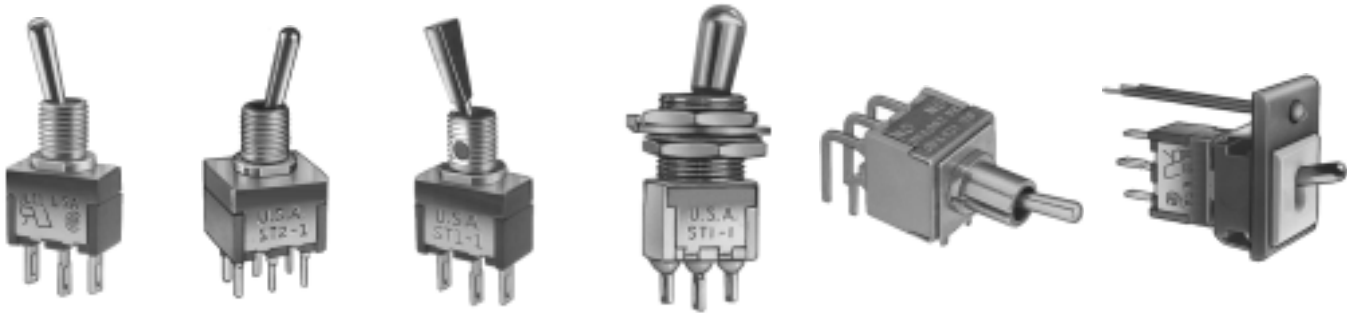


ST SERIES - MINIATURE TOGGLE SWITCHES



FEATURES

- Dry circuit through power ratings .
- Ultra-rugged construction SPDT & DPDT models with numerous options.
- Panel, panel & p.c. and p.c. mounting models, lighted and unlighted.

SPECIFICATIONS

Contact ratings (resistive loads): (Q) power models - coin silver: 6 Amps at 125 VAC, 3 Amps at 250 VAC or 7 Amps at 30 VDC.
(B) dry circuit models - gold over nickel over brass: 0.4 VA max. at 20 V max.
UL models - coin silver: 6 Amps at 125 VAC or 3 Amps at 250 VAC (75% power factor). UL file no. E66367. CSA models - coin silver: same ratings as UL models. CSA file no. LR54592-1.

Initial contact resistance: 3 milliohms max. at 3 VDC, 0.1 Amp.

Insulation resistance: Greater than 200,000 megohms between terminals & case ground.

Dielectric strength: Greater than 2000 VAC for 1 minute between terminals & case ground.

Electrical life (resistive loads): 100,000 cycles min. for ST1-1 & ST2-1. Other models, 40,000 cycles min.

Operating temperature range: -30°C to +85°C

MATERIALS

Contacts: Coin silver for power, UL & CSA models. Gold over nickel over brass for dry circuit models.

Actuator: Brass, bright nickel or chrome plated.

Bushing: Nickel plated brass

Strap: Stainless steel

Case: DAP, color blue

Terminal seal: Epoxy (optional)

Support bracket: Brass or steel, tin plated

Spring mounting bracket: Stainless steel

Bezel & bezel insert: Nylon. Available in black, red & white. Consult factory for other colors.

Hardware: See 'Miscellaneous' section.

LED: Intensity: 2.0 mcd at 10 mA. Forward voltage: 2.0V (3.0V max.). Max. continuous forward current: 15 mA for red, 30 mA for green & 20 mA for yellow. Red is standard. Yellow & green are optional. Specifications are subject to change without notice - consult factory.

AGENCY RECOGNITION



UL, & CSA. Marking: Switches ordered by UL model number are supplied with recognition marking. Switches ordered by UL model no. and with '/CSA' added at end of model no. are supplied with both recognitions marked.

ABOUT THIS SERIES

The material in this series is organized in the following sequence:

- Completely specified switch models
- Miscellaneous
- 'build your own switch' order format
- Option drawings & information
- Panel cut-outs

ST SERIES - MINIATURE TOGGLE SWITCHES

Solder lug terminals - panel mounting

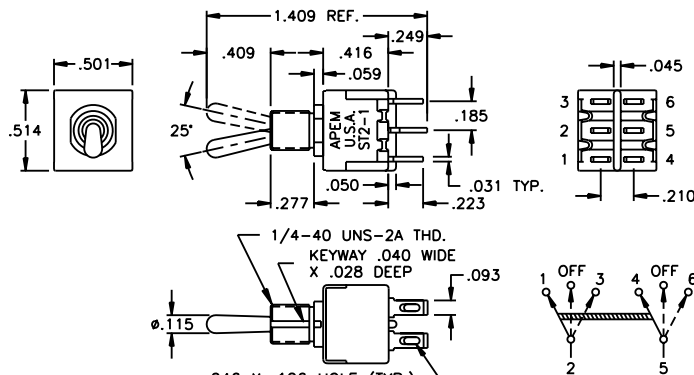
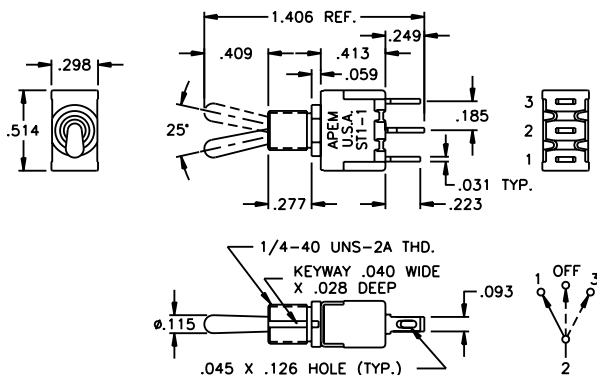
SINGLE POLE



DOUBLE POLE



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|--------------|------------------------------|------|------|
| Sing'l pole | ST1-1KMZQ | UL11KMZQ | ON | NONE | ON |
| | ST1-2KMZQ | UL12KMZQ | ON | OFF | ON |
| | ST1-4KMZQ | UL14KMZQ | ON | OFF | MOM |
| Double pole | ST2-1KMZQ | UL21KMZQ | ON | NONE | ON |
| | ST2-3KMZQ | UL23KMZQ | ON | OFF | ON |
| | ST2-4KMZQ | UL24KMZQ | ON | OFF | MOM |
| | ST2-6KMZQ | UL26KMZQ | ON | ON | ON |
| | ST2-7KMZQ | UL27KMZQ | ON | ON | MOM |
| | ST2-8KMZQ | UL28KMZQ | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, | 1-2, | 2-3, |
| | | | 4-5 | 5-6 | 5-6 |



SINGLE POLE

Terminal numbers for reference only

DOUBLE POLE

Straight p.c. terminals - panel mounting

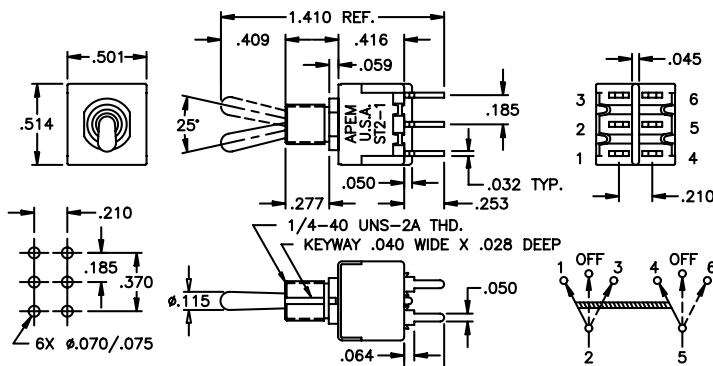
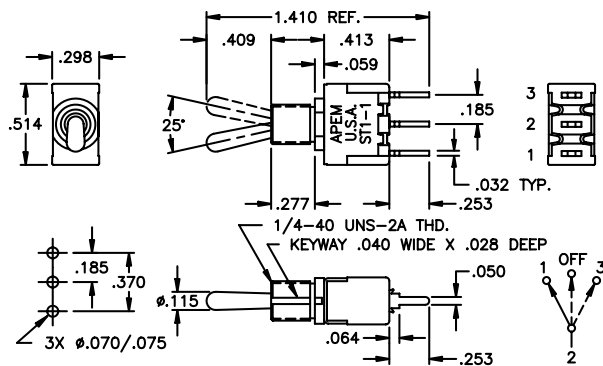
SINGLE POLE



