

C&K LC Series Subminiature Precision Snap-acting Switches



Features/Benefits

- Compact design
- Long life and high electrical capacity
- Quick connect, wire lead or PC mounting
- Wide variety of actuator styles

Typical Applications

- Motorized equipment
- Sump pump
- Thermostatic controls



Models Available

Specifications

CONTACT RATING: From low level* to 10.1 AMPS @ 250 V AC.

ELECTRICAL LIFE: 100,000 cycles at 5 AMPS @ 250 V AC.

INSULATION RESISTANCE: 1,000 M ohm min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -17°F to 185°F (-25°C to 85°C).

OPERATING FORCE: From 142 to 170 grams at actuator button.

Forces are less at free end of lever actuators; (see OPERATING FORCE and ACTUATOR option sections).

MOUNTING: 2-56 screws, torque 2.3 in/lbs max.

* Low Level=conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max.

NOTE: For the latest information regarding RoHS compliance, please go to: www.ittcannon.com/rohs.

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

Materials

SWITCH HOUSING: Thermoplastic polyester or high temperature thermoplastic (PTS) (UL 94V-0).

ACTUATOR BUTTON: Thermoplastic polyester (UL 94V-0).

SPRING: Copper alloy.

PIVOT: Copper alloy.

MOVABLE CONTACTS: Fine silver for ratings greater than 1 AMP @ 125 V AC. Fine silver with 24K gold plate for 1 AMP @ 125 V AC or less.

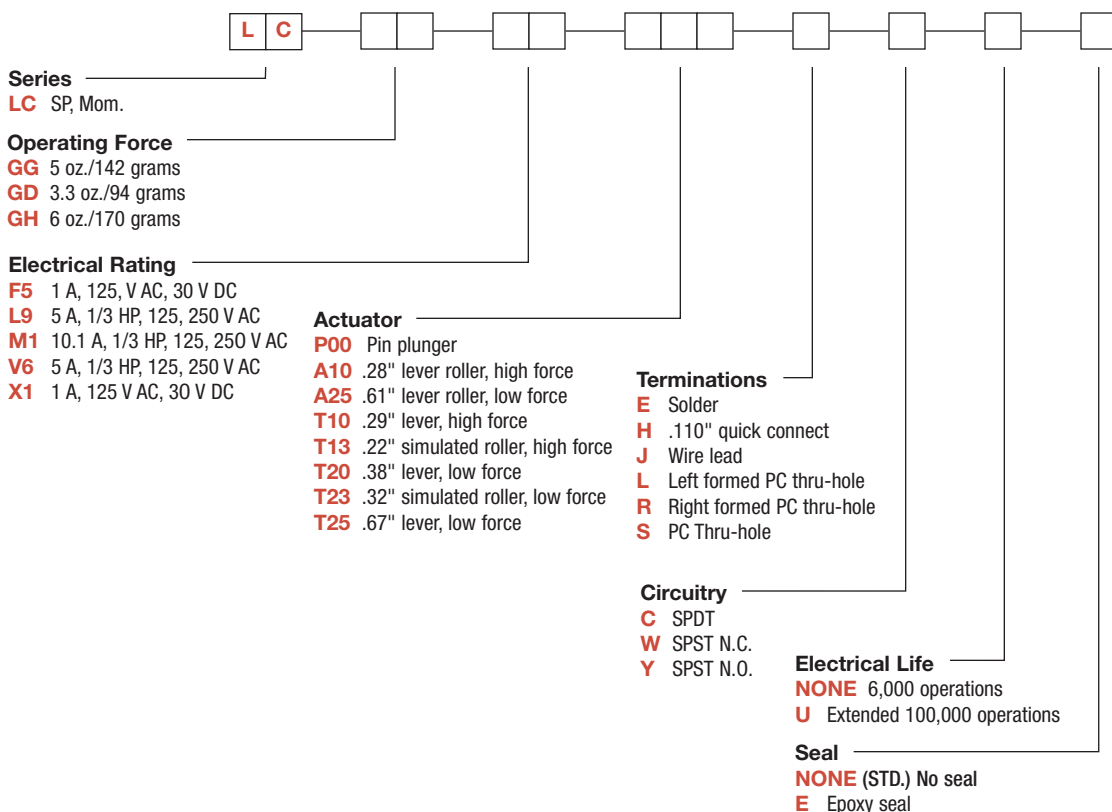
STATIONARY CONTACTS: Fine silver welded on copper alloy for ratings greater than 1 AMP @ 125 V AC. Gold alloy welded on copper alloy for ratings less than 1 AMP @ 125 V AC.

