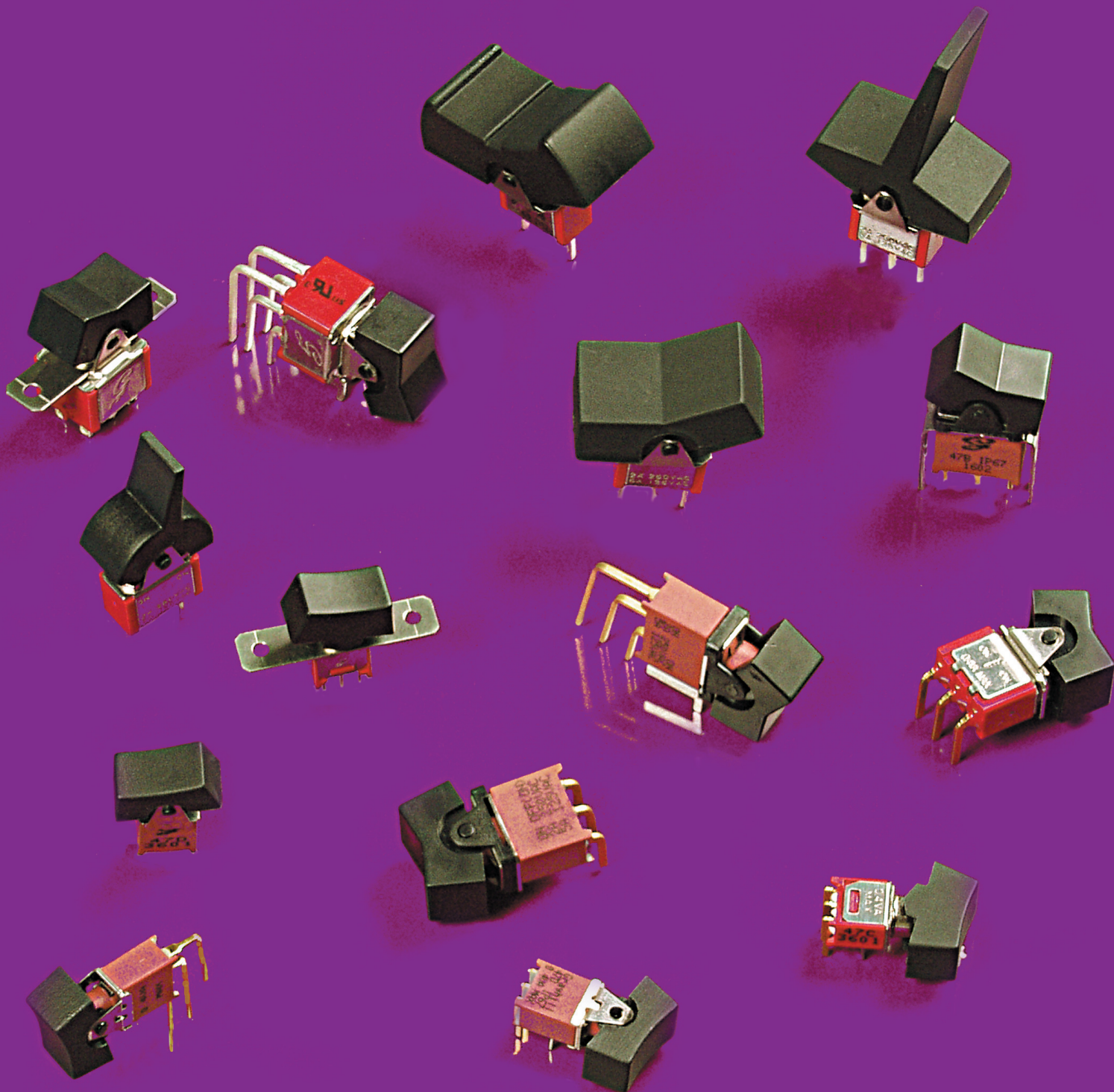




ROCKER SWITCHES

- Save Space and Weight
- SPDT, DPDT, 3PDT, and 4DPT Circuitry
- Choice of Actuators, Bushings and Terminations
- PC and Panel Mount Versions

Page

ROCKER AND PADDLE SWITCHES

Miniature	Series 47A	3
Sealed Miniature	Series 47B	9
Sub-Miniature	Series 47C	15
Sealed Sub-Miniature	Series 47D	18

Typical Applications:

- Computers and Peripherals
- Instrumentation
- Medical Equipment
- Telecommunications
- Test and Measurement Equipment

ROCKER AND PADDLE SWITCHES

Series	47A	47B	47C	47D
Page Number	2	9	15	18
Size	Miniature	Miniature	Sub-Miniature	Sub-Miniature
Circuitry	SPDT, DPDT, 3PDT, 4PDT	SPDT, DPDT, 3PDT	SPDT, DPDT	SPDT, DPDT
Max Contact Rating	5A	5A	3A	3A
Process Sealed		Yes		Yes
Mounting Options				
PC Vertical	Yes	Yes	Yes	Yes
PC Vertical w/ Support Bracket	Yes	Yes	Yes	Yes
PC Right Angle	Yes	Yes	Yes	Yes
PC Right Angle Vertical	Yes	Yes	Yes	Yes
Panel	Yes	Yes	Yes	
Termination Options				
Solder Lug	Yes	Yes	Yes	
PC Mount	Yes	Yes	Yes	Yes
PC Mount, Quick Connect	Yes	Yes		

SERIES 47A

Miniature Rocker and Paddle Switches

FEATURES

- Save Space and Weight
- SPDT, DPDT, 3PDT and 4PDT Circuitry
- Choice of Actuators and Terminations
- UL Recognized



MODELS In inches (and millimeters)

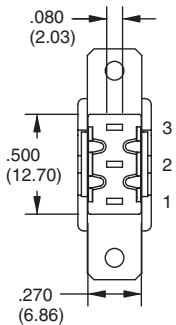
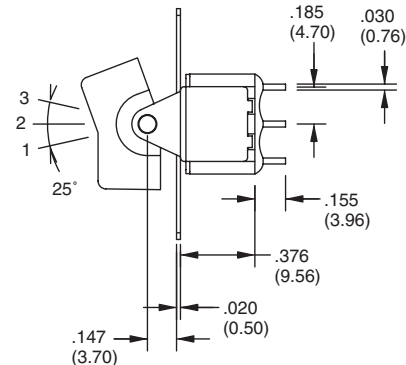
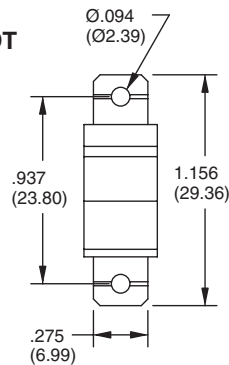
MODEL NO.	SWITCH POSITION		
			
SP1	ON	NONE	ON
SP2	ON	NONE	(ON)
SP3	ON	OFF	ON
SP4	(ON)	OFF	(ON)
SP5	ON	OFF	(ON)
TERM. COMM.	2-3	OPEN	2-1

()=MOMENTARY
02COMM.

SCHEMATIC



SPDT



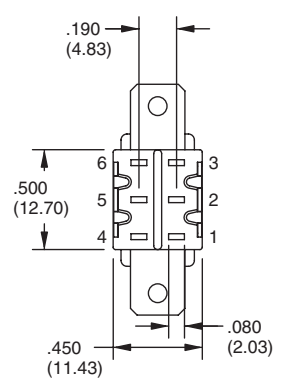
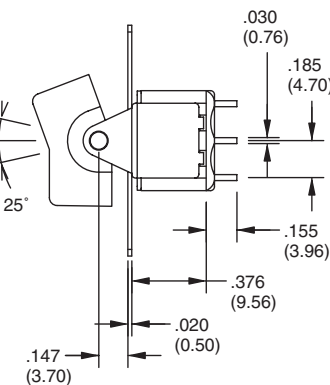
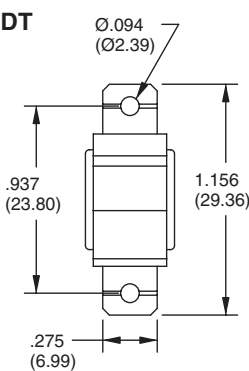
MODEL NO.	SWITCH POSITION		
			
DP1	ON	NONE	ON
DP2	ON	NONE	(ON)
DP3	ON	OFF	ON
DP4	(ON)	OFF	(ON)
DP5	ON	OFF	(ON)
TERM. COMM.	2-3,5-6	OPEN	2-1,5-4

()=MOMENTARY



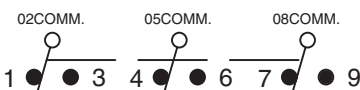
SCHEMATIC

DPDT



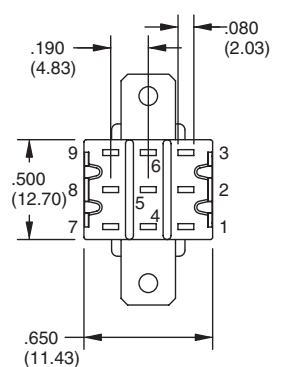
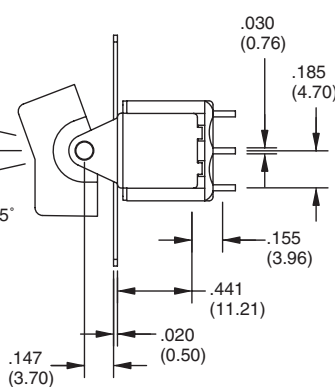
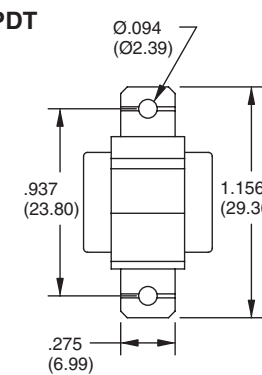
MODEL NO.	SWITCH POSITION		
			
