









Key Switches

Product Selection Guide

| Key Switches |  |  |  |  |
|-------------------------------|---|---|--|---|
| Series | K5G | K5A2 | K6 | K12 |
| Size (mm) L x W x H | 8,2 x 8 x 6 | 8,2 x 8 x 4,5 | 7,4 x 10,9 x 8,4 | 12 x 12 x 11 |
| Poles/Throws | 2 x SPST momentary | SPST momentary | SPST momentary | SPST 2 x SPST momentary |
| Maximum Load | 30 V / 50 mA | 30 V / 50 mA | 30 V / 100 mA | 30 V/100 mA |
| Operating Force | 4 N/ 6.5 N | 2 N; 4 N; 6 N | 2 N; 3 N; 5 N | 1,5 N; 2,5 N; 3,5 N; 5 N 3,5/7 N; 6/12 N |
| Travel (standard) | 1 mm | 0,8 mm | 1,5 mm | 1 mm, 1,5 mm, 2 mm |
| Life Cycle | 30,000 | 50,000 | 200,000 | 1,000,000 |
| Sealed | | | | K12C only |
| Illumination | | | • | • |
| Termination | SMT | SMT | SMT/ Thru-hole | Thru-hole |
| Page Number | E-3 | E-5 | E-7 | E-10 |

| Key Switches |  |  |  |  |
|-------------------------------|---|---|--|---|
| Series | PVA | D6 | KS | Digitast |
| Size (mm) L x W x H | 9,2 x 10 x 13,5 | 12 x 11,4 x 14,5 | 12,4 x 12,4 x 9,9 | 17,1x12,3 x 14,3 |
| Poles/Throws | DPST / DPDT momentary or push-on/push off | SPST momentary | SPST SPDT | SPDT momentary or push-on/push off |
| Maximum Load | 32 V / 100 mA | 32 V/100 mA* | 50 V/25 mA | 24 V / 10 mA |
| Operating Force | 1,2 N; 1,7 N; 3,5 N | 1,3 N | | 1,5 N |
| Travel (standard) | 2,4 mm | 0,8 mm | 0,71 mm | 3 mm |
| Life Cycle | 100,000 | 250,000 | 100,000 | 5,000,000 |
| Sealed | | | | |
| Illumination | | | | • |
| Termination | Thru-hole | Thru-hole | Thru-hole | Thru-hole |
| Page Number | E-16 | E-19 | E-23 | E-26 |

* Maximum value are for voltage and current separately

K5G Series Snap Action Key Switch



Features/Benefits

- Double stroke version
- Excellent tactile feel
- Low profile
- Quiet actuation
- RoHS compliant

Typical Applications

- Automotive
 - Window lift
 - Sun-roof control
- Multi-function devices

Construction

FUNCTION: Momentary action
CONTACT ARRANGEMENT: 2 make contacts, SPST
TERMINALS: Gullwing type for SMT

Mechanical

OPERATING FORCE FIRST STROKE: 3.7 + 0.8 - 0.5N
OPERATING FORCE SECOND STROKE: 6.5 N + 0.8 - 0.5N
ELECTRICAL TRAVEL FIRST STROKE: 0.5 mm
ELECTRICAL TRAVEL SECOND STROKE: 0.85 mm
TOTAL TRAVEL: 1 mm
OPERATING LIFE: 30,000 actuations

Packaging

Switches are delivered on continuous tape, in reels of 500 pieces

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

Electrical

| | Gold | Silver |
|------------------------|----------------|----------------|
| POWER MIN / MAX: | .02 VA / 1 VA | .02 VA / 1 VA |
| VOLTAGE MIN / MAX: | 20 mVDC/50 VDC | 20 mVDC/50 VDC |
| CURRENT MIN / MAX DC: | 10µA / 100 mA | 1 mA / 100 mA |
| CONTACT RESISTANCE: | ≤ 100 mΩ | ≤ 100 mΩ |
| INSULATION RESISTANCE: | ≥ 1GΩ | ≥ 1GΩ |
| BOUNCE TIME: | 5 ms | 5 ms |

Environmental

| | | |
|------------------------|-----------------|----------------|
| OPERATING TEMPERATURE: | -40°C to +105°C | -40°C to +85°C |
| STORAGE TEMPERATURE: | -50°C to +125°C | -50°C to +95°C |

Process

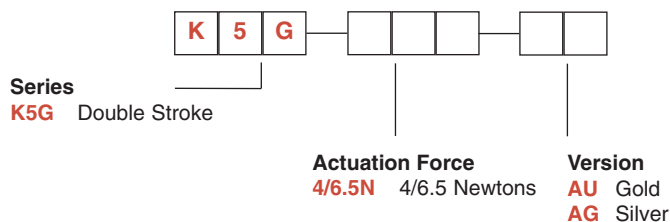
SOLDERING: Lead Free reflow compatible in accordance with CEI 60068-2-58 and Nr. 8GD000004

Materials

| | | |
|-----------------|-------------------------|----------------|
| CONTACTS: | Au over Ni-layer | Ag on Ni-layer |
| SOLDERING PINS: | Au | Ag |
| HOUSING: | Thermoplastic UL 94 H-B | |

How To Order

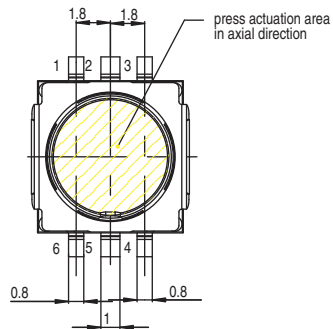
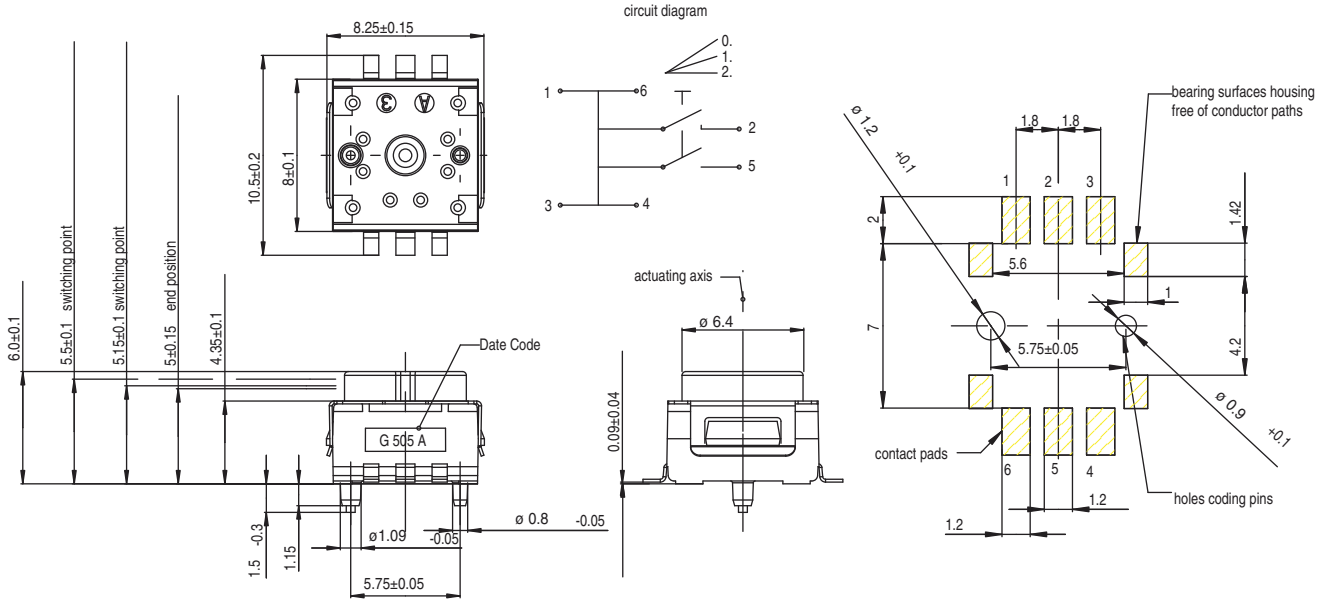
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



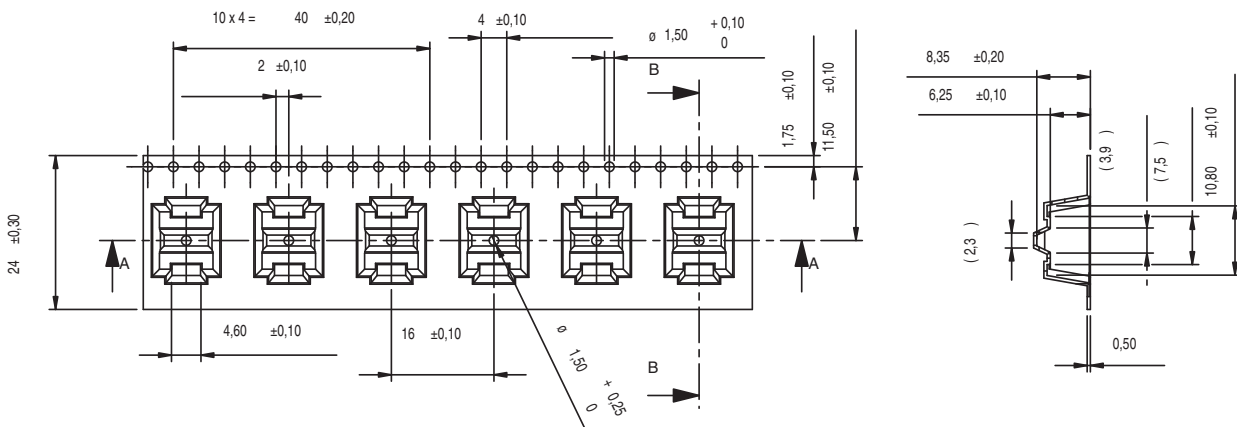
K5G Series Snap Action Key Switch

K5G DOUBLE STROKE VERSION

PCB LAYOUT, MOUNTING SIDE



Tape and Reel



Dimensions are shown: mm (inch)
Specifications and dimensions subject to change

www.ck-components.com

K5A2 Series Snap Action Key Switch



Features/Benefits

- Quiet actuation
- Space Saving
- RoHS compliant

Typical Applications

- Automotive
- Computers and network equipment

Construction

FUNCTION: Momentary action
CONTACT ARRANGEMENT: Normally open
TERMINALS: Gullwing type for SMT

