

# 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)

## AGENCY APPROVALS



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.

## 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.

# 5000 series

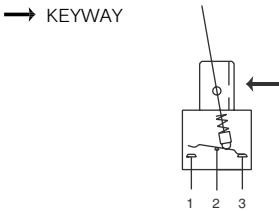
Miniature toggle switches • threaded bushing Ø 6.35 mm or plain bushing



## TERMINALS



## ELECTRICAL FUNCTION



## PANEL CUT-OUT



## PCB MOUNTING FOR RIGHT ANGLE TERMINAL MODELS

HORIZONTAL W



VERTICAL WW



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## BUILD YOUR PART NUMBER

### BASIC PART NUMBER

5	—	—	—	—	—	—		
SERIES	NUMBER OF POLES			TERMINALS		MOMENTARY FOR FUNCTION 4		
	3	Single pole		Blank	Solder lugs or straight PC depending on model	1R	ON ON MOM	
	4	Double pole		W	Right angle, horizontal mounting (5200 - 5400 switches)	2R	MOM ON MOM	
	5	Three pole		WW	Right angle, vertical mounting (5200 - 5400 switches)			
	6	Four pole		Y•	Bracket mounting (5200 switches)			
				Z	Quick-connect (5200 - 5900 switches)			
TERMINALS AND BUSHINGS			ELECTRICAL FUNCTIONS			CONNECTIONS FOR FUNCTION 4		
0	Straight PC terminals, 5.08 (.200) terminal spacing		6	ON	-	ON	TH	Standard
2	Straight PC terminals, 4.70 (.185) terminal spacing, right angle or quick-connect		9	ON	OFF	ON	CT	Reversed
4	Straight PC terminals, 4 (.157) terminal spacing or right angle terminals		7	MOM	OFF	MOM	For functions 4, 4-1R, 4-2R (leave blank for all other functions). Wiring diagrams, see Technical information on website.	
6	Solder lug terminals		8	ON	OFF	MOM		
7	Solder lug terminals, with <b>flatted</b> bushing		2	ON	-	MOM		
9	Straight PC or quick-connect terminals, with <b>flatted</b> bushing, 4.70 (.185) terminal spacing		4	ON	ON	ON	<b>Function 4</b> Must not have blank in «connections» box. ▲ Must not have blank in «momentary» box.	
			4	ON	ON	MOM ▲		
			4	MOM	ON	MOM ▲		
Bushing Ø 6 (.236) x 0.75 IS also available as standard.								

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## OPTIONS



## 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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## STRAIGHT PC TERMINALS SPACING 5.08 (.200)



Single pole	Double pole	III	II	I
		2-3		1-2
		5-6		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	II	I
	2-3		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	II	I
	2-3		1-2
	5-6		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).

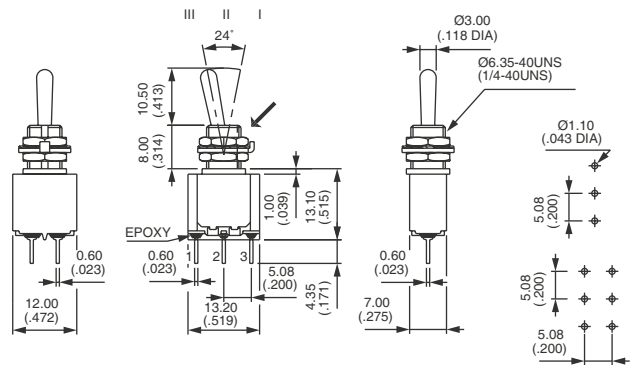
## RIGHT ANGLE TERMINALS - HORIZONTAL SINGLE POLE



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

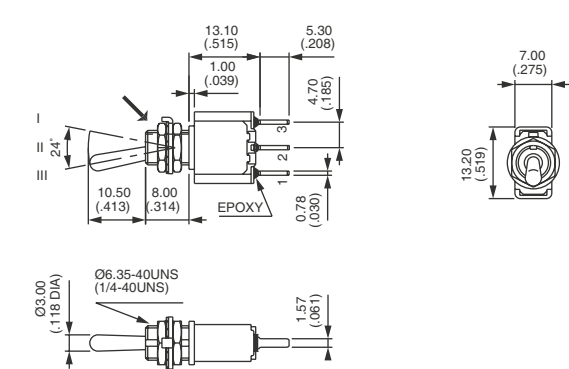
Also available with terminal spacing 4 mm (.157) instead of 4.7 (.185) : 5400W.