DOUBLE POLE



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|--------------|------------------------------|------|------|
| Sing'l pole | ST1-1KMCB | UL11KMCB | ON | NONE | ON |
| | ST1-2KMCB | UL12KMCB | ON | OFF | ON |
| | ST1-4KMCB | UL14KMCB | ON | OFF | MOM |
| Double pole | ST2-1KMCB | UL21KMCB | ON | NONE | ON |
| | ST2-2KMCB | UL22KMCB | ON | OFF | ON |
| | ST2-4KMCB | UL24KMCB | ON | OFF | MOM |
| | ST2-6KMCB | UL26KMCB | ON | ON | ON |
| | ST2-7KMCB | UL27KMCB | ON | ON | MOM |
| | ST2-8KMCB | UL28KMCB | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, | 1-2, | 2-3, |
| | | | 4-5 | 5-6 | 5-6 |



SINGLE POLE

Terminal numbers for reference only

DOUBLE POLE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ST SERIES - MINIATURE TOGGLE SWITCHES

Flatted actuator - panel mounting

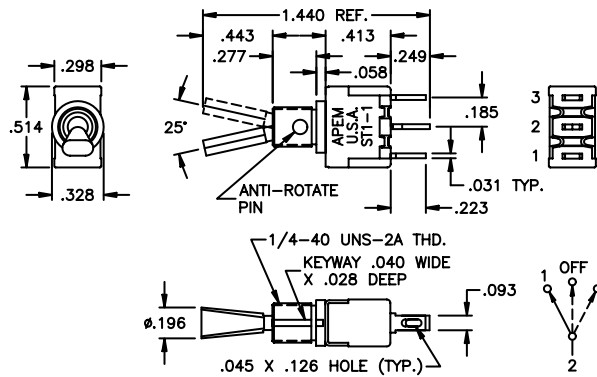
SINGLE POLE



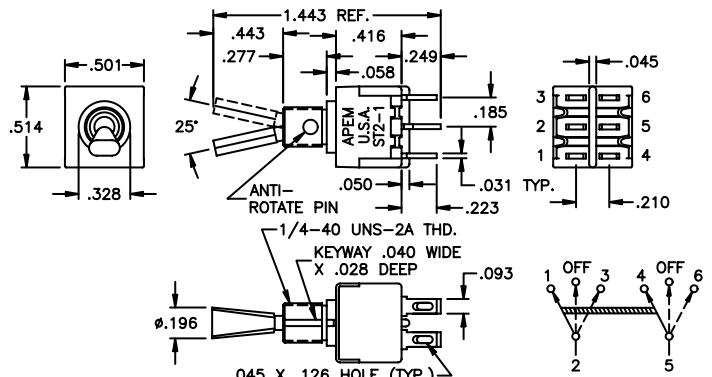
DOUBLE POLE



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|--------------|------------------------------|----------|----------|
| | | | | | |
| Sing'l pole | ST1-1F1MZQ | UL11F1MZQ | ON | NONE | ON |
| | ST1-2F1MZQ | UL12F1MZQ | ON | OFF | ON |
| | ST1-4F1MZQ | UL14F1MZQ | ON | OFF | MOM |
| Double pole | ST2-1F1MZQ | UL21F1MZQ | ON | NONE | ON |
| | ST2-2F1MZQ | UL22F1MZQ | ON | OFF | ON |
| | ST2-4F1MZQ | UL24F1MZQ | ON | OFF | MOM |
| | ST2-6F1MZQ | UL26F1MZQ | ON | ON | ON |
| | ST2-7F1MZQ | UL27F1MZQ | ON | ON | MOM |
| | ST2-8F1MZQ | UL28F1MZQ | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 |



Terminal numbers for reference only



SINGLE POLE

DOUBLE POLE

Splashproof bushing - panel mounting

An 'o'-ring placed internally between the actuator and the bushing, and a gasket placed externally between the bushing flange and mounting panel provides static protection from 3.3 ft. (1 meter) of water for 30 minutes.

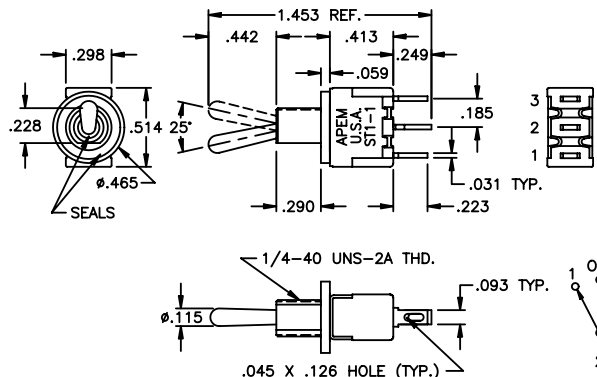
SINGLE POLE



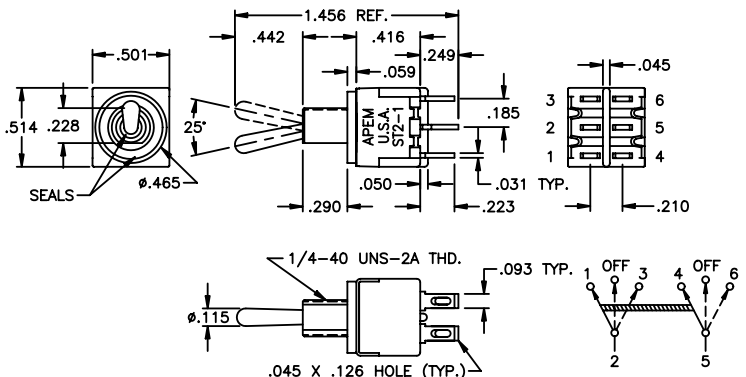
DOUBLE POLE



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|--------------|------------------------------|----------|----------|
| | | | | | |
| Sing'l pole | ST1-1KHZQ | UL11KHZQ | ON | NONE | ON |
| | ST1-2KHZQ | UL12KHZQ | ON | OFF | ON |
| | ST1-4KHZQ | UL14KHZQ | ON | OFF | MOM |
| Double pole | ST2-1KHZQ | UL21KHZQ | ON | NONE | ON |
| | ST2-2KHZQ | UL22KHZQ | ON | OFF | ON |
| | ST2-4KHZQ | UL24KHZQ | ON | OFF | MOM |
| | ST2-6KHZQ | UL26KHZQ | ON | ON | ON |
| | ST2-7KHZQ | UL27KHZQ | ON | ON | MOM |
| | ST2-8KHZQ | UL28KHZQ | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 |



Terminal numbers for reference only



SINGLE POLE

DOUBLE POLE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ST SERIES - MINIATURE TOGGLE SWITCHES

15/32" threaded bushing - panel mounting

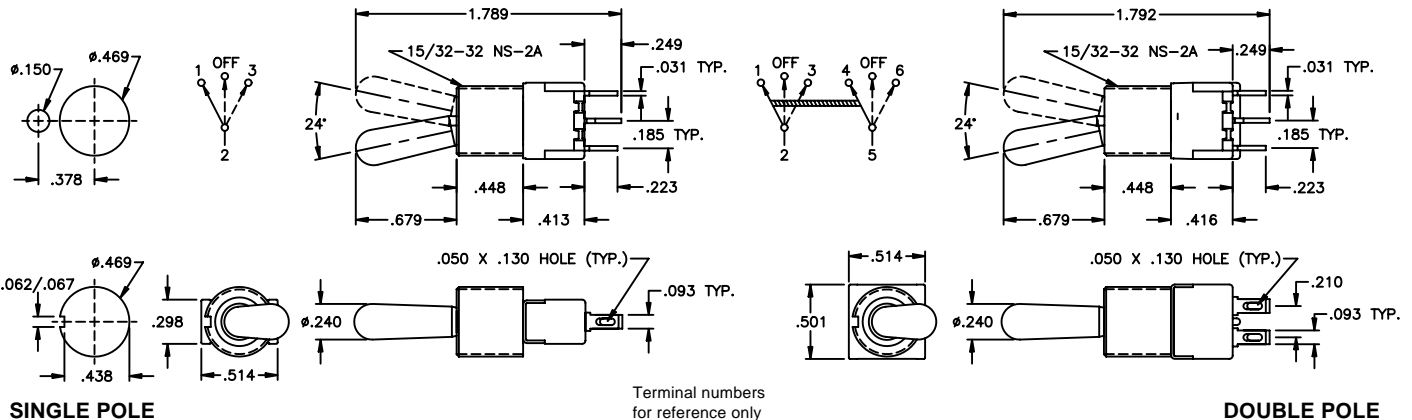
SINGLE POLE WITH T1 ACTUATOR



DOUBLE POLE WITH T2 ACTUATOR



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|--------------|------------------------------|----------|----------|
| Single pole | ST1-1T1M4ZQ | UL11T1M4ZQ | ON | NONE | ON |
| | ST1-2T1M4ZQ | UL12T1M4ZQ | ON | OFF | ON |
| | ST1-4T1M4ZQ | UL14T1M4ZQ | ON | OFF | MOM |
| Double pole | ST2-1T1M4ZQ | UL21T1M4ZQ | ON | NONE | ON |
| | ST2-2T1M4ZQ | UL22T1M4ZQ | ON | OFF | ON |
| | ST2-4T1M4ZQ | UL24T1M4ZQ | ON | OFF | MOM |
| | ST2-6T1M4ZQ | UL26T1M4ZQ | ON | ON | ON |
| | ST2-7T1M4ZQ | UL27T1M4ZQ | ON | ON | MOM |
| | ST2-8T1M4ZQ | UL28T1M4ZQ | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 |