TERMINALS: Copper alloy.

TERMINAL SEAL: Epoxy.

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages K-18 through K-20. For additional options not shown in catalog, consult Customer Service Center.



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

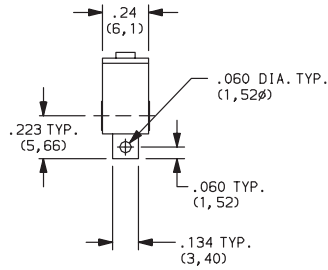
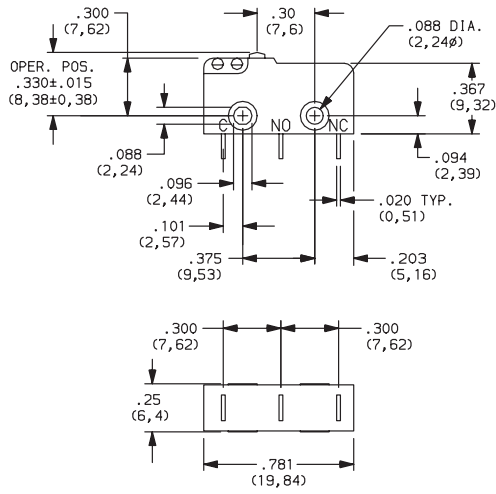


Snap-acting

C&K LC Series Subminiature Precision Snap-acting Switches

SERIES

LC SUBMINIATURE PRECISION SNAP-ACTING SWITCHES
SP MOMENTARY



K

Snap-acting

OPERATING FORCE

| OPTION CODE | BASIC SWITCH OPERATING FORCES (OZ./GRAMS) |
|-------------|---|
| GG | 5 142 |
| GD | 3.3 94 |
| GH | 6 170 |

NOTE: Operating force varies with actuator option, see ACTUATOR option section.

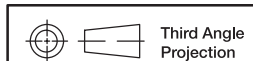
ELECTRICAL RATING

| OPTION CODE | | | | CONTACT MATERIAL | | ELECTRICAL RATING |
|-------------|---------------|-----------------|------------------|----------------------------------|---|---|
| DOMESTIC | INTERNATIONAL | RoHS COMPLIANT* | RoHS COMPATIBLE* | MOVABLE CONTACT | STATIONARY CONTACT | |
| F5 | X1 | Yes | Yes | Fine silver with 24K gold plate. | Fine silver with 24K gold plate on copper base alloy. | From low level* to 1 AMP @ 125 V AC, 30 V DC. |
| L9 | V6 | Yes | Yes | Fine silver. | Fine silver welded on copper base alloy. | 5 AMPS, 1/3 HP @ 125 & 250 V AC. |
| M1 | | Yes | Yes | | | 10.1 AMPS, 1/3 HP @ 125 & 250 V AC. |

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications.

All models with all options, also available.

Consult Customer Service Center for availability and delivery of nonstandard ratings.
*Low Level = conditions where no arcing occurs during switching, i.e., 0.4 VA max. @ 20 V AC or DC max.



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ACTUATOR

| OPTION CODE | FIG. | DIM. A | DIM. B | DIM. C |
|-------------|------|---------------|-------------------------------|--------------------|
| P00 | 1 | .30 (7,6) | .330 ± .015 (8,38 ± 0,38) | — |
| A10 | 7 | .28 (7,1) | .560 ± .070 (14,22 ± 1,78) | .19 dia. (4,8Ø) |
| A25 | 2 | .61 (15,5) | .560 ± .175 (14,22 ± 4,45) | .19 dia. (4,8Ø) |
| T10 | 3 | .29 (7,4) | .340 ± .070 (8,64 ± 1,78) | — |
| T13 | 5 | .22 (5,6) | .455 ± .065 (11,56 ± 1,65) | — |
| T20 | 4 | .39 (9,9) | .340 ± .140 (8,64 ± 3,56) | — |
| T23 | 6 | .32 (8,1) | .455 ± .125 (11,56 ± 3,18) | — |
| T25 | 4 | .67 (17,0) | .340 ± .185 (8,64 ± 4,70) | — |

