

5000 series

Miniature toggle switches •
threaded bushing Ø 6.35 mm or plain bushing



DISTINCTIVE FEATURES

17 actuators including toggles, paddle levers and locking levers in different lengths.

Various contact materials for low and high currents.

8 functions including maintained and momentary versions.

1 to 4 pole configurations.

12 terminal types including 9 for PC board mounting.

Other types include quick-connect and wire-wrap.

Several bushing styles.

3 types of finish including military black.

3 approvals (UL - CSA - CECC).

4 types of sealing for terminal or front panel requirements.

Numerous accessories available.



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ELECTRICAL SPECIFICATIONS

- Current/voltage rating with resistive load :

Contact	Maximum	Minimum	Level*
Silver (A)	4 A 30 VDC	50 mA 10 VDC	III and IV
Silver, gold plated (AD)	4 A 30 VDC Gold plating withstands up to 100 mA 30 VDC	10 mA 50 mV 10 µA 5 V	I to IV
Brass, gold plated (CD)	0.4 VA at 20 VAC or DC	10 mA 50 mV 10 µA 5 V	I and II

*For details, see Technical Information on website.

- For inductive, lamp or capacitive load, consult factory.
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1,000 MΩ min. at 500 VDC
- Dielectric strength :
1,000 Vrms 50 Hz min. between terminals
1,500 Vrms 50 Hz min. between poles
1,500 Vrms 50 Hz min. between terminals and frame
- Contact bounce : 2 ms max.
- Electrical life at full load :
50,000 cycles for single and double pole
40,000 cycles for 3 pole
30,000 cycles for 4 pole
- Low level or mechanical life : 100,000 cycles



GENERAL SPECIFICATIONS

- Torque : 1.25 Nm (.922 Ft.lb) max. applied to nut
- Panel thickness : 2.5 mm (.098) with 2 nuts - 4 mm (.157) with 1 nut
- Operating temperature : -40 °C to +85 °C (-40 °F to +185 °F)



MATERIALS

- Case : diallylphthalate (DAP) or high temperature plastic material (UL94-V0)
- Actuator : brass, nickel plated
- Paddles : UL94HB polyamide
- Lever caps : vinyl
- Bushing : brass, nickel plated
- Housing : stainless steel or steel tin plated
- Contacts
A : silver
AD : silver, gold plated
CD : brass, gold plated
X814 : for peak currents, see "Special options".
- Terminal seal : epoxy

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

AGENCY APPROVALS



CECC 96201-007

3 A 250 VAC, 6 A 125 VAC

For VDE, refer to 55000 series.

NATO

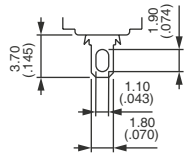
Availability : consult factory for details of approved models.

Marking : to order switches marked UL, CSA or CECC, complete appropriate box of ordering format. The preferential list does not appear on the switches.

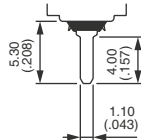
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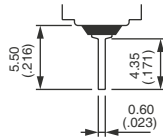
TERMINALS



