

# Distinctive Characteristics

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

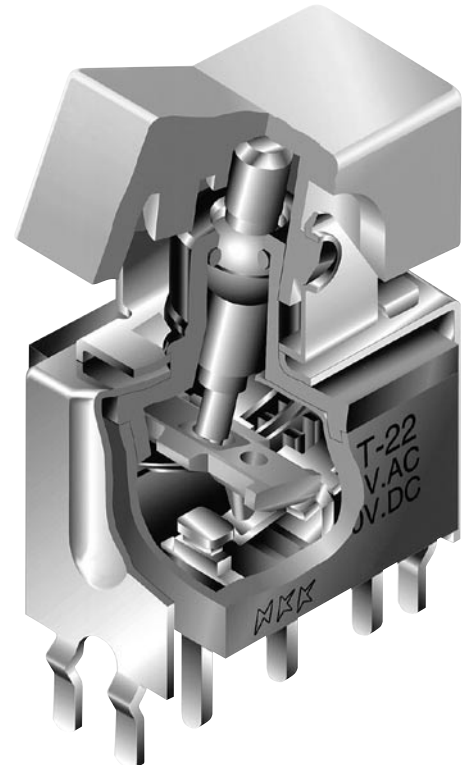
O-ring surrounding top of lever prevents liquids from reaching switch mechanism.

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

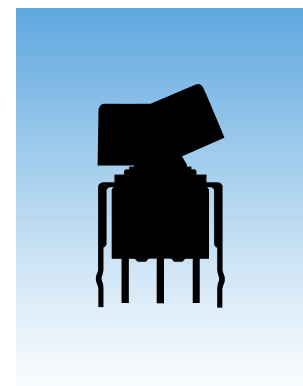
Terminals are epoxy sealed to prevent entry of flux, solvents, and other contaminants.

Bracketed models have crimped bracket 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



# General Specifications

### Electrical Capacity (Resistive Load)

<b>Power Level (code W):</b>	6A @ 125V AC or 3A @ 250V AC; 4A @ 30V DC (On-On circuit) & 3A @ 30V DC (all other circuits)
<b>Logic Level (code G):</b>	0.4VA maximum @ 28V AC/DC maximum (Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
<b>Logic/Power Level (code A):</b>	Combines W & G ratings Note: Find additional explanation of dual rating & operating range in Supplement section.

### Other Ratings

<b>Contact Resistance:</b>	10 milliohms maximum for silver; 20 milliohms maximum for gold
<b>Insulation Resistance:</b>	1,000 megohms minimum @ 500V DC
<b>Dielectric Strength:</b>	1,000V AC minimum between contacts for 1 minute minimum; 1,500V AC minimum between contacts & case for 1 minute minimum
<b>Mechanical Life:</b>	50,000 operations minimum
<b>Electrical Life:</b>	25,000 operations minimum for silver; 50,000 operations minimum for gold
<b>Contact Timing:</b>	Nonshorting (break-before-make)
<b>Angle of Throw:</b>	26°

### Materials & Finishes

<b>Lever:</b>	Brass with chrome plating
<b>Actuator Clip:</b>	Polyacetal
<b>Support Bracket:</b>	Brass with tin plating
<b>Bushing/Housing:</b>	Glass fiber reinforced polyamide (UL94V-0)
<b>Sealing Ring:</b>	Nitrile butadiene rubber
<b>Base:</b>	Glass fiber reinforced polyamide (UL94V-0)
<b>Movable Contacts:</b>	Silver alloy with silver plating (code W); copper or phosphor bronze with gold plating (code G); or silver alloy with gold plating (code A)
<b>Stationary Contacts:</b>	Silver alloy with silver plating (code W); copper or brass with gold plating (code G); or silver alloy with gold plating (code A)
<b>Terminals:</b>	Copper or brass with silver or gold plating




### Environmental Data

<b>Operating Temp Range:</b>	-30°C through +85°C (-22°F through +185°F)
<b>Humidity:</b>	90 ~ 95% humidity for 96 hours @ 40°C (104°F)
<b>Vibration:</b>	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
<b>Shock:</b>	50G (490m/s <sup>2</sup> ) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

