

5000 series

Toggle switches

Distinctive features

THE WIDEST RANGE IN MINIATURE SWITCHES



- 17 actuators including toggles, paddle levers and locking levers in different lengths.
- 5 contact materials from dry circuit to 6A 125VAC and high inrush up to 120A 2 ms.
- 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.
- 6 bushing styles from 6 (.236) plain to 11,9 (15/32) threaded.
- 3 types of finish including military black.



- 4 approvals (UL - CSA - VDE - CECC) and 3 listings.
- 4 types of sealing for terminal or front panel requirements.
- Numerous accessories available for actuator and bushing options.

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Specifications

ELECTRICAL SPECIFICATIONS

- Current/voltage rating with resistive load :

Contact	Maximum	Minimum	Level*
Silver (A)	3A 250VAC - 6A 125VAC - 4A 30VDC	50mA 10VDC	III and IV
Silver, gold plated (AD)	3A 250VAC - 6A 125 VAC - 4A 30VDC Gold plating withstands up to 100mA 30VDC	10mA 50mV 10 μ A 5V	I to IV
Brass, gold plated (CD)	0,4 VA at 20VAC or DC	10mA 50mV 10 μ A 5V	I and II

- For inductive, lamp or capacitive load, consult factory. * For details, see Technical Information, end of catalogue.
- Initial contact resistance : 10 m Ω max.
- Insulation resistance : 1.000 M Ω min. at 500VDC
- 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

MATERIALS

- Case : diallylphthalate (DAP) or high temperature plastic material (UL94-V0)
- Actuator : brass, chrome plated
- 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 section G.
- Terminal seal : epoxy
- Paddles : UL94HB polyamide
- Lever caps : vinyl

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

AGENCY APPROVALS/PREFERENTIAL LISTS



EN 61058-1



CECC 96201-007

For VDE, refer to 55000 series.

QPL (Europe only)
MUAHAG
NATO

Availability : consult factory for details of approved models.

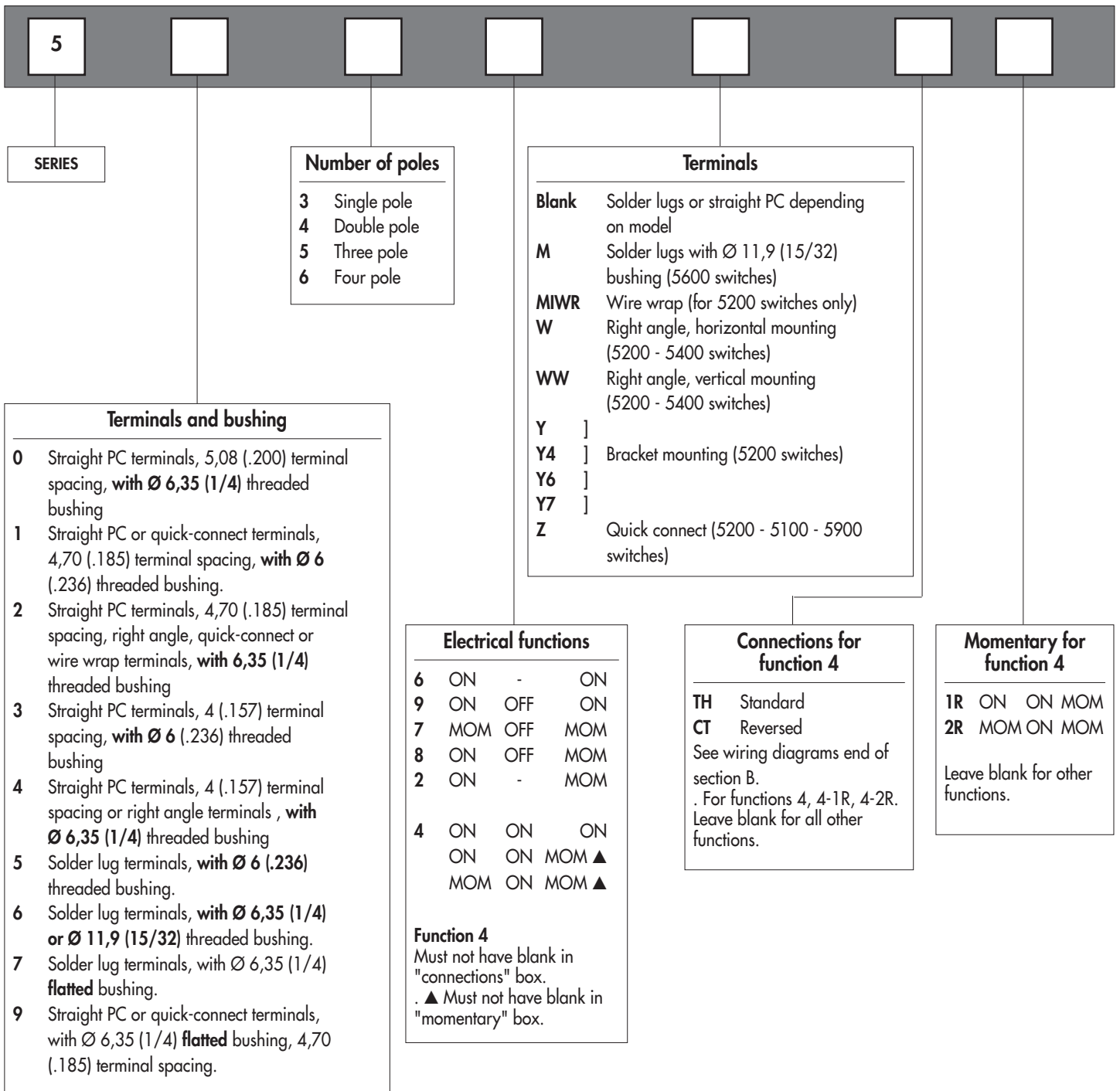
Marking : to order switches marked UL, CSA or CECC, complete appropriate box of ordering format.
Preferential lists do not appear on the switches.

5000 series

Toggle switches

Overview

MODEL
STRUCTURE



ABOUT THIS SERIES

- On the following pages, you will find successively :
- model structure of switches with threaded bushing
 - model structure of switches with plain bushing
 - options in the same order as in above chart

Dimensions : first dimensions are in mm while inches are shown as bracketted numbers.



