General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 5A @ 125/250V AC or 5A @ 30V DC
Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Note: Find additional explanation of operating range in Supplement section.

Other Ratings

Contact Resistance: 50 milliohms maximum for silver; 100 milliohms maximum for gold
Insulation Resistance: 200 megohms minimum @ 500V DC
Dielectric Strength: 1,000V AC minimum between contacts for 1 minute minimum;
1,500V AC minimum between contacts & case for 1 minute minimum
Mechanical Life: 1,000,000 operations minimum for momentary;
200,000 operations minimum for alternate action
Electrical Life: 10,000 operations minimum for silver;
100,000 operations minimum for silver with resistive load of 3A @ 125V AC
200,000 operations minimum for gold
Nominal Operating Force: Single Pole: 1.9N for Square & 1.9N for Rectangular
Double Pole: 2.55N for Square & 3.1N for Rectangular
Contact Timing: Break before make
Travel: Pretravel .067" (1.7mm); Overtravel .024" (0.6mm); Total Travel .091" (2.3mm)

Materials & Finishes

Housing/Bezel: Glass fiber reinforced polyamide (UL94V-0)
Snap-in Frame: Stainless steel
Movable Contactor: Phosphor bronze
Movable Contacts: Silver alloy or copper with gold plating
Stationary Contacts: Silver alloy or copper with gold plating
Switch Terminals: Phosphor bronze with silver or gold plating
Lamp Terminals: Brass with silver plating
Base: Glass fiber reinforced liquid crystal polymer (UL94V-0)

Environmental Data

Operating Temperature Range: –25°C through +50°C (–13°F through +122°F) for Illuminated
–20°C through +70°C (–4°F through +158°F) for Nonilluminated
Humidity: 90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50G (490m/s^2) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

Cap Installation Force: 7.55N (1.70 lbf) maximum downward force on cap
Soldering Time & Temp: Wave Soldering (PC version): See Profile A in Supplement section.
Manual Soldering: See Profile A in Supplement section.
Cleaning: These devices are not process sealed. Hand clean locally using alcohol based solution.

Standards & Certifications

Flammability Standards: UL94V-0 housing/bezel & base
UL: File No. E44145
All single & double pole models recognized at 5A @ 125/250V AC or 0.014A @ 28V DC.
Add "/U" to end of part number to order UL mark on switch.
Add "/CUL" to end of part number to order cULus mark on switch.
UL recognized only when ordered switch body with cap assembled.
CSA: CSA File No. 023535_0_000
All single & double pole models certified at 5A @ 125/250V AC or 5A @ 30V DC or 0.4VA maximum @ 28V AC/DC maximum.
Add "/C" to end of part number to order CSA mark on switch.

TYPICAL SWITCH ORDERING EXAMPLE

UB | 1 | 5 | SK | G | 03 | 5C | — | CC

Poles

1	SPDT
2	DPDT

Circuits

5	ON	(ON)
( ) = Momentary		
6	ON	ON
Alternate Action with Latchdown		

Mounting Types

PCB Mounting	
SK	Square
RK	Rectangular
* Snap-in Mounting	
KK	Square
NK	Rectangular
NBK	Rectangular with Side Barriers

* Standard with Solder Lug terminals

Contacts & Ratings

W	Silver Rated 5A @ 125/250V AC
G	Gold Rated 0.4VA max @ 28V AC/DC max

Terminals

01	Solder Lug* (for Snap-in Mounting)
03	Straight PC

* Wire harness & cable assemblies offered only in Americas

IMPORTANT:

Switches are supplied without UL, cULus, & CSA markings unless specified. Specific models & ratings noted on General Specifications page.

