



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# 600H-600NH series

Toggle switches • high amperage



## DISTINCTIVE FEATURES

- Robust mechanism
- High current/voltage rating
- Insulated or metal lever
- UL, CSA and NF-VDE (EN 61058-1) approved



## ELECTRICAL SPECIFICATIONS

- Max. current/voltage ratings : see tables below
- Peak current : 30 A max. during 1/2 sine, 250 VAC
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1,000 MΩ min. at 500 VDC
- Dielectric strength :  
2,000 Vrms 50 Hz min. between terminals  
2,500 Vrms 50 Hz min. between terminals and frame
- Electrical life : 10,000 cycles at full load

APPROVED RATINGS				
Models	Functions	600H - 600NH		
		UL	CSA	NF-VDE
		UL 1054	CSA 22-2	EN 61058-1
Single and double pole	ON - OFF (1)	15 A 1/2 HP 125-250 VAC		10(4) A 400 VAC
	ON - ON (6)			
	Other (4-5-7-8-9)	10 A 1/2 HP 125-250 VAC		T 85/55 (600H)
Three pole	ON - OFF (1) & ON - ON (6)	15 A 1/2 HP 125-250 VAC		T 125/55 (600NH)
	Other (4-5-7-8-9)	10 A 1/2 HP 125-250 VAC		

FOR INFORMATION Max. current/voltage rating w. resistive load		
Functions	Ratings	Electrical life
ON - OFF ON - ON	15 A 250 VAC 10 A 24 VDC 15 A 12 VDC	10,000 cycles
ON OFF ON	15 A 250 VAC 5 A 24 VDC	6,000 cycles 10,000 cycles
Other	15 A 125 VAC 12 A 250 VAC 5 A 24 VDC	10,000 cycles

The company reserves the right to change specifications without notice.



# 600H-600NH series

Toggle switches • high amperage

## GENERAL SPECIFICATIONS

- Torque : 1.50 Nm (1.10 Ft.lb) max. applied to nut
- Panel thickness : 4.5 mm (.177) max. between 2 nuts
- Operating temperature : -20 °C to +55 °C (-4 °F to +131 °F)

## MATERIALS

- Case : polyester UL94-V0
- Actuator :
  - 600H : brass, nickel plated
  - 600NH : black polyamide
- Bushing : brass, nickel plated
- Contacts : silver/nickel alloy

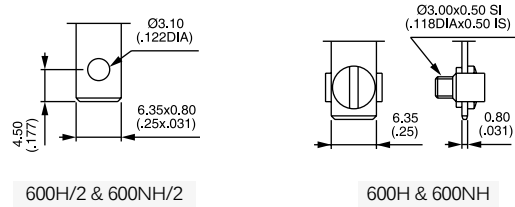
APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

## AGENCY APPROVALS



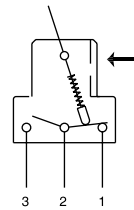
**Availability** : see chart on previous page.  
**Marking** : approved models are standard marked.

## TERMINALS

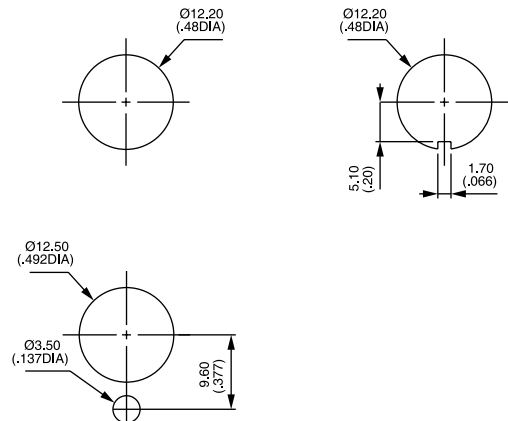


## ELECTRICAL FUNCTIONS

→ KEYWAY



## PANEL CUT-OUT





# 600H-600NH series

Toggle switches • high amperage



## BUILD YOUR PART NUMBER

**BASIC PART NUMBER**

SERIES	NUMBER OF POLES	ELECTRICAL FUNCTIONS	ACTUATOR AND TERMINALS	MOMENTARY
6				
	<b>3</b> Single pole <b>4</b> Double pole <b>5</b> Three pole For 4 pole, see 660 series.	<b>1</b> ON - OFF <b>5</b> MOM - ON <b>6</b> ON - ON <b>7</b> MOM OFF MOM <b>8</b> ON OFF MOM <b>9</b> ON OFF ON <b>4</b> ON ON ON MOM Δ MOM ON MOM Δ	<b>H</b> Metal lever, screw terminals <b>H/2</b> Metal lever, solder lug/quick-connect terminals * <b>H/3</b> Metal lever, normalized quick-connect terminals <b>NH</b> Insulated lever, screw terminals <b>NH/2</b> Insulated lever, solder lug/quick-connect terminals <b>NH/3</b> Insulated lever, normalized quick-connect terminals *	<b>-1R</b> ON ON MOM <b>-2R</b> MOM ON MOM

Δ Must not have blank in "momentary" box.      \* On request.

