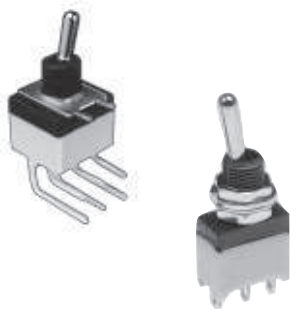
S and SF series

Washable miniature toggle switches

Distinctive features and specifications

UG1006-A



❑ Sealed
- Secure assembly of the two case parts
- Internally sealed bushing
- Epoxy sealed terminals

❑ Process compatible (S series)
- Wave solderable
- Washable

❑ Optional ESD protection

A

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - silver contacts (A or 1) : 2A 250VAC - 5A 125VAC - 4A 30VDC
  - gold plated brass contacts (CD or 0) : 0,4VA 20VAC or DC
  - gold plated silver contacts (AD or 2) : 2A 250VAC - 5A 125VAC - 4A 30VDC (300mA 30VDC for gold plating)
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1.000 MΩ min.
- Dielectric strength : 1.000 Vrms 50 Hz min.
- Electrical life at full load :

Contacts	Number of cycles	
	2 positions	3 positions
A or 1	40.000	40.000
CD or 0	100.000	50.000
AD or 2	40.000	40.000

MATERIALS

- Case and cover : UL94-VO, polyamide, glass filled or PES
- Actuator : brass, nickel plated
- Contacts
  CD or **0** : brass, gold plated
  A or **1** : silver
  AD or **2** : silver, gold plated
- Terminal seal : epoxy

GENERAL SPECIFICATIONS

- Mechanical strength :
  Terminals are strengthened by a bracket or a ground plate ensuring the rigidity of the switch on the board.
  Actuator strength is 10N max.
- Operating temperature : -20°C to +85°C
- Storage temperature : -40°C to +85°C
- Moisture :
  The insulating materials employed and the complete seal permit the switches to withstand a 56 days moisture test (IEC 68-2-3).
- Soldering - thermal shock (S series only) :
  The switches are especially designed for flow soldering at 260°C during 5 seconds owing to high temperature polymer parts.
- Iron soldering (SF series) : 300°C 5 sec. max.
- Solderability : The switches are tested at 235°C according to IEC 68-2-20 after accelerated aging.

AGENCY APPROVALS

CECC 96201-006

Availability : consult factory for details of approved models.

Marking : to order switches marked UL or CECC, complete appropriate box of ordering format.

S series

Washable toggle switches - plain bushing

Overview

MODEL STRUCTURE

S | ☐ | ☐ | ☐ | ☐

SERIES

Terminals

W	Right angle, horizontal mounting
WW	Right angle, vertical mounting
Y	Bracket mounting

Bushing and terminals

2	Terminal spacing 4,7 (.185) or 3,81 (.150)
0	Terminal spacing 5,08 (.200) (SW switches)

All models with plain bushing.

Number of poles

3	Single pole
4	Double pole

Electrical functions

6	ON	-	ON
9	ON	OFF	ON
7	MOM	OFF	MOM
8	ON	OFF	MOM
2	ON	-	MOM
4TH	ON	ON	ON

OPTIONS ● ● ●

☐ | ☐ | ☐ | ☐ | ☐

Contact materials

A	Silver
AD	Silver, gold plated
CD	Brass, gold plated

Levers

-7	Short
	Standard
-13	Long

Insulated levers

-11	Long
-8	Short

Approvals

UL
CECC

Availability : Consult factory for details of approved models.

Special options

X601	Silver plated brass contacts
X696	Higher bushing (for insulated levers)

Insulating caps

U270	For lever 13
U1710	For lever 7

ABOUT THIS SERIES
On the following pages, you will find successively :
- model structure of switches
- options in the same order as above

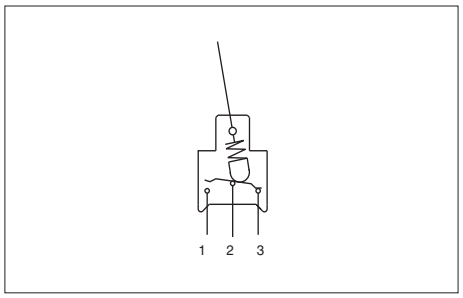
Dimensions : first dimensions are in mm while inches are shown as bracketted numbers.

