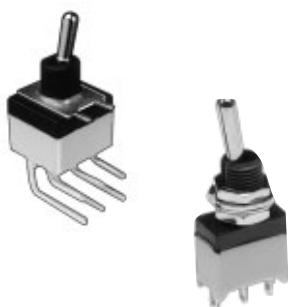


S and SF series

Washable miniature toggle switches

Distinctive features and specifications



☐ Sealed

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

☐ Process compatible (S series)

- Wave solderable
- Washable

☐ Optional ESD protection

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, chrome 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) (SY and 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
F	Tin dipped terminals
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

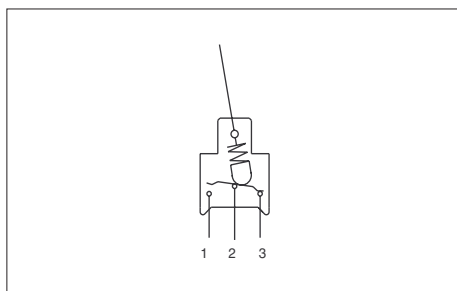
Dimensions : first dimensions are in mm while inches are shown as bracketted numbers.



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

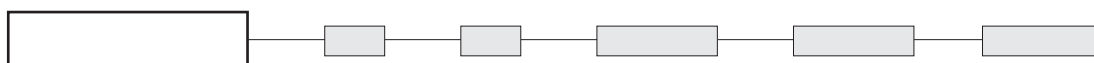


Packaging unit : 50 or 25 pieces depending on model.



- 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)

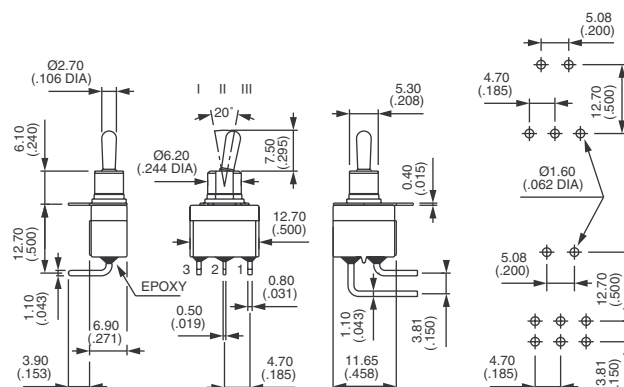
Right angle terminals - horizontal - spacing 4,7 (.185)



