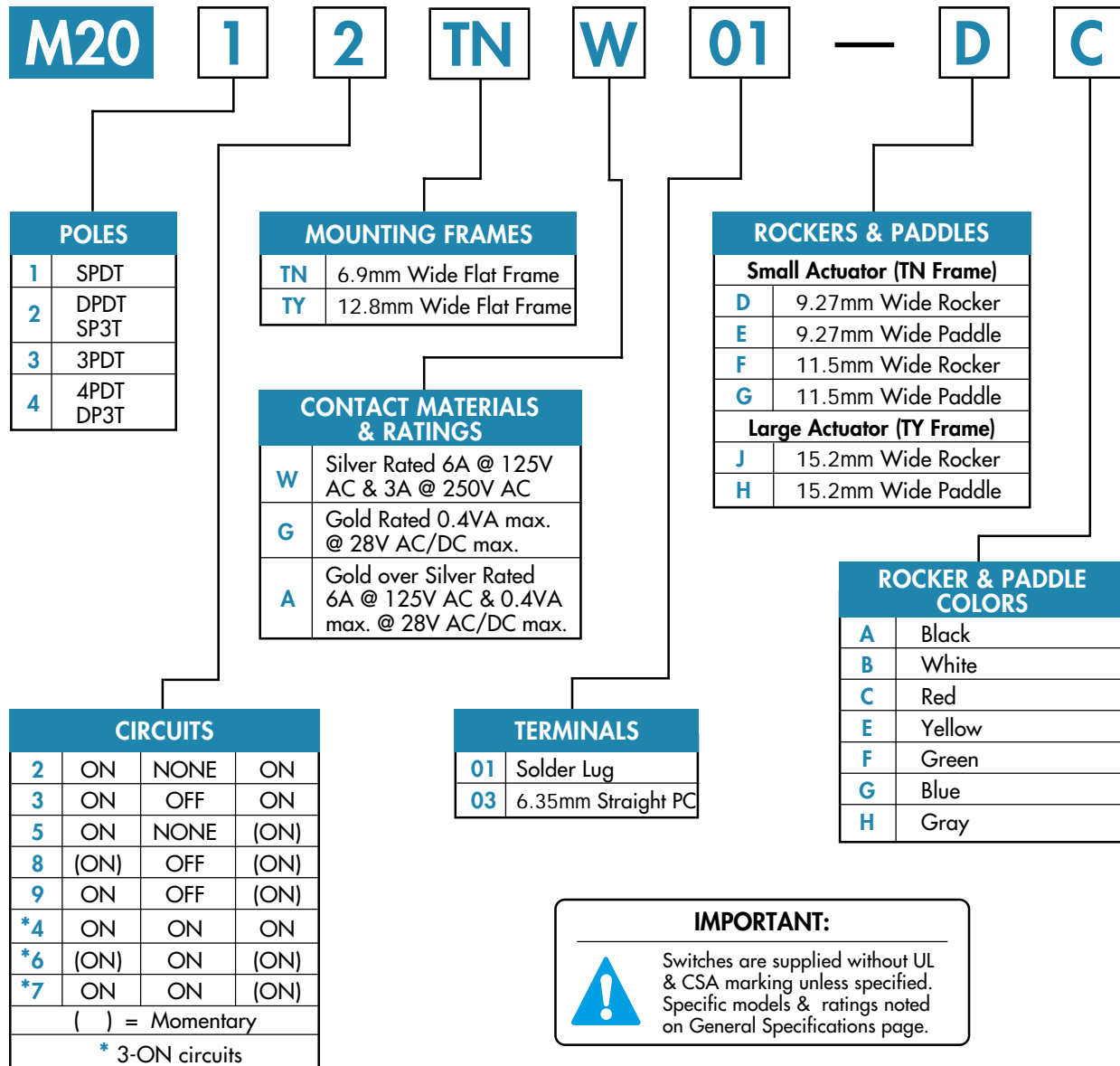


TYPICAL SWITCH ORDERING EXAMPLE



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

M2012TNW01-DC





GENERAL SPECIFICATIONS

Electrical Capacity (Resistive Load)

- Power Level (code W):** 6A @ 125V AC & 3A @ 250V AC
Logic Level (code G): 0.4VA maximum @ 28V AC/DC maximum
Logic/Power Level (code A): Combines W & G ratings
Note: See [Supplement Index](#) to find explanation of dual rating and operating range.