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

Packaging unit : 50 or 25 pieces depending on model.

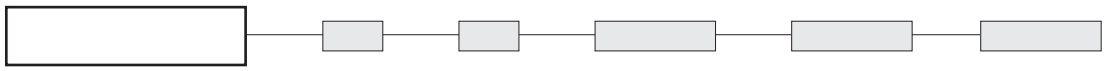
S series

Washable toggle switches - plain bushing



- Straight PC or right angle terminals
- Terminal spacing 4,7 (.185) or 5,08 (.200) on SW switches
- 1 and 2 pole configurations

MODEL STRUCTURE

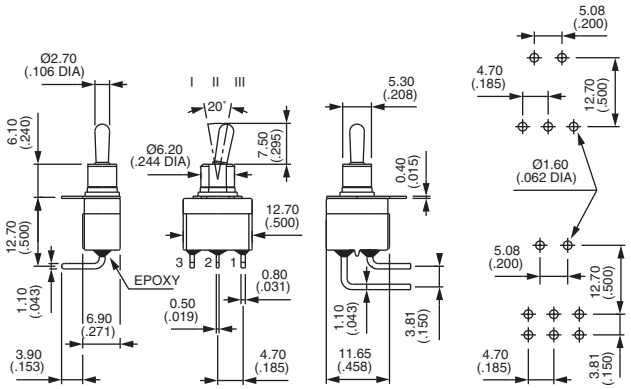


Shown with lever (-7)

Right angle terminals - horizontal - spacing 4,7 (.185)



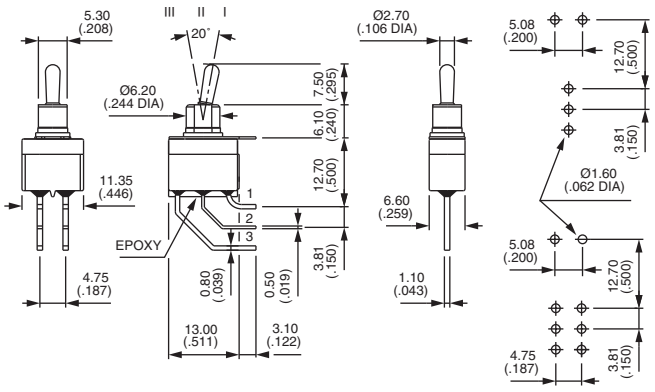
Single pole	Double pole	III	II	I
		2-3		2-1
		5-6		4-5
SW236	**SW246**	ON	-	ON
SW239	**SW249**	ON	OFF	ON
SW237	**SW247**	MOM	OFF	MOM
SW238	**SW248**	ON	OFF	MOM
SW232	**SW242**	ON	-	MOM
	SW244TH*	ON	ON	ON



Right angle terminals - vertical



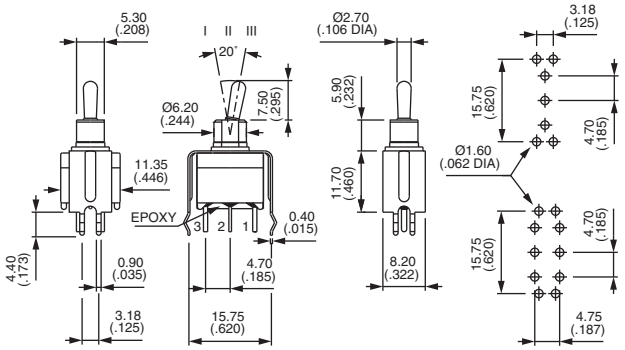
Single pole	Double pole	I	II	III
		2-3		2-1
		5-6		4-5
SWW236	**SWW246**	ON	-	ON
SWW239	**SWW249**	ON	OFF	ON
SWW237	**SWW247**	MOM	OFF	MOM
SWW238	**SWW248****	ON	OFF	MOM
SWW232	**SWW242****	ON	-	MOM
	SWW244TH*	ON	ON	ON