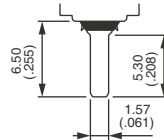
Solder lugs



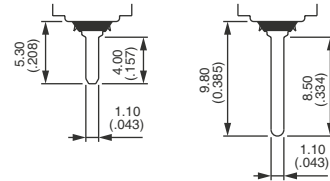
Straight PC



Straight PC



Quick-connect

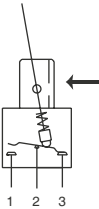


Straight PC bracket mounting

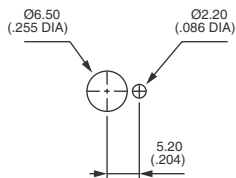


ELECTRICAL FUNCTION

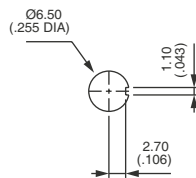
→ KEYWAY



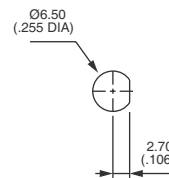
PANEL CUT-OUT



Standard



With K sealing option

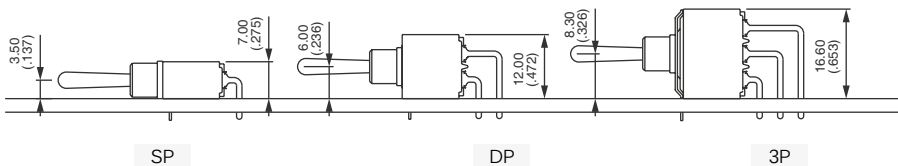


With X408 sealing option



PCB MOUNTING FOR RIGHT ANGLE TERMINAL MODELS

HORIZONTAL W

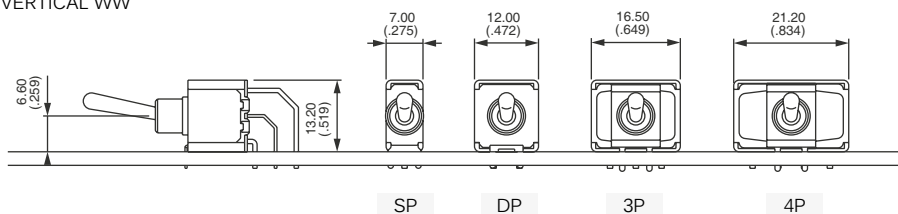


SP

DP

3P

VERTICAL WW



SP

DP

3P

4P

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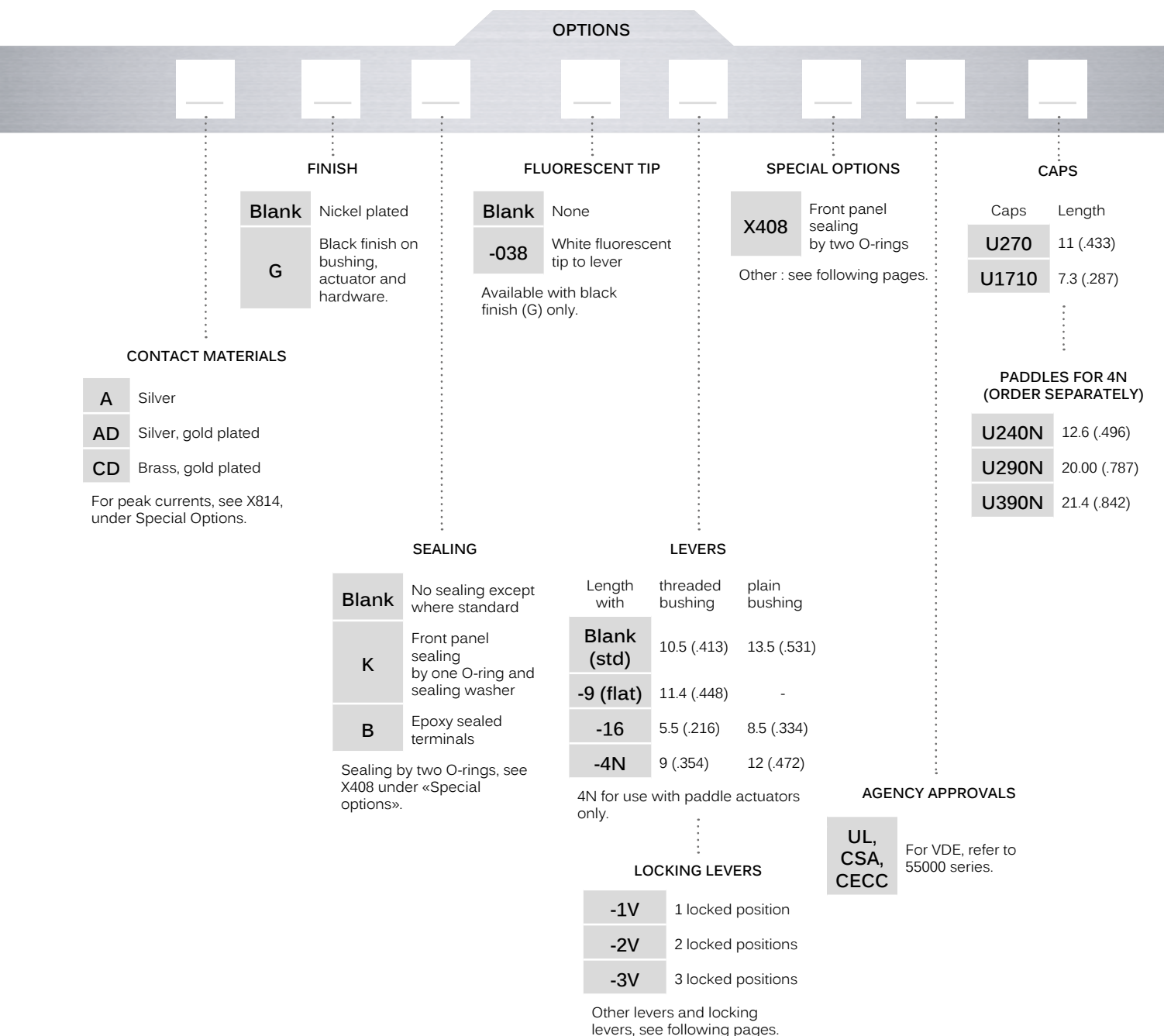
BUILD YOUR PART NUMBER