3P1	ON	NONE	ON
3P2	ON	NONE	(ON)
3P3	ON	OFF	ON
3P4	(ON)	OFF	(ON)
3P5	ON	OFF	(ON)
TERM. COMM.	2-3,5-6	OPEN	2-1,5-4

()=MOMENTARY

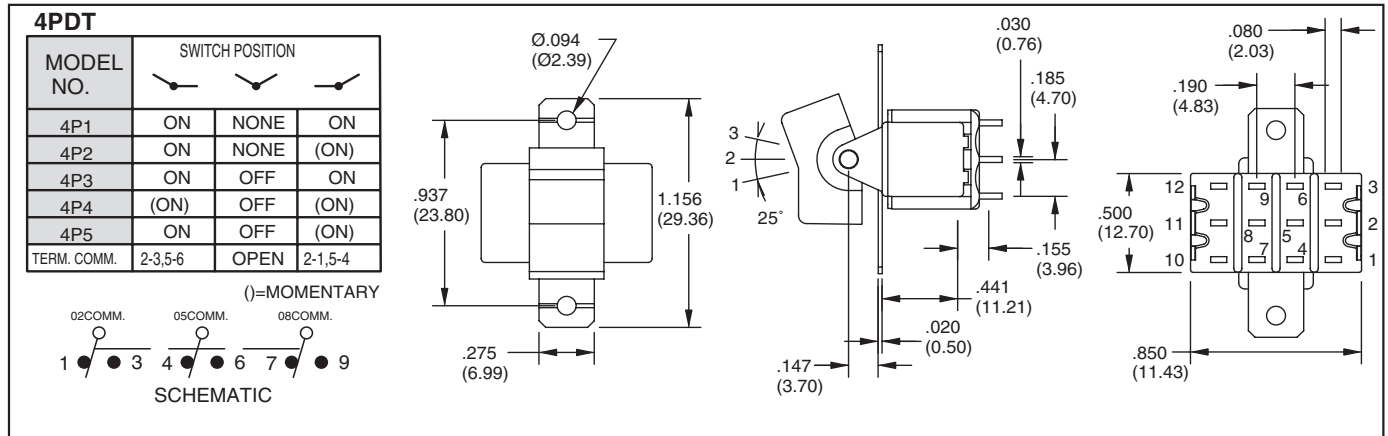


SCHEMATIC

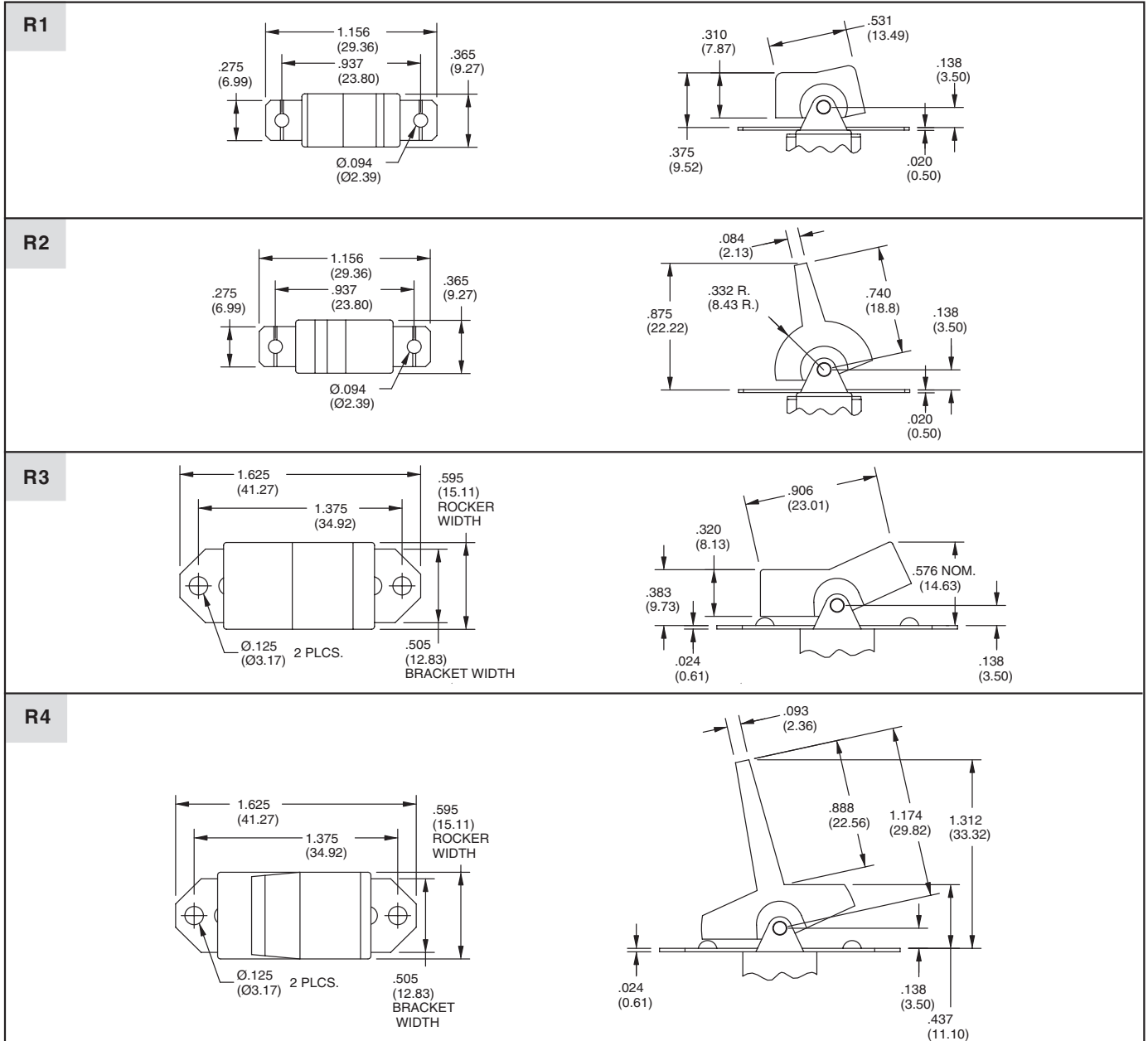
3PDT

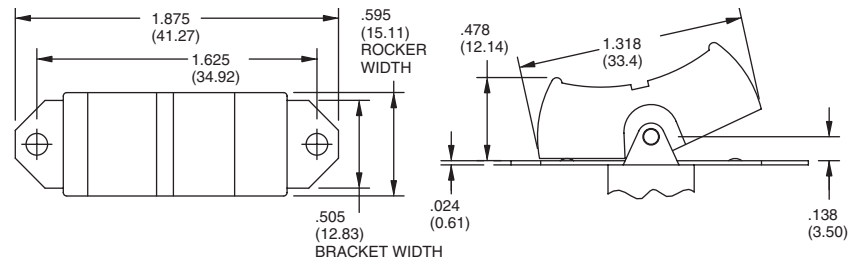
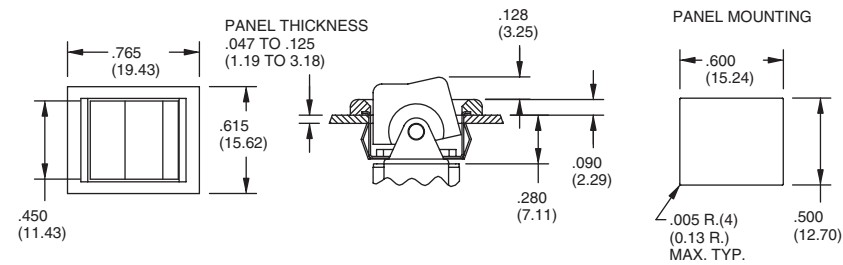
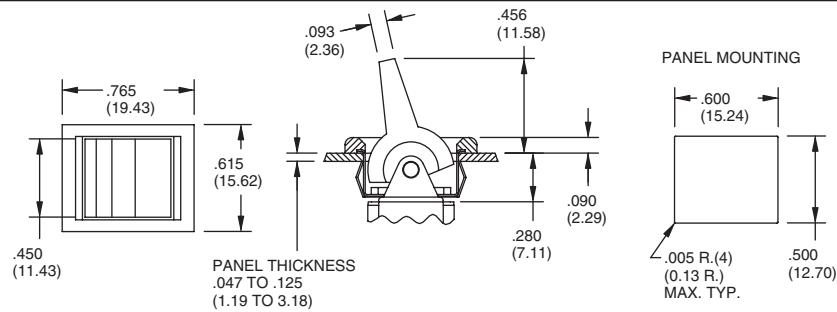
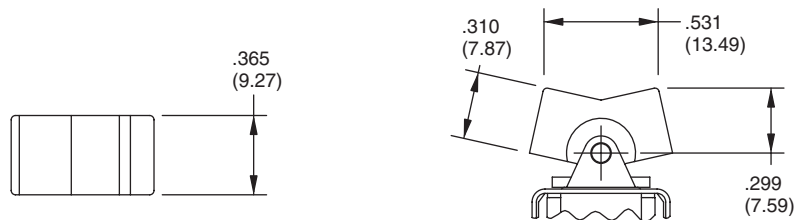
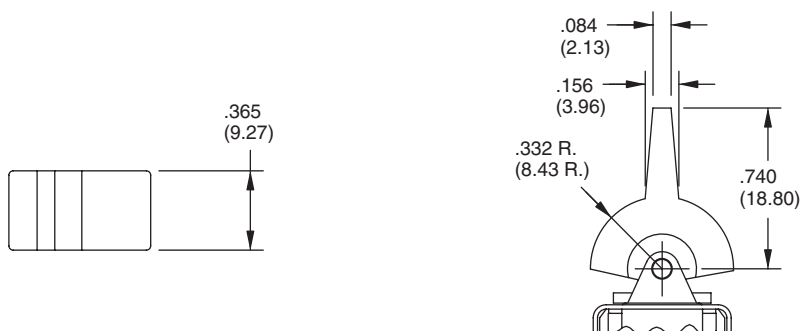


MODELS In inches (and millimeters)

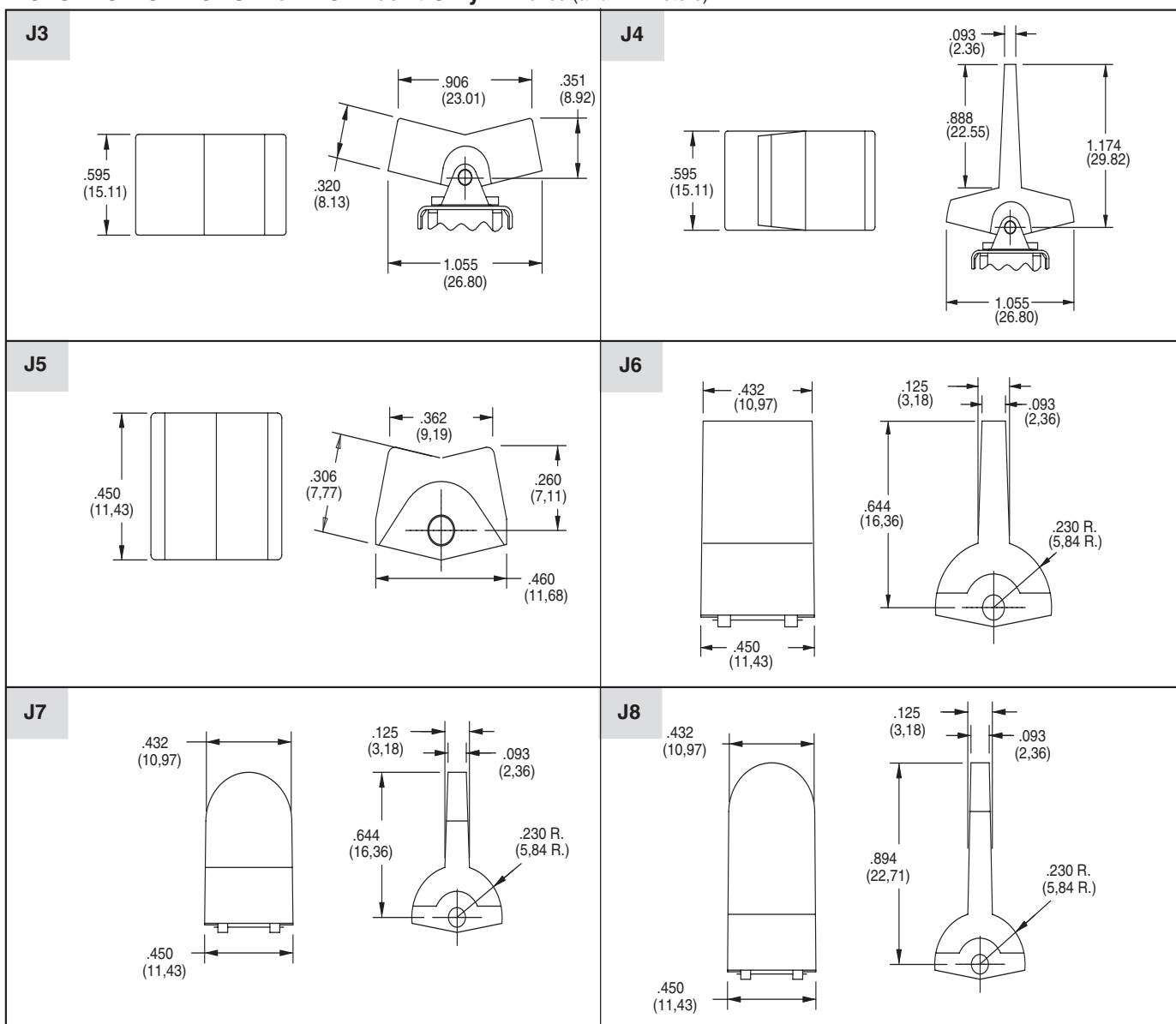


ACTUATOR OPTIONS: For Panel Mount Only In inches (and millimeters)

