

S and SF series

Washable miniature toggle switches

Distinctive features and specifications

UG1410A



☐ 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) : 4A 30VDC
 - gold plated brass contacts (CD or 0) : 0,4VA 20VAC or DC
 - gold plated silver contacts (AD or 2) : 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



2A 250VAC
4A 125VAC



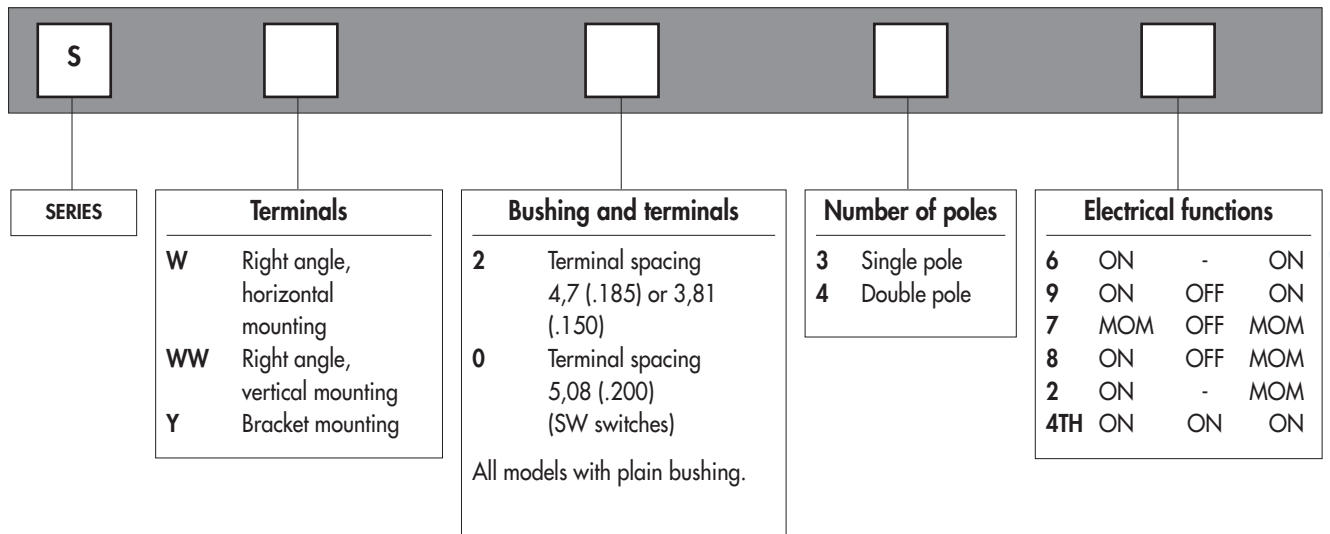
CECC 96201-006

Availability : consult factory for details of approved models.

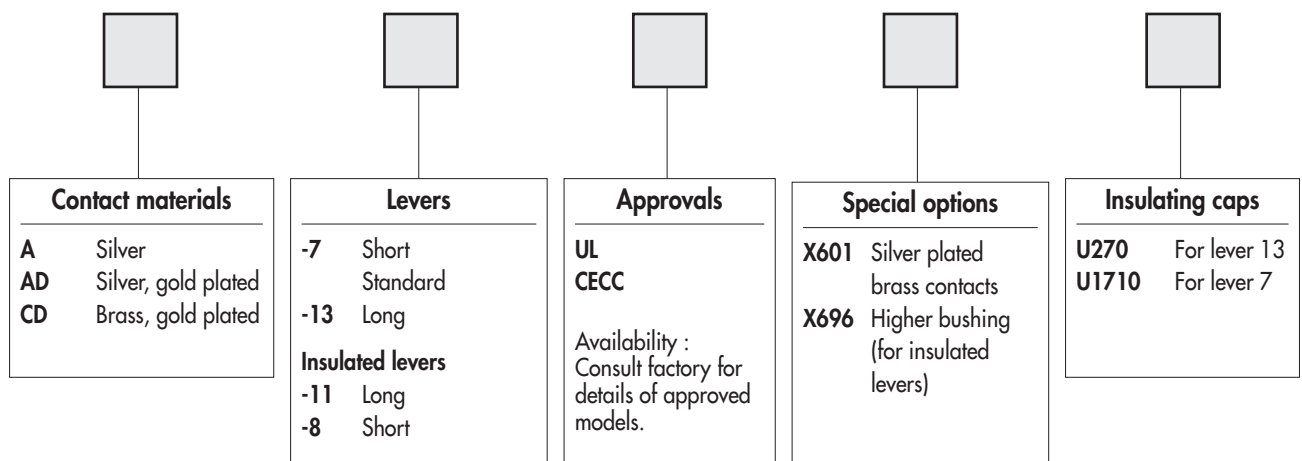
Marking : to order switches marked UL or CECC, complete appropriate box of ordering format.