LEDs

Bright LED

5C	Red
5D	Amber
5F	Green

Super Bright LED

6B	White
6F	Green
6G	Blue
Available with Square only	

Nonilluminated

N	Nonilluminated

Cap Types & Colors

Full Face Illuminated Cap for Bright LED

Lens/Diffuser Colors

CB	Red/White	FF	Green/Green
CC	Red/Red	*FJ	Green/Clear
*CJ	Red/Clear	JB	Clear/White
DB	Amber/White	JC	Clear/Red
DD	Amber/Amber	JD	Clear/Amber
*DJ	Amber/Clear	JF	Clear/Green
FB	Green/White	*JJ	Clear/Clear
AB	Square & Rectangular Spot Illuminated Black Cap with White Window		

* Not available with Rectangular cap

Full Face Illuminated Cap for Super Bright LED

JB	Clear Lens/White Diffuser
AB	Spot Illuminated Black Cap with White Window

For Square only; see cap detail page

Nonilluminated Cap Colors

A	Black	E	Yellow
B	White	F	Green
C	Red	G	Blue

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

UB15SKG035C-CC

Gold Contacts with 0.4VA Rating

Square with PCB Mounting

Red, Bright LED & Red Lens with Red Diffuser

SPDT ON-(ON) Circuit

Straight PC Terminals

OPTIONAL ACCESSORIES

Spring Loaded Protective Guard for Snap-in Mounting of Square PCB Model

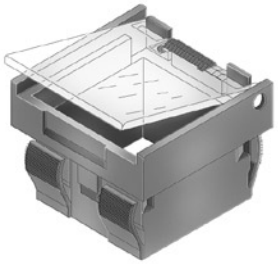
AT4173
Square Protective Guard/ Snap-in Frame

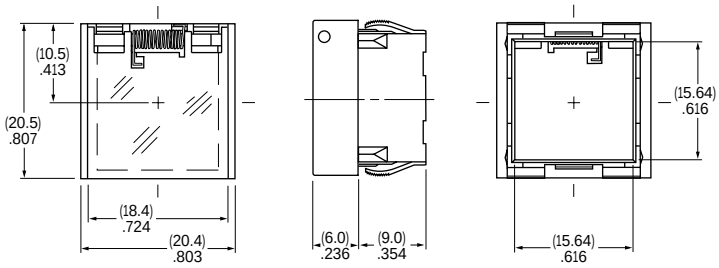
Opens 180°
Closes automatically

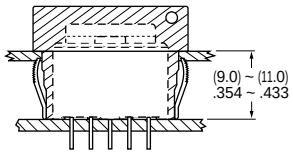
Materials:
Cover: Clear Polycarbonate
Base: Black Polyamide
Coil Spring: Stainless Steel

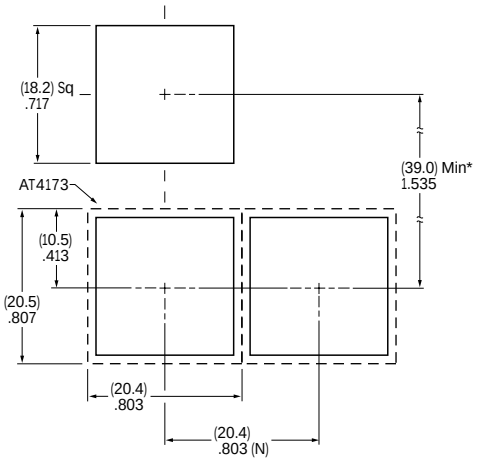
Recommended Panel Thickness:
.039" ~ .126"
(1.0mm ~ 3.2mm)

Recommended Panel-to-PCB Range:
.354" ~ .433"
(9.0mm ~ 11.0mm)

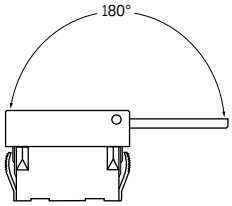






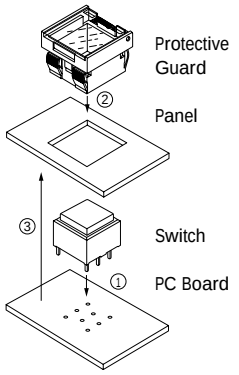


(N) = Number of switches
* Minimum dimension allows opening of cover to 180°



Installation

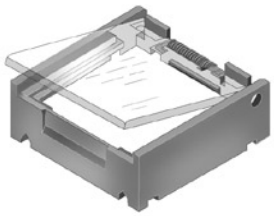
1. Install switch onto PC board.
2. Snap protective guard into panel.
3. Join the two assemblies.