BASIC PART NUMBER

<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">5</div> <p>SERIES</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> </div> <p>NUMBER OF POLES</p> <table style="width: 100%;"> <tr><td style="background-color: #f0f0f0; padding: 2px;">3</td><td>Single pole</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">4</td><td>Double pole</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">5</td><td>Three pole</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">6</td><td>Four pole</td></tr> </table>	3	Single pole	4	Double pole	5	Three pole	6	Four pole	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> </div> <p>TERMINALS</p> <table style="width: 100%;"> <tr><td style="background-color: #f0f0f0; padding: 2px;">Blank</td><td>Solder lugs or straight PC depending on model</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">W</td><td>Right angle, horizontal mounting (5200 - 5400 switches)</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">WW</td><td>Right angle, vertical mounting (5200 - 5400 switches)</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">Y•</td><td>Bracket mounting (5200 switches)</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">Z</td><td>Quick-connect (5200 - 5900 switches)</td></tr> </table>	Blank	Solder lugs or straight PC depending on model	W	Right angle, horizontal mounting (5200 - 5400 switches)	WW	Right angle, vertical mounting (5200 - 5400 switches)	Y•	Bracket mounting (5200 switches)	Z	Quick-connect (5200 - 5900 switches)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> </div> <p>MOMENTARY FOR FUNCTION 4</p> <table style="width: 100%;"> <tr><td style="background-color: #f0f0f0; padding: 2px;">1R</td><td>ON ON MOM</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">2R</td><td>MOM ON MOM</td></tr> </table>	1R	ON ON MOM	2R	MOM ON MOM	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> </div> <p>TERMINALS AND BUSHINGS</p> <table style="width: 100%;"> <tr><td style="background-color: #f0f0f0; padding: 2px;">0</td><td>Straight PC terminals, 5.08 (.200) terminal spacing</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">2</td><td>Straight PC terminals, 4.70 (.185) terminal spacing, right angle or quick-connect</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">4</td><td>Straight PC terminals, 4 (.157) terminal spacing or right angle terminals</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">6</td><td>Solder lug terminals</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">7</td><td>Solder lug terminals, with flatted bushing</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">9</td><td>Straight PC or quick-connect terminals, with flatted bushing, 4.70 (.185) terminal spacing</td></tr> </table> <p>Bushing Ø 6 (.236) x 0.75 IS also available as standard.</p>	0	Straight PC terminals, 5.08 (.200) terminal spacing	2	Straight PC terminals, 4.70 (.185) terminal spacing, right angle or quick-connect	4	Straight PC terminals, 4 (.157) terminal spacing or right angle terminals	6	Solder lug terminals	7	Solder lug terminals, with flatted bushing	9	Straight PC or quick-connect terminals, with flatted bushing, 4.70 (.185) terminal spacing	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> </div> <p>ELECTRICAL FUNCTIONS</p> <table style="width: 100%;"> <tr><td style="background-color: #f0f0f0; padding: 2px;">6</td><td>ON</td><td>-</td><td>ON</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">9</td><td>ON</td><td>OFF</td><td>ON</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">7</td><td>MOM</td><td>OFF</td><td>MOM</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">8</td><td>ON</td><td>OFF</td><td>MOM</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">2</td><td>ON</td><td>-</td><td>MOM</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">4</td><td>ON</td><td>ON</td><td>ON</td></tr> <tr><td></td><td>ON</td><td>ON</td><td>MOM ▲</td></tr> <tr><td></td><td>MOM</td><td>ON</td><td>MOM ▲</td></tr> </table> <p>Function 4 Must not have blank in «connections» box. ▲ Must not have blank in «momentary» box.</p>	6	ON	-	ON	9	ON	OFF	ON	7	MOM	OFF	MOM	8	ON	OFF	MOM	2	ON	-	MOM	4	ON	ON	ON		ON	ON	MOM ▲		MOM	ON	MOM ▲	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> </div> <p>CONNECTIONS FOR FUNCTION 4</p> <table style="width: 100%;"> <tr><td style="background-color: #f0f0f0; padding: 2px;">TH</td><td>Standard</td></tr> <tr><td style="background-color: #f0f0f0; padding: 2px;">CT</td><td>Reversed</td></tr> </table> <p>For functions 4, 4-1R, 4-2R (leave blank for all other functions). Wiring diagrams, see Technical information on website.</p>	TH	Standard	CT	Reversed
3	Single pole																																																																											
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8	ON	OFF	MOM																																																																									
2	ON	-	MOM																																																																									
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threaded bushing Ø 6.35 mm or plain bushing



ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

- Notice** : please note that not all combinations of above numbers are available. Refer to the following pages for further information.
- Sealing boots** are available. See "Sealing Boots" section of website.
- Mounting accessories** : standard hardware supplied with all models with Ø 6.35 (1/4) or Ø 6 (.236) threaded bushing : 2 hex nuts 8 mm (.314) across flats, 1 locking ring and 1 lockwasher. Standard and special hardware is presented in the "Hardware" section of website.