The company reserves the right to change specifications without notice.

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

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

MODEL
STRUCTURE



- 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)

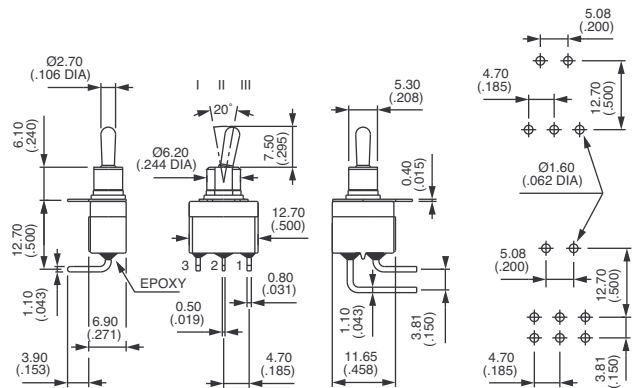
Right angle terminals - horizontal - spacing 4,7 (.185)



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



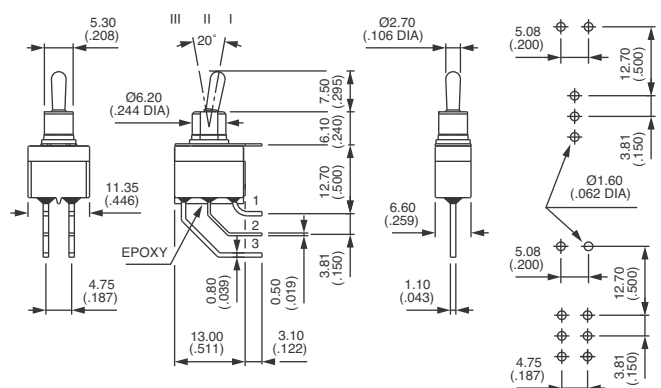
Right angle terminals - vertical



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



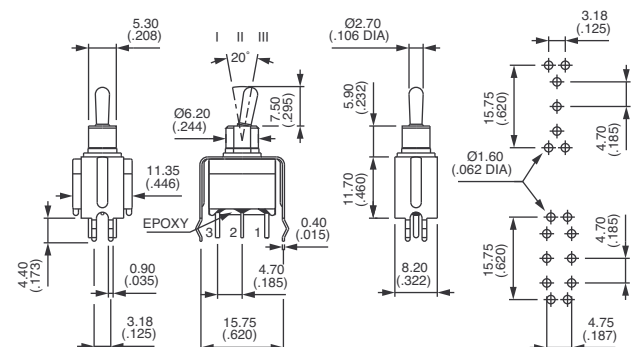
Bracket mounting



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.

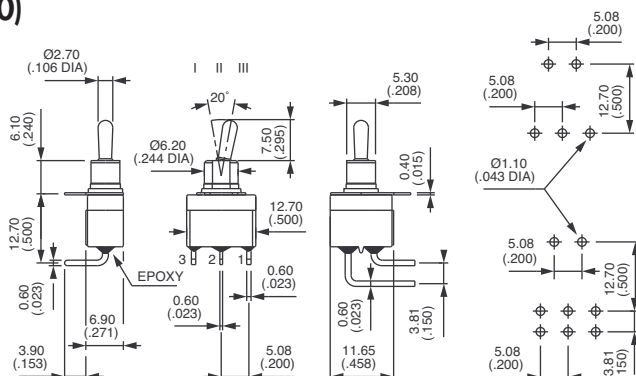
Right angle terminals - horizontal - spacing 5,08 (.200)



