

C&K A Series 4, 5 & 6 Tumbler 1-4 Pole Switchlocks

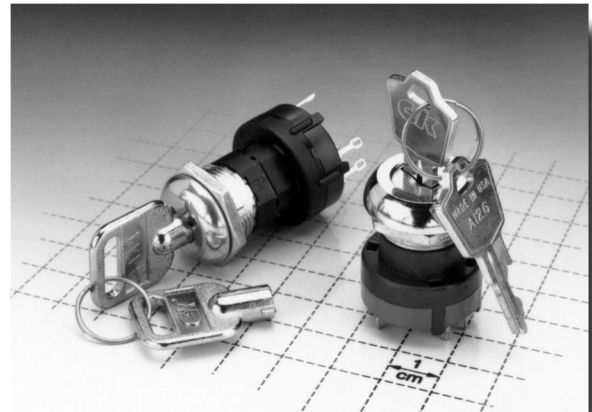


Features/Benefits

- Multi-pole and multi-position
- Shorting and non-shorting contacts available
- Low level and power capability
- PCB mounting

Typical Applications

- Security alarm systems
- Medical equipment
- Computer servers



Switchlock

Build-A-Switch

Our easy Build-A-Switch concept allows you to mix and match options to create the switch you need. Below is a complete listing of options shown in catalog. To order, simply select desired option from each category and place in the appropriate box. Switchlocks with standard options are shown on page H-36. Available options are shown and described on pages H-37 thru H-41. For additional options not shown in catalog, consult Customer Service Center.

Typical Example: A 2 1 6 1 3 — 2 — A — 2 — N — Z — N — Q — —

Switch and Lock Function

A21613 (STD.) DP, 30° Index

A2151U (STD.) DP, 45° Index

A11413 SP, 90° Index

A21413 DP, 90° Index

A31413 3P, 90° Index

A1141C SP, 90° Index

A2141C DP, 90° Index

A3141C 3P, 90° Index

A1141U SP, 90° Index

A2141U DP, 90° Index

A3141U 3P, 90° Index

A11513 SP, 45° Index

A21513 DP, 45° Index

A31513 3P, 45° Index

A1151C SP, 45° Index

A2151C DP, 45° Index

A3151C 3P, 45° Index

A1151U SP, 45° Index

A3151U 3P, 45° Index

A11582 SP, 45° Index

A21582 DP, 45° Index

A11613 SP, 30° Index

A31613 3P, 30° Index

A1161C SP, 30° Index

A2161C DP, 30° Index

A3161C 3P, 30° Index

A1161U SP, 30° Index

A2161U DP, 30° Index

A3161U 3P, 30° Index

A11773 SP, 90° Index

A1177C SP, 90° Index

A1177U SP, 90° Index

A12019 SP, 30° Index

A22019 DP, 30° Index

A32019 3P, 30° Index

A42019 4P, 30° Index

Keying

2 (STD.) Two nickel plated brass keys (4 tumbler) or two die cast zinc alloy keys with chrome plating (6 tumbler)

J One nickel plated brass key with plastic insert molded round head and one nickel plated brass key

T One nickel plated brass key with plastic insert molded square head and one nickel plated brass key

Lock Type

A (STD.) 4 Tumbler lock

W (STD.) 6 Tumbler tubular lock with anti-static switch

G 5 Tumbler lock with anti-static switch

Y 4 Tumbler lock with anti-static switch

B 5 Tumbler lock

Lock Finish

2 (STD.) Stainless steel facing

1 Nickel plated with removable dress nut

4 Polished nickel with removable dress nut

8 Gloss black facing

F Polished nickel facing

Shorting/Non-Shorting

N (STD.) Non-shorting contacts

S Shorting contacts

Terminations

Z (STD.) Solder lug

C PC Thru-hole

Mounting/Lock Style

N (STD.) With nut

D With clip

R With removable dress nut

Contact Material

Q (STD.) Silver

B Gold

G Gold over silver

Seal

NONE (STD.) No seal

E Epoxy seal

Key Color

NONE (STD.) Nickel plated brass (4 & 5 tumbler) or chrome plated zinc alloy (6 tumbler)

1 White

2 Black

3 Red

T Beige

A12112 SP, 45° Index

A22112 DP, 45° Index

A32112 3P, 45° Index

A42112 4P, 45° Index

A12310 SP, 30° Index

A22310 DP, 30° Index

A32310 3P, 30° Index

A42310 4P, 30° Index



ITT Industries

Cannon

C&K A Series

4 & 5 Tumbler & 6 Tumbler 1-4 Pole Switchlocks

Specifications

CONTACT RATING: Q contact material: Switch-2.5 AMPS @ 125 V AC; 350 mA @ 125 V DC (UL/CSA). Carry-5 AMPS continuous. See page H-41 for additional ratings.