**OPTIONS FOR 600H SERIES ONLY**

OPTIONS	LOCKING LEVERS	ACTUATOR OPTIONS
For models with metal lever only <b>T</b> Tropicalized case <b>K</b> Front panel sealing <b>L</b> Bushing 16 mm (.629) <b>LUXE</b> Chrome finish <b>TKLUXE</b> Front panel sealing + T and LUXE <b>G</b> Black finish <b>GK</b> Black finish + front panel sealing <b>G-038</b> Black finish + uminous tip on lever	<b>-1V</b> 1 locked position <b>-2V</b> 2 locked positions <b>-3V</b> 3 locked positions	<b>-4</b> 30 mm (1.181) long actuator <b>-5</b> 40 mm (1.574) long actuator <b>-6</b> Retro style actuator <b>X2595</b> Ergonomic flat plastic actuator



## 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 following pages for further information.
- 🛡 **Switch guards** are available to prevent inadvertent lever operation. See "Switch Guards" section on website.
- 🌧 **Sealing boots** are available on 600H series to protect the switches against dust and water. See "Sealing Boots" section of website.
- 🔧 **Mounting accessories** : standard hardware supplied with all models :
  - 600H and series : 1 hex nut U166 and 1 knurled nut U411
  - 600NH series : 1 hex nut U166 and 1 knurled nut U522

# 600H-600NH series

Toggle switches • high amperage

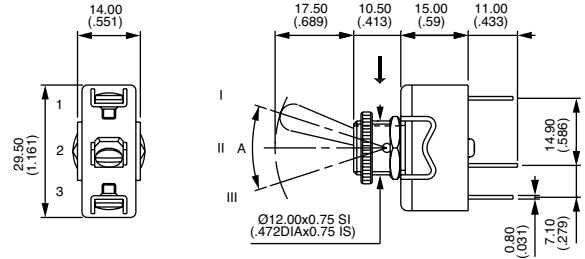
## METAL LEVER - SINGLE POLE



Solder lug	Screw	A	III 2-1	II	I 2-3
631H/2	631H	30° ON	-	OFF	
635H/2	635H	26° MOM	-	ON	
636H/2	636H	30° ON	-	ON	
637H/2	637H	30° MOM	OFF	MOM	
638H/2	638H	36° ON	OFF	MOM	
639H/2	639H	36° ON	OFF	ON	

→ KEYWAY

A = Angle of throw



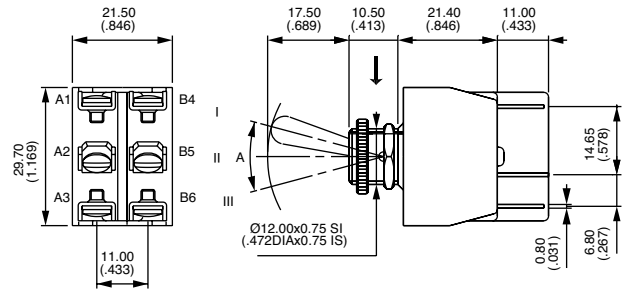
Angle of throw with K sealing option :  
functions 1, 5, 6, 7 : 26° - functions 8, 9 : 32°

→ KEYWAY

## METAL LEVER - DOUBLE POLE



Solder lug	Screw	A	III 2-1 5-4	II	I 2-3 5-6
641H/2	641H	26° ON	-	OFF	
644H/2	644H*	33° ON	ON	ON	
644H/2-1R	644H-1R*	33° ON	ON	MOM	
644H/2-2R	644H-2R*	33° MOM	ON	MOM	
645H/2	645H	26° MOM	-	ON	
646H/2	646H	26° ON	-	ON	
647H/2	647H	26° MOM	OFF	MOM	
648H/2	648H	26° ON	OFF	MOM	
649H/2	649H	32° ON	OFF	ON	



