

5000 SERIES TOGGLE SWITCHES

Distinctive features

B

THE WIDEST RANGE IN MINIATURE SWITCHES

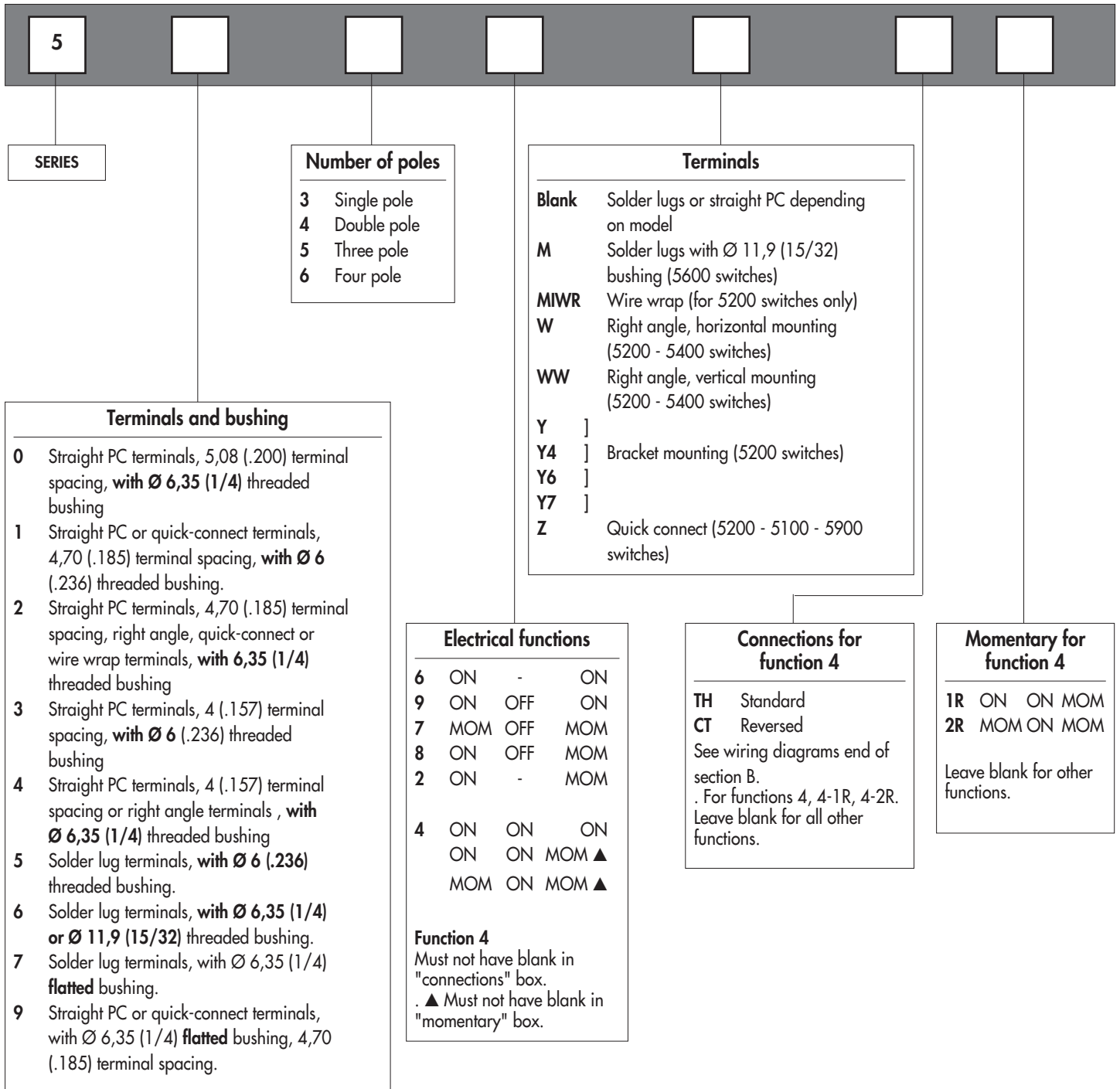
- 17** 17 actuators including toggles, paddle levers and locking levers in different lengths.
- 5** 5 contact materials from dry circuit to 6A 125VAC and high inrush up to 120A 2 ms.
- 8** 8 functions including maintained and momentary versions.
- 4** 1 to 4 pole configurations.
- 12** 12 terminal types including 9 for PC board mounting. Other types include quick-connect and wire-wrap.
- 6** 6 bushing styles from 6 (.236) plain to 11,9 (15/32) threaded.
- 3** 3 types of finish including military black.
- 9** 4 approvals (UL - CSA - VDE - CECC) and 5 listings.
- 4** 4 types of sealing for terminal or front panel requirements.
- +** Numerous accessories available for actuator and bushing options.

5000 SERIES TOGGLE SWITCHES

Overview

MODEL
STRUCTURE

B



ABOUT THIS SERIES

- On the following pages, you will find successively :
- specifications
 - 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.