→ KEYWAY

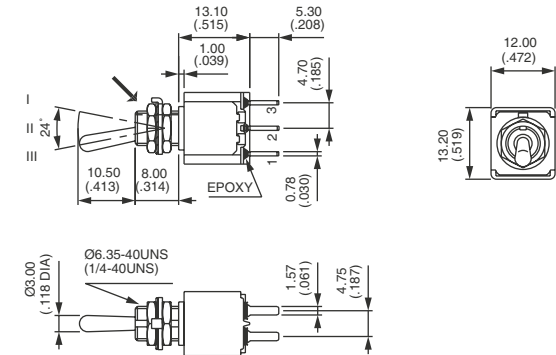


\* Function 4 : SP in DP case - specify CT or TH connections.

→ KEYWAY

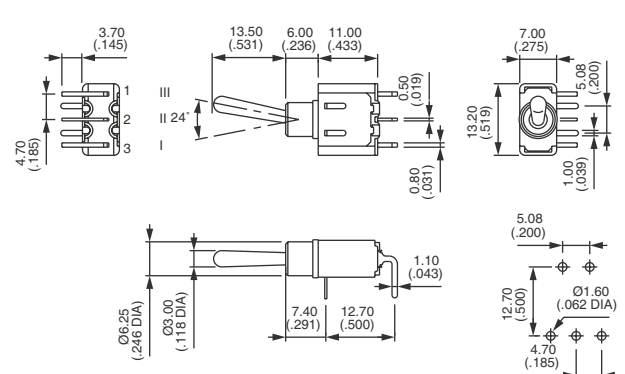


→ KEYWAY



\* 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

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

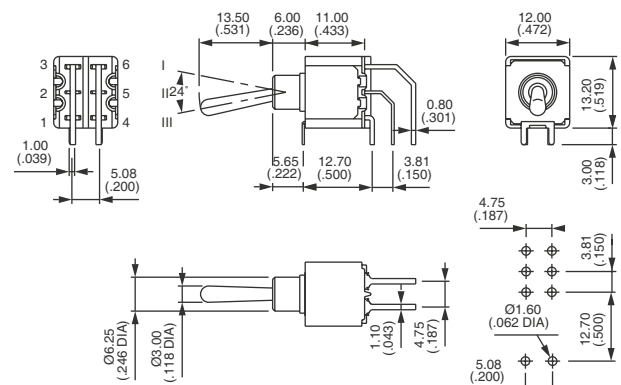
\*\* Functions 2 and 8 : reversed connection available, consult factory.

Also available with pin spacing 2.54 mm (.100) instead of 3.81 mm (.150) : 5400WW

Shown with standard lever



\* Function 4 : SP in DP 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).

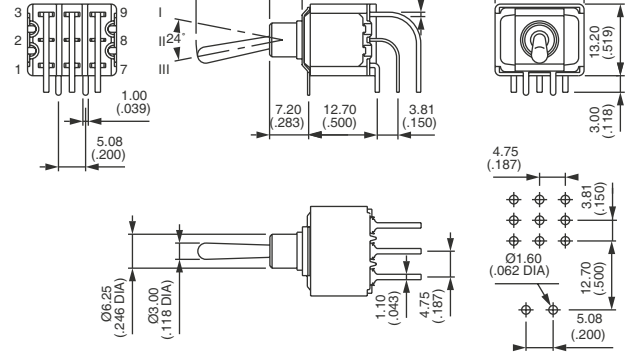
## SHORT BRACKET - WIDTH 15.75 (.620) DOUBLE POLE



	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.