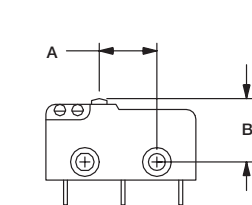


FIG. 1
Pin Plunger

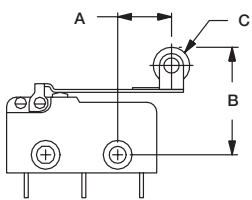


FIG. 2
Lever Roller

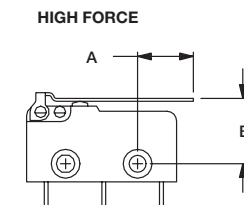


FIG. 3
Lever

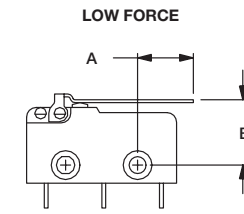


FIG. 4
Lever

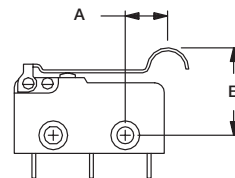


FIG. 5
Simulated Roller

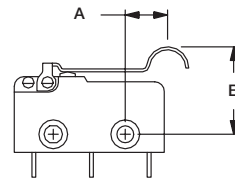


FIG. 6
Simulated Roller

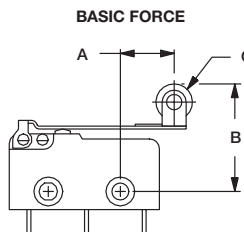


FIG. 7
Lever Roller

SWITCH CHARACTERISTICS

| OPTION CODE | MAXIMUM OPERATING FORCE (OZ./GRAMS) | | | MINIMUM RELEASE FORCE (OZ./GRAMS) | | | MAXIMUM DIFFERENTIAL TRAVEL | MAXIMUM PRETRAVEL | MINIMUM OVERTRAVEL |
|-------------|-------------------------------------|-----------|-----------|-----------------------------------|-----------|------------|-----------------------------|-------------------|--------------------|
| | GG | GD | GH | GG | GD | GH | ALL FORCES | ALL FORCES | ALL FORCES |
| A10 | 1.69 48 | 1 28 | 2.0 57 | .21 6 | .11 3 | .42 12 | .034 (0,86) | .140 (3,56) | .029 (0,74) |
| A15 | 1.3 37 | .68 19 | 1.6 44 | .16 4.5 | .07 2 | .32 9 | .044 (1,12) | .180 (4,57) | .037 (0,94) |
| A20 | 0.9 26 | .52 15 | 1.1 31 | .11 3 | .05 15 | .21 6 | .067 (1,70) | .272 (6,91) | .053 (1,53) |
| A25 | .70 20 | .42 12 | .85 24 | .07 2 | .04 1 | .16 4.5 | .086 (2,18) | .351 (8,92) | .068 (1,73) |
| P00 | 5 142 | 3.3 95 | 6 170 | 1 28 | .05 14 | 2.0 57 | .004 (0,10) | .030 (0,76) | .010 (0,25) |
| T10 | 1.7 48 | 1 28 | 2.1 60 | .21 6 | .10 3 | .39 11 | .035 (0,90) | .140 (3,56) | .029 (0,74) |
| T13 | 1.8 52 | 1.2 34 | 2.2 62 | .21 6 | .03 1 | .42 12 | .032 (0,81) | .130 (3,30) | .026 (0,66) |
| T20 | 0.9 26 | .52 15 | 1.1 30 | .10 3 | .03 1 | .21 6 | .067 (1,70) | .276 (7,01) | .053 (1,35) |
| T23 | 1.0 28 | .52 15 | 1.2 34 | .10 3 | .03 1 | .21 6 | .062 (1,57) | .252 (6,40) | .049 (1,24) |
| T25 | 0.7 19 | .05 14 | 0.8 24 | .07 2 | .03 1 | .14 4 | .090 (2,29) | .372 (9,45) | .072 (1,83) |

NOTE: For basic switch operating forces, see page K-18.



