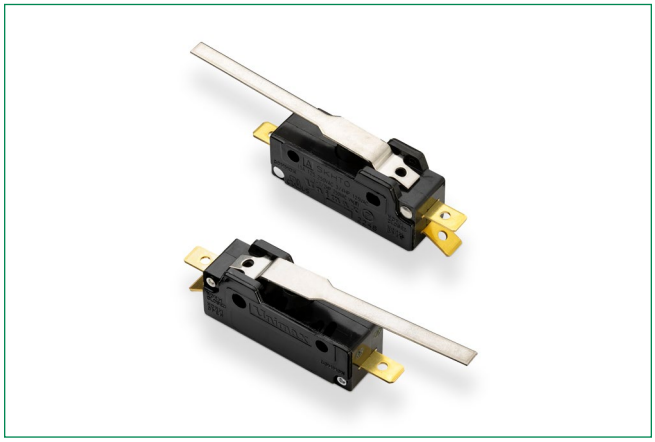
THE DATASHEET OF

A421122A1NZRQ

A Series
General Purpose Snap-acting Switches



Description

The A series are general purpose snap-acting switches, aimed for use in applications such as garage door openers, vending machines or enclosure equipment. The A series is known for being low-cost yet high-performance, with a long electrical life. The A series switches are available in single and double pole varieties and have a sealed actuator option available as well.

Features & Benefits

- Low cost—high performance
- Long electrical life
- Single and double pole
- Sealed actuator option available

Applications

- Enclosure equipment
- Garage door openers
- Vending machines

Agency Approvals

Agency	Agency File Number
c UL us	E42363

Specifications

Contact Rating	From low level[1] to 25 amps @ 277 V AC
Electrical Life	75,000 cycles at 25 amps @ 250 V AC, 200,000 cycles at 15 amps @ 250 V AC.
Insulation Resistance	1,000 M ohm min.
Dielectric Strength	1,000 Vrms min. @ sea level
Operating Temperature	-55°C to +150°C
Operating Force	20 oz. (567 grams) max. SP models. 40 oz. (1134 grams) max. DP models at actuator button.
Mounting	Torque 3 in/lbs max.
Mounting Nut	20 in/lbs max. torque

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

Specifications and materials listed above are for switches with standard options. C&K does provide specific and custom switches at 30 amps @ 277 VAC. Please consult Customer Service Center.

Materials

Switch Housing	Heat resistant phenolic (UL 94V-0)
Actuator Button	
Spring	Copper alloy.
Pivot	Brass alloy for models up to 15 amps. Copper for 25 amp models.
Movable Contacts	Gold alloy for ratings 1 amp or less. Fine silver for ratings up to 15 amps. Silver alloy for ratings of 25 amps.
Stationary Contacts	Gold alloy on brass base alloy for ratings 1 amp or less. Fine silver welded on brass base alloy for ratings greater than 1 amp up to 15 amps. Fine silver welded on copper alloy for ratings 25 amps.
Terminals	Brass alloy for 1 AMP up to 15 amps. Copper alloy for 25 amps.

A Series
General Purpose Snap-acting Switches

Ordering Number

To order. simply select desired option from each category and place in the appropriate box. For additional options not shown in catalog. consult Customer Service Center.

A - x - xx - xx - xx - 4A - x

Series
A: General Purpose Snap-acting Switches

No. Poles
S: SP
D: DP

Operating Force
KH[1]: 20 oz./567 grams
PD[2]: 30 oz./850 grams
GG[1]: 5 oz./142 grams
PF[2]: 40 oz./1134 grams

Electrical Rating
C2: 15 A, 125, 250 V AC; 3/4 HP, 125 V AC; 1 1/2 HP, 250 V AC
F3[3]: 25 A, 125, 250 V AC; 1 HP, 125 V AC; 2 HP, 250 V AC; 2 A, 24 V DC
F5: 1 A, 125 V AC, 30 V DC

