600H and 600NH series

Toggle switches - high amperage

Distinctive features and specifications



A

❑ Construction

Terminal and contact support are manufactured from a single piece of metal. The contacts are resistance-welded to the terminal for increased mechanical strength.

❑ Rating

These switches are suitable for motor loads and power applications up to 15A 250VAC or 10A 400VAC

❑ Metal or insulated lever

❑ UL, CSA and NF-VDE (EN 61058-1) approved

ELECTRICAL SPECIFICATIONS

- Max. current/voltage ratings : see tables below
- Peak current : 30A max. during 1/2 sine, 250VAC
- Initial contact resistance : 10 mΩ max. at 1A 2VDC
- Insulation resistance : 1.000 MΩ min. at 500VDC
- 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

Models for peak currents
Models 600SH and 600SNH with silver cadmium oxide contacts are **discontinued**. They will be replaced by switches with silver tin oxide contacts.

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)	15A 1/2 HP 125-250VAC		10(4)A 400VAC T 85/55 (600H) T 125/55 (600NH)
	ON - ON (6)			
	Other (4-5-7-8-9)	10A 1/2 HP 125-250VAC		
Three pole	ON - OFF (1) & ON - ON (6)	15A 1/2 HP 125-250VAC		
	Other (4-5-7-8-9)	10A 1/2 HP 125-250VAC		

- FOR INFORMATION-
Max. current/voltage rating w. resistive load

Functions	Ratings	Electrical life
ON - OFF ON - ON	15A 250VAC 10A 24VDC 15A 12VDC	10.000 cycles
ON OFF ON	15A 250VAC	6.000 cycles
Other	15A 125VAC 12A 250VAC 5A 25VDC	10.000 cycles

MATERIALS

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

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

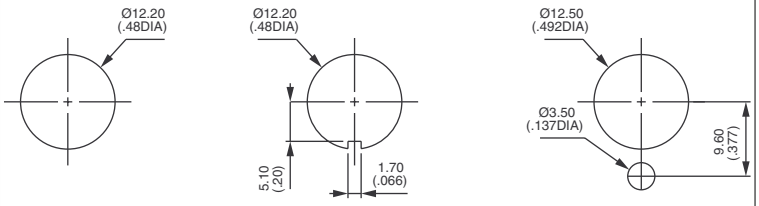
AGENCY APPROVALS

EN 61058-1 EN 61058-1

Availability : see chart on previous page.

Marking : approved models are standard marked.

PANEL CUT-OUT



MOUNTING RECOMMENDATIONS

Connection

- For quick-connect terminals, use 6,3 x 0,8 mm normalized female connectors.
- For screw terminals, use :
  either 1,5 mm^2 or 2,5 mm^2 rigid wires,
  or prepared stripped and tin plated flexible wires,
  or prepared flexible wires with crimped termination per EN 50027 (DIN 46228)

Ground connector

Compulsory if the panel is not metallic or not connected to ground. Should also be used when front face nut is of plastic material.
Order separately, see section I.

A

600H and 600NH series

Toggle switches - high amperage

Overview

MODEL STRUCTURE

6 | | | | |

SERIES

Number of poles

3	Single pole
4	Double pole
5	Three pole

For 4 pole, see 600 series.

Electrical functions

1	ON	-	OFF
5	MOM	-	ON
6	ON	-	ON
7	MOM	OFF	MOM
8	ON	OFF	MOM
9	ON	OFF	ON
4	ON	ON	ON
	ON	ON	MOM Δ
	MOM	ON	MOM Δ

Δ Must not have blank in "momentary" box.

Actuator and terminals

H	Metal lever, screw terminals
H/2	Metal lever, solder lug/quick-connect terminals
NH	Insulated lever, screw terminals
NH/2	Insulated lever, solder lug/quick-connect terminals
NH/3	Insulated lever, normalized quick-connect terminals

Momentary

1R	ON	ON	MOM
2R	MOM	ON	MOM

OPTIONS

Options

For models with metal lever only	
T	Tropicalized case
L	Bushing 16 mm (.629)
LUXE	Chrome finish
TKLUXE	Front panel sealing + T and LUXE
G	Matt black finish
GK	Matt black finish + front panel sealing
G038	Luminous tip on lever

Locking levers

1V	1 locked position
2V	2 locked positions
3V	3 locked positions

ABOUT THIS SERIES

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.

