General Specifications

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks   F

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

Electrical Capacity (Resistive Load)

Power Level (silver): 3A @ 125V AC for low & medium security; 1A @ 250V AC for low security

Other Ratings

Contact Resistance:	10 milliohms maximum
Insulation Resistance:	1,000 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:	30,000 cycles minimum
Electrical Life:	10,000 cycles minimum
Nominal Operating Torque:	.026Nm (.234 lb•in) for low & medium security
Contact Timing:	Break-before-make
Angle of Throw:	90° for 2-position & 45° for 3-position

Materials & Finishes

Key:	Zinc alloy with chrome plating (matte) for low security models; brass with nickel plating (shiny) for medium security models
Tumbler Barrel:	Zinc alloy with chrome plating (matte) for low security models; zinc alloy with chrome plating (shiny) for medium security models
Housing/Bushing:	Zinc alloy with chrome plating (matte) for low security models; zinc alloy with chrome plating (shiny) for medium security models
Base:	Phenolic resin (thermoset)
Movable Contactor:	Silver
Stationary Contacts:	Silver capped copper with silver plating
Terminals:	Copper or brass with silver plating

Environmental Data

Operating Temperature Range:	−25°C through +70°C (−13°F through +158°F)
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

Mounting Torque:	1.5Nm (13.28 lb•in) maximum
Soldering Time & Temperature:	Manual Soldering: See Profile A in Supplement section.

Standards & Certifications

UL: **File No. E44145 - Recognized only when ordered with marking on switch.**
Add "/U" or "/CUL" to end of part number to order UL recognized switch.
All low security models recognized at 3A @ 125V AC or 1A @ 250V AC
& all medium security models recognized at 3A @ 125V AC

CSA: **File No. 023535_0_000 - Certified only when ordered with marking on switch.**
Add "/C" to end of part number to order CSA certified switch.
All low security models certified at 3A @ 125V AC or 1A @ 250V AC

NKK SWITCHES

Distinctive Characteristics

12mm diameter bushing for easy panel cutout preparation and high density mounting.

Epoxy sealed terminals prevent entry of flux and other contaminants.

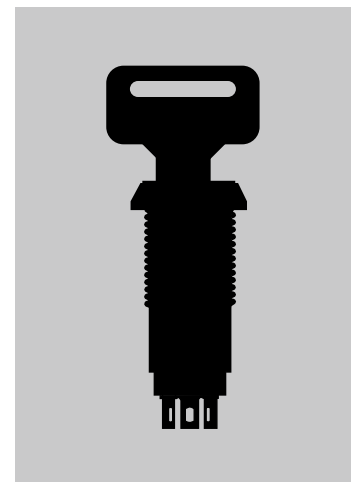Short behind panel dimension - only 1.063" (27.0mm).

High dielectric strength of 1,500 volts between contacts and case.

Detent mechanism gives crisp, positive action for accurate switch setting.

Dust resistant interior construction protects contacts.