Single pole Double pole

SW236	SW246
SW239	SW249
SW237	SW247
SW238	SW248
SW232	SW242
	SW244TH*

III	II	I
2-3		2-1
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON



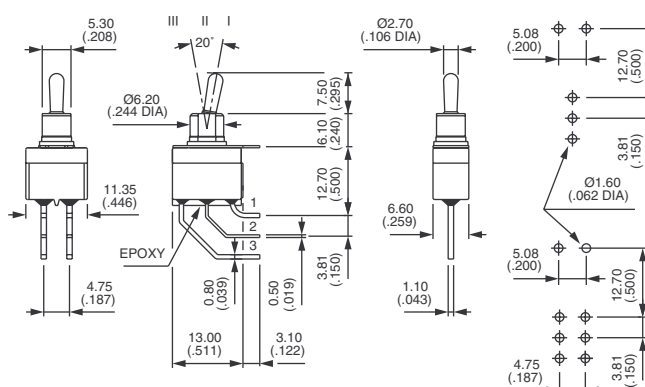
Right angle terminals - vertical



Single pole Double pole

SWW236	SWW246
SWW239	SWW249
SWW237	SWW247
SWW238	SWW248**
SWW232	SWW242**
	SWW244TH*

I	II	III
2-3		2-1
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON



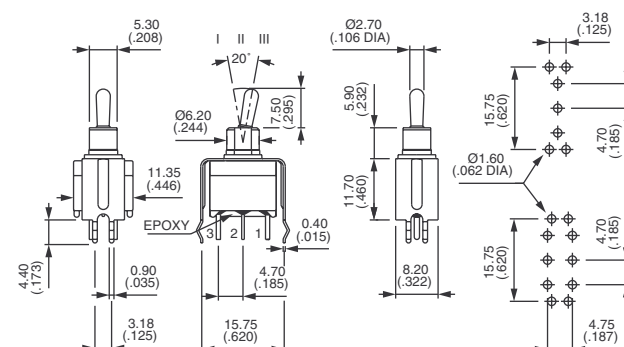
Bracket mounting



Single pole Double pole

SY236	SY246
SY239	SY249
SY237	SY247
SY238	SY248
SY232	SY242
	SY244TH*

III	II	I
2-3		2-1
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
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

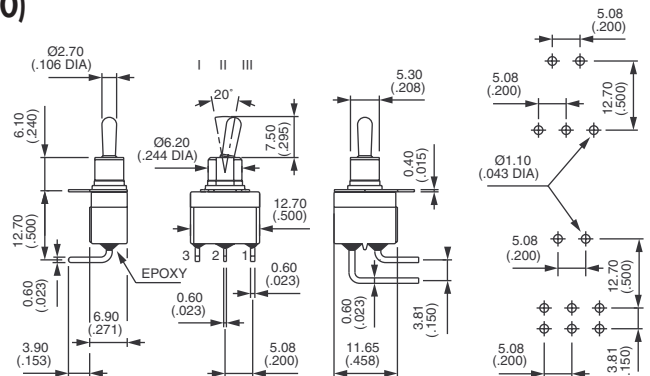
Right angle terminals - horizontal - spacing 5,08 (.200)



Single pole Double pole

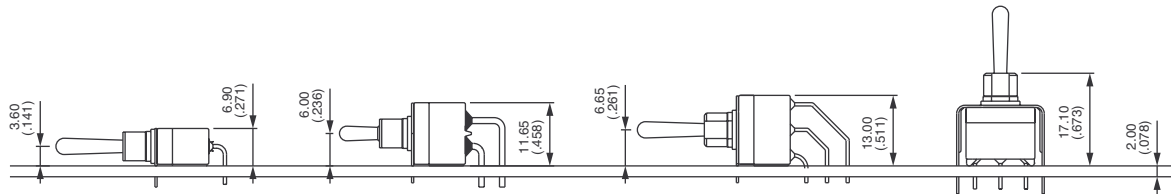
SW036 SW046
SW039 SW049
SW037 SW047
SW038 SW048
SW032 SW042
SW044TH*

III	II	I
2-3		2-1
5-6		4-5
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM
ON	ON	ON



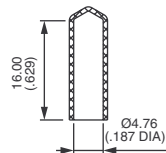
* Function 4 : SP in DP case, see end of catalogue.

PCB MOUNTING



CAP FOR PCB PROCESSING

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



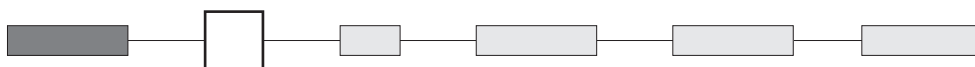
U3012



S series

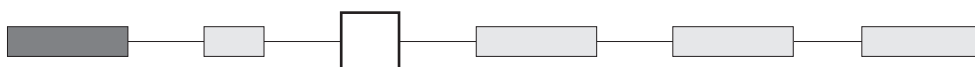
Washable toggle switches - plain bushing

CONTACT MATERIALS

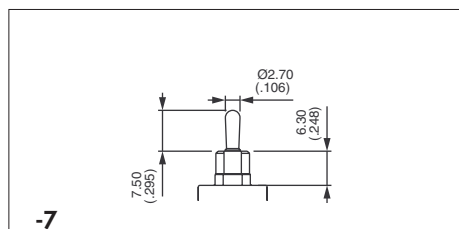


A	Silver
AD	Silver, gold plated
CD	Brass, gold plated

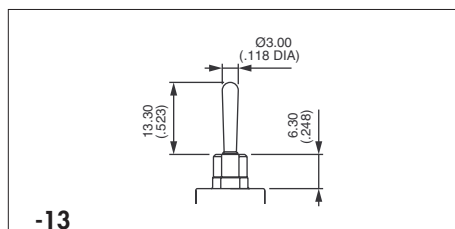
LEVERS



Dash compulsory before lever code.



