

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**



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 Ω 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: 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

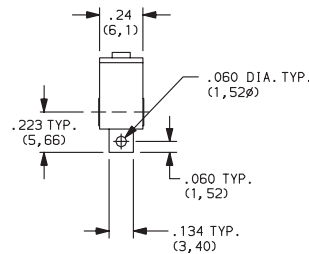
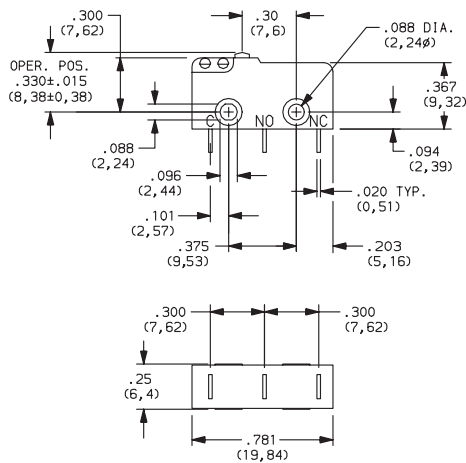
To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages J-19 thru J-22. For additional options not shown in catalog, consult Customer Service Center.

Series LC (STD.) SP, Mom. Operating Force GG (STD.) 5 oz./142 grams GD 3.3 oz./94 grams GH 6 oz./170 grams Electrical Rating F5 (STD.) 1 A, 250, V AC, 30 V DC L9 5 A, 1/3 HP, 125, 250 V AC M1 10.1 A, 1/3 HP, 125, 250 V AC M8 0.1 A, 125 V AC, 30 V DC V6 5 A, 1/3 HP, 125, 250 V AC X1 1 A, 125 V AC, 30 V DC	Actuator P00 (STD.) Pin plunger A10 .28" lever roller, high force A25 .61" lever roller, low force T10 .29" lever, high force T13 .22" simulated roller, high force T20 .38" lever, low force T23 .32" simulated roller, low force T25 .67" lever, low force	Terminations E (STD.) Solder D .093" quick connect H .110" quick connect J Wire lead L Left formed PC thru-hole R Right formed PC thru-hole S PC Thru-hole Circuitry C (STD.) SPDT W SPST N.C. Y SPST N.O.	Electrical Life NONE (STD.) 6,000 operations U Extended 100,000 operations Seal NONE (STD.) No seal E Epoxy seal
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C&K LC Series Subminiature Precision Snap-acting Switches

SERIES ■ ■ ■ ■ ■ ■ ■ ■ ■ ■

LC (STD.) SUBMINIATURE PRECISION SNAP-ACTING SWITCHES
SP MOMENTARY



OPERATING FORCE ■ ■ ■ ■ ■ ■ ■ ■ ■ ■

OPTION CODE	BASIC SWITCH OPERATING FORCES (OZ./GRAMS)
GG (STD.)	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 UL	INTERNATIONAL UL	MOVABLE CONTACT	STATIONARY CONTACT	
F5 (STD.)	X1	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	Fine silver.	Fine silver welded on copper base alloy.	5 AMPS, 1/3 HP @ 125 & 250 V AC.
M1				10.1 AMPS, 1/3 HP @ 125 & 250 V AC.
M8		Fine silver with 24K gold plate.	Fine silver with 24K gold plate on copper base alloy.	From low level* to 0.1 AMP @ 125 V AC, 30 V DC.

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 (STD.)	7	.30 (7,6)	.330 ± .015 (8,38 ± 0,38)	—
A10	1	.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)	—