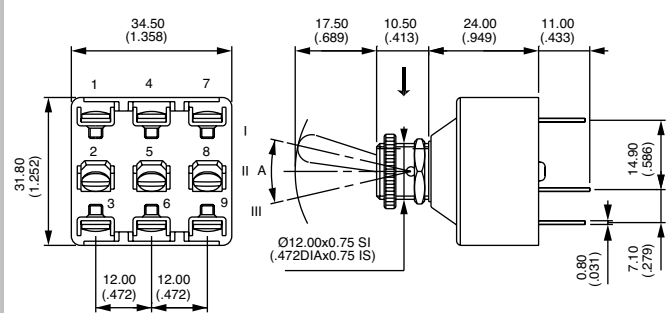
\* Function 4 : SP in DP case - see "Technical information" on website

→ KEYWAY

## METAL LEVER - THREE POLE



Solder lug	Screw	A	III 2-1 5-4 8-7	II	I 2-3 5-6 8-9
651H/2	651H	24° ON	-	OFF	
655H/2	655H	15° MOM	-	ON	
656H/2	656H	24° ON	-	ON	
657H/2	657H	24° MOM	OFF	MOM	
658H/2	658H	24° ON	OFF	MOM	
659H/2	659H	28° ON	OFF	ON	

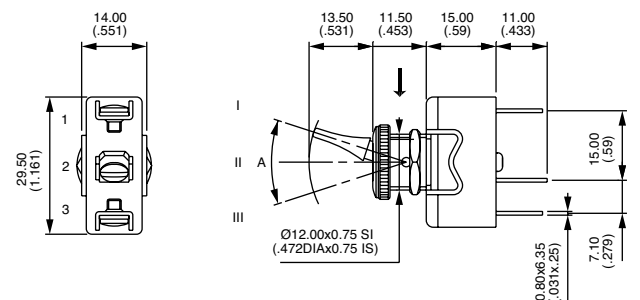


→ KEYWAY

## INSULATED LEVER - SINGLE POLE



Solder lug	Screw	A	III 2-1	II	I 2-3
631NH/2	631NH	28° ON	-	OFF	
635NH/2	635NH	24° MOM	-	ON	
636NH/2	636NH	28° ON	-	ON	
637NH/2	637NH	33° MOM	OFF	MOM	
638NH/2	638NH	33° ON	OFF	MOM	
639NH/2	639NH	33° ON	OFF	ON	



# 600H-600NH series

Toggle switches • high amperage

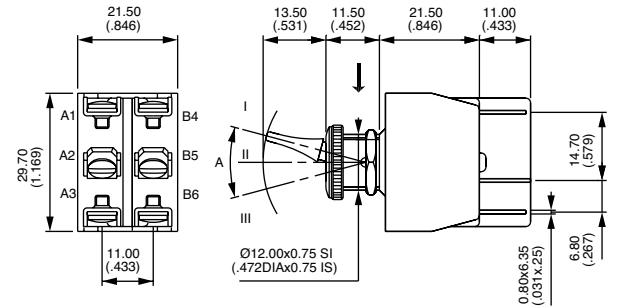
## INSULATED LEVER - DOUBLE POLE



Solder lug	Screw	A		
641NH/2	641NH	26° ON	-	OFF
644NH/2	644NH*	30° ON	ON	ON
644NH/2-1R	644NH-1R*	26° ON	ON	MOM
644NH/2-2R	644NH-2R*	26° MOM	ON	MOM
645NH/2	645NH	26° MOM	-	ON
646NH/2	646NH	26° ON	-	ON
647NH/2	647NH	26° MOM	OFF	MOM
648NH/2	648NH	30° ON	OFF	MOM
649NH/2	649NH	30° ON	OFF	ON

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

## KEYWAY



\* Function 4 : SP in DP case - see "Technical information" on website

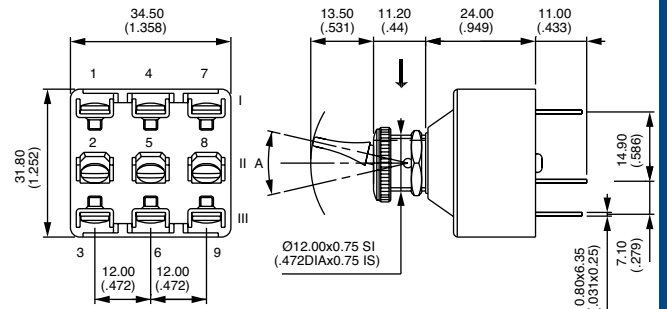
## INSULATED LEVER - THREE POLE



Solder lug	Screw	A		
651NH/2	651NH	24° ON	-	OFF
655NH/2	655NH	15° MOM	-	ON
656NH/2	656NH	24° ON	-	ON
657NH/2	657NH	24° MOM	OFF	MOM
658NH/2	658NH	24° ON	OFF	MOM
659NH/2	659NH	28° ON	OFF	ON

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

## KEYWAY



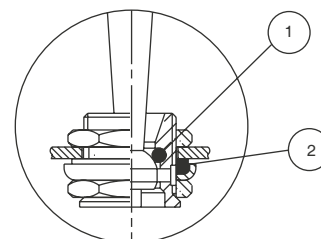
All models also available with normalized quick-connect terminals H/3 or NH/3.