Straight p.c. terminals with bracket - p.c. mounting

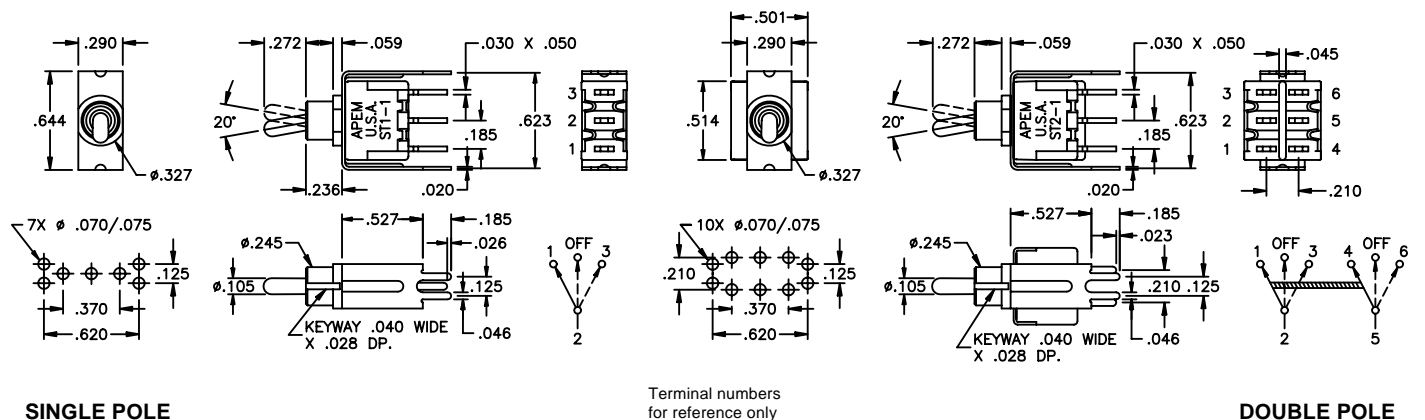
SINGLE POLE



DOUBLE POLE



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|--------------|------------------------------|----------|----------|
| Single pole | ST1-1L3S3V30B | UL11L3S3V30Q | ON | NONE | ON |
| | ST1-2L3S3V30B | UL12L3S3V30Q | ON | OFF | ON |
| | ST1-4L3S3V30B | UL14L3S3V30Q | ON | OFF | MOM |
| Double pole | ST2-1L3S3V30B | UL21L3S3V30Q | ON | NONE | ON |
| | ST2-2L3S3V30B | UL22L3S3V30Q | ON | OFF | ON |
| | ST2-4L3S3V30B | UL24L3S3V30Q | ON | OFF | MOM |
| | ST2-6L3S3V30B | UL26L3S3V30Q | ON | ON | ON |
| | ST2-7L3S3V30B | UL27L3S3V30Q | ON | ON | MOM |
| | ST2-8L3S3V30B | UL28L3S3V30Q | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 |



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ST SERIES - MINIATURE TOGGLE SWITCHES

Horizontal right angle p.c. terminals - p.c. mounting

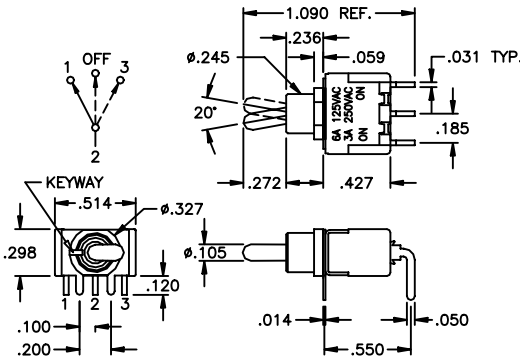
SINGLE POLE



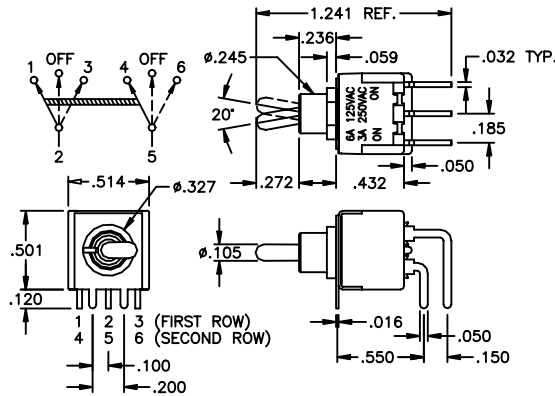
DOUBLE POLE



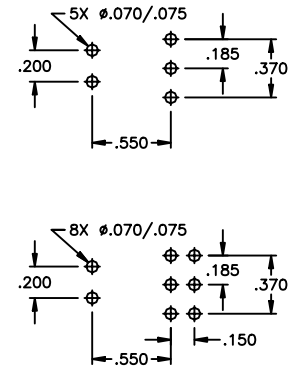
| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|--------------|------------------------------|------|------|
| Sing'l pole | ST1-1L3S3AB | UL11L3S3AQ | ON | NONE | ON |
| | ST1-2L3S3AB | UL12L3S3AQ | ON | OFF | ON |
| | ST1-4L3S3AB | UL14L3S3AQ | ON | OFF | MOM |
| Double pole | ST2-1L3S3AB | UL21L3S3AQ | ON | NONE | ON |
| | ST2-2L3S3AB | UL22L3S3AQ | ON | OFF | ON |
| | ST2-4L3S3AB | UL24L3S3AQ | ON | OFF | MOM |
| | ST2-6L3S3AB | UL26L3S3AQ | ON | ON | ON |
| | ST2-7L3S3AB | UL27L3S3AQ | ON | ON | MOM |
| | ST2-8L3S3AB | UL28L3S3AQ | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, | 1-2, | 2-3, |
| | | | 4-5 | 5-6 | 5-6 |



SINGLE POLE



Terminal numbers for reference only



DOUBLE POLE

Vertical right angle p.c. terminals - p.c. mounting

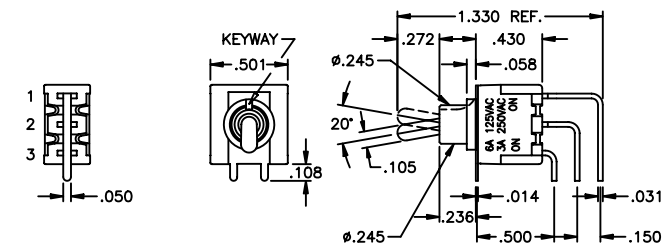
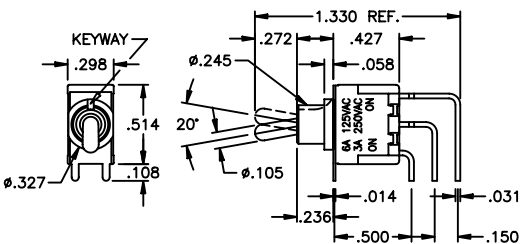
SINGLE POLE



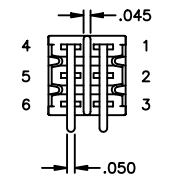
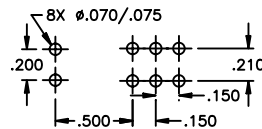
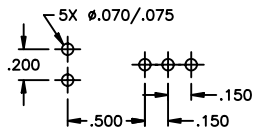
DOUBLE POLE