Mechanical

OPERATING FORCE: (6N version) 5,5 + 0,5 -1N
3,7 + 0,8N -0,5N
OPERATING LIFE: 50,000 operations
TOTAL TRAVEL: 0.8 mm +/- 0.2 mm
ELECTRICAL TRAVEL: 0,5 mm +/- 0.1 mm

Packaging

Switches are delivered on continuous tape, in reels of 600 pieces

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

Gold

Silver

Electrical

| | | |
|------------------------|----------------|----------------|
| POWER MIN / MAX: | .02 VA / 1 VA | .02 VA / 1 VA |
| VOLTAGE MIN / MAX: | 20 mVDC/50 VDC | 20 mVDC/50 VDC |
| CURRENT MIN / MAX DC: | 10µA / 100 mA | 1 mA / 100 mA |
| CONTACT RESISTANCE: | ≤ 100 mΩ | ≤ 100 mΩ |
| INSULATION RESISTANCE: | ≥ 1GΩ | ≥ 1GΩ |
| BOUNCE TIME: | 5 ms | 5 ms |

Environmental

| | | |
|------------------------|-----------------|----------------|
| OPERATING TEMPERATURE: | -40°C to +105°C | -40°C to +85°C |
| STORAGE TEMPERATURE: | -50°C to +125°C | -50°C to +95°C |

Process

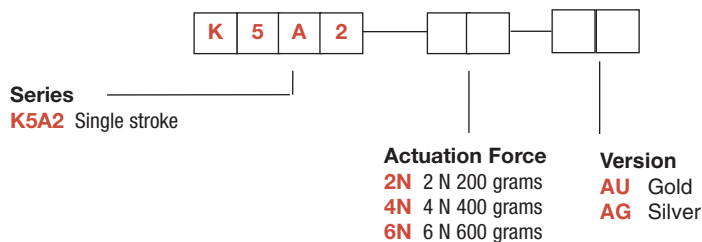
SOLDERING: Lead Free reflow compatible in accordance with CEI 60068-2-58 and Nr. 8GD000004

Materials

| | | |
|-----------------|-------------------------|----------------|
| CONTACTS: | Au over Ni-layer | Ag on Ni-layer |
| SOLDERING PINS: | Au | Ag |
| HOUSING: | Thermoplastic UL 94 H-B | |

How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



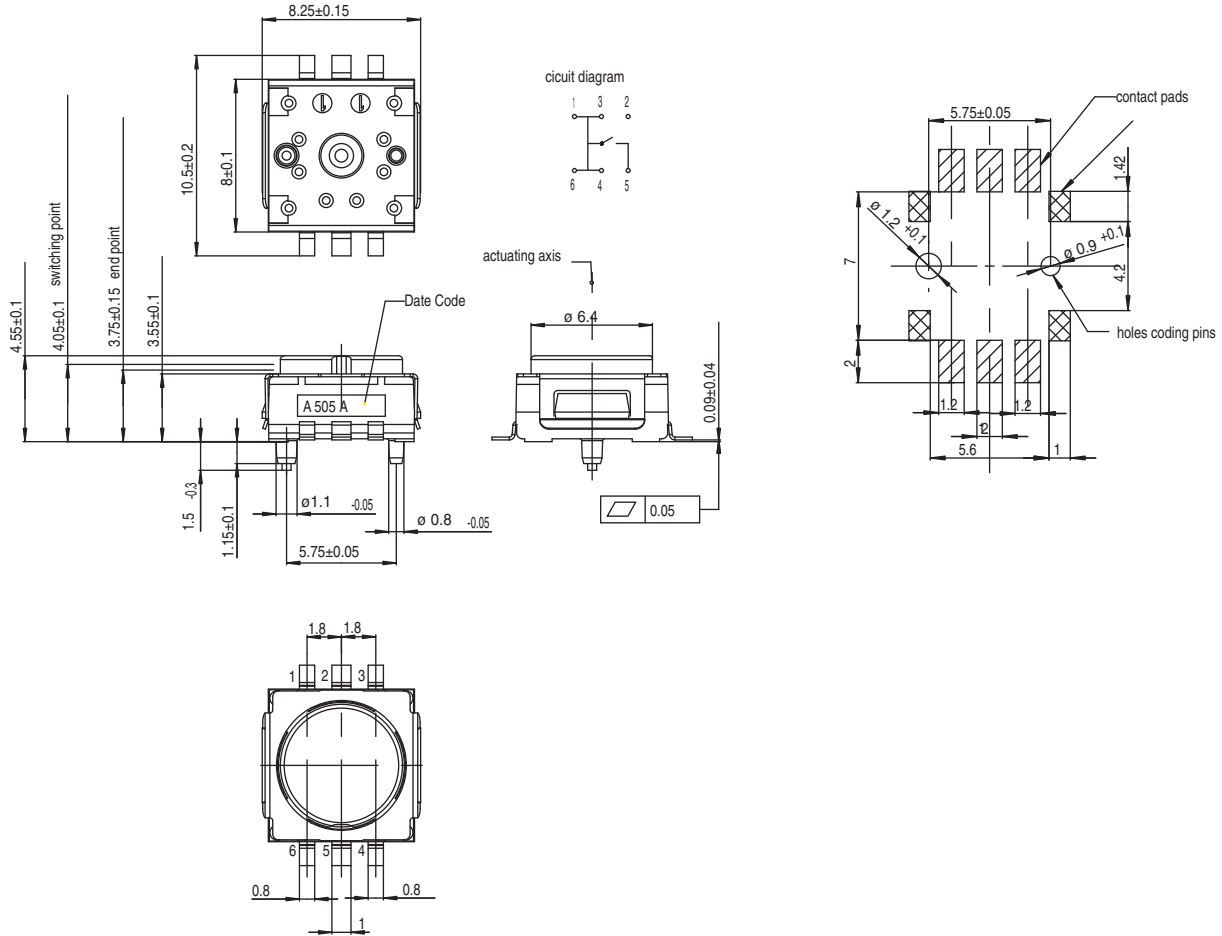
E

Key Switches

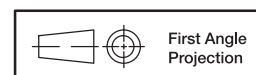
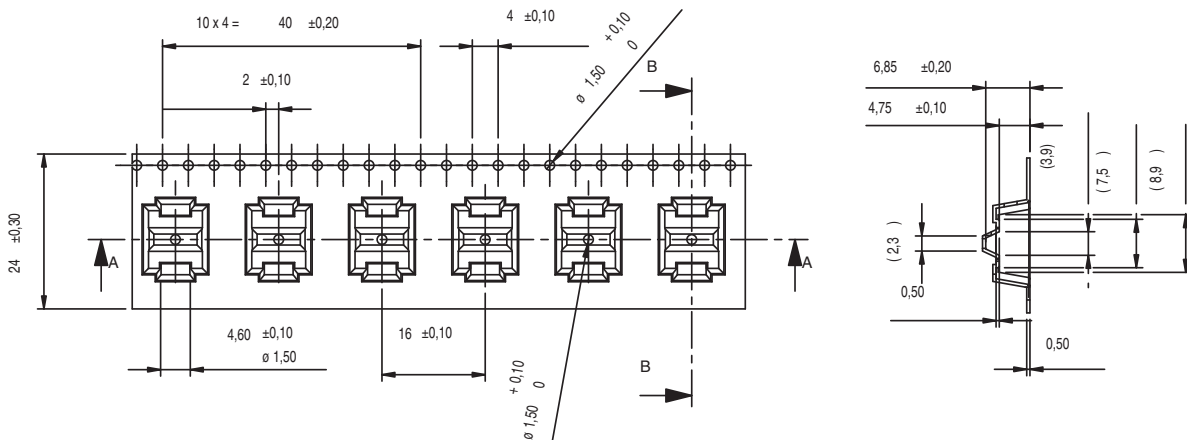
K5A2 Series Snap Action Key Switch

K5A2 SINGLE STROKE VERSION

PCB LAYOUT, MOUNTING SIDE



Tape and Reel



Dimensions are shown: mm (inch)
Specifications and dimensions subject to change

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Features/Benefits

- Excellent tactile feel
- Wide variety of LED's, travel and actuation forces
- Designed for low-level switching
- Detector version available
- RoHS compliant

Typical Applications

- Automotive
- Industrial electronics
- Computers and network equipment

Construction

FUNCTION: momentary action
 CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
 DISTANCE BETWEEN BUTTON CENTERS:
 min. 7,5 and 11,8 (0.295 and 0.465)
 TERMINALS: Snap-in pins, tinned
 MOUNTING: Soldered by PC pins, locating pins
 PC board thickness: 1,5 (0.0591)

Mechanical

TOTAL TRAVEL/SWITCHING TRAVEL: 1,5/0,9 (0.059/0.035)
 PROTECTION CLASS: IP 40 according to DIN/IEC 529

- 1) Voltage rise: 300 V/s
 2) According to DIN 41640; IEC 512-2
 3) Higher values upon request

NOTE: Product to be compatible with the lead free soldering profile on Q4 2006. THT product: compatible with the lead free soldering profile.

Electrical

SWITCHING POWER MIN./MAX.: 0.02 mW / 3 W DC
 SWITCHING VOLTAGE MIN./MAX.: 2 V DC / 30 V DC
 SWITCHING CURRENT MIN./MAX.: 10 µA / 100 mA DC
 DIELECTRIC STRENGTH (50 Hz)^{1) 2)}: ≥ 300 V
 OPERATING LIFE: ≥ 2 x 10⁵ operations³⁾
 ≥ 1 X 10⁵ operations for SMT version
 CONTACT RESISTANCE: Initial ≤ 50 mΩ
 INSULATION RESISTANCE: ≥ 10¹⁰ Ω
 BOUNCE TIME: ≤ 1 ms
 Operating speed 100 mm/s (3.94/s)

Environmental

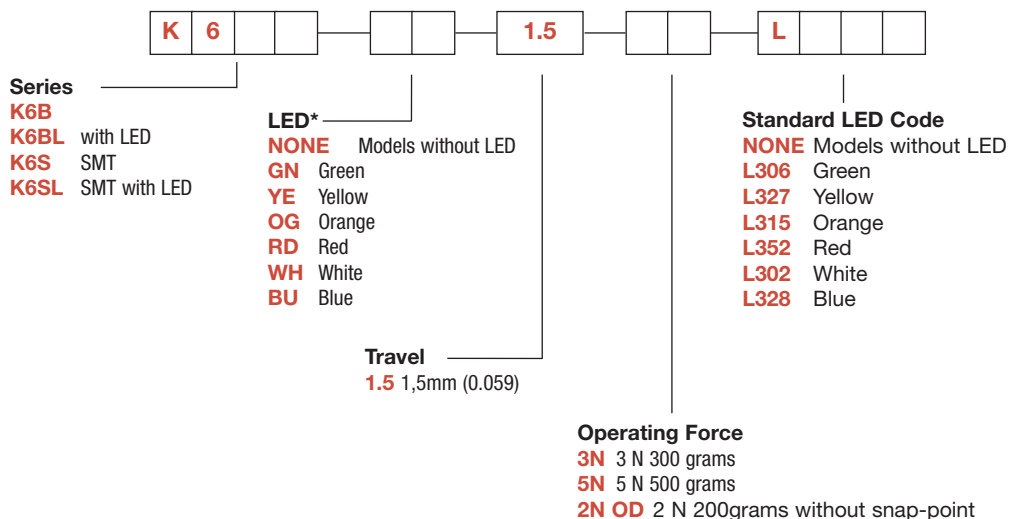
OPERATING TEMPERATURE: -40°C to 85°C.
 STORAGE TEMPERATURE: -40°C to 95°C.