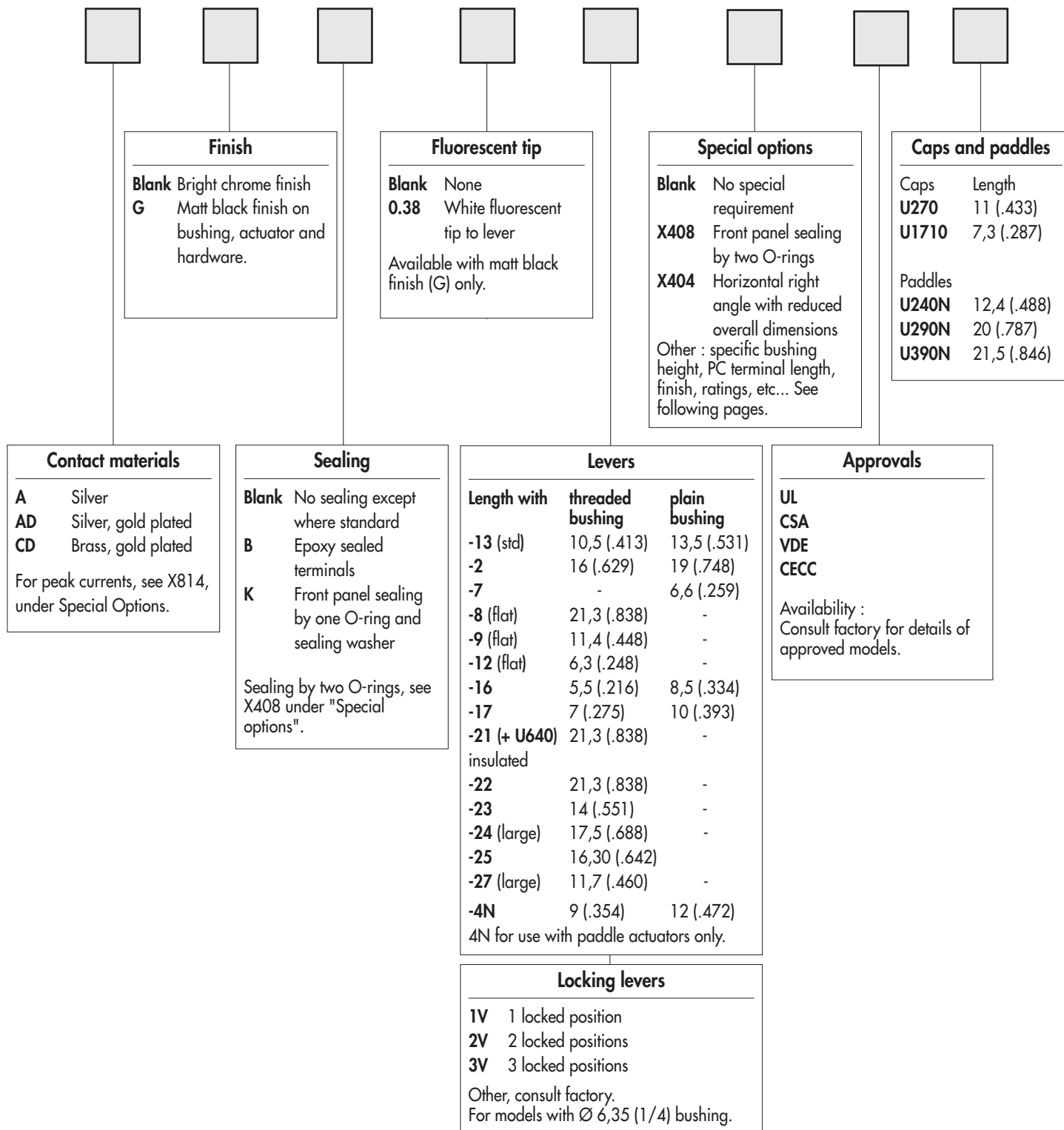
NOTICE : please note that not all combinations of above numbers are available. Refer to the following pages for further information.



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Toggle switches

Overview



Sealing boots are available. They are presented in section H.



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 available are presented in section I.



Packaging unit : 25 pieces or 50 pieces depending on models.

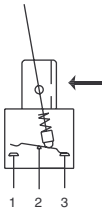
5000 series

Toggle switches - solder lug terminals

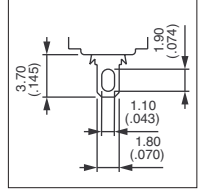
Threaded bushing $\varnothing 6,35$ (1/4) : 5600

MODEL
STRUCTURE

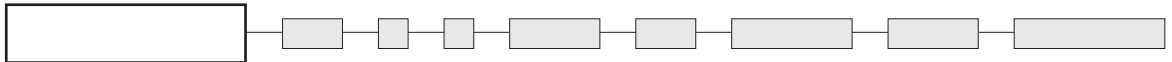
→ Keyway



- 1, 2, 3 and 4 pole configurations



MODEL
STRUCTURE



Shown with standard lever (-13)

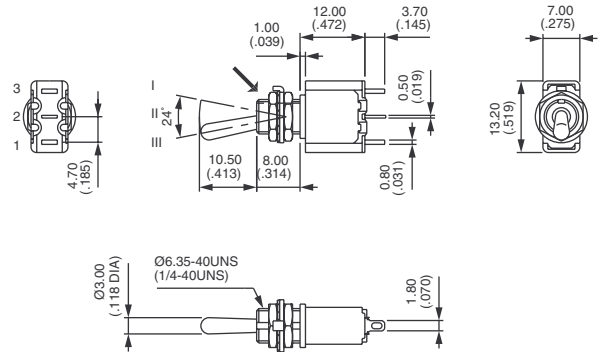
Single pole



5636
5639
5637
5638
5632

III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

→ Keyway



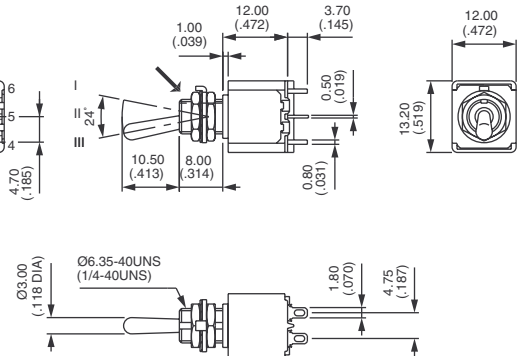
Double pole



5646
5649
5647
5648
5642
5644*
5644 1R*
5644 2R*

III	II	I
2-3		1-2
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM

→ Keyway



* Function 4 : SP in DP case - specify CT or TH connections, see end of catalogue.