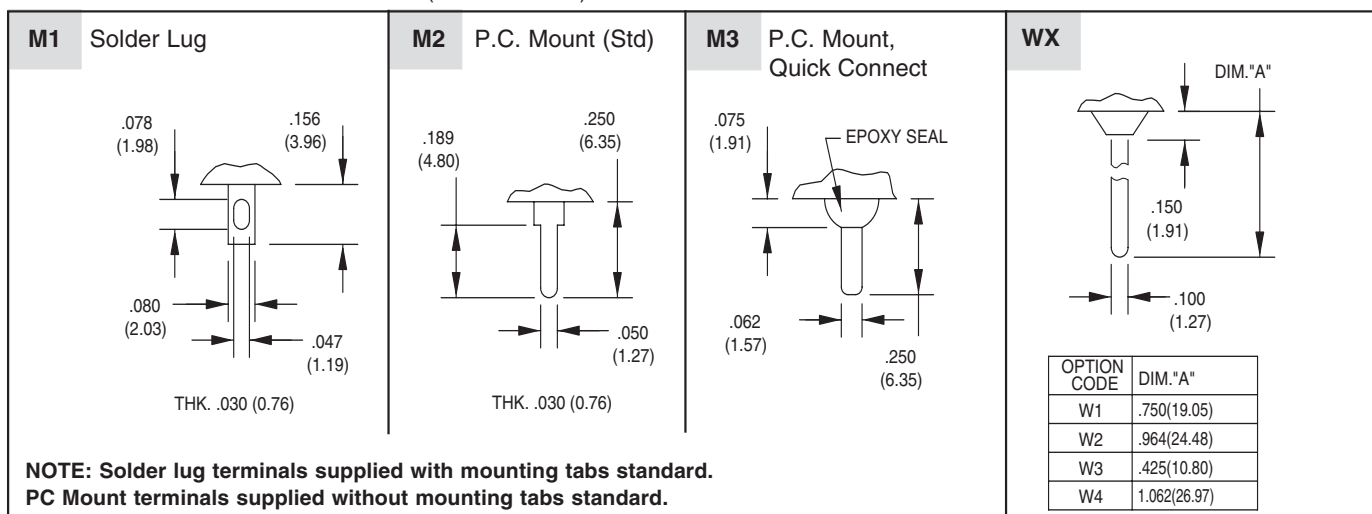


ACTUATOR OPTIONS: For Panel Rear Mount Only In inches (and millimeters)**R5****R6****R7****ACTUATOR OPTIONS: For P.C. Mount Only** In inches (and millimeters)**J1****J2**

ACTUATOR OPTIONS: For P.C. Mount Only In inches (and millimeters)



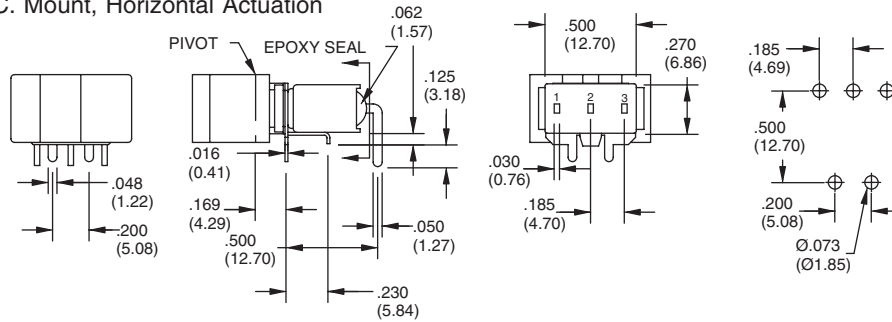
TERMINATION OPTIONS In inches (and millimeters)



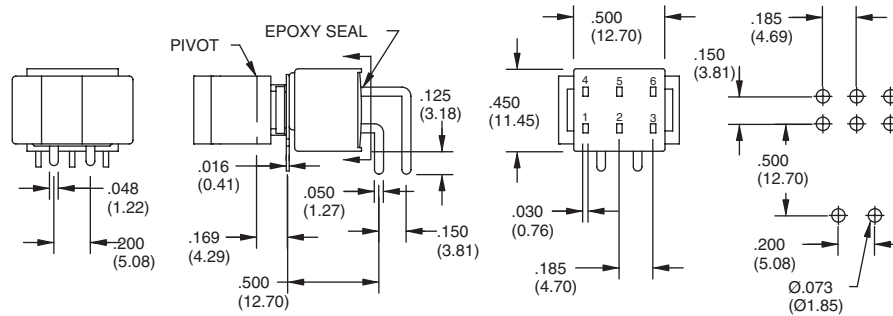
TERMINATION OPTIONS In inches (and millimeters)

