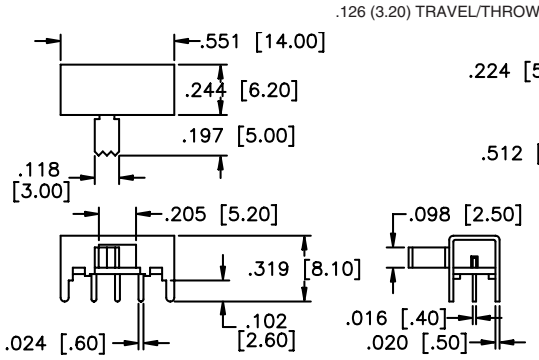


RIGHT ANGLE ACTUATOR

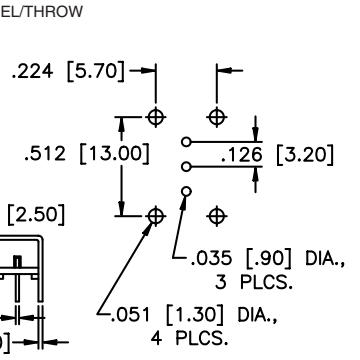
1P2T



SCHMATIC



MECHANICAL OUTLINE



P.C. BOARD LAYOUT

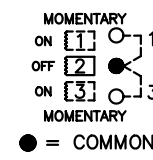
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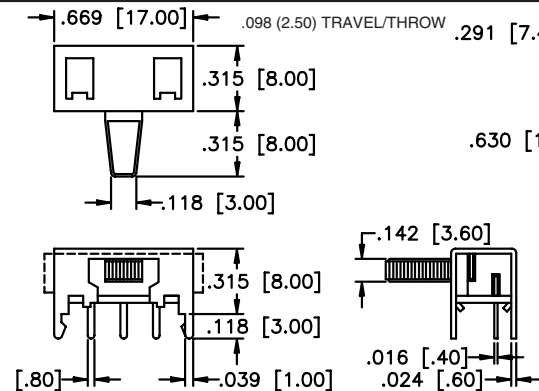


RIGHT ANGLE ACTUATOR

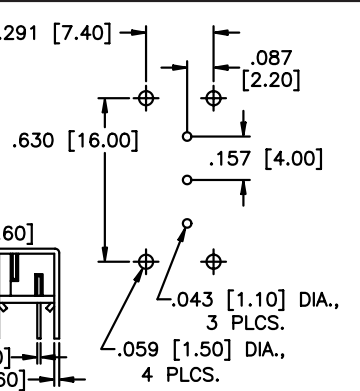
1P2T



SCHMATIC



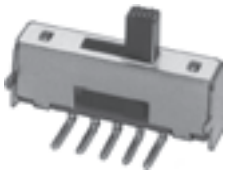
MECHANICAL OUTLINE



P.C. BOARD LAYOUT

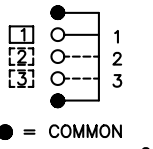
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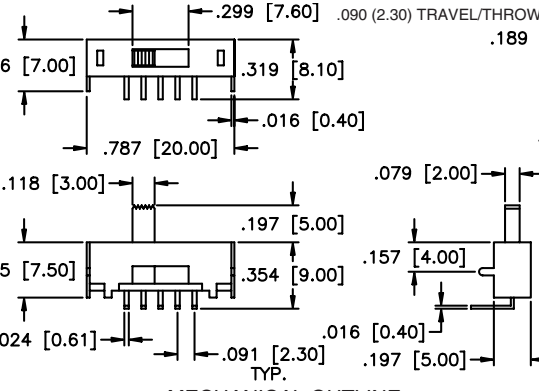


RIGHT ANGLE ACTUATOR

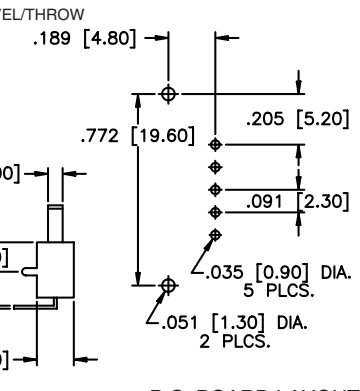
1P3T



SCHMATIC



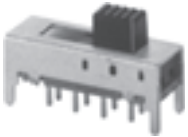
MECHANICAL OUTLINE



P.C. BOARD LAYOUT

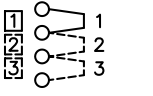
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SLB13804

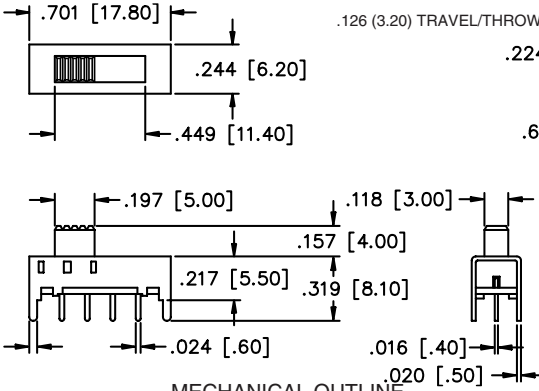


VERTICAL ACTUATOR

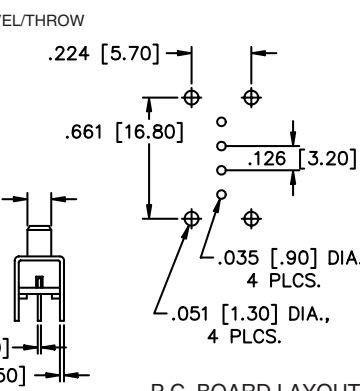
1P3T



SCHMATIC



MECHANICAL OUTLINE

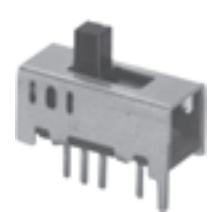


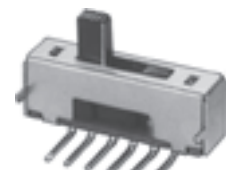


P.C. BOARD LAYOUT

SLB Series

(with thru-p.c. board hole mounting bracket)
Miniature Slide Switches

E

| | |
|---|---|
| <p>MODEL NO. SLB134145</p> | <p>1P3T</p>  <p>VERTICAL ACTUATOR</p> <p>Schematic: 1P3T, 1 terminal common, 2 terminals normally open. ● = COMMON</p> <p>Mechanical Outline: .630 [16.00] total width, .079 [2.00] TRAVEL/THROW, .244 [6.20] actuator height, .264 [6.70] body height, .315 [8.00] body width, .118 [3.00] terminal spacing, .177 [4.50] terminal height, .098 [2.50] terminal length, .295 [7.50] body depth, .433 [11.00] total depth, .020 [.50] lead length, .016 [.40] lead diameter.</p> <p>P.C. BOARD LAYOUT: .244 [6.20] mounting hole spacing, .073 [1.85] hole diameter, .157 [4.00] hole offset, .079 [2.00] TYP. hole diameter, .031 [.80] DIA., 4 PLCS. hole diameter, .051 [1.30] DIA., 2 PLCS. hole diameter.</p> |
| <p>MODEL NO. SLB1340R45</p> | <p>1P3T</p>  <p>RIGHT ANGLE ACTUATOR</p> <p>Schematic: 1P3T, 1 terminal common, 2 terminals normally open. ● = COMMON</p> <p>Mechanical Outline: .630 [16.00] total width, .079 [2.00] TRAVEL/THROW, .244 [6.20] actuator height, .264 [6.70] body height, .177 [4.50] body width, .118 [3.00] terminal spacing, .295 [7.50] body depth, .433 [11.00] total depth, .039 [1.00] lead length, .020 [.50] lead length, .016 [.40] lead diameter, .020 [.50] lead length.</p> <p>P.C. BOARD LAYOUT: .244 [6.20] mounting hole spacing, .073 [1.85] hole diameter, .157 [4.00] hole offset, .079 [2.00] TYP. hole diameter, .031 [.80] DIA., 4 PLCS. hole diameter, .051 [1.30] DIA., 4 PLCS. hole diameter.</p> |
| <p>MODEL NO. SLB1380R5</p> | <p>1P3T</p>  <p>RIGHT ANGLE ACTUATOR</p> <p>Schematic: 1P3T, 1 terminal common, 2 terminals normally open. ● = COMMON</p> <p>Mechanical Outline: .701 [17.80] total width, .126 [3.20] TRAVEL/THROW, .244 [6.20] actuator height, .197 [5.00] body height, .118 [3.00] terminal spacing, .217 [5.50] terminal height, .331 [8.40] body width, .319 [8.10] body depth, .102 [2.60] body depth, .039 [1.00] lead length, .024 [.60] lead length, .016 [.40] lead diameter, .020 [.50] lead length.</p> <p>P.C. BOARD LAYOUT: .224 [5.70] mounting hole spacing, .661 [16.80] hole diameter, .126 [3.20] hole diameter, .035 [.90] DIA., 4 PLCS. hole diameter, .051 [1.30] DIA., 4 PLCS. hole diameter.</p> |
| <p>MODEL NO. SLB1470R</p> | <p>1P4T</p>  <p>RIGHT ANGLE ACTUATOR</p> <p>Schematic: 1P4T, 1 terminal common, 3 terminals normally open. ● = COMMON</p> <p>Mechanical Outline: .390 [9.90] total width, .090 [2.30] TRAVEL/THROW, .276 [7.00] actuator height, .319 [8.10] body height, .016 [0.40] body width, .787 [20.00] body width, .118 [3.00] terminal spacing, .197 [5.00] terminal height, .079 [2.00] terminal length, .295 [7.50] body depth, .354 [9.00] total depth, .024 [0.61] lead length, .091 [2.30] TYP. lead length, .016 [0.40] lead diameter, .197 [5.00] lead length.</p> <p>P.C. BOARD LAYOUT: .189 [4.80] mounting hole spacing, .772 [19.60] hole diameter, .159 [4.05] hole diameter, .091 [2.30] TYP. hole diameter, .035 [0.90] DIA., 6 PLCS. hole diameter, .051 [1.30] DIA., 2 PLCS. hole diameter.</p> |

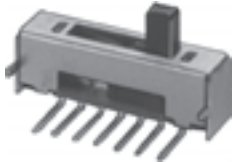
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SLB Series

(with thru-p.c. board hole mounting bracket)
Miniature Slide Switches

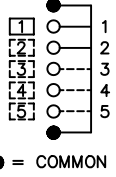
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MODEL NO.
SLB1570R

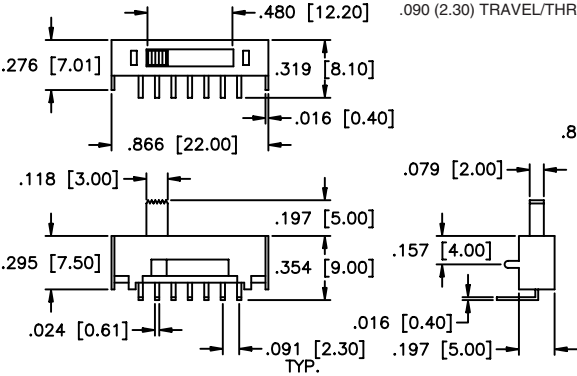
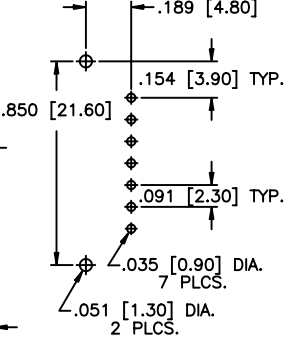


RIGHT ANGLE ACTUATOR

1P5T




● = COMMON

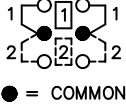
SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT

MODEL NO.
SLB22804

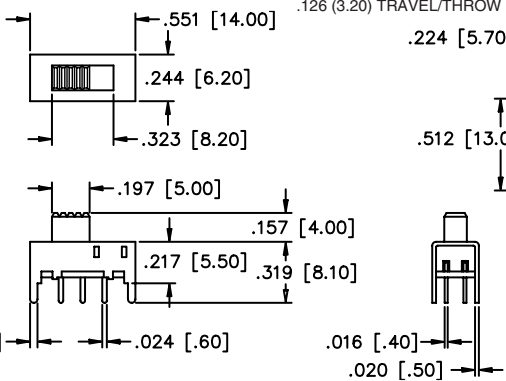
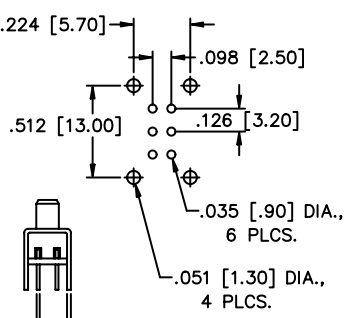


VERTICAL ACTUATOR

2P2T



● = COMMON


SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT

MODEL NO.
SLB224145

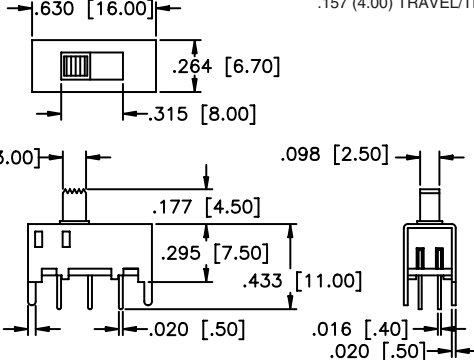
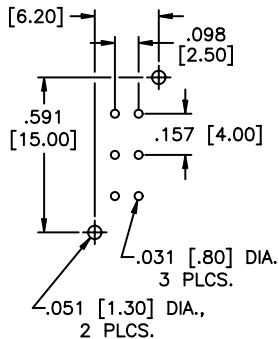


VERTICAL ACTUATOR

2P2T



● = COMMON

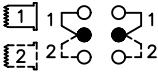
SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT

MODEL NO.
SLB2240R45

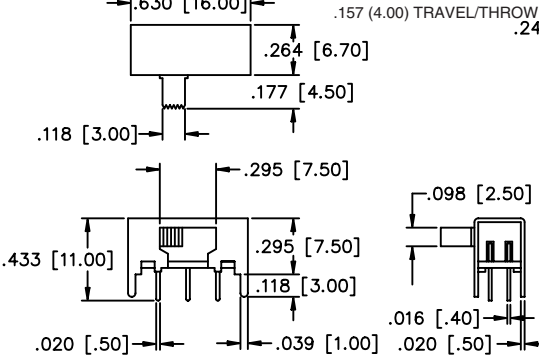
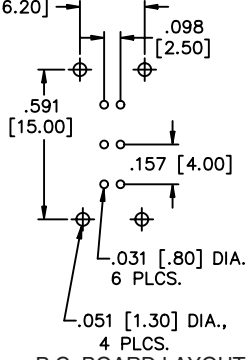


RIGHT ANGLE ACTUATOR

2P2T



● = COMMON


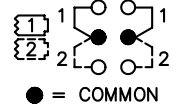
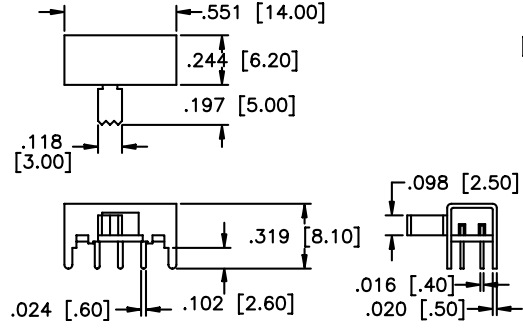
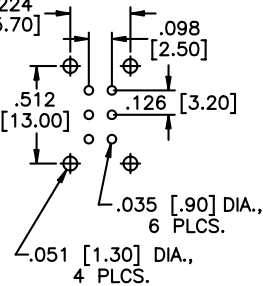
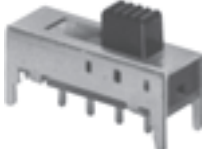
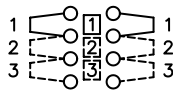
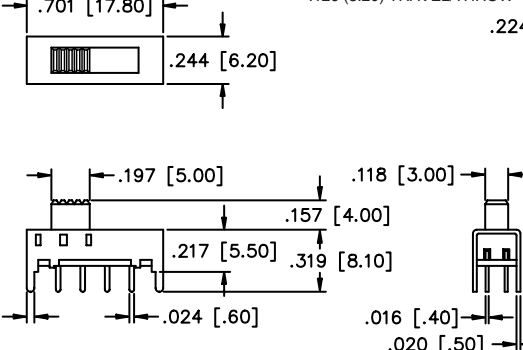
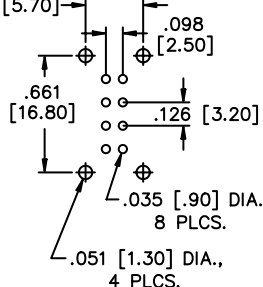
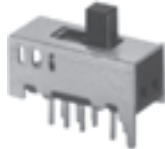
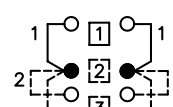
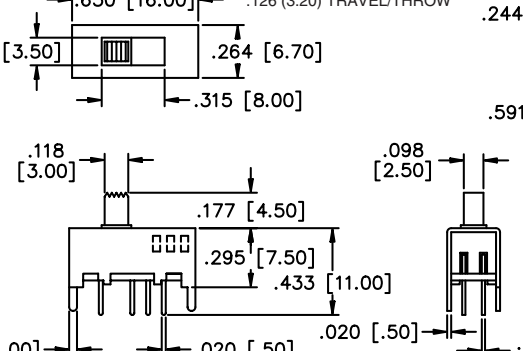
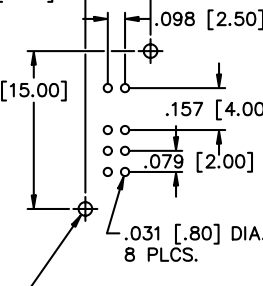
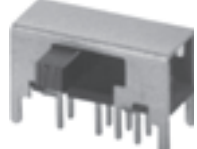
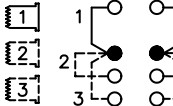
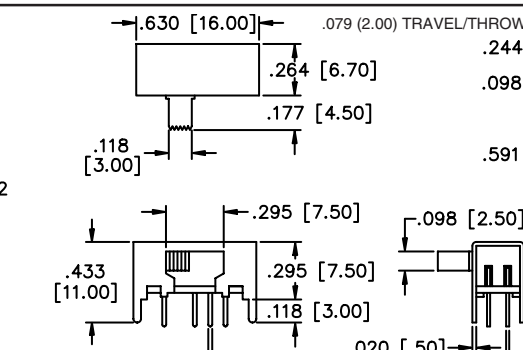
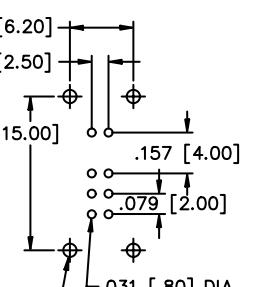



SCHMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT

E

SLB Series

(with thru-p.c. board hole mounting bracket)
Miniature Slide Switches

| | |
|---|--|
| <p>MODEL NO. SLB2280R5</p>  <p>RIGHT ANGLE ACTUATOR</p> | <p>2P2T .126 (3.20) TRAVEL/THROW</p> <p>Schematic:  ● = COMMON</p> <p>Mechanical Outline: </p> <p>P.C. BOARD LAYOUT:  .224 [5.70] .098 [2.50] .512 [13.00] .126 [3.20] .035 [.90] DIA., 6 PLCS. .051 [1.30] DIA., 4 PLCS.</p> |
| <p>MODEL NO. SLB23804</p>  <p>VERTICAL ACTUATOR</p> | <p>2P3T .126 (3.20) TRAVEL/THROW</p> <p>Schematic: </p> <p>Mechanical Outline: </p> <p>P.C. BOARD LAYOUT:  .224 [5.70] .098 [2.50] .661 [16.80] .126 [3.20] .035 [.90] DIA., 8 PLCS. .051 [1.30] DIA., 4 PLCS.</p> |
| <p>MODEL NO. SLB234145</p>  <p>VERTICAL ACTUATOR</p> | <p>2P3T .126 (3.20) TRAVEL/THROW</p> <p>Schematic:  ● = COMMON</p> <p>Mechanical Outline: </p> <p>P.C. BOARD LAYOUT:  .244 [6.20] .098 [2.50] .591 [15.00] .157 [4.00] .079 [2.00] .031 [.80] DIA., 8 PLCS. .051 [1.30] DIA., 2 PLCS. .016 [.40]</p> |
| <p>MODEL NO. SLB2340R45</p>  <p>RIGHT ANGLE ACTUATOR</p> | <p>2P3T .079 (2.00) TRAVEL/THROW</p> <p>Schematic:  ● = COMMON</p> <p>Mechanical Outline: </p> <p>P.C. BOARD LAYOUT:  .244 [6.20] .098 [2.50] .591 [15.00] .157 [4.00] .079 [2.00] .031 [.80] DIA., 8 PLCS. .051 [1.30] DIA., 4 PLCS. .016 [.40]</p> |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SLC Series

Miniature Slide Switches

SPECIFICATIONS

Contact ratings: 300 mA at 125 VAC or 30 VDC
Initial contact resistance: 20 milliohms max.
Insulation resistance: 100 megohms min. at 500 VDC
Dielectric strength: 500 volts RMS for 1 minute
Electrical life: 10,000 cycles min.
Operating temperature range: -20°C to +85°C
Actuation force: 220g ± 100g
Solder heat resistance: 260°C max. for 3 seconds
Solvent washing permissible

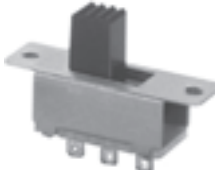
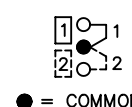
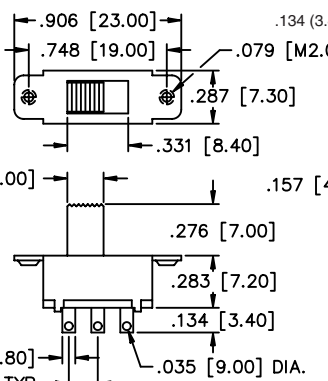
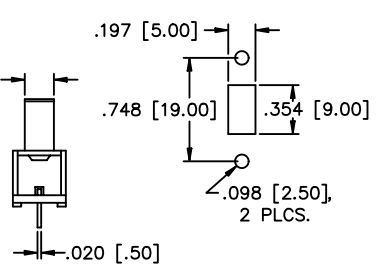

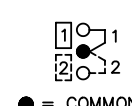
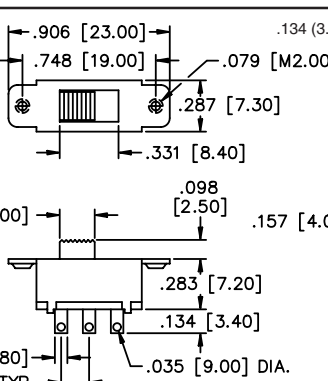
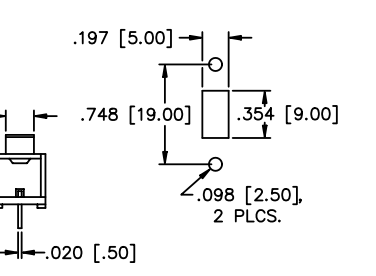
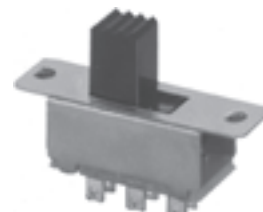
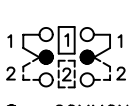
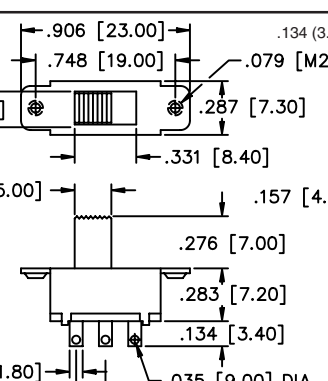
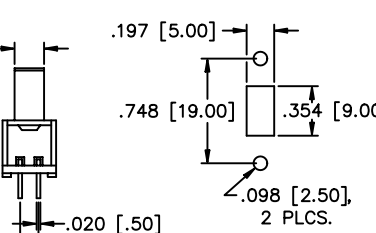
FEATURES

- Panel mounting with solder lug terminals.
- Wash-through open frame construction.
- Positive spring loaded ball detent mechanism.

MATERIALS

Contacts & terminals: Silver plated
Frame: Zinc plated steel
Actuator: Thermoplastic
Base: Phenolic laminated sheet

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


| | |
|---|--|
| <p>MODEL NO. SLC12007</p>  | <p>1P2T</p>  <p>● = COMMON</p>  <p>SCHMATIC MECHANICAL OUTLINE</p>  <p>PANEL CUTOUT</p> |
| <p>MODEL NO. SLC120025</p> <p style="color: red; font-weight: bold; font-size: 1.2em;">New!</p>  | <p>1P2T</p>  <p>● = COMMON</p>  <p>SCHMATIC MECHANICAL OUTLINE</p>  <p>PANEL CUTOUT</p> |
| <p>MODEL NO. SLC22007</p>  | <p>2P2T</p>  <p>● = COMMON</p>  <p>SCHMATIC MECHANICAL OUTLINE</p>  <p>PANEL CUTOUT</p> |

SLG Series


Miniature Slide Switches

| SPECIFICATIONS | FEATURES |
|--|---|
| <p>Contact ratings: 300 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Actuation force: 200g ± 75g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Wash-through open frame construction. ● Panel and p.c. mounting models. ● Positive spring loaded ball detent mechanism. |
| | MATERIALS |
| | <p>Contacts & terminals: Silver plated</p> <p>Frame: Zinc plated steel</p> <p>Actuator: Thermoplastic</p> <p>Base: Phenolic laminated sheet</p> |

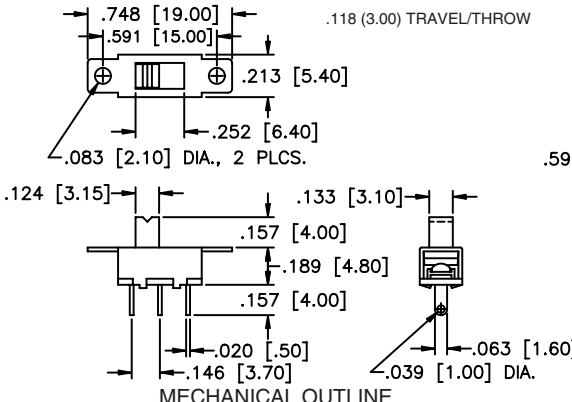
E

| MODEL NO. |
|--|
| SLG12004 |
|  |

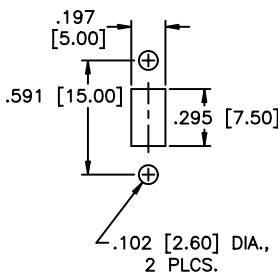
1P2T



● = COMMON




MECHANICAL OUTLINE

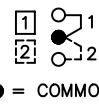


PANEL CUTOUT

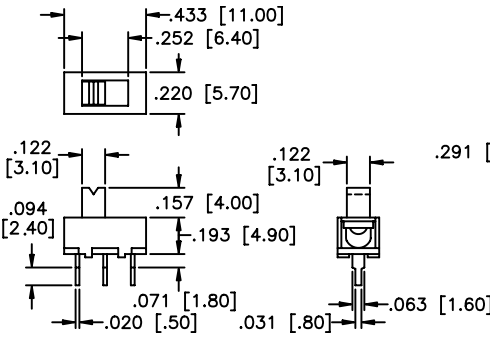
.118 (3.00) TRAVEL/THROW

| MODEL NO. |
|---|
| SLG12014 |
|  |
| VERTICAL MOUNTING |

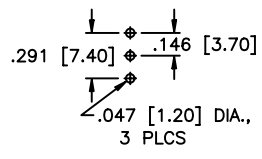
1P2T



● = COMMON



MECHANICAL OUTLINE



P.C. BOARD LAYOUT

.118 (3.00) TRAVEL/THROW

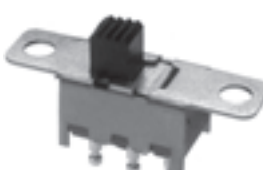
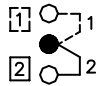
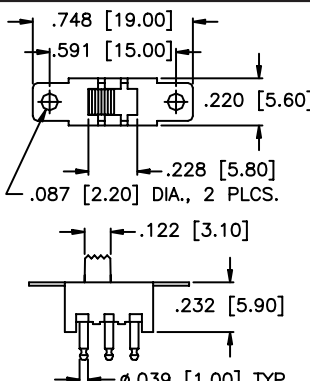
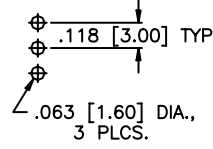


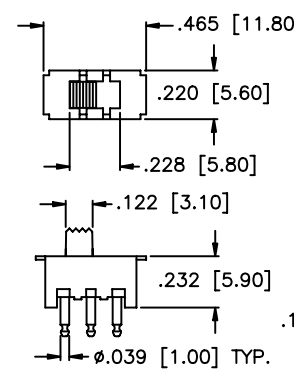
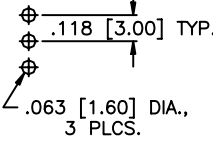

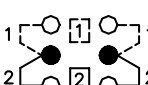
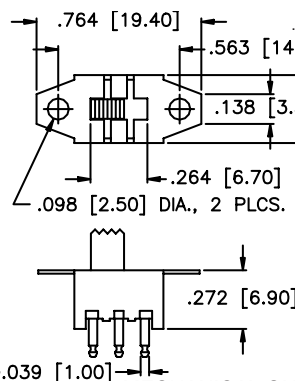
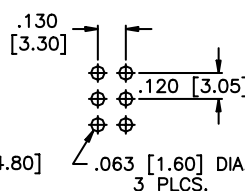
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SLA Series

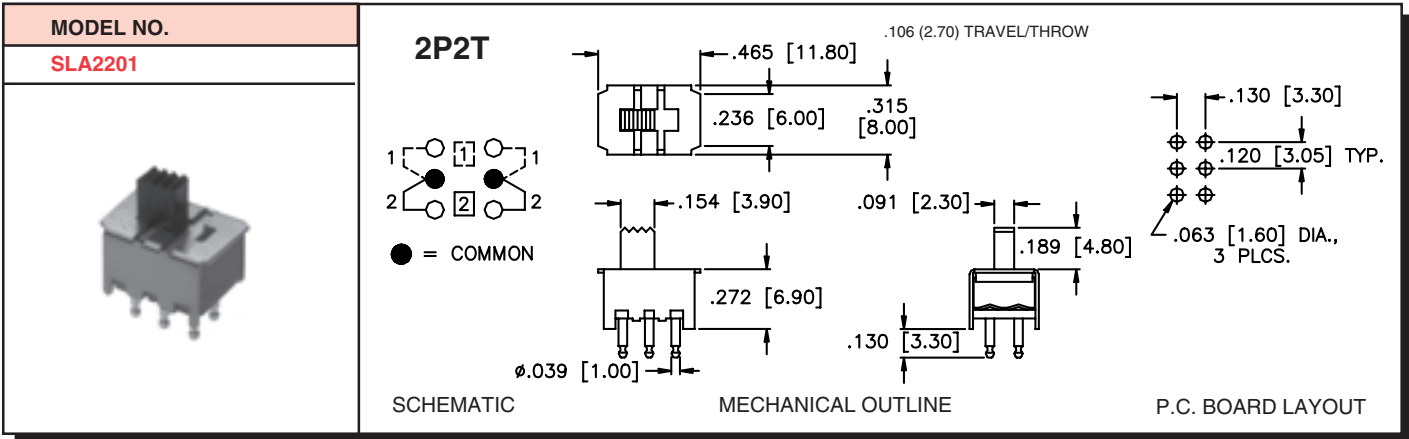
Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| SPECIFICATIONS | FEATURES |
|---|--|
| <p>Contact ratings: 500 mA at 125 VAC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Actuation force: 350g ± 200g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Panel and p.c. mounting models. |
| MATERIALS | |
| <p>Contacts & terminals: Silver plated brass</p> <p>Frame: Zinc plated steel</p> <p>Actuator: PBT Thermoplastic</p> <p>Base: Phenolic laminated sheet</p> | |

| MODEL NO. | 1P2T |
|-----------|--|
| SLA1200 |  <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>1P2T</p>  <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> <p style="text-align: right; font-size: small;">.106 (2.70) TRAVEL/THROW</p> |
| SLA1201 |  <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>1P2T</p>  <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> <p style="text-align: right; font-size: small;">.106 (2.70) TRAVEL/THROW</p> |
| SLA2200 |  <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>2P2T</p>  <p>● = COMMON</p> <p>SCHMATIC</p> </div> <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> </div> <p style="text-align: right; font-size: small;">.106 (2.70) TRAVEL/THROW</p> |

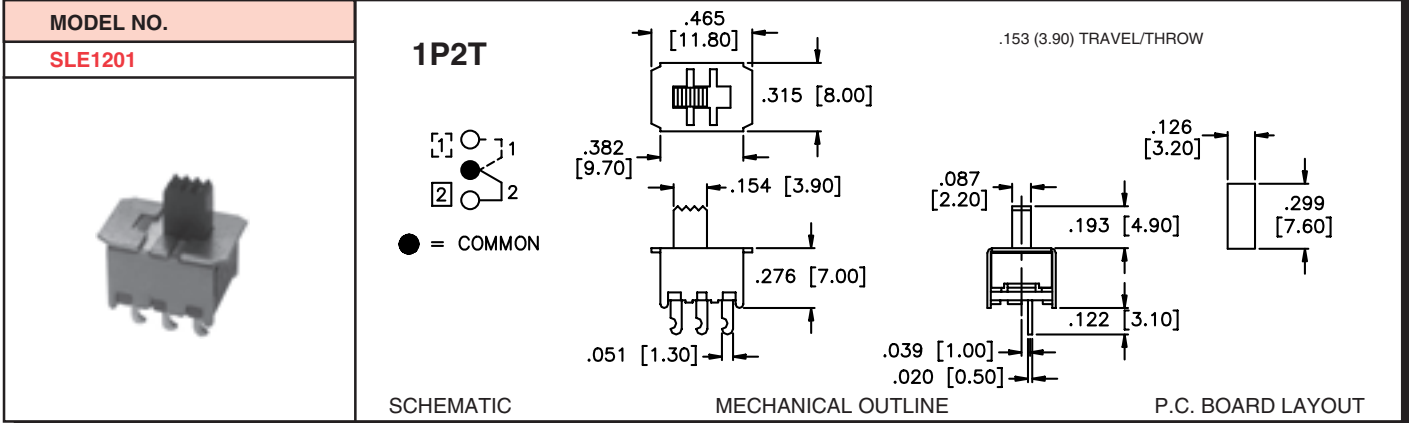
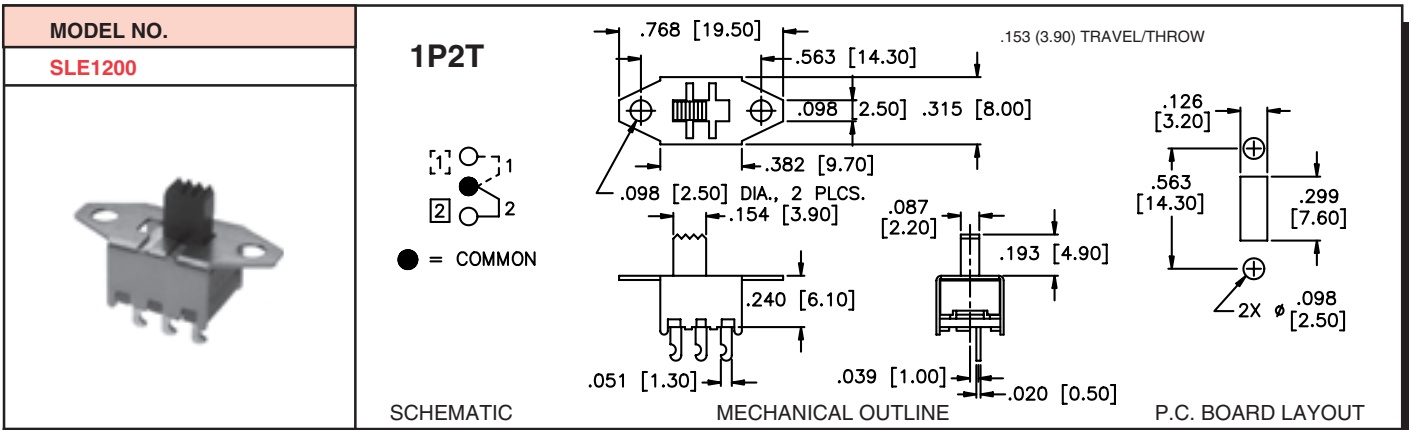
E



SLE Series

Miniature Slide Switches

| | |
|---|--|
| SPECIFICATIONS | FEATURES |
| <p>Contact ratings: 500 mA at 125 VAC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS for 1 minute</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +85°C</p> <p>Actuation force: 350g ± 200g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Miniature compact size. ● Wash-through open frame construction. ● Panel and p.c. mounting models. |
| | MATERIALS |
| | <p>Contacts & terminals: Silver plated brass</p> <p>Frame: Zinc plated steel</p> <p>Actuator: PBT Thermoplastic</p> <p>Base: Phenolic laminated sheet</p> |

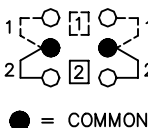
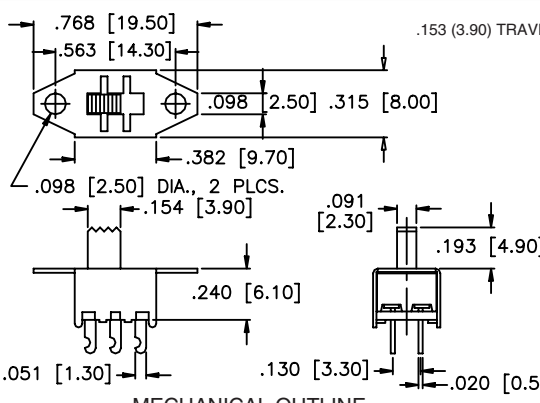
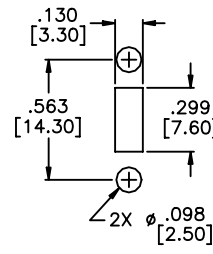
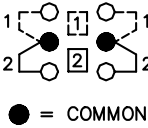
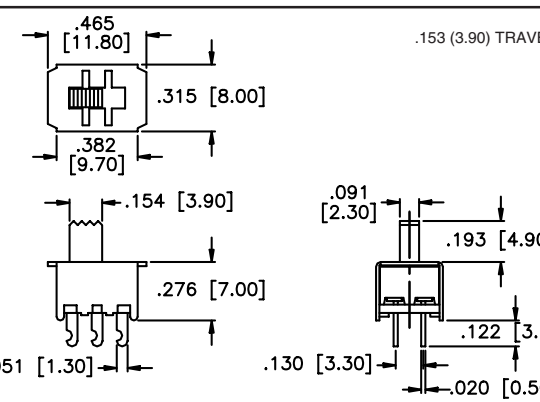
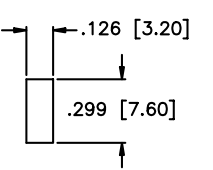


SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SLE Series

Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|---|--|---|--|
| <p>MODEL NO.</p> <p>SLE2200</p> | <p>2P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| <p>MODEL NO.</p> <p>SLE2201</p> | <p>2P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |