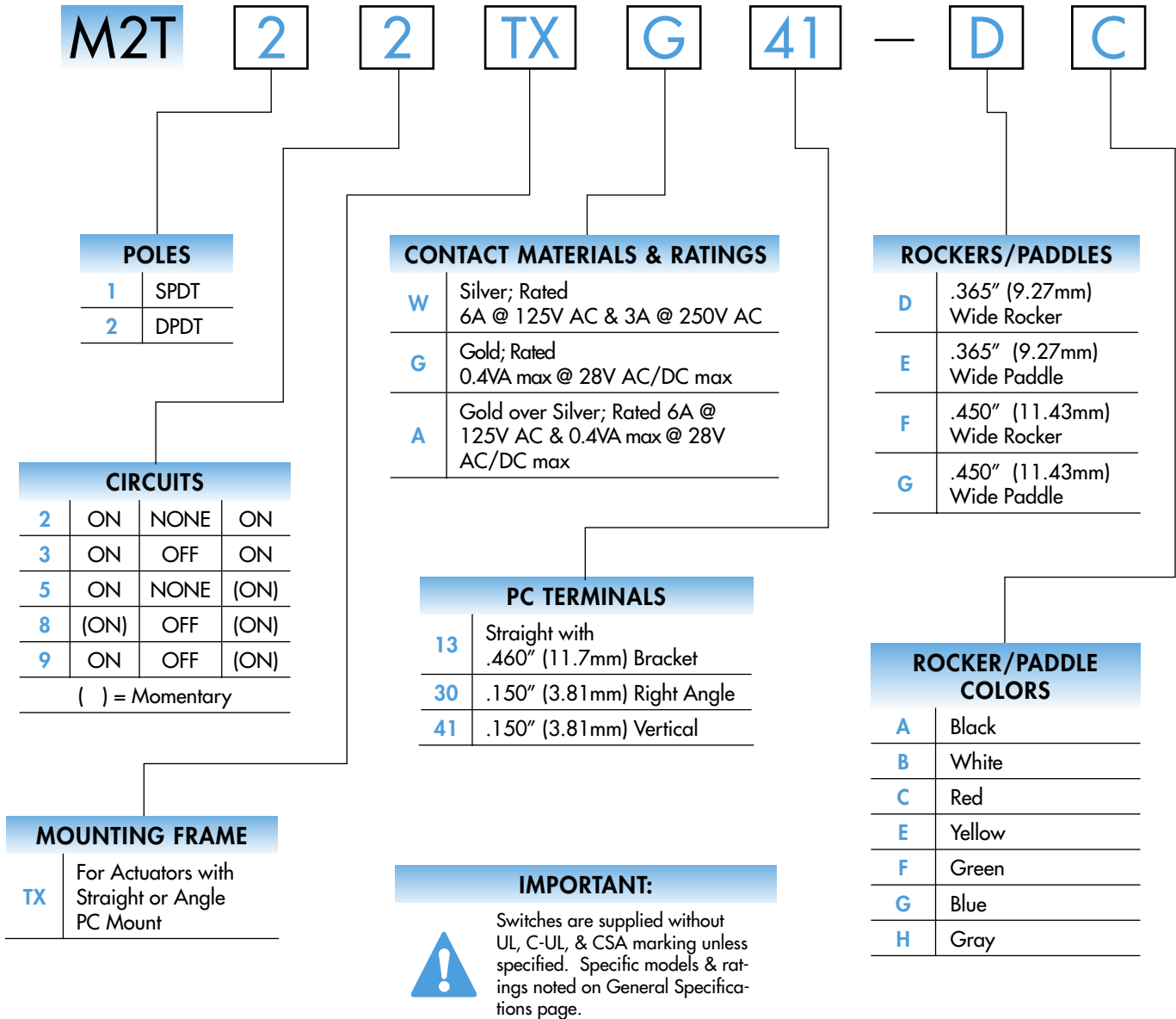
### PCB Processing

<b>Soldering:</b>	Wave Soldering Recommended: See Profile B in Supplement section. Manual Soldering: See Profile B in Supplement section.
<b>Cleaning:</b>	Automated cleaning. See Cleaning specifications in Supplement section.