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; 1,500V AC minimum between contacts and case
Mechanical Life: 50,000 operations minimum
Electrical Life: 25,000 operations minimum for silver; 50,000 operations minimum for gold
Angle of Throw: 25°

Materials & Finishes

- Actuator Clip:** Beryllium alloy with nickel plating
Mounting Frame: Stainless steel
Body Frame: Stainless steel
Case: Diallyl phthalate resin
Movable Contactor: Phosphor bronze with silver or gold plating
Movable Contacts: Silver alloy (code W); copper with gold plating over nickel plating (code G); or silver alloy with gold plating over nickel plating (code A)
Stationary Contacts: Silver with silver plating (code W); copper or brass with gold plating over nickel plating (code G); or silver with gold plating over nickel plating (code A)
Terminals: Copper or brass with silver plating; or copper or brass with gold plating over nickel

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 acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

- Soldering Time & Temperature:** 3 seconds @ 350°C or 5 seconds @ 270°C
Process Seal: Not available

Standards & Certifications

- Flammability Standards:** UL94V-0 available
UL Recognized: All models recognized at 6A @ 125V AC or 3A @ 250V AC or 0.4VA maximum @ 28V AC/DC maximum; UL File No. E44145
CSA Certified: All models recognized at 6A @ 125V AC or 3A @ 250V AC or 0.4VA maximum @ 28V AC/DC maximum; CSA File No. LR23535



Series M

Miniature Rocker Switches

POLES & CIRCUITS

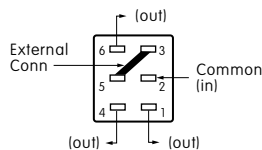
		Rocker Position () = Momentary			Connected Terminals			Throw & Schematics
Pole	Model	Down 	Center 	Up 	Down 	Center 	Up 	Note: Terminal numbers are not actually on the switch.
SP	M2012 M2013 M2015 M2018 M2019	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (ON)	2-3	OPEN	2-1	SPDT
DP	M2022 M2023 M2025 M2028 M2029	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
3P	M2032 M2033 M2035 M2038 M2039	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (ON)	2-3 5-6 8-9	OPEN	2-1 5-4 8-7	3PDT
4P	M2042 M2043 M2045 M2048 M2049	ON ON ON (ON) ON	NONE OFF NONE OFF OFF	ON ON (ON) (ON) (ON)	2-3 5-6 8-9 11-12	OPEN	2-1 5-4 8-7 11-10	4PDT

For 3 Throw (3-On)

Pole	Model	Down	Center	Up	Connected Terminals & Schematics
SP	M2024 M2026 M2027	ON (ON) ON	ON ON ON	ON (ON) (ON)	<p>2-3 5-6</p> <p>2-3 5-4</p> <p>2-1 5-4</p>
DP	M2044 M2046 M2047	ON (ON) ON	ON ON ON	ON (ON) (ON)	<p>2-3 5-6 8-9 11-12</p> <p>2-3 5-4 8-9 11-10</p> <p>2-1 5-4 8-7 11-10</p>

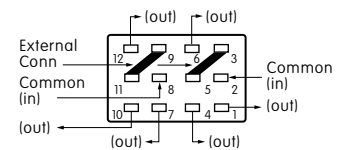
The SP3T model utilizes a double pole base.

External connection must be made during field installation.



The DP3T model utilizes a four pole base.

External connection must be made during field installation.

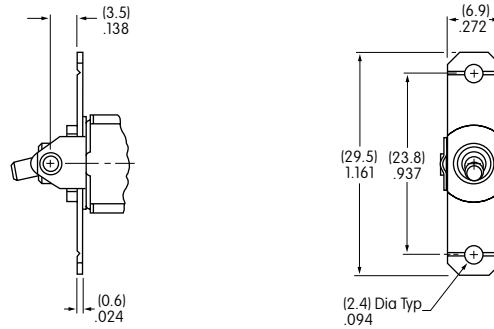


MOUNTING FRAMES

TN

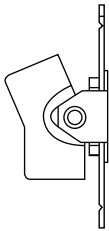
6.9mm Wide Flat Frame

Mounting hardware kit HK-1, as shown on the following page, must be ordered separately.