Security caps are available to prevent inadvertent lever operation. They are presented in section I.

Sealing boots are available on 600H series to protect the switches against dust and water. They are presented in section H.

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

Standard and special hardware are presented in section I.

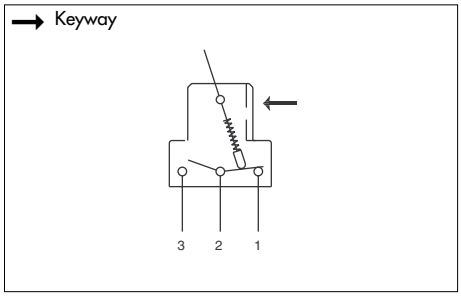
Packaging unit : 25 pieces.

MODEL STRUCTURE

600H series

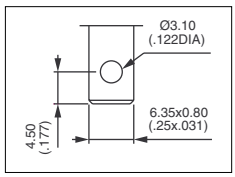
Toggle switches - high amperage - metal lever

Solder lug/quick-connect terminals - screw terminals

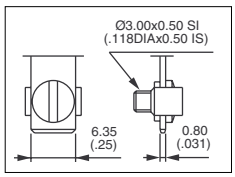


- 2 and 3 maintained or momentary positions
- Solder lug/quick-connect terminals 6,35 x 0,8 (.250 x.031) or screw terminals + clamp
- 1, 2 and 3 pole configurations
- Normalized quick-connect terminals (/3) optional. On request.

600H/2

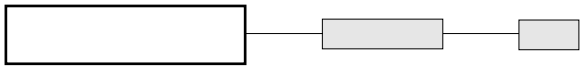


600H



A

MODEL STRUCTURE

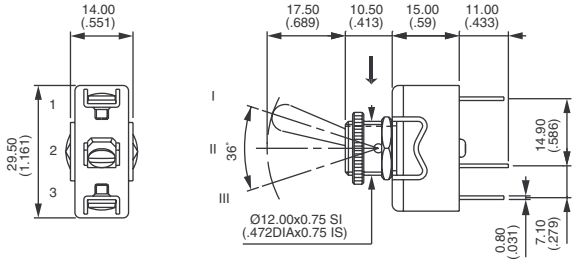


Single pole



Solder lug	Screw term.	III 2-1	II	I 2-3
631H/2	**631H**	ON	-	OFF
635H/2	**635H**	MOM	-	ON
636H/2	**636H**	ON	-	ON
637H/2	**637H**	MOM	OFF	MOM
638H/2	**638H**	ON	OFF	MOM
639H/2	**639H**	ON	OFF	ON

Keyway

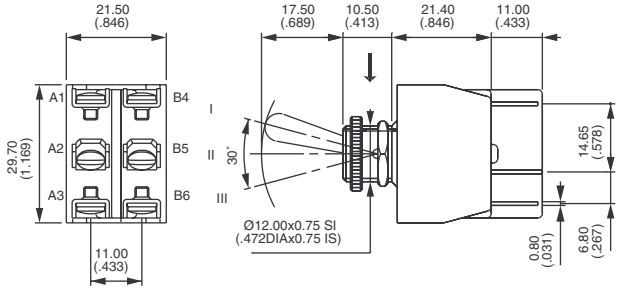


Double pole



Solder lug	Screw term.	III 2-1	II	I 2-3
		5-4		5-6
641H/2	**641H**	ON	-	OFF
644H/2	**644H***	ON	ON	ON
644H/2-1R	**644H-1R***	ON	ON	MOM
644H/2-2R	**644H-2R***	MOM	ON	MOM
645H/2	**645H**	MOM	-	ON
646H/2	**646H**	ON	-	ON
647H/2	**647H**	MOM	OFF	MOM
648H/2	**648H**	ON	OFF	MOM
649H/2	**649H**	ON	OFF	ON

Keyway



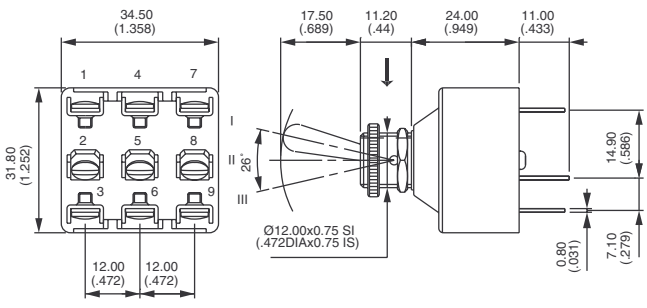
* Function 4 : SP in DP case - see end of catalogue.