ELECTRICAL LIFE: 15,000 make-and-break cycles at full load up to 300,000 detent operations.

CONTACT RESISTANCE: Below 20 milliohms typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10^9 ohms min.

DIELECTRIC STRENGTH: 1,000 V RMS min. @ sea level.

OPERATING TEMPERATURE: -30°C to 85°C .

INDEXING: 30° , 2-4 positions. 45° or 90° , 2-3 positions.

STATIC RESISTANCE: Anti-static models exceed 20 KV DC static resistance @ sea level, lock body to terminals.

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

Materials

LOCK: Zinc alloy with stainless steel facing (4 & 5 tumbler locks and 6 tumbler tubular lock).

KEYS: Two nickel plated brass keys with code number (4 & 5 tumbler lock). Two die cast chrome plated zinc alloy keys (6 tumbler lock).

SWITCH HOUSING: Glass filled 6/6 nylon (UL 94V-0).

MOVABLE CONTACT: Q contact material: Coin silver, silver plated. See page H-41 for additional contact materials.

STATIONARY CONTACTS & TERMINALS: Q contact material: Brass, silver plated. See page H-41 for additional contact materials.

MOUNTING NUT: Zinc alloy or steel, nickel or bright zinc plated.

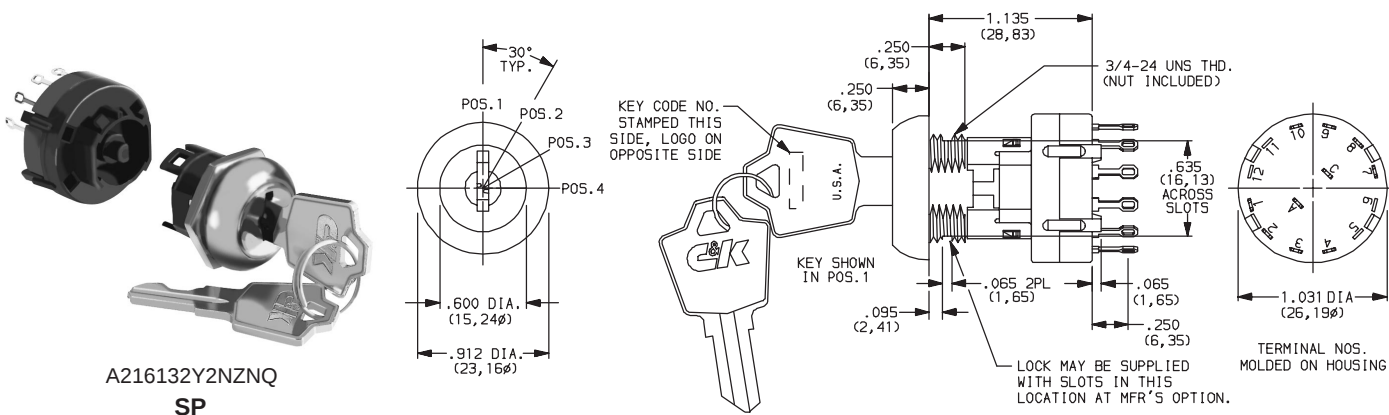
MOUNTING CLIP: Steel, nickel or bright zinc plated.

DRESS NUT: Brass, nickel plated.

LOCKING RING: 6/6 nylon (UL 94V-2).