### Standards & Certifications

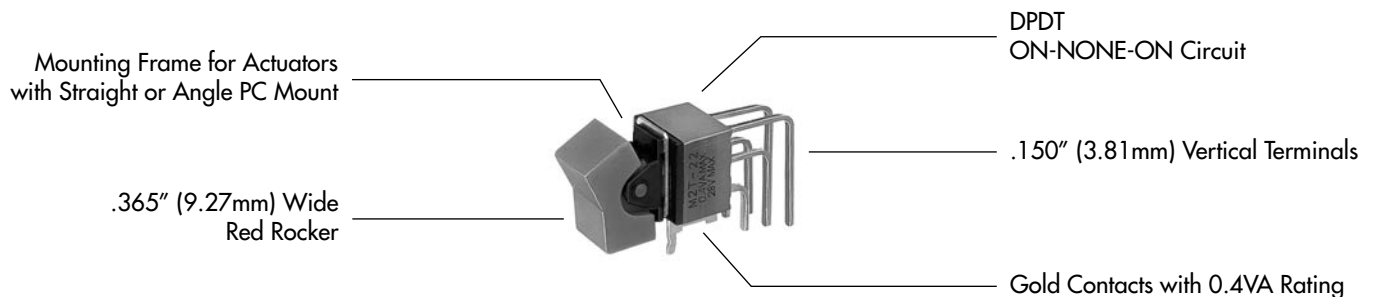
<b>Flammability Standards:</b>	UL94V-0 rated bushing/housing & base
 <b>UL Recognized:</b>	All models recognized at 6A @ 125V AC, 3A @ 250V AC, & 4A @ 30V DC or 0.4A @ 28V DC; UL File No. WOYR2.E44145; add "/U" to end of part number to order UL mark on switch.
 <b>C-UL Recognized:</b>	All models recognized at 6A @ 125V AC, 3A @ 250V AC, & 4A @ 30V DC or 0.4A @ 28V DC; C-UL File No. WOYR8.E44145; add "/C-UL" to end of part number to order C-UL mark on switch.
 <b>CSA Certified:</b>	All models certified at 6A @ 125V AC, 3A @ 250V AC, & 4A @ 30V DC; CSA File No. 023535-0-000; add "/C" to end of part number to order CSA mark on switch.

### TYPICAL SWITCH ORDERING EXAMPLE



### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

#### M2T22TXG41-DC



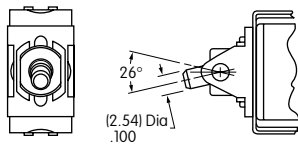
### POLES & CIRCUITS

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

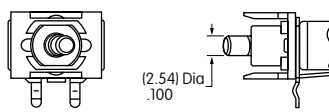
### MOUNTING FRAME

#### TX Mounting Frame for Rockers or Paddles with Straight or Angle PC Terminals

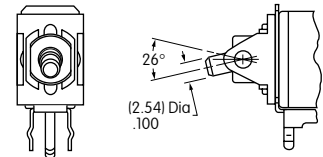
Straight PC Mounting



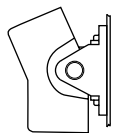
Right Angle PC Mounting



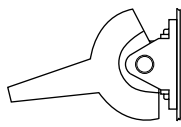
Vertical PC Mounting



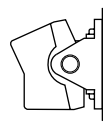
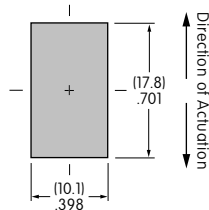
Actuators & Panel Cutouts



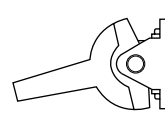
AT4148



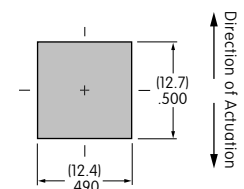
AT4149



AT4150



AT4151



### CONTACT MATERIALS & RATINGS

**W** Silver over Silver      Power Level      6A @ 125V AC & 3A @ 250V AC

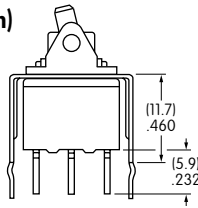
**G** Gold over Brass or Copper      Logic Level      0.4VA maximum @ 28V AC/DC maximum  
Complete explanation of operating range in Supplement section.

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

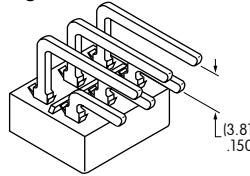
Note: This dual rated option is suitable when two or more identical switches are used in logic and in power circuits within the same application. See Supplement section for complete explanation of dual rating and operating range.