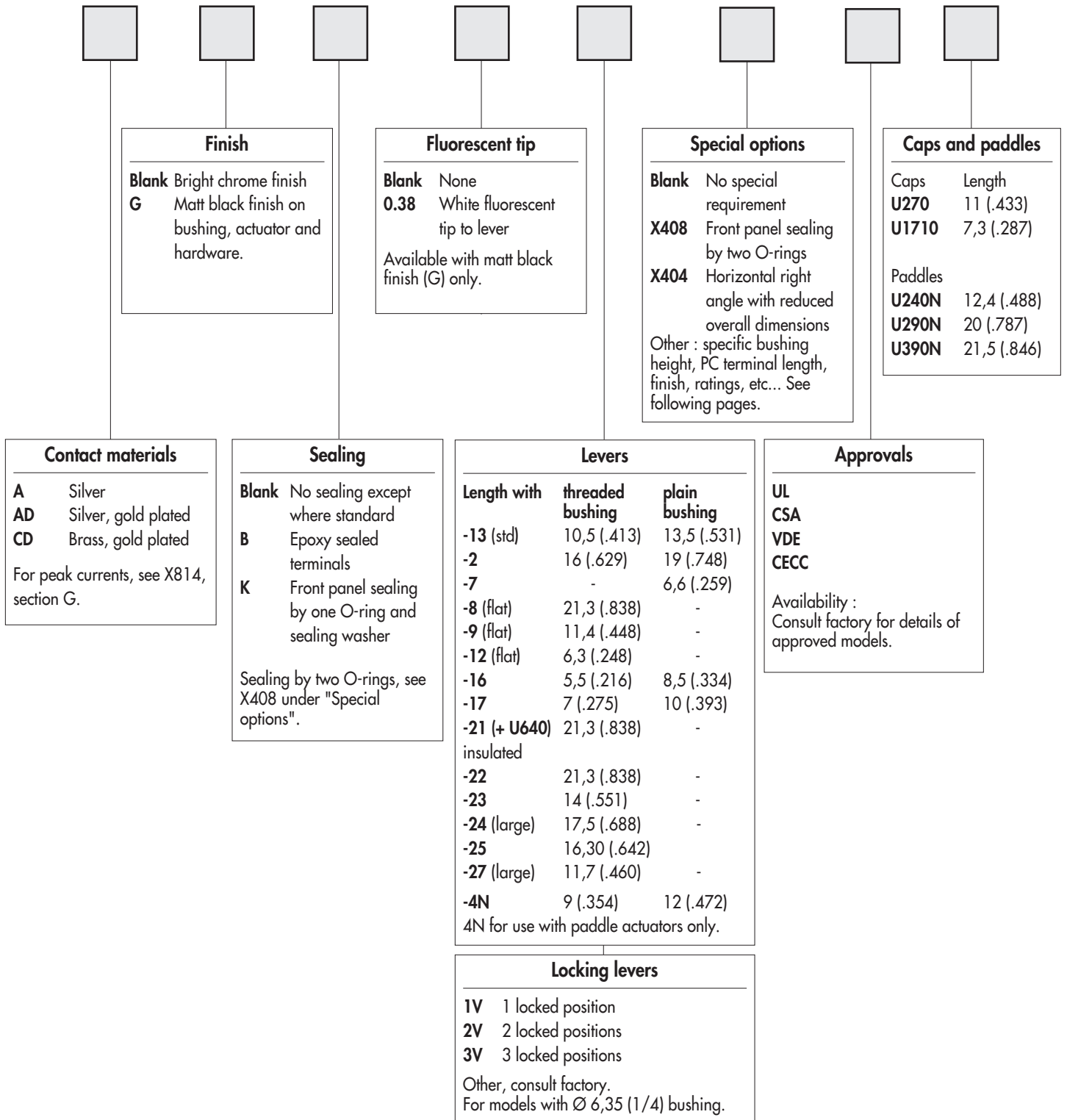
NOTICE : please note that not all combinations of above numbers are available. Refer to the following pages for further information.

5000 SERIES TOGGLE SWITCHES

Overview

OPTIONS

B



Sealing boots and caps are available. They are presented in section N.



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 N.



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

5000 SERIES TOGGLE SWITCHES Specifications

B

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 10µA 5V	I to IV
Brass, gold plated (CD)	0,4 VA at 20VAC or DC	10mA 50mV 10µA 5V	I and II

- For inductive, lamp or capacitive load, consult factory.
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1.000 MΩ 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

* For details, see general information on introduction pages.

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.

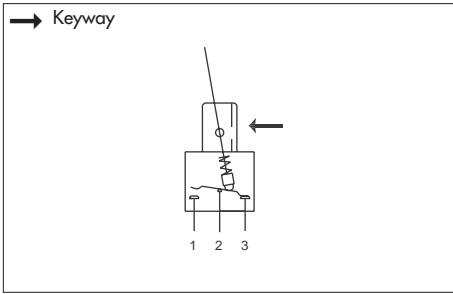
5000 SERIES

TOGGLE SWITCHES - SOLDER LUG TERMINALS

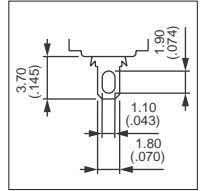
Threaded bushing \varnothing 6,35 (1/4) : 5600

MODEL
STRUCTURE

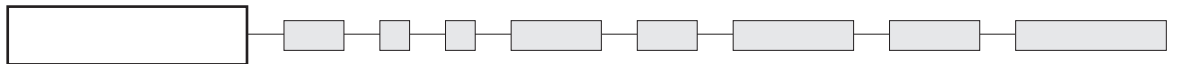
B



- 1, 2, 3 and 4 pole configurations



MODEL
STRUCTURE



Shown with standard lever (-13)

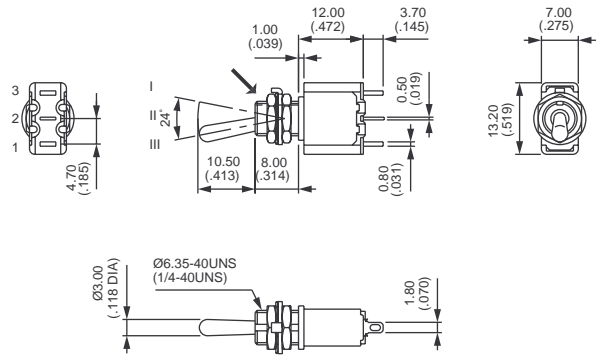
Single pole



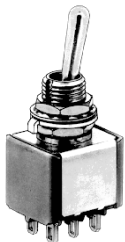
5636
5639
5637
5638
5632

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

→ Keyway



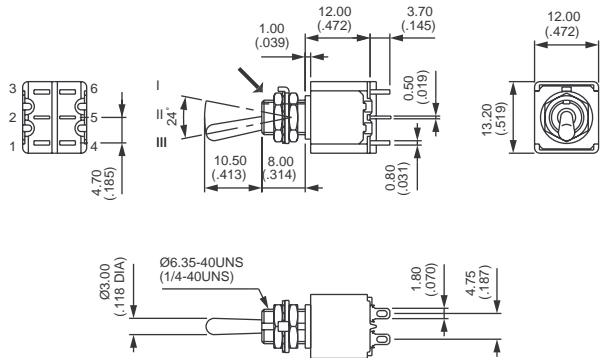
Double pole



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 section B.