Bracket mounting



Single pole	Double pole	III	II	I
		2-3		2-1
		5-6		4-5
SY236	**SY246**	ON	-	ON
SY239	**SY249**	ON	OFF	ON
SY237	**SY247**	MOM	OFF	MOM
SY238	**SY248**	ON	OFF	MOM
SY232	**SY242**	ON	-	MOM
	SY244TH*	ON	ON	ON



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

** Functions 2 and 8 : reversed connection available. Consult factory.

S series

Washable toggle switches - plain bushing

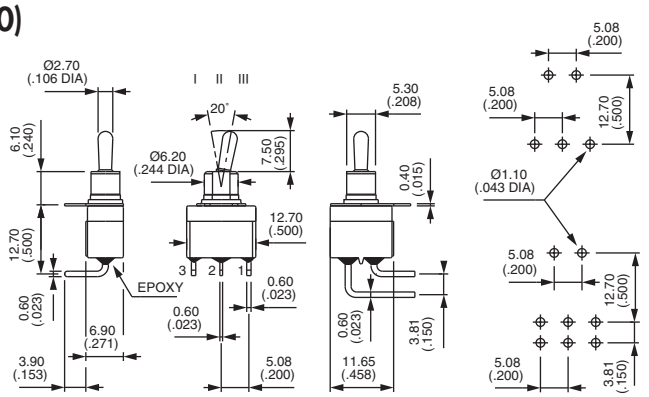
MODEL STRUCTURE

A

Right angle terminals - horizontal - spacing 5,08 (.200)

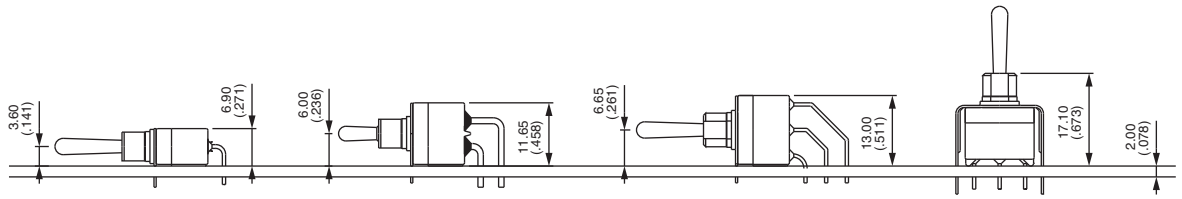


Single pole	Double pole	III	II	I
		2-3		2-1
		5-6		4-5
SW036	**SW046**	ON	-	ON
SW039	**SW049**	ON	OFF	ON
SW037	**SW047**	MOM	OFF	MOM
SW038	**SW048**	ON	OFF	MOM
SW032	**SW042**	ON	-	MOM
	SW044TH*	ON	ON	ON



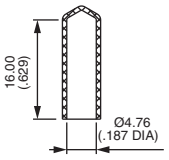
* Function 4 : SP in DP case, see end of catalogue.

PCB MOUNTING



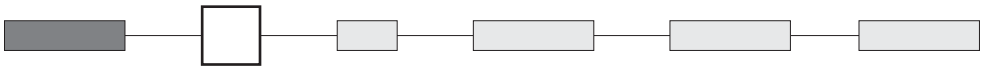
CAP FOR PCB PROCESSING

Provide additional protection during PCB processing.
Supplied mounted on the switch or separately.
Material : vinyl