Three pole



Solder lug	Screw term.	III 2-1	II	I 2-3
		5-4		5-6
		8-7		8-9
651H/2	**651H**	ON	-	OFF
655H/2	**655H**	MOM	-	ON
656H/2	**656H**	ON	-	ON
657H/2	**657H**	MOM	OFF	MOM
658H/2	**658H**	ON	OFF	MOM
659H/2	**659H**	ON	OFF	ON

Keyway

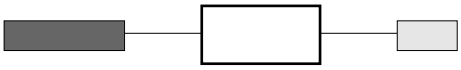


600H series

Toggle switches - high amperage - metal lever

OPTIONS

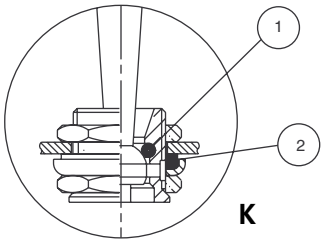
OPTIONS FOR 600H SERIES ONLY



Complete above box with desired options in the same order as below

T Tropicalized diallylphthalate case (-40°C to +85°C)

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



① O-ring ② Sealing washer

L Special threaded bushing, length 16 mm (.629)

LUXE Chrome plated lever and cap nut U117

TK LUXE Options T, K and LUXE.

G Matt black finish on bushing, lever and nuts.
Includes tropicalization (option T)



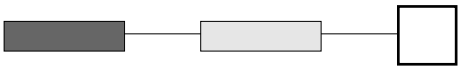
0.38

GK Front panel sealing by O-ring and sealing washer (as described in option TK LUXE)
+ option G

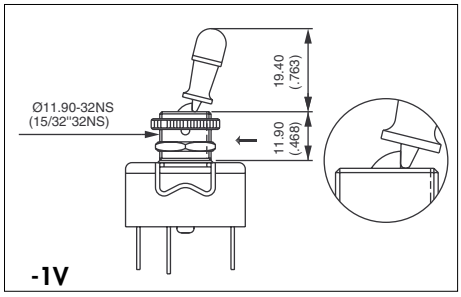
G038 Option G + fluorescent tip on lever.
White fluorescent tip becomes luminous when submitted to ultra violet rays.

LOCKING LEVERS (1 and 2 pole models)

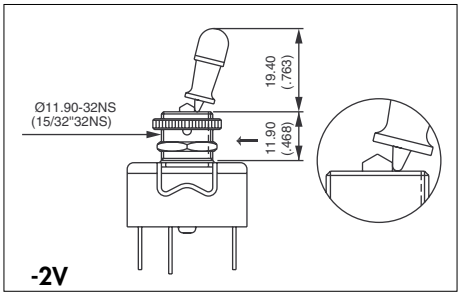
For 3-pole models, refer to 6000 series.



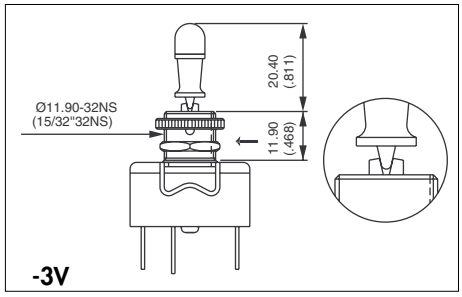
→ Keyway



1 locked position



2 locked positions

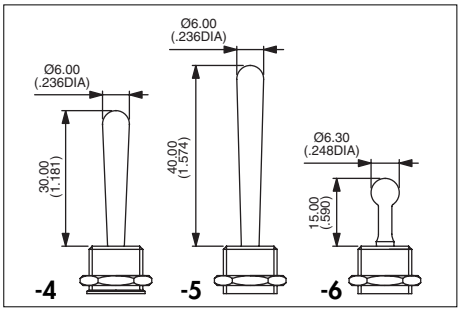


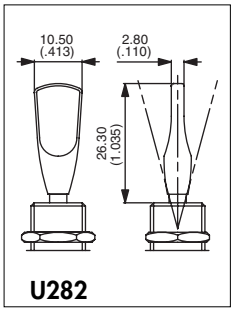
3 locked positions

ACTUATOR OPTIONS (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)

• Ergonomic flat plastic actuator : add U282 at the end of switch model number.