M6 Right Angle P.C. Mount, Horizontal Actuation

SPDT

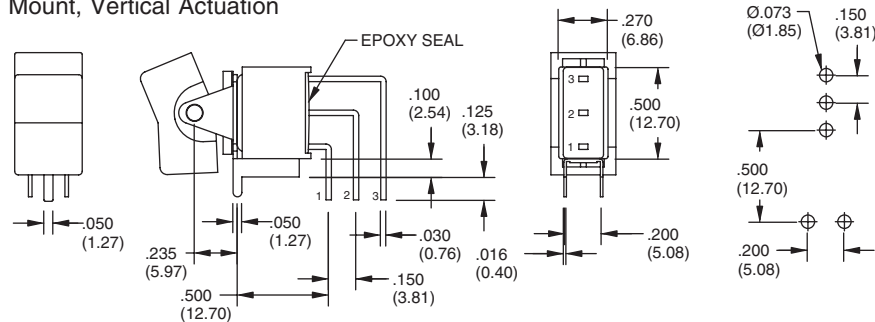


DPDT

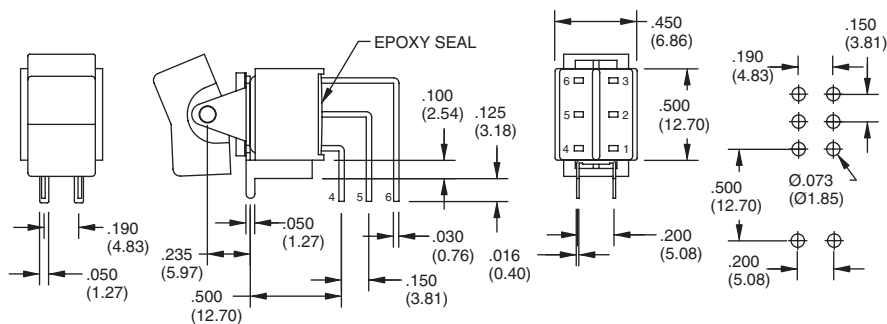


M7 Right Angle P.C. Mount, Vertical Actuation

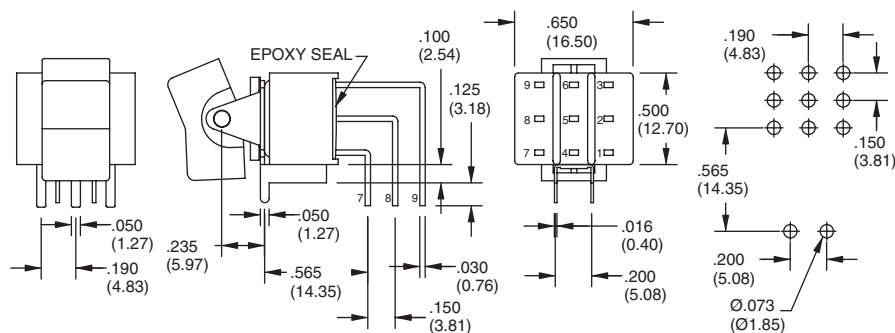
SPDT



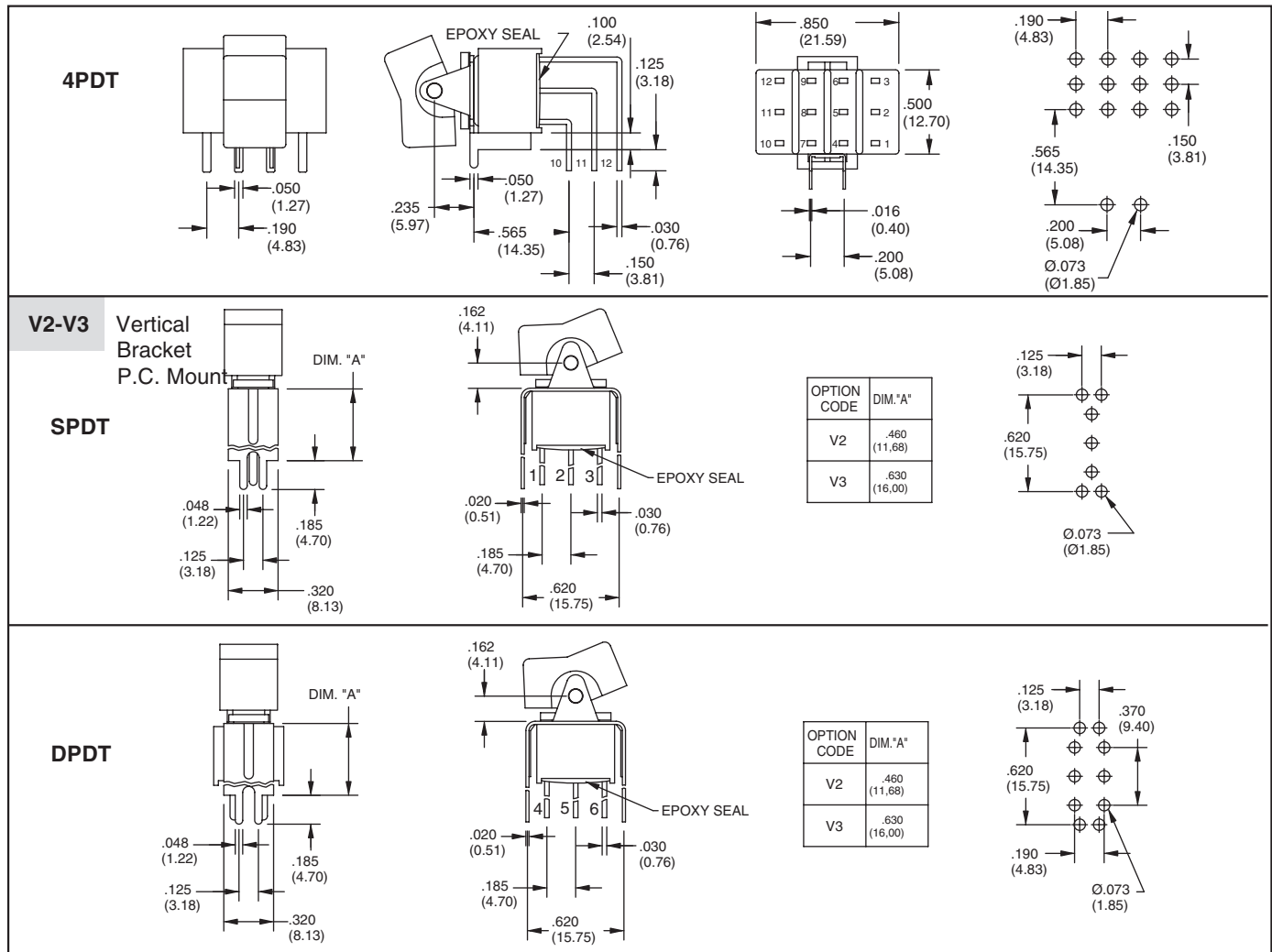
DPDT



3PDT



TERMINATION OPTIONS In inches (and millimeters)



SPECIFICATIONS RATINGS

Contact Rating: Q option - 5A with resistive load @ 125 VAC or 28 VDC; 2A with resistive load @ 250 VAC. R option - 0.4 VA max @ 20 Vmax (AC or DC)

Electrical Life: 40,000 make-and-break cycles at full load

Contact Resistance: 10 milliohms max. initial @ 2-4 VDC, 100 mA

Insulation Resistance: 1,000 megaohms minimum

Dielectric Strength: 1,000 V RMS @ sea level

Operating Temperature: -30°C to 85°C

UL Recognition: File number is E35289

MATERIALS

Case: Diallyl phthalate (DAP) (UL 94V-0)

Rockers: Nylon (UL 94V-0)

Bushing: Stainless steel

Switch Support: Brass, tin-plated

Terminal/Contacts: Brass with silver or gold plate

Terminal Seal: Epoxy

ORDERING INFORMATION



Series 47A Miniature Rocker and Paddle Switches

Model: SPDT: SP1, SP2, SP3, SP4, SP5

DPDT: DP1, DP2, DP3, DP4, DP5

3PDT: 3P1, 3P2, 3P3, 3P4, 3P5

4PDT: 4P1, 4P2, 4P3, 4P4, 4P5

(See Model options.)

Actuator: R1, R2, R3, R4, R5, R6, R7

J1, J2, J3, J4, J5, J6, J7, J8 (See actuator options.)

Termination Options: M1, M2, M3, M6, M7, S6, V2, V3, W1, W2, W3, W4 (See Termination options.)

RoHS Compliant

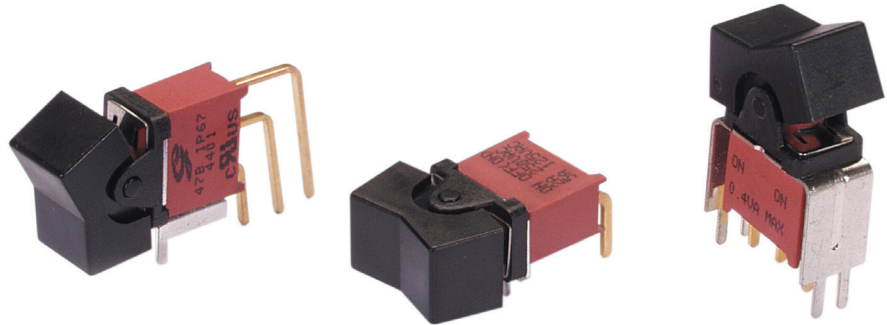
Contact: R = Brass alloy, gold plate over nickel plate

Q = Brass alloy, silver plated

Available from your local Grayhill Component Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.

SERIES 47B**Sealed Miniature Rocker and Paddle Switches****FEATURES**

- Save Space and Weight
- SPDT, DPDT and 3PDT Circuitry
- Choice of Actuators and Terminations
- Sealed per IP-67

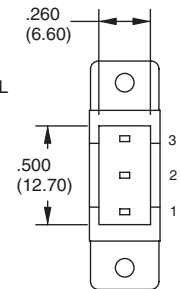
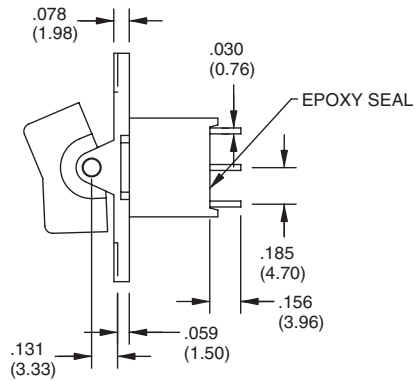
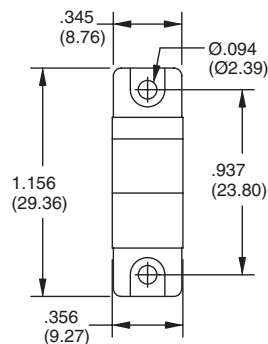
**MODELS** In inches (and millimeters)

MODEL NO.	SWITCH POSITION		
			
WSP1	ON	NONE	ON
WSP2	ON	NONE	(ON)
WSP3	ON	OFF	ON
WSP4	(ON)	OFF	(ON)
WSP5	ON	OFF	(ON)
TERM. COMM.	2-3	OPEN	2-1

()=MOMENTARY

02COMM.

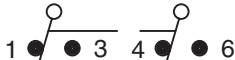
SCHEMATIC

**SPDT**

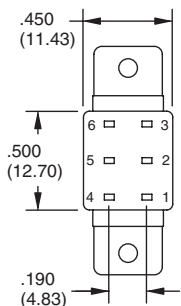
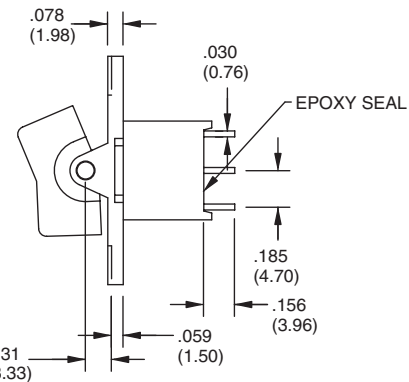
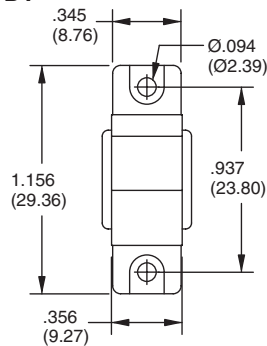
MODEL NO.	SWITCH POSITION		
			
WDP1	ON	NONE	ON
WDP2	ON	NONE	(ON)
WDP3	ON	OFF	ON
WDP4	(ON)	OFF	(ON)
WDP5	ON	OFF	(ON)
TERM. COMM.	2-3,5-6	OPEN	2-1,5-4

()=MOMENTARY

02COMM. 05COMM.



SCHEMATIC

DPDT

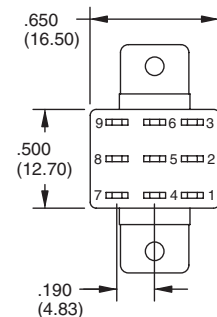
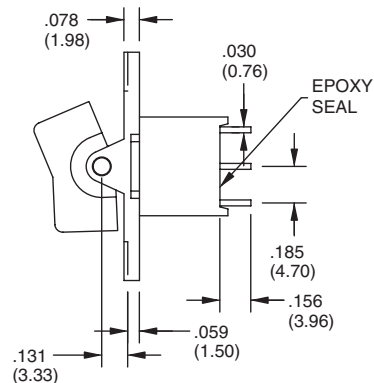
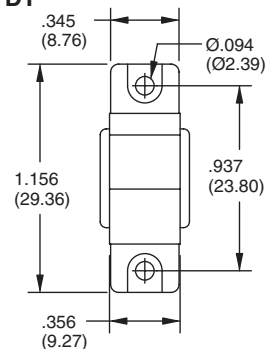
MODEL NO.	SWITCH POSITION		
			
W3P1	ON	NONE	ON
W3P2	ON	NONE	(ON)
W3P3	ON	OFF	ON
W3P4	(ON)	OFF	(ON)
W3P5	ON	OFF	(ON)
TERM. COMM.	2-3,5-6	OPEN	2-1,5-4

()=MOMENTARY

02COMM. 05COMM. 08COMM.

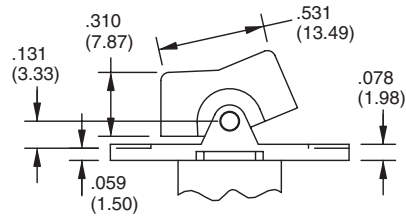
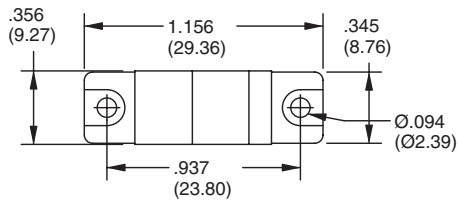


SCHEMATIC

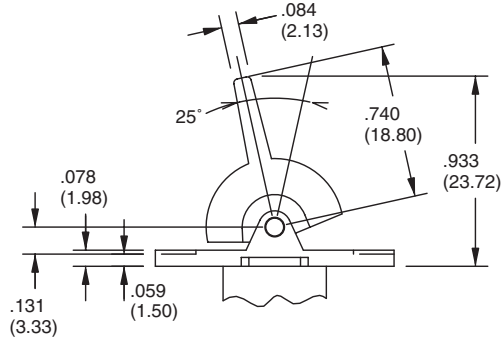
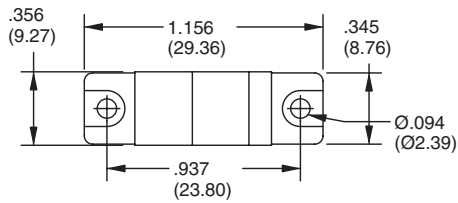
3PDT

ACTUATOR OPTIONS In inches (and millimeters)