## OPTIONS



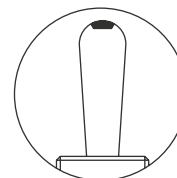
### For 600H series only

- T** Tropicalized diallylphthalate case (-40 °C to +85 °C) (-40 °F to +185 °F)
- K** Front panel sealing by 1 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
- L** Special threaded bushing, length 16 mm (.629)
- LUXE** Chrome plated lever and cap nut U117
- TK LUXE** Options T, K and LUXE.
- G** Black finish on bushing, lever and nuts. Includes tropicalization (option T) and locking ring U12.
- GK** Option G + front panel sealing by O-ring and sealing washer (as described in option K)
- G-038** Option G + fluorescent tip on lever. White fluorescent tip becomes luminous when submitted to ultra violet rays.



- ① O-ring
- ② Sealing washer

GK

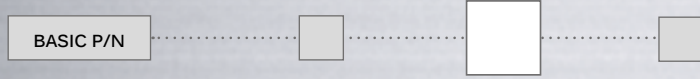


G-38

# 600H-600NH series

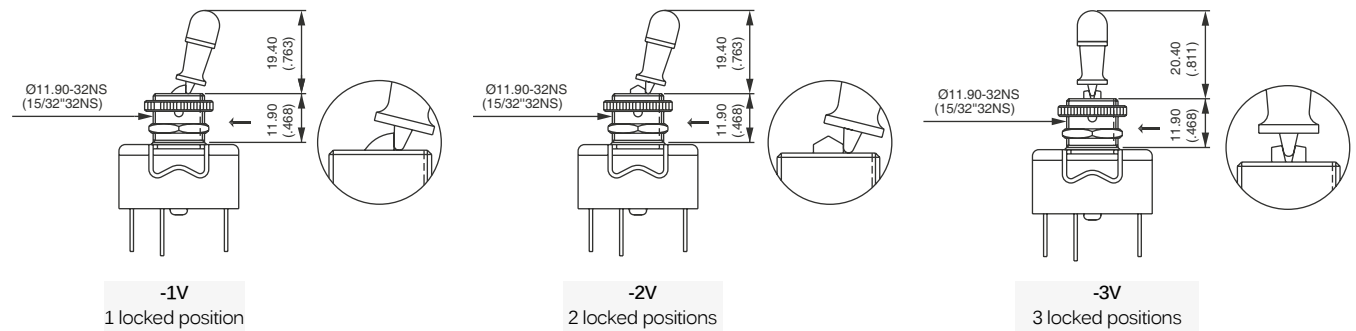
Toggle switches • high amperage

## LOCKING LEVERS

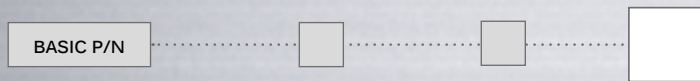


For 600H series only  
 For 1 and 2 pole models.  
 For 3-pole models, refer to 6000 series.

→ KEYWAY

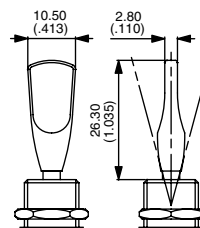
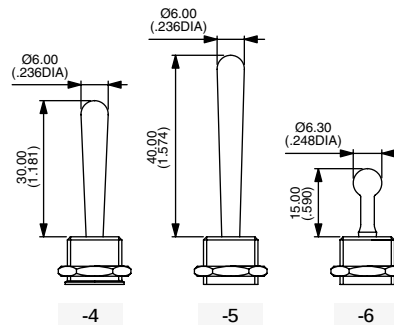


## ACTUATOR OPTIONS



For 600H series only  
 For 1 and 2 pole models.

- 4 30 mm (1.181) long actuator
- 5 40 mm (1.574) long actuator
- 6 Retro style actuator (gold plated or chrome plated : on request)
- X2595 Ergonomic flat plastic actuator



X2595