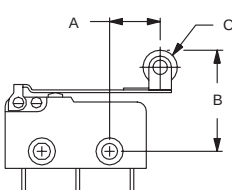


FIG. 1
Lever Roller

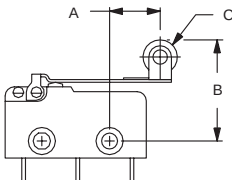


FIG. 2
Lever Roller

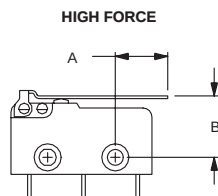


FIG. 3
Lever

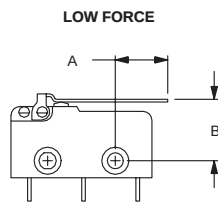


FIG. 4
Lever

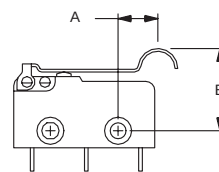


FIG. 5
Simulated Roller

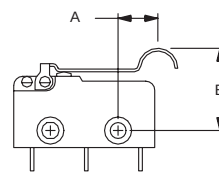


FIG. 6
Simulated Roller

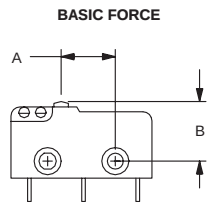


FIG. 7
Pin Plunger

SWITCH CHARACTERISTICS

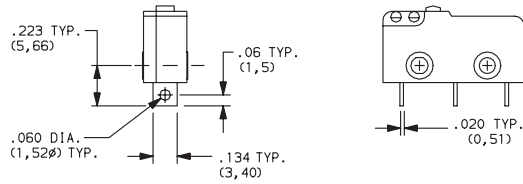
OPTION CODE	MAXIMUM OPERATING FORCE (OZ./GRAMS)			MINIMUM RELEASE FORCE (OZ./GRAMS)			MAXIMUM DIFFERENTIAL TRAVEL	MAXIMUM PRETRAVEL	MINIMUM OVERTRAVEL
	GG	GD	GH	GG	GD	GH	ALL FORCES	ALL FORCES	ALL FORCES
A10	1.69 48	1 28	2.0 57	.21 6	.11 3	.42 12	.034 (0,86)	.140 (3,56)	.029 (0,74)
A15	1.3 37	.68 19	1.6 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 J-19.

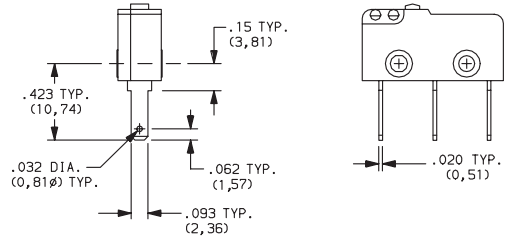
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TERMINATIONS

E (STD.) SOLDER

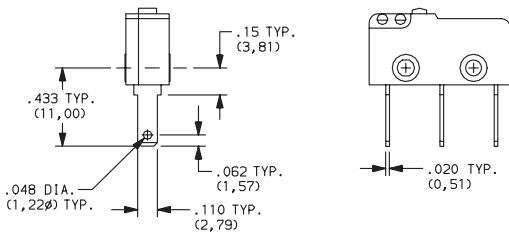


D .093" QUICK CONNECT



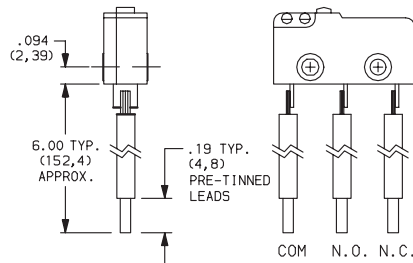
NOTE: Use Amp Quick Connect Part No. 60432-1.

H .110" QUICK CONNECT



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

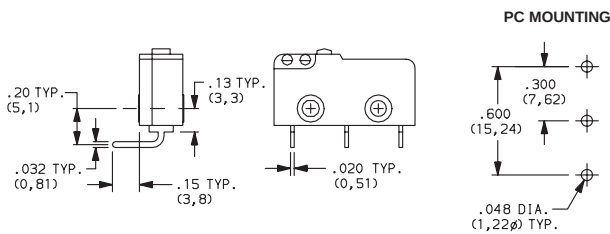
J WIRE LEAD



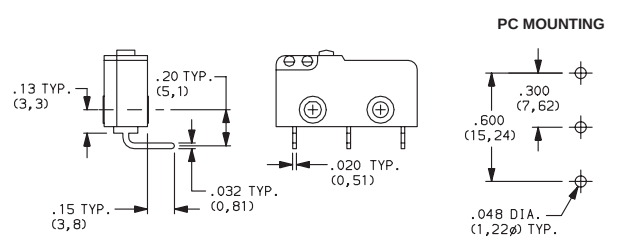
RATING	WIRE SIZE
1 AMP	22 AWG
5 AMPS	20 AWG
10.1 AMPS	18 AWG

TERMINAL	WIRE COLOR
COMMON	BLACK
NORMALLY OPEN	WHITE
NORMALLY CLOSED	RED

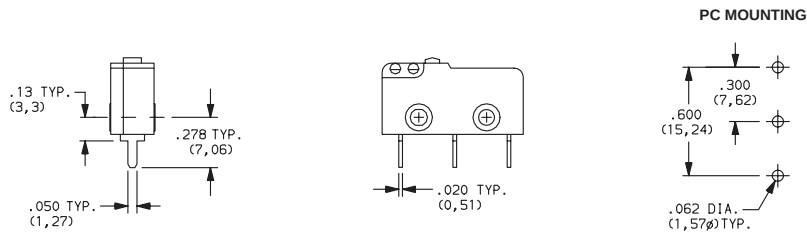
L LEFT FORMED PC THRU-HOLE



R RIGHT FORMED PC THRU-HOLE



S PC THRU-HOLE



CIRCUITRY

C (STD.) 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)



Third Angle
Projection

Dimensions are shown: IN (mm)
Dimensions subject to change

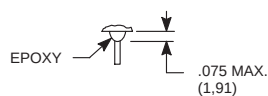
C&K LC Series Subminiature Precision Snap-acting Switches

NONE (STD.) 6,000 OPERATIONS

U EXTENDED 100,000 OPERATIONS

NONE (STD.) NO SEAL

E EPOXY SEAL



Snap-acting



ITT Industries

Cannon

Dimensions are shown: IN (mm)
Dimensions subject to change

www.ittcannon.com