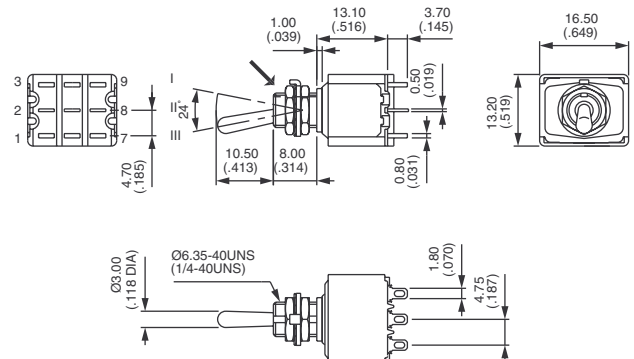
Three pole



5656
5659
5657
5658
5652

III	II	I
2-3		1-2
5-6		4-5
8-9		7-8
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

→ Keyway



5000 series

Toggle switches - solder lug terminals

MODEL
STRUCTURE

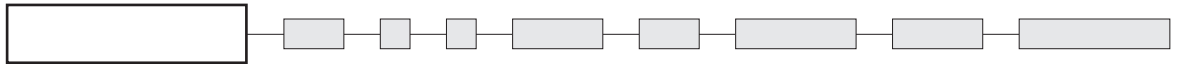
A

Diagram as per 5600 model

5700 models

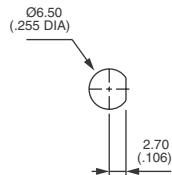
- Flatted bushing \varnothing 6,35 mm (1/4)
- 1, 2, 3 and 4 pole configurations

MODEL
STRUCTURE



For model structure numbers, refer to 5600 models and replace 6 with 7.

PANEL CUT-OUT



Standard or
with K sealing option

5500 models

- Threaded bushing \varnothing 6 mm (.236)
- 1, 2, 3 and 4 pole configurations

MODEL
STRUCTURE

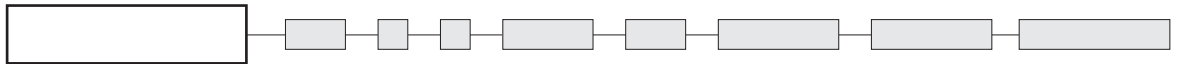
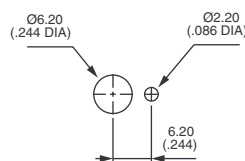


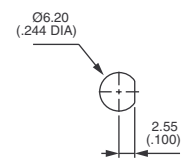
Diagram as per 5600 model

For model structure numbers, refer to 5600 models and replace 6 with 5.

PANEL CUT-OUT



Standard



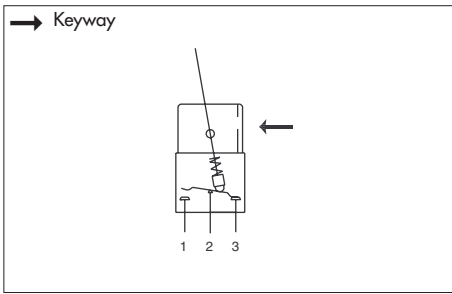
With X408 sealing option



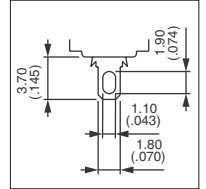
5000 series

Toggle switches - solder lug terminals

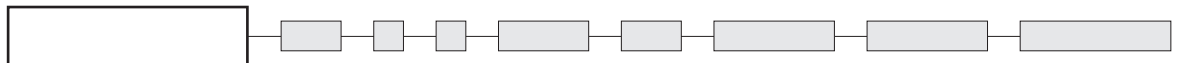
Threaded bushing $\varnothing 11,9$ (15/32) : 5600M



- 1, 2, 3 and 4 pole configurations
- Supplied with 2 hex nuts and 1 locking ring
- Panel thickness up to 6 mm (.236)



MODEL STRUCTURE



Shown with standard lever (-24)

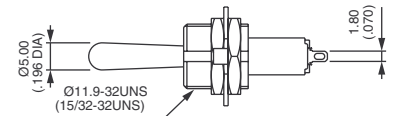
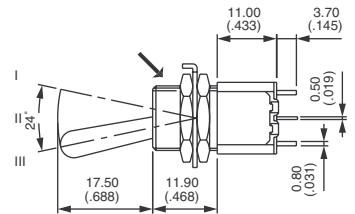
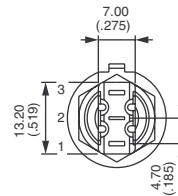
Single pole



5636M
5639M
5637M
5638M
5632M

III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

→ Keyway



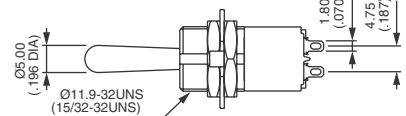
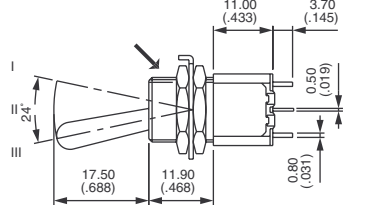
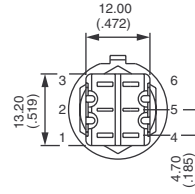
Double pole



5646M
5649M
5647M
5648M
5642M
5644M*
5644M 1R*
5644M 2R*

III	II	I
2-3		1-2
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM

→ Keyway



* Function 4 : SP in DP case - specify CT or TH connections, see end of catalogue.

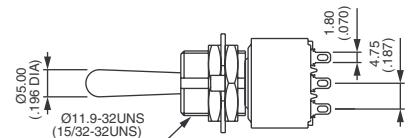
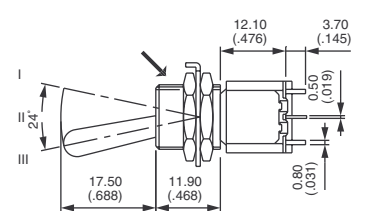
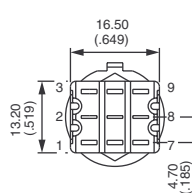
Three pole



5656M
5659M
5657M
5658M
5652M

III	II	I
2-3		1-2
5-6		4-5
8-9		7-8
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

→ Keyway



5000 series

Toggle switches - solder lug terminals

Threaded bushing \varnothing 11,9 (15/32) : 5600M

MODEL
STRUCTURE

Four pole

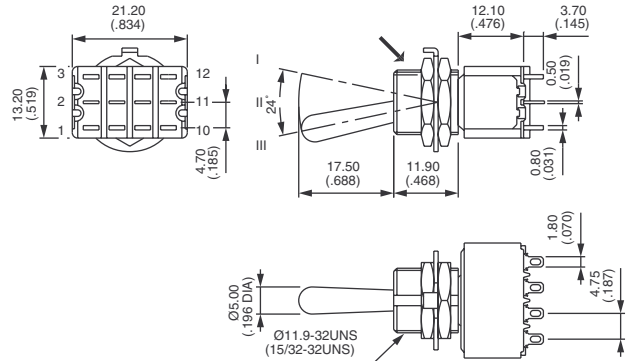


5666M
5669M
5667M
5668M
5662M
5664M*
5664M 1R*
5664M 2R*

III	II	I
2-3		1-2
5-6		4-5
8-9		7-8
11-12		10-11

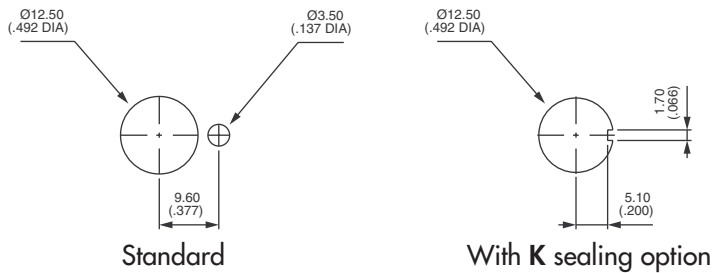
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM

→ Keyway



*Function 4 : DP in 4P case - specify CT or TH connections, see end of catalogue.