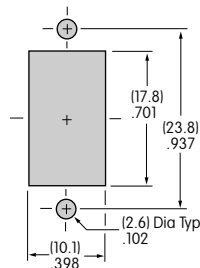
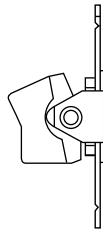


Small Actuators & Panel Cutouts for TN Frame (actuator details on the following pages)

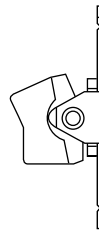
AT4148



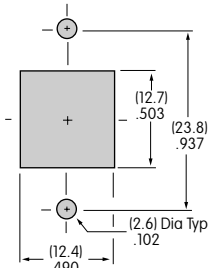
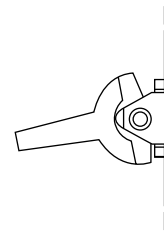
AT4149



AT4150



AT4151



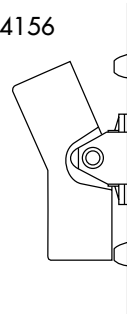
TY

12.8mm Wide Flat Frame

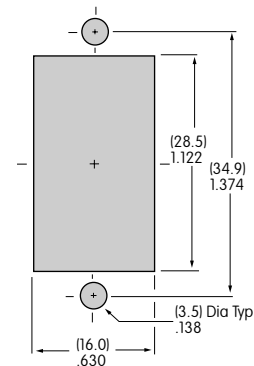
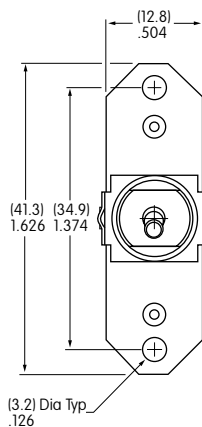
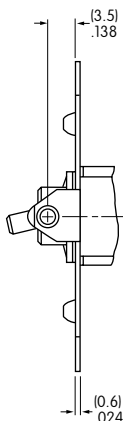
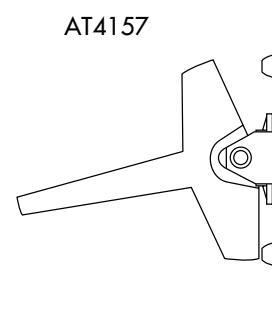
Mounting hardware kit HK-2, as shown on the following page, must be ordered separately.

Large Actuator & Panel Cutouts for TY Frame (actuator details on the following pages)

AT4156

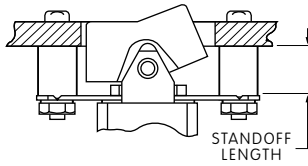


AT4157



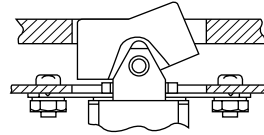
MOUNTING FRAMES (Continued)

Face Panel Mounting



Flat frame devices may also be mounted to the face panel. Standoffs are used to recess the actuator and achieve an attractive front panel appearance.

Subpanel Mounting



These devices are especially designed for subpanel mounting. When installed on a mounting plate behind the panel, hardware is completely concealed and the front panel retains a clean, attractive appearance.

Optional Hardware Kits for Subpanel or Face Panel Mounting

Frame	Panel Thickness	Standoff Length	Hardware Kit Number
TN Frame	3.18mm	5.92mm	HK-1
TY Frame	3.18mm	7.92mm	HK-2

Hardware kits include:
2 stainless steel screws, 2 hex nuts, 2 lockwashers, & 2 standoffs

Optional Snap-in Panel Frames



AT064-1
AT064-2

Further details are shown in the previous bracketed PC mount subsection.



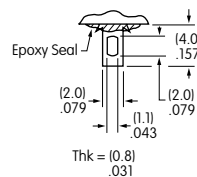
AT065-1
AT065-2

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
Note: See Supplement Index to find complete explanation of operating range.		
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 Index to find complete explanation of dual rating and operating range.		