Actual Size

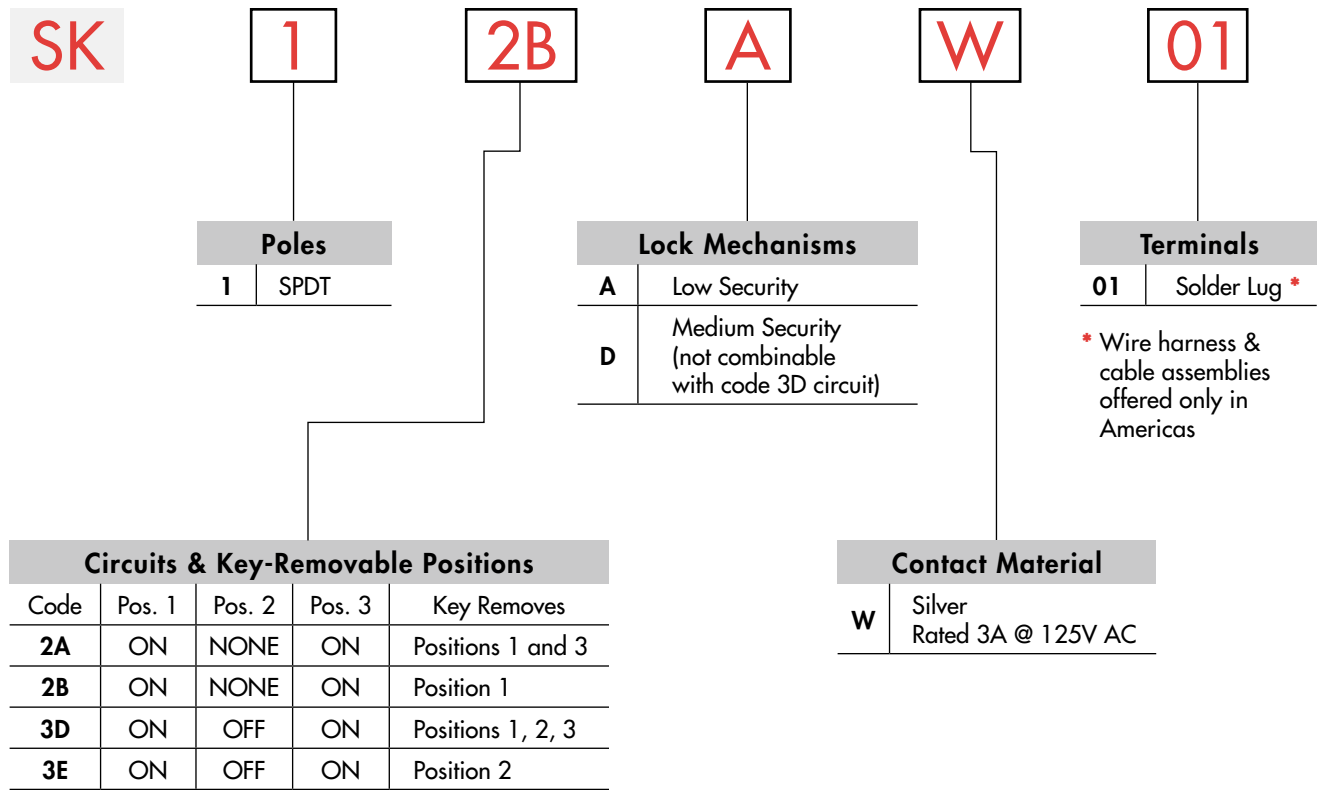Toggles · Rockers · Pushbuttons · Illuminated PB · Programmable · Keylocks · Rotaries · Slides · Tactiles · Tilt · Touch · Indicators · Accessories · Supplement

F

Toggles
Rockers
Pushbuttons
Illuminated PB
Programmable
Keylocks **F**
Rotaries
Slides
Tactiles
Tilt
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Accessories
Supplement

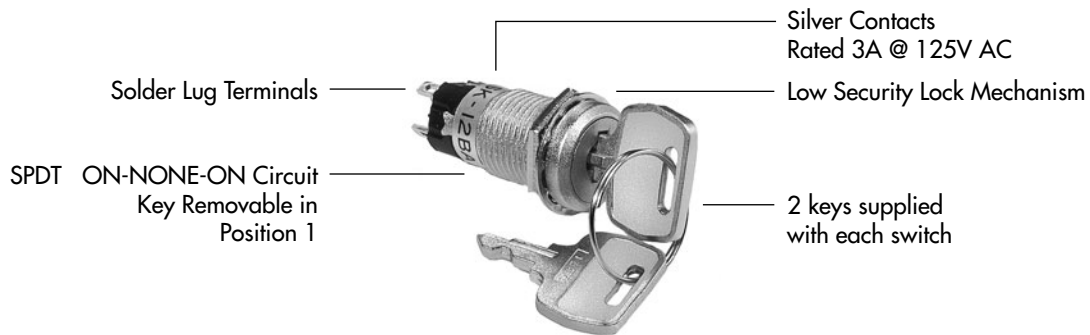## TYPICAL SWITCH ORDERING EXAMPLE

| SK | 1 | 2B | A | W | 01 |

Poles

| 1 | SPDT |

Lock Mechanisms

| A | Low Security |
| D | Medium Security (not combinable with code 3D circuit) |

Terminals

| 01 | Solder Lug * |

* Wire harness & cable assemblies offered only in Americas

Circuits & Key-Removable Positions

Code	Pos. 1	Pos. 2	Pos. 3	Key Removes
2A	ON	NONE	ON	Positions 1 and 3
2B	ON	NONE	ON	Position 1
3D	ON	OFF	ON	Positions 1, 2, 3
3E	ON	OFF	ON	Position 2

Contact Material

| W | Silver Rated 3A @ 125V AC |

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

SK12BAW01

Solder Lug Terminals

SPDT ON-NONE-ON Circuit Key Removable in Position 1

Silver Contacts Rated 3A @ 125V AC

Low Security Lock Mechanism

2 keys supplied with each switch

IMPORTANT:

Switches are supplied without UL, cULus & CSA marking unless specified. **UL, cULus & CSA recognized only when ordered with marking on the switch.** Specific models, ratings, & ordering instructions are noted on General Specifications page.