-7
Standard



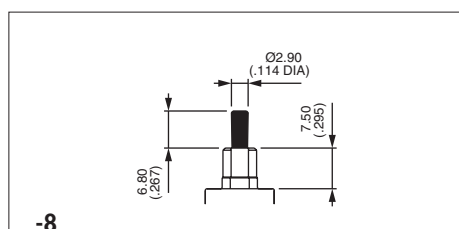
-13
Long



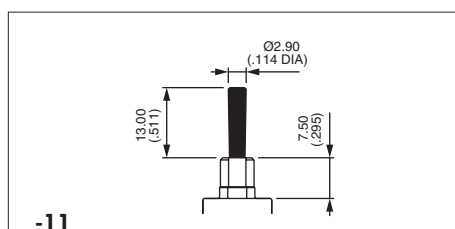
If actuator not specified, we supply former default option -13.

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.

F Tin dipped terminals
For models with gold plated contacts only.

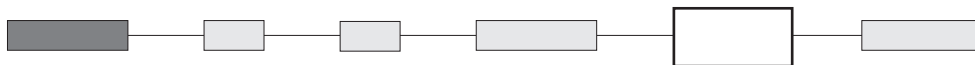
S series

Washable toggle switches - plain bushing

OPTIONS



AGENCY APPROVALS

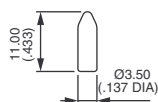
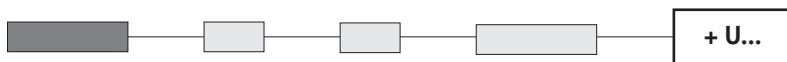


UL
CECC

Availability : consult factory for details of approved models.

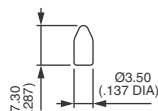
Marking : to order switches marked UL or CECC, please complete above box with desired approvals.
Blank : no agency approval required.

INSULATING CAPS



U270

For lever 13



U1710

For lever 7

Cap colours

Replace "0" by
number

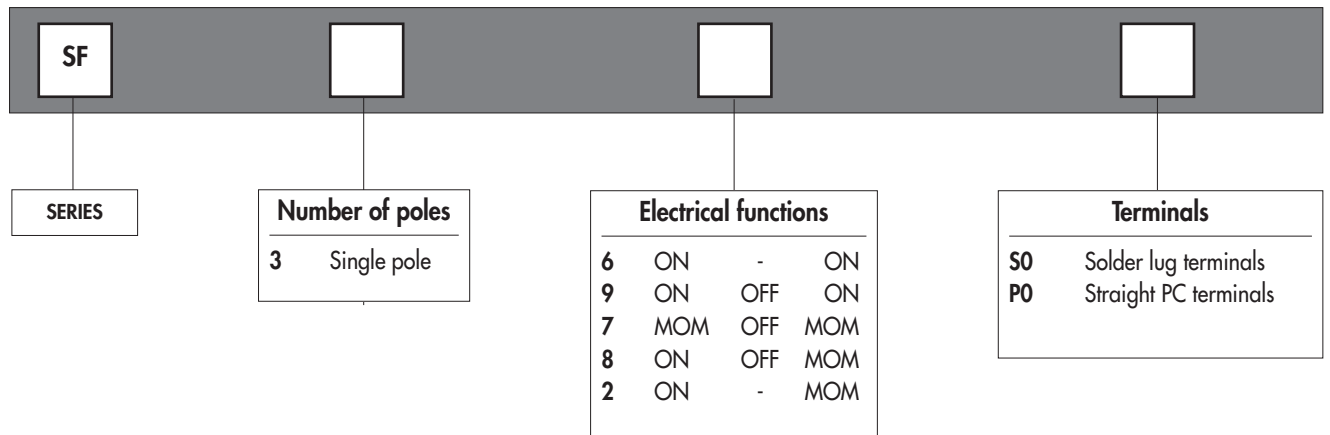
1	blue
1/4	dark blue
2	black
3	green
4	grey
5	yellow
6	red
7/1	white
9	orange