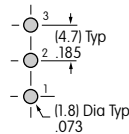
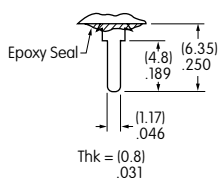
TERMINALS

01 Solder Lug

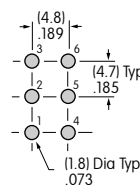


The 1.1mm x 2mm oblong hole accommodates 1 solid 18-gauge wire or 2 solid or stranded 20-gauge wires.

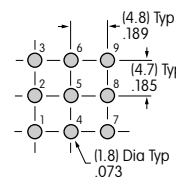
03 6.35mm Straight PC



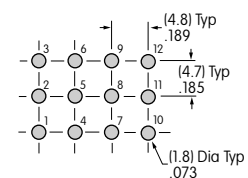
Single Pole



Double Pole



Three Pole



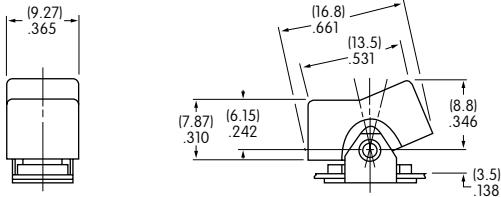
Four Pole

ROCKERS & PADDLES

For TN Frame

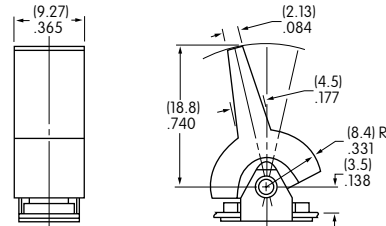
D AT4148
9.27mm Wide Rocker

Material: Polybutylene terephthalate
Finish: Matte



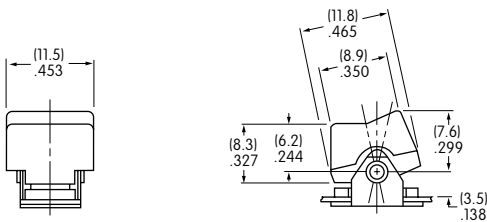
E AT4149
9.27mm Wide Paddle

Material: Polybutylene terephthalate
Finish: Matte



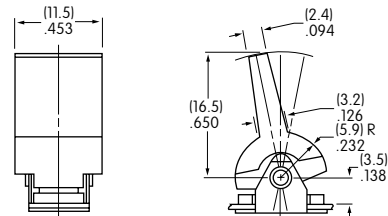
F AT4150
11.5mm Wide Rocker

Material: Polybutylene terephthalate
Finish: Matte



G AT4151
11.5mm Wide Paddle

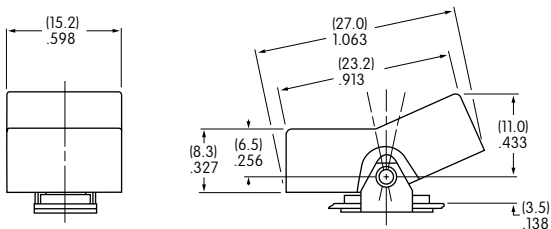
Material: Polybutylene terephthalate
Finish: Matte



For TY Frame

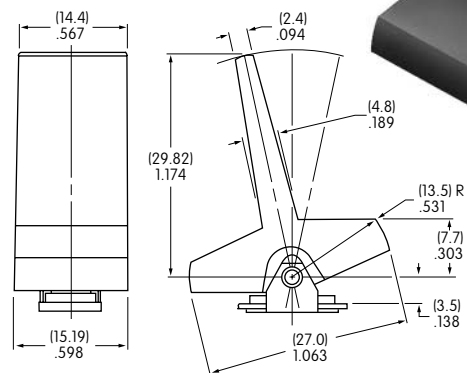
J AT4156
15.2mm Wide Rocker

Material: Polybutylene terephthalate
Finish: Matte



H AT4157
15.2mm Wide Paddle

Material: Polybutylene terephthalate
Finish: Matte



Cap Colors Available:

A

Black

B

White

C

Red

E

Yellow

F

Green

G

Blue

H

Gray



Series M

Miniature Rocker Switches

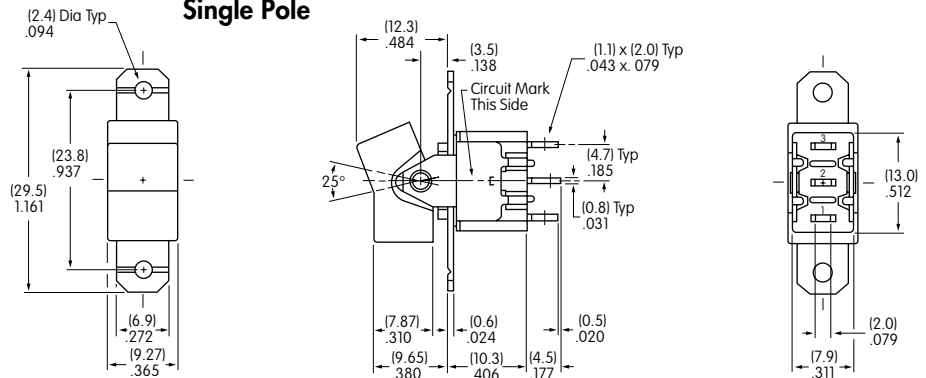
TYPICAL SWITCH DIMENSIONS

TN Frame • Solder Lug



M2012TNW01-DC

Single Pole

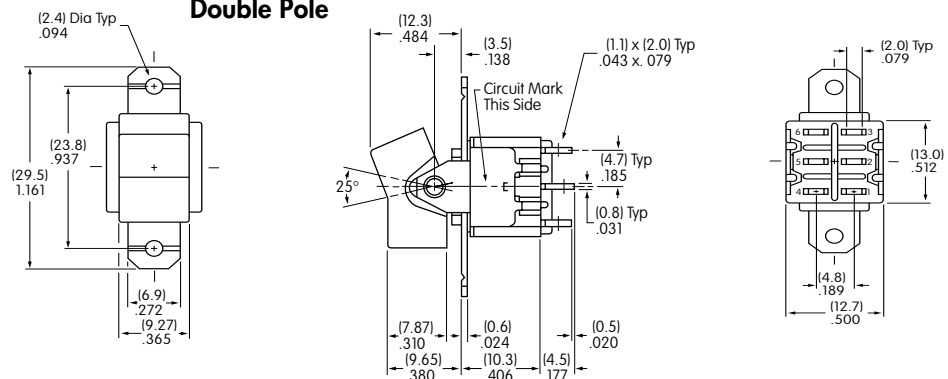