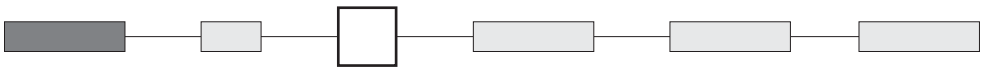
U3012

CONTACT MATERIALS

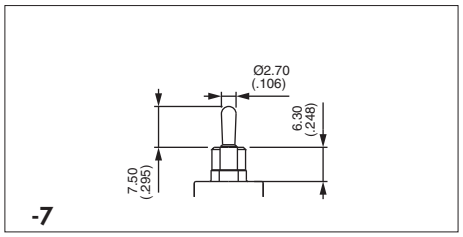


A Silver
AD Silver, gold plated
CD Brass, gold plated

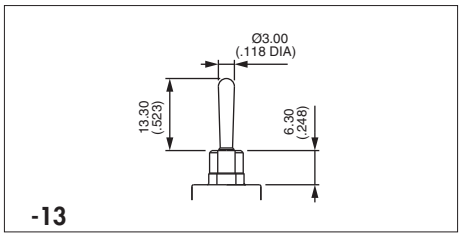
LEVERS



Dash compulsory before lever code.



-7
Standard

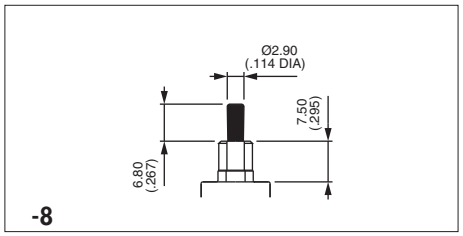


-13
Long

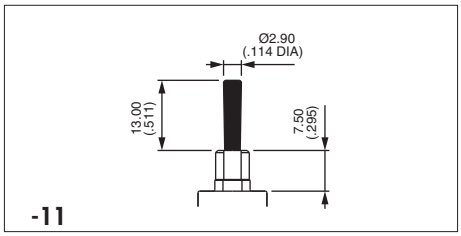
If actuator not specified, we supply former default option -13.

Insulated levers

Protected against electrostatic discharges (ESD) up to 12 KV. Black colour.



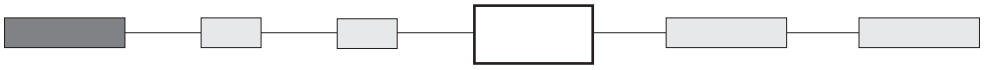
-8
Short



-11
Long

To combine with option X696.

SPECIAL OPTIONS



X601 Silver plated brass contacts
Lower rating - Minimum quantity : 5.000 pieces per model and shipment.

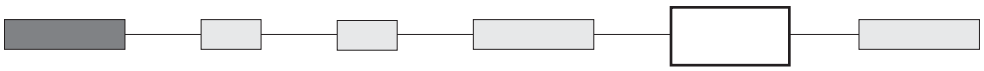
X696 Higher bushing 7,50 (.295). Compulsory for insulated levers 11 and 8.

S series

Washable toggle switches - plain bushing

OPTIONS

AGENCY APPROVALS

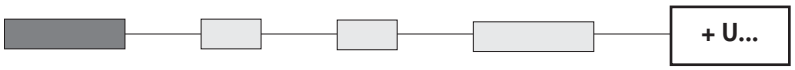


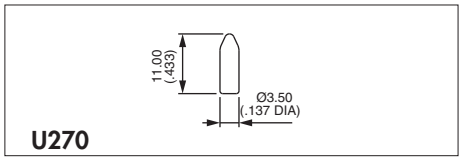
UL
CECC

Availability : consult factory for details of approved models.

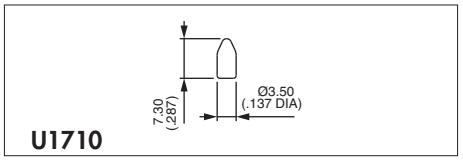
Marking : to order switches marked UL or CECC, please complete above box with desired approvals.
Blank : no agency approval required.