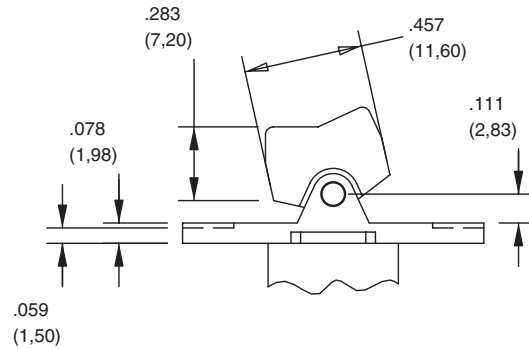
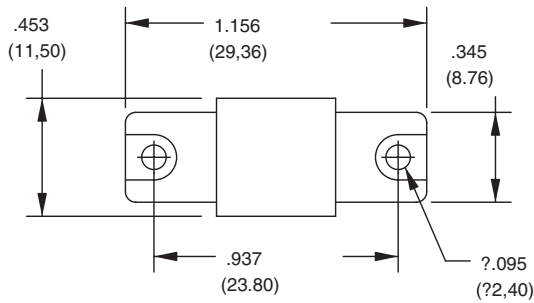
R1



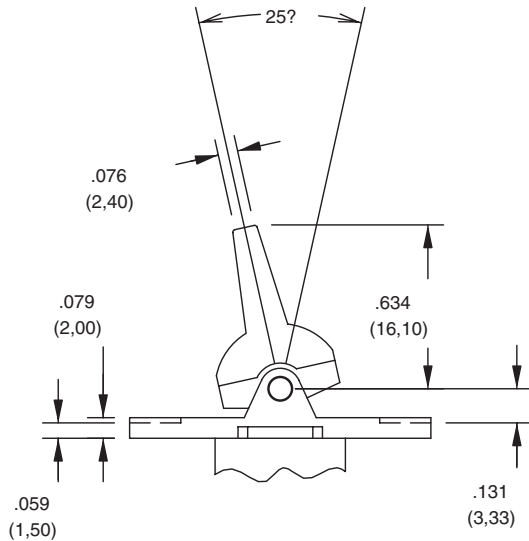
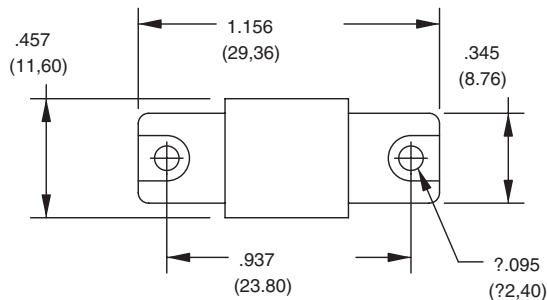
R2



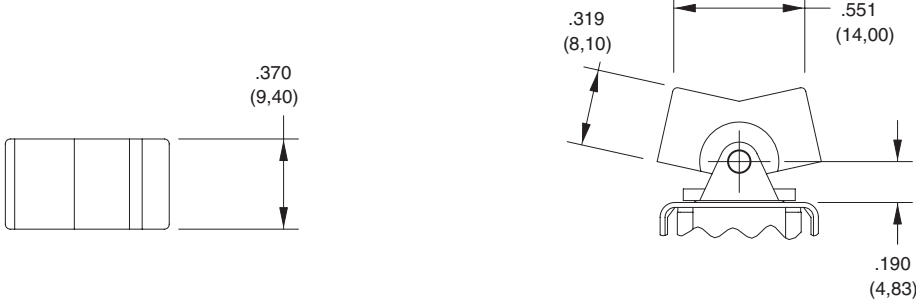
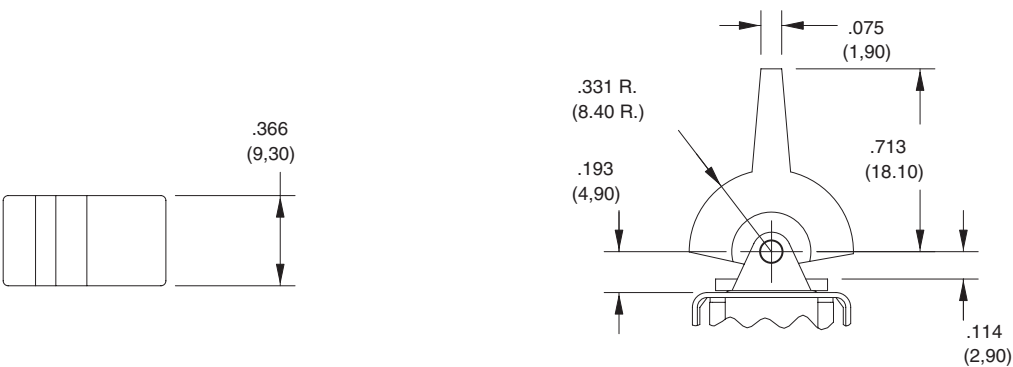
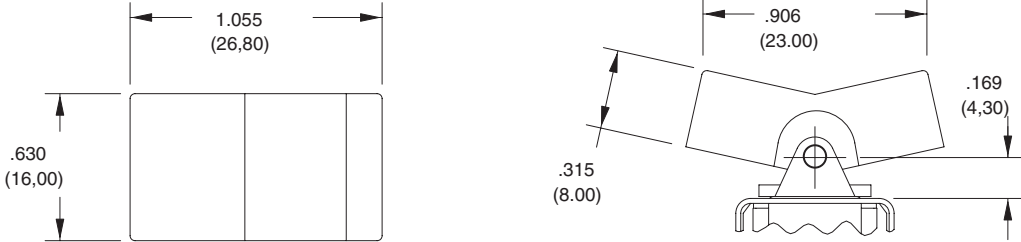
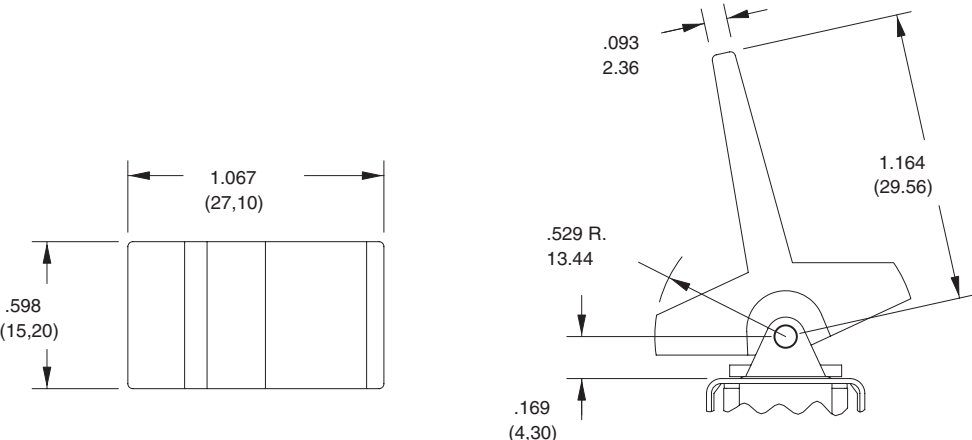
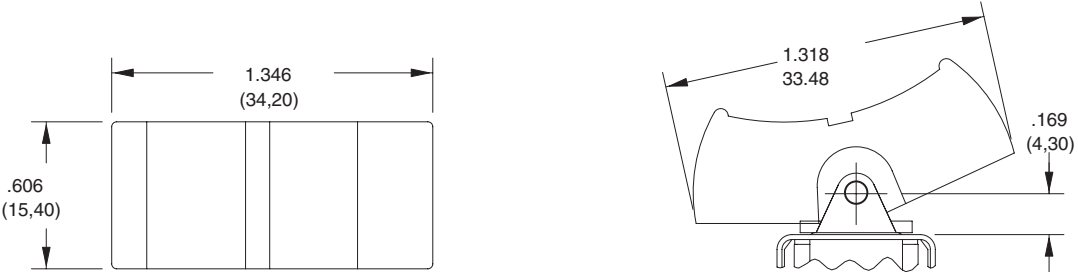
R3