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|--------------|------------------------------|------|------|
| Sing'l pole | ST1-1L3S3V-1B | UL11L3S3V-1Q | ON | NONE | ON |
| | ST1-2L3S3V-1B | UL12L3S3V-1Q | ON | OFF | ON |
| | ST1-4L3S3V-1B | UL14L3S3V-1Q | ON | OFF | MOM |
| Double pole | ST2-1L3S3V-1B | UL21L3S3V-1Q | ON | NONE | ON |
| | ST2-2L3S3V-1B | UL22L3S3V-1Q | ON | OFF | ON |
| | ST2-4L3S3V-1B | UL24L3S3V-1Q | ON | OFF | MOM |
| | ST2-6L3S3V-1B | UL26L3S3V-1Q | ON | ON | ON |
| | ST2-7L3S3V-1B | UL27L3S3V-1Q | ON | ON | MOM |
| | ST2-8L3S3V-1B | UL28L3S3V-1Q | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, | 1-2, | 2-3, |
| | | | 4-5 | 5-6 | 5-6 |



Terminal numbers for reference only



SINGLE POLE

DOUBLE POLE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ST SERIES - MINIATURE TOGGLE SWITCHES

Snap-in bezel with outboard LED

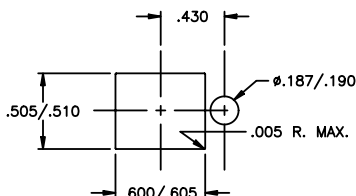
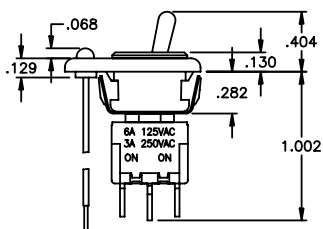
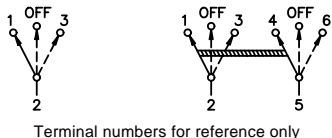
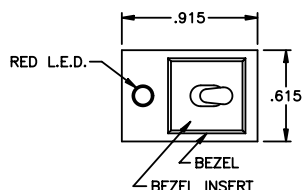
PATENT NO.
Des. 282,524

UL11KMZQJ6128



| POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|---------------|------------------------------|----------|----------|
| | | ON | NONE | ON |
| ST1-1KMZQJ6122 | UL11KMZQJ6122 | ON | NONE | ON |
| ST1-2KMZQJ6122 | UL12KMZQJ6122 | ON | OFF | ON |
| ST1-4KMZQJ6122 | UL14KMZQJ6122 | ON | OFF | MOM |
| ST2-1KMZQJ6122 | UL21KMZQJ6122 | ON | NONE | ON |
| ST2-2KMZQJ6122 | UL22KMZQJ6122 | ON | OFF | ON |
| ST2-4KMZQJ6122 | UL24KMZQJ6122 | ON | OFF | MOM |
| ST2-6KMZQJ6122 | UL26KMZQJ6122 | ON | ON | ON |
| ST2-7KMZQJ6122 | UL27KMZQJ6122 | ON | ON | MOM |
| ST2-8KMZQJ6122 | UL28KMZQJ6122 | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 |

Above models have black bezel and insert.



Panel thickness range .047" to .125".

Snap-in bezel with 0, 1 or 2 inboard LEDs

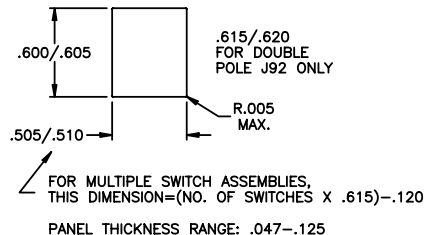
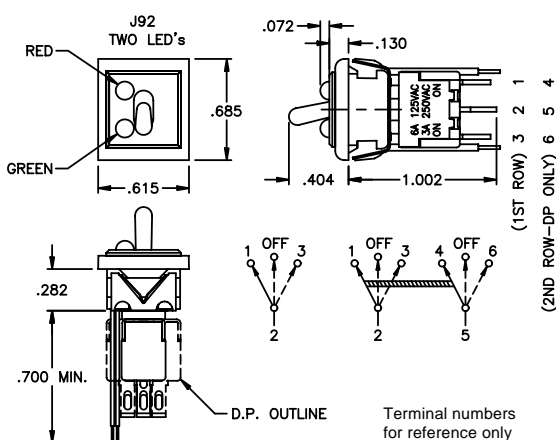
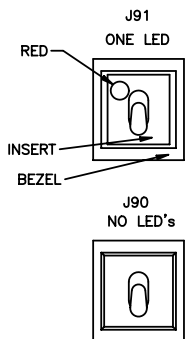
PATENT NO.
Des. 282,524

ST1-1KMZQJ9128



| POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|---------------|------------------------------|----------|----------|
| | | ON | NONE | ON |
| ST1-1KMZQJ9122 | UL11KMZQJ9122 | ON | NONE | ON |
| ST1-2KMZQJ9122 | UL12KMZQJ9122 | ON | OFF | ON |
| ST1-4KMZQJ9122 | UL14KMZQJ9122 | ON | OFF | MOM |
| ST2-1KMZQJ9122 | UL21KMZQJ9122 | ON | NONE | ON |
| ST2-2KMZQJ9122 | UL22KMZQJ9122 | ON | OFF | ON |
| ST2-4KMZQJ9122 | UL24KMZQJ9122 | ON | OFF | MOM |
| ST2-6KMZQJ9122 | UL26KMZQJ9122 | ON | ON | ON |
| ST2-7KMZQJ9122 | UL27KMZQJ9122 | ON | ON | MOM |
| ST2-8KMZQJ9122 | UL28KMZQJ9122 | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 |

Above models have black bezel and insert.



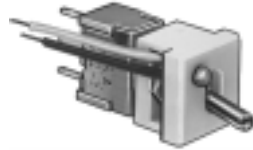
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ST SERIES - MINIATURE TOGGLE SWITCHES

Bezel for p.c. mounted switches with 0, 1 or 2 LEDs

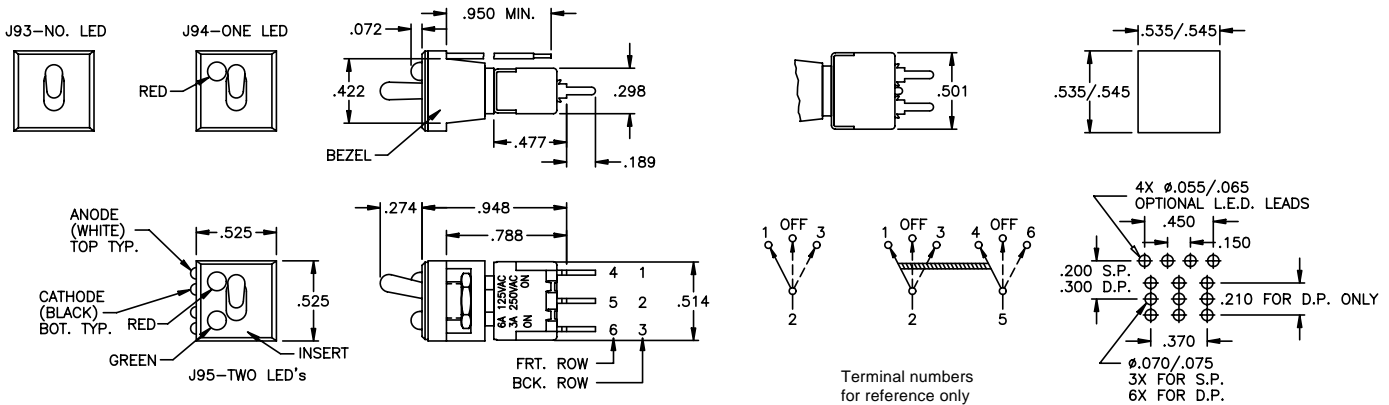
PATENT NO.
Des. 282,524

ST1-1KMCBJ9488



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|---------------|------------------------------|----------|----------|
| | | | | | |
| Sing'l pole | ST1-1KMCBJ9422 | UL11KMCQJ9422 | ON | NONE | ON |
| | ST1-2KMCBJ9422 | UL12KMCQJ9422 | ON | OFF | ON |
| | ST1-4KMCBJ9422 | UL14KMCQJ9422 | ON | OFF | MOM |
| Double pole | ST2-1KMCBJ9422 | UL21KMCQJ9422 | ON | NONE | ON |
| | ST2-2KMCBJ9422 | UL22KMCQJ9422 | ON | OFF | ON |
| | ST2-4KMCBJ9422 | UL24KMCQJ9422 | ON | OFF | MOM |
| | ST2-6KMCBJ9422 | UL26KMCQJ9422 | ON | ON | ON |
| | ST2-7KMCBJ9422 | UL27KMCQJ9422 | ON | ON | MOM |
| | ST2-8KMCBJ9422 | UL28KMCQJ9422 | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 |

Above models have black bezel and insert.