Actuator
P0: Pin plunger
T0: Lever
A0: Lever roller
A2: Lever roller, high force
BB: Large red button
B1: Lever black button
J0: High overtravel plunger
L0: Leaf
Q0: High operating position plunger
W0: Leaf roller

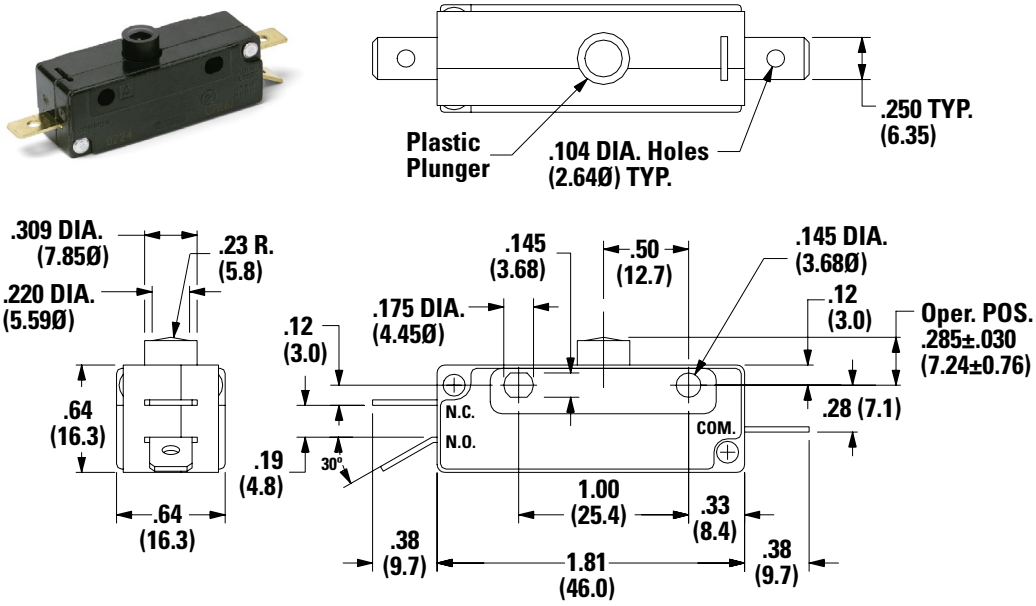
Terminations
4A: .250" quick connect

Circuitry:
C: DT
W: ST N.C.
Y: ST N.O.

Notes:
1. Single Pole
2. Double Pole
3. UL verified ratings, 25A, 125, 250VAC. 2A, 24VDC.

A Series - General Purpose Snap-Acting Switches

No. Poles
S Single Pole Switch Dimensions inches (mm)