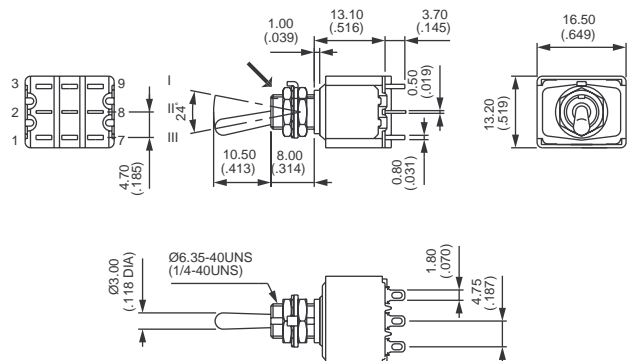
Three pole



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

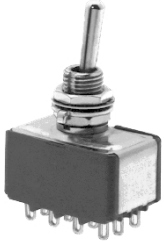
TOGGLE SWITCHES - SOLDER LUG TERMINALS

Threaded bushing Ø 6,35 (1/4) : 5600

M O D E L
S T R U C T U R E

B

Four pole

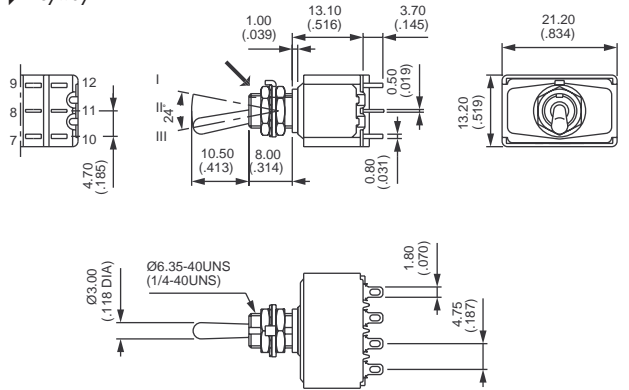


5666
5669
5667
5668
5662
5664*
5664 1R*
5664 2R*

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

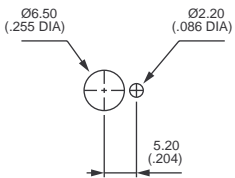
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM

→ Keyway

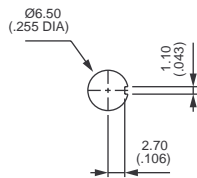


*Function 4 : DP in 4P case - specify CT or TH connections, see end of section B.

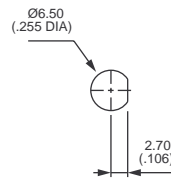
PANEL CUT-OUT



Standard



With K
sealing option



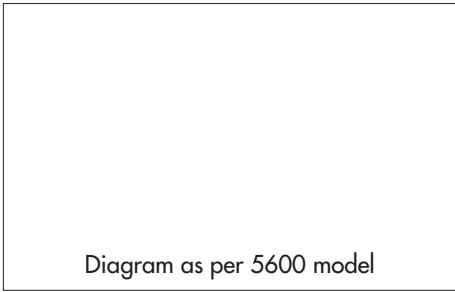
With X408
sealing option

5000 SERIES

TOGGLE SWITCHES - SOLDER LUG TERMINALS

MODEL
STRUCTURE

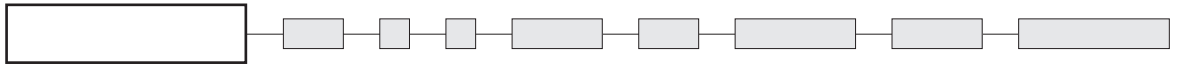
B



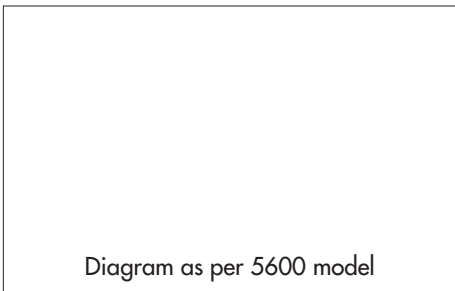
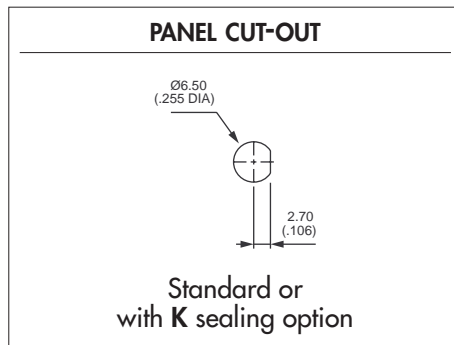
5700 models

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

MODEL STRUCTURE



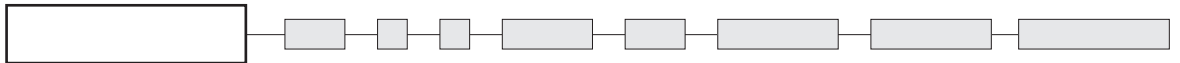
For model structure numbers, refer to 5600 models and replace 6 with 7.



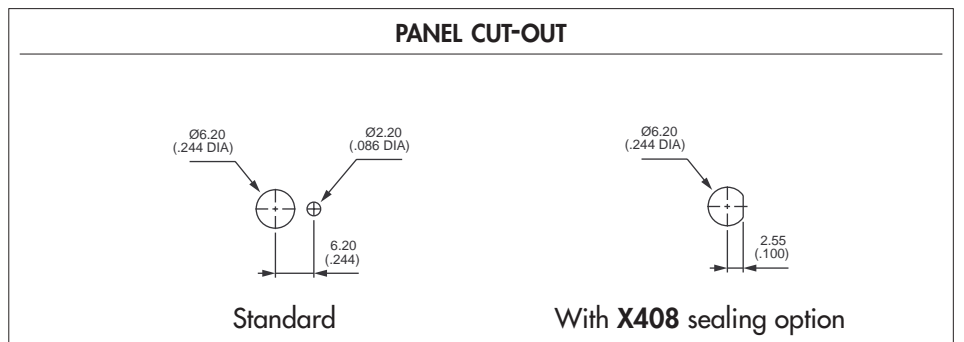
5500 models

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

MODEL STRUCTURE



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



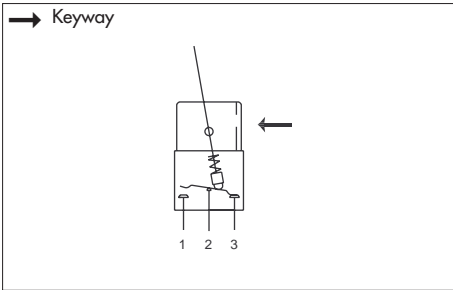
5000 SERIES

TOGGLE SWITCHES - SOLDER LUG TERMINALS

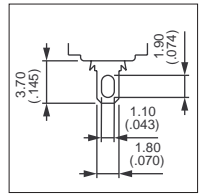
Threaded bushing $\varnothing 11,9$ (15/32) : 5600M