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Bezel for p.c. mounted switches with 0, 1 or 2 LEDs

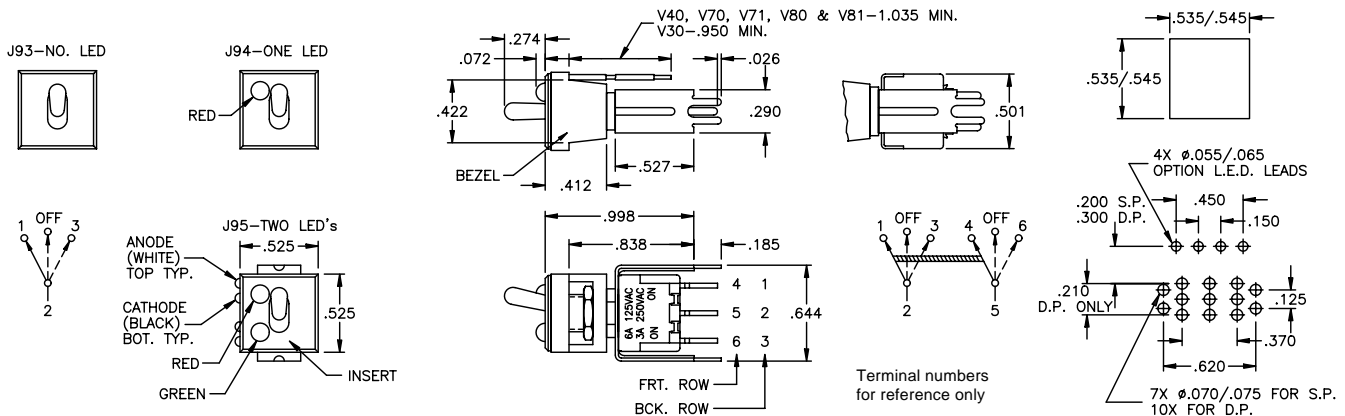
PATENT NO.
Des. 282,524

ST1-1KMV30QJ9488



| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side | | |
|-----------------------------------|----------------------|-----------------|------------------------------|----------|----------|
| | | | | | |
| Sing'l pole | ST1-1KMV30BJ9422 | UL11KMV30QJ9422 | ON | NONE | ON |
| | ST1-2KMV30BJ9422 | UL12KMV30QJ9422 | ON | OFF | ON |
| | ST1-4KMV30BJ9422 | UL14KMV30QJ9422 | ON | OFF | MOM |
| Double pole | ST2-1KMV30BJ9422 | UL21KMV30QJ9422 | ON | NONE | ON |
| | ST2-2KMV30BJ9422 | UL22KMV30QJ9422 | ON | OFF | ON |
| | ST2-4KMV30BJ9422 | UL24KMV30QJ9422 | ON | OFF | MOM |
| | ST2-6KMV30BJ9422 | UL26KMV30QJ9422 | ON | ON | ON |
| | ST2-7KMV30BJ9422 | UL27KMV30QJ9422 | ON | ON | MOM |
| | ST2-8KMV30BJ9422 | UL28KMV30QJ9422 | MOM | ON | MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 |

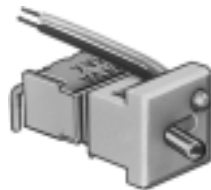
Above models have black bezel and insert.



ST SERIES - MINIATURE TOGGLE SWITCHES

Bezel for right angle p.c. mtd. switches with 0, 1 or 2 LEDs

PATENT NO.
Des. 282,524



ST1-1KMA-1BJ9488

| Poles | Option | Dim. A | Dim. B |
|-------|--------|--------|-----------|
| SP | A | .148 | .045 max. |
| SP | A-1 | .164 | .095 max. |
| DP | A | .250 | .300 max. |
| DP | A-1 | .266 | .350 max. |

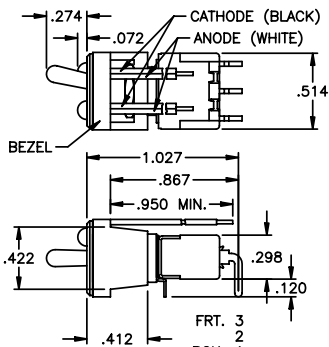
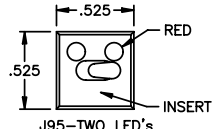
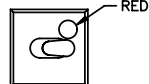
| | POWER CKT. MODEL NO. | | UL MODEL NO. | | | USA marking on opposite side | | |
|-----------------------------------|----------------------|-----------------|-----------------|--|----------|------------------------------|----------|-----|
| | | | | | | ON | NONE | ON |
| Sing'l pole | ST1-1KMA-1BJ9422 | | UL11KMA-1QJ9422 | | | ON | NONE | ON |
| | ST1-2KMA-1BJ9422 | | UL12KMA-1QJ9422 | | | ON | OFF | ON |
| | ST1-4KMA-1BJ9422 | | UL14KMA-1QJ9422 | | | ON | OFF | MOM |
| Double pole | ST2-1KMA-1BJ9422 | | UL21KMA-1QJ9422 | | | ON | NONE | ON |
| | ST2-2KMA-1BJ9422 | | UL22KMA-1QJ9422 | | | ON | OFF | ON |
| | ST2-4KMA-1BJ9422 | | UL24KMA-1QJ9422 | | | ON | OFF | MOM |
| | ST2-6KMA-1BJ9422 | | UL26KMA-1QJ9422 | | | ON | ON | ON |
| | ST2-7KMA-1BJ9422 | | UL27KMA-1QJ9422 | | | ON | ON | MOM |
| ST2-8KMA-1BJ9422 | | UL28KMA-1QJ9422 | | | MOM | ON | MOM | |
| Terminals connected (-6, -7 & -8) | | | | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 | |

Above models have black bezel and insert.

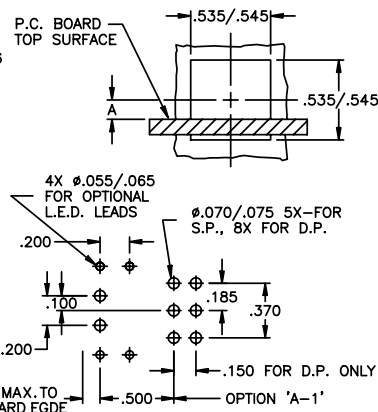
J93-NO. LED



J94-ONE LED



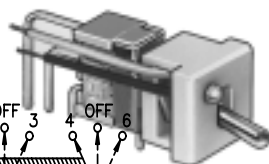
Terminal numbers for reference only



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Bezel for right angle p.c. mtd. switches with 0, 1 or 2 LEDs