PANEL CUT-OUT



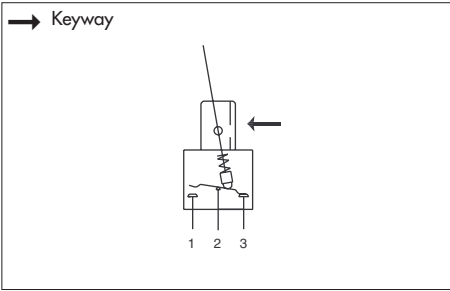
OTHER : M bushing can be combined with other types such as : 5200, Z, MIWR... Consult factory.



5000 series

Toggle switches - straight PC terminals

Threaded bushing $\varnothing 6,35$ (1/4) : 5200

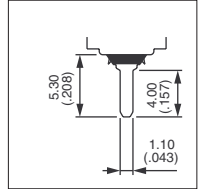


- Terminal spacing 4,7 mm (.185)
- 1, 2, 3 and 4 pole configurations
- Epoxy sealed terminals standard

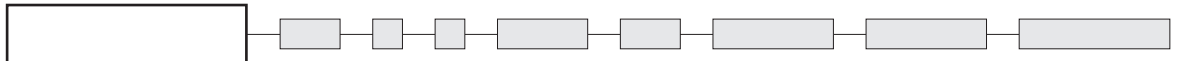
For new projects, we recommend switches with support bracket (option Y) which holds the switch securely on the PCB.

Other terminal lengths presented under "Special options".

Also available with plain bushing, see "Special options" X371



MODEL STRUCTURE



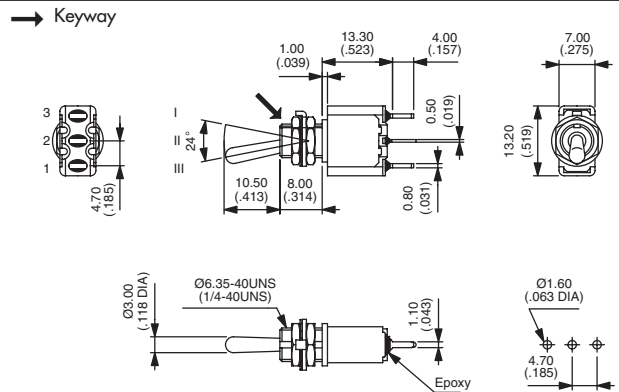
Shown with standard lever (-13)

Single pole



- 5236 B
- 5239 B
- 5237 B
- 5238 B
- 5232 B

III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

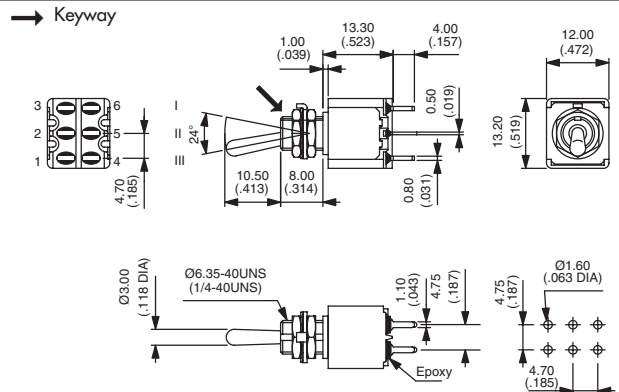


Double pole



- 5246 B
- 5249 B
- 5247 B
- 5248 B
- 5242 B
- 5244 B*
- 5244 1R B*
- 5244 2R B*

III	II	I
2-3		1-2
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM



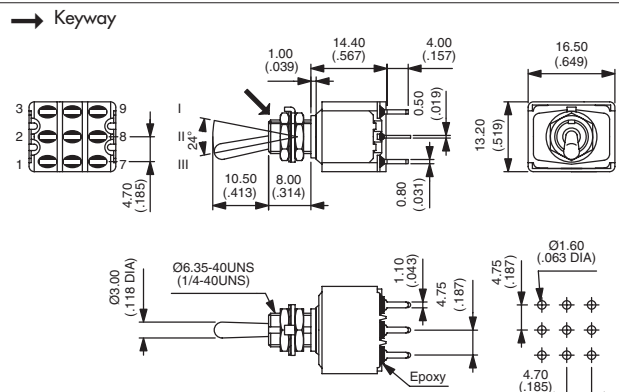
*Function 4 : SP in DP case - specify CT or TH connections, see end of catalogue.

Three pole



- 5256 B
- 5259 B
- 5257 B
- 5258 B
- 5252 B

III	II	I
2-3		1-2
5-6		4-5
8-9		7-8
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

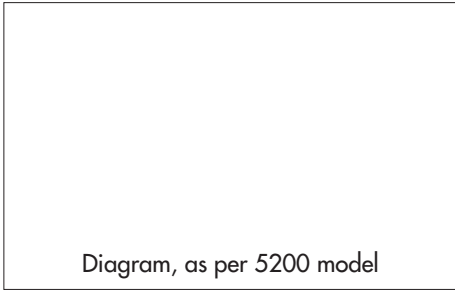




5000 series

Toggle switches - straight PC terminals

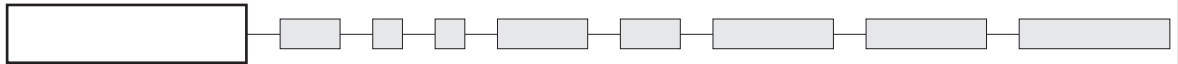
A



5400 models

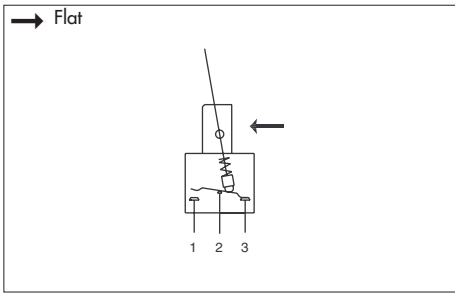
- Threaded bushing \varnothing 6,35 mm (1/4)
- Terminal spacing 4 mm (.157)
- 1, 2, 3 and 4 pole configurations

MODEL
STRUCTURE



For model structure numbers, refer to 5200 models and replace 2 with 4.

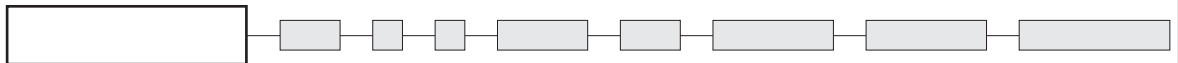
Panel cut-out, see 5200.