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threaded bushing Ø 6.35 mm

SOLDER LUG TERMINALS SINGLE POLE



	III	II	I
5636	2-3 ON	-	1-2 ON
5639	ON	OFF	ON
5637	MOM	OFF	MOM
5638	ON	OFF	MOM
5632	ON	-	MOM

SOLDER LUG TERMINALS DOUBLE POLE



	III	II	I
5646	2-3 ON	-	1-2 ON
5649	ON	OFF	ON
5647	MOM	OFF	MOM
5648	ON	OFF	MOM
5642	ON	-	MOM
5644*	ON	ON	ON
5644 1R*	ON	ON	MOM
5644 2R*	MOM	ON	MOM

SOLDER LUG TERMINALS THREE POLE



	III	II	I
5656	2-3 ON	-	1-2 ON
5659	ON	OFF	ON
5657	MOM	OFF	MOM
5658	ON	OFF	MOM
5652	ON	-	MOM

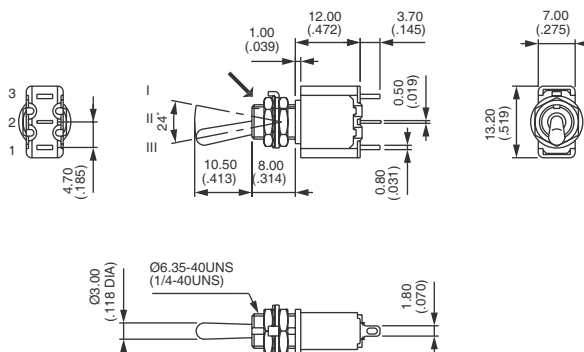
SOLDER LUG TERMINALS FOUR POLE



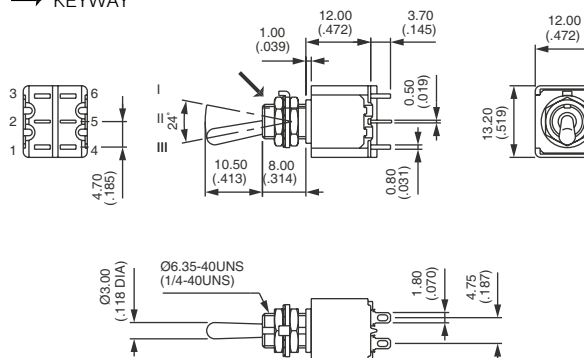
	III	II	I
5666	2-3 ON	-	1-2 ON
5669	ON	OFF	ON
5667	MOM	OFF	MOM
5668	ON	OFF	MOM
5662	ON	-	MOM
5664*	ON	ON	ON
5664 1R*	ON	ON	MOM
5664 2R*	MOM	ON	MOM

→ KEYWAY

Shown with standard lever

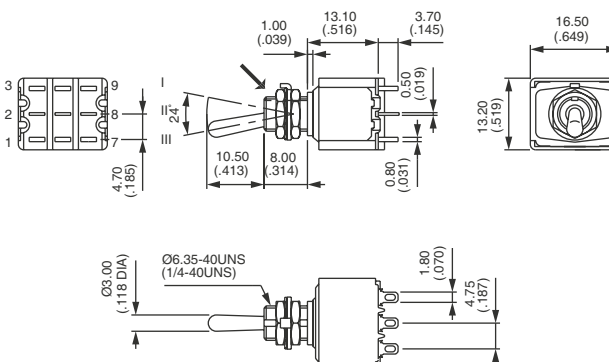


→ KEYWAY

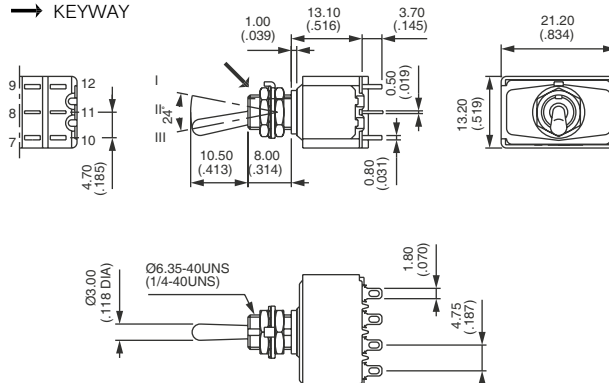


* Function 4 : SP in DP case - specify CT or TH connections.

→ KEYWAY



→ KEYWAY



* Function 4 : DP in 4P case - specify CT or TH connections.

All models above also available with flatted bushing : 5700 or with dia. 6 mm x 0.75 SI (.236 x 0.75 IS) : 5500.

5000 series

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STRAIGHT PC TERMINALS - SPACING 4.7 (.185) SINGLE POLE



	III 2-3	II	I 1-2
5236 B	ON	-	ON
5239 B	ON	OFF	ON
5237 B	MOM	OFF	MOM
5238 B	ON	OFF	MOM
5232 B	ON	-	MOM

STRAIGHT PC TERMINALS - SPACING 4.7 (.185) DOUBLE POLE



	III 2-3 5-6	II	I 1-2 4-5
5246 B	ON	-	ON
5249 B	ON	OFF	ON
5247 B	MOM	OFF	MOM
5248 B	ON	OFF	MOM
5242 B	ON	-	MOM
5244 B*	ON	ON	ON
5244 1R B*	ON	ON	MOM
5244 2R B*	MOM	ON	MOM