PATENT NO.
Des. 282,524

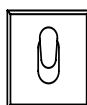


ST1-1KMV-1BJ9488

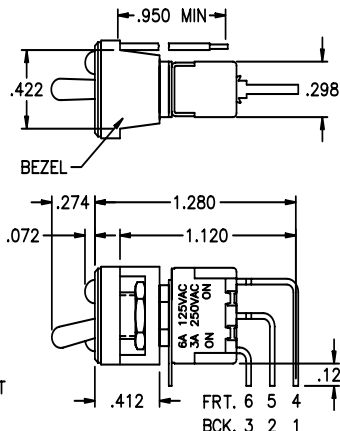
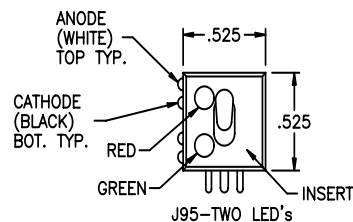
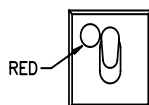
| | POWER CKT. MODEL NO. | | UL MODEL NO. | | | USA marking on opposite side | | |
|-----------------------------------|----------------------|-----------------|-----------------|--|----------|------------------------------|----------|-----|
| | | | | | | ON | NONE | ON |
| Sing'l pole | ST1-1KMV-1BJ9422 | | UL11KMV-1QJ9422 | | | ON | NONE | ON |
| | ST1-2KMV-1BJ9422 | | UL12KMV-1QJ9422 | | | ON | OFF | ON |
| | ST1-4KMV-1BJ9422 | | UL14KMV-1QJ9422 | | | ON | OFF | MOM |
| Double pole | ST2-1KMV-1BJ9422 | | UL21KMV-1QJ9422 | | | ON | NONE | ON |
| | ST2-2KMV-1BJ9422 | | UL22KMV-1QJ9422 | | | ON | OFF | ON |
| | ST2-4KMV-1BJ9422 | | UL24KMV-1QJ9422 | | | ON | OFF | MOM |
| | ST2-6KMV-1BJ9422 | | UL26KMV-1QJ9422 | | | ON | ON | ON |
| | ST2-7KMV-1BJ9422 | | UL27KMV-1QJ9422 | | | ON | ON | MOM |
| ST2-8KMV-1BJ9422 | | UL28KMV-1QJ9422 | | | MOM | ON | MOM | |
| Terminals connected (-6, -7 & -8) | | | | | 1-2, 4-5 | 1-2, 5-6 | 2-3, 5-6 | |

Above models have black bezel and insert.

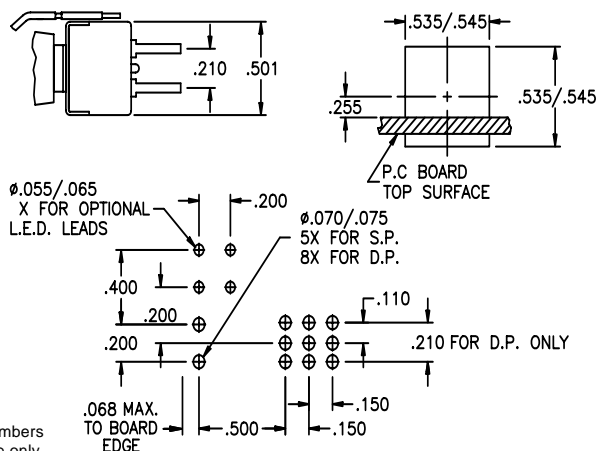
J93-NO. LED



J94-ONE LED



Terminal numbers for reference only



ST SERIES - MINIATURE TOGGLE SWITCHES

Snap-in bezel for round hole mounting with 0, 1 or 2 LEDs
Self keying against rotation

PATENT NO.
Des. 282,524

ST1-1KMZQJ9788



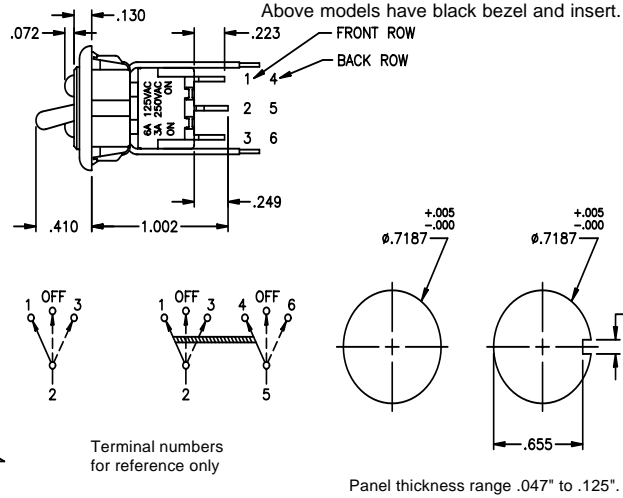
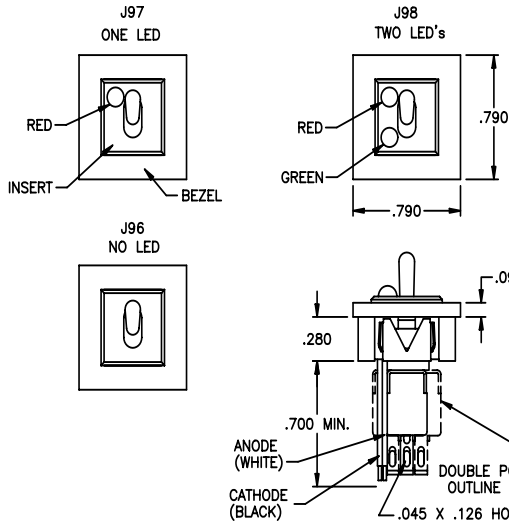
POWER CKT.
MODEL NO.

UL MODEL NO.

USA marking on opposite side

| | POWER CKT. MODEL NO. | UL MODEL NO. | USA marking on opposite side |
|-----------------------------------|----------------------|---------------|------------------------------|
| Sing'l pole | ST1-1KMZQJ9722 | UL11KMZQJ9722 | ON NONE ON |
| | ST1-2KMZQJ9722 | UL12KMZQJ9722 | ON OFF ON |
| | ST1-4KMZQJ9722 | UL14KMZQJ9722 | ON OFF MOM |
| Double pole | ST2-1KMZQJ9722 | UL21KMZQJ9722 | ON NONE ON |
| | ST2-2KMZQJ9722 | UL22KMZQJ9722 | ON OFF ON |
| | ST2-4KMZQJ9722 | UL24KMZQJ9722 | ON OFF MOM |
| | ST2-6KMZQJ9722 | UL26KMZQJ9722 | ON ON ON |
| | ST2-7KMZQJ9722 | UL27KMZQJ9722 | ON ON MOM |
| | ST2-8KMZQJ9722 | UL28KMZQJ9722 | MOM ON MOM |
| Terminals connected (-6, -7 & -8) | | | 1-2, 1-2, 2-3, 4-5 5-6 5-6 |

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

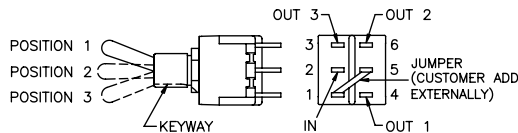


MISCELLANEOUS

ST2-6, -7 & -8 SWITCHES

May be wired as a single pole 3 position switch; add external jumper between terminals 1 & 5, then -

Common terminal is 2
Output 1 - terminal 4
Output 2 - terminal 6
Output 3 - terminal 3



HARDWARE SUPPLIED

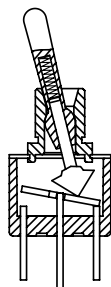
(See Hardware section of catalog)
Switches with M and Y option bushings are supplied with (2) A112 Hex Nuts, (1) A115 Lockwasher and (1) A107 Anti-rotate Ring.
Switches with D bushings are supplied with (2) A112 Hex Nuts and (1) A115 Lockwasher.
Switches with H option bushing are supplied with (1) A112 Hex Nut, (1) A115 Lockwasher and (1) A257 Gasket.
Switches with M4 and M5 bushings are supplied with (2) A465 Hex Nuts, (1) A466 Lockwasher and (1) A482 Anti-rotate Ring.
Note: Switches with non-threaded bushings or bezels supplied without hardware.

QUICK-CONNECT RECEPTACLES that are compatible with solder lug or p.c. terminals are commercially available - consult factory.

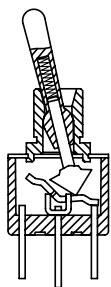
FRONT PANEL SEAL: Silicone rubber boots for front panel sealing of the switch against high pressure water or other contaminants are available - see Waterproof switch sealing boots section of catalog.

TYPICAL SWITCH CROSS SECTIONS

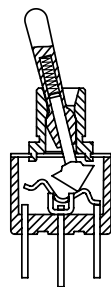
Note: Contacts make opposite actuator direction.



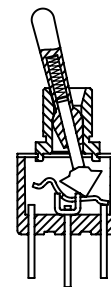
ON NONE ON



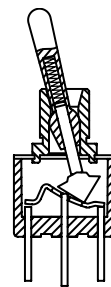
ON OFF ON



MOM OFF MOM



ON OFF MOM



ON NONE MOM

ST SERIES - MINIATURE TOGGLE SWITCHES

Additional ordering information: Commonly ordered models are shown on prior 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 with selections shown for **Model Structure**, then add **Options** selections for complete model number.

Allowable options are shown below each respective box with brief description - see option dwgs. & info. following.

Note: 'NONE' indicates box may be left empty.