Process

SOLDERABILITY:
 Maximum soldering time and temperature:
 5 s at 260°C; Hand soldering 3 s at 350°C.

How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



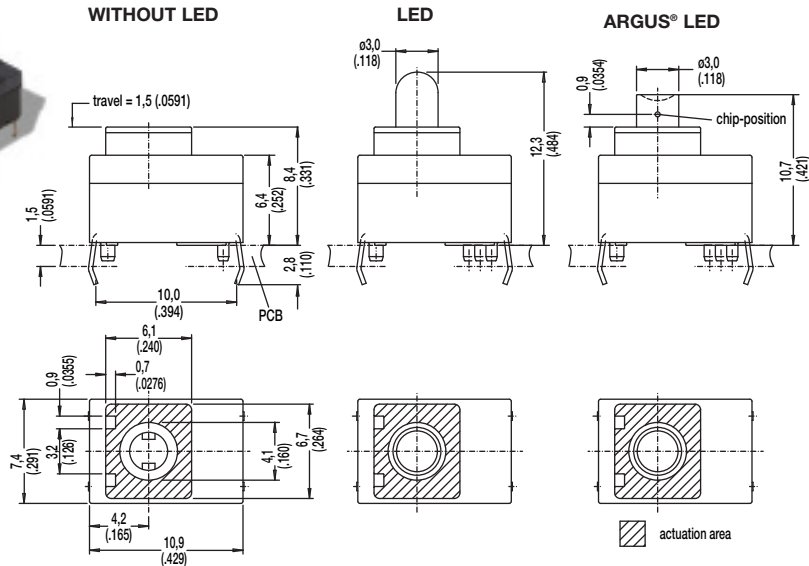
* Additional LED colors available by request.

K6 Miniature Key Switches

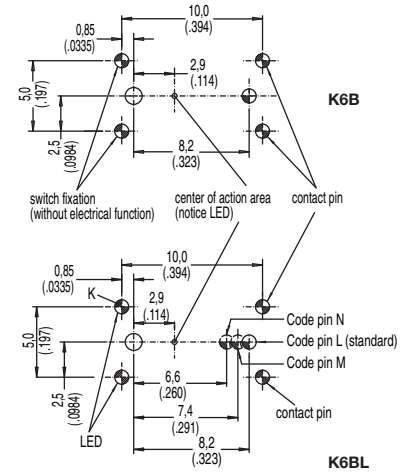
SERIES

K6B WITHOUT LED

K6BL WITH LED



PCB LAYOUT, MOUNTING SIDE

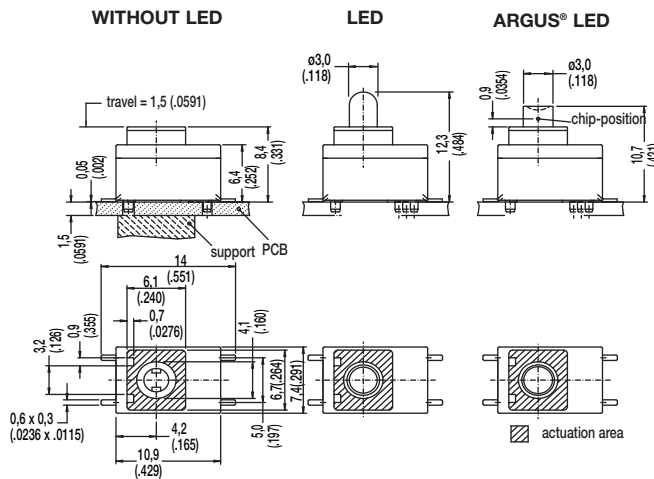


| SCHEMATIC | |
|-----------|------|
| K6B | K6BL |
| | |

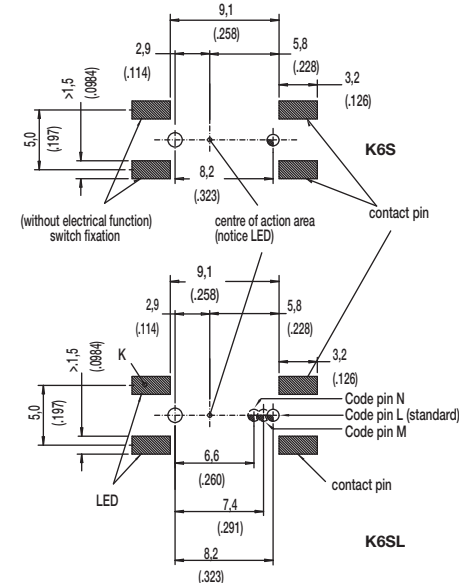
| Hole | Ø | Without LED | With LED | Description | Terminal Section | Surface |
|------|---------------------------|-------------|----------|-----------------|------------------------------|---------|
| | 1,2+0,1 (.0471+.00349) | 1x | 1x | center hole | | |
| | 0,9+0,1 (.0354+.00349) | 1x | 1x | code (L,M,N) | | |
| | 1,0+0,1 (.0354+.00349) | | 2x | | 0,6 x 0,3 (.0236 x .0118) | SnPb |
| | | 4x | 2x | LED switch | | |

K6S WITHOUT LED

K6SL WITH LED



PCB LAYOUT, MOUNTING SIDE



| SCHEMATIC | |
|-----------|------|
| K6S | K6SL |
| | |

| Hole | Ø | Without LED | With LED | Description |
|------|---------------------------|-------------|----------|-----------------|
| | 1,2+0,1 (.0471+.00349) | 1x | 1x | center hole |
| | 0,9+0,1 (.0354+.00349) | 1x | 1x | code (L,M,N) |



Dimensions are shown: mm (inch)
Specifications and dimensions subject to change

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LED

| OPTION CODE | COLOR |
|-------------|--------------------|
| NONE | Models without LED |
| GN | Green |
| YE | Yellow |
| OG | Orange |
| RD | Red |
| WH | White |
| BU | Blue |

| STANDARD LED CODE | COLOR |
|-------------------|--------------------|
| NONE | Models without LED |
| L306 | Green |
| L327 | Yellow |
| L315 | Orange |
| L352 | Red |
| L302 | White |
| L328 | Blue |

Additional LED colors available by request

TRAVEL

1.5 1.5 MM

OPERATING FORCE

| OPTION CODE | OPERATING FORCE |
|--------------|------------------------------|
| 3N | 3 N, 300 g |
| 5N | 5 N, 500 g |
| 2N OD | 2 N, 200g without snap-point |



First Angle Projection

*Dimensions are shown: mm (inch)
Specifications and dimensions subject to change*

K12

High Performance Key Switches

Features/Benefits

- Excellent tactile feel
- Wide choice of LED colors, travel and actuator forces
- High reliability / long life
- Sealed version available
- Designed for low-level switching
- Double stroke version available
- Detector version available

Typical Applications

- Automotive
- Off-road transportation
- Industrial electronics
- Computers & network equipment



Construction:

FUNCTION: momentary
 DISTANCE BETWEEN BUTTON CENTERS:
 min. 11 (0.433) K12C = 13 (0.512)
 TERMINALS: PC pins, tinned
 MOUNTING: Locating pins; K12D, K12G and K12P additionally
 with snap-in housing

Mechanical

TOTAL TRAVEL: 1 mm, 1,5 mm, 2 mm
 SWITCHING TRAVEL: 0,6 mm*
 OPERATING FORCE: 1.5 N OD without snap-point as detector
 switch, 2.5 N, 3.5 N, 5 N, 3.5/7 N, 6/12 N. Additional
 operating force 7N, 9N and 20N, available on request.
 PROTECTION CLASS: K12C IP 67 (dust tight, protected against
 the effects of immersion in water; other versions IP 40)

* Additional switching travel (with pre-travel) available by request.

Electrical

SWITCHING POWER MIN./MAX.: 0.02mW/3 W
 SWITCHING VOLTAGE MIN./MAX.: 2 V DC / 30 V DC
 SWITCHING CURRENT MIN./MAX.: 10 µA /100 mA
 DIELECTRIC STRENGTH (50 Hz, 1 min): ≥ 500 V
 OPERATING LIFE with max. switching power: ≥ 10⁶ operations
 K12G & K12GO; operating life of second switch 5 x 10⁴ operations,
 operating life K12C and version with more than 6N (7N, 9N 20N)
 please consult factory.
 CONTACT RESISTANCE: Initial ≤ 50 mΩ
 INSULATION RESISTANCE: ≥ 10¹⁰ Ω
 BOUNCE TIME: ≤ 1 ms
 Operating speed 400 mm/s (15.75/s)

Environmental

OPERATING TEMPERATURE: -40°C to 85°C.
 STORAGE TEMPERATURE: -40°C to 95°C.