MODEL STRUCTURE

6-600H series

Toggle switches - metal lever

A

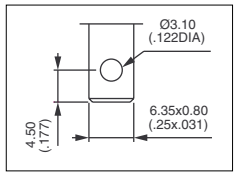
SPECIFICATIONS

- Max. current/voltage rating with resistive load : 6A 250VAC and 125VAC
- Initial contact resistance : 10mΩ max. at 1A 2VDC
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 2.500 Vrms 50 Hz min. between terminals
  2.500 Vrms 50 Hz between terminals and frame
- Electrical life at full load : 10.000 cycles
- 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
- Hardware supplied : 1 hex nut U166 and 1 knurled nut U411

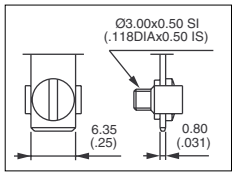
MATERIALS

- Case : melamine/polyester
- Actuator : brass, nickel plated
- Bushing : brass, nickel plated
- Contacts : copper, silver plated

6-600H/2



6-600H

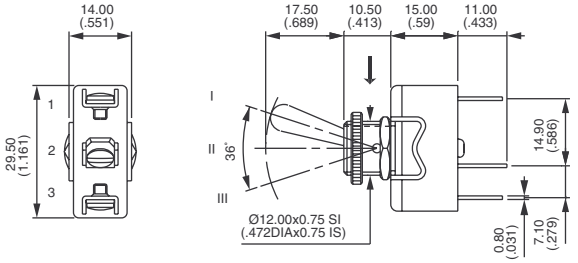


Single pole



→ Keyway

		III	II	I
		2-1		2-3
Solder lug	Screw term.			
6-631H/2	**6-631H**	ON	-	OFF
6-636H/2	**6-636H**	ON	-	ON
6-639H/2	**6-639H**	ON	OFF	ON

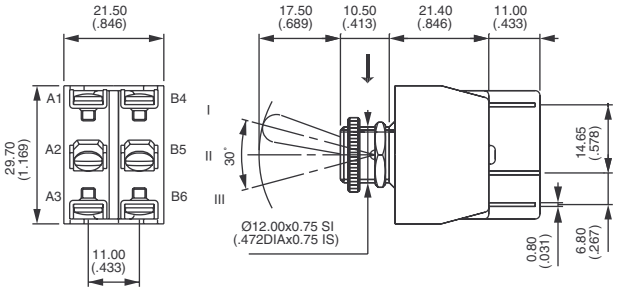


Double pole



→ Keyway

		III	II	I
		2-1		2-3
		5-4		5-6
Solder lug	Screw term.			
6-641H/2	**6-641H**	ON	-	OFF
6-646H/2	**6-646H**	ON	-	ON
6-649H/2	**6-649H**	ON	OFF	ON

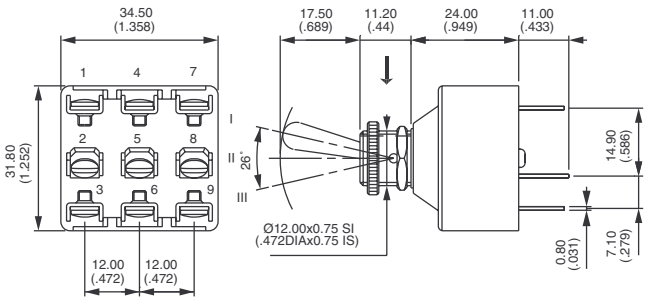


Three pole



→ Keyway

		III	II	I
		2-1		2-3
		5-4		5-6
		8-7		8-9
Solder lug	Screw term.			
6-651H/2	**6-651H**	ON	-	OFF
6-656H/2	**6-656H**	ON	-	ON
6-659H/2	**6-659H**	ON	OFF	ON