TN Frame • Solder Lug



M2022TNW01-DC

Double Pole

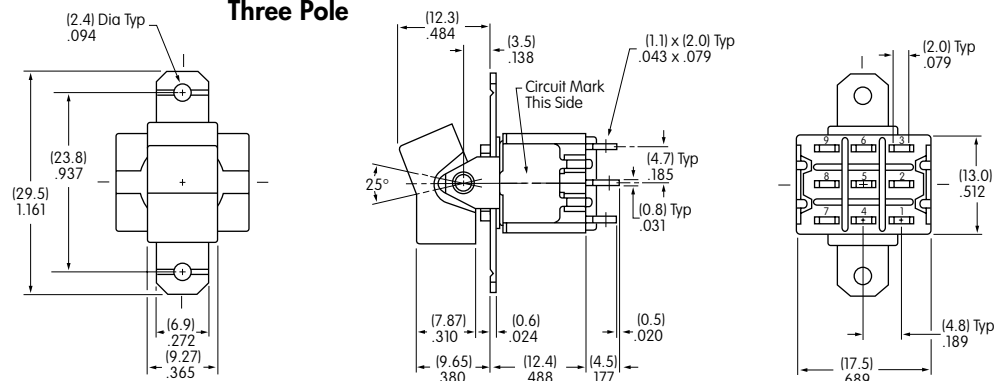


TN Frame • Solder Lug



M2032TNW01-DC

Three Pole

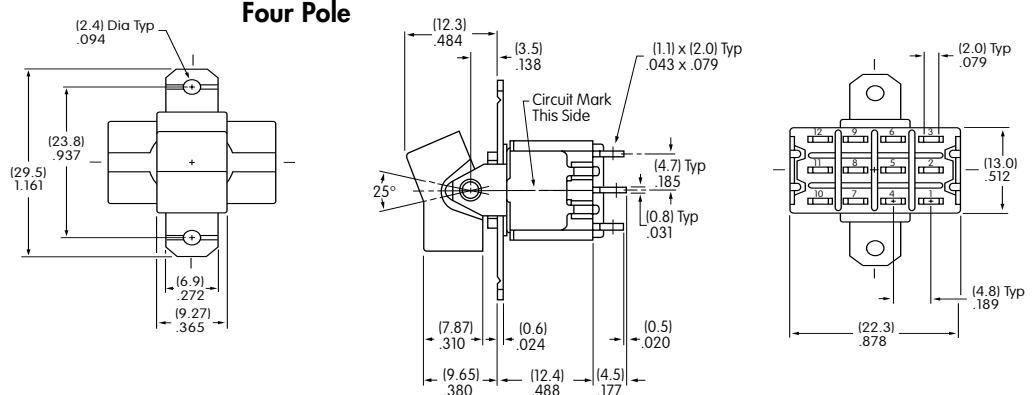


TN Frame • Solder Lug



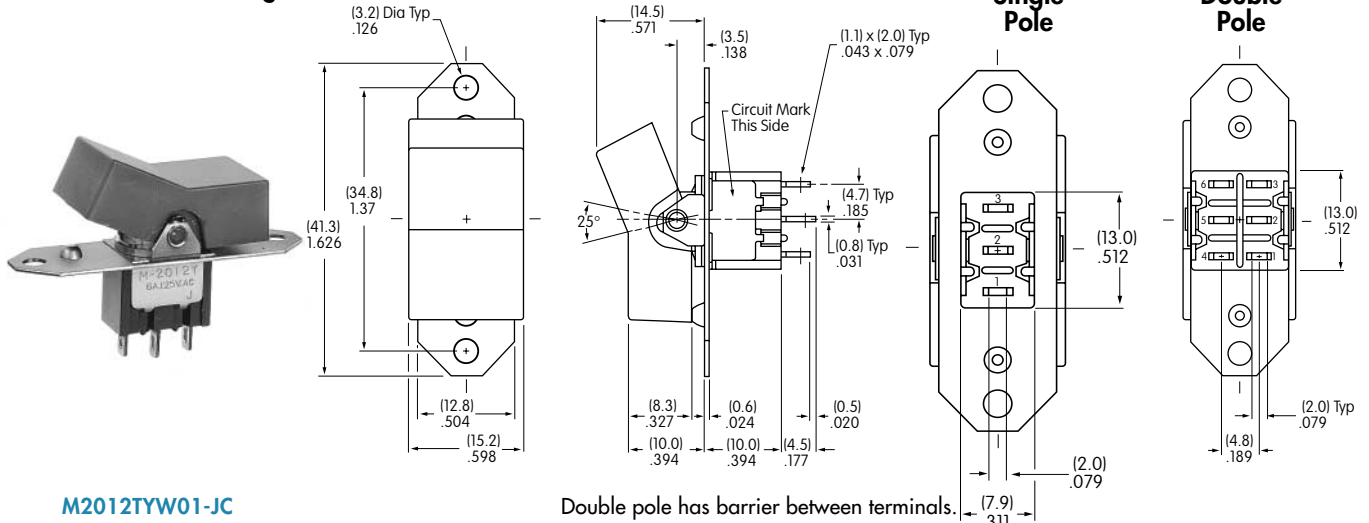