INSULATING CAPS





U270
For lever 13



U1710
For lever 7

Cap colours	
Replace "0" by number	
1	blue
1/4	dark blue
2	black
3	green
4	grey
5	yellow
6	red
7/1	white
9	orange

SF series

Washable toggle switches - insulated threaded bushing

Overview

MODEL STRUCTURE

SF

SERIES

Number of poles

3	Single pole

Electrical functions

6	ON	-	ON
9	ON	OFF	ON
7	MOM	OFF	MOM
8	ON	OFF	MOM
2	ON	-	MOM

Terminals

S0	Solder lug terminals
P0	Straight PC terminals

OPTIONS

Contact and terminal materials

0	Brass, gold plated
1	Silver
2	Silver, gold plated
5	Special contact, lower rating

Levers

00	Long
01	Short

Insulated levers

08	Short
11	Long

Model

00	Standard

Insulating cap

10	P/N U270 For lever 00 only

ABOUT THIS SERIES

On the following pages, you will find successively :
- model structure of switches
- options in the same order as above

Specifications are at the beginning of the S series.

Dimensions : first dimensions are in mm while inches are shown as bracketted numbers.

Mounting accessories : 2 hex nuts 8 mm (.314) across flats, 1 locking ring and 1 lockwasher
Standard and special hardware available are presented in section I.

Packaging unit : 50 to 25 pieces depending on model.

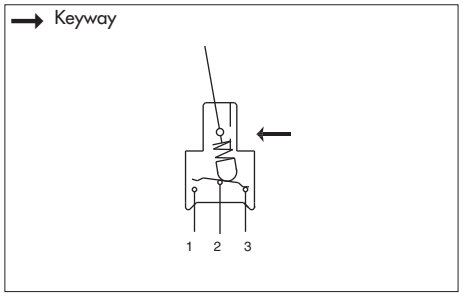
SF series

Washable toggle switches - insulated threaded bushing

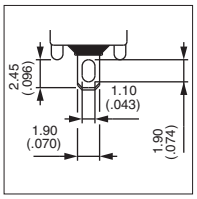
Solder lug or straight PC terminals

MODEL STRUCTURE

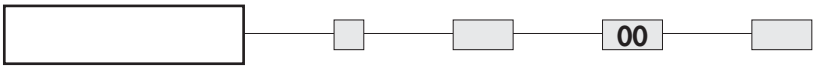
A



- Single pole configurations
- Max. torque : 0,25 Nm (.184 Ft.lb)
- Iron soldering : 300°C max. 5 sec. max.
- Max. panel thickness :
  2,5 mm (.098) with 2 nuts
  4 mm (.157) with 1 nut



MODEL STRUCTURE

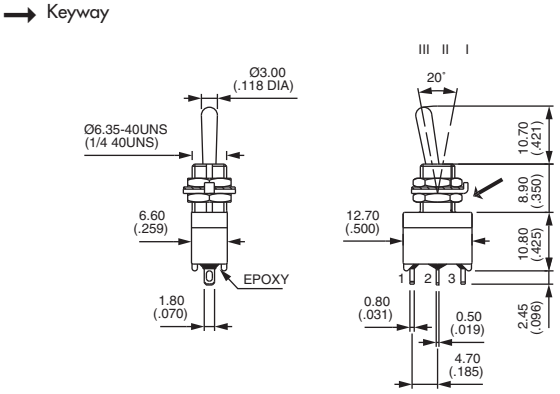


Shown with standard lever 00

Solder lugs : SF..S0



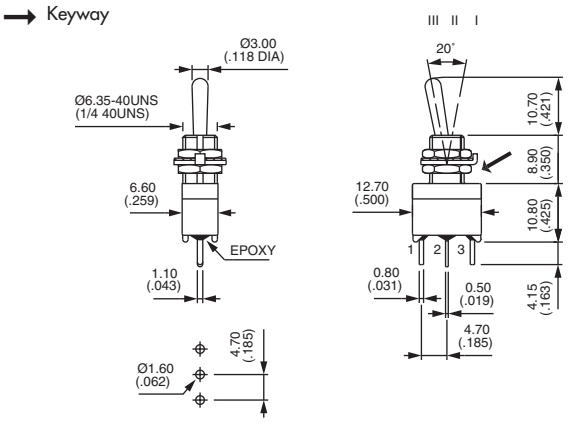
	III	II	I
	2-3		1-2
SF36S0	ON	-	ON
SF39S0	ON	OFF	ON
SF37S0	MOM	OFF	MOM
SF38S0	ON	OFF	MOM
SF32S0	ON	-	MOM