MODEL
STRUCTURE

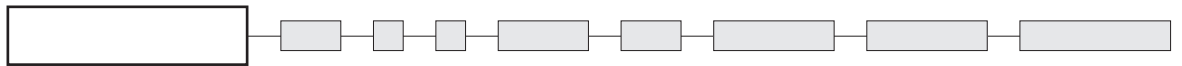
B



- 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)

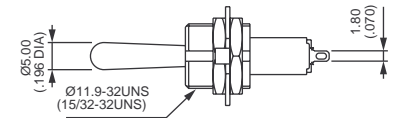
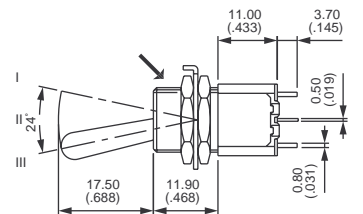
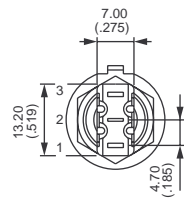
Single pole



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



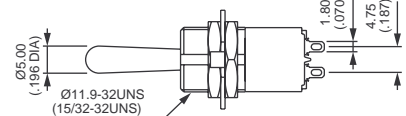
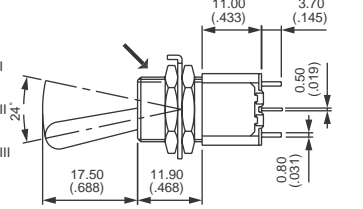
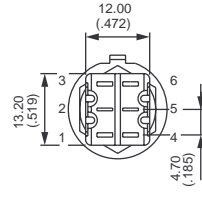
Double pole



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 section

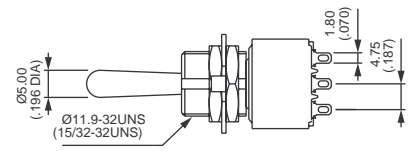
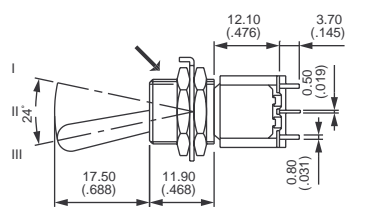
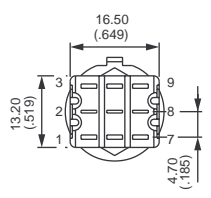
Three pole



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

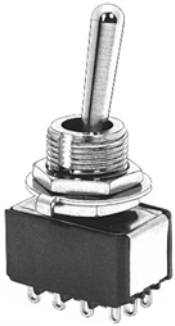
TOGGLE SWITCHES - SOLDER LUG TERMINALS

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

MODEL
STRUCTURE

B

Four pole

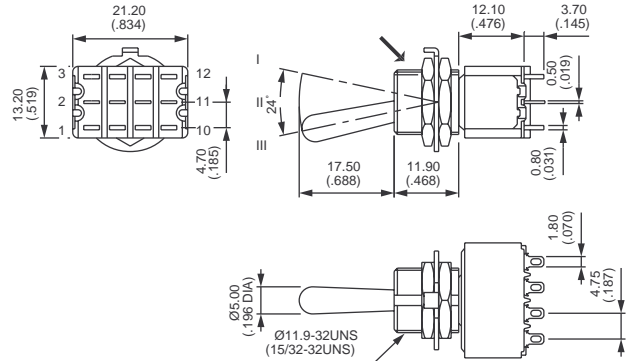


5666M
5669M
5667M
5668M
5662M
5664M*
5664M 1R*
5664M 2R*

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

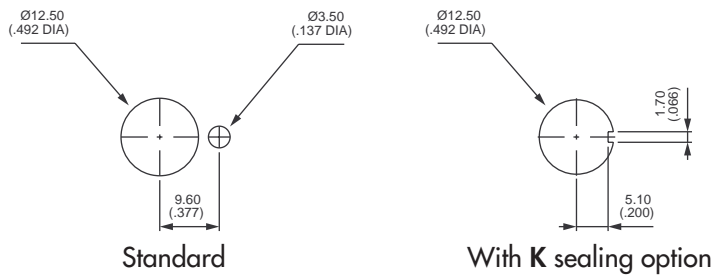
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM

→ Keyway



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

PANEL CUT-OUT



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

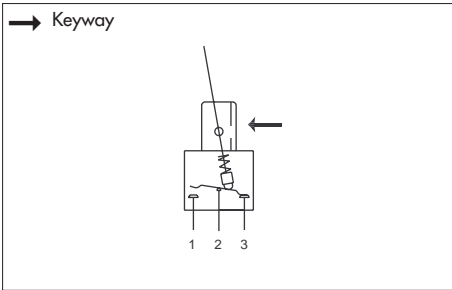
5000 SERIES

TOGGLE SWITCHES - STRAIGHT PC TERMINALS

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

MODEL
STRUCTURE

B

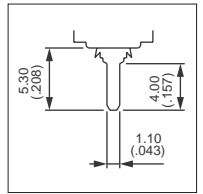


- Terminal spacing 4,7 mm (.185)
- 1, 2, 3 and 4 pole configurations

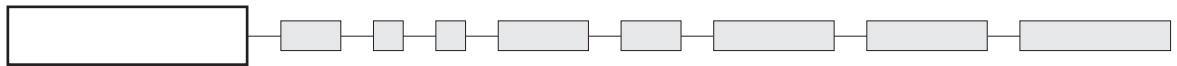
For new projects, we recommend switches with support bracket (option Y) which holds the switch securely on the PC board.

Other terminal lengths presented under "Special options".