Process

SOLDERABILITY:
 Max. soldering time and temperature: 5 s at 260°C

How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



Series

- K12A** No snap-in pegs
- K12AL** No snap-in pegs with central LED
- K12P** With snap-in pegs
- K12PL** With central LED
- K12C** Sealed contact with rubber cap (IP 67)
- K12GO** Two-step switch
- K12GOL** K12GO with central LED

Cap Color

- NONE** version with LED, version C
- BK** Black cap – No LED
- YE** Yellow cap - No LED
- RD** Red cap – No LED
- GY** Gray cap – No LED

LED Color

- NONE** No LED
- GN** Green
- YE** Yellow
- OG** Orange
- RD** Red
- WH** White
- BU** Blue

Travel*

- 1** 1 mm (0.039)
- 1.5** 1.5 mm (0.059)
- 2** 2 mm (0.079)

Operating Force***

- 1.5N OD** 1.5 N without snap-point
- 2.5N** 2.5 N
- 3.5N** 3.5 N
- 5N** 5 N
- 3.5/7N** 3.5/7 N**
- 6/12N** 6/12 N**

Standard LED Code

- NONE** No LED
- L306** Green
- L327** Yellow
- L315** Orange
- L352** Red
- L302** White
- L328** Blue

Contact Arrangement

- NONE** SPST NO (STD)
- 1R** SPST NC (Special request)

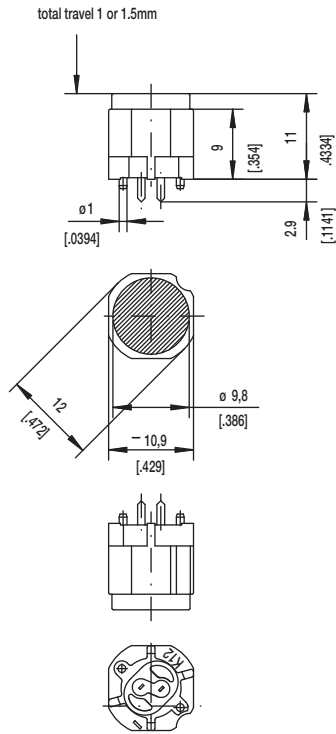
* K12C – 1mm MAX
 K12 with LED – 1.5 mm MAX
 ** K12G & K12GO version only
 *** Additional operating force: 7N, 9N available on request

K12 High Performance Key Switches

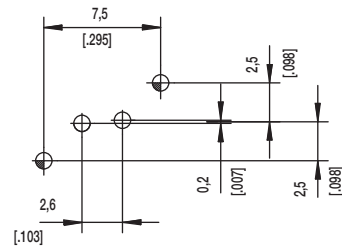
SERIES



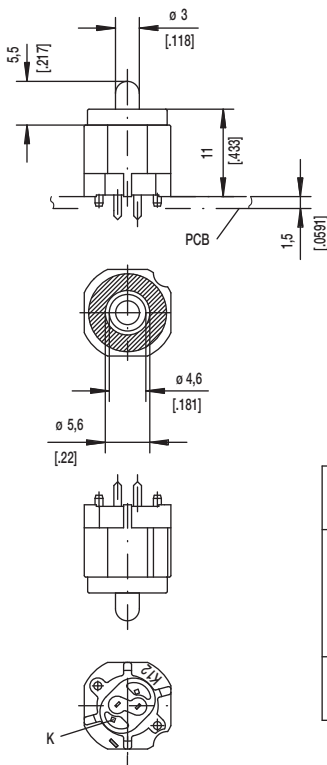
K12A without snap in



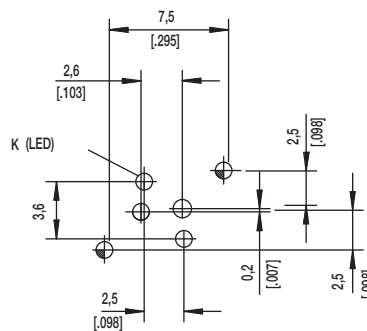
PCB LAYOUT, MOUNTING SIDE



K12AL



PCB LAYOUT, MOUNTING SIDE



| | | | | | | |
|------|----------------------|---------|----------|-------------|---------------------|---------|
| | 1,1 ^{+0,05} | 2x | 2x | center hole | | |
| | 0,9 ±0,05 | | 2x | LED | ø0,5 (.020) | Sn |
| | | 2x | 2x | switch | 0,7x0,2 (.028x.081) | Sn |
| Hole | ø | Without | with LED | Description | Terminal Section | Surface |

C&K



First Angle
Projection

Dimensions are shown: mm (inch)
Specifications and dimensions subject to change



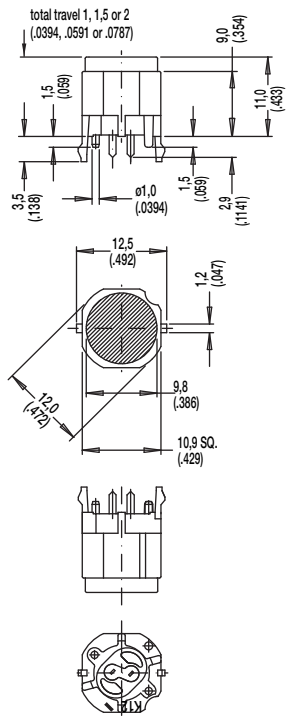
E

Key Switches

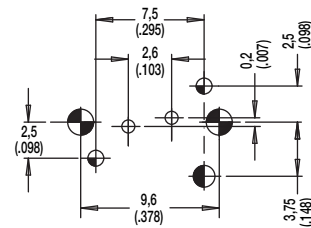
K12 High Performance Key Switches

SERIES

K12P with snap in



PCB LAYOUT, MOUNTING SIDE

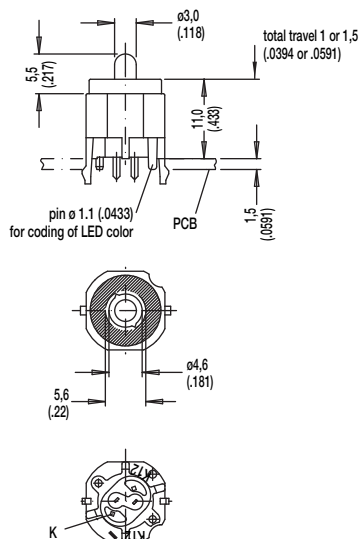


center of actuation area (notice LED)

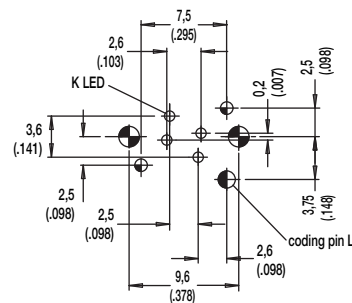


| Hole | Ø | Without LED | Description | Terminal Section | Surface |
|------|------------|-------------|---------------------|-------------------------|---------|
| | 1,7 (.069) | 2x | snap-in | | |
| | 1,6 (.062) | 1x | coding hole (L,M,N) | | |
| | 1,1 (.043) | 2x | center hole | | Sn |
| | 0,9 (.035) | 2x | switch | 0.7 x 0.2 (.028 x .081) | Sn |

K12PL



PCB LAYOUT, MOUNTING SIDE



center of actuation area (notice LED)



| Hole | Ø | Without LED | Description | Terminal Section | Surface |
|------|------------|-------------|---------------------|-------------------------|---------|
| | 1,7 (.069) | 2x | snap-in | | |
| | 1,6 (.062) | 1x | coding hole (L,M,N) | | |
| | 1,1 (.043) | 2x | center hole | | Sn |
| | 0,9 (.035) | 2x | LED | m0.5 (.020) | Sn |
| | | 2x | switch | 0.7 x 0.2 (.028 x .081) | |



First Angle Projection

Dimensions are shown: mm (inch)
Specifications and dimensions subject to change

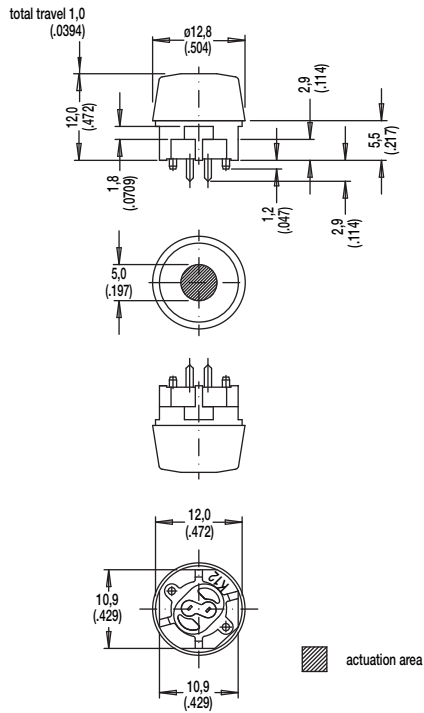


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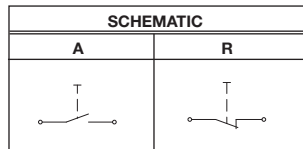
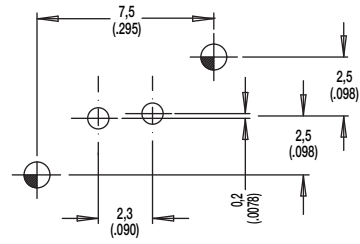
K12 High Performance Key Switches

SERIES

K12C SEALED CONTACT WITH RUBBER CAP (IP 67)



PCB LAYOUT, MOUNTING SIDE

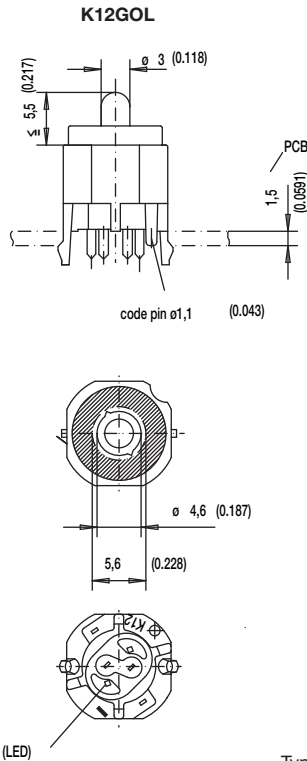
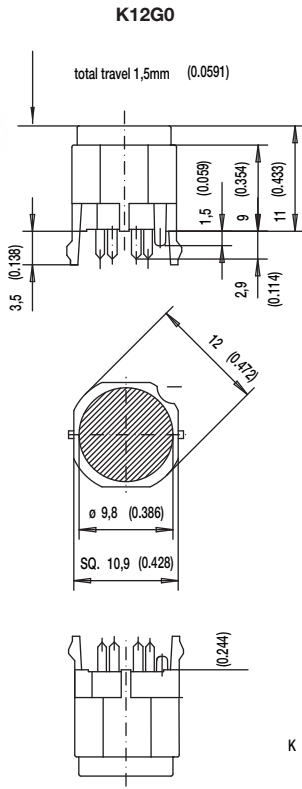


| Hole | Ø | Without LED | Description | Terminal Section | Surface |
|------|------------|-------------|-------------|--------------------------|---------|
| | 1,1 (.043) | 2x | center hole | | |
| | 0,9 (.035) | 2x | switch | 0.7 x 0.2(.0275 x .0787) | Sn |