SF series

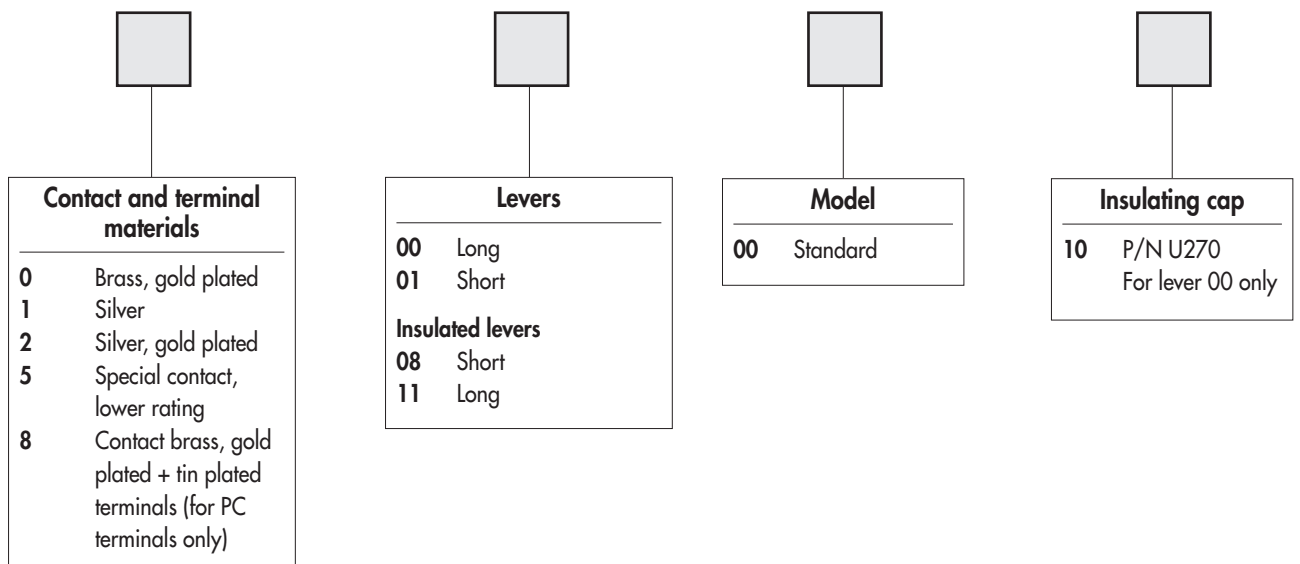
Washable toggle switches - insulated threaded bushing

Overview

MODEL STRUCTURE



OPTIONS



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.

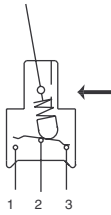
SF series

Washable toggle switches - insulated threaded bushing

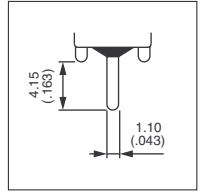
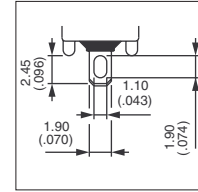
Solder lug or straight PC terminals

MODEL
STRUCTURE

→ Keyway



- 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

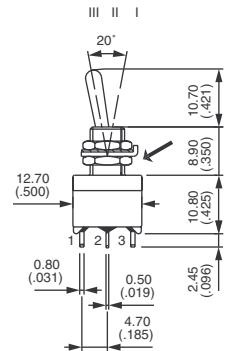
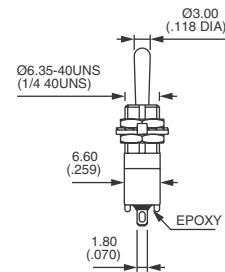
Solder lugs : SF..S0