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



MODEL
STRUCTURE



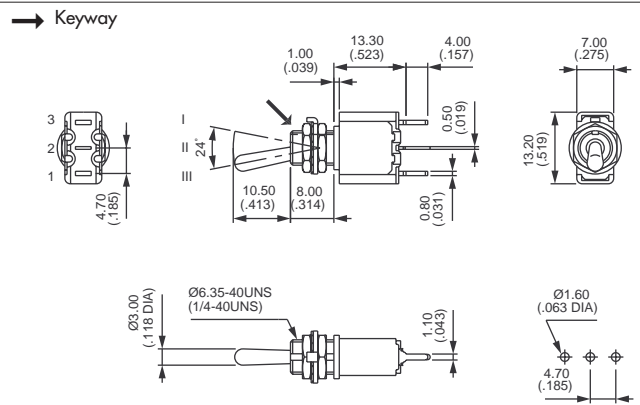
Shown with standard lever (-13)

Single pole



5236
5239
5237
5238
5232

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

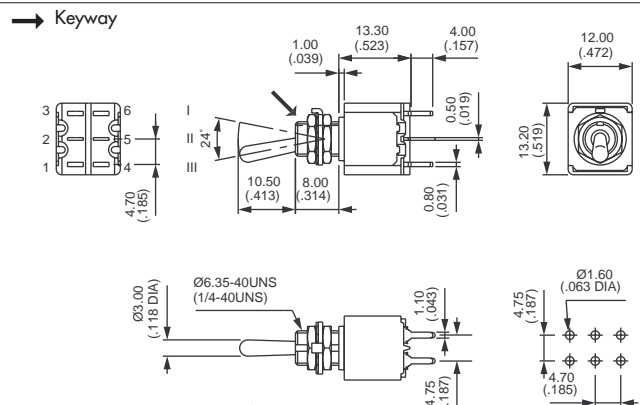


Double pole



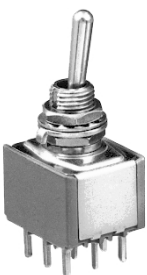
5246
5249
5247
5248
5242
5244*
5244 1R*
5244 2R*

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



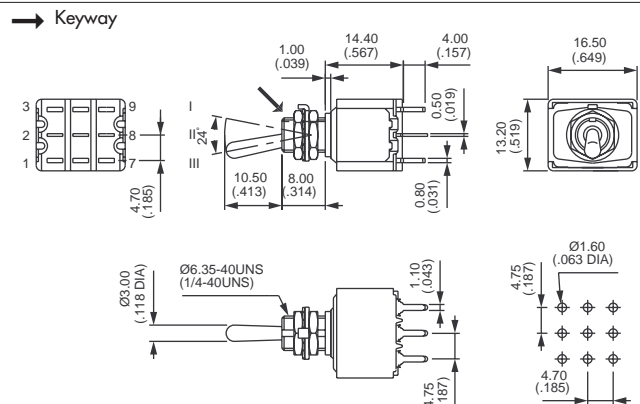
*Function 4 : SP in DP case - specify CT or TH connections, see end of section B.

Three pole



5256
5259
5257
5258
5252

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



5000 SERIES

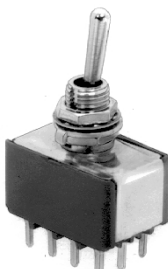
TOGGLE SWITCHES - STRAIGHT PC TERMINALS

Threaded bushing $\varnothing 6,35$ (1/4) : 5200 - 5000

MODEL
STRUCTURE

B

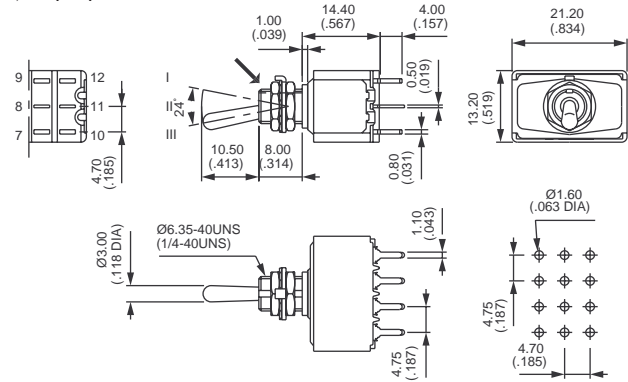
Four pole



→ Keyway

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

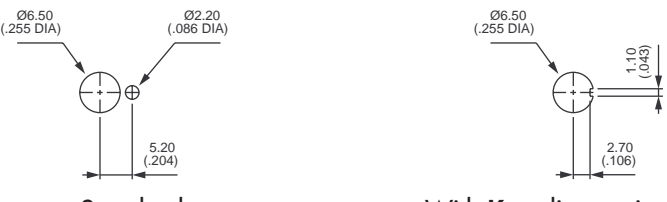
5266	ON	-	ON
5269	ON	OFF	ON
5267	MOM	OFF	MOM
5268	ON	OFF	MOM
5262	ON	-	MOM
5264*	ON	ON	ON
5264 1R*	ON	ON	MOM
5264 2R*	MOM	ON	MOM



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

PANEL CUT-OUT

5200 - 5000 - 5400



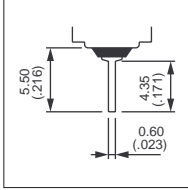
Standard

With K sealing option

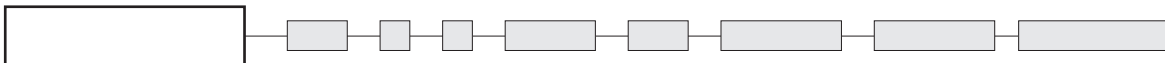
Diagram as per 5200 model

5000 models

- Terminal spacing 5,08 mm (.200)
- Epoxy sealed terminals standard
- 1 and 2 pole configurations



MODEL
STRUCTURE




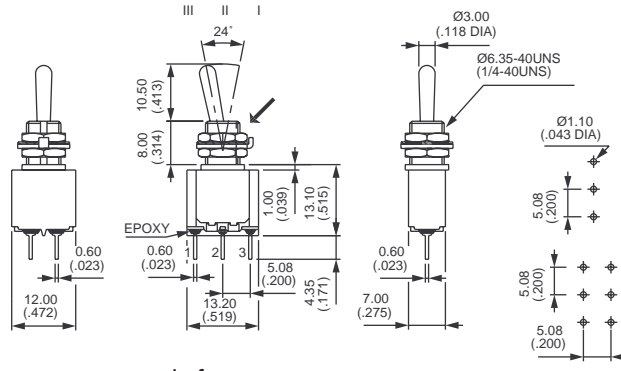
Shown with standard lever (-13)

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

→ Keyway

III	II	I
2-3		1-2
5-6		4-5

5036	5046	ON	-	ON
5039	5049	ON	OFF	ON
5037	5047	MOM	OFF	MOM
5038	5048	ON	OFF	MOM
5032	5042	ON	-	MOM
	5044*	ON	ON	ON
	5044 1R*	ON	ON	MOM
	5044 2R*	MOM	ON	MOM

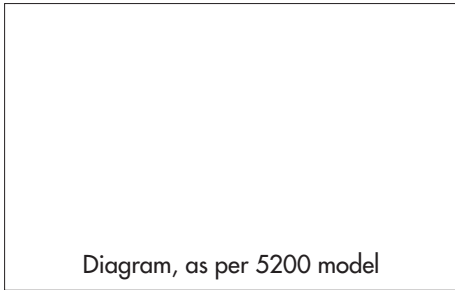
*Function 4 : SP in DP case - specify CT or TH connections, see end of section B.