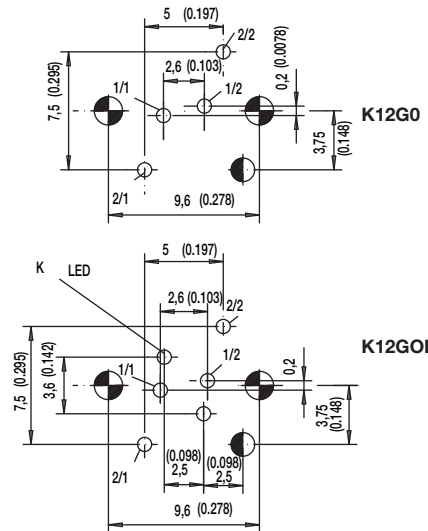
K12 High Performance Key Switches

SERIES 

K12GO
K12GOL

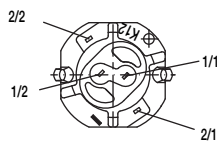



PCB LAYOUT, MOUNTING SIDE

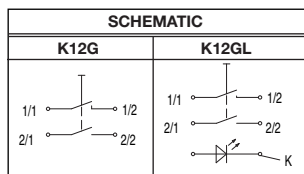


Type K12G and K12GL

see drawing: 844-9001-601 or 844-900-1601 with LED holder by side



 actuation area



| Hole | ∅ | Without LED | With LED | Description | Terminal Section | Surface |
|------|---------------|-------------|----------|-------------|-------------------------|---------|
| | 1,7 (.069) | 2x | 2x | snap-in | | |
| | 1,6 (.062) | 1x | 1x | code | | |
| | 0,9 (.035) | | 2x | 2 LED | | Sn |
| | | | 2x | LED | m0.5 (.020) | Sn |
| | | 2x | 2x | switch 2 | 0.7 x 0.3 (.028 x .012) | Sn |
| | | 2x | 2x | switch 1 | 0.7 x 0.2 (.028 x .081) | Sn |



Dimensions are shown: mm (inch)
Specifications and dimensions subject to change

www.ck-components.com



High Performance Key Switches

CAP COLOR

| OPTION CODE | COLOR |
|-------------|------------------|
| NONE | Version with LED |
| BK | Black - no LED |
| YE | Yellow - no LED |
| RD | Red - no LED |
| GY | Gray - no LED |

LED COLOR

| OPTION CODE | COLOR |
|-------------|--------------------|
| NONE | Models without LED |
| GN | Green |
| YE | Yellow |
| OG | Orange |
| RD | Red |
| WH | White |
| BU | Blue |

| STANDARD LED CODE | COLOR |
|-------------------|--------------------|
| NONE | Models without LED |
| L306 | Green |
| L327 | Yellow |
| L315 | Orange |
| L352 | Red |
| L302 | White |
| L328 | Blue |

TRAVEL

- 1** 1 mm
- 1.5** 1.5 mm
- 2** 2 mm

OPERATING FORCE

| OPTION CODE | OPERATING FORCE |
|----------------|--------------------------------|
| 1.5N OD | 1.5 N, 150g without snap-point |
| 2.5N | 2.5 N, 250g |
| 3.5N | 3.5 N, 350g |
| 5N | 5 N, 500g |
| 3.5/7N | 3.5/7 N, 350/700g |
| 6/12N | 6/12 N, 600-1200g |



Dimensions are shown: mm (inch)
Specifications and dimensions subject to change

PVA Short Stroke Key Switches

Features/Benefits

- Compact design
- Short stroke to latch
- Wide variety of actuator heights and styles
- Adapted for medium power applications
- RoHS compliant and compatible

Typical Applications

- Automotive (air conditioning, lighting)
- Video, remote controls
- Electronic games



Construction

FUNCTION: Momentary, Push-Push

CONTACT ARRANGEMENT:¹

PVA1: 2 make contacts (DPST)

PVA2: 2 change over contacts (DPDT)

MODE SWITCHING: Non-shorting

TERMINALS: PC pins²

Mechanical

TOTAL TRAVEL / LATCHING TRAVEL:

OA: 2,4± 0,2 (0.094 ± 0.008)

EE: 2,4± 0,2 (0.094 ± 0.008)/ 1,5 (0.059)

OPERATING FORCE: 1.2 ± .25 (120 grams);

1.7 ± .25 (170 grams); 3.5 ± .25 (350 grams)

Process

SOLDERABILITY:

Hand soldering: 350°C for 3 seconds

Wave or bath soldering: 260°C for 5 seconds

Cleaning: Use solvents compatible with ABS

Electrical

SWITCHING POWER MAX.: 3 W DC

SWITCHING VOLTAGE MAX.: 32 V DC

SWITCHING CURRENT MAX.: 100 mA DC*

DIELECTRIC STRENGTH (50 Hz / 1 min):

1000 V between open contacts, PVA2: 750 V

OPERATING LIFE:

OA (momentary): ≥ 1 x 10⁵ operations

EE (push-push): ≥ 1 x 10⁵ operations

CONTACT RESISTANCE: Initial ≤ 100 mΩ; 50mΩ

After life: 150 mΩ

INSULATION RESISTANCE: ≥ 10¹⁰ Ω

BOUNCE TIME: ≤ 3 ms

Environmental

OPERATING TEMPERATURE: -40°C to 85°C.³

1) Other contact arrangements available by request

2) "Snap-in" contacts on request, Version SNA with pins bent inside (standard)

3) With button +70°C

* By 13,8 VDC, the PVA supports a peak current of 500 mA and a continuous current of 200 mA.

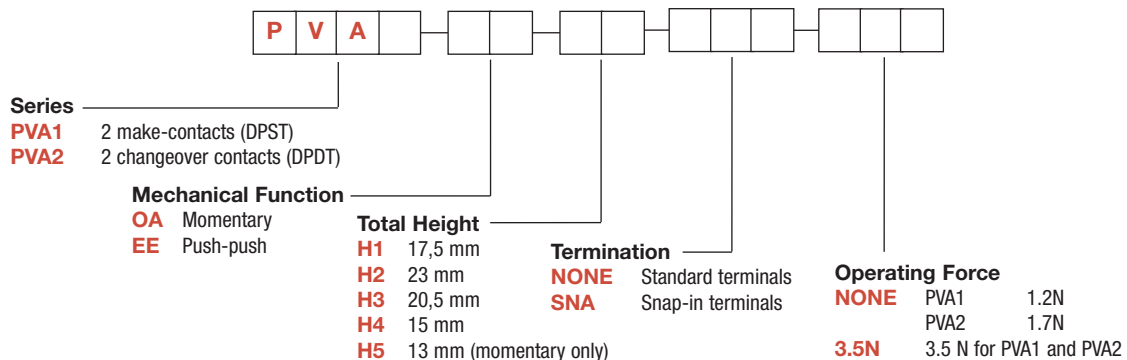
Note: Specifications listed above are for switches with standard options.

For information on specific and custom switches, consult Customer Service Center.

How To Order

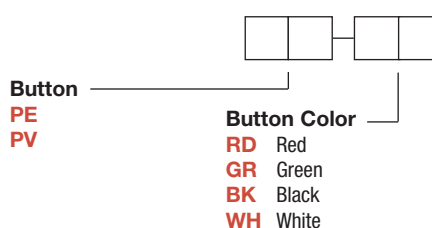
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

Switch



Button

Buttons must be ordered separately.
Shipped in bulk.



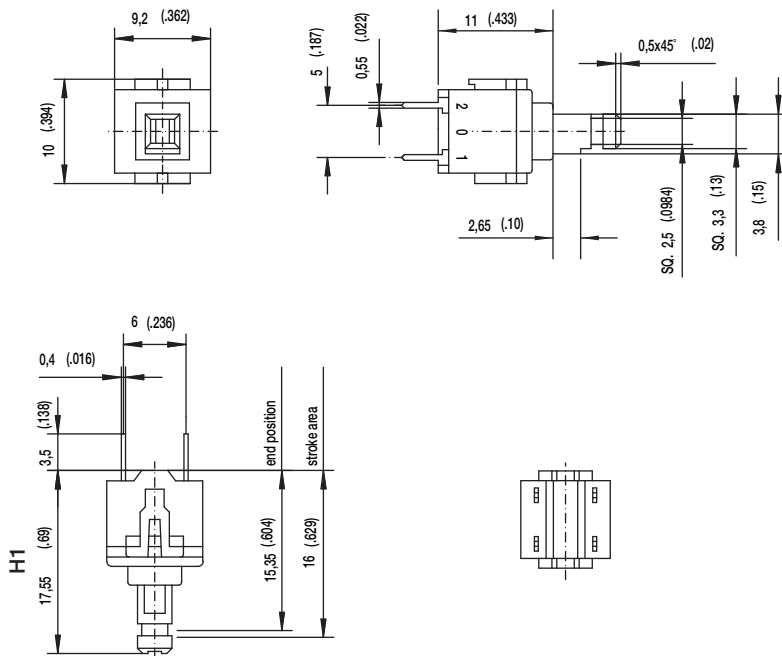
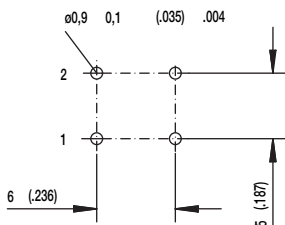
Dimensions are shown: mm (inch)
Specifications and dimensions subject to change



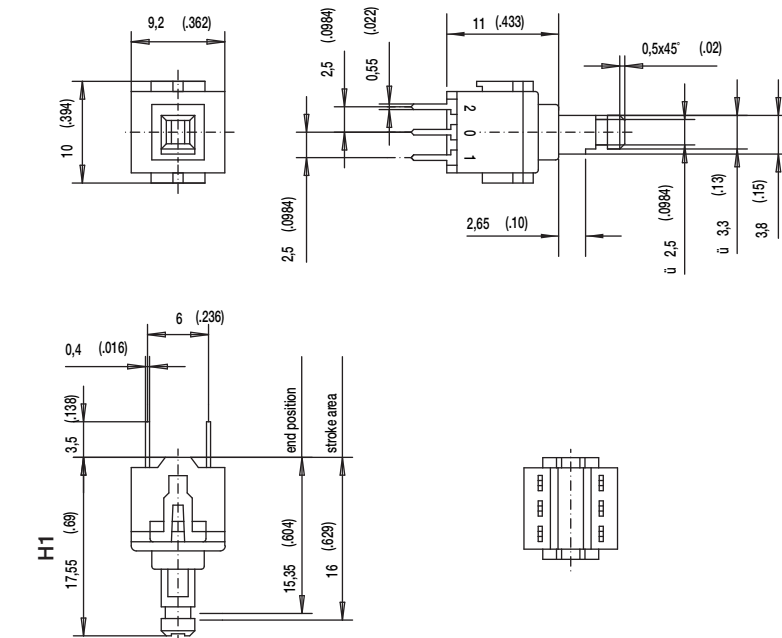
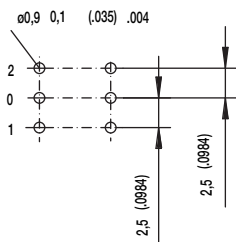
PVA Short Stroke Key Switches