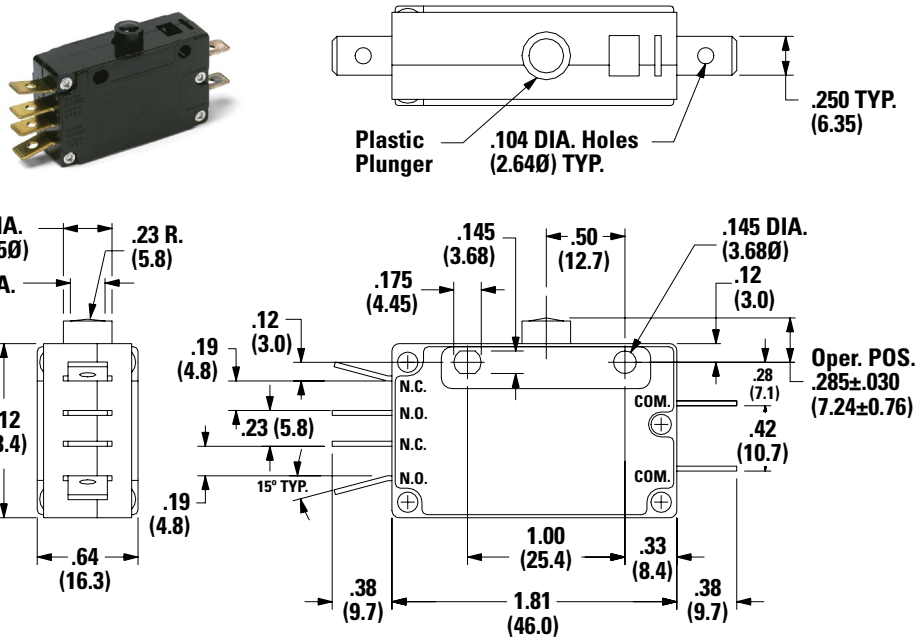


Notes:
Mounting holes will accept pins or screws of 0.139 dia. (3.53) max. on 1.000 (25.40) centers.

Revised: CM.04/09/24

A Series
General Purpose Snap-acting Switches

D Double Pole Switch Dimensions inches (mm)



Notes:
Mounting holes will accept pins or screws of 0.139 dia. (3.53) max., on 1.000 (25.40) centers.
To select switching function, see CIRCUITRY section, page 6.

Operating Force

Option Code	No. Poles	Basic Switch Operating Force (oz./grams)
KH	SP	20/567
PD	DP	30/850
GG	SP	5/142
PF	DP	40/1134

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

Electrical Rating

Option Code	Movable Contact	Stationary Contact	Electrical Rating
C2	Fine silver	Fine silver welded on brass base alloy	15 amps @ 125 & 250 V AC; 3/4 HP @ 125 V AC; 1-1/2 HP @ 250 V AC
F3	Silver Alloy	Silver welded on copper base alloy	25 amps @ 125 & 250 V AC; 1 HP @ 125 V AC; 2 HP @ 250 V AC; 2 amps @ 24 V DC
F5	Gold alloy	Gold alloy on brass base alloy	From low level[1] to 1 amp @ 125 V AC, 30 V DC

Notes: See Technical Data section of this catalog for RoHS compliant and compatible definition and specifications. All models c UL us with all options. Consult Customer Service center for availability and delivery of nonstandard ratings.

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

Available Combinations

Electrical Rating	Operating Force (oz./grams)			
	GG 5/142	KH 20/567	PD 30/850	PF 40/1134
C2	•	•	•	•
F3	X	•	•	•
F5	•	•	•	•

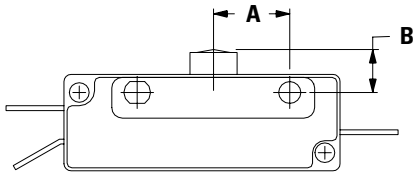
Notes: • Available. X Not available.

A Series
General Purpose Snap-acting Switches

Actuator

Option Code	Fig.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E	Dim. F
P0	1	0.50 (12.7)	0.285 ± 0.030 (7.24 ± 0.76)	–	-	-	-
A0	3	1.38 (35.1)	0.718 ± 0.062 (18.24 ± 1.57)	0.375 dia. (9.53Ø)	0.50 (12.7)	0.50 (12.7)	-
A2	4	1.25 (31.8)	0.718 ± 0.062 (18.24 ± 1.57)	0.375 dia. (9.53Ø)	0.50 (12.7)	-	-
B1	6	1.50 (38.1)	0.40 ± 0.1 (10.2 ± 2.54)	0.98 dia. (24.9Ø)	-	-	-
BB	6	1.50 (38.1)	0.40 ± 0.1 (10.2 ± 2.54)	0.98 dia. (24.9Ø)	-	-	-
J0	5	0.50 (12.7)	0.810 ± 0.030 (20.6 ± 0.8)	0.38 (9.7)	0.25 dia. (6.4Ø)	-	-
L0	2	1.62 (41.1)	0.312 ± 0.062 (17.92 ± 1.57)	0.50 (12.7)	-	-	-
Q0	5	0.50 (12.7)	0.670 ± 0.030 (17.02 ± 0.76)	0.38 (9.6)	0.25 dia. (6.4Ø)	-	-
T0	7	1.50 (38.1)	0.318 ± 0.062 (8.08 ± 1.57)	0.50 (12.7)	0.50 (12.7)	-	-
W0	8	1.50 (38.1)	0.801 ± 0.062 (20.34 ± 1.57)	.375 dia. (9.53Ø)	0.50 (12.7)	-	-

Figure 1 High Overtravel Plunger



Note: The "H0" high overtravel plunger option provides 0.100 (2.54) min. overtravel and longer mechanical life (1,000,000 operations typical).