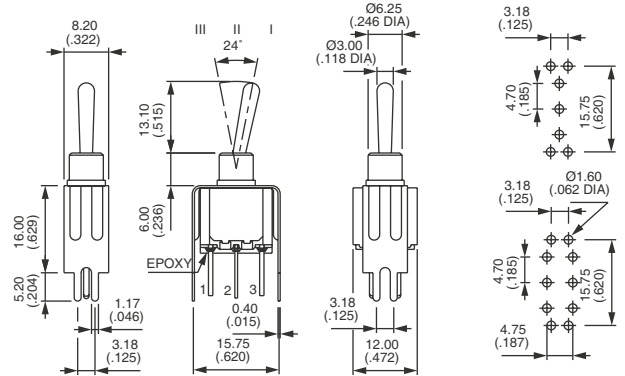
# 5000 series

Miniature toggle switches • plain bushing

## TALL BRACKET - WIDTH 15.75 (.620)



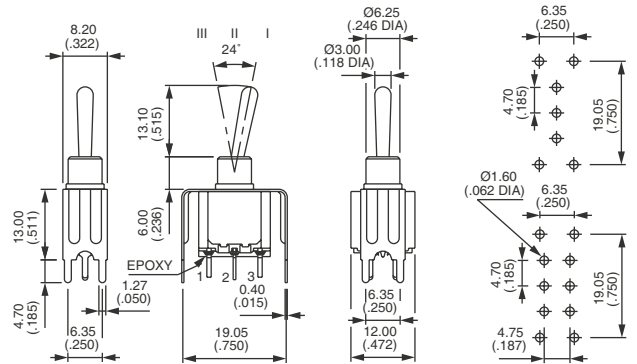
Single pole	Double pole	III	II	I
5236Y4 B	5246Y4 B	2-3	-	1-2
5239Y4 B	5249Y4 B	5-6	-	4-5
5237Y4 B	5247Y4 B	ON	OFF	ON
5238Y4 B	5248Y4 B	MOM	OFF	MOM
5232Y4 B	5242Y4 B	ON	-	MOM
	5244Y4 B*	ON	ON	ON
	5244Y4 1R B*	ON	ON	MOM
	5244Y4 2R B*	MOM	ON	MOM



## SHORT BRACKET - WIDTH 19.05 (.750)



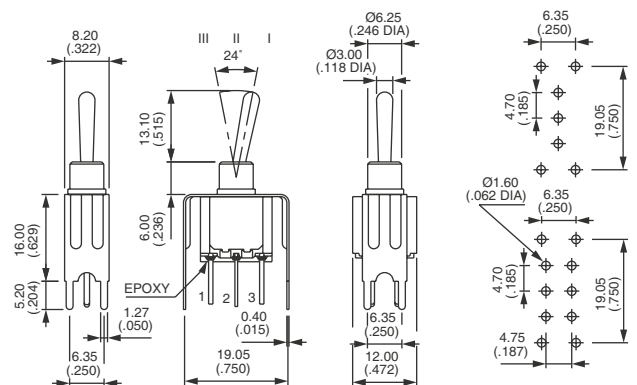
Single pole	Double pole	III	II	I
5236Y6 B	5246Y6 B	2-3	-	1-2
5239Y6 B	5249Y6 B	5-6	-	4-5
5237Y6 B	5247Y6 B	ON	OFF	ON
5238Y6 B	5248Y6 B	MOM	OFF	MOM
5232Y6 B	5242Y6 B	ON	-	MOM
	5244Y6 B*	ON	ON	ON
	5244Y6 1R B*	ON	ON	MOM
	5244Y6 2R B*	MOM	ON	MOM



## TALL BRACKET - WIDTH 19.05 (.750)



Single pole	Double pole	III	II	I
5236Y7 B	5246Y7 B	2-3	-	1-2
5239Y7 B	5249Y7 B	5-6	-	4-5
5237Y7 B	5247Y7 B	ON	OFF	ON
5238Y7 B	5248Y7 B	MOM	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



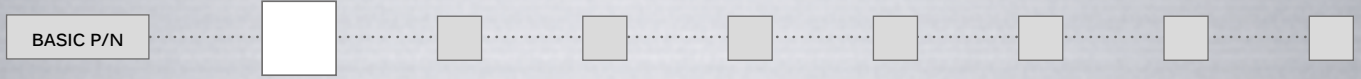
Epoxy sealed terminals standard (B).