STRAIGHT PC TERMINALS - SPACING 4.7 (.185) THREE POLE



	III 2-3 5-6 8-9	II	I 1-2 4-5 7-8
5256 B	ON	-	ON
5259 B	ON	OFF	ON
5257 B	MOM	OFF	MOM
5258 B	ON	OFF	MOM
5252 B	ON	-	MOM

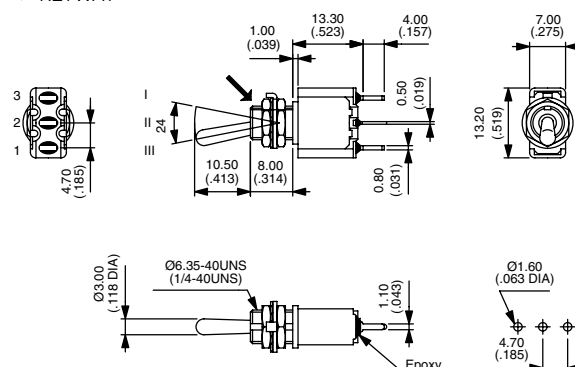
STRAIGHT PC TERMINALS - SPACING 4.7 (.185) FOUR POLE



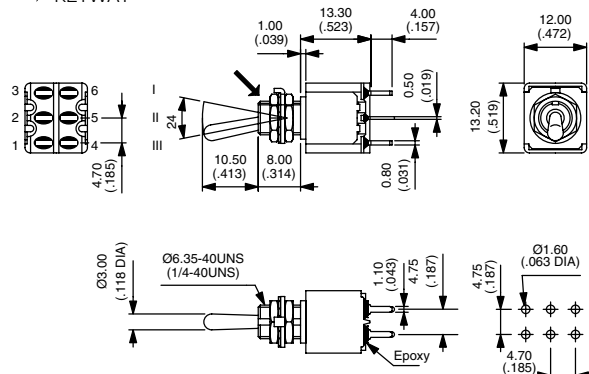
	III 2-3 5-6 8-9 11-12	II	I 1-2 4-5 7-8 10-11
5266 B	ON	-	ON
5269 B	ON	OFF	ON
5267 B	MOM	OFF	MOM
5268 B	ON	OFF	MOM
5262 B	ON	-	MOM
5264 B*	ON	ON	ON
5264 1R B*	ON	ON	MOM
5264 2R B*	MOM	ON	MOM

→ KEYWAY

Shown with standard lever

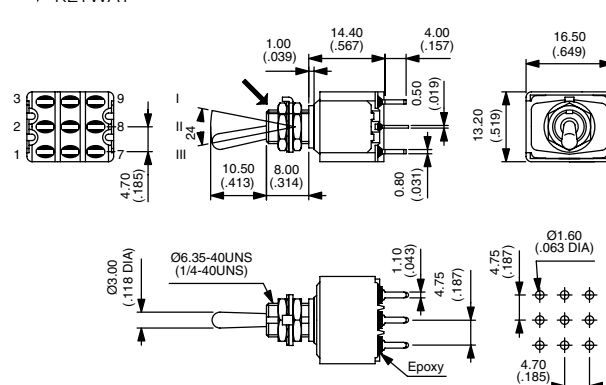


→ KEYWAY

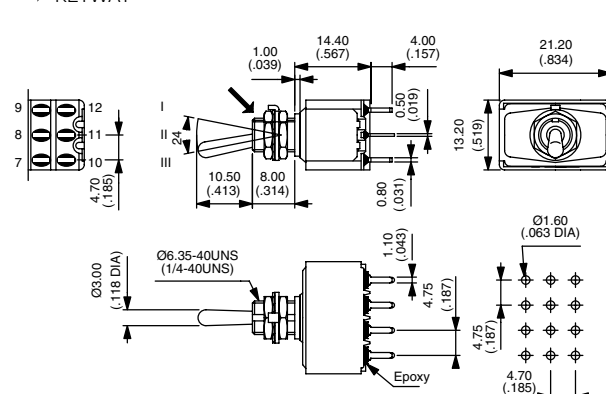


* Function 4 : SP in DP case - specify CT or TH connections.

→ KEYWAY



→ KEYWAY



* Function 4 : SP in DP case - specify CT or TH connections.

All models above : Epoxy sealed terminals standard (B).

All models above also available with flatted bushing : 5900 or with terminal spacing 4 mm (.157) : 5400.

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STRAIGHT PC TERMINALS SPACING 5.08 (.200)



Single pole	Double pole	III 2-3 5-6	II -	I 1-2 4-5
5036 B	5046 B	ON	-	ON
5039 B	5049 B	ON	OFF	ON
5037 B	5047 B	MOM	OFF	MOM
5038 B	5048 B	ON	OFF	MOM
5032 B	5042 B	ON	-	MOM
	5044* B	ON	ON	ON
	5044 1R* B	ON	ON	MOM
	5044 2R* B	MOM	ON	MOM

Epoxy sealed terminals standard (B).