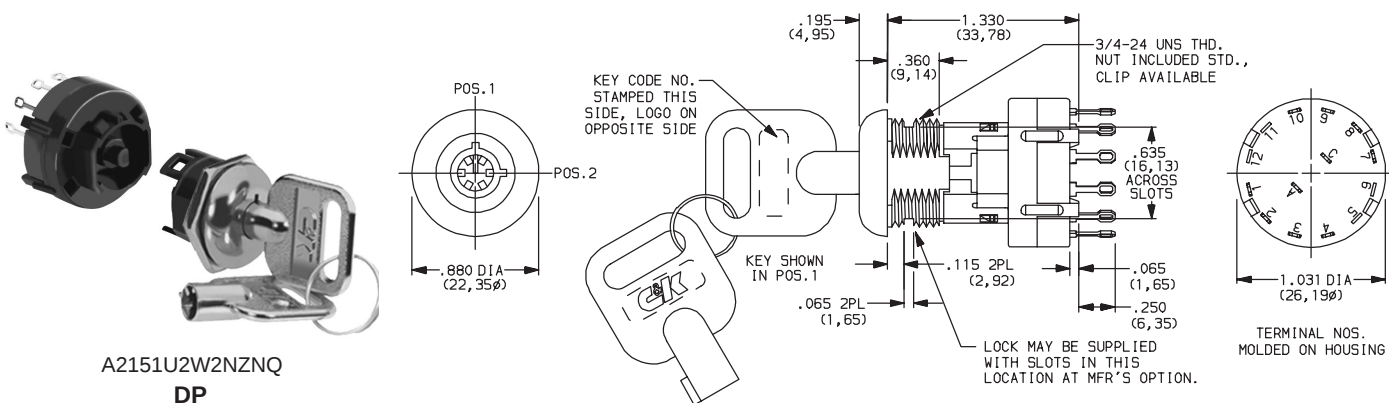
TERMINAL SEAL: Epoxy.

SWITCHLOCKS WITH STANDARD OPTIONS



PART NUMBER	NO. TUMBLERS	INDEXING
A216132Y2NZNQ	4	30°

NOTE: For panel mounting information, see page H-40.



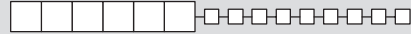
PART NUMBER	NO. TUMBLERS	INDEXING
A2151U2W2NZNQ	6	45°

NOTE: For panel mounting information, see page H-40.

C&K A Series

4, 5 & 6 Tumbler 1-4 Pole Switchlocks

SWITCH AND LOCK FUNCTION



H

Switchlock

NO. TUMBLERS	NO. POLES	MODEL NO.	CONNECTED TERMINALS				KEY PULL POSITIONS	LOCK CONFIGURATION	INDEXING
			POS. 1	POS. 2	POS.3	POS.4			
4, 5 & 6	SP DP 3P	A11413* A21413 A31413	A-1 A-1, C-7 A-1, B-5, C-9	A-4 A-4, C-10 A-4, B-8, C-12			Position 1		90°
4 & 5	SP DP 3P	A1141C* A2141C A3141C	A-1 A-1, C-7 A-1, B-5, C-9	A-4 A-4, C-10 A-4, B-8, C-12			Position 2		
4, 5 & 6	SP DP 3P	A1141U* A2141U A3141U	A-1 A-1, C-7 A-1, B-5, C-9	A-4 A-4, C-10 A-4, B-8, C-12			Positions 1 & 2		
4, 5 & 6	SP DP 3P	A11513* A21513 A31513	A-1 A-1, C-7 A-1, B-5, C-9	A-2 A-2, C-8 A-2, B-6, C-10	A-4 A-4, C-10 A-4, B-8, C-12		Position 1		45°
4 & 5	SP DP 3P	A1151C* A2151C A3151C	A-1 A-1, C-7 A-1, B-5, C-9	A-2 A-2, C-8 A-2, B-6, C-10	A-4 A-4, C-10 A-4, B-8, C-12		Position 3		
4, 5 & 6	SP DP 3P	A1151U* A2151U A3151U	A-1 A-1, C-7 A-1, B-5, C-9	A-2 A-2, C-8 A-2, B-6, C-10	A-4 A-4, C-10 A-4, B-8, C-12		Positions 1 & 3		
4 & 5	SP DP	A11582 A21582	A-4 A-4, C-10	A-5 A-5, C-11	A-2 A-2, C-8		Position 1		30°
4 & 5	SP DP 3P	A11613* A21613 A31613	A-1 A-1, C-7 A-1, B-5, C-9	A-2 A-2, C-8 A-2, B-6, C-10	A-3 A-3, C-9 A-3, B-7, C-11	A-4 A-4, C-10 A-4, B-8, C-12	Position 1		
4 & 5	SP DP 3P	A1161C* A2161C A3161C	A-1 A-1, C-7 A-1, B-5, C-9	A-2 A-2, C-8 A-2, B-6, C-10	A-3 A-3, C-9 A-3, B-7, C-11	A-4 A-4, C-10 A-4, B-8, C-12	Position 4		
4 & 5	SP DP 3P	A1161U* A2161U A3161U	A-1 A-1, C-7 A-1, B-5, C-9	A-2 A-2, C-8 A-2, B-6, C-10	A-3 A-3, C-9 A-3, B-7, C-11	A-4 A-4, C-10 A-4, B-8, C-12	Positions 1 & 4		
4 & 5	SP	A11773	A-1	A-4	A-10		Position 1		90°