Figure 2 Leaf

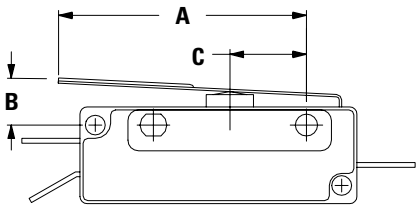


Figure 3 Lever Roller

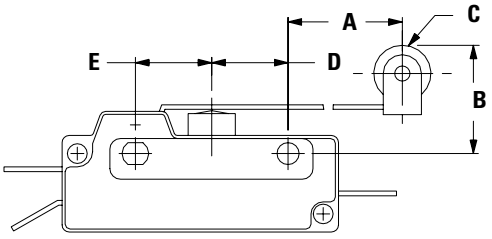


Figure 4 Lever Roller (High Force)

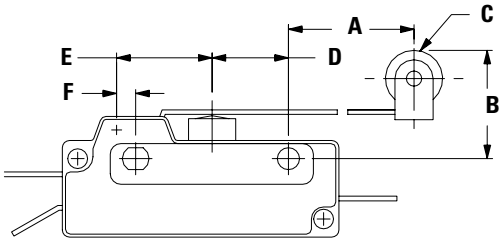
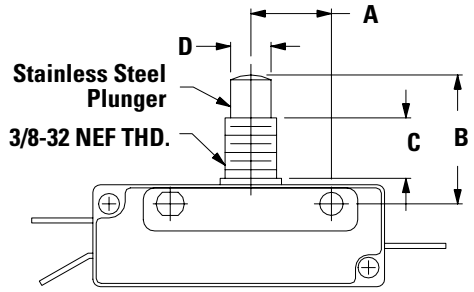
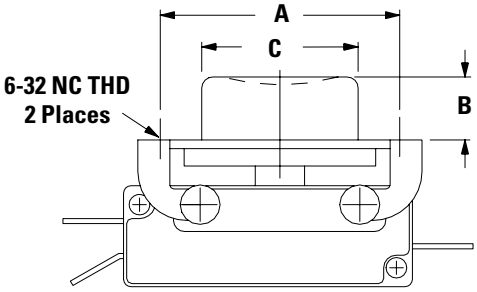


Figure 5 High Overtravel Plunger

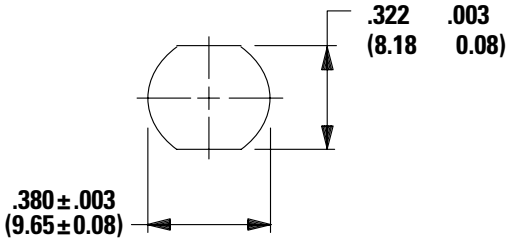


Notes:
Torque 20 in/lbs. max. (Nut)

Figure 6 - B1 Black Button - BB Red Button



Panel Mounting



Panel Mounting

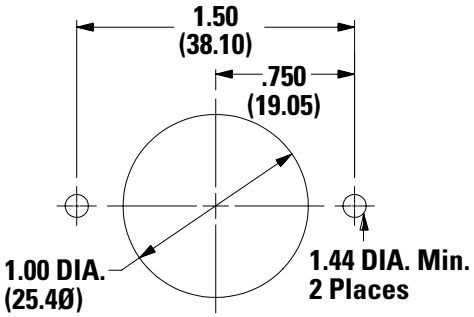


Figure 7 Lever

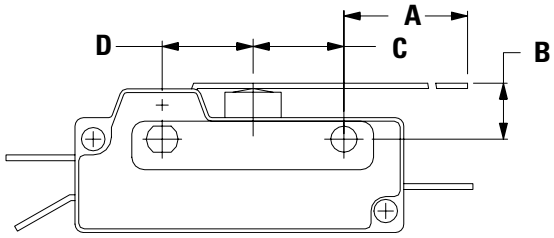
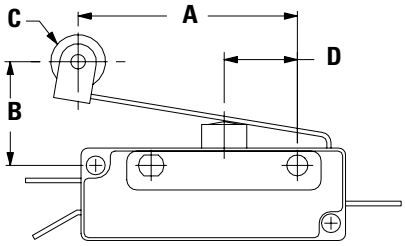