QUICK-CONNECT TERMINALS SINGLE POLE



	III 2-3	II -	I 1-2
5236Z B	ON	-	ON
5239Z B	ON	OFF	ON
5237Z B	MOM	OFF	MOM
5238Z B	ON	OFF	MOM
5232Z B	ON	-	MOM

Single and double pole models also available with flatted bushing : 5900Z.
Epoxy sealed terminals standard (B).

QUICK-CONNECT TERMINALS DOUBLE POLE



	III 2-3 5-6	II -	I 1-2 4-5
5246Z B	ON	-	ON
5249Z B	ON	OFF	ON
5247Z B	MOM	OFF	MOM
5248Z B	ON	OFF	MOM
5242Z B	ON	-	MOM
5244Z* B	ON	ON	ON
5244Z 1R* B	ON	ON	MOM
5244Z 2R* B	MOM	ON	MOM

Epoxy sealed terminals standard (B).

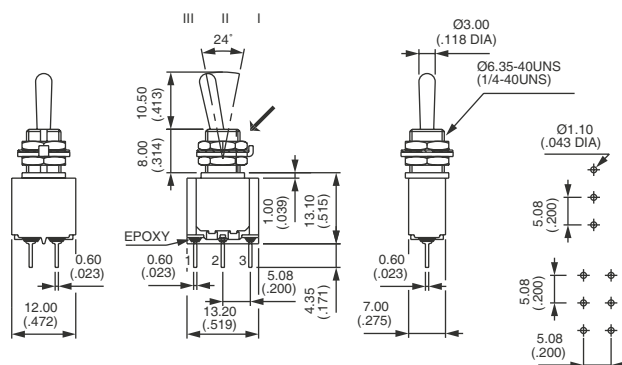
RIGHT ANGLE TERMINALS - HORIZONTAL SINGLE POLE



	III 2-3	II -	I 1-2
5236W	ON	-	ON
5239W	ON	OFF	ON
5237W	MOM	OFF	MOM
5238W	ON	OFF	MOM
5232W	ON	-	MOM

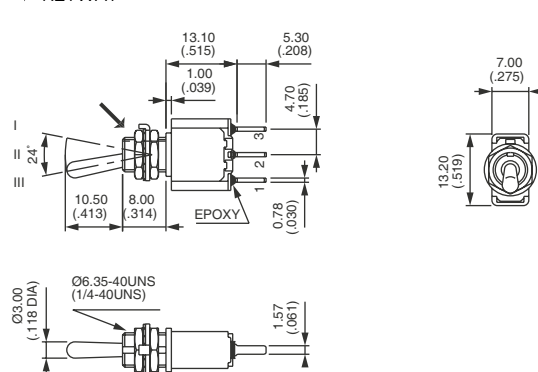
Also available with terminal spacing 4 mm (.157) instead of 4.7 (.185) : 5400W.

→ KEYWAY

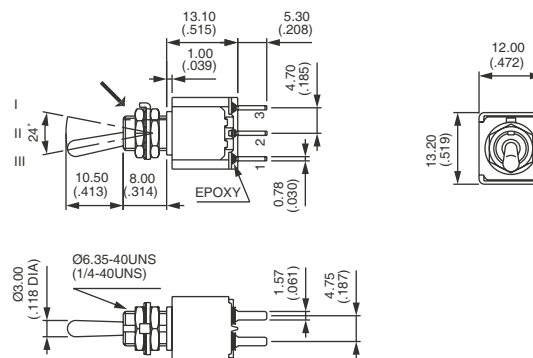


* Function 4 : SP in DP case - specify CT or TH connections.

→ KEYWAY

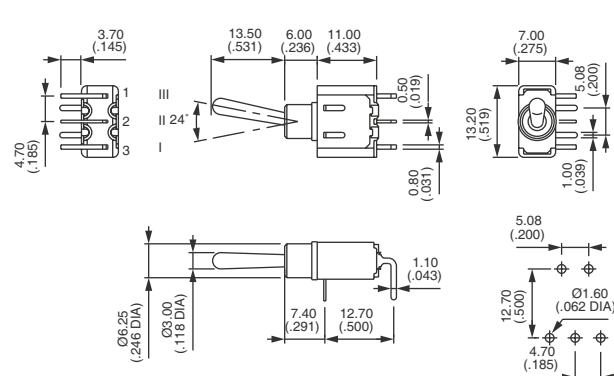


→ KEYWAY



* Function 4 : SP in DP case - specify CT or TH connections.

→ KEYWAY



5000 series

Miniature toggle switches •
plain bushing

RIGHT ANGLE TERMINALS - HORIZONTAL DOUBLE POLE



	III	II	I
	2-3		1-2
	5-6		4-5
5246W	ON	-	ON
5249W	ON	OFF	ON
5247W	MOM	OFF	MOM
5248W	ON	OFF	MOM
5242W	ON	-	MOM
5244W*	ON	ON	ON
5244W 1R*	ON	ON	MOM
5244W 2R*	MOM	ON	MOM

Also available with terminal spacing 4 mm (.157) instead of 4.7 (.185) : **5400W**.