5000 SERIES

TOGGLE SWITCHES - STRAIGHT PC TERMINALS

MODEL
STRUCTURE

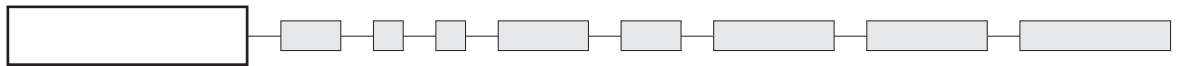
B



5400 models

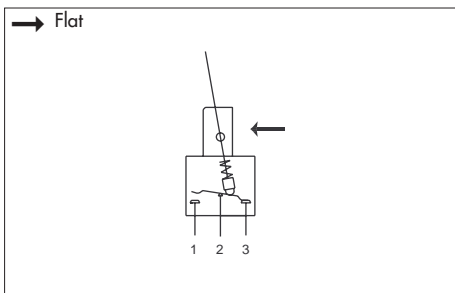
- Threaded bushing \varnothing 6,35 mm (1/4)
- Terminal spacing 4 mm (.157)
- 1, 2, 3 and 4 pole configurations

MODEL STRUCTURE



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

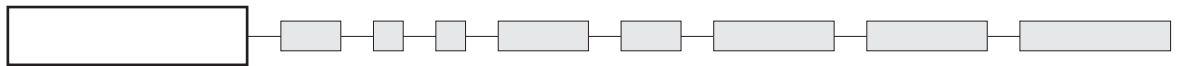
Panel cut-out, see 5200.



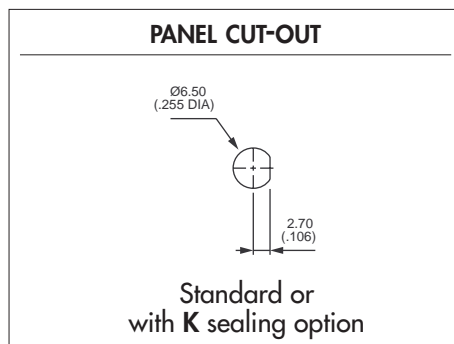
5900 models

- 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.

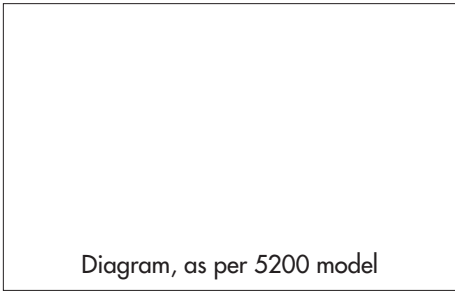


5000 SERIES

TOGGLE SWITCHES - STRAIGHT PC TERMINALS

MODEL
STRUCTURE

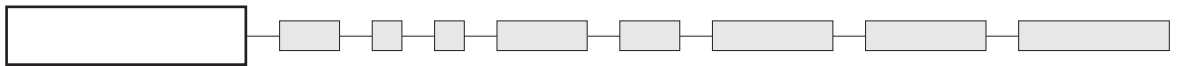
B



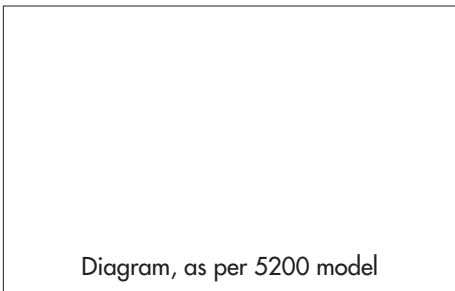
5100 models

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

MODEL STRUCTURE



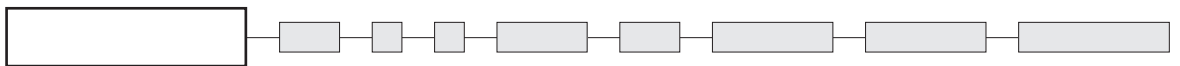
For model structure numbers, refer to 5200 models and replace 2 with 1.
Panel cut-out, see below.



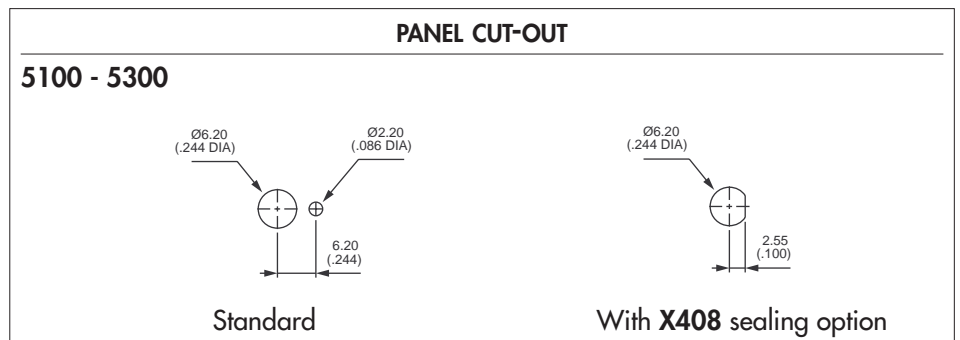
5300 models

- 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.