LEGEND

- = Detent Positions (30°, 45° or 90°)
- ⊙ = Key pull possible in these positions.
- ⊙ = Stop Positions

TERMINAL NUMBERS



4P MODEL



3P MODEL

***NOTE:** Switchlock models A114XX, A115XX and A116XX with 'C' terminations have additional terminal no. 8 as switch support only. This terminal is not connected electrically inside switch.

All models with all options when ordered with 'G' or 'Q' contact material.

AX14 and AX17 models not available with 'S' shorting contacts.

SP MODEL (omit terminals B, C & D)
DP MODEL (omit terminals B & D)

Terminal numbers molded on housing bottom.

C&K A Series

4 & 5 Tumbler & 6 Tumbler 1-4 Pole Switchlocks

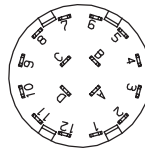
SWITCH AND LOCK FUNCTION

NO. TUMBLERS	NO. POLES	MODEL NO.	CONNECTED TERMINALS			KEY PULL POSITIONS	LOCK CONFIGURATION	INDEXING
			POS. 1	POS. 2	POS. 3			
4 & 5	SP	A1177C	A-1	A-4	A-10	Positions 2, 3		90°
4 & 5	SP	A1177U	A-1	A-4	A-10	Positions 1, 2 & 3		
4 & 5	SP	A12019*	A-1	A-2		Position 1		30°
	DP	A22019	A-1, C-7	A-2, C-8				
	3P	A32019	A-1, B-5, C-9	A-2, B-6, C-10				
	4P	A42019	A-1, B-4, C-7, D-10	A-2, B-5, C-8, D-11				
4 & 5	SP	A12112*	A-1	A-2		Position 1		45°
	DP	A22112	A-1, C-7	A-2, C-8				
	3P	A32112	A-1, B-5, C-9	A-2, B-6, C-10				
	4P	A42112	A-1, B-4, C-7, D-10	A-2, B-5, C-8, D-11				
4 & 5	SP	A12310*	A-1	A-2	A-3	Position 1		30°
	DP	A22310	A-1, C-7	A-2, C-8	A-3, C-9			
	3P	A32310	A-1, B-5, C-9	A-2, B-6, C-10	A-3, B-7, C-11			
	4P	A42310	A-1, B-4, C-7, D-10	A-2, B-5, C-8, D-11	A-3, B-6, C-9, D-12			

LEGEND

- = Detent Positions (30°, 45° or 90°)
- ⊙ = Key pull possible in these positions.
- = Stop Positions

TERMINAL NUMBERS



4P MODEL



3P MODEL

***NOTE:** Switchlock models A12019, A12112, A12310 with 'C' terminations have additional terminal no. 8 as switch support only. This terminal is not connected electrically inside switch.

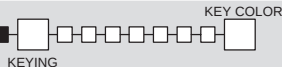
AX20 and AX23 models not available with 'G' or 'Z' lock types.

All models with all options when ordered with 'G' or 'Q' contact material.

SP MODEL (omit terminals B, C & D)
DP MODEL (omit terminals B & D)

Terminal numbers molded on housing bottom.