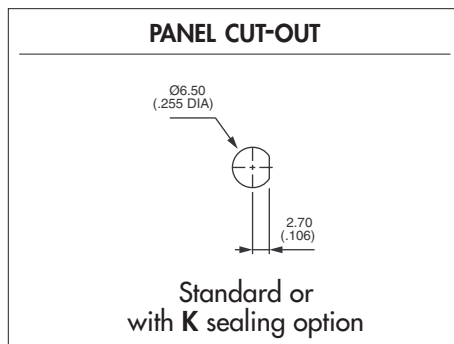
5900 models

- Flatted bushing \varnothing 6,35 mm (1/4)
- Terminal spacing 4,7 mm (.185)
- 1, 2, 3 and 4 pole configurations

MODEL
STRUCTURE



For model structure numbers, refer to 5200 models and replace 2 with 9.



5000 series

Toggle switches - straight PC terminals

MODEL
STRUCTURE

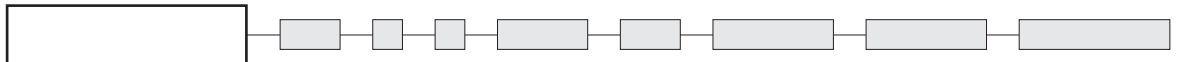
A

Diagram, as per 5200 model

5100 models

- Threaded bushing \varnothing 6 mm (.236)
- Terminal spacing 4,7 mm (.185)
- 1, 2, 3 and 4 pole configurations

MODEL
STRUCTURE



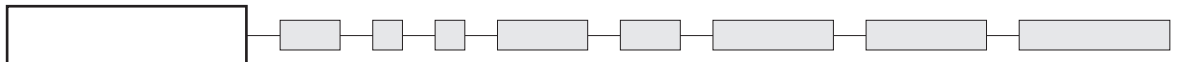
For model structure numbers, refer to 5200 models and replace 2 with 1.

Panel cut-out, see below.

5300 models

- Threaded bushing \varnothing 6 mm (.236)
- Terminal spacing 4 mm (.157)
- 1, 2, 3 and 4 pole configurations

MODEL
STRUCTURE

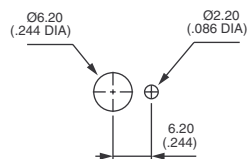


For model structure numbers, refer to 5200 models and replace 2 with 3.

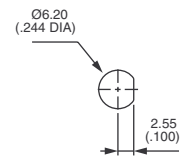
Diagram, as per 5200 model

PANEL CUT-OUT

5100 - 5300



Standard



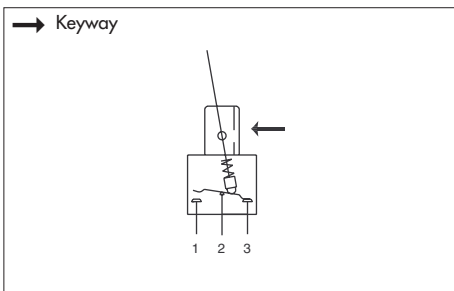
With X408 sealing option



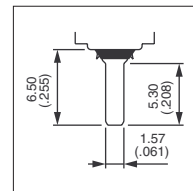
5000 series

Toggle switches - quick-connect terminals

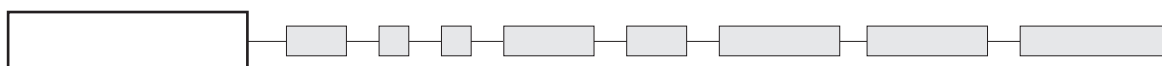
Threaded bushing $\varnothing 6,35 (1/4)$: 5200Z



- Terminal spacing 4,7 mm (.185)
- Epoxy sealed terminals standard
- 1 and 2 pole configurations



MODEL STRUCTURE



Shown with standard lever (-13)

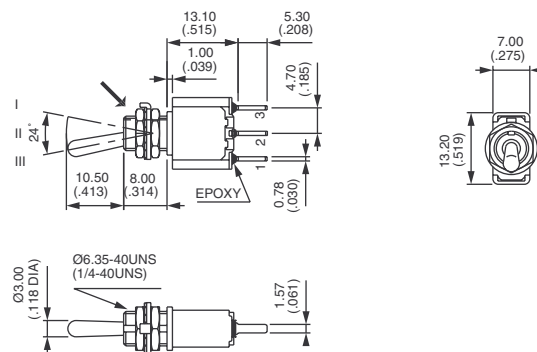
Single pole



5236Z
5239Z
5237Z
5238Z
5232Z

III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

→ Keyway



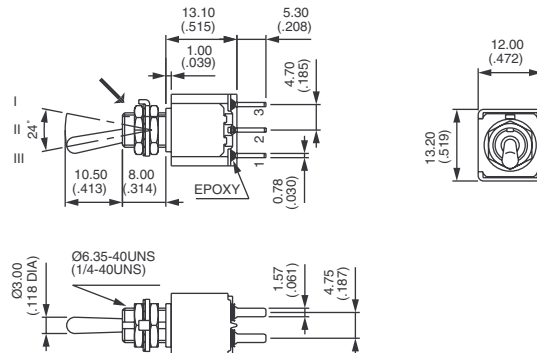
Double pole



5246Z
5249Z
5247Z
5248Z
5242Z
5244Z*
5244Z 1R*
5244Z 2R*

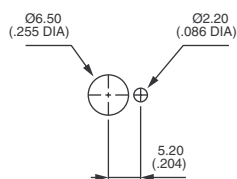
III	II	I
2-3		1-2
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM

→ Keyway

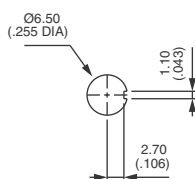


*Function 4 : SP in DP case - specify CT or TH connections, see end of catalogue.