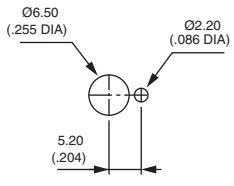
Straight PC terminals : SF..P0



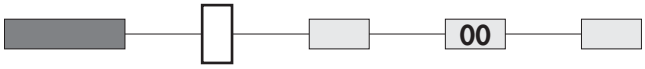
	III	II	I
	2-3		1-2
SF36P0	ON	-	ON
SF39P0	ON	OFF	ON
SF37P0	MOM	OFF	MOM
SF38P0	ON	OFF	MOM
SF32P0	ON	-	MOM



PANEL CUT-OUT

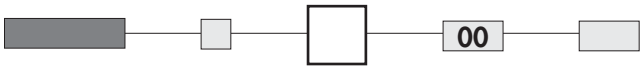


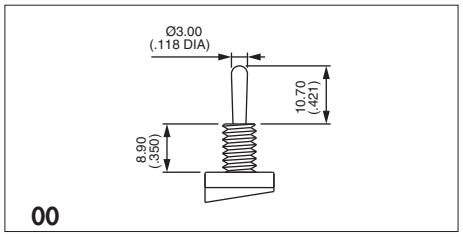
CONTACT AND TERMINAL MATERIALS



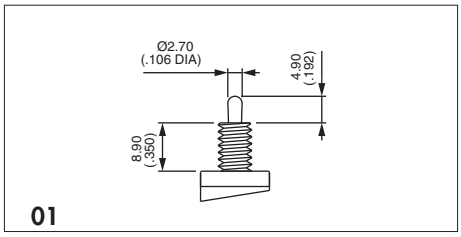
0 Brass, gold plated (standard)
1 Silver
2 Silver, gold plated
5 Special contact, lower rating, minimum quantity : consult factory.

LEVERS



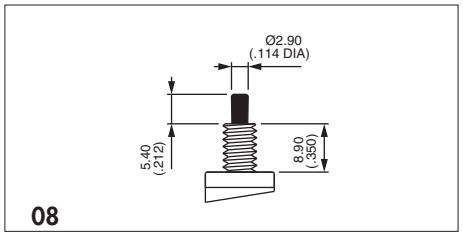


Standard

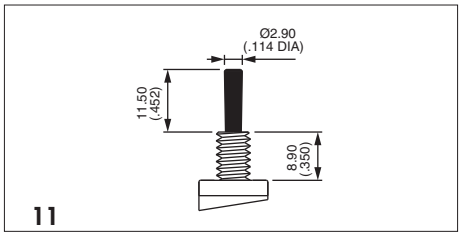


Insulated levers

Protected against electrostatic discharges (ESD) up to 12KV. Black colour.

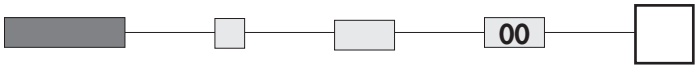


Short

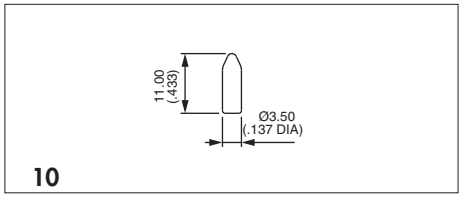


Long

INSULATING CAP



Blank Without cap



P/N U270 - For lever 00

To order cap separately, use its part number (U270).

Cap colours	
Replace "0" by number	
1	blue
1/4	dark blue
2	black
3	green
4	grey
5	yellow
6	red
7/1	white
9	orange