→ Keyway



SF36S0
SF39S0
SF37S0
SF38S0
SF32S0

III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM



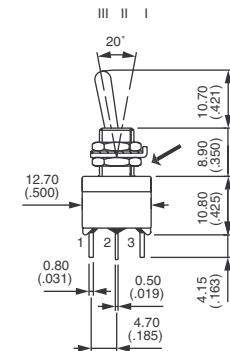
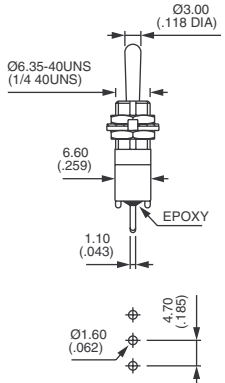
Straight PC terminals : SF..P0

→ Keyway

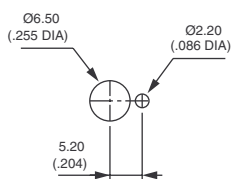


SF36P0
SF39P0
SF37P0
SF38P0
SF32P0

III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM



PANEL CUT-OUT

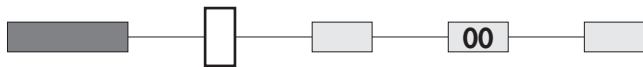




SF series

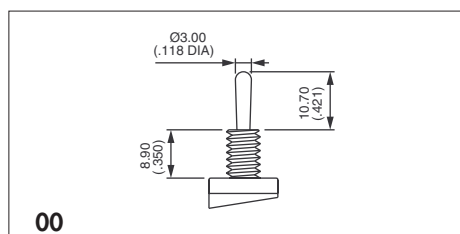
Washable toggle switches - insulated threaded bushing

CONTACT AND TERMINAL MATERIALS



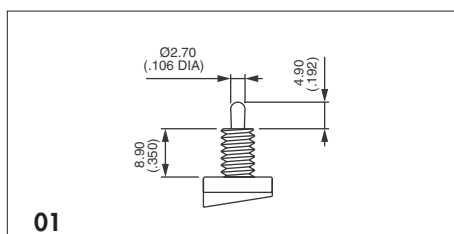
- 0** Brass, gold plated (standard)
- 1** Silver
- 2** Silver, gold plated
- 5** Special contact, lower rating, minimum quantity : consult factory.
- 8** Contact brass, gold plated + tin plated terminals (for PC terminals only)

LEVERS



00

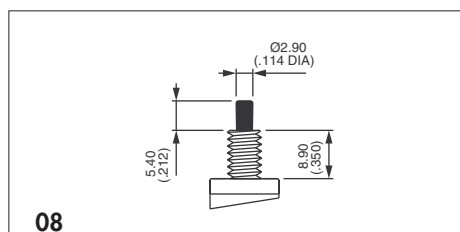
Standard



01

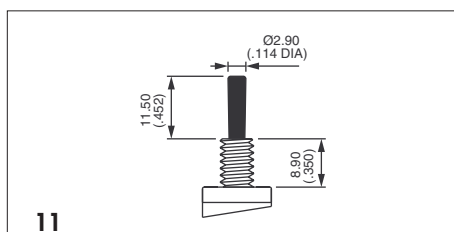
Insulated levers

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



08

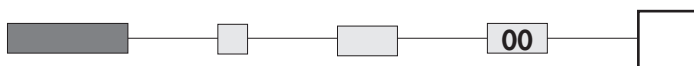
Short



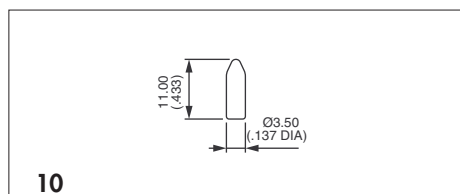
11

Long

INSULATING CAP



Blank Without cap



10

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