

SW-600H-600NH-0212

# 600H-600NH series

Toggle switches • high amperage

PANEL SWITCHES

## 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  T 85/55 (600H)
	ON - ON (6)			
	Other (4-5-7-8-9)	10 A 1/2 HP 125-250 VAC		
Three pole	ON - OFF (1) & ON - ON (6)	15 A 1/2 HP 125-250 VAC		T 125/55 (600NH)
	MOM - ON (5)	-		
	Other (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.

4006-022-002

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APEM

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## 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 or zinc die-cast (zamak)
- Contacts : silver/nickel alloy

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

## AGENCY APPROVALS



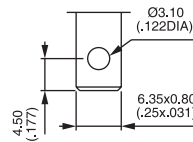
EN 61058-1 EN 61058-1

Availability : see chart on previous page.

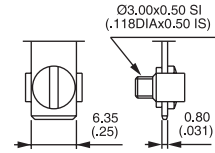
Marking : approved models are standard marked.



## TERMINALS



600H/2 & 600NH/2

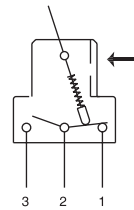


600H & 600NH

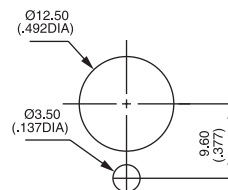
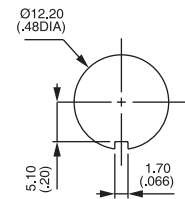
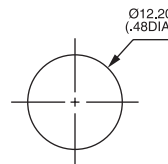


## ELECTRICAL FUNCTIONS

→ KEYWAY



## PANEL CUT-OUT



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## BUILD YOUR PART NUMBER

**BASIC PART NUMBER**

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

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>-1V</b> 1 locked position	<b>-4</b> 30 mm (1.181) long actuator
<b>K</b> Front panel sealing	<b>-2V</b> 2 locked positions	<b>-5</b> 40 mm (1.574) long actuator
<b>L</b> Bushing 16 mm (.629)	<b>-3V</b> 3 locked positions	<b>-6</b> Retro style actuator
<b>LUXE</b> Chrome finish		<b>X2595</b> Ergonomic flat plastic actuator
<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 + luminous tip on lever		



## 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 series : 1 hex nut U166 and 1 knurled nut U411
  - 600NH series : 1 hex nut U166 and 1 knurled nut U522

# 600H-600NH series

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PANEL SWITCHES

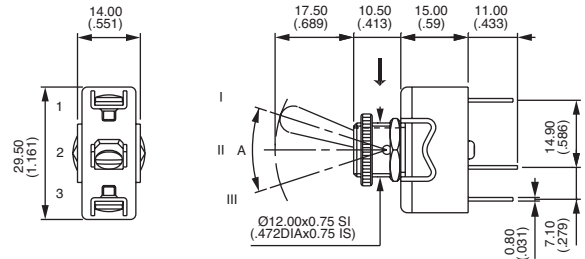
## METAL LEVER - SINGLE POLE



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



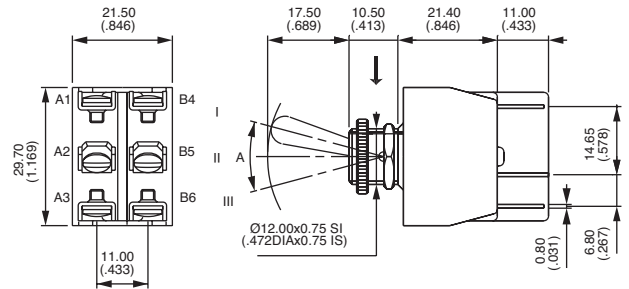
Angle of throw with K sealing option :  
functions 1, 5, 6, 7 : 26° - functions 8, 9 : 32°

→ KEYWAY

## METAL LEVER - DOUBLE POLE



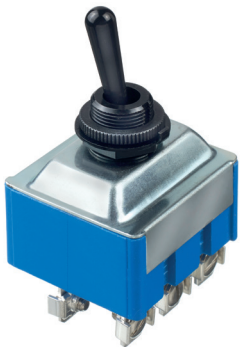
Solder lug	Screw	A	III 2-1 5-4	II	I 2-3 5-6
641H/2	641H	26° ON	-	OFF	
644H/2	644H*	33° ON	ON	ON	
644H/2-1R	644H-1R*	33° ON	ON	MOM	
644H/2-2R	644H-2R*	33° MOM	ON	MOM	
645H/2	645H	26° MOM	-	ON	
646H/2	646H	26° ON	-	ON	
647H/2	647H	26° MOM	OFF	MOM	
648H/2	648H	26° ON	OFF	MOM	
649H/2	649H	32° ON	OFF	ON	



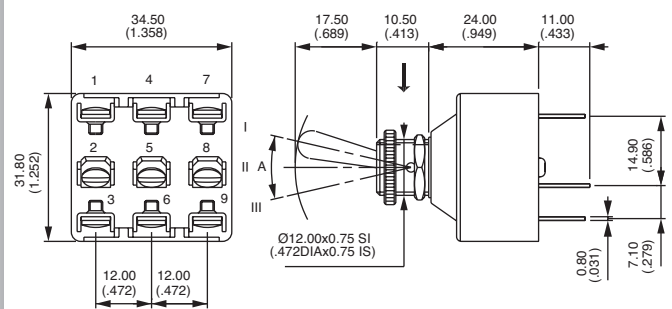
\* Function 4 : SP in DP case - see "Technical information" on website