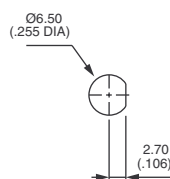
PANEL CUT-OUT



Standard



With K sealing option



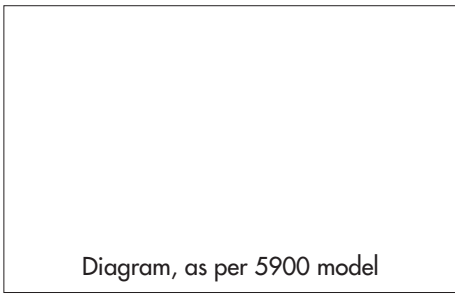
With X408 sealing option

5000 series

Toggle switches - quick-connect terminals



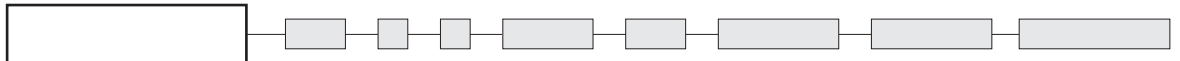
A



5900Z models

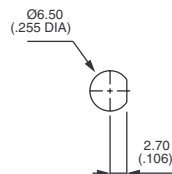
- Flatted bushing \varnothing 6,35 mm (1/4)
- Terminal spacing 4,7 mm (.185)
- Epoxy sealed terminals standard
- 1 and 2 pole configurations

MODEL
STRUCTURE

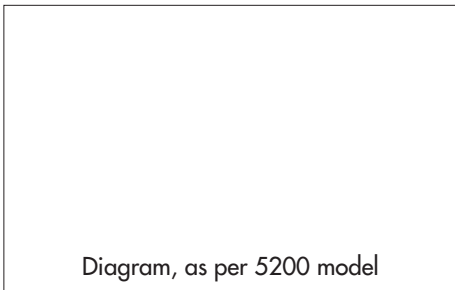


For model structure numbers, refer to 5200Z models and replace 2 with 9.

PANEL CUT-OUT



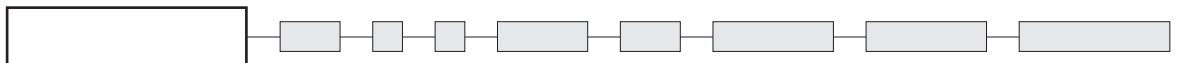
Standard or
with K sealing option



5100Z models

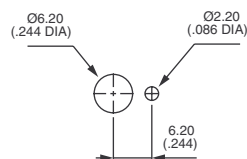
- Threaded bushing \varnothing 6 mm (.236)
- Terminal spacing 4,7 mm (.185)
- Epoxy sealed terminals standard
- 1 and 2 pole configurations

MODEL
STRUCTURE



For model structure numbers, refer to 5200Z models and replace 2 with 1.

PANEL CUT-OUT



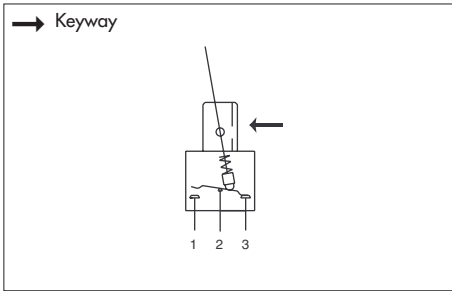
Standard



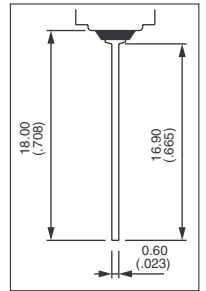
5000 series

Toggle switches - wire-wrap terminals

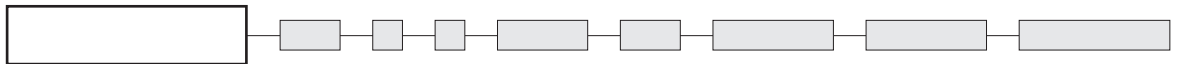
Threaded bushing $\varnothing 6,35$ (1/4) : 5200MIWR



- Terminal spacing 5,08 mm (.200)
- Epoxy sealed terminals standard
- 1 and 2 pole configurations
- Can also be used as extended PCB terminals



MODEL STRUCTURE



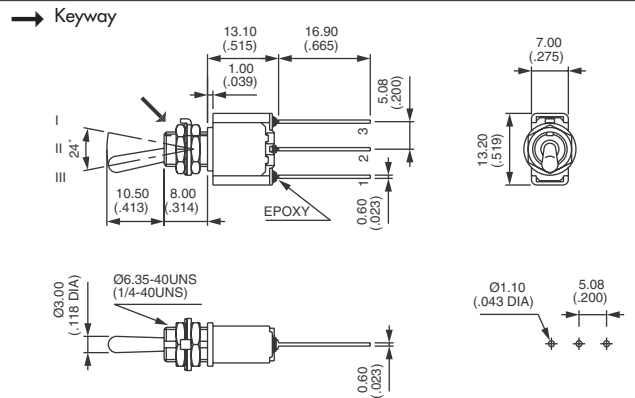
Shown with standard lever (-13)

Terminal spacing 5,08 (.200) - single pole



5236MIWR
5239MIWR
5237MIWR
5238MIWR
5232MIWR

III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

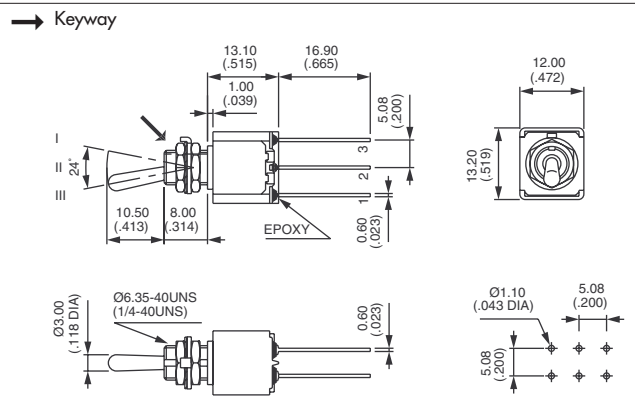


Terminal spacing 5,08 (.200) - double pole



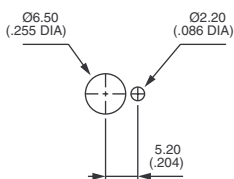
5246MIWR
5249MIWR
5247MIWR
5248MIWR
5242MIWR
5244 1R MIWR*
5244 1R MIWR*
5244 2R MIWR*

III	II	I
2-3		1-2
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM

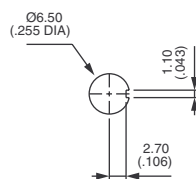


*Function 4 : SP in DP case - specify CT or TH connections, see end of catalogue.

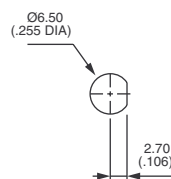
PANEL CUT-OUT



Standard



With K sealing option



With X408 sealing option

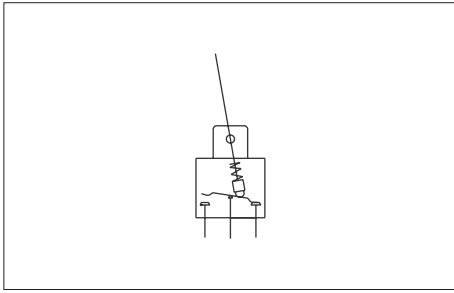
5000 series

Toggle switches - plain bushing

Right angle terminals - horizontal : 5200W



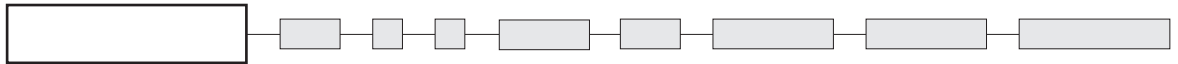
A



- Terminal spacing 4,7 mm (.185)
- 1, 2 and 3 pole configurations

Special switch **5200WX404** with reduced overall dimensions is presented under "Special options".