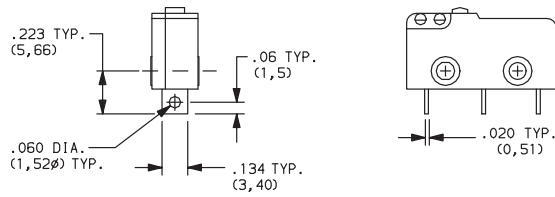
Third Angle Projection
Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change



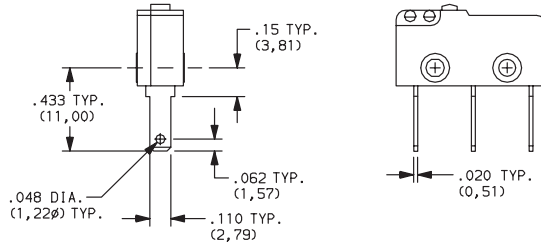
C&K LC Series Subminiature Precision Snap-acting Switches

TERMINATIONS

E SOLDER

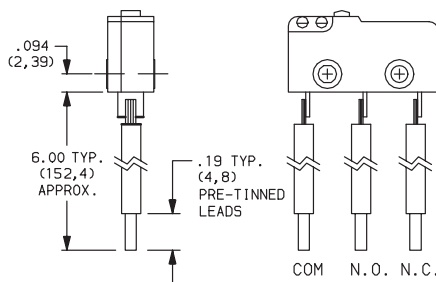


H .110" QUICK CONNECT



NOTE: Use Amp Quick Connect Part No. 640932-1.

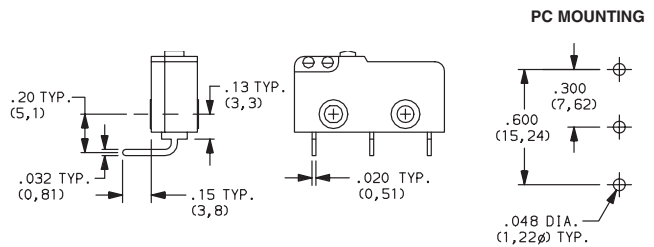
J WIRE LEAD



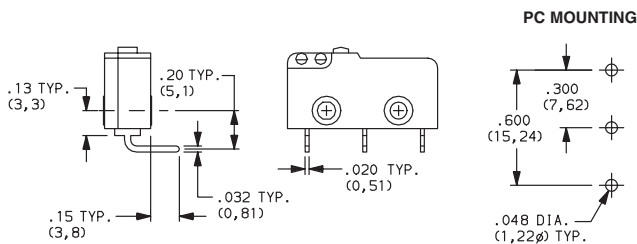
| RATING | WIRE SIZE |
|-----------|-----------|
| 1 AMP | 22 AWG |
| 5 AMPS | 20 AWG |
| 10.1 AMPS | 18 AWG |

| TERMINAL | WIRE COLOR |
|-----------------|------------|
| COMMON | BLACK |
| NORMALLY OPEN | WHITE |
| NORMALLY CLOSED | RED |

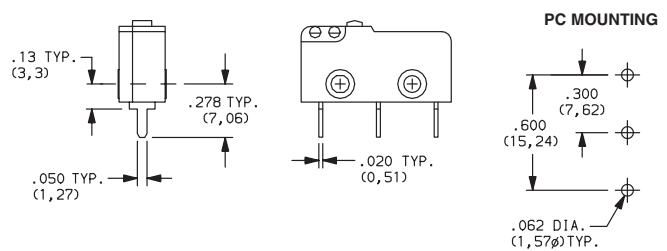
L LEFT FORMED PC THRU-HOLE



R RIGHT FORMED PC THRU-HOLE



S PC THRU-HOLE



CIRCUITRY

C SPDT (Single Pole, Double Throw)

W SPST N.C. (Single Pole, Single Throw, Normally Closed)

Y SPST N.O. (Single Pole, Single Throw, Normally Open)

ELECTRICAL LIFE

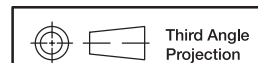
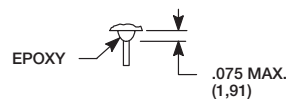
NONE 6,000 OPERATIONS

U EXTENDED 100,000 OPERATIONS

SEAL

NONE NO SEAL

E EPOXY SEAL



Third Angle Projection

Dimensions are shown: Inch (mm)
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Snap-acting
K