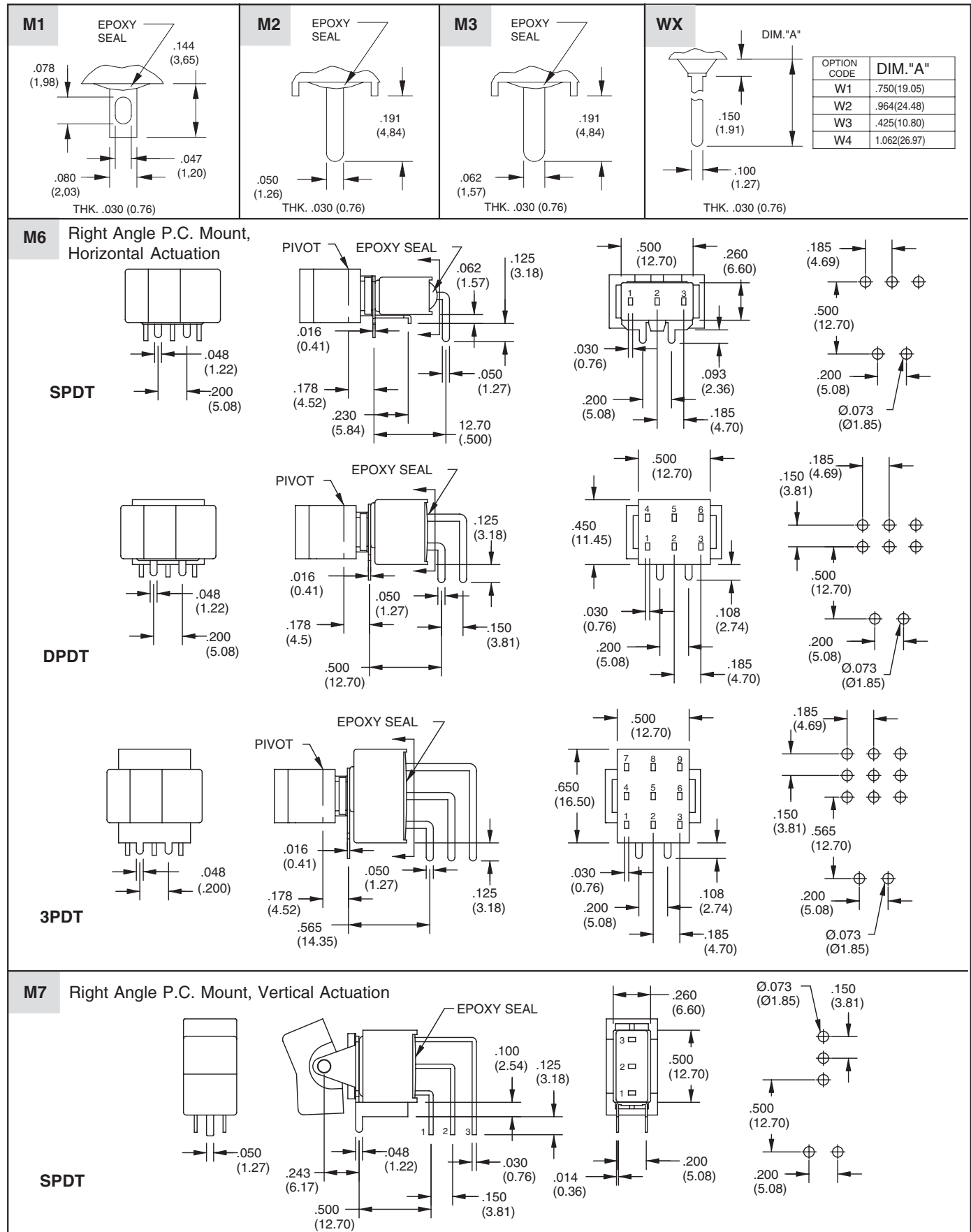
R4



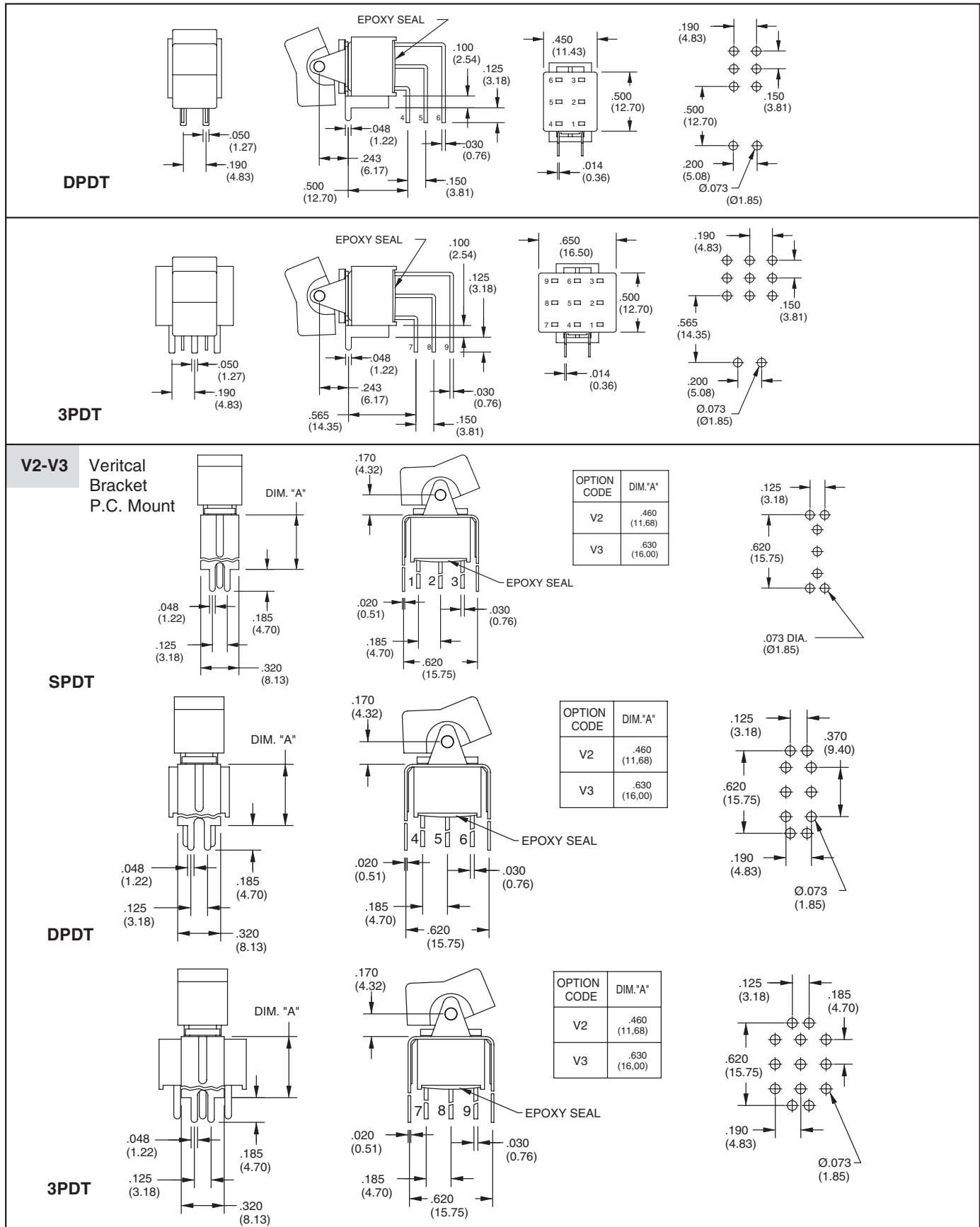
ACTUATOR OPTIONS In inches (and millimeters)

J1	 Side view dimensions: .370 (9,40) Front view dimensions: .319 (8,10), .551 (14,00), .190 (4,83)
J2	 Side view dimensions: .366 (9,30) Front view dimensions: .075 (1,90), .331 R. (8,40 R.), .193 (4,90), .713 (18,10), .114 (2,90)
J3	 Side view dimensions: .630 (16,00), 1.055 (26,80) Front view dimensions: .906 (23,00), .169 (4,30), .315 (8,00)
J4	 Side view dimensions: .598 (15,20), 1.067 (27,10) Front view dimensions: .093 (2,36), .529 R. (13,44), 1.164 (29,56), .169 (4,30)
J5	 Side view dimensions: .606 (15,40), 1.346 (34,20) Front view dimensions: 1.318 (33,48), .169 (4,30)

TERMINATION OPTIONS In inches (and millimeters)



TERMINATION OPTIONS In inches (and millimeters)



SPECIFICATIONS

RATINGS

Contact Rating: Q option - 5A with resistive load @ 125 VAC or 28 VDC; 2A with resistive load @ 250 VAC. R option - 0.4 VA max @ 20 Vmax (AC or DC)

Electrical Life: 50,000 make-and-break cycles at full load

Contact Resistance: Below 10 milliohms max. initial @ 2-4 VDC, 100 mA

Insulation Resistance: 1,000 megaohms minimum

Dielectric Strength: 1,500 V RMS @ sea level

Operating Temperature: -30°C to 85°C

MATERIALS

Case and Bushing: Glass-filled nylon 6/6, flame retardant, heat stabilized (UL94V-0)

Actuator: Nylon, black standard. Internal O-ring seal standard with all actuators.

Frame: Spring steel, black (standard)

Switch Support: Brass, tin-plated

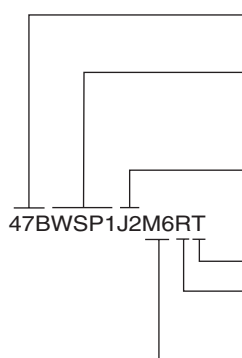
Actuator Pivot & Mounting Bracket: Nylon (UL 94V-0)

Actuator Pivot Retainer: Stainless Steel

Terminal Seal: Epoxy

Terminal/Contacts: Copper alloy with gold plate over nickel or silver plate

ORDERING INFORMATION



Series Sealed Miniature Rocker and Paddle Switches

Model: SPDT: WSP1, WSP2, WSP3, WSP4, WSP5

DPDT: WDP1, WDP2, WDP3, WDP4, WDP5

3PDT: W3P1, W3P2, W3P3, W3P4, W3P5

(See Model options.)

Actuator: R1, R2, R3, R4, J1, J2, J3, J4, J5

(See Actuator options)

RoHS Compliant

Contact: R = Copper alloy, gold plate over nickel plate,

Q = Copper alloy, gold plate over silver plate

Termination Options: M1, M2, M6, M7, V2, V3, W1, W2, W3, W4

(See Termination options)

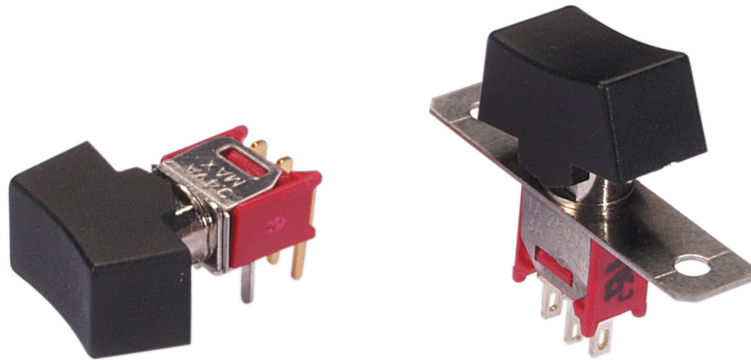
Available from your local Grayhill Component Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.

SERIES 47C

Sub-Miniature Rocker Switches

FEATURES

- Save Space and Weight
- SPDT and DPDT Circuitry
- Choice of Actuators and Terminations
- UL Recognized

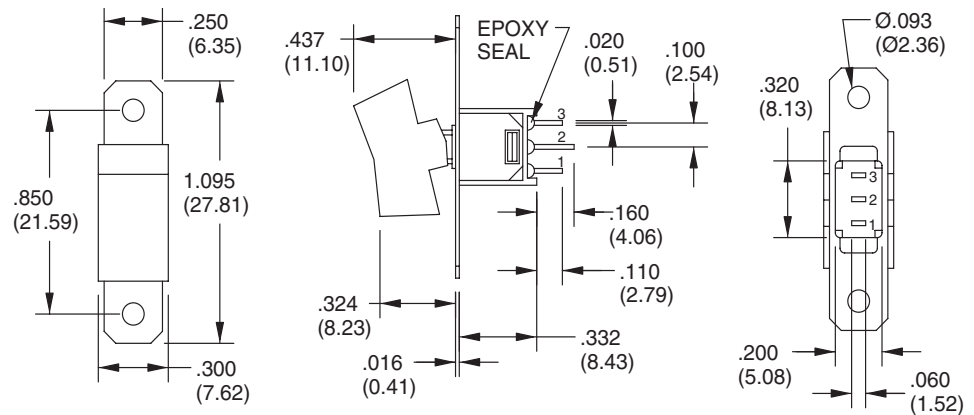
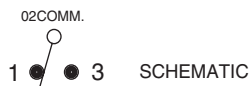


MODELS In inches (and millimeters)

SPDT

MODEL NO.	SWITCH POSITION		
			
MSP1	ON	NONE	ON
MSP2	ON	NONE	(ON)
MSP3	ON	OFF	ON
MSP4	(ON)	OFF	(ON)
MSP5	ON	OFF	(ON)
TERM. COMM.	2-3	OPEN	2-1

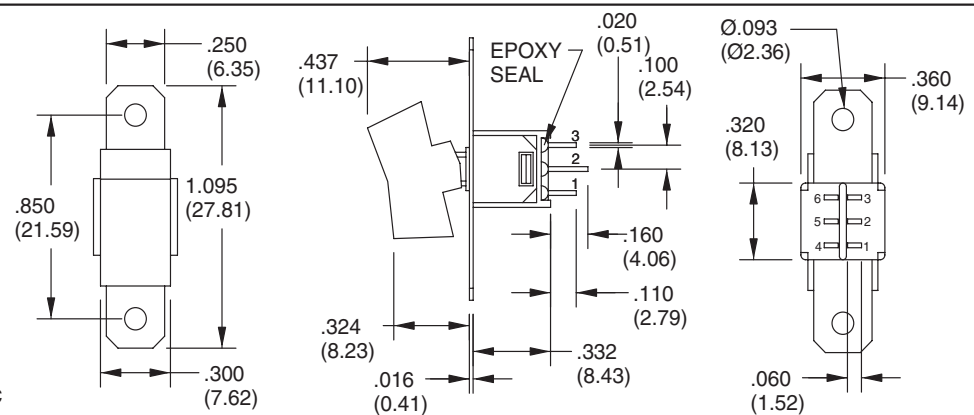
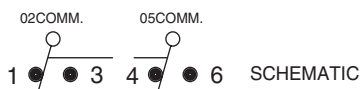
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DPDT