G Series

Instrument Grade Miniature Slide Switches

| SPECIFICATIONS | FEATURES |
|--|---|
| <p>Contact ratings: Gold; 0.4 Volt-Amps (VA) max. at 20 V max. (AC or DC) Silver; 4 A at 125 VAC, 2 A at 250 VAC or 3 A at 30 VDC Initial contact resistance: 10 milliohms max. Insulation resistance: 1000 megohms min. Dielectric strength: 1000 V rms min. Electrical life w/resistive load: Gold; 60,000 cycles min. Silver; 2 pos. - 40,000 cycles, 3 pos. - 20,000 cycles Operating temperature range: -30°C to +85°C Solder heat resistance: 300°C max. for 5 seconds Washing not recommended</p> | <ul style="list-style-type: none"> ● Epoxy sealed terminals. ● Break-before-make contact action. ● SPDT and DPDT models with long electrical life. ● Many additional models & options available (see page E44). |
| MATERIALS | |
| <p>Contacts & terminals: Gold or silver available (see contact ratings) Cover: Stainless steel Actuator: Glass filled polyamide Case: PES high temp. thermoplastic Terminal seal: Epoxy</p> | |

E

| MODEL NO. | PLATING | ACTION | SPDT | DIMENSIONS | | | | | | | | | | | | | | | |
|---|-----------|-----------|--------|-------------|------|---------|-------------|------|-----------|-------------|--------|---------|-------------|--------|-----------|--|--|---|--|
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th>MODEL NO.</th> <th>PLATING</th> <th>ACTION</th> </tr> </thead> <tbody> <tr><td style="color: red;">GH36S000001</td><td>Gold</td><td>on - on</td></tr> <tr><td style="color: red;">GH39S000001</td><td>Gold</td><td>on off on</td></tr> <tr><td style="color: red;">GH36S010001</td><td>Silver</td><td>on - on</td></tr> <tr><td style="color: red;">GH39S010001</td><td>Silver</td><td>on off on</td></tr> </tbody> </table> | MODEL NO. | PLATING | ACTION | GH36S000001 | Gold | on - on | GH39S000001 | Gold | on off on | GH36S010001 | Silver | on - on | GH39S010001 | Silver | on off on | | | <p>Function (see pg. E46)</p> <p>6 9</p> <p>ON ON [1] 1</p> <p>OFF [2] 2</p> <p>ON ON [1] 1</p> <p>ON ON [2] 2</p> <p>● = COMMON</p> <p style="text-align: center;">SCHEMATIC</p> | <p style="text-align: center;">MECHANICAL OUTLINE PANEL CUTOUT</p> |
| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | | |
| GH36S000001 | Gold | on - on | | | | | | | | | | | | | | | | | |
| GH39S000001 | Gold | on off on | | | | | | | | | | | | | | | | | |
| GH36S010001 | Silver | on - on | | | | | | | | | | | | | | | | | |
| GH39S010001 | Silver | on off on | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th>MODEL NO.</th> <th>PLATING</th> <th>ACTION</th> </tr> </thead> <tbody> <tr><td style="color: red;">GH36P000001</td><td>Gold</td><td>on - on</td></tr> <tr><td style="color: red;">GH39P000001</td><td>Gold</td><td>on off on</td></tr> <tr><td style="color: red;">GH36P010001</td><td>Silver</td><td>on - on</td></tr> <tr><td style="color: red;">GH39P010001</td><td>Silver</td><td>on off on</td></tr> </tbody> </table> | MODEL NO. | PLATING | ACTION | GH36P000001 | Gold | on - on | GH39P000001 | Gold | on off on | GH36P010001 | Silver | on - on | GH39P010001 | Silver | on off on | | | <p>Function (see pg. E46)</p> <p>6 9</p> <p>ON ON [1] 1</p> <p>OFF [2] 2</p> <p>ON ON [1] 1</p> <p>ON ON [2] 2</p> <p>● = COMMON</p> <p style="text-align: center;">SCHEMATIC</p> | <p style="text-align: center;">MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> |
| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | | |
| GH36P000001 | Gold | on - on | | | | | | | | | | | | | | | | | |
| GH39P000001 | Gold | on off on | | | | | | | | | | | | | | | | | |
| GH36P010001 | Silver | on - on | | | | | | | | | | | | | | | | | |
| GH39P010001 | Silver | on off on | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th>MODEL NO.</th> <th>PLATING</th> <th>ACTION</th> </tr> </thead> <tbody> <tr><td style="color: red;">GH36W000001</td><td>Gold</td><td>on - on</td></tr> <tr><td style="color: red;">GH39W000001</td><td>Gold</td><td>on off on</td></tr> <tr><td style="color: red;">GH36W010001</td><td>Silver</td><td>on - on</td></tr> <tr><td style="color: red;">GH39W010001</td><td>Silver</td><td>on off on</td></tr> </tbody> </table> | MODEL NO. | PLATING | ACTION | GH36W000001 | Gold | on - on | GH39W000001 | Gold | on off on | GH36W010001 | Silver | on - on | GH39W010001 | Silver | on off on | | | <p>Function (see pg. E46)</p> <p>6 9</p> <p>ON ON [1] 1</p> <p>OFF [2] 2</p> <p>ON ON [1] 1</p> <p>ON ON [2] 2</p> <p>● = COMMON</p> <p style="text-align: center;">SCHEMATIC</p> | <p style="text-align: center;">MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> |
| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | | |
| GH36W000001 | Gold | on - on | | | | | | | | | | | | | | | | | |
| GH39W000001 | Gold | on off on | | | | | | | | | | | | | | | | | |
| GH36W010001 | Silver | on - on | | | | | | | | | | | | | | | | | |
| GH39W010001 | Silver | on off on | | | | | | | | | | | | | | | | | |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

G Series

Instrument Grade Miniature Slide Switches

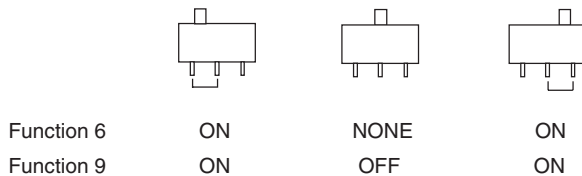
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| MODEL NO. | PLATING | ACTION | SPDT | | |
|--------------------|---------|-----------|---|---|--|
| GH36WW00001 | Gold | on - on | Function (see pg. E46) 6 9 ON ON 1 2 OFF 1 2 ON ON 1 2 ● = COMMON | <p style="text-align: center;">MECHANICAL OUTLINE</p> | <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
| GH39WW00001 | Gold | on off on | | | |
| GH36WW10001 | Silver | on - on | | | |
| GH39WW10001 | Silver | on off on | | | |
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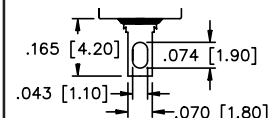
| MODEL NO. | PLATING | ACTION | SPDT | | |
|--------------------|---------|-----------|---|---|--|
| GH36Y000001 | Gold | on - on | Function (see pg. E46) 6 9 ON ON 1 2 OFF 1 2 ON ON 1 2 ● = COMMON | <p style="text-align: center;">MECHANICAL OUTLINE</p> | <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
| GH39Y000001 | Gold | on off on | | | |
| GH36Y010001 | Silver | on - on | | | |
| GH39Y010001 | Silver | on off on | | | |
| | | | | | |

| MODEL NO. | PLATING | ACTION | SPDT | | |
|--------------------|---------|-----------|---|---|--|
| GH36Y400001 | Gold | on - on | Function (see pg. E46) 6 9 ON ON 1 2 OFF 1 2 ON ON 1 2 ● = COMMON | <p style="text-align: center;">MECHANICAL OUTLINE</p> | <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
| GH39Y400001 | Gold | on off on | | | |
| GH36Y410001 | Silver | on - on | | | |
| GH39Y410001 | Silver | on off on | | | |
| | | | | | |

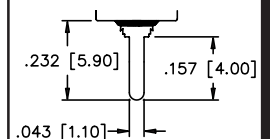
**ACTUATOR POSITION AND CONNECTIONS
(FOR BOTH SP & DP MODELS)**



SOLDER LUG TERMINAL



P.C. TERMINAL


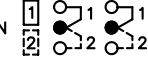
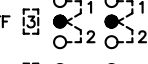
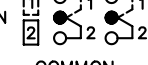
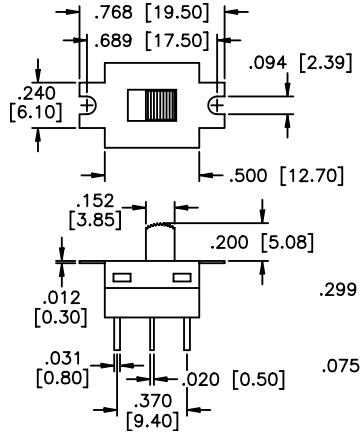
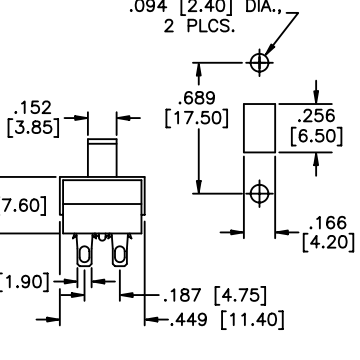

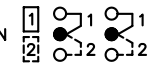
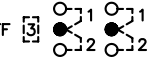
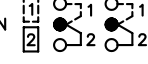
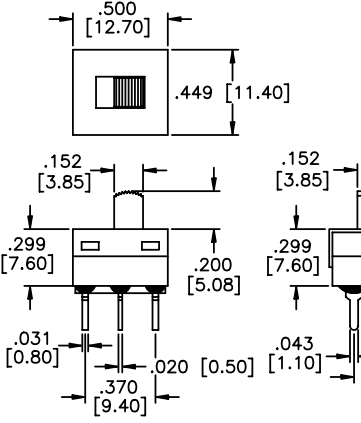
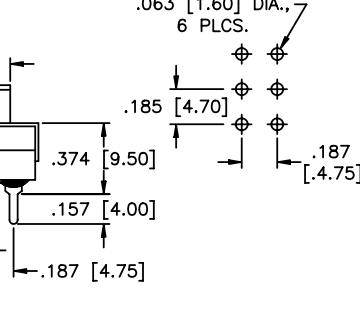

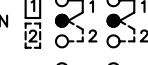
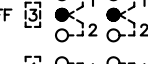
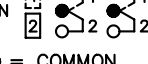
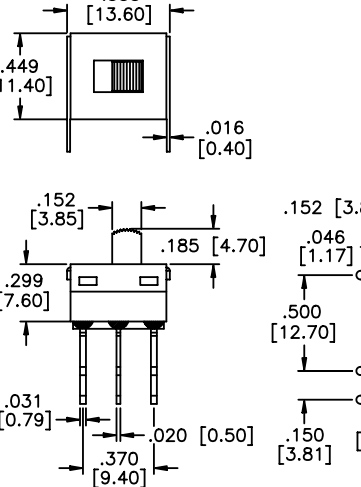
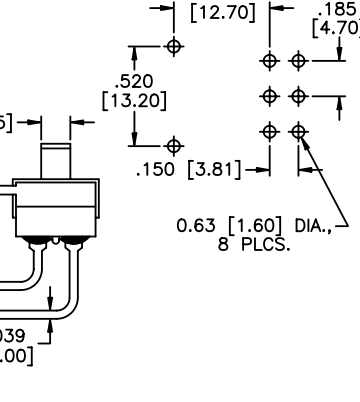


E

G Series

Instrument Grade Miniature Slide Switches

E

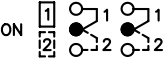
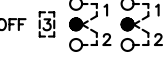
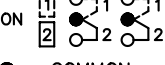
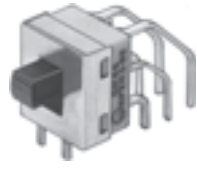
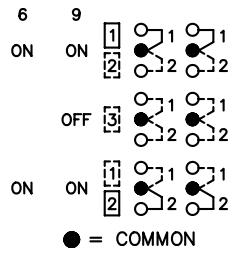
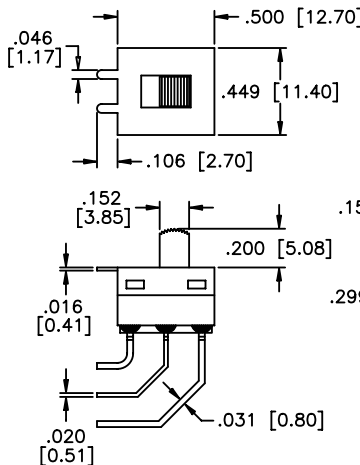
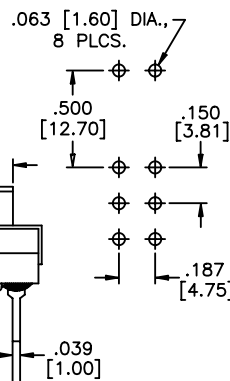
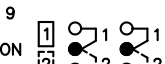
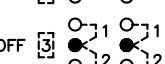
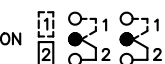
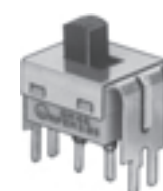
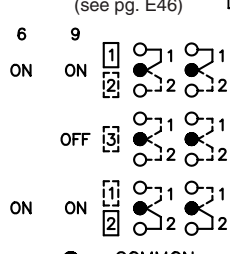
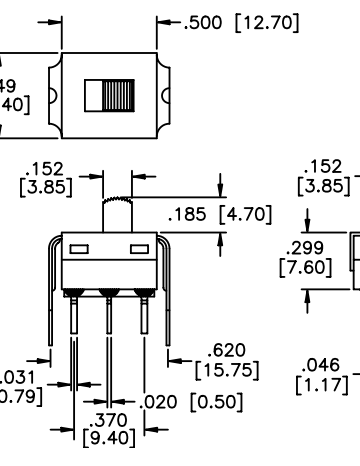
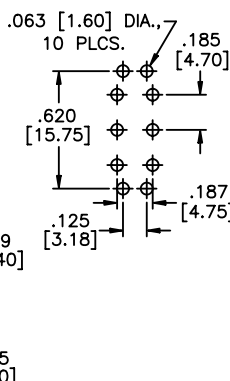
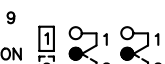
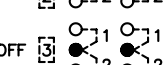
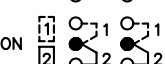

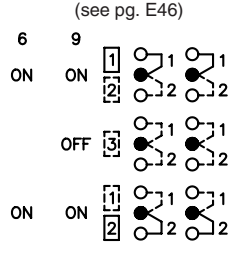
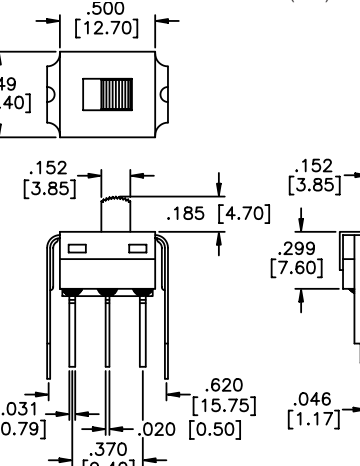
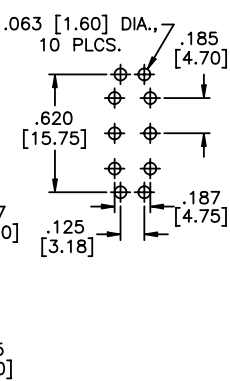
| MODEL NO. | PLATING | ACTION | DPDT | | | | | | | | | | | | | | | | |
|---|-----------|-----------|--------|-------------|------|---------|-------------|------|-----------|-------------|--------|---------|-------------|--------|-----------|---|---|---|---|
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| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | | |
| GH46S000001 | Gold | on - on | | | | | | | | | | | | | | | | | |
| GH49S000001 | Gold | on off on | | | | | | | | | | | | | | | | | |
| GH46S010001 | Silver | on - on | | | | | | | | | | | | | | | | | |
| GH49S010001 | Silver | on off on | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th>MODEL NO.</th> <th>PLATING</th> <th>ACTION</th> </tr> </thead> <tbody> <tr> <td style="color: red;">GH46P000001</td> <td>Gold</td> <td>on - on</td> </tr> <tr> <td style="color: red;">GH49P000001</td> <td>Gold</td> <td>on off on</td> </tr> <tr> <td style="color: red;">GH46P010001</td> <td>Silver</td> <td>on - on</td> </tr> <tr> <td style="color: red;">GH49P010001</td> <td>Silver</td> <td>on off on</td> </tr> </tbody> </table> | MODEL NO. | PLATING | ACTION | GH46P000001 | Gold | on - on | GH49P000001 | Gold | on off on | GH46P010001 | Silver | on - on | GH49P010001 | Silver | on off on |  | <p>Function (see pg. E46)</p> <p>6 9</p> <p>ON ON </p> <p>OFF OFF </p> <p>ON ON </p> <p>● = COMMON</p> | <p style="text-align: right;">.086 (2.20) TRAVEL/THROW</p>   | <p style="text-align: center;">SCHEMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> |
| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | | |
| GH46P000001 | Gold | on - on | | | | | | | | | | | | | | | | | |
| GH49P000001 | Gold | on off on | | | | | | | | | | | | | | | | | |
| GH46P010001 | Silver | on - on | | | | | | | | | | | | | | | | | |
| GH49P010001 | Silver | on off on | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th>MODEL NO.</th> <th>PLATING</th> <th>ACTION</th> </tr> </thead> <tbody> <tr> <td style="color: red;">GH46W000001</td> <td>Gold</td> <td>on - on</td> </tr> <tr> <td style="color: red;">GH49W000001</td> <td>Gold</td> <td>on off on</td> </tr> <tr> <td style="color: red;">GH46W010001</td> <td>Silver</td> <td>on - on</td> </tr> <tr> <td style="color: red;">GH49W010001</td> <td>Silver</td> <td>on off on</td> </tr> </tbody> </table> | MODEL NO. | PLATING | ACTION | GH46W000001 | Gold | on - on | GH49W000001 | Gold | on off on | GH46W010001 | Silver | on - on | GH49W010001 | Silver | on off on |  | <p>Function (see pg. E46)</p> <p>6 9</p> <p>ON ON </p> <p>OFF OFF </p> <p>ON ON </p> <p>● = COMMON</p> | <p style="text-align: right;">.086 (2.20) TRAVEL/THROW</p>   | <p style="text-align: center;">SCHEMATIC MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> |
| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | | |
| GH46W000001 | Gold | on - on | | | | | | | | | | | | | | | | | |
| GH49W000001 | Gold | on off on | | | | | | | | | | | | | | | | | |
| GH46W010001 | Silver | on - on | | | | | | | | | | | | | | | | | |
| GH49W010001 | Silver | on off on | | | | | | | | | | | | | | | | | |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

G Series

Instrument Grade Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| MODEL NO. | PLATING | ACTION | DPDT | .086 (2.20) TRAVEL/THROW | | | |
|--|----------------------------------|--|--|---|---|--|---|
| <b style="color: red;">GH46WW00001 <b style="color: red;">GH49WW00001 <b style="color: red;">GH46WW10001 <b style="color: red;">GH49WW10001 | Gold Gold Silver Silver | on - on on off on on - on on off on | Function (see pg. E46) ON ON  OFF  ON ON  ● = COMMON |  |  |  |  |
| <b style="color: red;">GH46Y000001 <b style="color: red;">GH49Y000001 <b style="color: red;">GH46Y010001 <b style="color: red;">GH49Y010001 | Gold Gold Silver Silver | on - on on off on on - on on off on | Function (see pg. E46) ON ON  OFF  ON ON  ● = COMMON |  |  |  |  |
| <b style="color: red;">GH46Y400001 <b style="color: red;">GH49Y400001 <b style="color: red;">GH46Y410001 <b style="color: red;">GH49Y410001 | Gold Gold Silver Silver | on - on on off on on - on on off on | Function (see pg. E46) ON ON  OFF  ON ON  ● = COMMON |  |  |  |  |

E

G Series

Instrument Grade Miniature Slide Switches

Additional ordering information: Commonly ordered models are shown on pgs. E40 thru E43 with complete specifications. Below is an ordering format that enables you to 'build your own switch' by simply selecting from all available options shown and filling in the boxes.