SERIES

PVA1 (DPST)



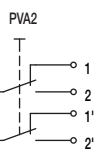
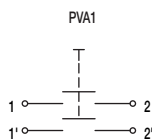
PVA2 (DPDT)



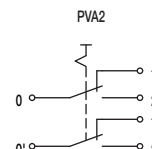
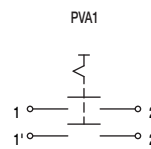
MECHANICAL FUNCTION

| OPTION CODE | FUNCTION |
|-------------|-----------|
| OA | Momentary |
| EE | Push-Push |

OA



EE



First Angle Projection

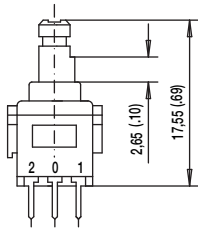
Dimensions are shown: mm (inch)
Specifications and dimensions subject to change



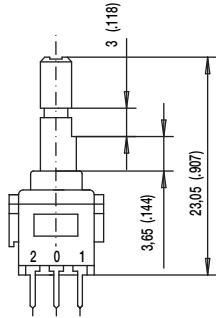
PVA Short Stroke Key Switches

TOTAL HEIGHT

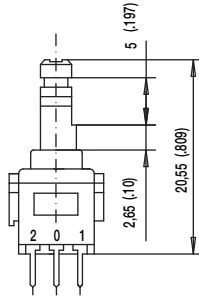
H1 17,5 MM



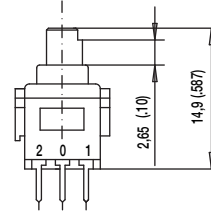
H2 23 MM



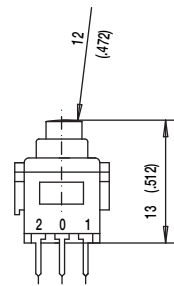
H3 20,5 MM



H4 15 MM

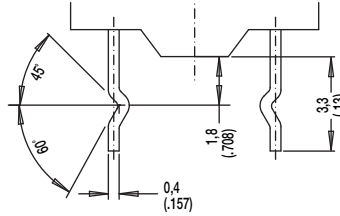
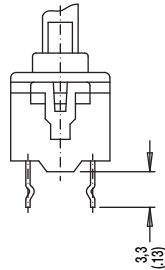


H5 13 MM
(MOMENTARY ONLY)



TERMINATION

SNA



OPERATING FORCE

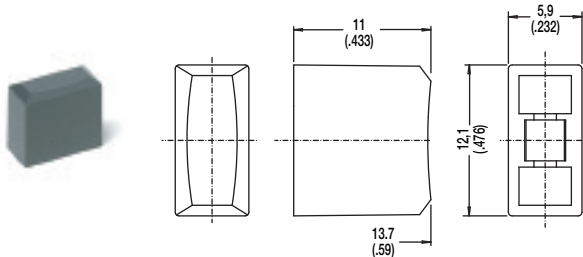
NONE PVA1 1.2 N
PVA2 1.7 N

3.5N 3.5 NEWTONS PVA1 & PVA2

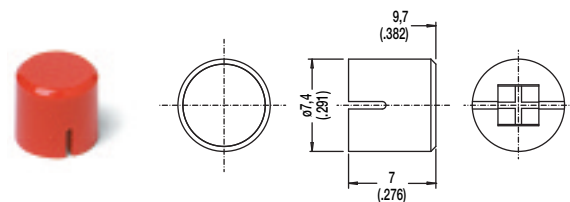
BUTTONS

BUTTONS MUST BE ORDERED SEPARATELY. SHIPPED IN BULK.

PE



PV



| OPTION CODE | COLOR |
|-------------|-------|
| RD | Red |
| GY | Gray |
| BK | Black |
| WH | White |



Dimensions are shown: mm (inch)
Specifications and dimensions subject to change



SPST Momentary Key Switches



Features/Benefits

- Easy X, Y coding on single side PCB
- Positive tactile feedback
- High temperature
- Wide variety of colors & styles
- RoHS compliant and compatible

Typical Applications

- Video
- Electronic games
- Appliances

Construction

FUNCTION: momentary
 CONTACT ARRANGEMENT: 1 make contact (SPST), NO
 DISTANCE BETWEEN BUTTON CENTERS, MIN.: 12,7 (0.500)
 TERMINALS: PC pins

Electrical

SWITCHING POWER MAX.: 3 VA
 SWITCHING VOLTAGE MAX.: 32 V DC
 SWITCHING CURRENT MAX.: 100 mA DC
 DIELECTRIC STRENGTH (50 Hz / 1 min): 250 V
 OPERATING LIFE with max. switching power: (2,5x10⁵ operations)
 CONTACT RESISTANCE: ≤100 mΩ
 INSULATION RESISTANCE: ≥10⁸Ω
 BOUNCE TIME: ≤10 ms

Mechanical

SWITCHING TRAVEL: Version F1: ±.2±mm ≤ Te4bn) ≤ 1.± mm
 Version F2: ±.3± mm ≤ Te4bn) ≤ 1.1 mm
 OPERATING FORCE: Version F1: ±.8N ≤ Fa ≤1.8N
 Version F2: 2.±N ≤ Fa ≤ 3.5N

Environmental

OPERATING TEMPERATURE: -20°C to 85°C.

Process

SOLDERABILITY:

Hand soldering: 350°C for 3 seconds
 Wave or bath soldering: 260°C for 5 seconds
 Cleaning: Not washable

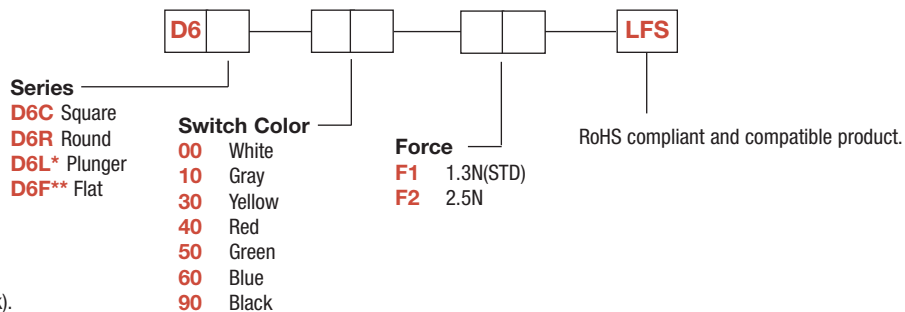
PACKAGING:

The D6 switches are delivered in boxes containing 10 trays with 250 pieces each: Total 2,500 pieces per box.
 The D6 buttons are delivered in bulk with 2500 pieces per box.

How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

Switch



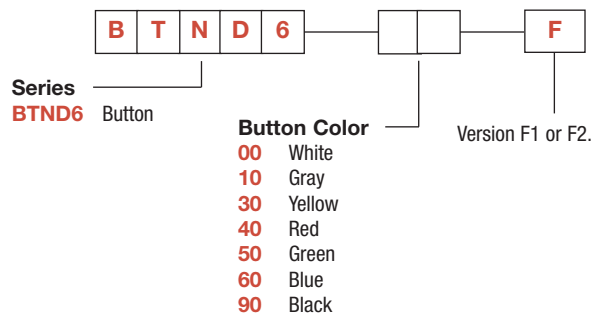
*Available only in color 90 (black).

** Available only in color 90 (black) and 00 (white).

Button

Buttons can be ordered separately.
 Shipped in bulk.

D6 button for use with D6C only.

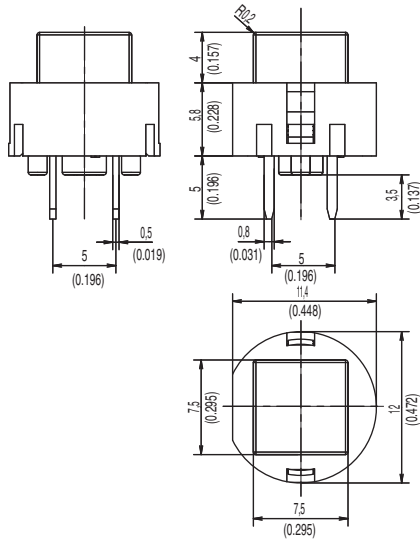


Dimensions are shown: mm (inch)
 Specifications and dimensions subject to change

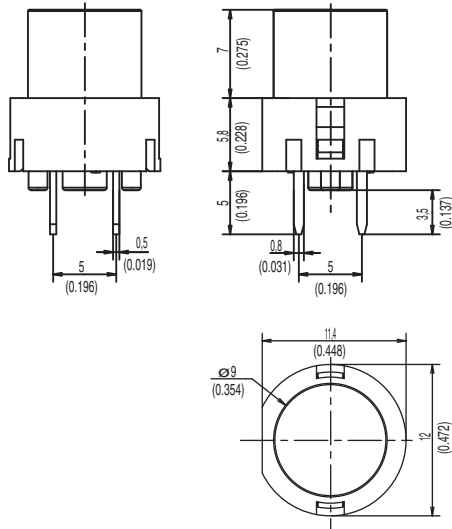
D6 SPST Momentary Key Switches

SERIES 

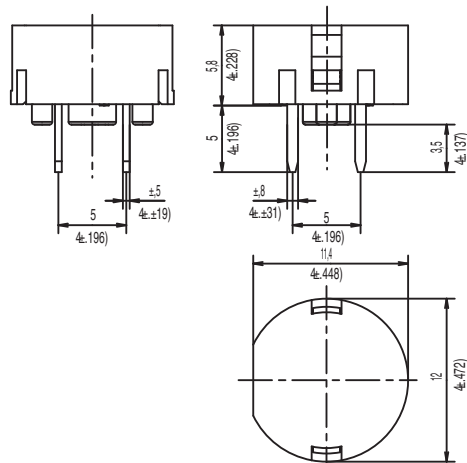
D6C



D6R



D6F



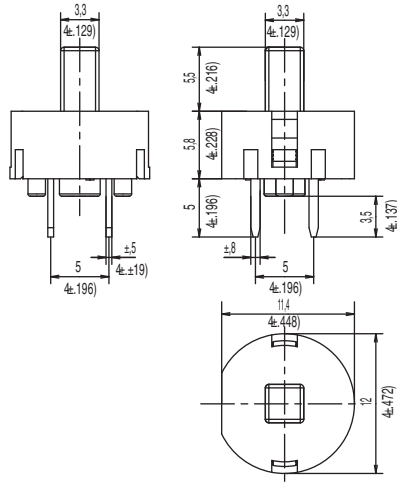
Dimensions are shown: mm (inch)
Specifications and dimensions subject to change