Model Structure:

| Series | Electrical functions | Actuators | Bushings | Terminations | Contact material |
|--------------------------------|---------------------------------------|---|--|--|---------------------------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Single pole: S T 1 - | 1 ON NONE ON 2 ON OFF ON | K Standard bat F 1 Flatted | M Standard 1/4" thd'd. D 'D' flat 1/4" thd'd. | Z Solder lug C Printed circuit | B Gold Q Coin silver |
| S.P. UL model: U L 1 | 4 ON OFF MOM Following for DP only | F 2 Long flatted F 3 Short flatted | H Splashproof 1/4" thd'd. Y Long 1/4" thd'd. | W Wirewrap W 1 Lg. wirewrap | G Gold/coin |
| Double pole: S T 2 - | 6 ON ON ON 7 ON ON MOM | L Long round L 1 Medium rnd. | S 2 Non-threaded S 3 Short non-thd'd. | W 3 Sht. wirewrap X Extra lg. wirewrap | N Economy gold |
| D.P. UL model: U L 2 | 8 MOM ON MOM | L 2 Short round L 3 Short round | M 4 15/32" thd'd. M 5 M4 with 'o'-ring | Horiz. right angle p.c. terminals: A A - 1 Vertical right angle p.c. terminals: V V - 1 V - 2 Straight p.c. terminals w/brkt.: V 3 0 V 4 0 | T Economy silver |

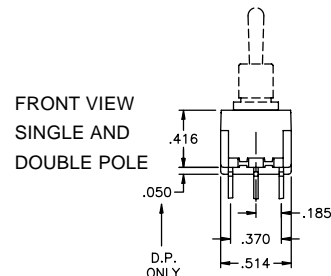
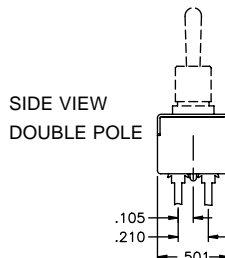
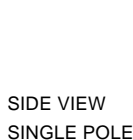
Note: When switch is ordered with a bezel, actuator selection may be **K, L, L1, or L2** and bushing must be **M** only.

Options:

| Sealing | Colored actuator* | Colored bushing* | Bezel & Insert | Bezel color | Insert color | Approvals |
|--------------------------|----------------------|----------------------|--|---------------------------------------|---------------------------------------|--------------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| (NONE) E Epoxy | (NONE) 2 Black | (NONE) 2 Black | (NONE) J 6 1 Snap-in w/LED J 9 0 Snap-in no LED J 9 1 Snap-in w/LED J 9 2 Snap-in w/2 LEDs J 9 3 p.c. no LED J 9 4 p.c. w/LED J 9 5 p.c. w/2 LEDs Self-keying round hole mt.: J 9 6 Snap-in no LED J 9 7 Snap-in w/LED J 9 8 Snap-in w/2 LEDs | (NONE) 2 Black 6 Red 8 White | (NONE) 2 Black 6 Red 8 White | (NONE) / C S A |

Example of completely specified model number:
UL15KMZQEJ9726/CSA

**SWITCH BODY
SIZES WITH
TERMINAL
LOCATION
DIMENSIONS**



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ST SERIES - MINIATURE TOGGLE SWITCHES

K

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

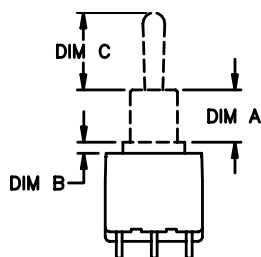
ACTUATOR OPTIONS

| | | | | |
|--------------------------------------|-------------------------------------|--------------------------------------|---|---|
| <p>L</p> <p>LONG ROUND</p> | <p>F1</p> <p>FLATTED</p> | <p>F2</p> <p>LONG FLATTED</p> | <p>F3</p> <p>SHORT FLATTED</p> | <p>K (STANDARD)</p> <p>ROUND</p> |
| <p>L1</p> <p>MEDIUM ROUND</p> | <p>L2</p> <p>SHORT ROUND</p> | <p>L3</p> <p>SHORT ROUND</p> | <p>T1 & T2 (FOR M4 & M5 BUSHINGS ONLY)</p> <p>LONG & SHORT ROUND</p> | <p>T3 & T4</p> <p>Same as T1 & T2 respectively except with positive internal keying and sideways support to provide more ruggedness in harsh applications.</p> <p>Available only with M4 bushing</p> |

BUSHING OPTIONS

| | | | | |
|--------------------------------------|--------------------------------------|--|--|--------------------------------------|
| <p>D</p> <p>THREADED</p> | <p>H</p> <p>SPLASHPROOF</p> | <p>SEALS</p> | <p>M (STANDARD)</p> <p>THREADED</p> | <p>Y</p> <p>LONG THREADED</p> |
| <p>S2</p> <p>NON THREADED</p> | <p>S3</p> <p>NON THREADED</p> | <p>M4 & M5</p> <p>THREADED</p> <p>'O' RING</p> <p>M5 FEATURES 'O'-RING FOR SPLASHPROOF APPLICATIONS</p> | | |

ACTUATOR & BUSHING COMPATIBILITY TABLE WITH DIMENSIONS FOR SELECTIONS



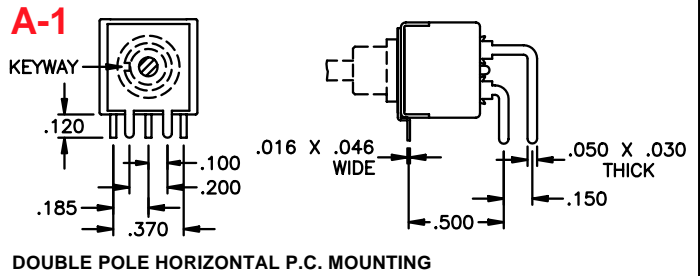
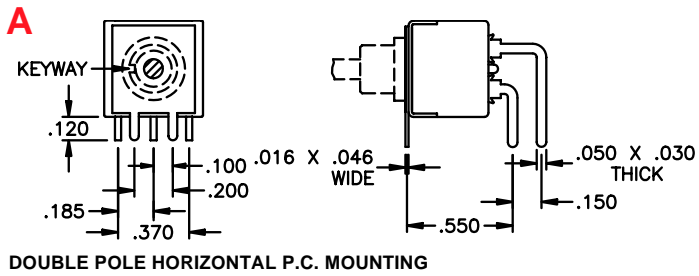
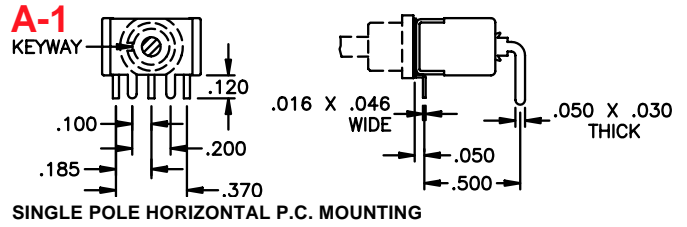
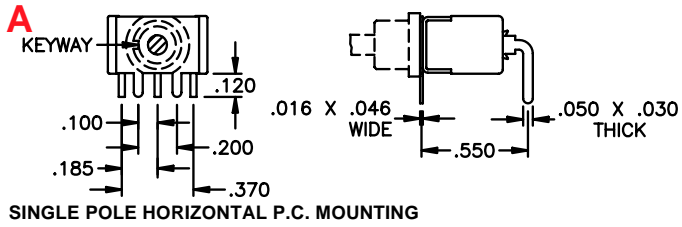
| Bushing Option | Bushing Dims. | | Actuator length dimension C | | | | | | | | | |
|----------------|---------------|-------|-----------------------------|------|------|------|------|------|------|------|------|------|
| | Dim A | Dim B | F1 | F2 | F3 | K | L | L1 | L2 | L3 | T1 | T2 |
| D | .277 | .060 | N/A | N/A | N/A | .410 | .840 | .640 | .270 | .170 | N/A | N/A |
| H | .290 | .060 | N/A | N/A | N/A | .410 | .840 | .640 | .270 | .170 | N/A | N/A |
| M | .277 | .060 | .450 | .650 | .250 | .410 | .840 | .640 | .270 | .170 | N/A | N/A |
| Y | .330 | .040 | N/A | N/A | N/A | .410 | .840 | .640 | .270 | .170 | N/A | N/A |
| S2 | .277 | .060 | .450 | .650 | .250 | .410 | .840 | .640 | .270 | .170 | N/A | N/A |
| S3 | .177 | .060 | N/A | N/A | N/A | .510 | .940 | .740 | .370 | .270 | N/A | N/A |
| M4 | .448 | - | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | .460 | .687 |
| M5 | .448 | - | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | .460 | .687 |