'BUILD YOUR OWN SWITCH' ORDER FORMAT

Fill in all boxes shown with options selected from below.
Allowable options for each box are shown under each respective box.

| Series | Actuator Height | Poles | Function | Terminals | Contact & Term. Mat'l. | Special Option 1 | Special Option 2 |
|--------|-----------------|-------|----------|-----------|------------------------|------------------|------------------|
| G | | | | | | | |
| | B* | 3 | 6 | S 0 | 0 | 0 0 | 0 0 |
| | C | 4 | 9 | P 0 | 1 | 1 0 | 0 1 |
| | E* | | | W 0 | 2 | 1 1 | 1 0 |
| | H | | | WW | 5 | 1 2 | 1 1 |
| | L* | | | Y 0 | 8 | | |
| | N | | | Y 4 | | | |

* indicates Actuator options B, E & L are available for single pole models only .

Actuators heights: Dimensions in inches and millimeters. **H** is standard.

B = .301" (7.65mm) **C** = .137" (3.50mm) **E** = .358" (9.10mm)
H = .200" (5.10mm) for S0 & P0 and .185" (4.70mm) for Y, Y4, W0 & WW
L = .251" (6.40mm) **N** = .374" (9.50mm)

Poles: 3 = Single Pole 4 = Double Pole
Functions: 6 = ON - ON 9 = ON OFF ON

Terminals: See completely specified models in prior section for configurations and dimensions.

- S0** = Solder lugs
- P0** = .250" (6.35mm) long Printed circuit terminals
- W0** = Right angle horizontal p.c. terminals with mounting bracket
- WW** = Right angle vertical p.c. terminals with mounting bracket
- Y0** = P.C. terminals with short bracket
- Y4** = P.C. terminals with tall bracket

Contact & terminal materials: See contact ratings under "specifications".

0 = Gold plated brass

- 1** = Silver
- 2** = Gold plated silver
- 5** = Special contact with lower rating
- 8** = Gold plated brass contacts with tin plated terminals (not available w/SO)

Special options 1:

- 00** = Standard model
- 10** = Switch without ground plate
- 11** = .407" (10.35mm) long printed circuit terminals
- 12** = Same as 11 except without ground plate

Special options 2:

- 00** = No epoxy seal (for printed circuit terminals only as S0 (solder lug) terminals are always sealed)
- 01** = Epoxy sealed terminals (standard on solder lug models)
- 10** = Extended terminals for WW models (see figure 1)
- 11** = Same as 10 above except with epoxy sealed terminals

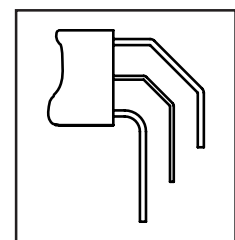


figure 1

25000N Series

Miniature Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| SPECIFICATIONS | FEATURES |
|---|---|
| <p>Contact ratings: Gold; 0.4 Volt-Amps (VA) max. at 20 V max. (AC or DC) Silver; 4 A at 125 VAC, 2 A at 250 VAC or 3 A at 30 VDC</p> <p>Initial contact resistance: Gold; 50 milliohms max. Silver; 10 milliohms max.</p> <p>Insulation resistance: 1000 megohms min. at 500 VDC</p> <p>Dielectric strength: 1000 V rms min. between terms.</p> <p>Electrical life: Gold; 20,000 cycles, Silver; 10,000 cycles</p> <p>Operating temperature range: -40°C to +85°C</p> <p>Solder heat resistance: 300°C max. for 5 seconds</p> <p>Washing not recommended.</p> | <ul style="list-style-type: none"> ● Molded-in terminals. ● .100" (2,54mm) and .200" (5,08mm) terminal spacing. ● Many additional models & options available (see page E49). ● Optional UL recognized & marked models available . |
| MATERIALS | |
| <p>Contacts & terminals: Gold or silver available (see contact ratings)</p> <p>Actuator and Cover: Glass filled polyamide</p> <p>Case: PBT high temp. thermoplastic Terminal seal: Epoxy</p> | |

| MODEL NO. | PLATING | ACTION | SINGLE POLE FLUSH ACTUATOR | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
|---|---------|--------|--|--|-------------------|
| <p>25136NLDB Gold on - on</p> <p>25139NLDB Gold on off on</p> <p>25136NAB Silver on - on</p> <p>25139NAB Silver on off on</p> | | | <p>Function (see pg. E51)</p> <p>6 9</p> <p>ON ON </p> <p>OFF </p> <p>ON ON </p> <p>● = COMMON</p> <p>SCHMATIC</p> | <p>TRAVEL/THROW: 3 POSITION - .078 (2.00) 2 POSITION - .150 (3.80)</p> | |
| <p>VERTICAL ACTUATOR</p> | | | | | |
| <p>25336NLD Gold on - on</p> <p>25339NLD Gold on off on</p> <p>25336NA Silver on - on</p> <p>25339NA Silver on off on</p> | | | <p>Function (see pg. E51)</p> <p>6 9</p> <p>ON ON </p> <p>OFF </p> <p>ON ON </p> <p>● = COMMON</p> <p>SCHMATIC</p> | <p>TRAVEL/THROW: 3 POSITION - .078 (2.00) 2 POSITION - .150 (3.80)</p> | |
| <p>RIGHT ANGLE ACTUATOR</p> | | | | | |
| <p>25146NLDB Gold on - on</p> <p>25149NLDB Gold on off on</p> <p>25146NAB Silver on - on</p> <p>25149NAB Silver on off on</p> | | | <p>Function (see pg. E51)</p> <p>6 9</p> <p>ON ON </p> <p>OFF </p> <p>ON ON </p> <p>● = COMMON</p> <p>SCHMATIC</p> | <p>TRAVEL/THROW: 3 POSITION - .078 (2.00) 2 POSITION - .150 (3.80)</p> | |
| <p>VERTICAL ACTUATOR</p> | | | | | |

E

25000N Series


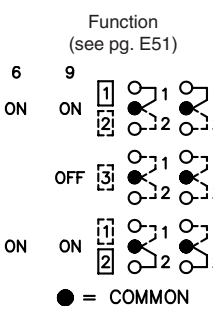
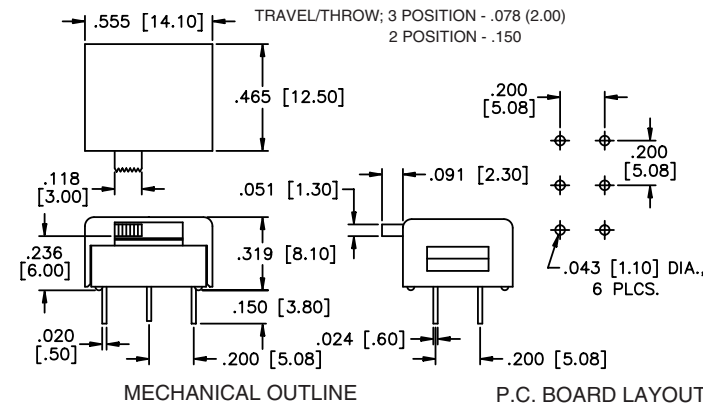

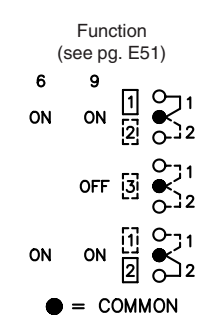
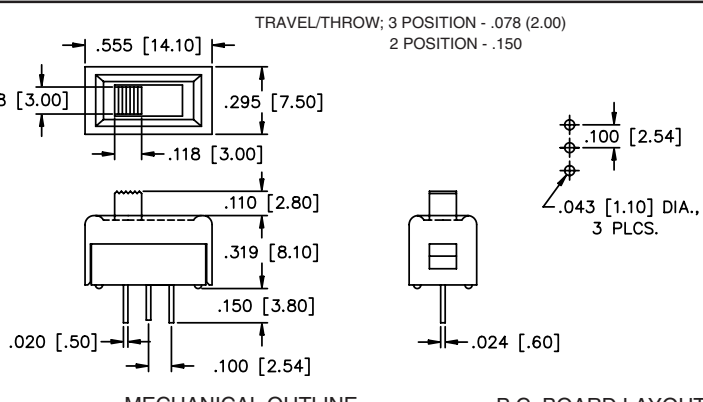

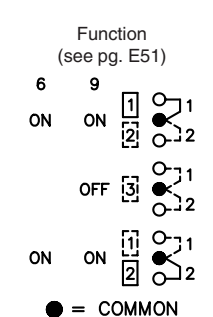
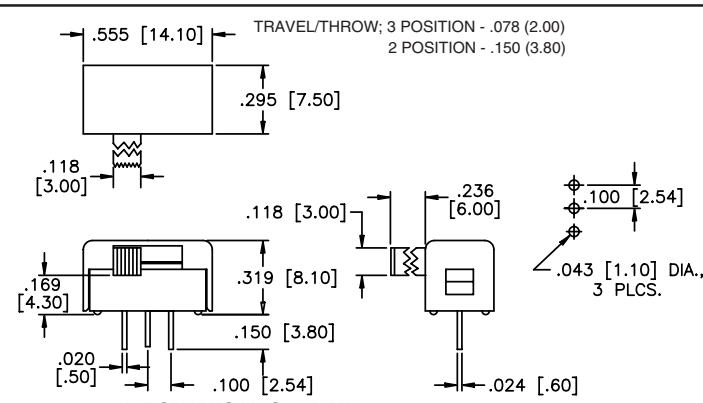

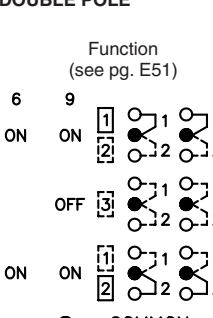
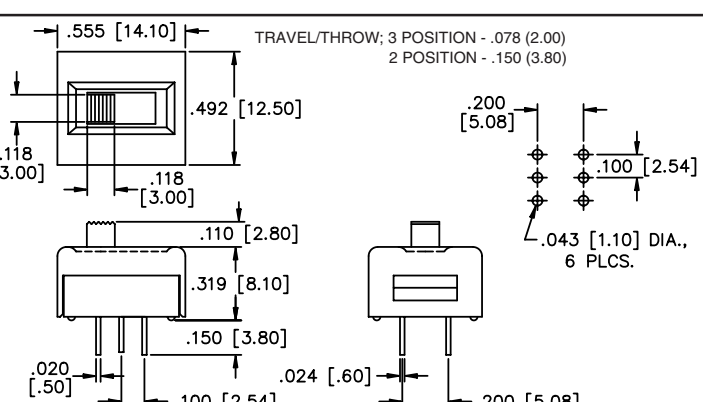
Miniature Slide Switches

| MODEL NO. | PLATING | ACTION | DOUBLE POLE | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
|--|----------------------------------|--|--|--------------------|--|
| 25346NLD 25349NLD 25346NA 25349NA | Gold Gold Silver Silver | on - on on off on on - on on off on | DOUBLE POLE Function (see pg. E51) <p>● = COMMON</p> | | TRAVEL/THROW; 3 POSITION - .078 (2.00) 2 POSITION - .150 (3.80) |
| <p>RIGHT ANGLE ACTUATOR</p> | | | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| 25436NLDB 25439NLDB 25436NAB 25439NAB | Gold Gold Silver Silver | on - on on off on on - on on off on | SINGLE POLE FLUSH ACTUATOR Function (see pg. E51) <p>● = COMMON</p> | | |
| <p>VERTICAL ACTUATOR</p> | | | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| 25536NLD 25539NLD 25536NA 25539NA | Gold Gold Silver Silver | on - on on off on on - on on off on | SINGLE POLE Function (see pg. E51) <p>● = COMMON</p> | | TRAVEL/THROW; 3 POSITION - .078 (2.00) 2 POSITION - .150 (3.80) |
| <p>RIGHT ANGLE ACTUATOR</p> | | | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| 25446NLDB 25449NLDB 25446NAB 25449NAB | Gold Gold Silver Silver | on - on on off on on - on on off on | DOUBLE POLE FLUSH ACTUATOR Function (see pg. E51) <p>● = COMMON</p> | | |
| <p>VERTICAL ACTUATOR</p> | | | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

25000N Series Miniature Slide Switches


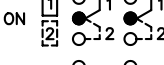
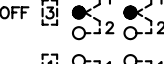

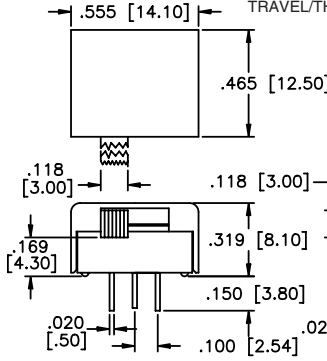
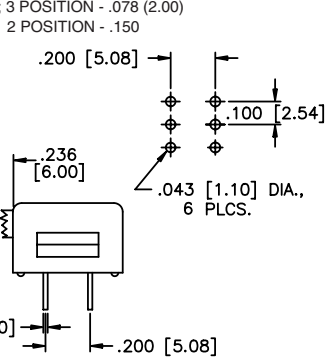

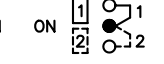
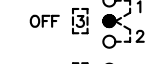
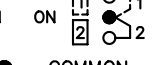
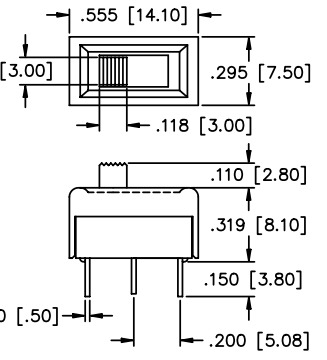
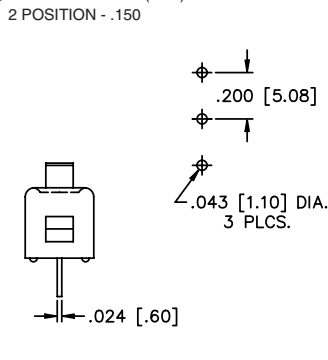
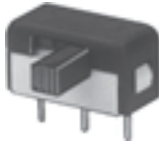
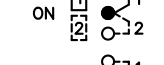


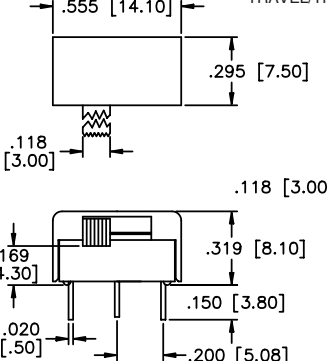
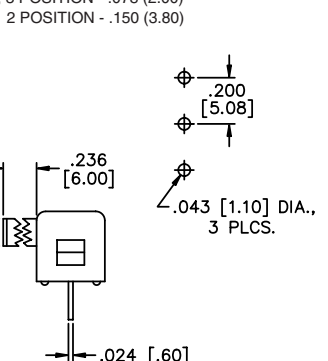

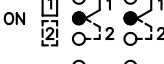
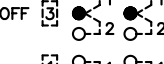

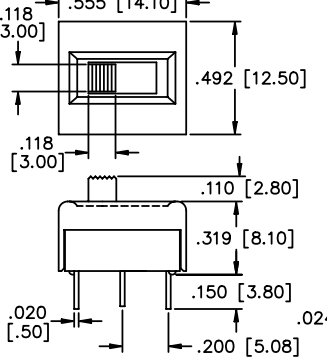
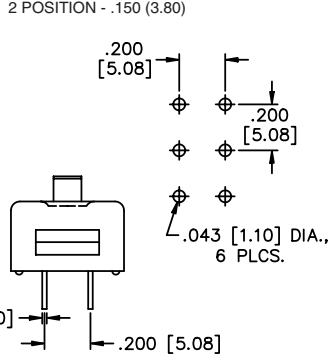
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">MODEL NO.</th> <th style="text-align: left;">PLATING</th> <th style="text-align: left;">ACTION</th> </tr> </thead> <tbody> <tr> <td>25546NLD</td> <td>Gold</td> <td>on - on</td> </tr> <tr> <td>25549NLD</td> <td>Gold</td> <td>on off on</td> </tr> <tr> <td>25546NA</td> <td>Silver</td> <td>on - on</td> </tr> <tr> <td>25549NA</td> <td>Silver</td> <td>on off on</td> </tr> </tbody> </table> | MODEL NO. | PLATING | ACTION | 25546NLD | Gold | on - on | 25549NLD | Gold | on off on | 25546NA | Silver | on - on | 25549NA | Silver | on off on |  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <p>DOUBLE POLE</p> <p>Function (see pg. E51)</p>  <p>● = COMMON</p> <p style="text-align: center;">SCHEMATIC</p> |  <p style="text-align: center;">MECHANICAL OUTLINE P.C. BOARD LAYOUT</p> |
|--|-----------|-----------|--------|-----------|------|---------|-----------|------|-----------|----------|--------|---------|----------|--------|-----------|---|--|---|
| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | |
| 25546NLD | Gold | on - on | | | | | | | | | | | | | | | | |
| 25549NLD | Gold | on off on | | | | | | | | | | | | | | | | |
| 25546NA | Silver | on - on | | | | | | | | | | | | | | | | |
| 25549NA | Silver | on off on | | | | | | | | | | | | | | | | |
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| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | |
| 25136NLDH | Gold | on - on | | | | | | | | | | | | | | | | |
| 25139NLDH | Gold | on off on | | | | | | | | | | | | | | | | |
| 25136NAH | Silver | on - on | | | | | | | | | | | | | | | | |
| 25139NAH | Silver | on off on | | | | | | | | | | | | | | | | |
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| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | |
| 25336NLD6 | Gold | on - on | | | | | | | | | | | | | | | | |
| 25339NLD6 | Gold | on off on | | | | | | | | | | | | | | | | |
| 25336NA6 | Silver | on - on | | | | | | | | | | | | | | | | |
| 25339NA6 | Silver | on off on | | | | | | | | | | | | | | | | |
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| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | | |
| 25146NLDH | Gold | on - on | | | | | | | | | | | | | | | | |
| 25149NLDH | Gold | on off on | | | | | | | | | | | | | | | | |
| 25146NAH | Silver | on - on | | | | | | | | | | | | | | | | |
| 25149NAH | Silver | on off on | | | | | | | | | | | | | | | | |

E

25000N Series

Miniature Slide Switches

| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">MODEL NO.</th> <th style="text-align: left;">PLATING</th> <th style="text-align: left;">ACTION</th> </tr> </thead> <tbody> <tr> <td>25346NLD6</td> <td>Gold</td> <td>on - on</td> </tr> <tr> <td>25349NLD6</td> <td>Gold</td> <td>on off on</td> </tr> <tr> <td>25346NA6</td> <td>Silver</td> <td>on - on</td> </tr> <tr> <td>25349NA6</td> <td>Silver</td> <td>on off on</td> </tr> </tbody> </table> <div style="text-align: center; margin-top: 10px;">  <p>RIGHT ANGLE ACTUATOR</p> </div> | MODEL NO. | PLATING | ACTION | 25346NLD6 | Gold | on - on | 25349NLD6 | Gold | on off on | 25346NA6 | Silver | on - on | 25349NA6 | Silver | on off on | <p>DOUBLE POLE</p> <p>Function (see pg. E51)</p> <p>6 9</p> <p>ON ON </p> <p>OFF </p> <p>ON ON </p> <p>● = COMMON</p> <p style="text-align: center;">SCHEMATIC</p> | <div style="text-align: center;">  <p>MECHANICAL OUTLINE</p> </div> <div style="text-align: center;">  <p>P.C. BOARD LAYOUT</p> </div> |
|---|-----------|-----------|--------|-----------|------|---------|-----------|------|-----------|----------|--------|---------|----------|--------|-----------|--|---|
| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | |
| 25346NLD6 | Gold | on - on | | | | | | | | | | | | | | | |
| 25349NLD6 | Gold | on off on | | | | | | | | | | | | | | | |
| 25346NA6 | Silver | on - on | | | | | | | | | | | | | | | |
| 25349NA6 | Silver | on off on | | | | | | | | | | | | | | | |
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| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | |
| 25436NLDH | Gold | on - on | | | | | | | | | | | | | | | |
| 25439NLDH | Gold | on off on | | | | | | | | | | | | | | | |
| 25436NAH | Silver | on - on | | | | | | | | | | | | | | | |
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| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | |
| 25536NLD6 | Gold | on - on | | | | | | | | | | | | | | | |
| 25539NLD6 | Gold | on off on | | | | | | | | | | | | | | | |
| 25536NA6 | Silver | on - on | | | | | | | | | | | | | | | |
| 25539NA6 | Silver | on off on | | | | | | | | | | | | | | | |
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| MODEL NO. | PLATING | ACTION | | | | | | | | | | | | | | | |
| 25446NLDH | Gold | on - on | | | | | | | | | | | | | | | |
| 25449NLDH | Gold | on off on | | | | | | | | | | | | | | | |
| 25446NAH | Silver | on - on | | | | | | | | | | | | | | | |
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E