NKK SWITCHES

Series SK

Toggles
Rockers
Pushbuttons
Illuminated PB
Programmable
Keylocks   F
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POLES, CIRCUITS & KEY-REMOVABLE POSITIONS

Pole & Throw	Model	Key Positions			Connected Terminals (Terminal numbers are on switch)			Schematic	⊙ = Key Removable • = Not Removable ⌄ = Maximum Arc
		Pos 1	Pos 2	Pos 3	Pos 1	Pos 2	Pos 3		
SPDT	**SK12A**	ON	NONE	ON	COM-1	—	COM-2	COM 1 2	POS 1 ⊙ ⊙ 3
SPDT	**SK12B**	ON	NONE	ON	COM-1	—	COM-2	1 2	POS 1 ⊙ • 3
SPDT	***SK13D**	ON	OFF	ON	COM-1	OPEN	COM-2	COM OPEN 1 2	2 3 POS 1 ⊙ ⊙ ⊙
SPDT	**SK13E**	ON	OFF	ON	COM-1	OPEN	COM-2	OPEN 1 2	2 POS 1 ⊙ • 3

* Available with low security only

KEY REMOVABLE

A   Positions 1 & 3   90° Angular Throw

B   Position 1   90° Angular Throw

D   Positions 1, 2 & 3   45° Angular Throw

E   Position 2   45° Angular Throw

LOCK MECHANISMS & KEYS

A   Low Security Mechanism

Zinc Alloy with Chrome Plating (matte finish)

Two keys provided with each switch
(no master key available)

For ordering additional keys:
    AT4081 for SK12A and SK12B, marked "1201"
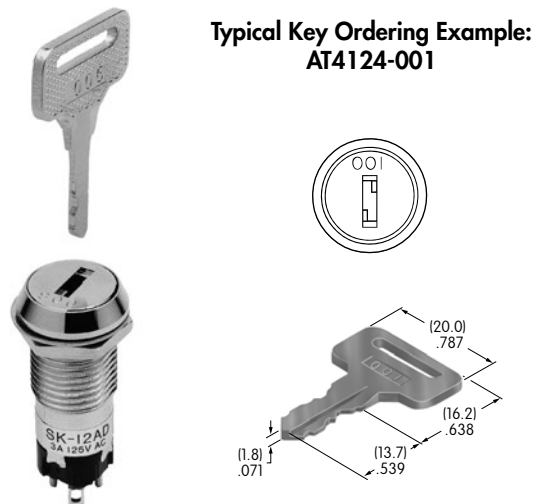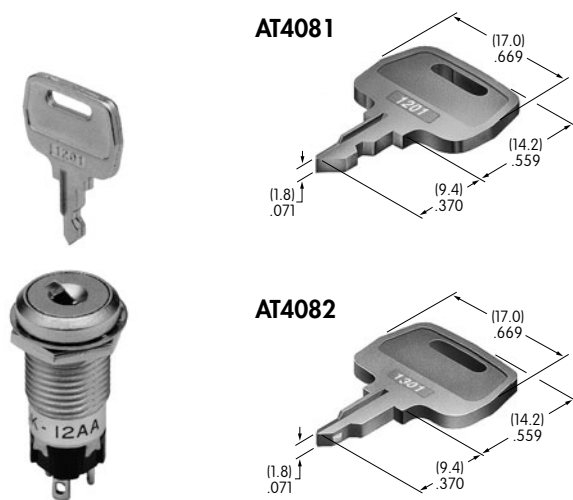   AT4082 for SK13D and SK13E, marked "1301"

D   Medium Security Mechanism

Brass with Nickel Plating (shiny finish)

One key provided with each switch
(no master key available)

For ordering additional keys, indicate the same key number that is engraved on the face of your switch.

Key numbers (001 through 010) randomly assigned.