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

# 5000 series

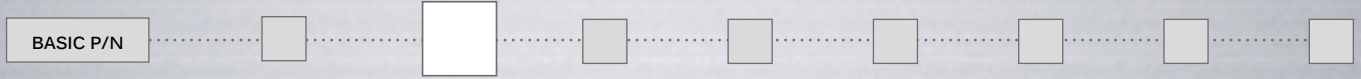
Miniature toggle switches •  
threaded bushing Ø 6.35 mm or plain bushing

### CONTACT MATERIALS



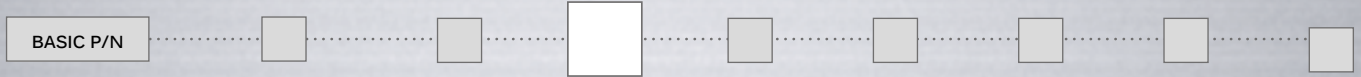
- A Silver
  - AD Silver, gold plated
  - CD Brass, gold plated
- Special contacts for peak currents : see X814, under "Special Options".

### FINISH



- Blank Nickel plated
- G Black finish on bushing, actuator and hardware

### SEALING



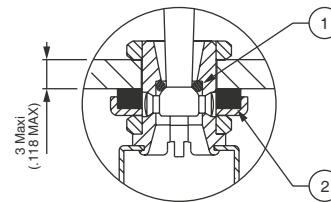
- Blank
  - For 5000 and 5200Z models : epoxy sealed terminals standard
  - Other models : no sealing required
- K Front panel sealing by one O-ring and sealing washer. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.
  - ⚠ Available on models with Ø 6.35 (1/4) **threaded bushing only**.
  - Not available with levers 8, 9, 12, 22, 23.
- B Epoxy sealed terminals
- KB Combined sealings

Sealing by two O-rings, see X408 under "Special options".

#### OPTION B



#### OPTION K



- ① O-ring
- ② Sealing washer



K with Ø 6.35 (1/4) keyway bushing includes washer **U360**

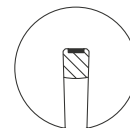


K with Ø 6.35 (1/4) flattened bushing includes washer **U5141**

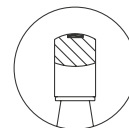
### FLUORESCENT TIP



- Blank None
- 038 White fluorescent tip. Becomes luminous when submitted to ultraviolet rays.
  - ⚠ Available with black finish (option G) only.
  - Consult factory for levers available with this option.



-19 Standard lever



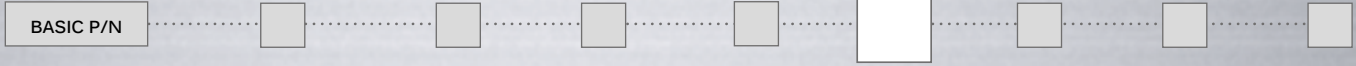
Locking lever

Same dimensions as standard actuator on next page.