### PC TERMINALS

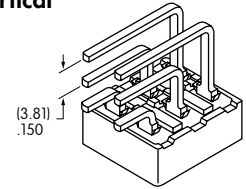
**13** Straight with  
.460" (11.7mm)  
Bracket



**30** .150" (3.81mm)  
Right Angle



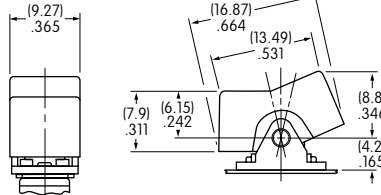
**41** .150" (3.81mm)  
Vertical



### ROCKERS & PADDLES

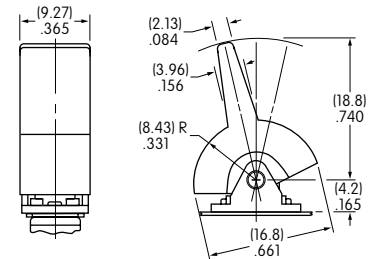
**D** AT4148  
.365" (9.27mm) Wide Rocker

Material: Polyamide  
Finish: Matte



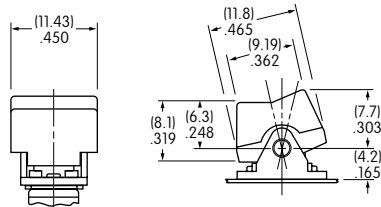
**E** AT4149  
.365" (9.27mm) Wide Paddle

Material: Polyamide  
Finish: Matte



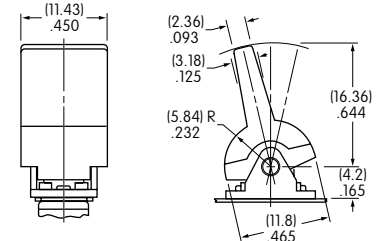
**F** AT4150  
.450" (11.43mm) Wide Rocker

Material: Polyamide  
Finish: Matte



**G** AT4151  
.450" (11.43mm) Wide Paddle

Material: Polyamide  
Finish: Matte



Cap Colors Available:



Black



White



Red



Yellow



Green



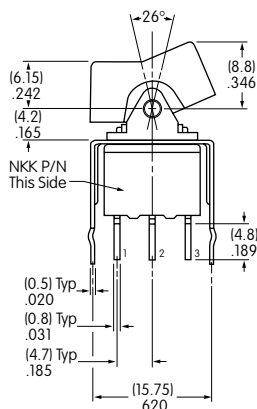
Blue



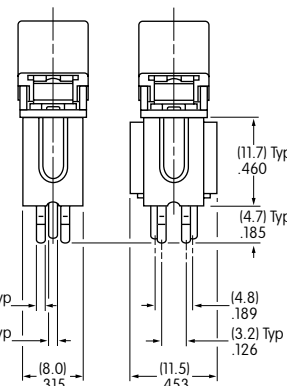
Gray

### TYPICAL SWITCH DIMENSIONS

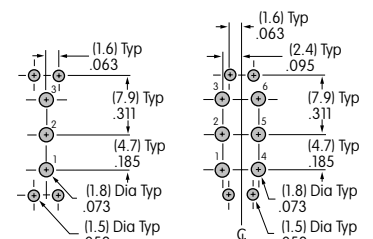
Straight PC • Bracket



Single Pole



Double Pole

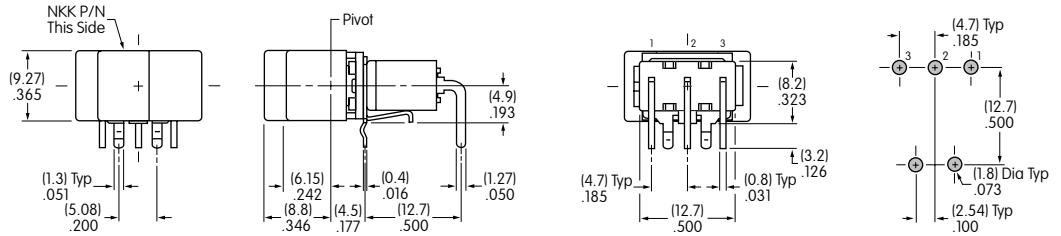


M2T12TXG13-DC

### TYPICAL SWITCH DIMENSIONS

#### Right Angle PC

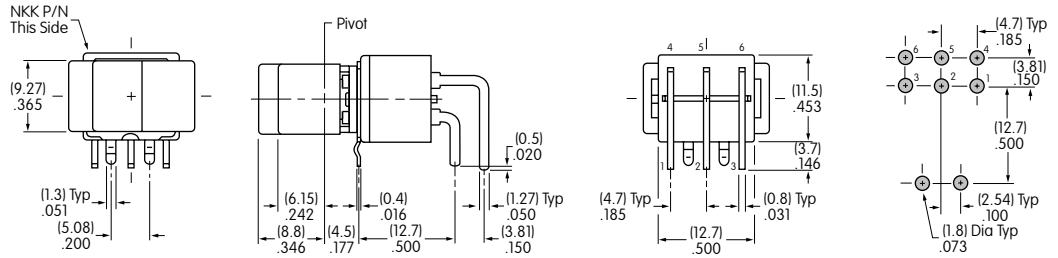
#### Single Pole



M2T12TXG30-DC

#### Right Angle PC

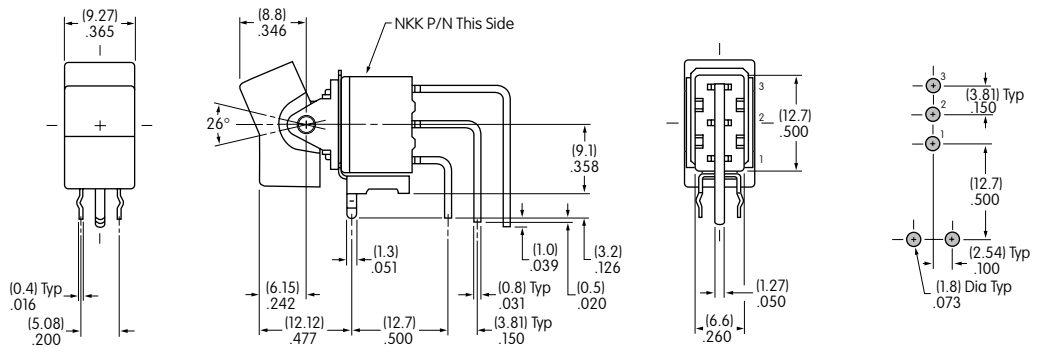
#### Double Pole



M2T22TXG30-DC

#### Vertical PC

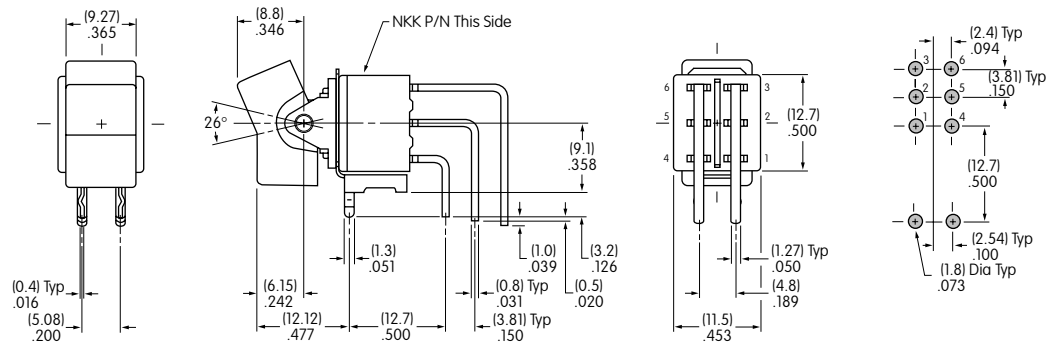
#### Single Pole



M2T12TXG41-DC

#### Vertical PC

#### Double Pole



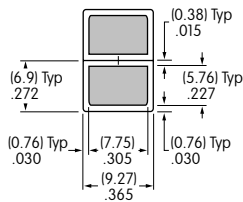
M2T22TXG41-DC

### LEGENDS

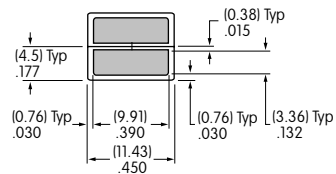
General information and basic specifications are presented here for customers who want to do their own legends.

#### Suggested Printable Area for Cap

AT4148



AT4150



Shaded areas are printable areas.

#### Recommended Print Method:

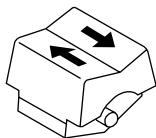
Screen Print or Pad Print

Epoxy based ink is recommended.

#### Additional Method

An additional method for legends is engraving the cap. Maximum depth for engraving is .012" (0.3mm) on the cap. Enamel paint is recommended to fill the engraved area.

### LEGEND PACKET



1. To order caps with legends contact the factory and request the M2T Rocker Legend Packet.
2. Once you determine your desired legend, fill out the ordering work sheet included in the packet.
3. Return the completed work sheet to receive a quotation.