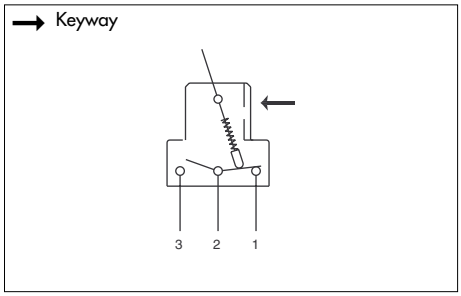


600NH series

Toggle switches - high amperage - insulated lever

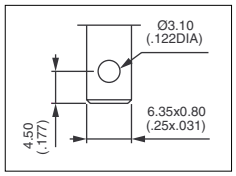
Solder lug/quick-connect terminals - screw terminals

MODEL STRUCTURE

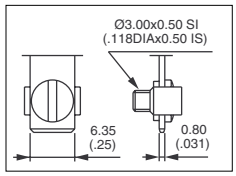


- 2 and 3 maintained or momentary positions
- Solder lug/quick-connect terminals 6,35 x 0,8 (.250 x.031) or screw terminals + clamp
- 1, 2 and 3 pole configurations
- Normalized quick-connect terminals (/3) optional. On request.

600NH/2



600NH

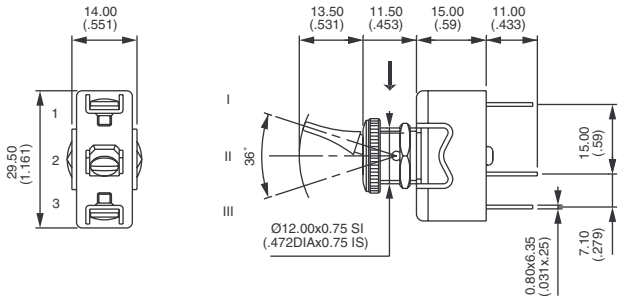


Single pole



		III	II	I
		2-1		2-3
Solder lug	Screw term.			
631NH/2	**631NH**	ON	-	OFF
635NH/2	**635NH**	MOM	-	ON
636NH/2	**636NH**	ON	-	ON
637NH/2	**637NH**	MOM	OFF	MOM
638NH/2	**638NH**	ON	OFF	MOM
639NH/2	**639NH**	ON	OFF	ON

Keyway

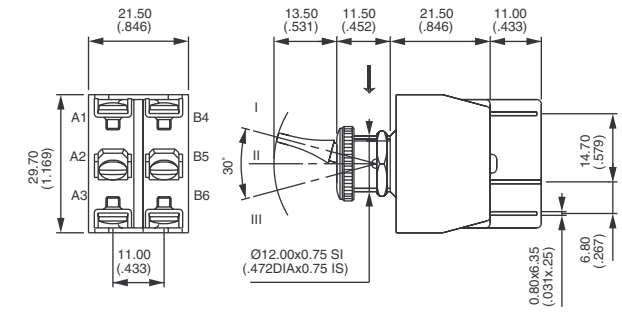


Double pole



		III	II	I
		2-1		2-3
		5-4		5-6
Solder lug	Screw term.			
641NH/2	**641NH**	ON	-	OFF
644NH/2	**644NH**	ON	ON	ON
644NH/2-1R	**644NH-1R***	ON	ON	MOM
644NH/2-2R	**644NH-2R***	MOM	ON	MOM
645NH/2	**645NH**	MOM	-	ON
646NH/2	**646NH**	ON	-	ON
647NH/2	**647NH**	MOM	OFF	MOM
648NH/2	**648NH**	ON	OFF	MOM
649NH/2	**649NH**	ON	OFF	ON

Keyway



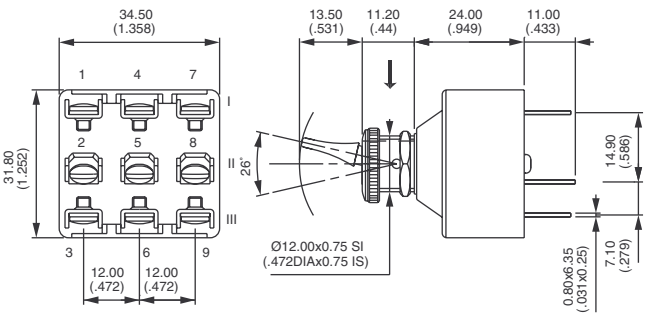
* Function 4 : SP in DP case - see end of catalogue.