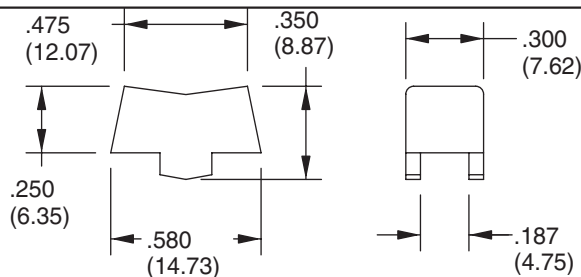
MODEL NO.	SWITCH POSITION		
			
MDP1	ON	NONE	ON
MDP2	ON	NONE	(ON)
MDP3	ON	OFF	ON
MDP4	(ON)	OFF	(ON)
MDP5	ON	OFF	(ON)
TERM. COMM.	2-3,5-6	OPEN	2-1,5-4

()=MOMENTARY



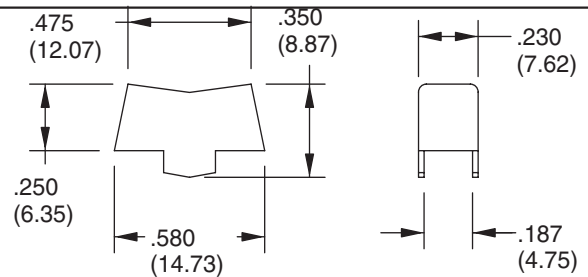
ACTUATOR OPTIONS In inches (and millimeters)

R1



STD. ALL MODELS EXCEPT SPDT
WITH M6 TERMINATIONS

R2



STD. ON SPDT MODELS
WITH M6 TERMINATIONS

M1 Solder Lug

Note: Solder lug terminals supplied with mounting ears standard.

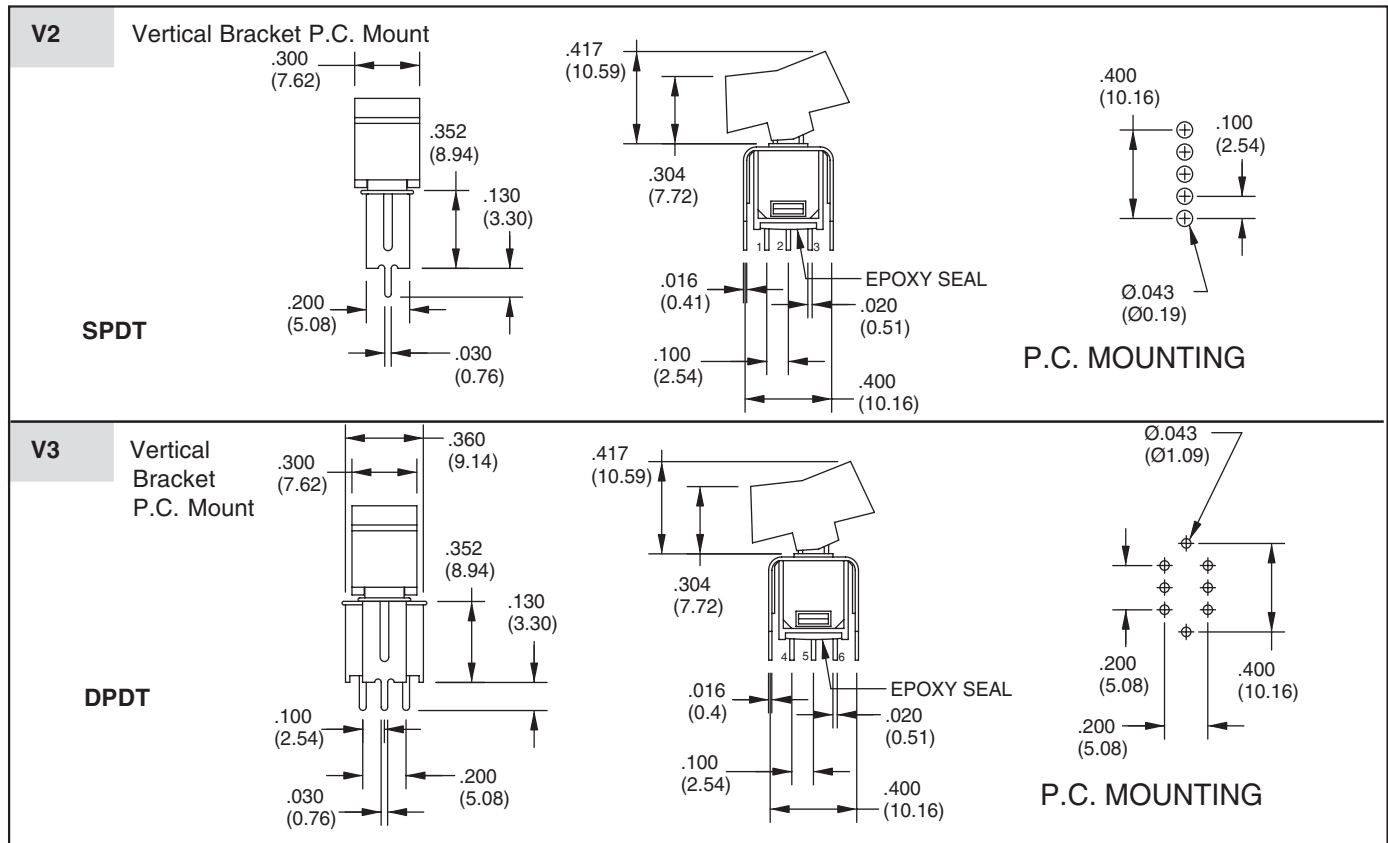
M2 P.C. Mount (Std)

PC mount terminals supplied without mounting ears standard

M6 Right Angle P.C. Mount, Horizontal Actuation

M7 Right Angle P.C. Mount, Vertical Actuation

TERMINATION OPTIONS In inches (and millimeters)



SPECIFICATIONS

RATINGS

Contact Rating: Q option - 3A with resistive load @ 125 VAC or 28 VDC; 1.5A with resistive load @ 250 VAC. R option - 0.4 VA max @ 20 Vmax (AC or DC)
Electrical Life: 30,000 make-and-break cycles at full load

Contact Resistance: 20 milliohms max. initial @ 2-4 VDC, 100 mA

Insulation Resistance: 1,000 megaohms minimum

Dielectric Strength: 1,000 V RMS @ sea level

Operating Temperature: -30°C to 85°C

UL Recognition: File number is E35289

MATERIALS

Case: Diallyl phthalate (DAP) (UL94V-0)

Rocker: Nylon

Bushing: Brass, nickel plated

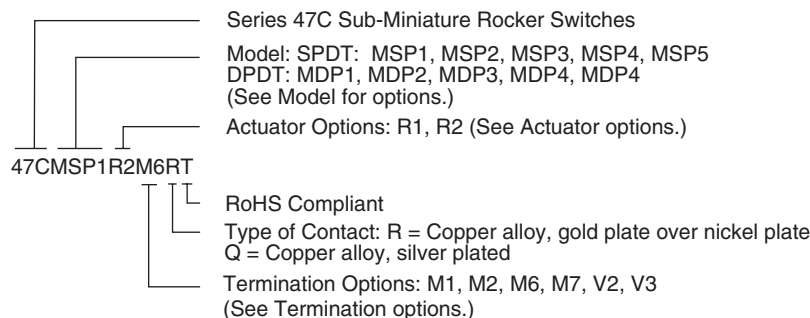
Housing: Stainless steel

Switch Support: Brass, electrotin plated

Terminal/Contacts: Copper alloy with silver or gold plating

Terminal Seal: Epoxy

ORDERING INFORMATION



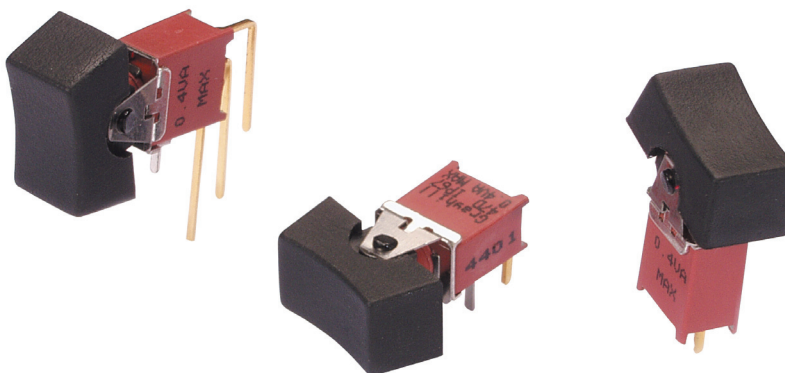
Available from your local Grayhill Component Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.

SERIES 47D

Sealed Sub-Miniature Rocker Switches

FEATURES

- Save Space and Weight
- SPDT and DPDT Circuitry
- Choice of Actuators and Terminations
- Sealed per IP-67

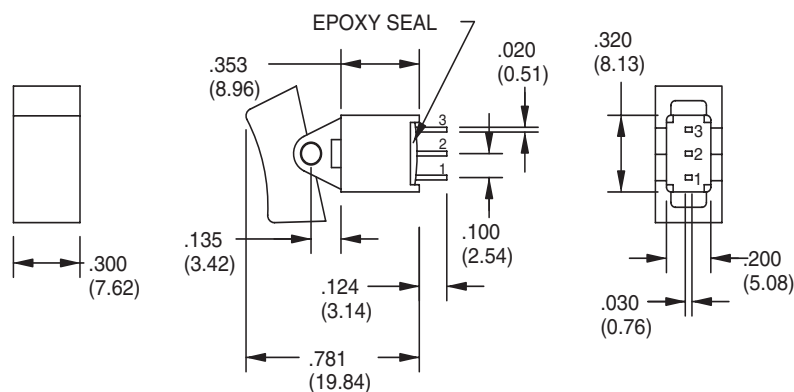


MODELS In inches (and millimeters)

SPDT

MODEL NO.	SWITCH POSITION		
	ON	NONE	ON
WMSP1	ON	NONE	ON
WMSP2	ON	NONE	(ON)
WMSP3	ON	OFF	ON
WMSP4	(ON)	OFF	(ON)
WMSP5	ON	OFF	(ON)
TERM. COMM.	2-3	OPEN	2-1