M2042TNW01-DC

Four Pole



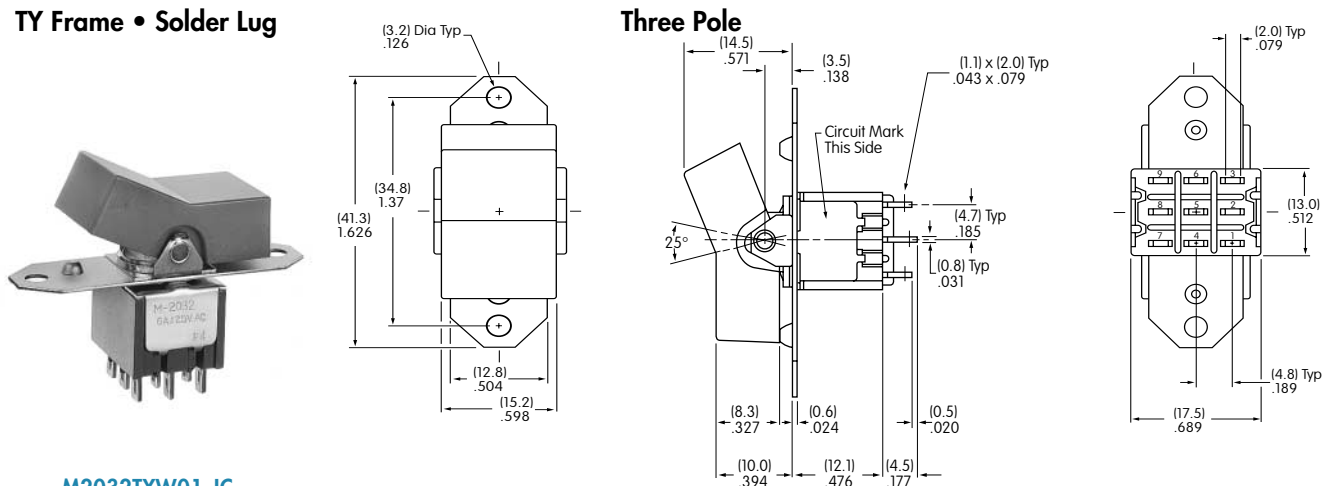
TYPICAL SWITCH DIMENSIONS

TY Frame • Solder Lug



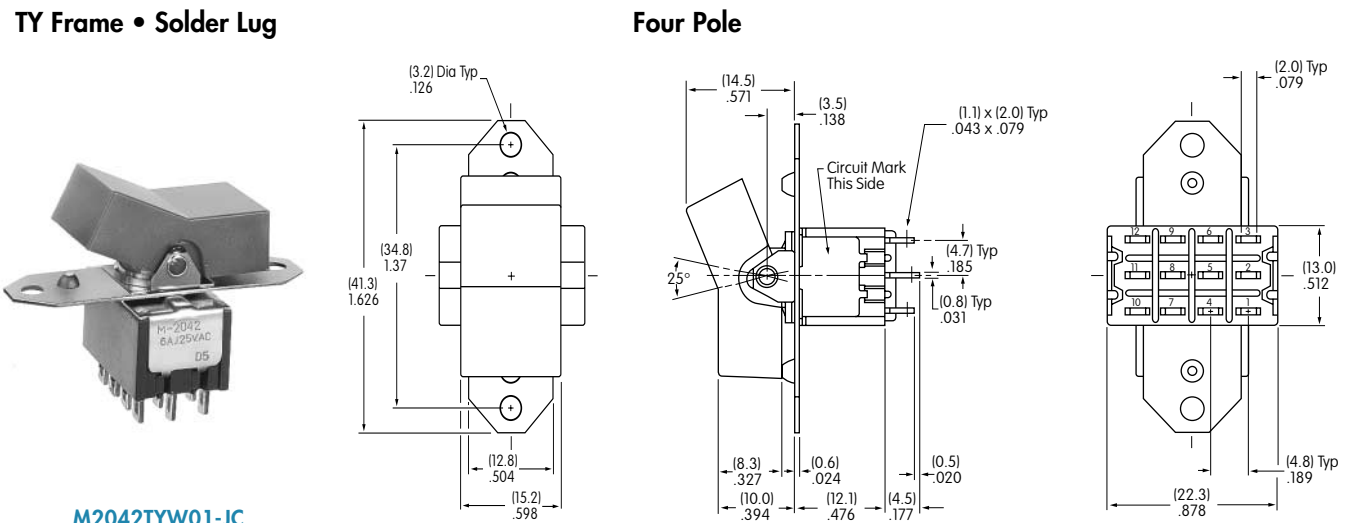
M2012TYW01-JC

TY Frame • Solder Lug



M2032TYW01-JC

TY Frame • Solder Lug



M2042TYW01-JC