Three pole



		III	II	I
		2-1		2-3
		5-4		5-6
		8-7		8-9
Solder lug	Screw term.			
651NH/2	**651NH**	ON	-	OFF
655NH/2	**655NH**	MOM	-	ON
656NH/2	**656NH**	ON	-	ON
657NH/2	**657NH**	MOM	OFF	MOM
658NH/2	**658NH**	ON	OFF	MOM
659NH/2	**659NH**	ON	OFF	ON

Keyway



MODEL STRUCTURE

6-600NH series

Toggle switches - insulated lever

SPECIFICATIONS

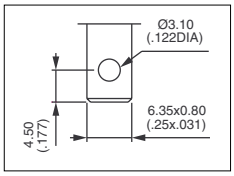
- Max. current/voltage rating with resistive load : 6A 250VAC and 125VAC
- Initial contact resistance : 10mΩ max. at 1A 2VDC
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 2.500 Vrms 50 Hz min. between terminals
  2.500 Vrms 50 Hz between terminals and frame
- Electrical life at full load : 10.000 cycles
- 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
- Hardware supplied : 1 hex nut U166 and 1 knurled nut U522

MATERIALS

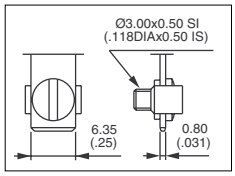
- Case : melamine/polyester
- Actuator : black polyamide
- Bushing : brass, nickel plated
- Contacts : copper, silver plated

A

6-600NH/2



6-600NH

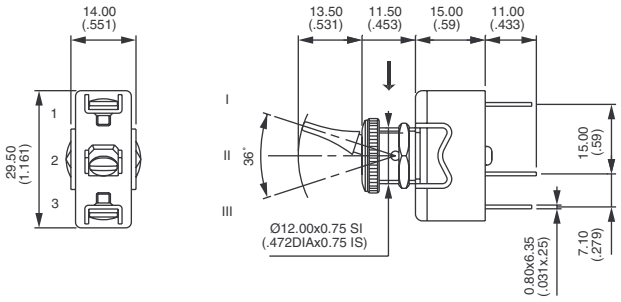


Single pole



→ Keyway

		III	II	I
		2-1		2-3
Solder lug	Screw term.			
6-631NH/2	**6-631NH**	ON	-	OFF
6-636NH/2	**6-636NH**	ON	-	ON
6-639NH/2	**6-639NH**	ON	OFF	ON

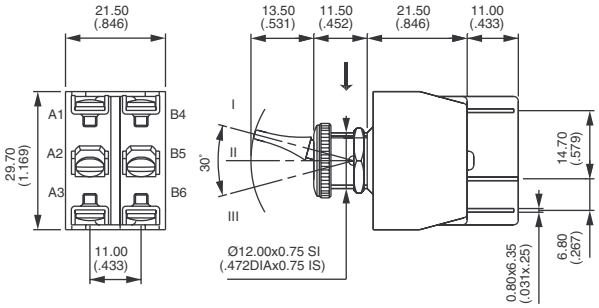


Double pole



→ Keyway

		III	II	I
		2-1		2-3
		5-4		5-6
Solder lug	Screw term.			
6-641NH/2	**6-641NH**	ON	-	OFF
6-646NH/2	**6-646NH**	ON	-	ON
6-649NH/2	**6-649NH**	ON	OFF	ON



Three pole



→ Keyway

		III	II	I
		2-1		2-3
		5-4		5-6
		8-7		8-9
Solder lug	Screw term.			
6-651NH/2	**6-651NH**	ON	-	OFF
6-656NH/2	**6-656NH**	ON	-	ON
6-659NH/2	**6-659NH**	ON	OFF	ON