SPST Momentary Key Switches

SERIES 

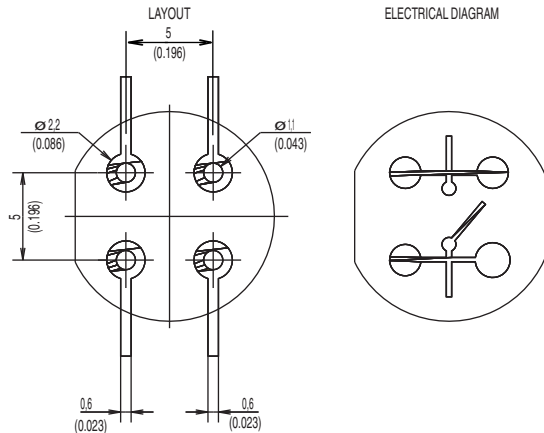
D6L ONLY AVAILABLE IN BLACK



SWITCH COLORS 

| OPTION CODE | SWITCH COLOR |
|-------------|--------------|
| 00 | WHITE |
| 10 | GRAY |
| 30 | YELLOW |
| 40 | RED |
| 50 | GREEN |
| 60 | BLUE |
| 90 | BLACK |

PCB LAYOUT



Dimensions are shown: mm (inch)
Specifications and dimensions subject to change

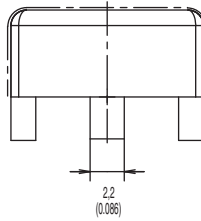
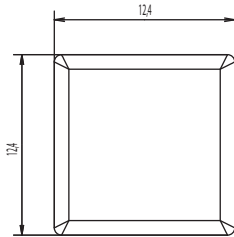
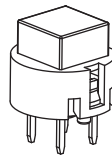
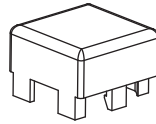
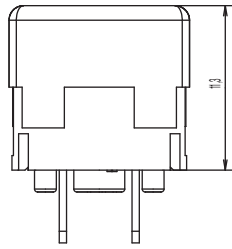


D6 SPST Momentary Key Switches

BUTTON AVAILABLE

BTND6 Buttons must be ordered separately. Shipped in bulk.

NOTE: Only compatible with D6C.



| OPTION CODE | BUTTON COLOR |
|-------------|--------------|
| 00 | WHITE |
| 10 | GRAY |
| 30 | YELLOW |
| 40 | RED |
| 50 | GREEN |
| 60 | BLUE |
| 90 | BLACK |



Key Switches



Features/Benefits

- Positive tactile feel
- Variety of cap colors
- LED support available
- SPST and SPDT configurations
- RoHS compliant

Typical Applications

- Telecommunications
- Industrial
- Instrumentation

Specifications

CONTACT RATING: Q contact material: 25mA @ 50V AC .or DC max.
 ELECTRICAL LIFE: 100,000 actuations.
 CONTACT RESISTANCE: Below 100 mΩ initial @ 2-4 V DC, 100 mA
 INSULATION RESISTANCE: 10⁹Ω min.
 DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level.
 OPERATING TEMPERATURE: -30°C to 65°C.
 SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

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

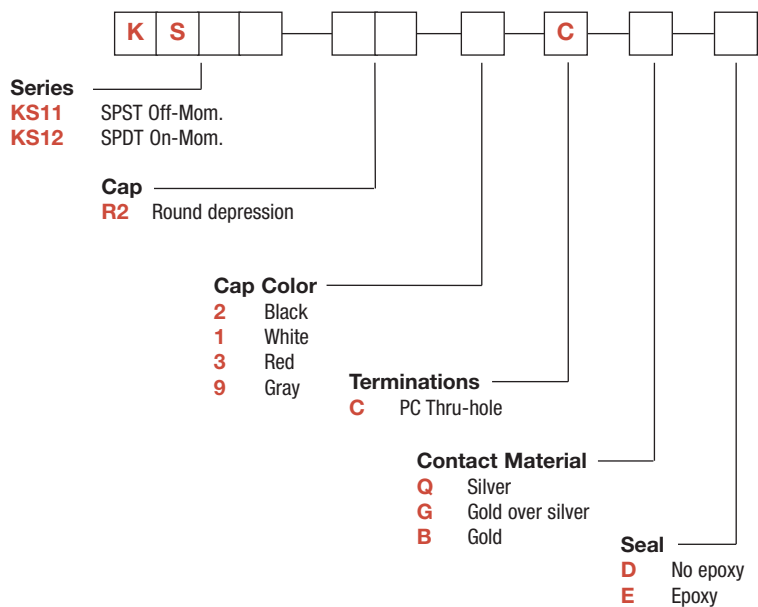
NOTE: Product to be compatible with the lead free soldering profile on Q4 2006.

Materials

CASE: Glass filled nylon (UL 94V-0).
 ACTUATOR: Nylon 6/6 or ABS, matte finish, black standard.
 MOVABLE CONTACT: Q contact material: Stainless steel, silver plated.
 STATIONARY CONTACTS AND TERMINALS: Q contact material: copper alloy, silver plated.
 TERMINAL SEAL: Epoxy

How To Order

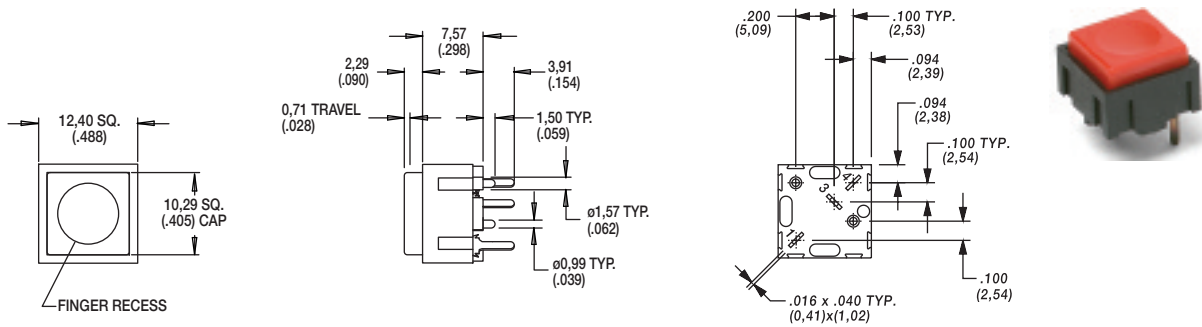
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.





KS Single Pole Key Switches

SERIES 

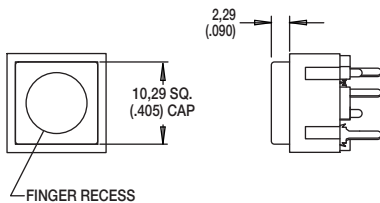
KS11 / KS12



| NO. POLES | MODEL NO. | SWITCH FUNCTION | | CONNECTED TERMINALS | | SCHEMATIC |
|-----------|-----------|-----------------|--------|---------------------|--------|---|
| | | POS. 1 | POS. 2 | POS. 1 | POS. 2 | |
| SP | KS11 | OFF | MOM. | OPEN | 1-3 | SPST  |
| | KS12 | ON | MOM. | 1-4 | 1-3 | SPDT  |

CAP 

R2 CAP WITH ROUND DEPRESSION



| OPTION CODE | CAP COLOR |
|-------------|-----------|
| 2 | BLACK |
| 1 | WHITE |
| 3 | RED |
| 9 | GRAY |



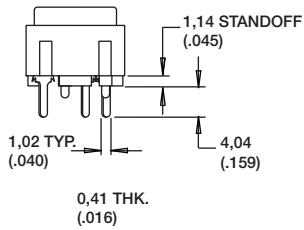
Third Angle
Projection

Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

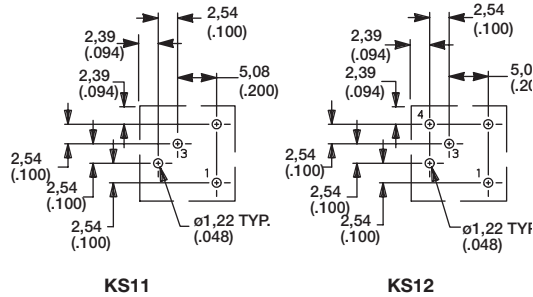
www.ck-components.com

TERMINATION

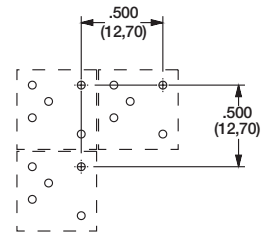
C PC THRU-HOLE



PC MOUNTING



MULTIPLE SWITCH SPACING



CONTACT MATERIAL

| OPTION CODE | CONTACT MATERIAL | TERMINAL PLATING | RATINGS | |
|-------------|--------------------------|---------------------|--------------------------------|---|
| | | | | |
| Q | SILVER ² | SILVER ² | POWER | 25 mA MAX. @ 50 V AC OR DC MAX. |
| B | GOLD ¹ | GOLD ¹ | LOW LEVEL/DRY CIRCUIT | 0.4 VA MAX. @ 20 V AC OR DC MAX. |
| G | GOLD/SILVER ³ | GOLD ¹ | LOW LEVEL/DRY CIRCUIT OR POWER | 0.4 VA MAX. @ 20 V AC OR DC MAX. OR 25 mA MAX. @ 50 V AC OR DC MAX. |

- MOVABLE CONTACT: Stainless steel, with gold plate over nickel plate.
STATIONARY CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.
- MOVABLE CONTACT: Stainless steel, silver plated.
STATIONARY CONTACTS & ALL TERMINALS: Copper alloy, silver plated.
- MOVABLE CONTACT: Stainless steel, with gold plate over nickel plate over silver plate.
STATIONARY CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate over silver plate.