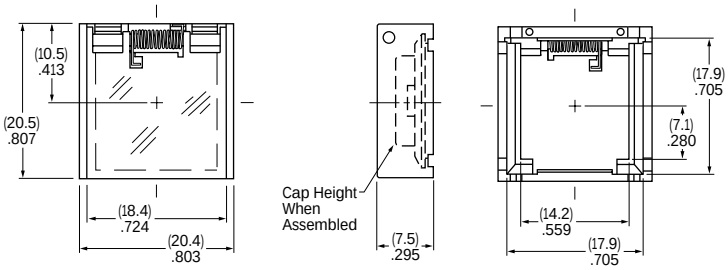


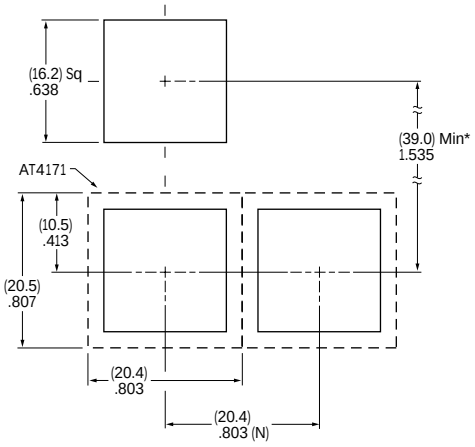
Spring Loaded Protective Guard for Square Snap-in Model

AT4171
Square Protective Guard

Opens 180°
Closes automatically



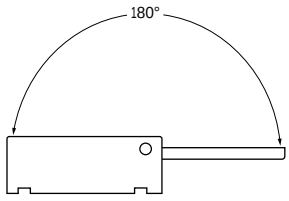




(N) = Number of switches * Minimum dimension allows opening of cover to 180°

Materials:
Cover: Clear Polycarbonate
Base: Black GFR Polyamide
Coil Spring: Stainless Steel

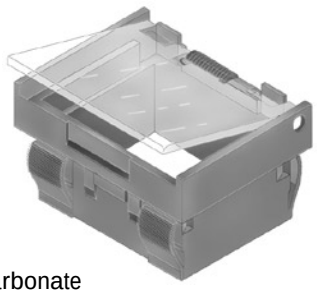
Recommended Panel Thickness:
.039" ~ .106" (1.0mm ~ 2.7mm)