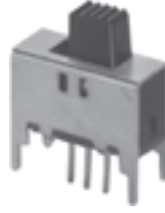

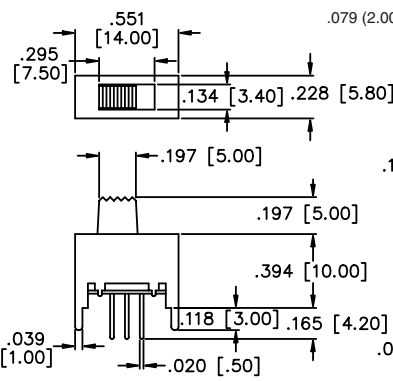
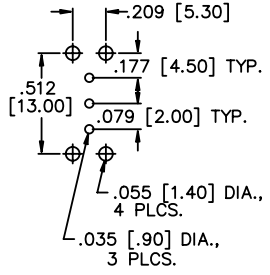

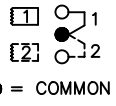
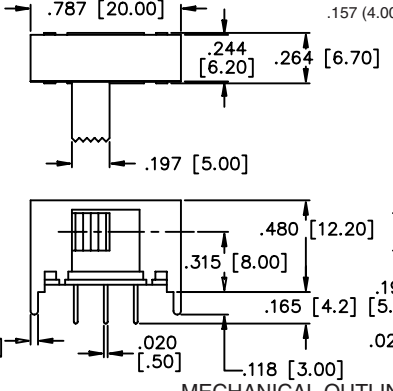
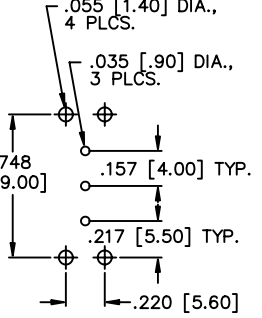

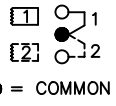
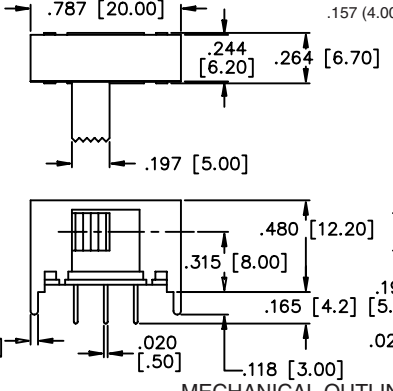
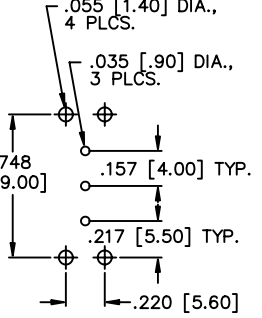
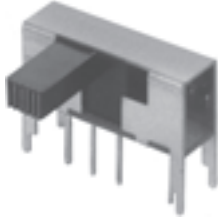
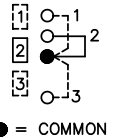
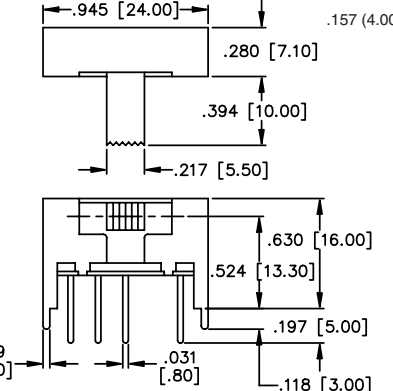
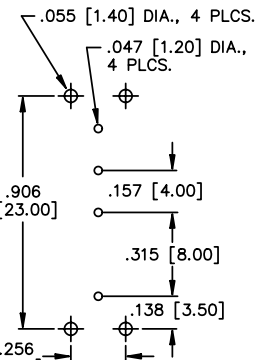
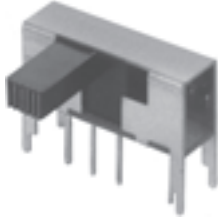
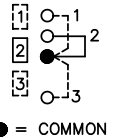
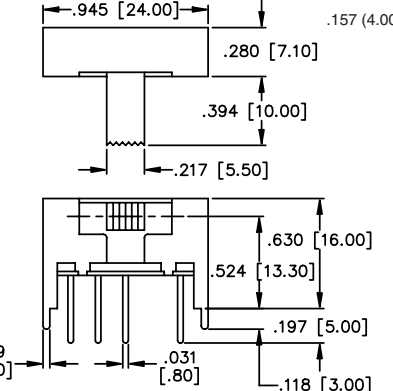
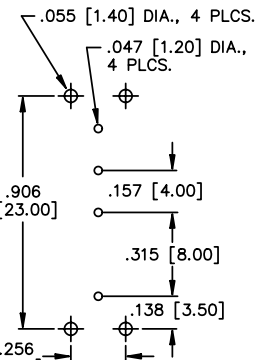
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MSS Series

Standard Size Slide Switches

| SPECIFICATIONS | FEATURES |
|--|---|
| <p>Contact ratings: Gold; 0.4 Volt-Amps (VA) max. at 20 V max. (AC or DC) Silver; 300 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Epoxy sealed terminals. ● Wash-through open frame construction. ● Reinforcing mounting legs. |
| MATERIALS | |
| <p>Contacts & terminals: Gold or silver available (see contact ratings)</p> <p>Housing: Tin/lead plated steel</p> <p>Base: Phenolic laminated sheet</p> | <p>Actuator: Thermoplastic</p> <p>Terminal seal: Epoxy</p> |

E

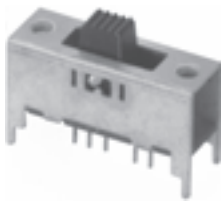
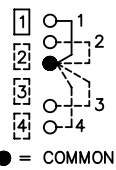
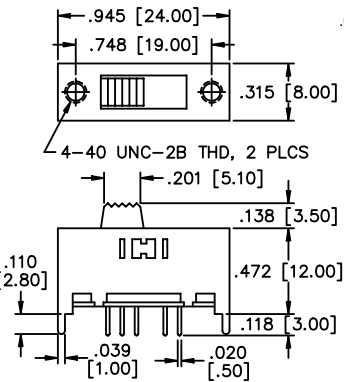
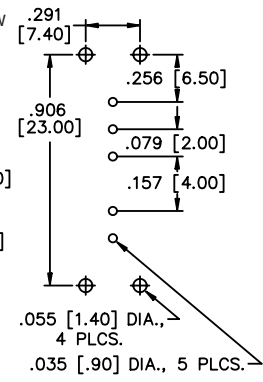
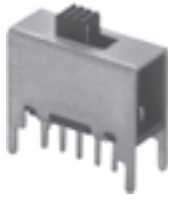
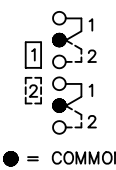
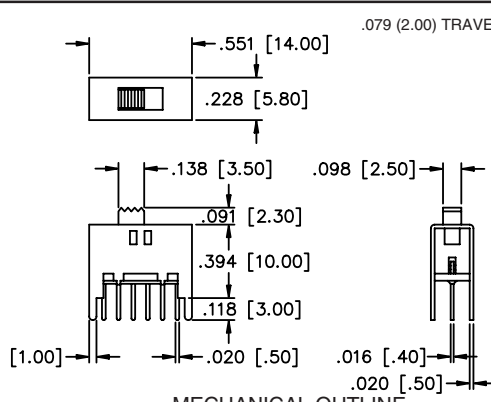
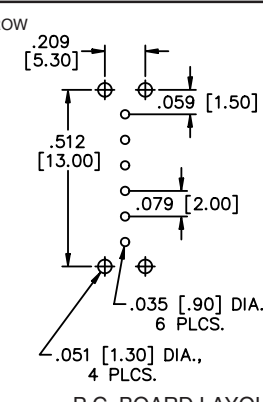
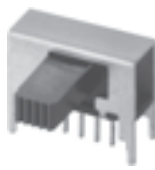
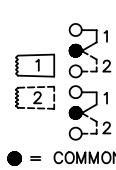
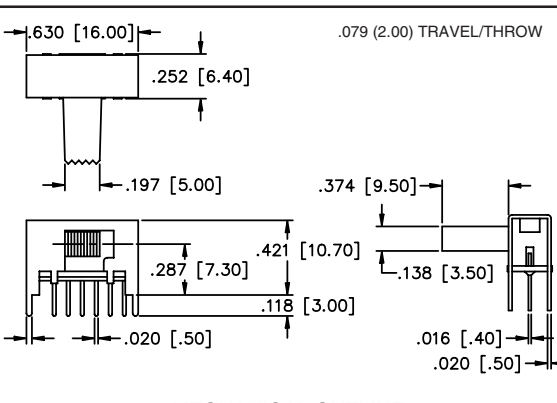
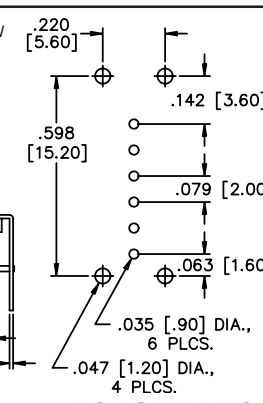
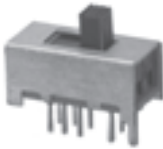
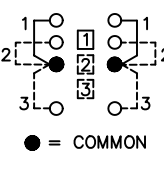
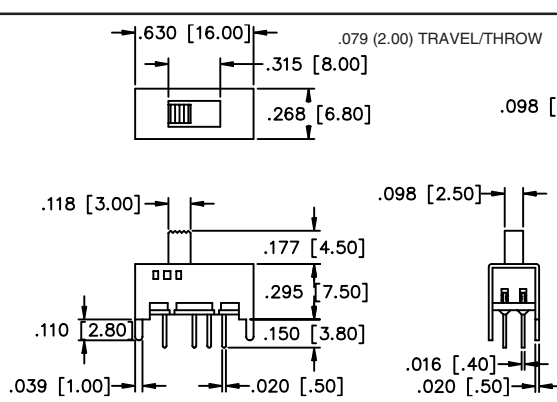
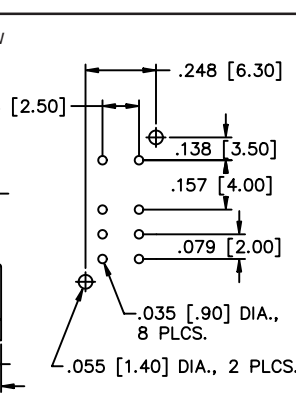
| MODEL NO. | PLATING | | | | | | | | |
|-----------|---------|---|---------|--------|---|----------|------|---------|--------|
| MSS12A | SILVER | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">  <p style="text-align: center;">VERTICAL ACTUATOR</p> </div> <div style="width: 60%;"> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">1P2T</p> <div style="display: flex; justify-content: space-around;"> <div style="width: 30%;">  <p style="text-align: center;">SCHEMATIC</p> </div> <div style="width: 30%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> </div> </div> | | | | | | | |
| MSS12AG | GOLD | | MSS12AR | SILVER | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> </div> <div style="width: 60%;"> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">1P2T</p> <div style="display: flex; justify-content: space-around;"> <div style="width: 30%;">  <p style="text-align: center;">SCHEMATIC</p> </div> <div style="width: 30%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> </div> </div> | MSS12ARG | GOLD | MSS13AR | SILVER |
| MSS12AR | SILVER | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> </div> <div style="width: 60%;"> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">1P2T</p> <div style="display: flex; justify-content: space-around;"> <div style="width: 30%;">  <p style="text-align: center;">SCHEMATIC</p> </div> <div style="width: 30%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> </div> </div> | | | | | | | |
| MSS12ARG | GOLD | | MSS13AR | SILVER | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> </div> <div style="width: 60%;"> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">1P3T</p> <div style="display: flex; justify-content: space-around;"> <div style="width: 30%;">  <p style="text-align: center;">SCHEMATIC</p> </div> <div style="width: 30%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> </div> </div> | | | | |
| MSS13AR | SILVER | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> </div> <div style="width: 60%;"> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">1P3T</p> <div style="display: flex; justify-content: space-around;"> <div style="width: 30%;">  <p style="text-align: center;">SCHEMATIC</p> </div> <div style="width: 30%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> </div> </div> | | | | | | | |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MSS Series

Standard Size Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE


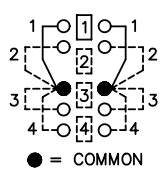
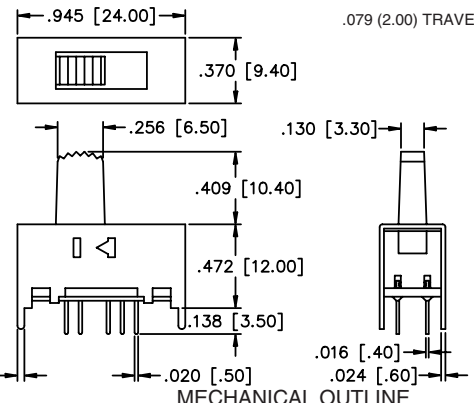
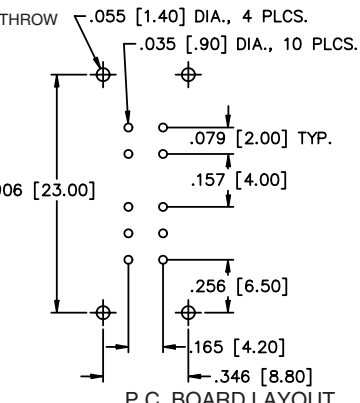

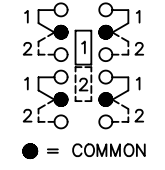
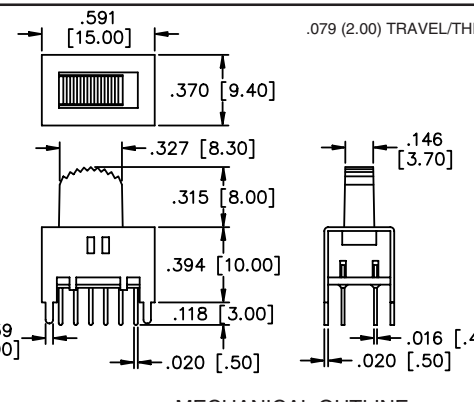
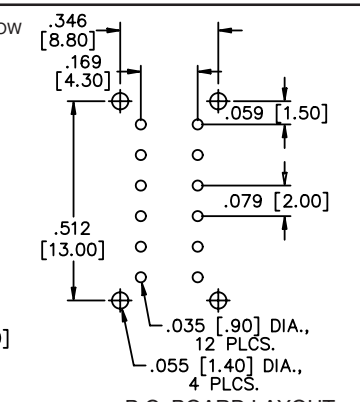

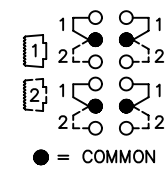
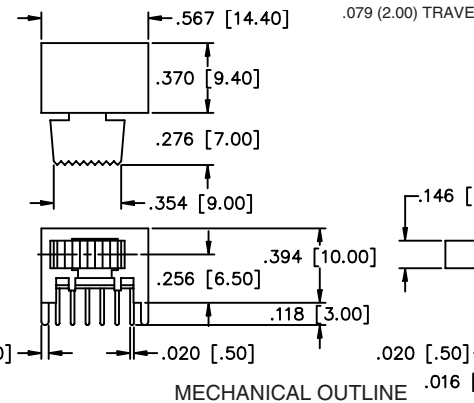
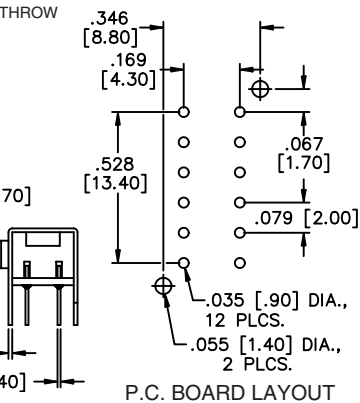

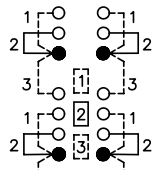
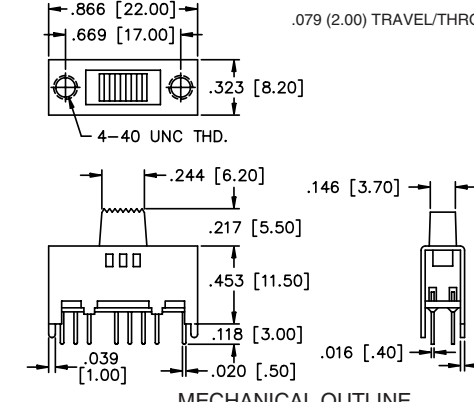
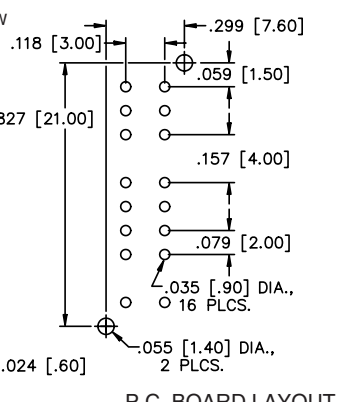
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">MODEL NO.</th> <th style="text-align: left;">PLATING</th> </tr> </thead> <tbody> <tr> <td>MSS14</td> <td>SILVER</td> </tr> <tr> <td>MSS14G</td> <td>GOLD</td> </tr> </tbody> </table> | MODEL NO. | PLATING | MSS14 | SILVER | MSS14G | GOLD |  <p style="text-align: center;">VERTICAL ACTUATOR</p> | <h3 style="text-align: center;">1P4T</h3> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>● = COMMON</p> </div> <div style="width: 35%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> |
|---|-----------|---------|----------------|--------|-----------------|------|---|--|
| MODEL NO. | PLATING | | | | | | | |
| MSS14 | SILVER | | | | | | | |
| MSS14G | GOLD | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">MODEL NO.</th> <th style="text-align: left;">PLATING</th> </tr> </thead> <tbody> <tr> <td>MSS22</td> <td>SILVER</td> </tr> <tr> <td>MSS22G</td> <td>GOLD</td> </tr> </tbody> </table> | MODEL NO. | PLATING | MSS22 | SILVER | MSS22G | GOLD |  <p style="text-align: center;">VERTICAL ACTUATOR</p> | <h3 style="text-align: center;">2P2T</h3> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>● = COMMON</p> </div> <div style="width: 35%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> |
| MODEL NO. | PLATING | | | | | | | |
| MSS22 | SILVER | | | | | | | |
| MSS22G | GOLD | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">MODEL NO.</th> <th style="text-align: left;">PLATING</th> </tr> </thead> <tbody> <tr> <td>MSS225R</td> <td>SILVER</td> </tr> <tr> <td>MSS225RG</td> <td>GOLD</td> </tr> </tbody> </table> | MODEL NO. | PLATING | MSS225R | SILVER | MSS225RG | GOLD |  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <h3 style="text-align: center;">2P2T</h3> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>● = COMMON</p> </div> <div style="width: 35%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> |
| MODEL NO. | PLATING | | | | | | | |
| MSS225R | SILVER | | | | | | | |
| MSS225RG | GOLD | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">MODEL NO.</th> <th style="text-align: left;">PLATING</th> </tr> </thead> <tbody> <tr> <td>MSS23</td> <td>SILVER</td> </tr> <tr> <td>MSS23G</td> <td>GOLD</td> </tr> </tbody> </table> | MODEL NO. | PLATING | MSS23 | SILVER | MSS23G | GOLD |  <p style="text-align: center;">VERTICAL ACTUATOR</p> | <h3 style="text-align: center;">2P3T</h3> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>● = COMMON</p> </div> <div style="width: 35%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 30%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> |
| MODEL NO. | PLATING | | | | | | | |
| MSS23 | SILVER | | | | | | | |
| MSS23G | GOLD | | | | | | | |