MODEL
STRUCTURE



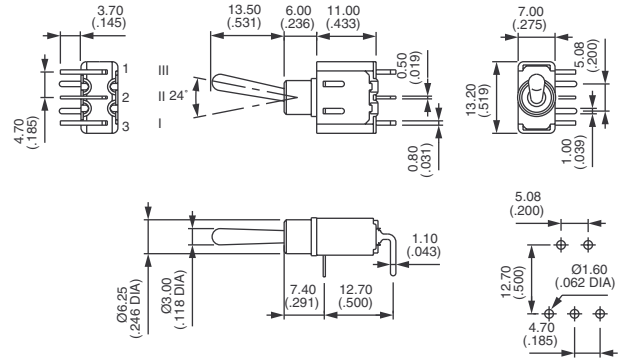
Shown with standard lever (-13)

Single pole



5236W
5239W
5237W
5238W
5232W

III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

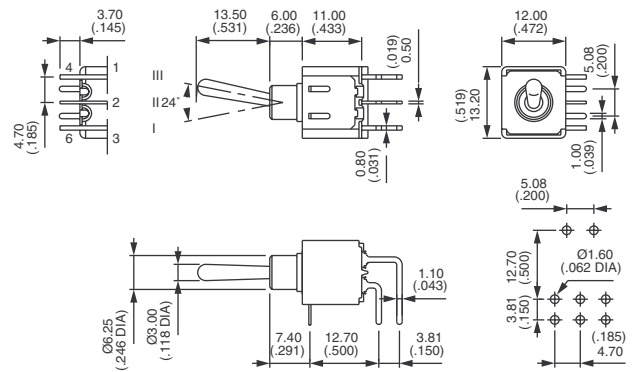


Double pole



5246W
5249W
5247W
5248W
5242W
5244W*
5244W 1R*
5244W 2R*

III	II	I
2-3		1-2
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM



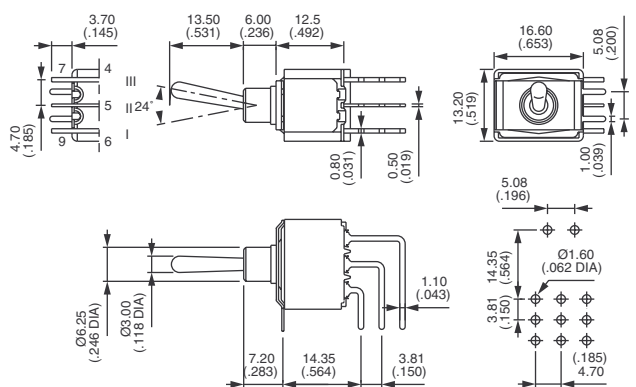
*Function 4 : SP in DP case - specify CT or TH connections, see end of catalogue.

Three pole



5256W
5259W
5257W
5258W
5252W

III	II	I
2-3		1-2
5-6		4-5
8-9		7-8
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

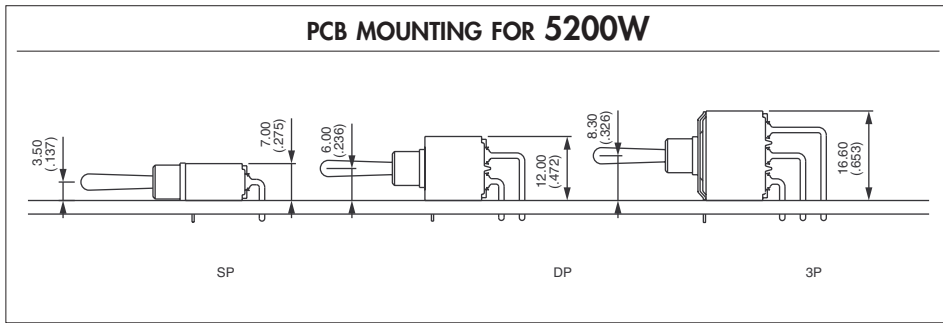




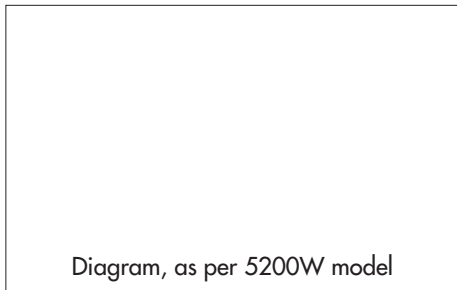
5000 series

Toggle switches - plain bushing

Right angle terminals - horizontal : 5400W



A



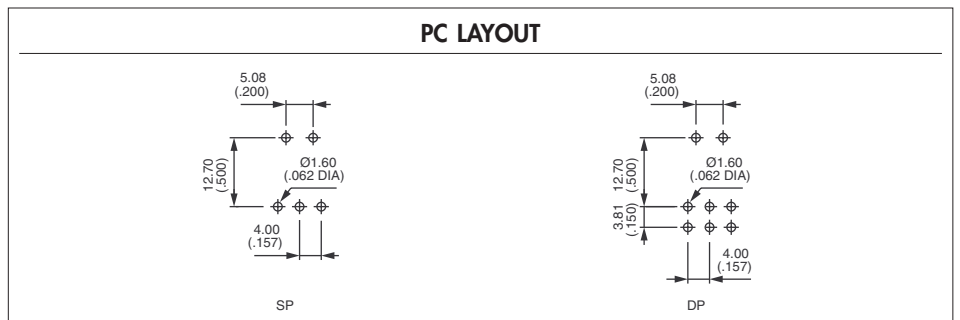
5400W models

- Terminal spacing 4 mm (.157)
- 1 and 2 pole configurations

MODEL STRUCTURE



For model structure numbers, refer to 5200W single and double pole and replace 2 with 4.