N/A - NOT AVAILABLE

CONSULT FACTORY FOR SPECIAL REQUIREMENTS

ST SERIES - MINIATURE TOGGLE SWITCHES

TERMINATION OPTIONS



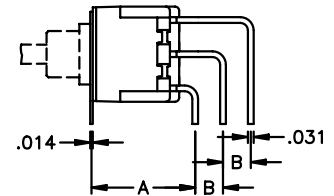
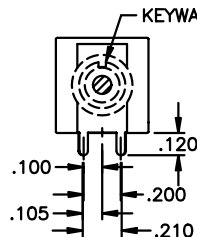
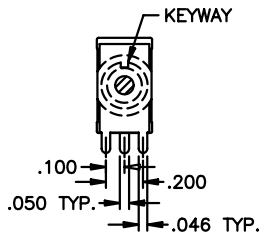
V, V-1 & V-2

FRONT VIEW SINGLE POLE

FRONT VIEW DOUBLE POLE

SIDE VIEW - SINGLE & DOUBLE POLE

| Option | Dim. A | Dim. B |
|--------|--------|--------|
| V | .550 | .150 |
| V-1 | .500 | .150 |
| V-2 | .500 | .100 |

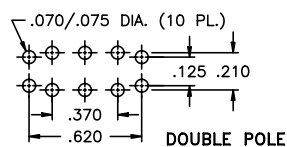
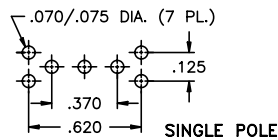


VERTICAL P.C. MOUNTING

V30 & V40

PANEL LAYOUT V30, V31, V40 & V41

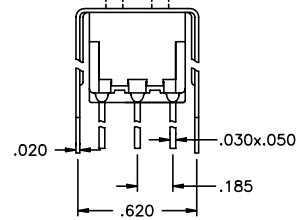
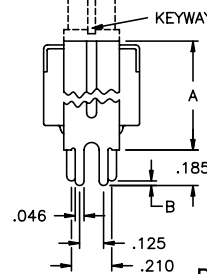
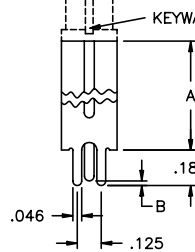
| Option | Dim. A | Dim. B |
|--------|--------|--------|
| V30 | .527 | .024 |
| V40 | .647 | .048 |



FRONT VIEW SINGLE POLE

FRONT VIEW DOUBLE POLE

SIDE VIEW - SINGLE AND DOUBLE POLE



PRINTED CIRCUIT MOUNTING

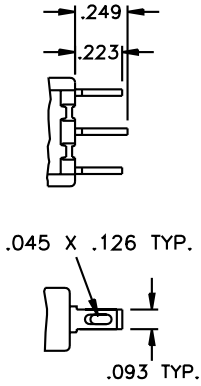
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ST SERIES - MINIATURE TOGGLE SWITCHES

K

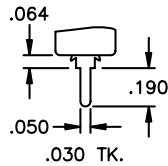
TERMINATION OPTIONS (CONT'D.)

Z



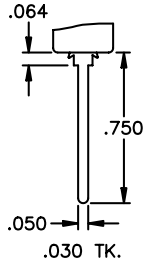
SOLDER LUG

C



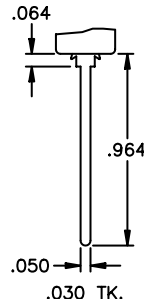
PRINTED CIRCUIT

W



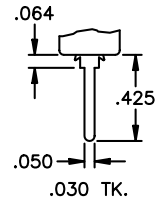
WIREWRAp

W1



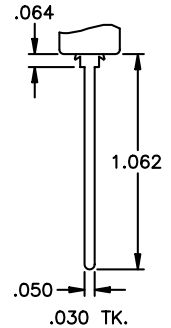
LONG WIREWRAp

W3



SHORT WIREWRAp

X



EXTRA LG. WIREWRAp

CONTACT MATERIAL OPTIONS

B

Dry circuit - gold over nickel over brass.
 RATING: 0.4 Volt-Amps (VA) max. at 20 V max.
 ELECTRIC LIFE: 100,000 cycles min. (ST1-1 & ST2-1 only - other models 40,000 cycles min.)

Q

Power circuit - coin silver.
 RATING: 6 Amps at 125 VAC, 3 Amps at 250 VAC or 7 Amps at 30 VDC (resistive loads).
 ELECTRIC LIFE: 100,000 cycles min. (ST1-1 & ST2-1 only - other models 40,000 cycles min.)

G

Dry circuit or power circuit - gold over nickel over coin silver.
 RATINGS & ELECTRIC LIFE: Same as B & Q above - i.e. - can be used in either dry circuit or power circuit, however once used in power circuit, switch cannot be re-used in dry circuit. This option satisfies those customers who have both dry circuit and power circuit requirements, but prefer to inventory only one switch for both.

N

Dry circuit - gold over nickel over brass. Note- less gold than B option.
 RATING: 0.4 Volt-Amps (VA) max. at 20 V max.
 ELECTRIC LIFE: 10,000 cycles min. at 13 cycles per minute.

T

Power circuit - Silver plate over brass.
 RATING: 3 Amps at 125 VAC or 1.5 Amps at 250 VAC (resistive loads).
 ELECTRIC LIFE: 10,000 cycles min. at 13 cycles per minute.

Solder dipped terminals and custom contact plating available - contact factory.

UL & CSA OPTIONS

UL

For power circuits - coin silver
 RATING: 6 Amps at 125 VAC or 3 Amps at 250 VAC (75% power factor).
 Underwriter Laboratories file no. E66367. To specify, order UL model no. Note - applicable only to terminations with coin silver contacts (Q or G options).

CSA

For power circuits - coin silver
 RATING: 6 Amps at 125 VAC or 3 Amps at 250 VAC (75% power factor). Canadian Standards Association file no. LR54592-1. To specify, UL model number, then add '/CSA' to complete switch number. Note - applicable only to terminations with coin silver contacts (Q or G options) as CSA recognizes switches for power applications only.

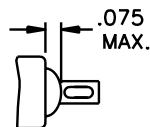
SEALING & MISCELLANEOUS OPTIONS

E

Epoxy terminal sealing: Available with all terminal configurations.

The space between terminal & case hole is sealed with epoxy all around terminal.

Provides maximum protection from entry of flux or contaminants into the switch case.



/R

To specify reverse switch action on non-symmetrical models with bushing keyway, add '/R' to switch model no.

22

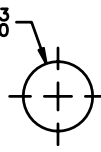
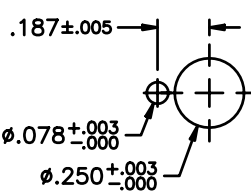
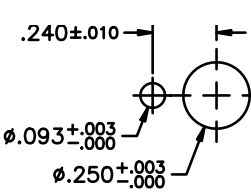
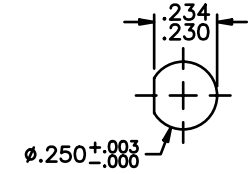
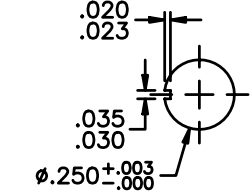
Black finish is available on actuator, bushing & hardware. To specify, add '-22' to switch model no.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

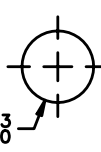
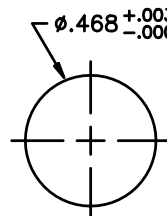
ST SERIES - MINIATURE TOGGLE SWITCHES

PANEL CUT-OUTS

Cut-outs that accept all 1/4-40 threaded bushings:

| | | | | |
|---|---|---|--|---|
|  <p>Without keying</p> |  <p>With A107 anti-rotate ring</p> |  <p>With A158 anti-rotate ring</p> |  <p>With D bushing</p> |  <p>With slotted keyway bushings</p> |
|---|---|---|--|---|

Cut-outs that accept non-threaded 1/4" bushings and 15/32" threaded bushings:

| | |
|---|---|
|  <p>Accepts all non-threaded 1/4" bushings</p> |  <p>15/32" threaded bushings</p> |
|---|---|

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