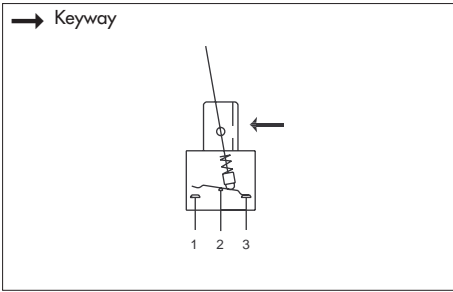
5000 SERIES

TOGGLE SWITCHES - QUICK-CONNECT TERMINALS

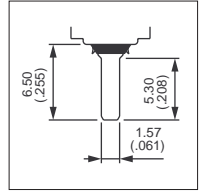
Threaded bushing $\text{\O} 6,35 (1/4) : 5200Z$

M O D E L
S T R U C T U R E

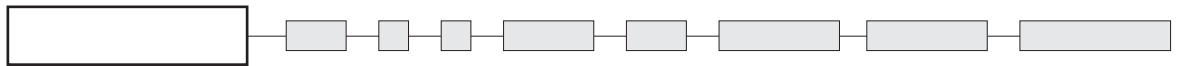
B



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



**MODEL
STRUCTURE**



Shown with standard lever (-13)

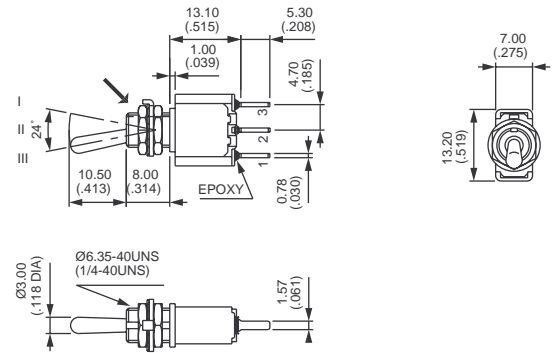
Single pole



**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



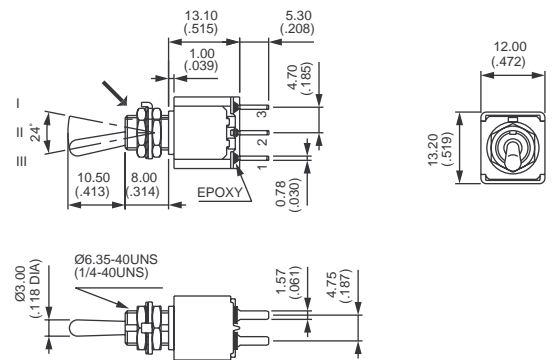
Double pole



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

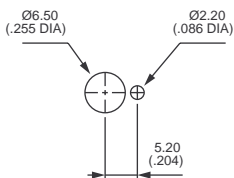
III	II	I
2-3		1-2
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON
ON	ON	MOM
MOM	ON	MOM

→ Keyway

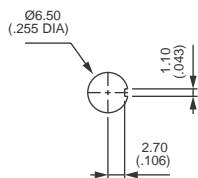


*Function 4 : SP in DP case - specify CT or TH connections, see end of section B.

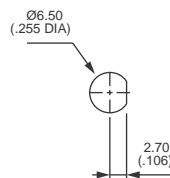
PANEL CUT-OUT



Standard



With K
sealing option



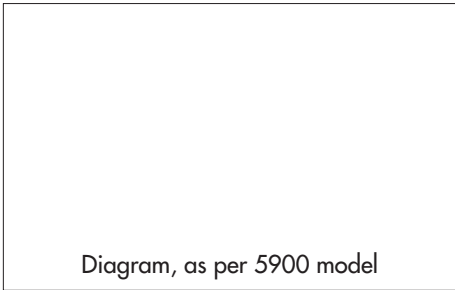
With X408
sealing option

5000 SERIES

TOGGLE SWITCHES - QUICK-CONNECT TERMINALS

MODEL
STRUCTURE

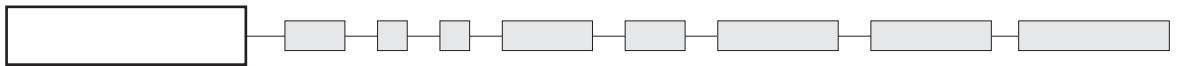
B



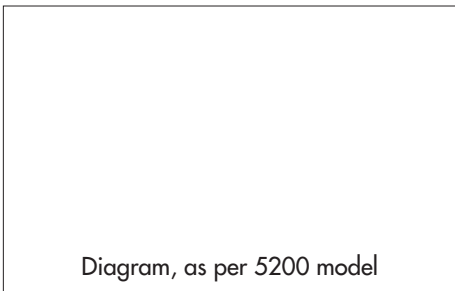
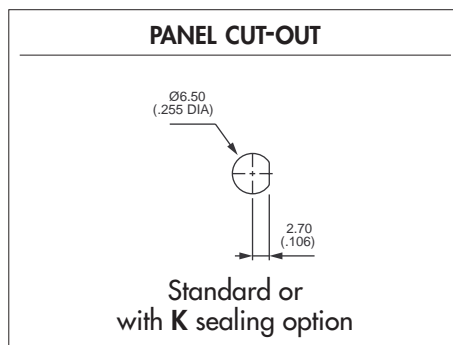
5900Z models

- 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



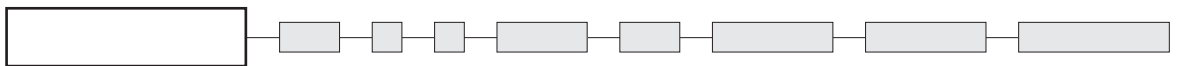
For model structure numbers, refer to 5200Z models and replace 2 with 9.



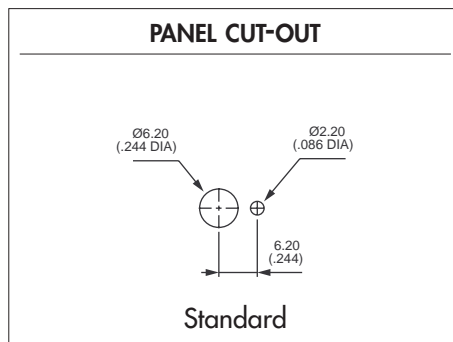
5100Z models

- 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.



