General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 6A @ 125V AC or 3A @ 250V AC;
4A @ 30V DC (On-On circuit) & 3A @ 30V DC (all other circuits)

Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

Logic/Power Level (gold over silver): Combines silver & gold ratings

Note: Find additional explanation of dual rating & operating range in Supplement section.

Other Ratings

Contact Resistance: 10 milliohms maximum for silver; 20 milliohms maximum for gold

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: 100,000 operations minimum

Electrical Life: 25,000 operations minimum for silver; 50,000 operations minimum for gold

Contact Timing: Nonshorting (break-before-make)

Angle of Throw: 26°

Materials & Finishes

Toggle/Lever: Brass with nickel plating

Support Bracket: Brass with tin plating

Bushing/Housing: Glass fiber reinforced polyamide (UL94V-0)

Sealing Ring: Nitrile butadiene rubber

Base: Glass fiber reinforced polyamide (UL94V-0)

Movable Contacts: Silver alloy with silver plating (code W); copper or phosphor bronze with gold plating (code G);
or silver alloy with gold plating (code A)

Stationary Contacts: Silver alloy with silver plating (code W); copper or brass with gold plating (code G);
or silver alloy with gold plating (code A)

Terminals: Copper or brass with silver or gold plating

Environmental Data

Operating Temp Range: –30°C through +85°C (–22°F through +185°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)

PCB Processing

Soldering: Wave Soldering Recommended: See Profile B in Supplement section.
Manual Soldering: See Profile B in Supplement section.

Cleaning: Automated cleaning. See Cleaning specifications in Supplement section.

Standards & Certifications

Flammability Standards: UL94V-0 rated bushing/housing & base

UL: **File No. E44145 - Recognized only when ordered with marking on switch.**
Add "/U" or "/CUL" before first dash in part number to order UL recognized switch.
All models recognized at 6A @ 125V AC, 3A @ 250V AC, & 4A @ 30V DC or 0.4A @ 28V DC.

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 models certified at 6A @ 125V AC, 3A @ 250V AC, & 4A @ 30V DC.

Distinctive Characteristics

Antijamming actuator design protects against mechanism damage from downward force on the toggle.

Single unit construction of the bushing and top of the housing gives protection from cleaning fluids or other liquids.

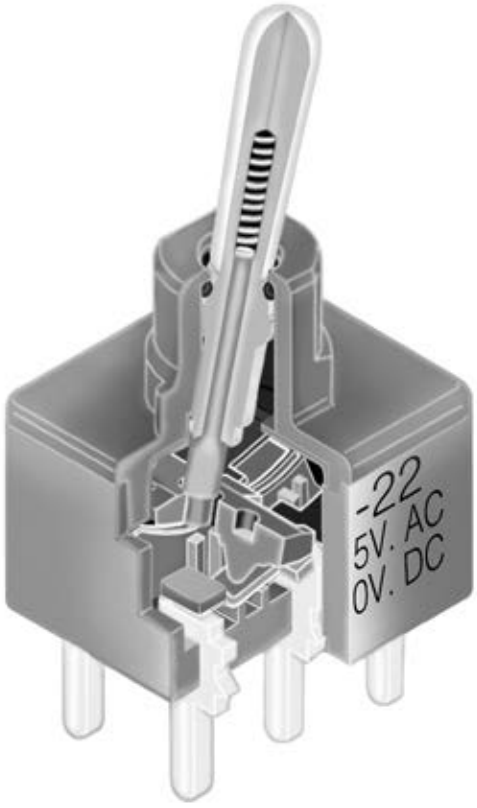
O-ring surrounding actuator at top of bushing interior prevents liquids from reaching switch mechanism.

Ultrasonic welding of upper and lower housing seals out contaminants and allows automated soldering and cleaning.

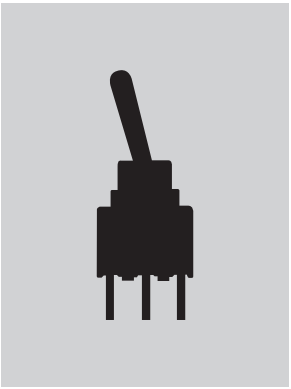
Terminals are epoxy sealed to prevent entry of flux, solvents, and other contaminants.

Bracketed models have crimped legs to ensure secure PC mounting and prevent dislodging during automated soldering.

Logic level and power capabilities are available to suit varying applications.



Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

M2T | 1 | 2 | S | A5 | G | 03

Poles

1	SPDT
2	DPDT

Circuits

2	ON	NONE	ON
3	ON	OFF	ON
5	ON	NONE	(ON)
8	(ON)	OFF	(ON)
9	ON	OFF	(ON)

( ) = Momentary

Actuators

S	.500" (12.7mm) Bat Lever (standard combination with code 03 straight terminals)
S4	.300" (7.62mm) Bat Lever (standard combinations with codes 13, 30 & 40 bracketed terminals)

Bushing

A5	.250" (6.35mm) Double Flatted

Contact Materials & Ratings

W	Silver; Rated 6A @ 125V AC & 3A @ 250V AC
G	Gold; Rated 0.4VA max @ 28V AC/DC max
A	Gold over Silver; Rated 6A @ 125V AC & 0.4VA max @ 28V AC/DC max

PC Terminals

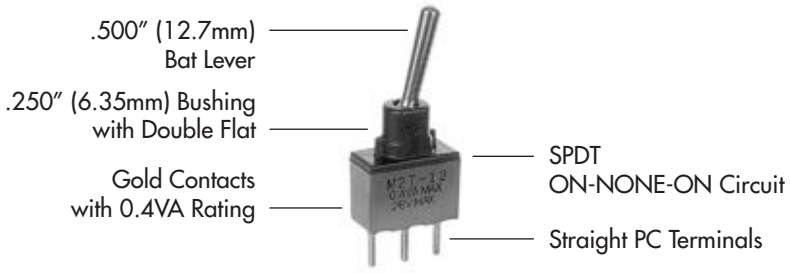
03	Straight
13	Straight with .460" (11.7mm) Bracket
30	.150" (3.81mm) Right Angle
40	.150" (3.81mm) Vertical
05	.390" (9.9mm) Extended PC
06	.728" (18.5mm) Extended PC
07	.945" (24.0mm) Extended PC

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 the General Specifications page.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

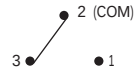
M2T12SA5G03

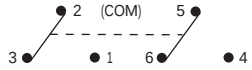


POLES & CIRCUITS

Pole	Model	( ) = Momentary Down	Center	Up	Connected Terminals Down	Center	Up	Throw & Schematics
SP	M2T12 M2T13 M2T15 M2T18 M2T19	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (ON)	2-3	OPEN	2-1	SPDT
DP	M2T22 M2T23 M2T25 M2T28 M2T29	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (ON)	2-3 5-6	OPEN	2-1 5-4	DPDT

Note: Terminal numbers are not actually on the switch.

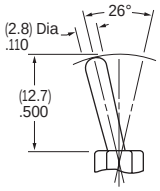




ACTUATORS

S **.500" (12.7mm) Bat Lever**

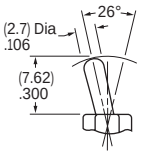
Material:
Nickel over Brass



Standard Combinations: S Bat Lever with straight terminals (code 03) with silver or gold contacts.

S4 **.300" (7.62mm) Bat Lever**

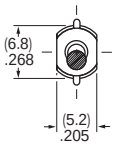
Material:
Nickel over Brass

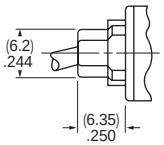


Standard Combinations: S4 Bat Lever with bracketed terminals (codes 13, 30, 40) with silver or gold contacts.

BUSHING

A5 **.250" (6.35mm) Double Flatted**





CONTACT MATERIALS & RATINGS

W	**Silver over Silver**	**Power Level**	**6A @ 125V AC & 3A @ 250V AC**
G	**Gold over Brass or Copper**	**Logic Level**	**0.4VA maximum @ 28V AC/DC maximum**

Complete explanation of operating range in Supplement section.

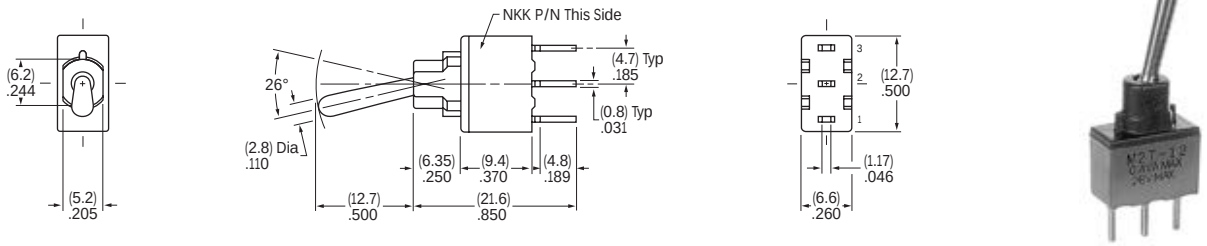
A	**Gold over Silver**	**Power Level or Logic Level**	**6A @ 125V AC or 0.4VA maximum @ 28V AC/DC maximum**

Note: This dual rated option is suitable when two or more identical switches are used in logic and in power circuits within the same application. See Supplement section for complete explanation of dual rating and operating range.