E

MSS Series

Standard Size Slide Switches

E

| MODEL NO. | PLATING | | | |
|----------------|---------|---|--|---|
| MSS24A | SILVER |  | 2P4T |  |
| MSS24AG | GOLD | | | |
| | | VERTICAL ACTUATOR |  |  |
| MSS42 | SILVER |  | 4P2T |  |
| MSS42G | GOLD | | | |
| | | VERTICAL ACTUATOR |  |  |
| MSS42R | SILVER |  | 4P2T |  |
| MSS42RG | GOLD | | | |
| | | RIGHT ANGLE ACTUATOR |  |  |
| MSS43 | SILVER |  | 4P3T |  |
| MSS43G | GOLD | | | |
| | | VERTICAL ACTUATOR |  |  |


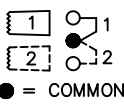
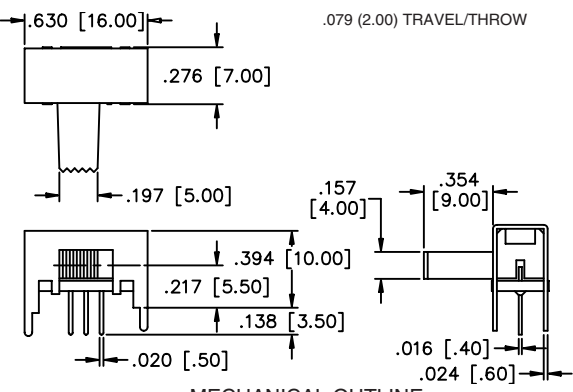
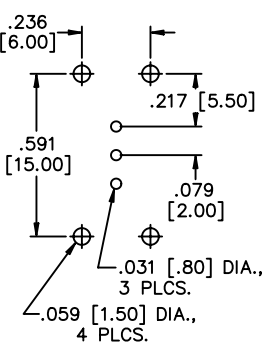

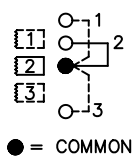
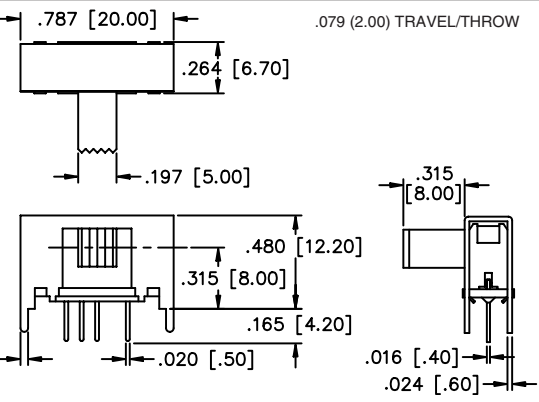
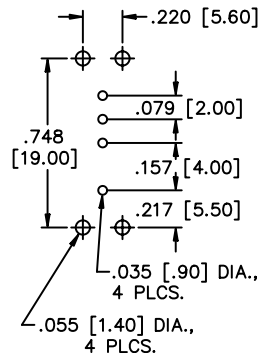
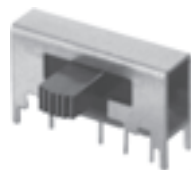
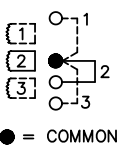
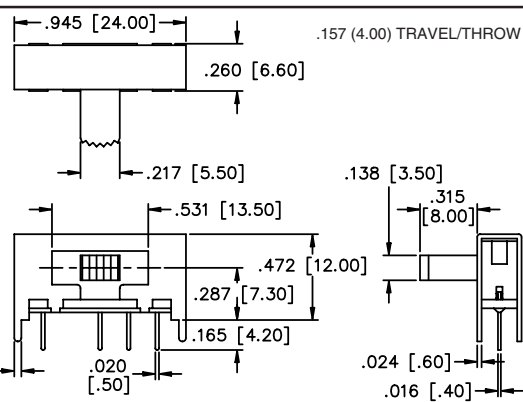
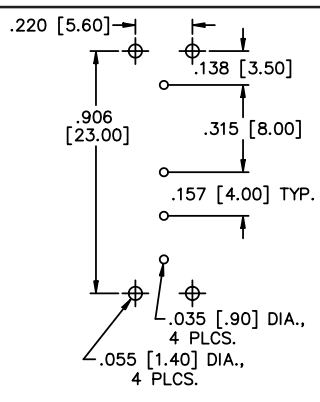
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

M Series

Standard Size Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

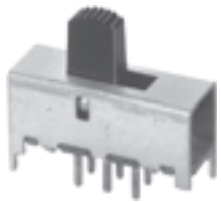
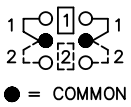
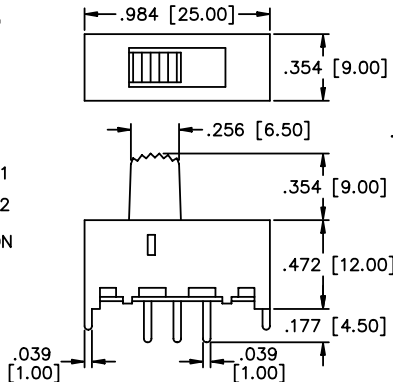
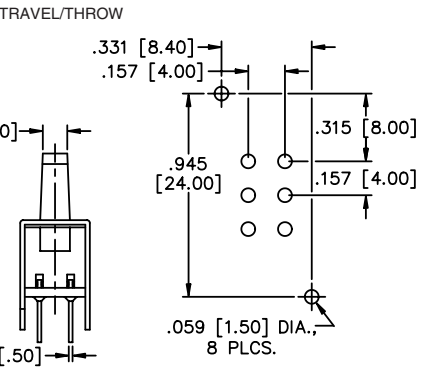
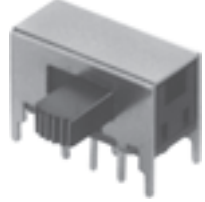
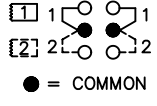
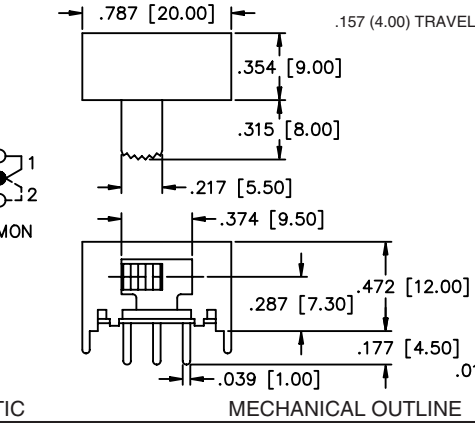
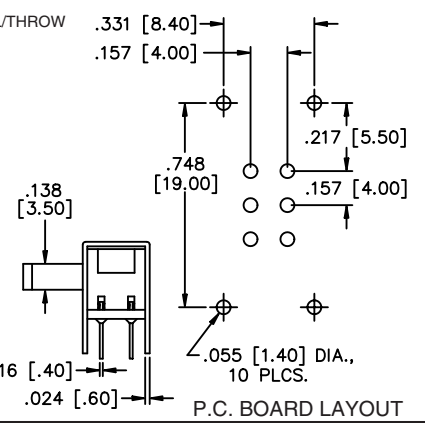
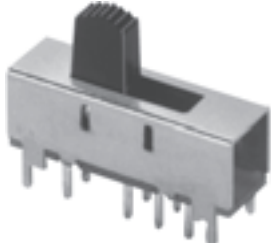
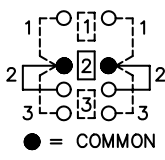
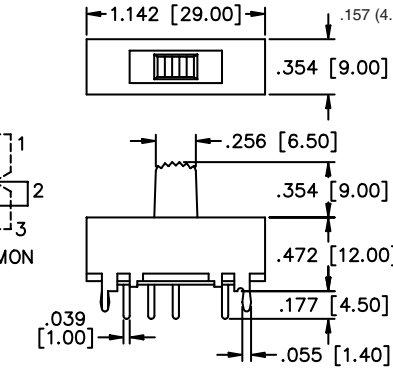
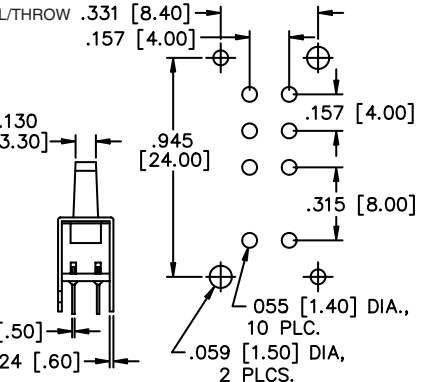
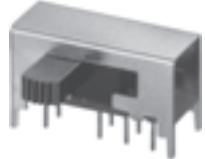
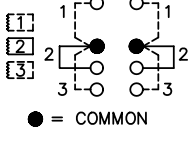
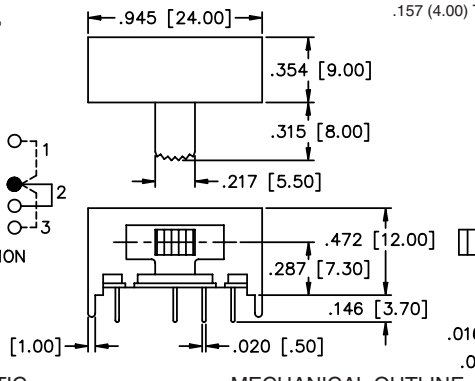
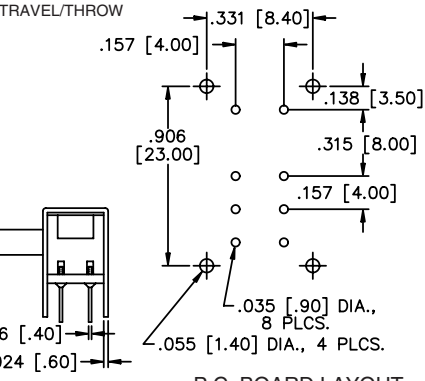
| SPECIFICATIONS | FEATURES |
|---|--|
| <p>Contact rating: 300 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Epoxy sealed terminals. ● Wash-through open frame construction. ● Reinforcing mounting legs. ● Many actuator styles and lengths available on request. |
| MATERIALS | |
| <p>Contacts & terminals: Silver plated</p> <p>Housing: Tin plated steel</p> <p>Actuator: Thermoplastic</p> <p>Base: Phenolic laminated sheet</p> | <p>Terminal seal: Epoxy</p> |

| | | | |
|---|--|--|--|
| <p>MODEL NO.</p> <p>M12R</p>  <p>RIGHT ANGLE ACTUATOR</p> | <p>1P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| <p>MODEL NO.</p> <p>M13R</p>  <p>RIGHT ANGLE ACTUATOR</p> | <p>1P3T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| <p>MODEL NO.</p> <p>M13AR</p>  <p>RIGHT ANGLE ACTUATOR</p> | <p>1P3T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |



M Series

Standard Size Slide Switches


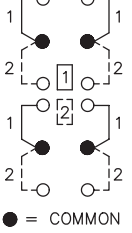
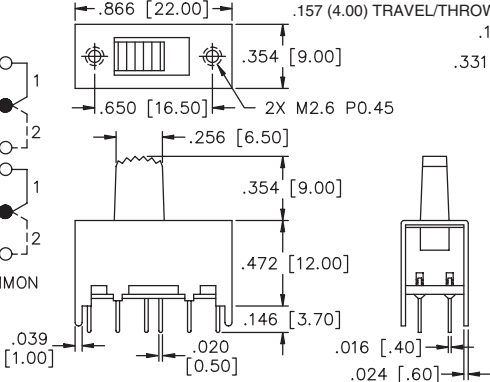
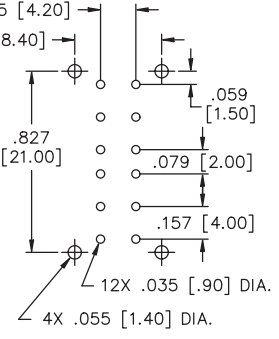
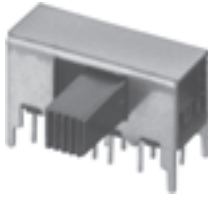
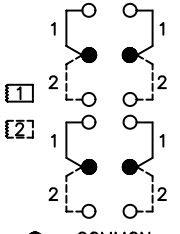
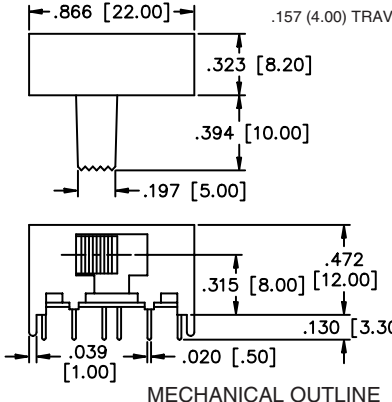
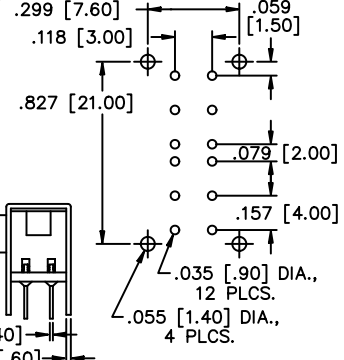

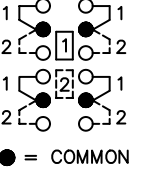
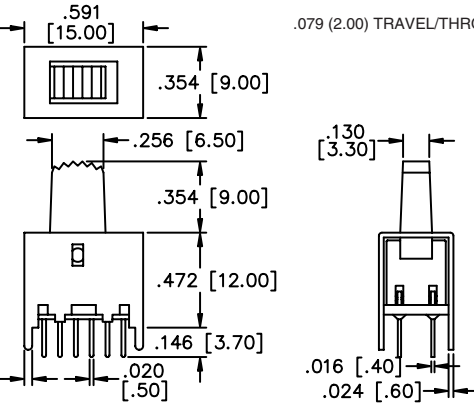
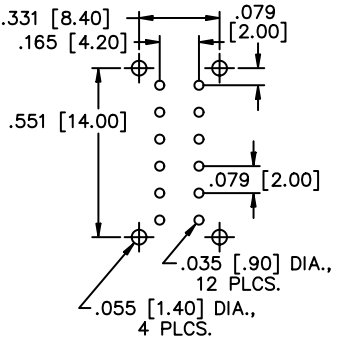
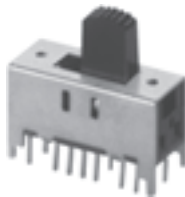
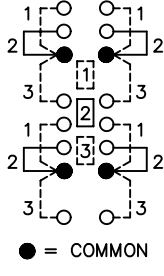
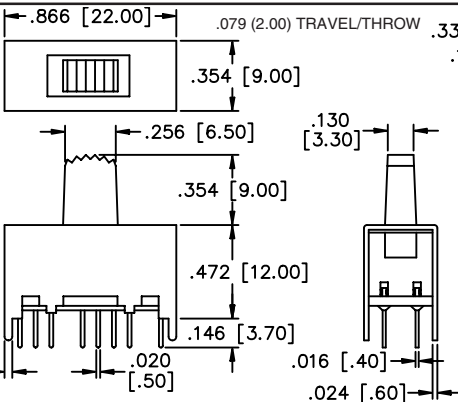
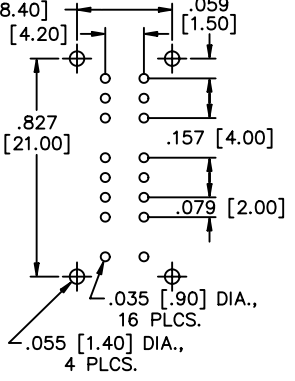
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|---|--|--|--|
| MODEL NO. | | | |
| M22 | | | |
|  <p>VERTICAL ACTUATOR</p> | <p>2P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| MODEL NO. | | | |
| M22R | | | |
|  <p>RIGHT ANGLE ACTUATOR</p> |  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| MODEL NO. | | | |
| M23 | | | |
|  <p>VERTICAL ACTUATOR</p> |  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| MODEL NO. | | | |
| M23R | | | |
|  <p>RIGHT ANGLE ACTUATOR</p> |  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

M Series

Standard Size Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

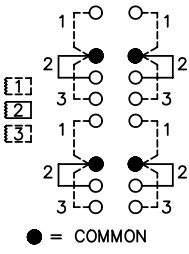
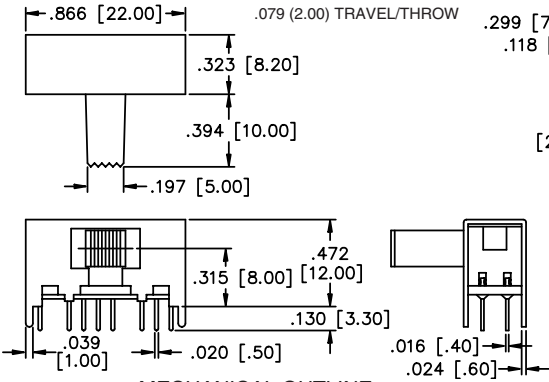
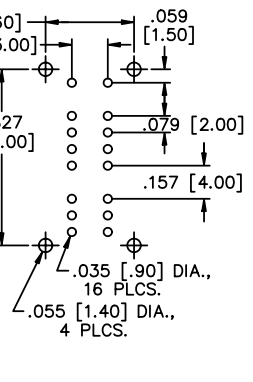
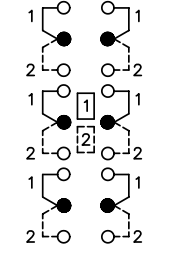
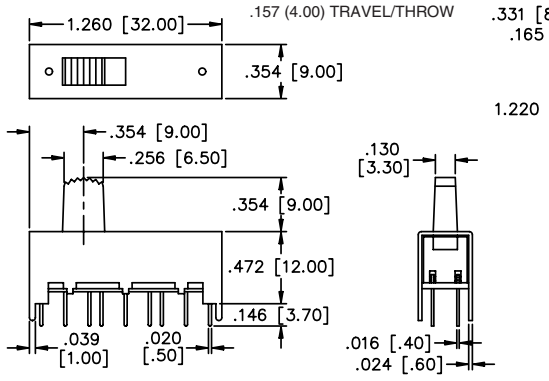
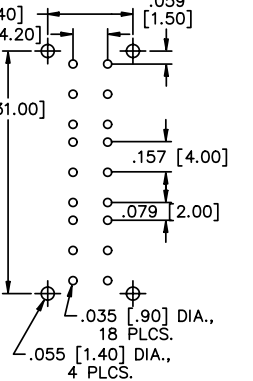
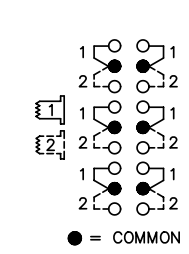
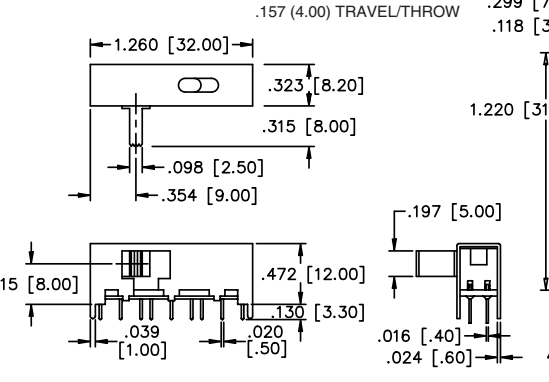
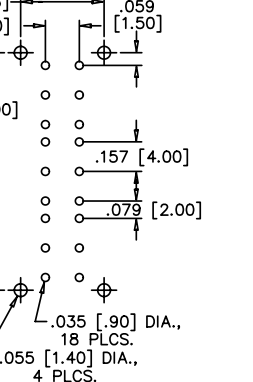
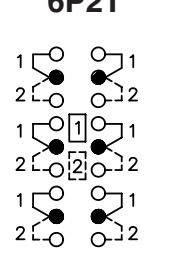
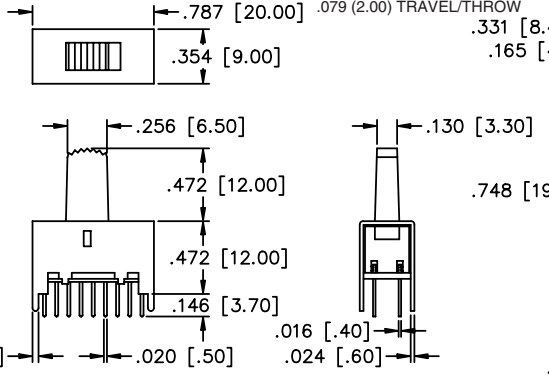
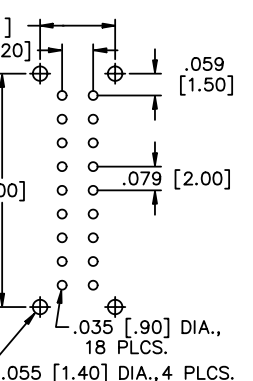
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|---|--|--|--|
| MODEL NO. | | | |
| M42 | | | |
|  | <p>4P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | | | |
| M42R | | | |
|  | <p>4P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| RIGHT ANGLE ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | | | |
| M42A | | | |
|  | <p>4P2T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MODEL NO. | | | |
| M43 | | | |
|  | <p>4P3T</p>  <p>● = COMMON</p> |  <p>MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| VERTICAL ACTUATOR | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |

E

M Series

Standard Size Slide Switches

E

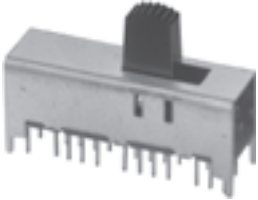
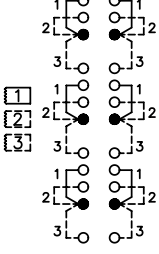
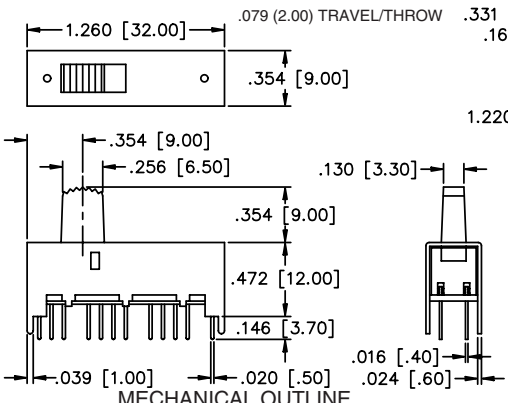
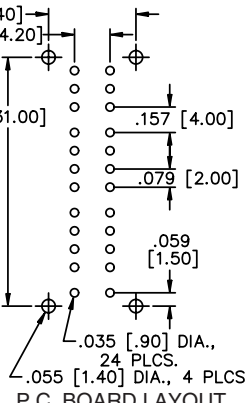

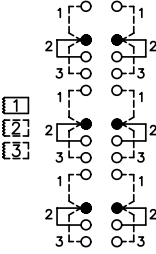
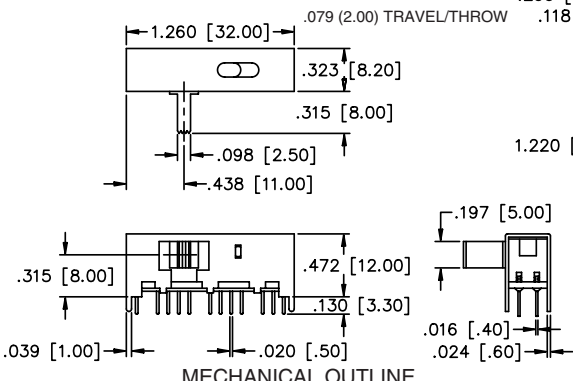
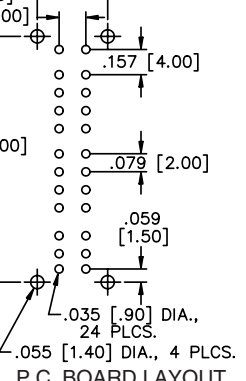

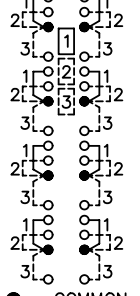
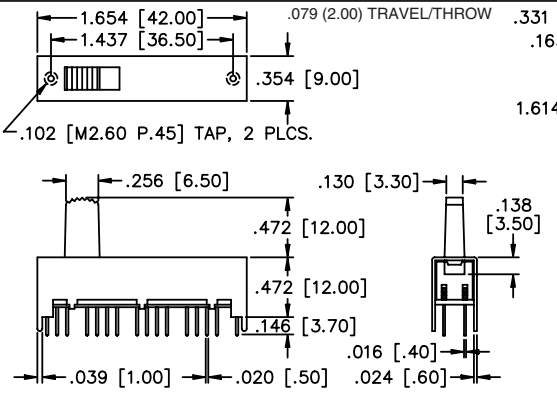
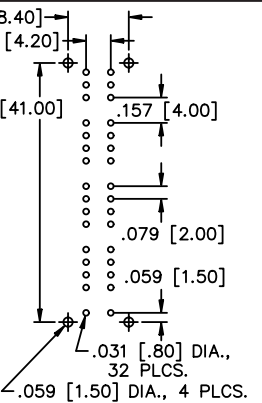

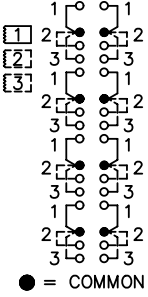
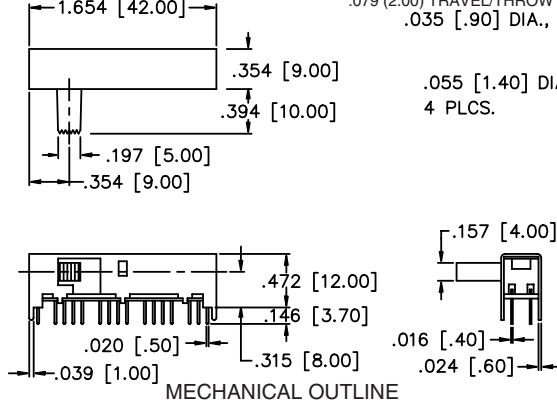
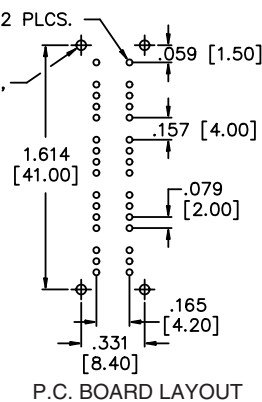
| | |
|--|---|
| <p>MODEL NO.</p> <p>M43R</p> | <p>4P3T</p>  <p>● = COMMON</p>  <p>MECHANICAL OUTLINE</p>  <p>P.C. BOARD LAYOUT</p> <p>RIGHT ANGLE ACTUATOR</p> <p>SCHMATIC</p> <p>MECHANICAL OUTLINE</p> <p>P.C. BOARD LAYOUT</p> |
| <p>MODEL NO.</p> <p>M62</p> | <p>6P2T</p>  <p>● = COMMON</p>  <p>MECHANICAL OUTLINE</p>  <p>P.C. BOARD LAYOUT</p> <p>VERTICAL ACTUATOR</p> <p>SCHMATIC</p> <p>MECHANICAL OUTLINE</p> <p>P.C. BOARD LAYOUT</p> |
| <p>MODEL NO.</p> <p>M62R</p> | <p>6P2T</p>  <p>● = COMMON</p>  <p>MECHANICAL OUTLINE</p>  <p>P.C. BOARD LAYOUT</p> <p>RIGHT ANGLE ACTUATOR</p> <p>SCHMATIC</p> <p>MECHANICAL OUTLINE</p> <p>P.C. BOARD LAYOUT</p> |
| <p>MODEL NO.</p> <p>M62A</p> | <p>6P2T</p>  <p>● = COMMON</p>  <p>MECHANICAL OUTLINE</p>  <p>P.C. BOARD LAYOUT</p> <p>VERTICAL ACTUATOR</p> <p>SCHMATIC</p> <p>MECHANICAL OUTLINE</p> <p>P.C. BOARD LAYOUT</p> |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

M Series

Standard Size Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| | | |
|---------------------------------|---|---|
| MODEL NO. M63 |  <p style="text-align: center;">VERTICAL ACTUATOR</p> | <p>6P3T</p>  <p>● = COMMON</p> <p>SCHMATIC</p>  <p style="text-align: center;">MECHANICAL OUTLINE</p>  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
| MODEL NO. M63R |  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <p>6P3T</p>  <p>● = COMMON</p> <p>SCHMATIC</p>  <p style="text-align: center;">MECHANICAL OUTLINE</p>  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
| MODEL NO. M83 |  <p style="text-align: center;">VERTICAL ACTUATOR</p> | <p>8P3T</p>  <p>● = COMMON</p> <p>SCHMATIC</p>  <p style="text-align: center;">MECHANICAL OUTLINE</p>  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |
| MODEL NO. M83R |  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <p>8P3T</p>  <p>● = COMMON</p> <p>SCHMATIC</p>  <p style="text-align: center;">MECHANICAL OUTLINE</p>  <p style="text-align: center;">P.C. BOARD LAYOUT</p> |

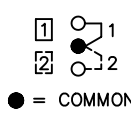
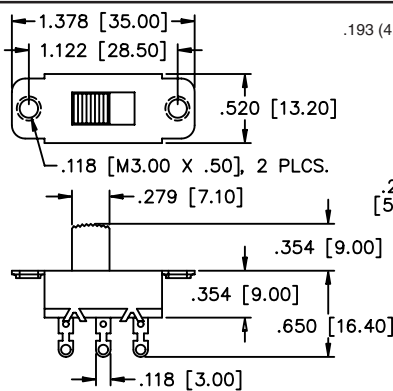
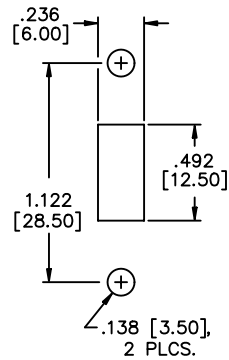
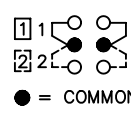
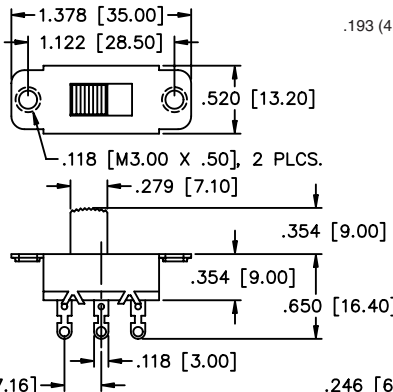
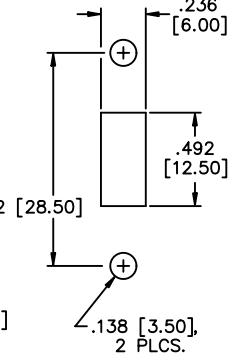
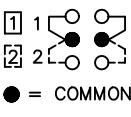
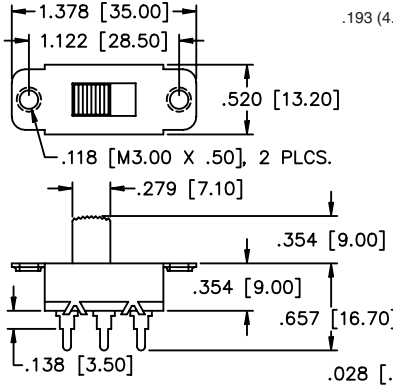
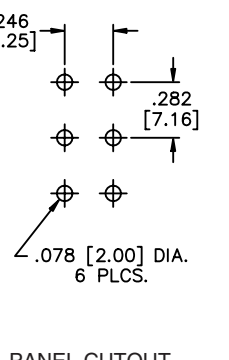
E

PM Series

Standard Size Slide Switches

| SPECIFICATIONS | FEATURES |
|---|--|
| <p>Contact rating: 6 Amps at 125 VAC, 3 Amps at 250 VAC</p> <p>Initial contact resistance: 30 milliohms max.</p> <p>Insulation resistance: 100 megohms min. at 500 VDC</p> <p>Dielectric strength: 1000 VAC for 1 minute (min.)</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -20°C to +60°C</p> <p>Actuation force: 500g ± 200g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Wash-through open frame construction. ● UL & CSA recognized. ● Threaded mounting holes standard - M3X0.5. ● Panel mounting. |
| MATERIALS | |
| <p>Contacts: Silver plated phosphor bronze</p> <p>Terminals: Tin plated brass</p> <p>Base: Phenolic laminated sheet</p> | <p>Actuator: Nylon, type 6/6</p> <p>Frame: Zinc plated steel</p> |

E

| | |
|---|---|
| <p style="background-color: #f2f2f2; margin: 0;">MODEL NO.</p> <p style="margin: 0;">PM13B012</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <p style="font-weight: bold; font-size: 1.2em;">1P2T</p>  <p>● = COMMON</p> </div> <div style="width: 55%;">  <p style="text-align: right; font-size: 0.8em;">.193 (4.90) TRAVEL/THROW</p> </div> <div style="width: 20%;">  </div> </div> <div style="display: flex; justify-content: space-around; font-size: 0.8em; margin-top: 5px;"> SCHMATIC MECHANICAL OUTLINE PANEL CUTOUT </div> |
| <p style="background-color: #f2f2f2; margin: 0;">MODEL NO.</p> <p style="margin: 0;">PM13B022</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <p style="font-weight: bold; font-size: 1.2em;">1P2T</p>  <p>● = COMMON</p> </div> <div style="width: 55%;">  <p style="text-align: right; font-size: 0.8em;">.193 (4.90) TRAVEL/THROW</p> </div> <div style="width: 20%;">  </div> </div> <div style="display: flex; justify-content: space-around; font-size: 0.8em; margin-top: 5px;"> SCHMATIC MECHANICAL OUTLINE P. C. BOARD LAYOUT </div> |
| <p style="background-color: #f2f2f2; margin: 0;">MODEL NO.</p> <p style="margin: 0;">PM13B022P</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <p style="font-weight: bold; font-size: 1.2em;">2P2T</p>  <p>● = COMMON</p> </div> <div style="width: 55%;">  <p style="text-align: right; font-size: 0.8em;">.193 (4.90) TRAVEL/THROW</p> </div> <div style="width: 20%;">  </div> </div> <div style="display: flex; justify-content: space-around; font-size: 0.8em; margin-top: 5px;"> SCHMATIC MECHANICAL OUTLINE PANEL CUTOUT </div> |


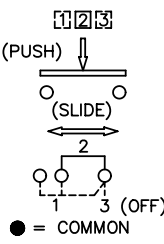
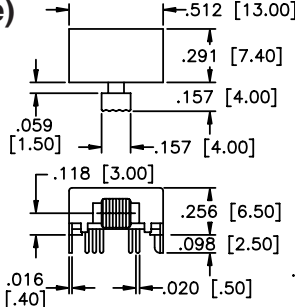
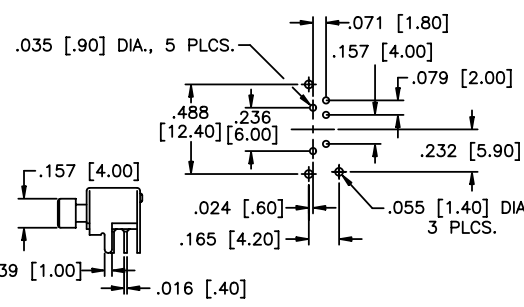

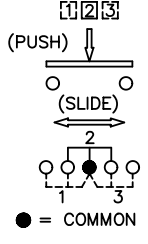
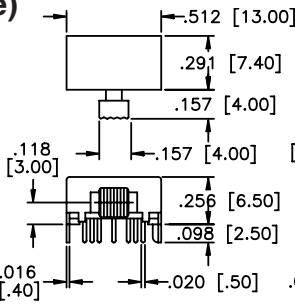
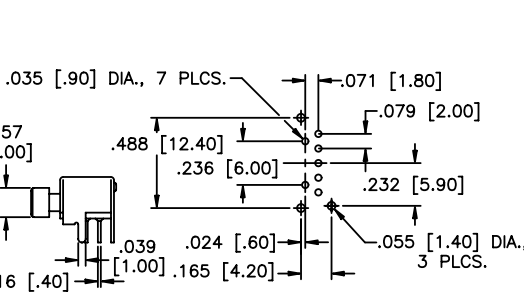

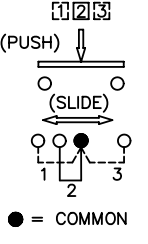
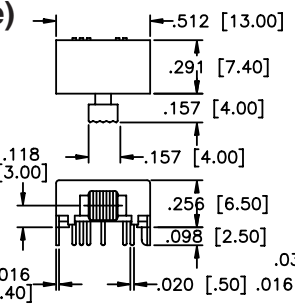
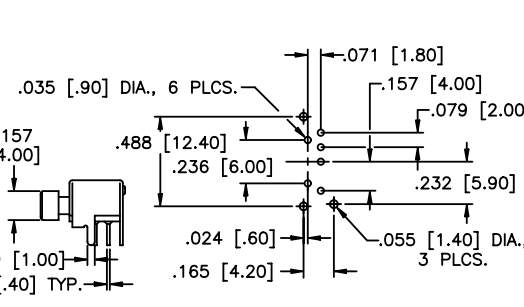
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MPS Series

Miniature Pushbutton Style Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| SPECIFICATIONS | FEATURES |
|--|---|
| <p>Contact ratings: Pushbutton contacts; 0.4 Volt-Amps max. at 20 V max. (AC or DC) Slide contacts; 300 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms max. at 250 VDC</p> <p>Dielectric strength: 250 volts RMS at sea level</p> <p>Electrical life: 100,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: Pushbutton; 200g ± 100g Slide; 100g to 450g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Washing not recommended</p> | <ul style="list-style-type: none"> ● Combination momentary pushbutton switch and slide switch mechanism. ● Bifurcated wiping contact design. ● Epoxy sealed terminals. ● Reinforcing mounting legs. |
| MATERIALS | |
| <p>Contacts & terminals: Gold plating for pushbutton. Silver plating for slide (see contact ratings).</p> <p>Housing: Nickel plated brass Actuator: Thermoplastic</p> <p>Base: Phenolic laminated sheet Terminal seal: Epoxy</p> | |

| MODEL NO. | 1P1T, (PB) 1P3T, (Slide) |
|---|---|
| <p style="color: red; font-weight: bold;">MPS101</p>  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">  <p style="text-align: center;">SCHEMATIC</p> </div> <div style="width: 30%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 45%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> |
| <p style="color: red; font-weight: bold;">MPS101A</p>  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">  <p style="text-align: center;">SCHEMATIC</p> </div> <div style="width: 30%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 45%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> |
| <p style="color: red; font-weight: bold;">MPS101B</p>  <p style="text-align: center;">RIGHT ANGLE ACTUATOR</p> | <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;">  <p style="text-align: center;">SCHEMATIC</p> </div> <div style="width: 30%;">  <p style="text-align: center;">MECHANICAL OUTLINE</p> </div> <div style="width: 45%;">  <p style="text-align: center;">P.C. BOARD LAYOUT</p> </div> </div> |