Figure 8 Leaf Roller



A Series
General Purpose Snap-acting Switches

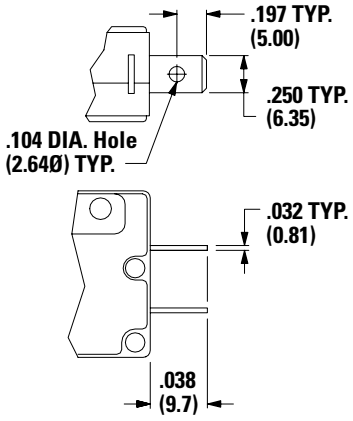
Actuator
Switch Characteristics

Option Code	Max. Operating Force (oz./grams)				Min. Release Force (oz./grams)				Max. Pre-travel				Max. Pre-travel				Operating Position			
	GG S.P.	KH S.P.	PD D.P.	PF D.P.	GG S.P.	KH S.P.	PD D.P.	PF D.P.	GG S.P.	KH S.P.	PD D.P.	PF D.P.	GG S.P.	KH S.P.	PD D.P.	PF D.P.	GG S.P.	KH S.P.	PD D.P.	PF D.P.
A0	1.5 42.5	4 113	6 170	10 283	0.3 8.5	0.5 14	1 28	1 28	0.312 (7.92)				0.312 (7.92)		0.187 (4.75)		0.718 (18.24)			
A2	1.5 42.5	4 113	6 170	10 283	0.4 11	0.5 14	1 28	1 28	0.25 (6.4)				0.14 (5.6)				0.718 (18.24)			
B1	8 227	20 567	30 850	40 1134	1 28	3 85	6 170	6 170	0.050 (1.27)				0.050 (1.27)				-	-	-	-
BB	8 227	20 567	30 850	40 1134	1 28	3 85	6 170	6 170	0.050 (1.27)				0.050 (1.27)				-	-	-	-
J0	5 142	20 567	30 850	40 1134	1 28	3 85	6 170	6 170	0.050 (1.27)				0.187 (4.75)				-	-	-	-
L0	3 85	12 340	18 510	22 624	0.5 14	1 28	2 56.7	2 56.7	0.281 (7.14)				0.062 (1.57)				0.312 (7.92)			
P0	8 227	20 567	30 850	40 1134	1 28	3 85	6 170	6 170	0.050 (1.27)				0.050 (1.27)				-	-	-	-
Q0	5 142	20 567	30 850	40 1134	1 28	3 85	6 170	6 170	0.050 (1.27)				0.050 (1.27)				-	-	-	-
T0	1.5 42.5	4 113	6 170	10 283	0.3 8.5	0.5 14	1 28	1 28	0.312 (7.92)				0.187 (4.75)				0.312 (7.92)			
W0	3 85	12 340	18 510	22 624	0.5 14	1 28	2 56.7	2 56.7	0.281 (7.14)				0.062 (1.57)				0.718 (18.24)			

Note: For basic switch operating forces. see page 3.

Terminations

4A 0.250" Quick Connect



Note: Terminals can be supplied at various angles. Other terminal styles can be supplied for special applications. Consult Customer Service Center for special requirements.

Circuitry

C DT (Double Throw, Normally Closed & Normally Open)
W ST N.C. (Single Throw, Normally Closed)
Y ST N.O. (Single Throw, Normally Open)

Note: To select number of poles, see No. Poles section, pages 2-3.

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