# 5000 series

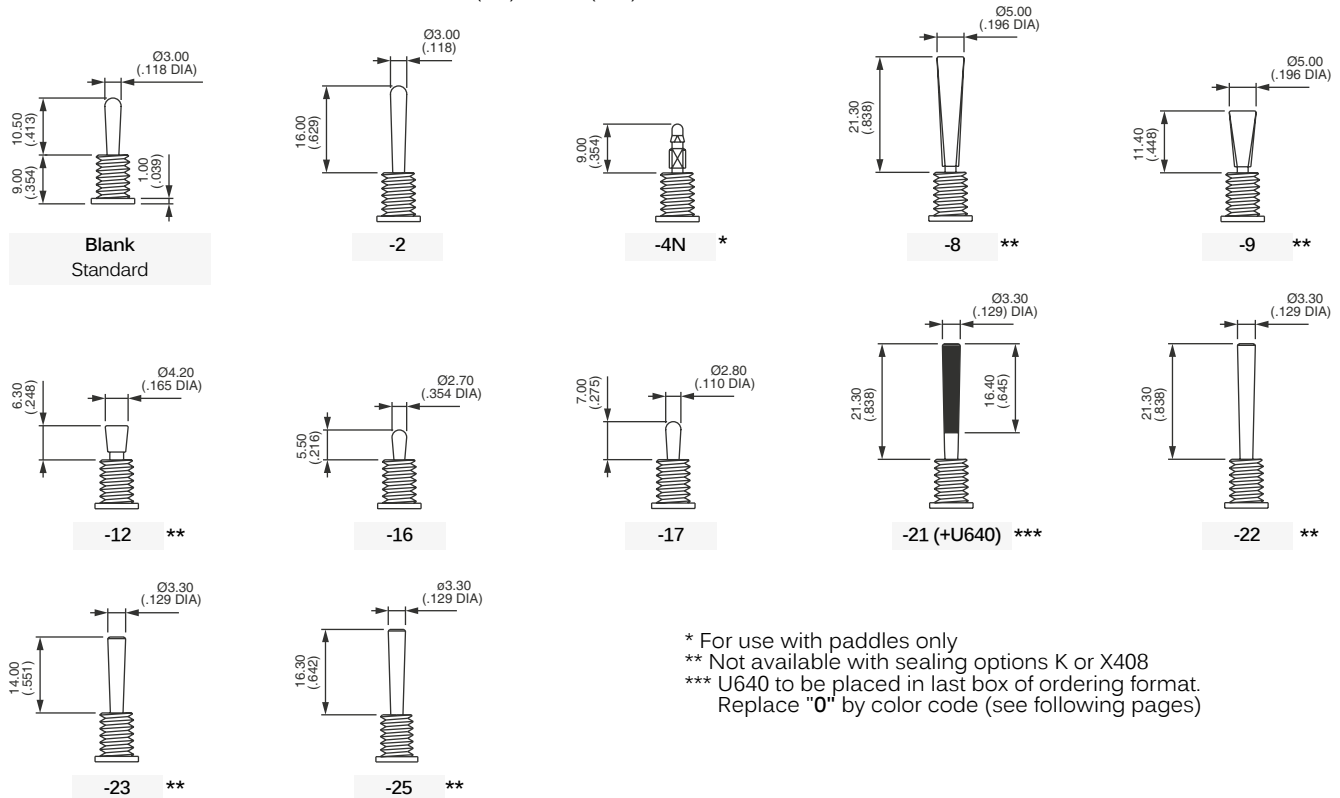
Miniature toggle switches • threaded bushing Ø 6.35 mm or plain bushing

## ACTUATORS



Dash compulsory before lever code.

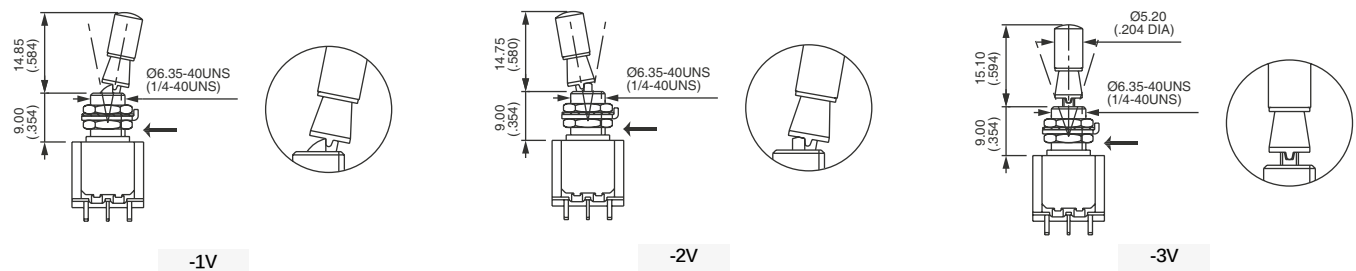
LEVERS FOR THREADED BUSHING MODELS Ø 6,35 (1/4) OR Ø 6 (.236)



LOCKING LEVERS FOR THREADED BUSHING MODELS Ø 6,35 (1/4)

- 1V 1 locked position (function 6)
- 2V 2 locked position (function 6)
- 3V 3 locked positions (functions 9 and 4)

→ KEYWAY



Consult factory for other locking lever options.