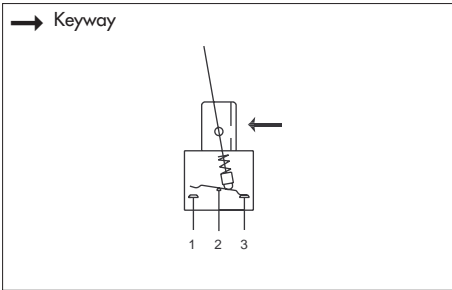
5000 SERIES

TOGGLE SWITCHES - WIRE-WRAP TERMINALS

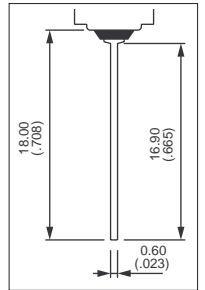
Threaded bushing $\varnothing 6,35$ (1/4) : 5200MIWR

MODEL
STRUCTURE

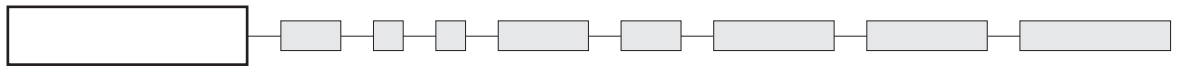
B



- 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



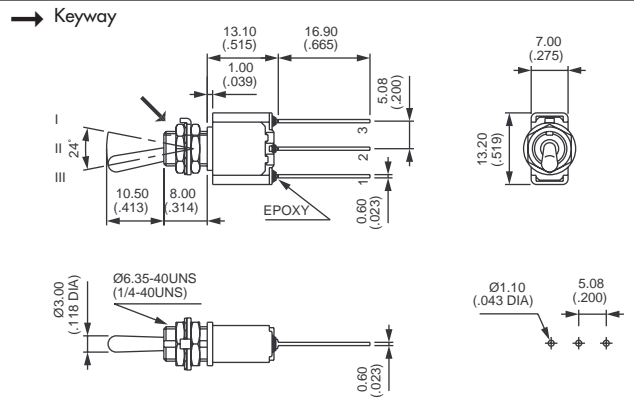
Shown with standard lever (-13)

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

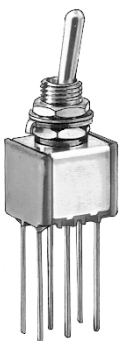


5236MIWR
5239MIWR
5237MIWR
5238MIWR
5232MIWR

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

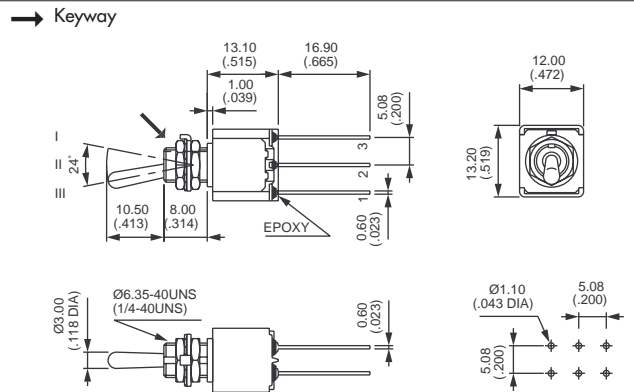


Terminal spacing 5,08 (.200) - double pole



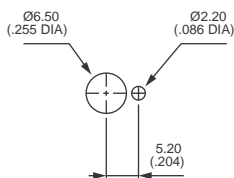
5246MIWR
5249MIWR
5247MIWR
5248MIWR
5242MIWR
5244 MIWR*
5244 1R MIWR*
5244 2R MIWR*

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

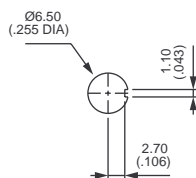


*Function 4 : SP in DP case - specify CT or TH connections, see end of section B.

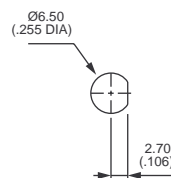
PANEL CUT-OUT



Standard



With K
sealing option



With X408
sealing option

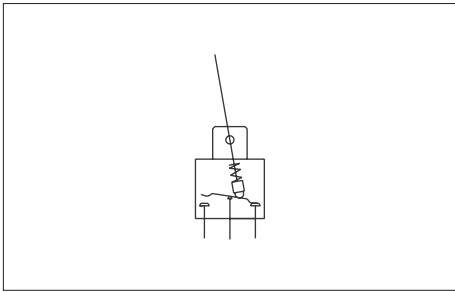
5000 SERIES

TOGGLE SWITCHES - PLAIN BUSHING

Right angle terminals - horizontal : 5200W

MODEL
STRUCTURE

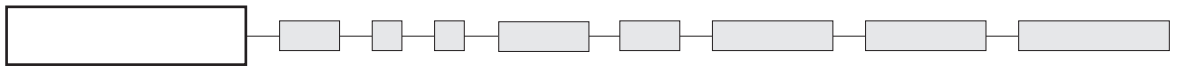
B



- 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**



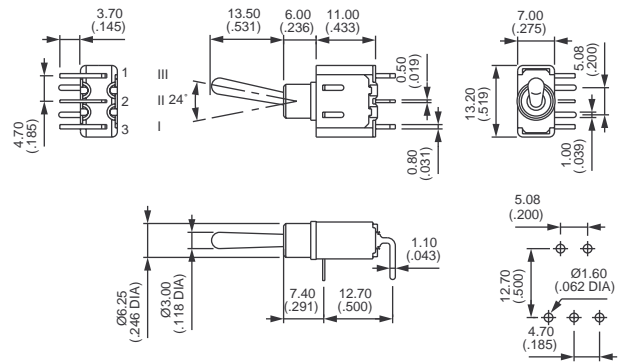
Shown with standard lever (-13)

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

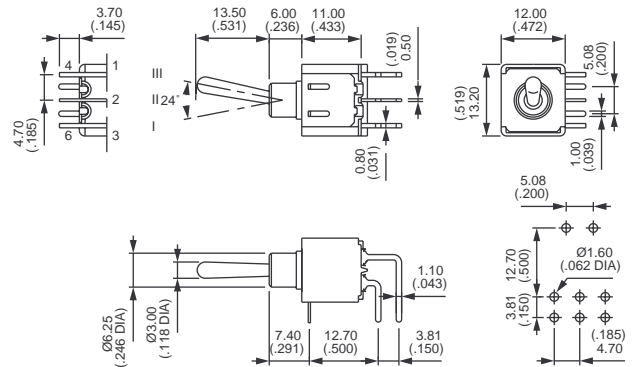


Double pole



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 section B.

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