KEYING

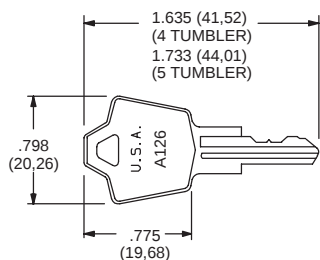


OPTION CODE	KEY OPTIONS	CODE NO. ON KEY	CODE NO. ON LOCK
2	(STD.) 2 NICKEL PLATED BRASS KEYS (4 & 5 TUMBLER) OR 2 DIE CAST CHROME PLATED ZINC ALLOY KEYS (6 TUMBLER)	YES	NO
J	1 NICKEL PLATED BRASS KEY WITH PLASTIC INSERT MOLDED ROUND HEAD & 1 NICKEL PLATED BRASS KEY	YES	NO
T	1 NICKEL PLATED BRASS KEY WITH PLASTIC INSERT MOLDED SQUARE HEAD & 1 NICKEL PLATED BRASS KEY	YES	NO

OPTION CODE	KEY COLOR
NONE	(STD.) NICKEL PLATED BRASS (4 & 5 TUMBLER) OR CHROME PLATED ZINC ALLOY (6 TUMBLER)
1	WHITE
2	BLACK
3	RED
T	BEIGE

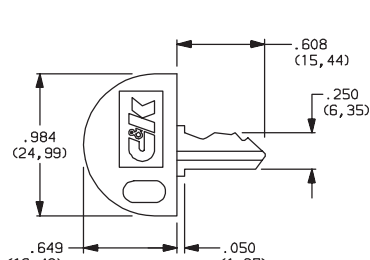
NOTE: All orders keyed alike, standard. For more than one key code, replacement keys or other special features, consult Customer Service Center.

NICKEL PLATED BRASS KEY



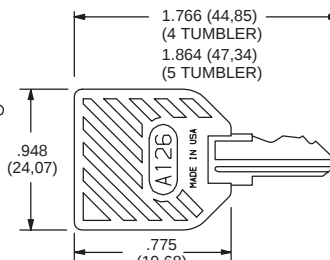
Key part number: 115140126

NICKEL PLATED BRASS KEY WITH PLASTIC INSERT MOLDED ROUND HEAD



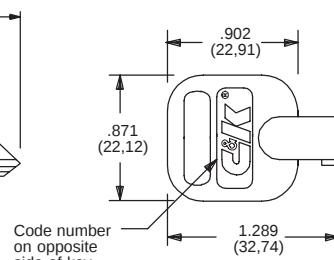
Key part number: 16564112602

NICKEL PLATED BRASS KEY WITH PLASTIC INSERT MOLDED SQUARE HEAD



Key part number: 11599112602

CHROME PLATED ZINC ALLOY KEY

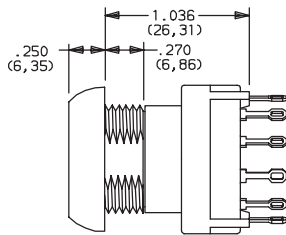


Key part number: 1110801

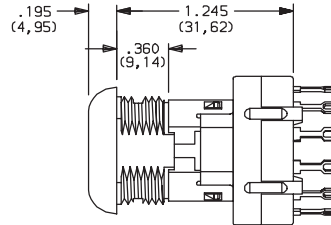
C&K A Series 4, 5 & 6 Tumbler 1-4 Pole Switchlocks

LOCK TYPE

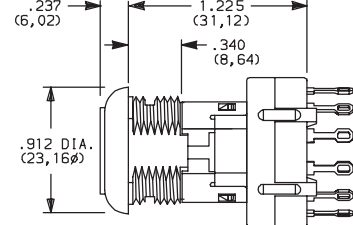
A (STD.) 4 TUMBLER LOCK WITH REMOVABLE DRESS NUT