For plain bushing models, see X386 or X916 under "Special options" on the following pages.

# 5000 series

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

## ACTUATORS (CONTINUED)



LEVERS FOR PLAIN BUSHING MODELS : W - WW AND Y

Lever length : With bracket or mounting plate lever length will be reduced by 0.4 mm (.015) as a rule. Please refer to switch technical drawings of basic models pages for details.



Blank  
Standard



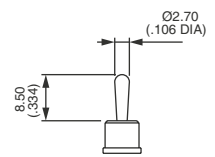
-2



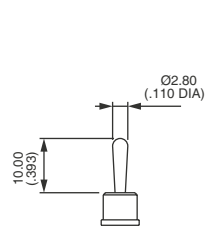
-4N



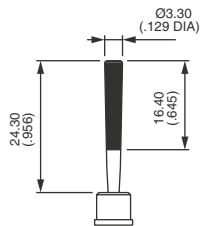
-7



-16



-17



-21 (+U640) \*

\* U640 to be placed in last box of ordering format.  
For actuator colors, replace «0» by color code (see following pages)

## SPECIAL OPTIONS



**Blank** No special requirement

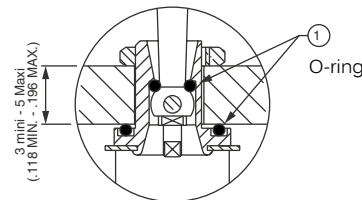
**X408** Front panel sealing by two O-rings. Flatted bushing for precise orientation. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated. Includes sealed terminals (option B).

⚠ Available only on models with threaded bushing.  
Not available with levers 8, 9, 12, 22, 23.

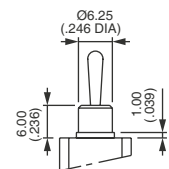
**X371** Plain bushing Ø 6.25 mm (.246) (instead of standard threaded bushing).

**X372** Threaded bushing Ø 6.35 (1/4). **Height 7 mm (.274).**

**X386** Threaded bushing Ø 6.35 mm (1/4) to replace plain bushing on models W - WW and Y.



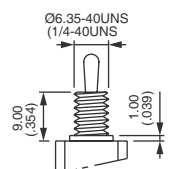
X408



X371



X372



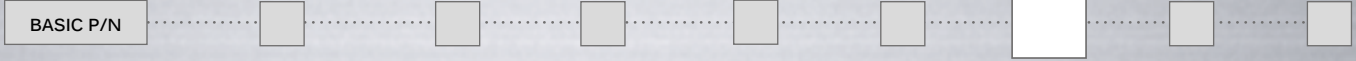
X386



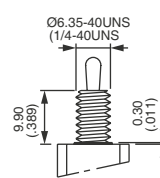
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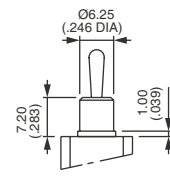
## SPECIAL OPTIONS (CONTINUED)



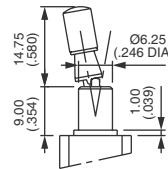
- X442** Threaded bushing Ø 6.35 mm (1/4) - Height 9.9 mm (.389).
- X445** Plain bushing. Height 7.2 mm (.283) - for W, WW and Y models.  
Available with the same levers, insulating cap and paddles as X404.
- X601** **Silver plated brass contacts.**  
Current/voltage rating for an electrical life of 20,000 cycles : 0.5 A 30 VDC. Minimum quantity : 5,000 pieces per model and shipment.
- X681** **Satin chrome** actuator
- X814** **Switches for peak currents** - single and double pole.  
On request.
- X902** Plain bushing Ø 6.25 mm (.246) - Height 9 mm (.354) (not available with K sealing option).
- X916** Locking lever on model with plain bushing.
- X404** **Horizontal right angle (W) with reduced overall dimensions** (shown with lever -16)