TYPICAL SWITCH DIMENSIONS

Single Pole

Straight PC

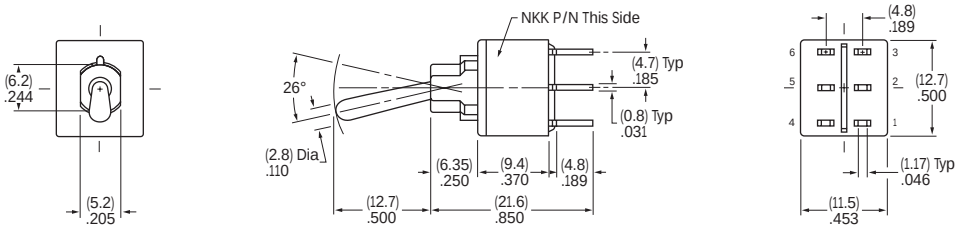


Actuator in Down Position

M2T12SA5G03

Double Pole

Straight PC

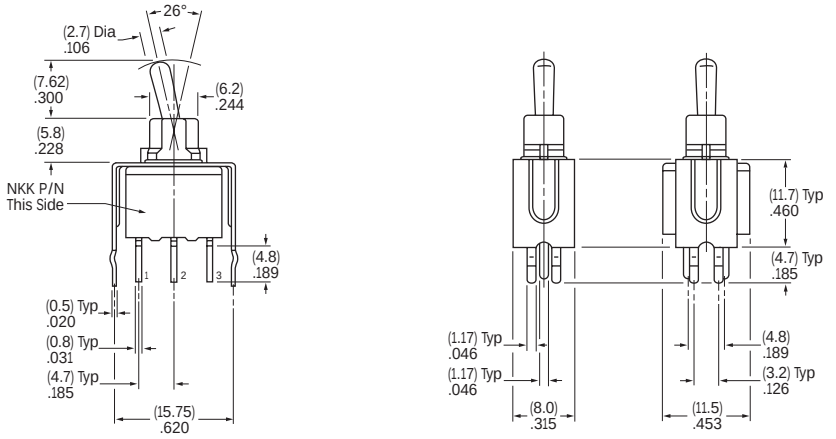


Actuator in Down Position

M2T22SA5G03

Single & Double Pole

Straight PC • Bracket



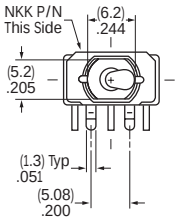
Actuator in Down Position

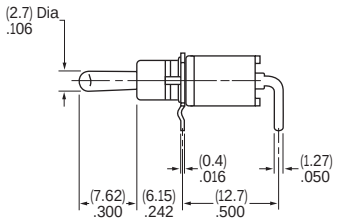
M2T12S4A5G13

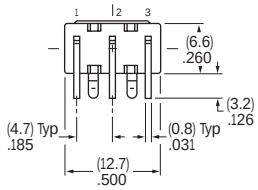
TYPICAL SWITCH DIMENSIONS

Right Angle PC

Single Pole





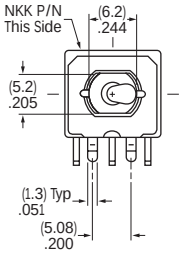


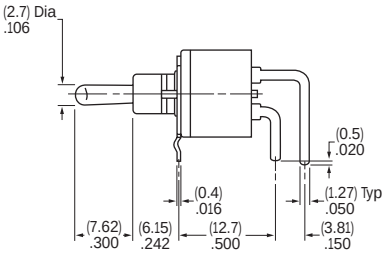
M2T12S4A5G30

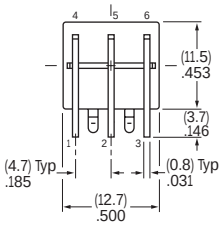
Actuator in Down Position

Right Angle PC

Double Pole





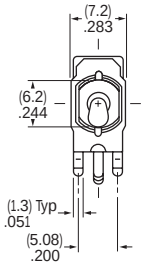


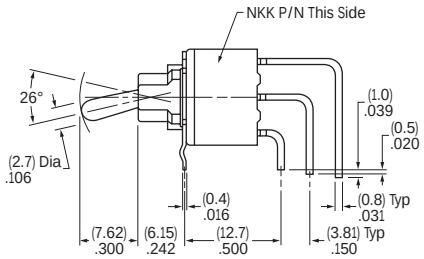
M2T22S4A5G30

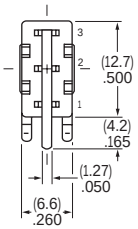
Actuator in Down Position

Vertical PC

Single Pole







M2T12S4A5G40

Actuator in Down Position