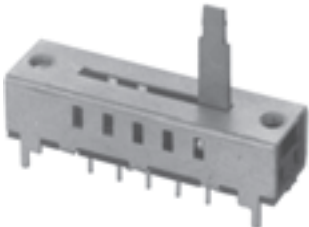
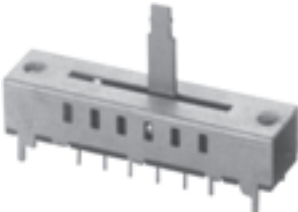
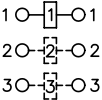
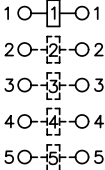
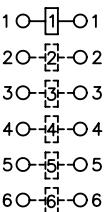
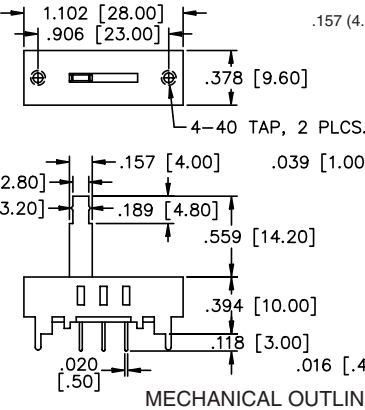
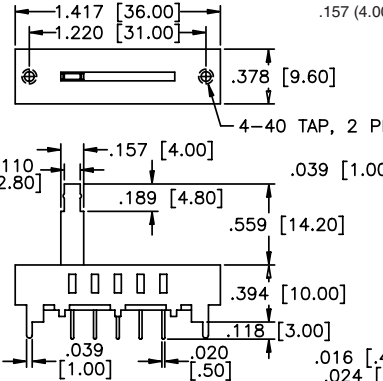
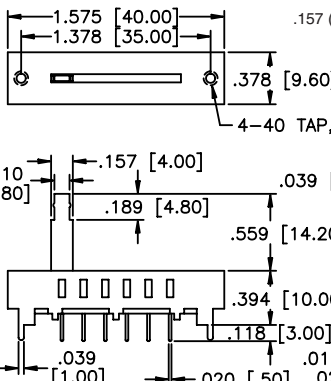
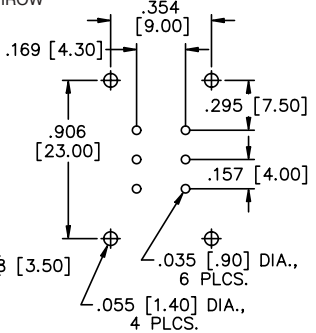
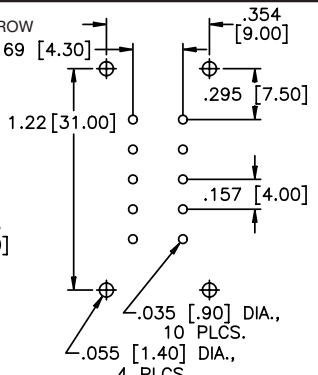
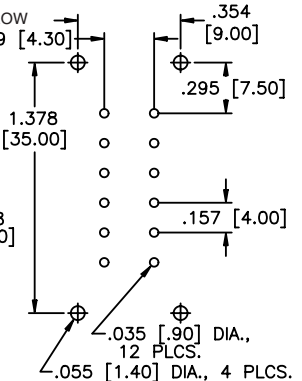
MSL Series

Single Pole Multi-Position Slide Switches

Note: up to 10 positions available - contact factory.
Minimum quantities may apply.
Optional color cap available for these models - see
Hardware section.

| SPECIFICATIONS | FEATURES |
|--|---|
| Contact rating: 200 mA at 125 VAC or 30 VDC Initial contact resistance: 30 milliohms max. Contact timing: Non-shorting Insulation resistance: 100 megohms max. at 500 VDC Dielectric strength: 500 volts RMS at sea level Electrical life: 10,000 cycles min. Operating temperature range: -10°C to +60°C Actuation force: 250g ± 100g Solder heat resistance: 260°C max. for 3 seconds Solvent washing permissible | <ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Epoxy sealed terminals. ● Wash-through open frame construction. ● Reinforcing mounting legs. ● Threaded mounting holes standard - 4-40NC-2B. |
| MATERIALS | Contacts & terminals: Silver plated Housing: Tin/lead plated steel Base: Phenolic laminated sheet Slider: High temperature thermoplastic Actuator: Steel Terminal seal: Epoxy |

E

| MODEL NO. | | | |
|---|---|--|---|
| MSL33 | | | |
|  | | | |
| VERTICAL ACTUATOR | | | |
| MODEL NO. | | | |
| MSL55 | | | |
|  | | | |
| VERTICAL ACTUATOR | | | |
| MODEL NO. | | | |
| MSL66 | | | |
|  | | | |
| VERTICAL ACTUATOR | | | |
| | 1P3T | 1P5T | 1P6T |
| |  1 1-1-1 2 2-2-2 3 3-3-3 |  1 1-1-1 2 2-2-2 3 3-3-3 4 4-4-4 5 5-5-5 |  1 1-1-1 2 2-2-2 3 3-3-3 4 4-4-4 5 5-5-5 6 6-6-6 |
| | SCHEMATIC | SCHEMATIC | SCHEMATIC |
| |  4-40 TAP, 2 PLCS. |  4-40 TAP, 2 PLCS. |  4-40 TAP, 2 PLCS. |
| | MECHANICAL OUTLINE | MECHANICAL OUTLINE | MECHANICAL OUTLINE |
| | | |  .157 (4.00) TRAVEL/THROW .354 [9.00] .169 [4.30] .295 [7.50] .157 [4.00] .035 [.90] DIA., 6 PLCS. .055 [1.40] DIA., 4 PLCS. |
| | | | P.C. BOARD LAYOUT |
| | | |  .157 (4.00) TRAVEL/THROW .354 [9.00] .169 [4.30] .295 [7.50] .157 [4.00] .035 [.90] DIA., 10 PLCS. .055 [1.40] DIA., 4 PLCS. |
| | | | P.C. BOARD LAYOUT |
| | | |  .157 (4.00) TRAVEL/THROW .354 [9.00] .169 [4.30] .295 [7.50] .157 [4.00] .035 [.90] DIA., 12 PLCS. .055 [1.40] DIA., 4 PLCS. |
| | | | P.C. BOARD LAYOUT |

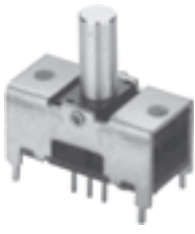
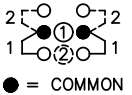
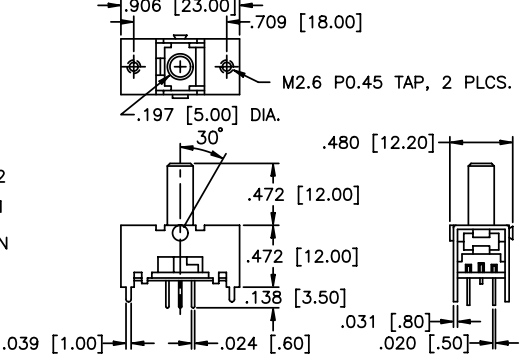
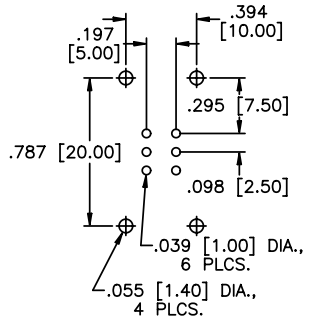

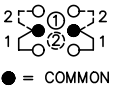
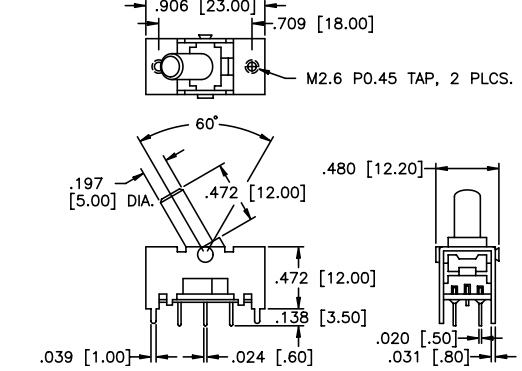
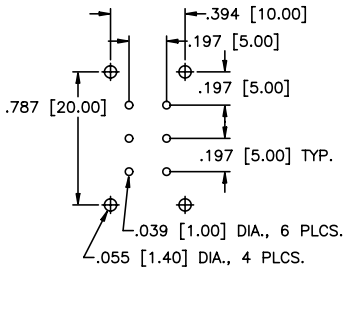

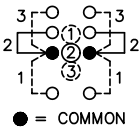
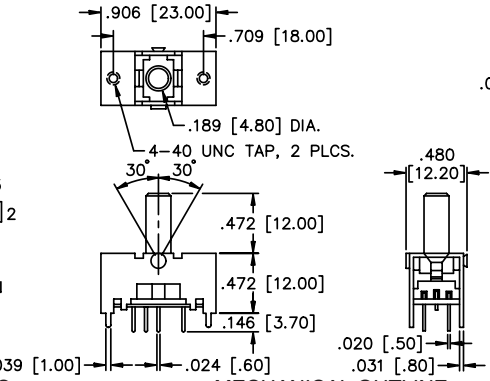
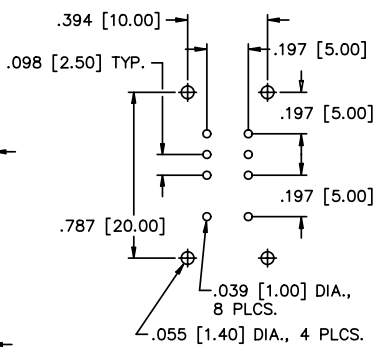
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MBT Series

Baton Toggle Style Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| SPECIFICATIONS | FEATURES |
|--|---|
| <p>Contact rating: 300 mA at 125 VAC or 30 VDC</p> <p>Initial contact resistance: 20 milliohms max.</p> <p>Insulation resistance: 100 megohms max. at 500 VDC</p> <p>Dielectric strength: 500 volts RMS at sea level</p> <p>Electrical life: 10,000 cycles min.</p> <p>Operating temperature range: -10°C to +60°C</p> <p>Actuation force: 400g ± 200g</p> <p>Solder heat resistance: 260°C max. for 3 seconds</p> <p>Solvent washing permissible</p> | <ul style="list-style-type: none"> ● Bifurcated wiping contact design. ● Epoxy sealed terminals. ● Wash-through open frame construction. ● Reinforcing mounting legs. ● Threaded mounting holes standard. |
| MATERIALS | |
| <p>Contacts & terminals: Silver plated</p> <p>Housing: Tin plated steel</p> <p>Actuator: Thermoplastic</p> <p>Base: Phenolic laminated sheet</p> | |
| | Terminal seal: Epoxy |

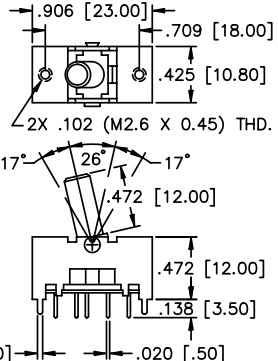
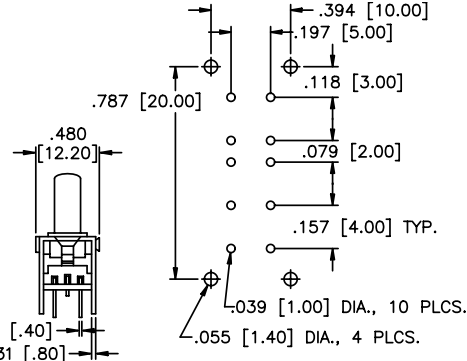
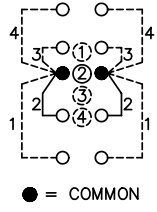
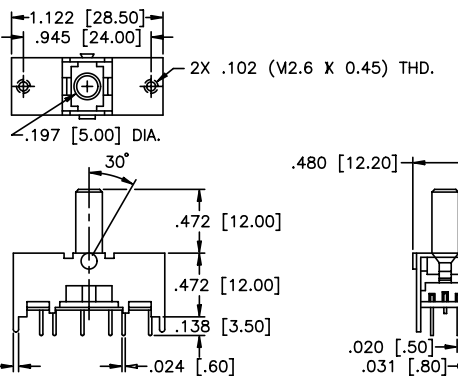
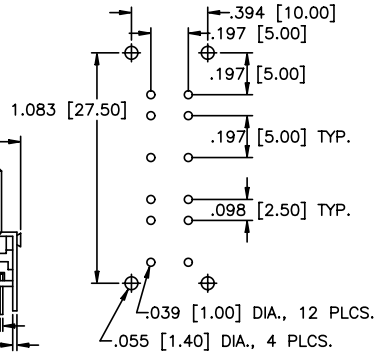
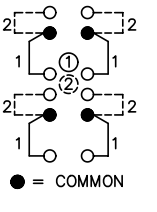
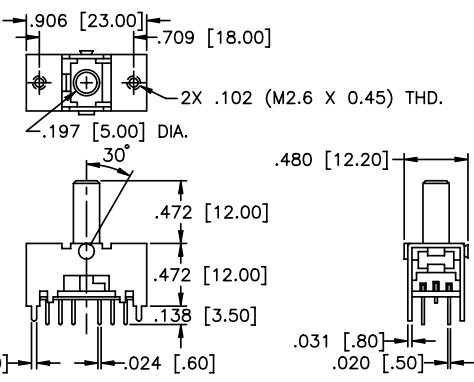
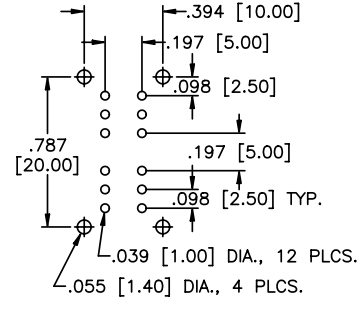
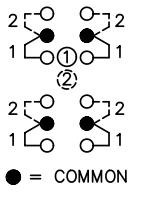
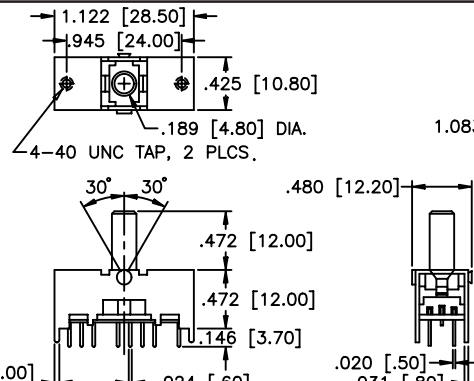
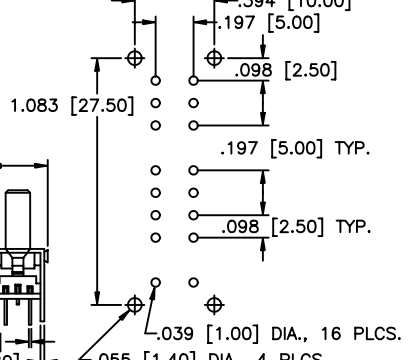
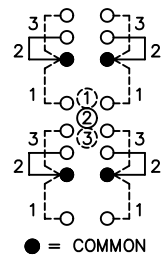
| MODEL NO. CONTACTS | | | |
|---|---|--|--|
| MBT22N | NON-SHORTING | 2P2T | |
|  |  <p>● = COMMON</p> |  <p>SCHMATIC MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| MBT22S | SHORTING | 2P2T | |
|  |  <p>● = COMMON</p> |  <p>SCHMATIC MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |
| MBT23N | NON-SHORTING | 2P3T | |
|  |  <p>● = COMMON</p> |  <p>SCHMATIC MECHANICAL OUTLINE</p> |  <p>P.C. BOARD LAYOUT</p> |



MBT Series

Baton Toggle Style Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| MODEL NO. | CONTACTS | | | | |
|---------------|--------------|---|--|--|-------------------|
| MBT24 | UNSPECIFIED | 2P4T |  <p style="font-size: small;">.906 [23.00] .709 [18.00] .425 [10.80] 2X .102 (M2.6 X 0.45) THD. 17° 26° 17° .472 [12.00] .472 [12.00] .138 [3.50] .039 [1.00] .020 [.50] .480 [12.20] .016 [.40] .031 [.80]</p> |  <p style="font-size: small;">.394 [10.00] .197 [5.00] .118 [3.00] .787 [20.00] .079 [2.00] .157 [4.00] TYP. .039 [1.00] DIA., 10 PLCS. .055 [1.40] DIA., 4 PLCS.</p> | |
| | |  <p style="font-size: small;">● = COMMON</p> | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MBT42N | NON-SHORTING | 4P2T |  <p style="font-size: small;">1.122 [28.50] .945 [24.00] 2X .102 (M2.6 X 0.45) THD. .197 [5.00] DIA. 30° .472 [12.00] .472 [12.00] .138 [3.50] .039 [1.00] .024 [.60] .480 [12.20] .020 [.50] .031 [.80]</p> |  <p style="font-size: small;">.394 [10.00] .197 [5.00] .197 [5.00] TYP. 1.083 [27.50] .197 [5.00] TYP. .098 [2.50] TYP. .039 [1.00] DIA., 12 PLCS. .055 [1.40] DIA., 4 PLCS.</p> | |
| | |  <p style="font-size: small;">● = COMMON</p> | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MBT42S | SHORTING | 4P2T |  <p style="font-size: small;">.906 [23.00] .709 [18.00] 2X .102 (M2.6 X 0.45) THD. .197 [5.00] DIA. 30° .472 [12.00] .472 [12.00] .138 [3.50] .039 [1.00] .024 [.60] .480 [12.20] .031 [.80] .020 [.50]</p> |  <p style="font-size: small;">.394 [10.00] .197 [5.00] .098 [2.50] .787 [20.00] .197 [5.00] .098 [2.50] TYP. .039 [1.00] DIA., 12 PLCS. .055 [1.40] DIA., 4 PLCS.</p> | |
| | |  <p style="font-size: small;">● = COMMON</p> | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |
| MBT43N | NON-SHORTING | 4P3T |  <p style="font-size: small;">1.122 [28.50] .945 [24.00] .425 [10.80] .189 [4.80] DIA. 4-40 UNC TAP, 2 PLCS. 30° 30° .472 [12.00] .472 [12.00] .146 [3.70] .039 [1.00] .024 [.60] .480 [12.20] .020 [.50] .031 [.80]</p> |  <p style="font-size: small;">.394 [10.00] .197 [5.00] .098 [2.50] 1.083 [27.50] .197 [5.00] TYP. .098 [2.50] TYP. .039 [1.00] DIA., 16 PLCS. .055 [1.40] DIA., 4 PLCS.</p> | |
| | |  <p style="font-size: small;">● = COMMON</p> | SCHEMATIC | MECHANICAL OUTLINE | P.C. BOARD LAYOUT |

MBT Series

Baton Toggle Style Slide Switches

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

| MODEL NO. | CONTACTS | | | |
|---|---|---|--|--|
| <p>MBT62N NON-SHORTING</p> <p>MBT62S SHORTING</p> | <p style="font-size: 24pt; font-weight: bold; text-align: center;">6P2T</p> <p>● = COMMON</p> | <p style="text-align: center;">MECHANICAL OUTLINE</p> | <p style="text-align: center;">P.C. BOARD LAYOUT</p> | |
| <p>MBT63 UNSPECIFIED</p> | <p style="font-size: 24pt; font-weight: bold; text-align: center;">6P3T</p> <p>● = COMMON</p> | <p style="text-align: center;">MECHANICAL OUTLINE</p> | <p style="text-align: center;">P.C. BOARD LAYOUT</p> | |