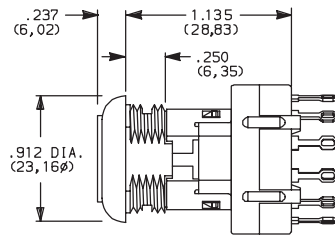
W (STD.) 6 TUMBLER TUBULAR LOCK WITH ANTI-STATIC SNAP-ON SWITCH



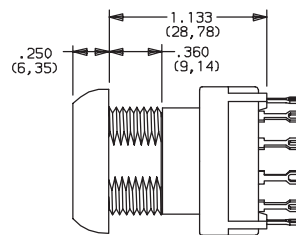
G 5 TUMBLER LOCK WITH ANTI-STATIC SWITCH



Y 4 TUMBLER LOCK WITH ANTI-STATIC SWITCH



B 5 TUMBLER LOCK WITH REMOVABLE DRESS NUT



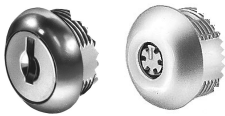
Not available with AX20 and AX23 models.

AVAILABLE OPTION COMBINATIONS			
LOCK TYPES	MOUNTING STYLES		
	D	N	R
G	•	•	
A			•
W	•	•	
Y	•	•	
B			•

NOTE: For available option combinations, see page H-40.

LOCK FINISH

2 (STD.) STAINLESS STEEL



1 NICKEL



4 POLISHED NICKEL



Available with W lock type only.

8 GLOSS BLACK



F POLISHED NICKEL



AVAILABLE OPTION COMBINATIONS								
FINISH OPTIONS	LOCK TYPES					MOUNTING STYLES		
	G	A	W	Y	B	D	N	R
1		●			●			●
2	●		●	●		●		
4		●			●			
8	●	●		●	●	●		●
F	●			●		●		

NOTE: For available option combinations, see page H-40.

SHORTING/NON-SHORTING

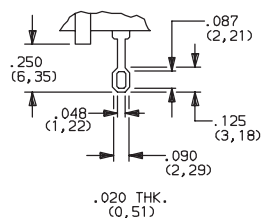
N (STD.) NON-SHORTING CONTACTS (break-before-make)

S SHORTING CONTACTS (make-before-break)

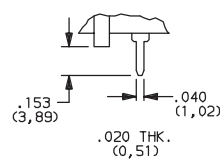
Not available with AX14 and AX17 models.

TERMINATIONS

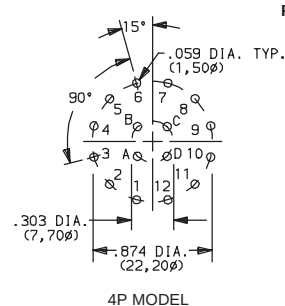
Z (STD.) SOLDER LUG



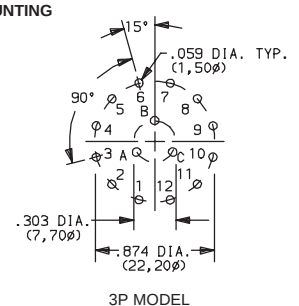
C PC THRU-HOLE



PC MOUNTING

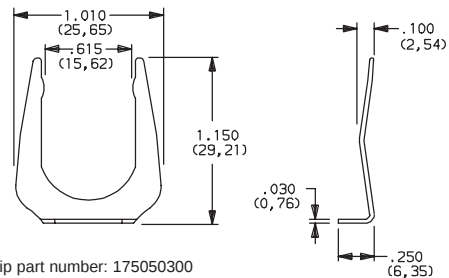


SP MODEL (omit terminals B, C & D)
DP MODEL (omit terminals B & D)



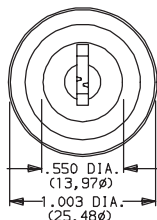
Switchlock

D WITH CLIP



Clip part number: 175050300

Technical drawing of the U.S.A. lock assembly. The drawing shows a side view of the lock with a keyhole on the left. The keyhole is labeled "U.S.A.". The lock body is labeled "REMOVABLE DRESS NUT PART NO. 531300201". The lock is shown with a key inserted. The key is labeled "3/4-24 UNS THD.". The drawing includes dimensions: ".250 (6, 35)" for the key width, "A'" for the key length, and "B'" for the key depth. The drawing also shows a cross-section of the lock body with a keyhole and a key inserted.