X442



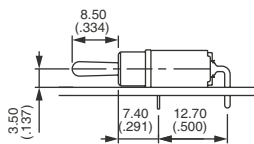
X445



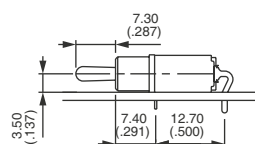
X916

⚠ With options X372, X386, X442 and X445, the lever lengths indicated on previous pages will be modified.

### OPTION X404



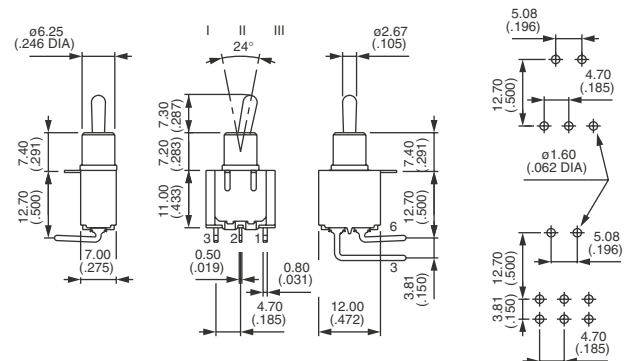
Standard W



Option X404



		III	II	I
Single pole	Double pole	2-3		1-2
5236W X404	5246W X404	ON	-	ON
5239W X404	5249W X404	ON	OFF	ON
5237W X404	5247W X404	MOM	OFF	MOM
5238W X404	5248W X404	ON	OFF	MOM
5232W X404	5242W X404	ON	-	MOM
	5244W X404*	ON	ON	ON
	5244W 1R X404*	ON	ON	MOM
	5244W 2R X404*	MOM	ON	MOM



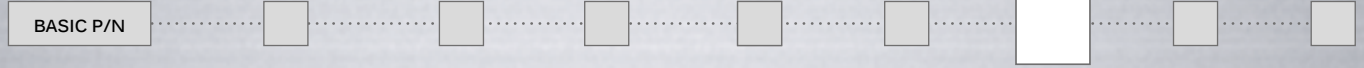
\* Function 4 : SP in DP case - specify CT or TH connections