OPTIONAL ACCESSORIES

Spring Loaded Protective Guard for Snap-in Mounting of Rectangular PCB Model

AT4174
Rectangular
Protective Guard/
Snap-in Frame

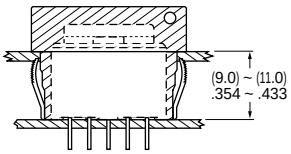


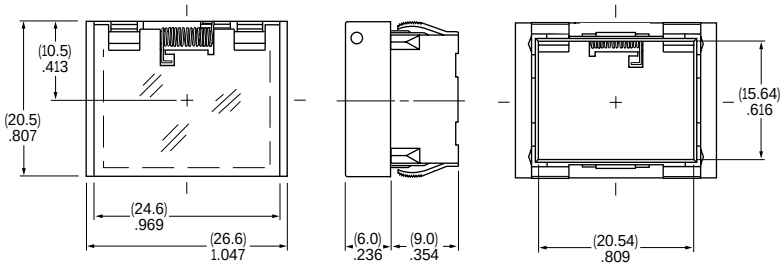
Opens 180°
Closes automatically

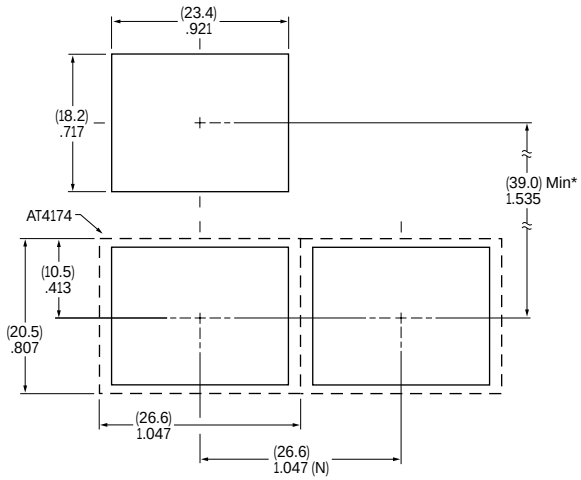
Materials:
Cover: Clear Polycarbonate
Base: Black Polyamide
Coil Spring: Stainless Steel

Recommended
Panel Thickness:
.039" ~ .126"
(1.0mm ~ 3.2mm)

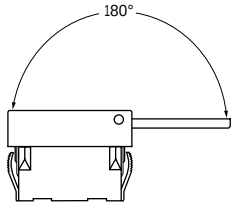
Recommended
Panel-to-PCB Range:
.354" ~ .433"
(9.0mm ~ 11.0mm)





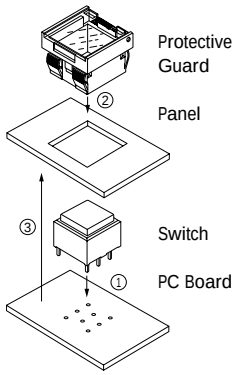


(N) = Number of switches * Minimum dimension allows opening of cover to 180°



Installation

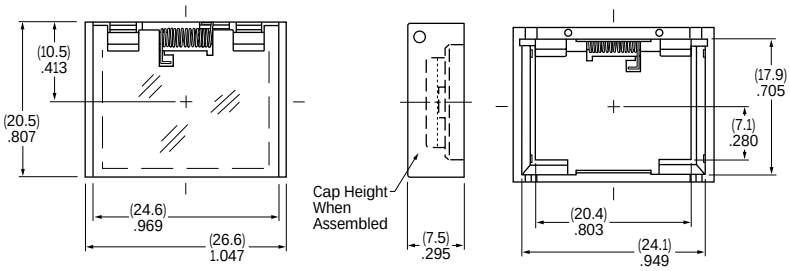
1. Install switch onto PC board.
2. Snap protective guard into panel.
3. Join the two assemblies.

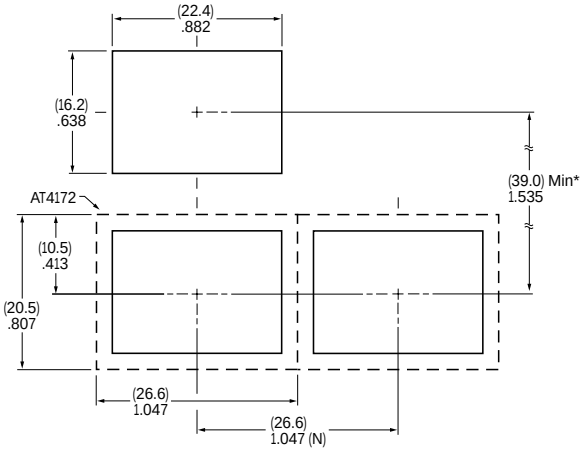


Spring Loaded Protective Guard for Rectangular Snap-in Model

AT4172
Rectangular
Protective Guard

Opens 180°
Closes automatically

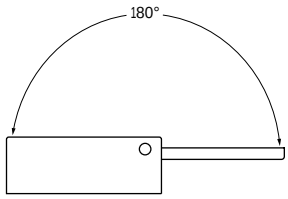




(N) = Number of switches * Minimum dimension allows opening of cover to 180°

Materials:
Cover: Clear Polycarbonate
Base: Black GFR Polyamide
Coil Spring: Stainless Steel