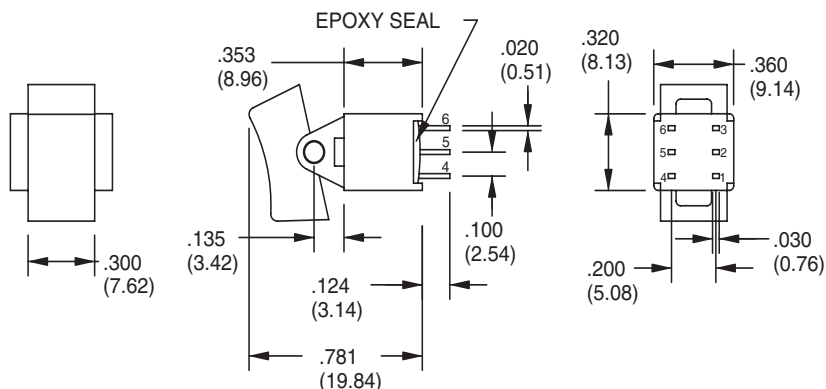
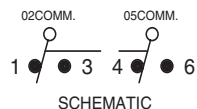
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DPDT

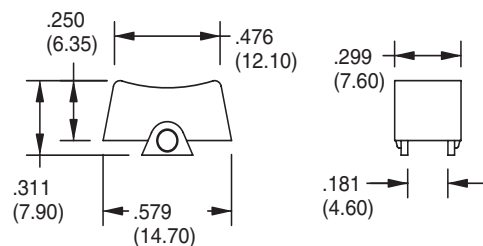
MODEL NO.	SWITCH POSITION		
	ON	NONE	ON
WMDP1	ON	NONE	ON
WMDP2	ON	NONE	(ON)
WMDP3	ON	OFF	ON
WMDP4	(ON)	OFF	(ON)
WMDP5	ON	OFF	(ON)
TERM. COMM.	2-3,5-6	OPEN	2-1,5-4

()=MOMENTARY

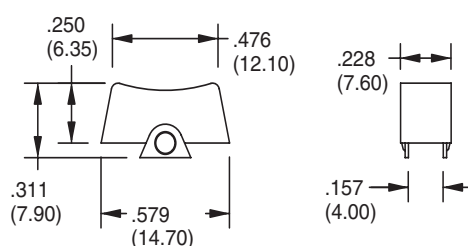


ACTUATOR OPTIONS In inches (and millimeters)

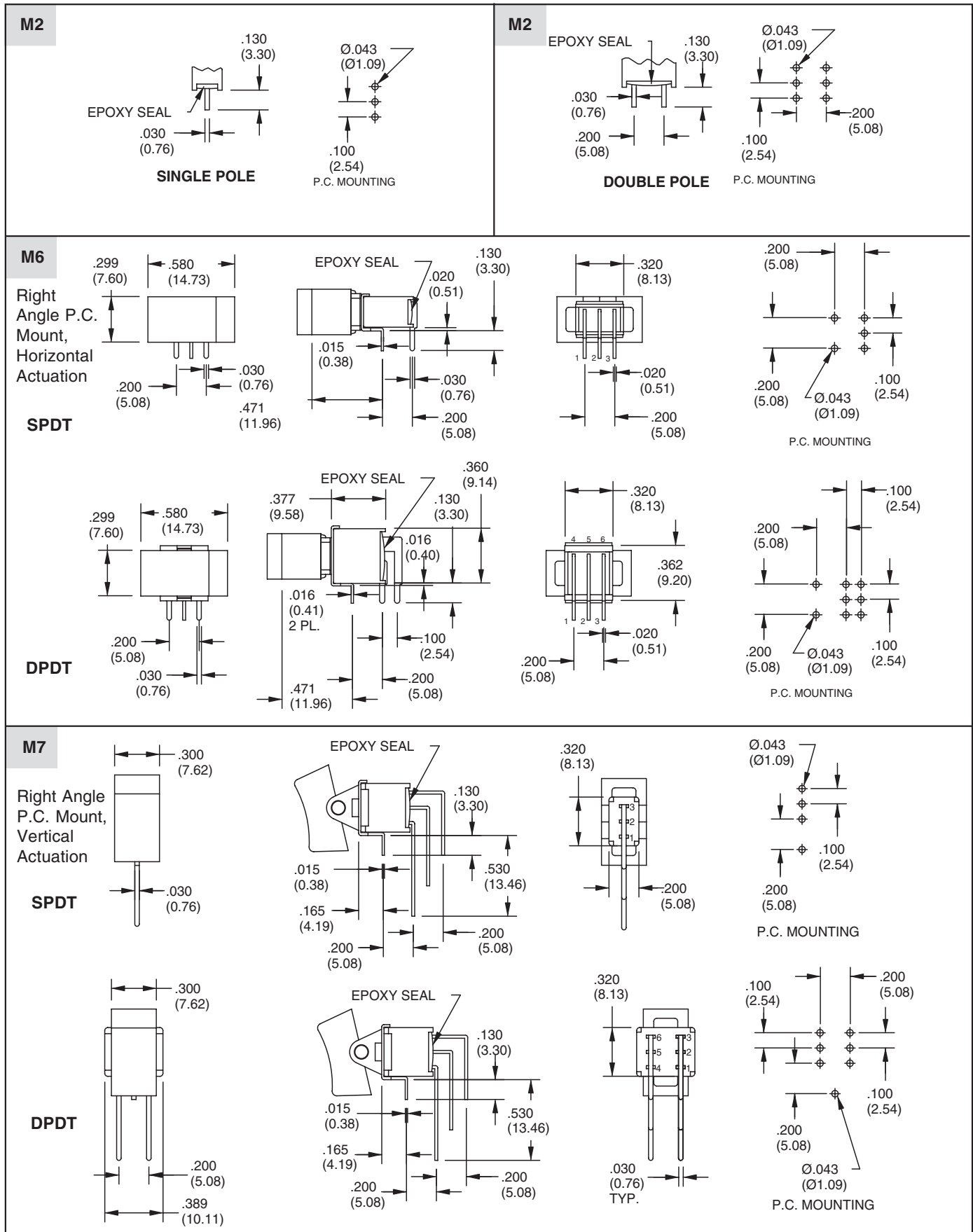
R1



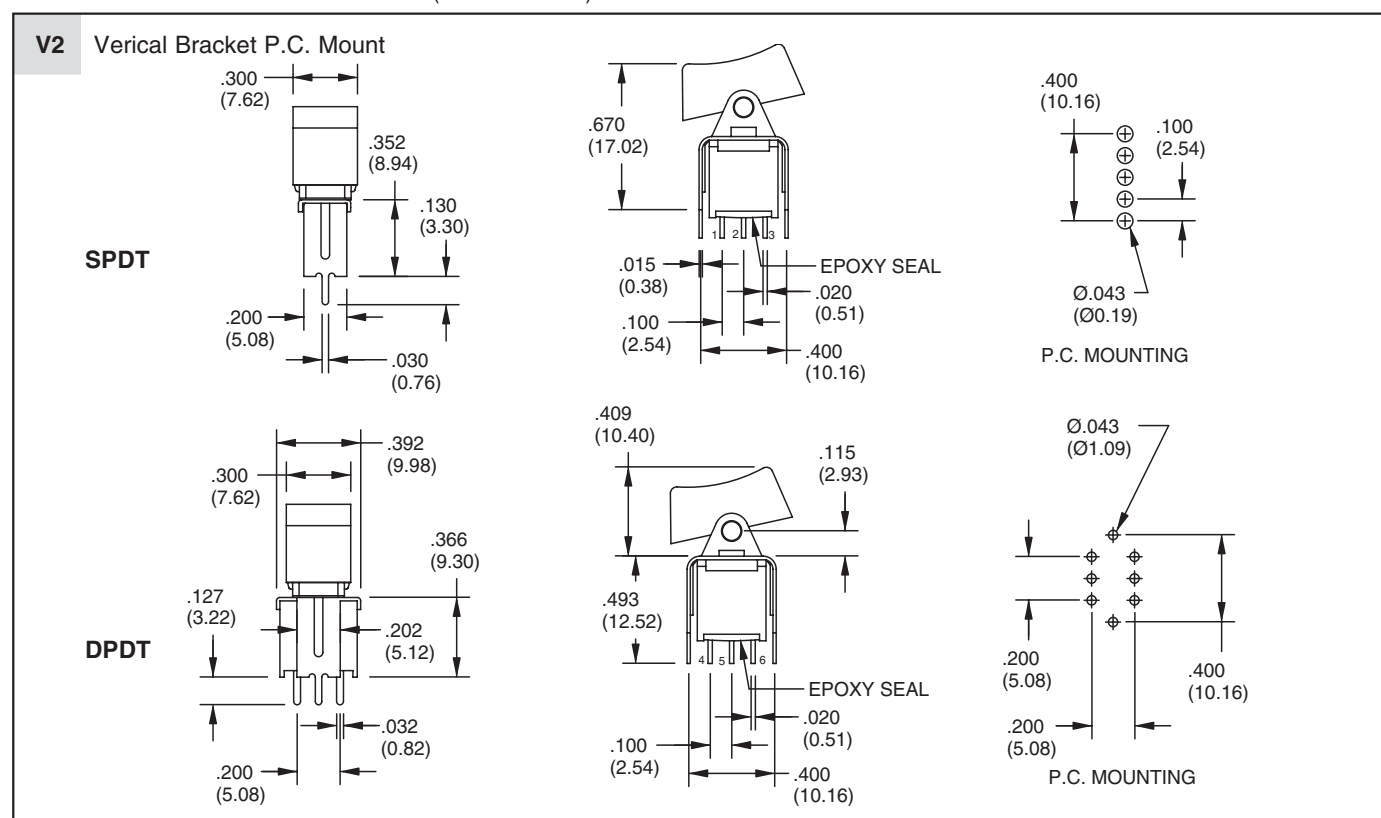
R2



TERMINATION OPTIONS In inches (and millimeters)



TERMINATION OPTIONS In inches (and millimeters)



SPECIFICATIONS

RATINGS

Contact Rating: Q option - 3A with resistive load @ 125 VAC or 28 VDC; 1.5A with resistive load @ 250 VAC. R option - 0.4 VA max @ 20 Vmax (AC or DC)

Electrical Life: 30,000 make-and-break cycles at full load

Contact Resistance: 20 milliohms max.

initial @ 2-4 VDC, 100 mA

Insulation Resistance: 1,000 megaohms minimum

Dielectric Resistance: 1,500 V RMS @ sea level

Operating Temperature: -30°C to 85°C

MATERIALS

Case and Bushings: Glass-filled nylon 6/6, flame retardant, heat stabilized (UL94V-0)

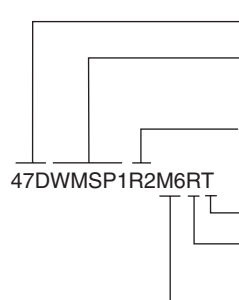
Actuator: Nylon, black standard. Internal o-ring seal standard with all actuators.

Switch Support: Brass, tin-plated

Terminal Seal: Epoxy

Terminal/Contacts: Copper alloy with gold plate or silver plate over nickel

ORDERING INFORMATION



Series 47D Sealed Sub-Miniature Rocker Switch

Model: SPDT: WMSP1, WMSP2, WMSP3, WMSP4, WMSP5
DPDT: WMDP1, WMDP2, WMDP3, WMDP4, WMDP5

Actuator Options: R1, R2
(See Actuator options.)

RoHS Compliant

Contact: R= Copper alloy, gold plate over nickel plate

Q = Copper alloy, gold plate over silver plate

Termination Options: M2, M6, M7, V2
(See Termination options.)

Available from your local Grayhill Component Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.