5000 series

Toggle switches - plain bushing

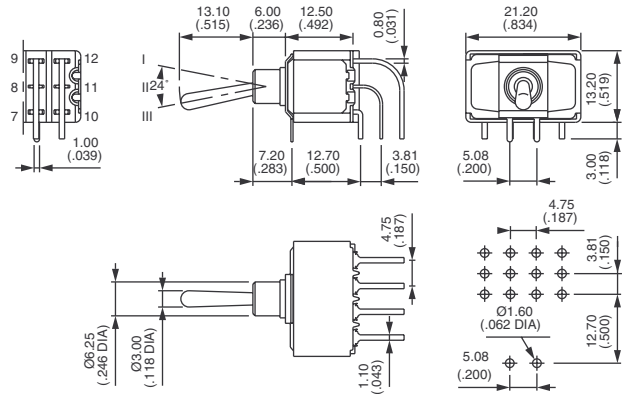
Right angle terminals - vertical : 5200WW - 5400WW

Four pole



- 5266WW
- 5269WW
- 5267WW
- 5268WW**
- 5262WW**
- 5264WW*
- 5264WW 1R*
- 5264WW 2R*

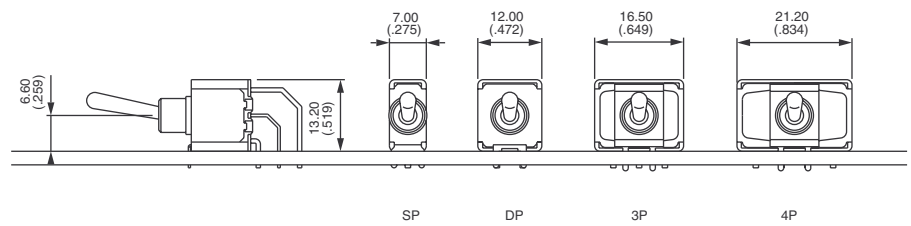
III	II	I
2-3		1-2
5-6		4-5
8-9		7-8
11-12		10-11
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM



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

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

PCB MOUNTING

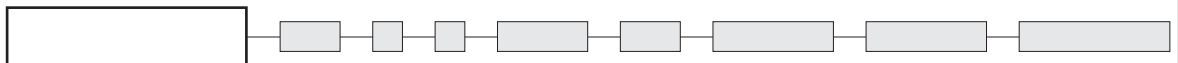


5400WW models

- Pin spacing 2,54 mm (.100)
- 1, 2, 3 and 4 pole configurations

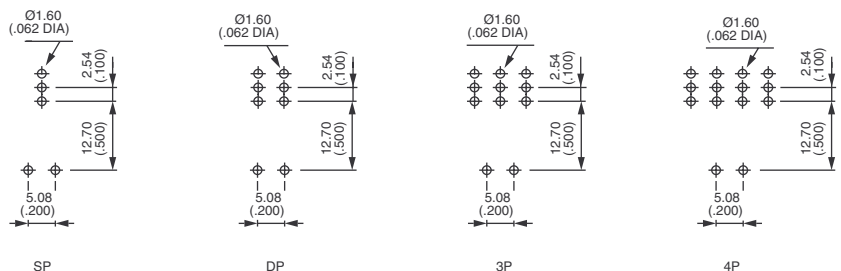
Diagram as per 5200WW model

MODEL STRUCTURE



For model structure numbers, refer to **5200WW** models and replace 2 with 4.

PC LAYOUT





5000 series

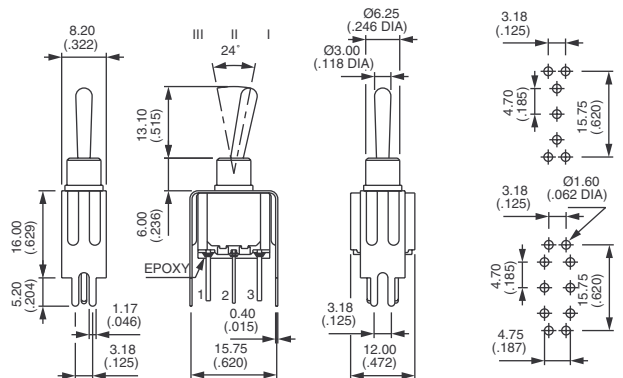
Toggle switches - plain bushing

Straight PC terminals - bracket mounting : 5200Y4 - Y6 - Y7

Tall bracket - width 15,75 (.620) : 5200Y4



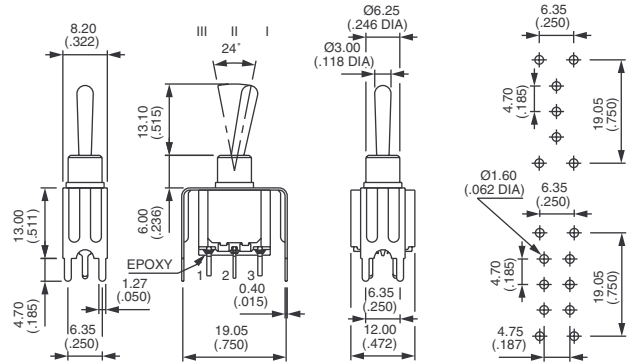
	Single pole	Double pole	III	II	I
5236Y4 B	5246Y4 B	ON	-	ON	
5239Y4 B	5249Y4 B	ON	OFF	ON	
5237Y4 B	5247Y4 B	MOM	OFF	MOM	
5238Y4 B	5248Y4 B	ON	OFF	MOM	
5232Y4 B	5242Y4 B	ON	-	MOM	
	5244Y4 B*	ON	ON	ON	
	5244Y4 1R B*	ON	ON	MOM	
	5244Y4 2R B*	MOM	ON	MOM	



Short bracket - width 19,05 (.750) : 5200Y6



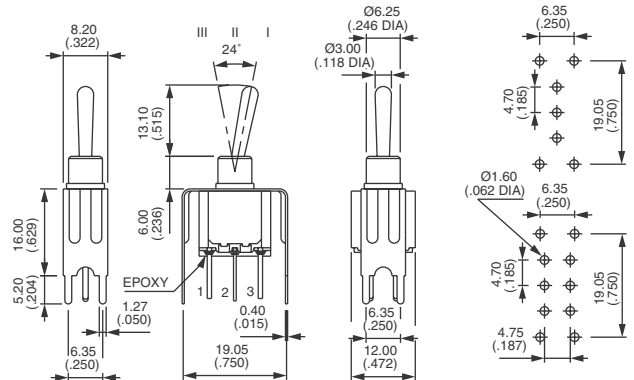
	Single pole	Double pole	III	II	I
5236Y6 B	5246Y6 B	ON	-	ON	
5239Y6 B	5249Y6 B	ON	OFF	ON	
5237Y6 B	5247Y6 B	MOM	OFF	MOM	
5238Y6 B	5248Y6 B	ON	OFF	MOM	
5232Y6 B	5242Y6 B	ON	-	MOM	
	5244Y6 B*	ON	ON	ON	
	5244Y6 1R B*	ON	ON	MOM	
	5244Y6 2R B*	MOM	ON	MOM	



Tall bracket - width 19,05 (.750) : 5200Y7



	Single pole	Double pole	III	II	I
5236Y7 B	5246Y7 B	ON	-	ON	
5239Y7 B	5249Y7 B	ON	OFF	ON	
5237Y7 B	5247Y7 B	MOM	OFF	MOM	
5238Y7 B	5248Y7 B	ON	OFF	MOM	
5232Y7 B	5242Y7 B	ON	-	MOM	
	5244Y7 B*	ON	ON	ON	
	5244Y7 1R B*	ON	ON	MOM	
	5244Y7 2R B*	MOM	ON	MOM	



* Function 4 : SP in DP case - specify CT or TH connections, see end of catalogue.