RIGHT ANGLE TERMINALS - HORIZONTAL THREE POLE



	III	II	I
	2-3		1-2
	5-6		4-5
	8-9		7-8
5256W	ON	-	ON
5259W	ON	OFF	ON
5257W	MOM	OFF	MOM
5258W	ON	OFF	MOM
5252W	ON	-	MOM

RIGHT ANGLE TERMINALS - VERTICAL SINGLE POLE



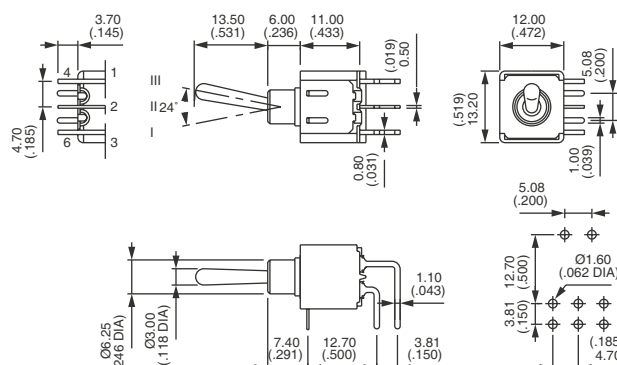
	III	II	I
	2-3		1-2
5236WW	ON	-	ON
5239WW	ON	OFF	ON
5237WW	MOM	OFF	MOM
5238WW**	ON	OFF	MOM
5232WW**	ON	-	MOM

RIGHT ANGLE TERMINALS - VERTICAL DOUBLE POLE

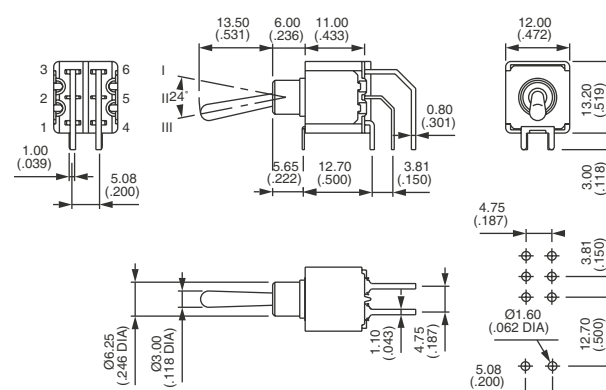
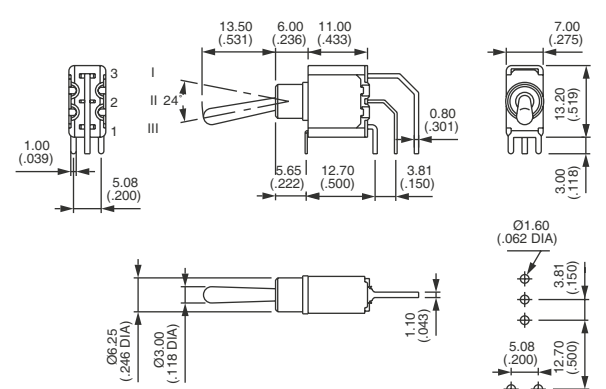
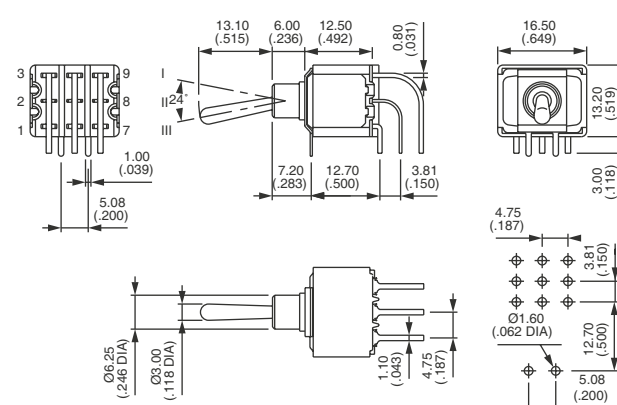


	III	II	I
	2-3		1-2
	5-6		4-5
5246WW	ON	-	ON
5249WW	ON	OFF	ON
5247WW	MOM	OFF	MOM
5248WW**	ON	OFF	MOM
5242WW**	ON	-	MOM
5244WW*	ON	ON	ON
5244WW 1R*	ON	ON	MOM
5244WW 2R*	MOM	ON	MOM

Shown with standard lever



* Function 4 : SP in DP case - specify CT or TH connections.



Vertical right angle models above : * Function 4 : SP in DP case, DP in 4P case - specify CT or TH connections.