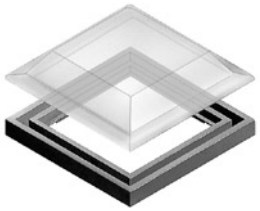
Recommended Panel Thickness:
.039" ~ .106" (1.0mm ~ 2.7mm)



OPTIONAL ACCESSORIES

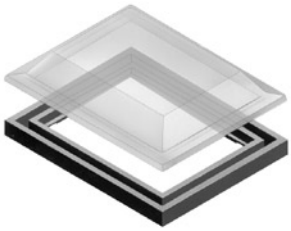
Dust Covers

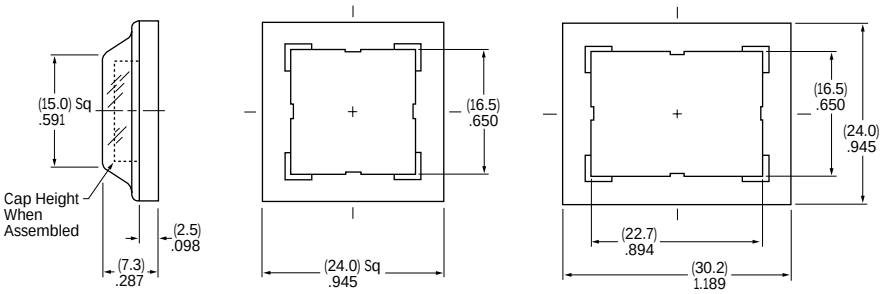
AT4001
Square



Not for use with barrier type models (mounting code NBK)

AT4011
Rectangular





Materials:
PVC with polyethylene gasket
(PVC loses pliability below 0°C (32°F).)

Recommended Panel Thickness: .039" ~ .098" (1.0mm ~ 2.5mm)

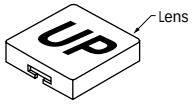
LEGENDS

NKK Switches can provide custom legends for caps. Contact factory for more information.

Suggested Printable Area for UB Lens & Film Insert

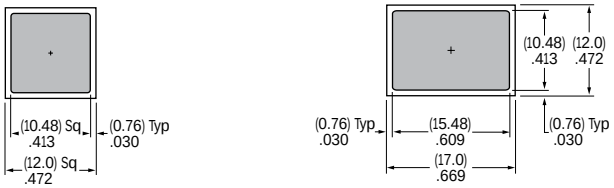
Recommended Methods: Laser Etch on clear lens, Screen Print or Pad Print on lens;
Laser Print on film insert.

Square Cap

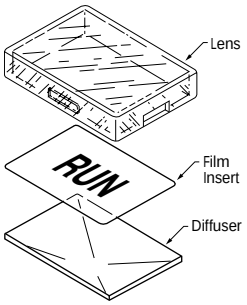


Shaded areas are printable areas.

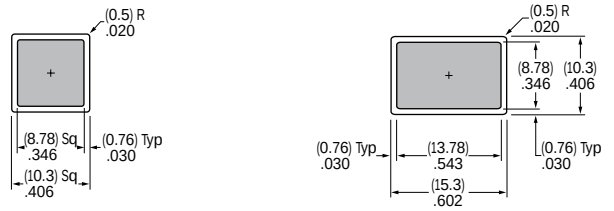
Lens



Rectangular Cap



Film Insert



Film Insert: Clear Polyester 4 mil max. thickness