→ 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	

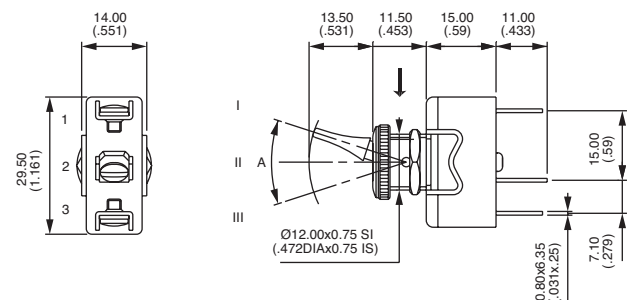


→ KEYWAY

## 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	



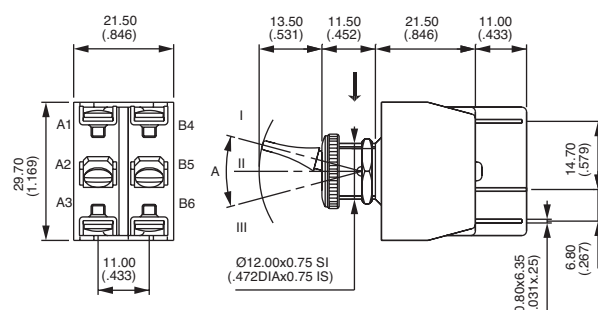
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**INSULATED LEVER - DOUBLE POLE**



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

→ KEYWAY



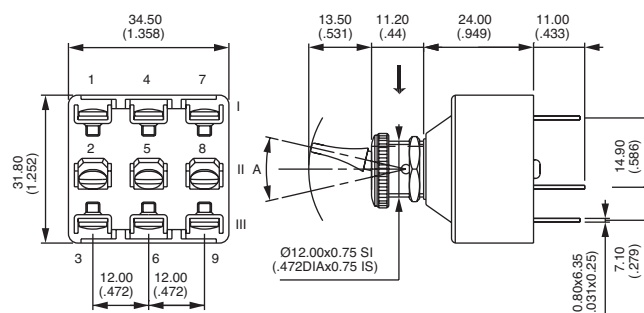
\* Function 4 : SP in DP case - see "Technical information" on website

**INSULATED LEVER - THREE POLE**



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

→ KEYWAY



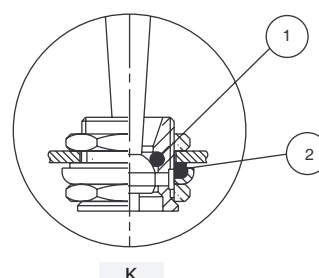
All models also available with normalized quick-connect terminals H/3 or NH/3.

**OPTIONS**

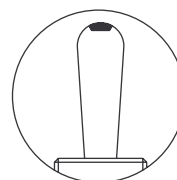


**For 600H series only**

- 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

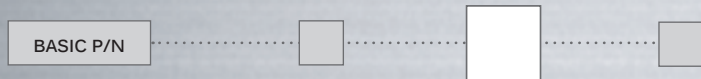


G-038

# 600H-600NH series

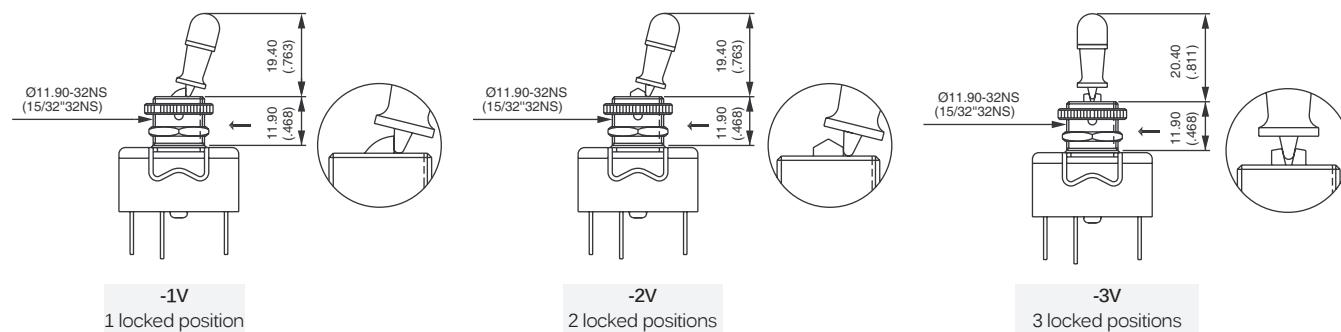
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## LOCKING LEVERS

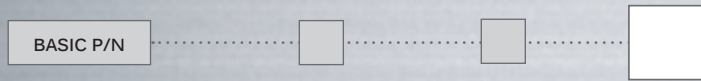


For 600H series only  
 For 1 and 2 pole models.  
 For 3-pole models, refer to 6000 series.

→ KEYWAY

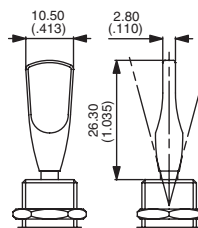
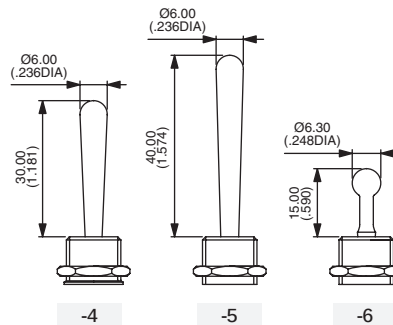


## ACTUATOR OPTIONS



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