5000 series

Miniature toggle switches •
plain bushing

RIGHT ANGLE TERMINALS - VERTICAL THREE POLE



	III	II	I
	2-3		1-2
	5-6		4-5
	8-9		7-8
5256WW	ON	-	ON
5259WW	ON	OFF	ON
5257WW	MOM	OFF	MOM
5258WW**	ON	OFF	MOM
5252WW**	ON	-	MOM

** Functions 2 and 8 : reversed connection available, consult factory.

RIGHT ANGLE TERMINALS - VERTICAL FOUR POLE



	III	II	I
	2-3		1-2
	5-6		4-5
	8-9		7-8
	11-12		10-11
5266WW	ON	-	ON
5269WW	ON	OFF	ON
5267WW	MOM	OFF	MOM
5268WW**	ON	OFF	MOM
5262WW**	ON	-	MOM
5264WW*	ON	ON	ON
5264WW 1R*	ON	ON	MOM
5264WW 2R*	MOM	ON	MOM

Vertical right angle models above also available with terminal spacing 2.54 mm (.100) instead of 3.81 mm (.150) : 5400WW.

SHORT BRACKET - WIDTH 15.75 (.620) SINGLE POLE



	III	II	I
	2-3		1-2
5236Y B	ON	-	ON
5239Y B	ON	OFF	ON
5237Y B	MOM	OFF	MOM
5238Y B	ON	OFF	MOM
5232Y B	ON	-	MOM

Epoxy sealed terminals standard (B).

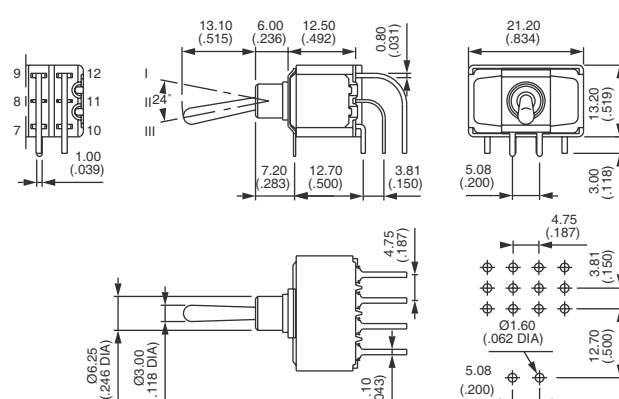
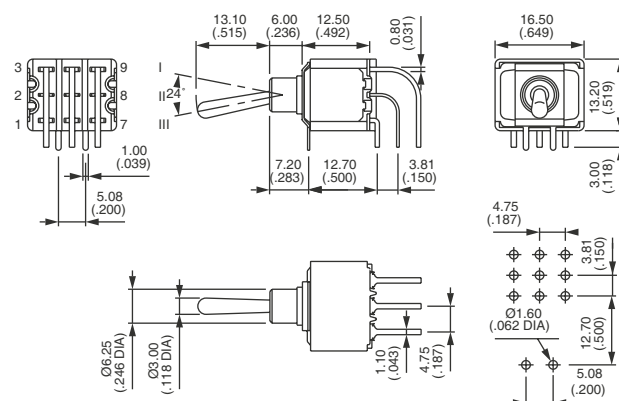
SHORT BRACKET - WIDTH 15.75 (.620) DOUBLE POLE



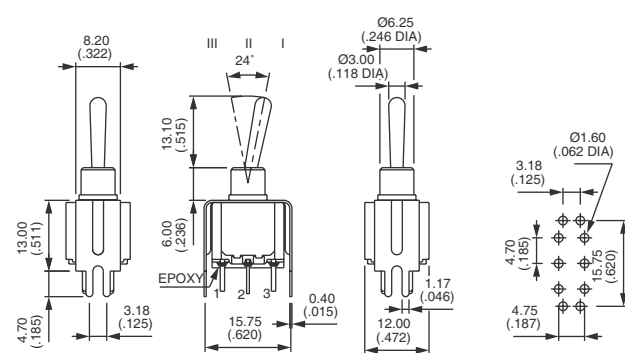
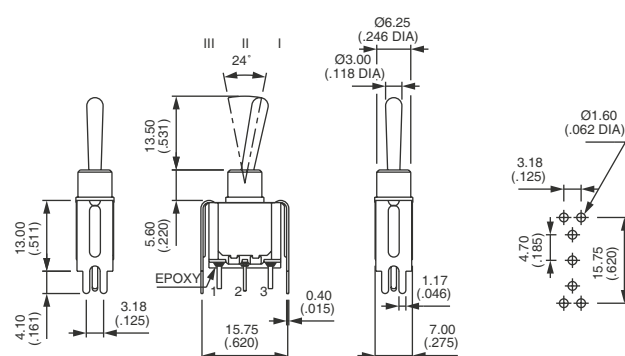
	III	II	I
	2-3		1-2
	5-6		4-5
5246Y B	ON	-	ON
5249Y B	ON	OFF	ON
5247Y B	MOM	OFF	MOM
5248Y B	ON	OFF	MOM
5242Y B	ON	-	MOM
5244Y B*	ON	ON	ON
5244Y 1R B*	ON	ON	MOM
5244Y 2R B*	MOM	ON	MOM

Epoxy sealed terminals standard (B).

Shown with standard lever



* Function 4 : SP in DP case, DP in 4P case - specify CT or TH connections.



*Function 4 : SP in DP case - specify CT or TH connections.