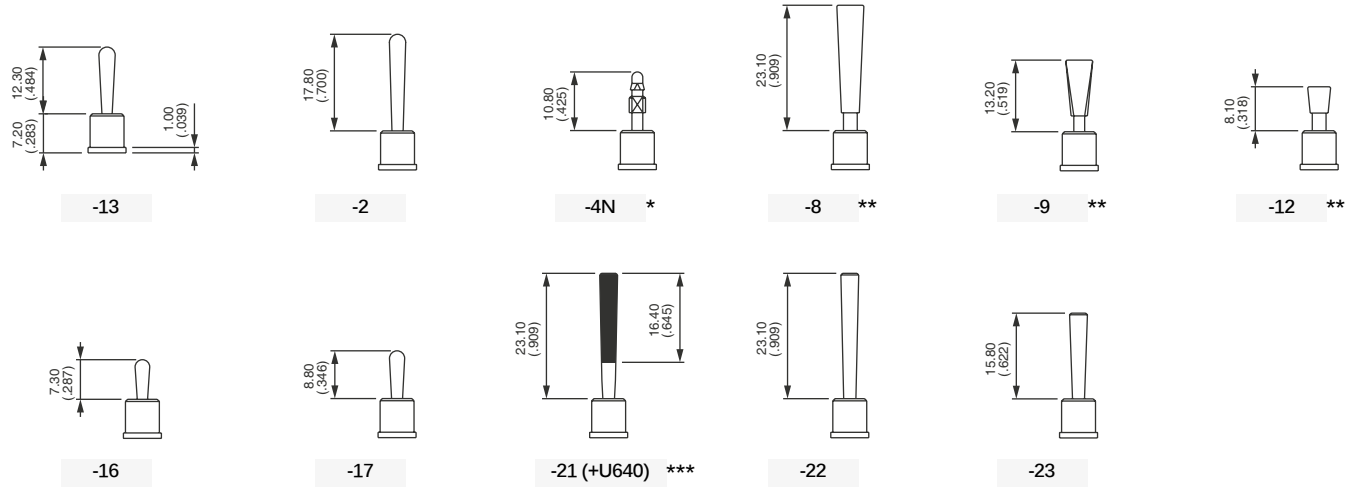
# 5000 series

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

## SPECIAL OPTIONS (CONTINUED)



OPTION X404 (CONTINUED)  
LEVERS LENGTHS FOR X404 (ALSO AVAILABLE WITH X445 OPTION)



- \* For paddles
- \*\* Levers -8, -9 and -12 not available with function 2 (ON-MOM)
- \*\*\* U640 to be placed in last box of ordering format. Replace "0" with color code.

### Insulating caps and paddles for X404 :

Insulating cap U1710 available with lever style 16.  
Paddles U240N, U290N and U390N available with lever style 4N. See details on next page..

## AGENCY APPROVALS



- Blank No agency approval required.
- UL All standard models
- CSA
- CECC Standard models 5600 - 5200

**Availability :** consult factory for details of approved combinations or options.

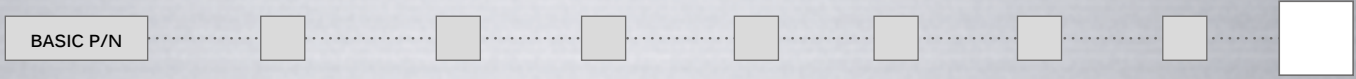
**Marking :** to order switches marked UL, CSA or CECC, complete above box with desired approvals, in this order & without space (ex. : ULCSACECC). **VDE (with UL & CSA) :** Refer to 55000 series.

Preferential lists : see specifications.

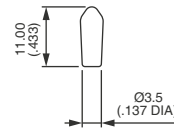
# 5000 series

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

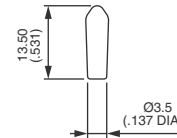
## INSULATING CAPS



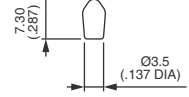
- U270** For standard lever & threaded bushing only
- U1040** For standard lever & plain bushing only
- U1710** For lever 17 and threaded bushing  
For lever 7 and plain bushing



U270



U1040



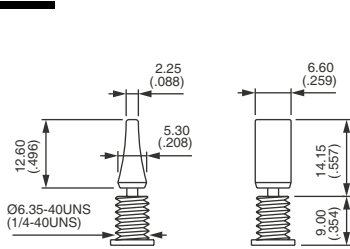
U1710

For cap colors, replace "0" with number :

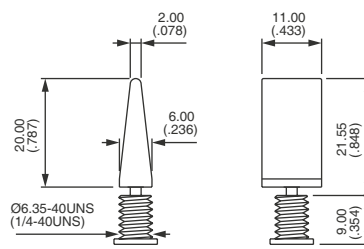
- 1 Blue
- 1/4 Dark blue
- 2 Black
- 3 Green
- 4 Grey
- 5 Yellow
- 6 Red
- 7/1 White
- 9 Orange

## PADDLES

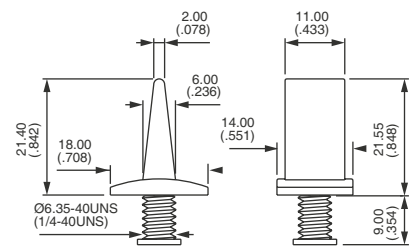
For use with lever 4N only. Shown with standard threaded bushing. Order separately.



U240N



U290N



U390N

For cap colors, replace "0" with number :

- 1 Blue
- 1/4 Dark blue
- 2 Black
- 3 Green
- 4 Grey
- 5 Yellow
- 6 Red
- 7 Ivory
- 7/1 White
- 9 Orange



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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