REMOVABLE DRESS NUT
PART NO. 531300201

HEX MOUNTING NUT

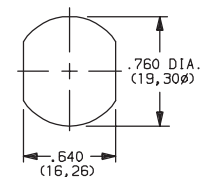
SWITCHLOCK MOUNTS FROM REAR OF PANEL.

LOCK DIMENSIONS		
LOCK TYPES	DIMENSIONS	
	'A'	'B'
A	1.036 (26,31)	.270 (6,68)
B	1.133 (28,78)	.360 (9,14)

Install hex nut with enough clearance to allow for dress nut and panel. Place switch through cutout in rear of panel. Install and tighten dress nut by hand, then tighten hex nut. Always tighten assembly with back of panel hex nut to avoid damaging front of panel.

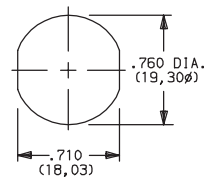
PANEL MOUNTING

MOUNTING STYLES	PANEL THICKNESS		
	A & Y LOCK TYPES	B & G LOCK TYPES	W LOCK TYPES
D	.065-.085 (1,65-2,16)		.085-.105 (2,16-2,67)
N	.105 (2,67) max.	.195 (4,95) max.	.215 (5,46) max.
R	.125 (3,18) max.	.215 (5,46) max.	—



For models with 'N or D' mounting styles.

AVAILABLE OPTION COMBINATIONS										
MOUNTING STYLES	LOCK FINISHES					LOCK TYPES				
	1	2	4	8	F	G	A	W	Y	B
D		●		●	●	●		●	●	
N		●		●	●	●		●	●	
R	●		●	●			●			●

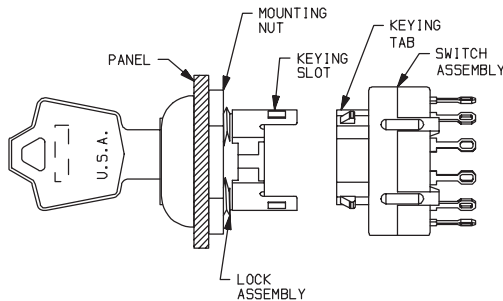


For models with 'R' mounting style.

C&K A Series 4, 5 & 6 Tumbler 1-4 Pole Switchlocks

MOUNTING/LOCK STYLE

Switch and Lock Assembly Instructions



1. Place lock assembly in mounting hole on panel, secure with mounting nut.
2. Align keying tab on switch assembly with keying slot on lock assembly.
3. Snap assemblies together.
4. Switch installation is permanent. Switch cannot be removed from lock after assembly. Attempting to separate switch and lock may cause damage to switchlock.

CONTACT MATERIAL

OPTION CODE	CONTACT AND TERMINAL MATERIAL	RATINGS	
Q (STD.)	SILVER ²	POWER	SWITCH-2.5 AMPS @ 125 V AC; 350 mA @ 125 V DC (UL/CSA). CARRY-5 AMPS CONTINUOUS.
B	GOLD ¹	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
G	GOLD OVER SILVER ³	LOW LEVEL/DRY CIRCUIT OR POWER	0.4 VA MAX. @ 20 V AC OR DC MAX. OR SWITCH-2.5 AMPS @ 125 V AC; 350 mA @ 125 V DC (UL/CSA). CARRY-5 AMPS CONTINUOUS.

CONTACT MATERIAL/APPLICATION RECOMMENDATIONS — SEE CHART, PAGE L-31.

- ¹ MOVABLE CONTACT: Copper alloy, with gold plate over nickel plate.
STATIONARY CONTACTS & TERMINALS: Brass, with gold plate over nickel plate.
- ² MOVABLE CONTACT: Coin silver, silver plated.
STATIONARY CONTACTS & TERMINALS: Brass, silver plated (standard with all termination options).
- ³ MOVABLE CONTACT: Coin silver, with gold plate over nickel plate over silver plate.
STATIONARY CONTACTS & TERMINALS: Brass, with gold plate over nickel plate over silver plate.

All models   with all options when ordered with 'G' or 'Q' contact material.

NOTE: 'G' contact material is equivalent to both 'B' and 'Q' contact materials.

SEAL

NONE (STD.) NO SEAL

E EPOXY SEAL