AT4081
(17.0) .669
(14.2) .559
(1.8) .071
(9.4) .370

AT4082
(17.0) .669
(14.2) .559
(1.8) .071
(9.4) .370

Typical Key Ordering Example:
AT4124-001

(20.0) .787
(16.2) .638
(1.8) .071
(13.7) .539

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CONTACT MATERIALS, RATINGS, & TERMINALS

W Silver over Silver   Power Level   3A @ 125V AC

Epoxy Seal

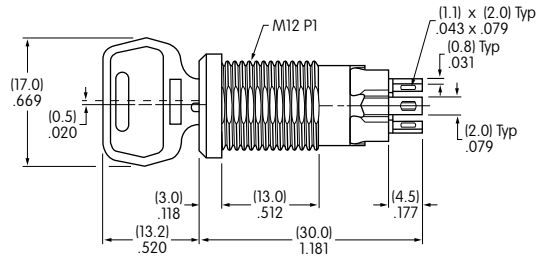(4.5) .177

(2.0) .079   (2.0) .079

(1.1) .043

Thk = (0.8) .031

01 Solder Lug Terminals
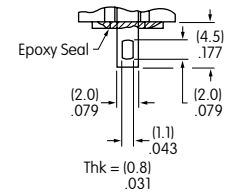
TYPICAL SWITCH DIMENSIONS

Low Security • 90° Angular Throw

POS 1

90°

POS 3

(14.0) Dia .551

(17.0) .669

(0.5) .020

M12 P1

(1.1) x (2.0) Typ .043 x .079
(0.8) Typ .031

(2.0) Typ .079

(3.0) .118

(13.0) .512

(4.5) .177

(13.2) .520

(30.0) 1.181

(10.8) .425
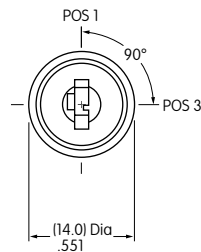
SK12BAW01

Low Security • 45° Angular Throw
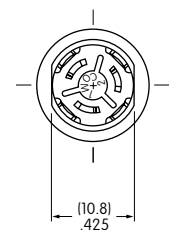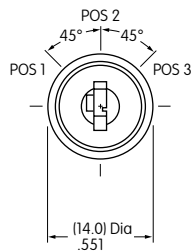
POS 2
45°   45°
POS 1   POS 3

(14.0) Dia .551

(17.0) .669

(0.5) .020

M12 P1

(1.1) x (2.0) Typ .043 x .079
(2.0) Typ .079

(0.8) Typ .031

(3.0) .118

(13.0) .512

(4.5) .177

(13.2) .520

(30.0) 1.181

(10.8) .425

SK13EAW01

NKK SWITCHES

Low & Medium Security Keylocks

Series SK

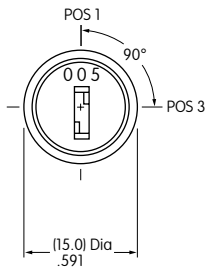Toggles · Rockers · Pushbuttons · Illuminated PB · Programmable · Keylocks · Rotaries · Slides · Tactiles · Tilt · Touch · Indicators · Accessories · Supplement
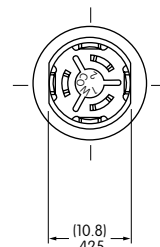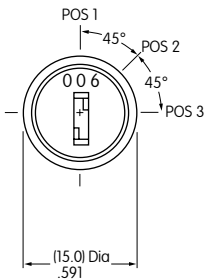
TYPICAL SWITCH DIMENSIONS
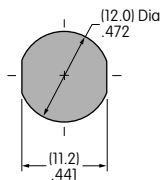
Medium Security • 90° Angular Throw

SK12ADW01

Medium Security • 45° Angular Throw
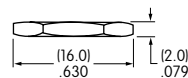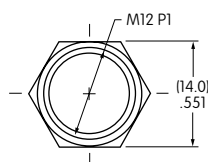

SK13EDW01

PANEL CUTOUT & THICKNESS

The 12mm bushing is .512" (13.0mm) long.
It allows mounting these devices in a maximum
effective panel thickness of .315" (8.0mm).

STANDARD HARDWARE

AT527M
Hex Mounting Nut

1 included with each switch

Steel with nickel plating

AT508
Internal Tooth Lockwasher

1 included with each switch

Steel with
zinc/chromate plating