NOTE: Any models supplied with Q, B or G contact material are RoHS compliant.

SEAL

D NO EPOXY SEAL

E EPOXY SEAL



DIGITAST

Microminiature SPDT, Key Switches



Features/Benefits

- High reliability/long life
- Designed for low level switching
- Ready to implement on PCB
- Latching function available
- Several button options
- RoHS compliant and compatible

Typical Applications

- Medical
- Instrumentation
- Industrial electronics
- Audio electronics

Construction

FUNCTION: momentary or push-push
 CONTACT ARRANGEMENT: 1 change over contact SPDT, NO
 MODE OF SWITCHING: Non-shorting
 DISTANCE BETWEEN BUTTON CENTERS:
 HORIZONTAL MINIMUM: 12,7 (0.500) or 17,78 (0.700)
 VERTICAL MINIMUM: 17,78 (0.700)
 TERMINALS: PC pins
 MOUNTING: Soldering, centering pins

Mechanical

TOTAL TRAVEL: ≤ 3 (.0018)
 SWITCHING TRAVEL: 1,5 (0.0591)
 LATCHING TRAVEL: 1,8 (0.0709)
 OPERATING FORCE: 1.5 +/- 0.5 N (150 +/- 50 grams)

Process

SOLDERABILITY: Max. soldering time and temperature: 5 s at 260°C

Electrical

SWITCHING POWER MAX.: 240 mW DC
 SWITCHING VOLTAGE MAX.: 24 V DC
 SWITCHING CURRENT MAX.: 10 mA DC
 CARRYING CURRENT AT 20°C (push-push version): 100 mA
 DIELECTRIC STRENGTH (50 Hz, 1 min): 500 V
 OPERATING LIFE with or without max. switching power
 Momentary: $\geq 5 \times 10^6$ operations
 Push-push: $\geq 5 \times 10^5$ operations
 CONTACT RESISTANCE: Initial ≤ 50 m Ω
 After 5×10^6 operations: ≤ 100 m Ω
 INSULATION RESISTANCE: $\geq 10^{10}$ Ω
 CAPACITANCE at f= 10 kHz: ≤ 0.8 pF
 BOUNCE TIME: ≤ 2.5 ms
 Operating speed 400 mm/s (15.75/s)

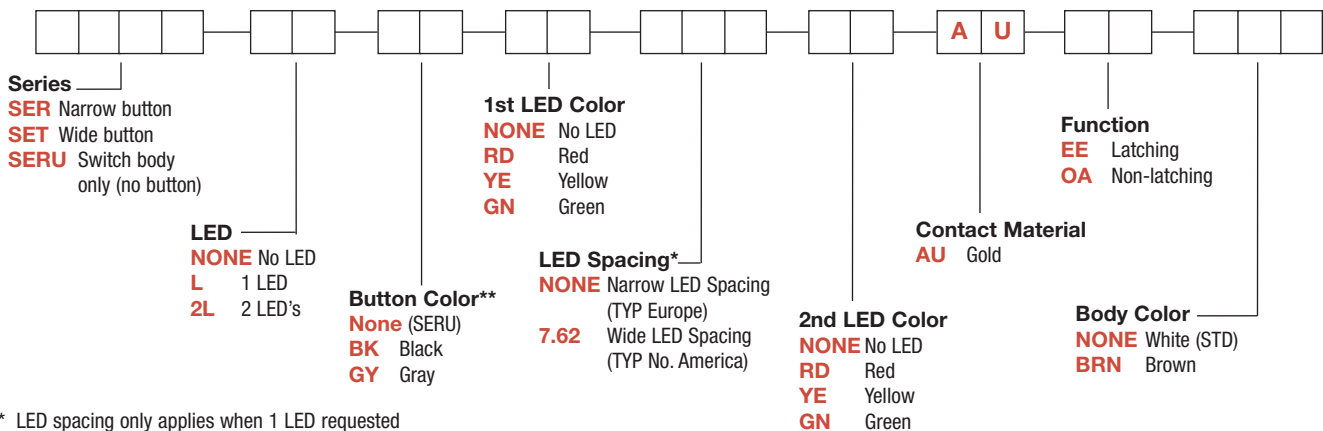
Environmental

OPERATING TEMPERATURE: -25°C to 85°C.

How To Order

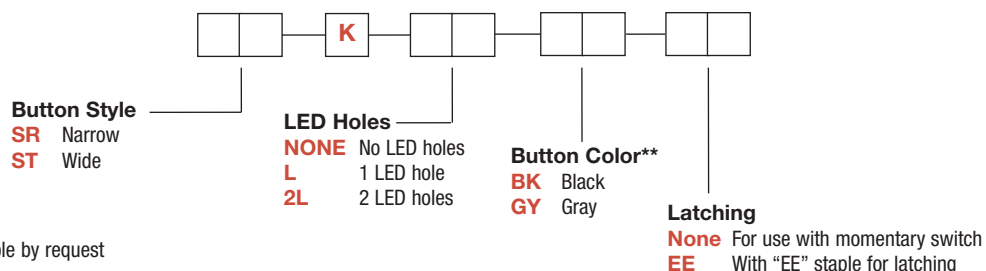
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

Switch



* LED spacing only applies when 1 LED requested

Button



** Additional button colors available by request



Dimensions are shown: mm (inch)
 Specifications and dimensions subject to change

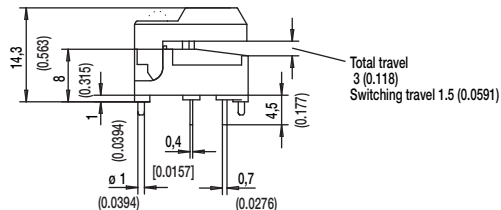
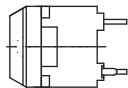
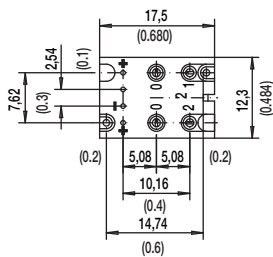
www.ck-components.com

DIGITAST Microminiature SPDT, Key Switches

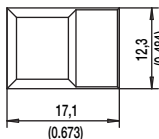
DESIGNATION



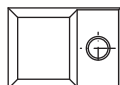
SER NARROW BUTTON



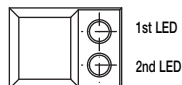
SER



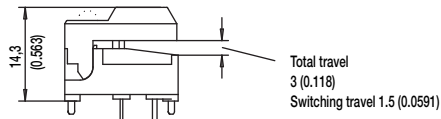
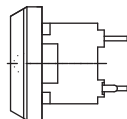
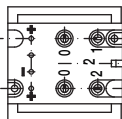
SERL



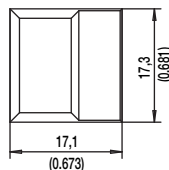
SER2L



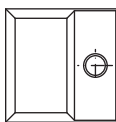
SET WIDE BUTTON



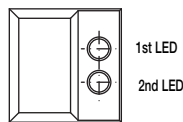
SET



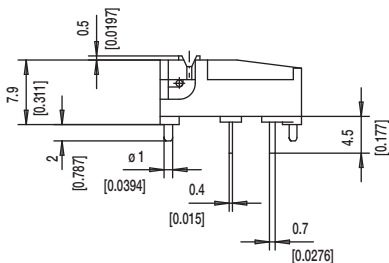
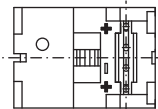
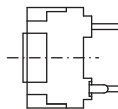
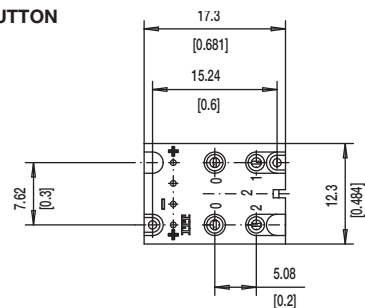
SETL



SET2L



SERU NO BUTTON



First Angle
Projection

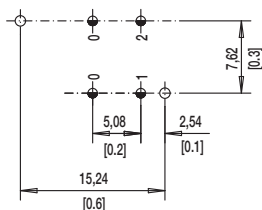
Dimensions are shown: mm (inch)
Specifications and dimensions subject to change

DIGITAST

Microminiature SPDT, Key Switches

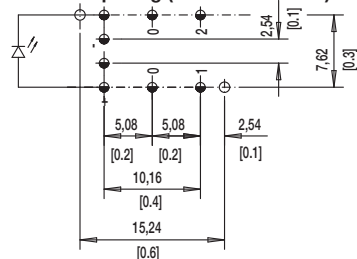
LED

NONE NO LED

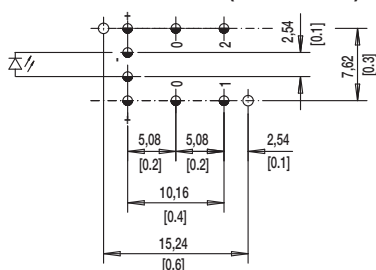


L 1 LEDs

7.62 mm Spacing (TYP No. America)

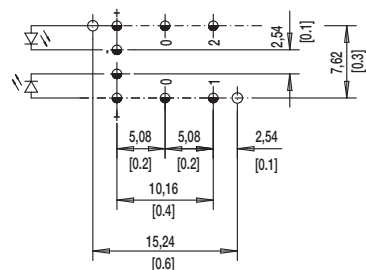


NARROW SPACING (TYP EUROPE)



TOP VIEW OF PCB

2L 2 LEDs



$\phi 1.0 \pm 0.1$ (0.0394 \pm 0.00349)

$\phi 1.1 \pm 0.05$ (0.0433 \pm 0.00197)

BUTTON COLOR

BK BLACK

GY GRAY

Other button colors available by request [red (RD), green (GN), white (WH), yellow (YE), blue (BU), orange (OG)].

LED COLOR

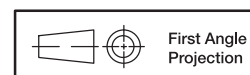
| OPTION CODE | COLOR |
|-------------|--------------------|
| NONE | Models without LED |
| RD | Red |
| GN | Green |
| YE | Yellow |

CONTACT MATERIAL

| OPTION CODE | MATERIAL |
|-------------|----------|
| AU | Gold |

FUNCTION

| OPTION CODE | COLOR | SCHEMATIC |
|-------------|-----------|-----------|
| OA | Momentary | |
| EE | Push-Push | |



Dimensions are shown: mm (inch)
Specifications and dimensions subject to change