Single pole Double pole

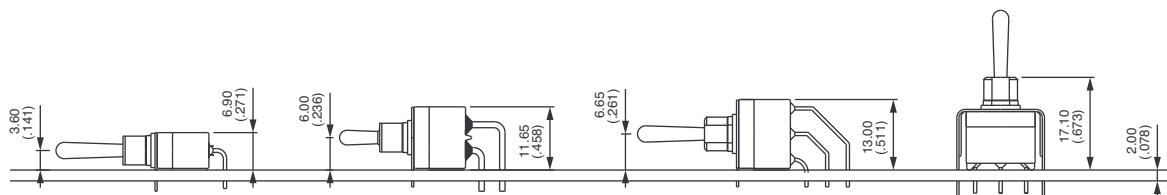
SW036 SW046
SW039 SW049
SW037 SW047
SW038 SW048
SW032 SW042
SW044TH*

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



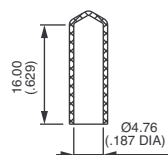
* Function 4 : SP in DP case, see end of catalogue.

PCB MOUNTING



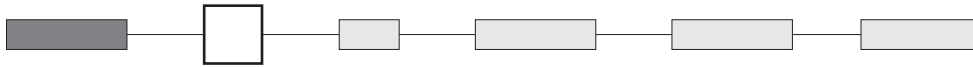
CAP FOR PCB PROCESSING

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



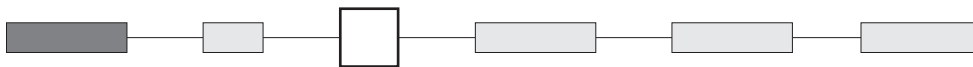
U3012

CONTACT MATERIALS

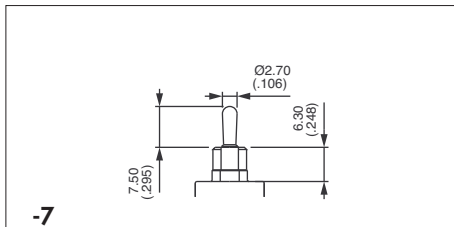


A	Silver
AD	Silver, gold plated
CD	Brass, gold plated

LEVERS

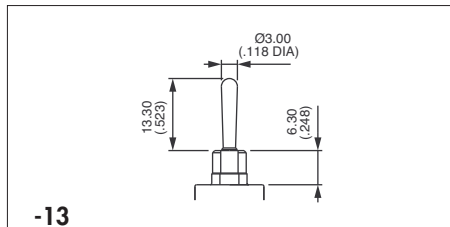


Dash compulsory before lever code.



-7

Standard



-13

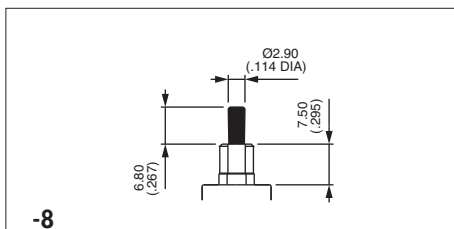
Long



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

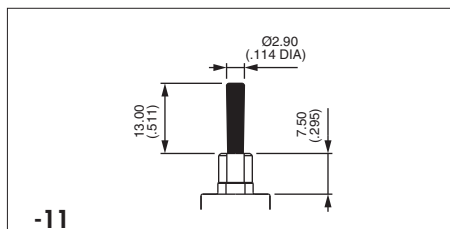
Insulated levers

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



-8

Short



-11

Long



To combine with option X696.

SPECIAL OPTIONS

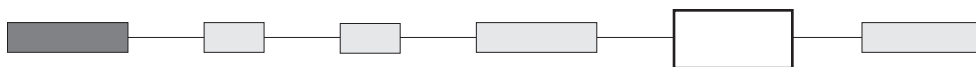


X601 Silver plated brass contacts
Lower rating - Minimum quantity : 5.000 pieces per model and shipment.

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



AGENCY APPROVALS

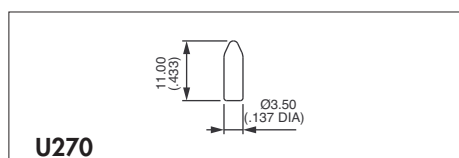
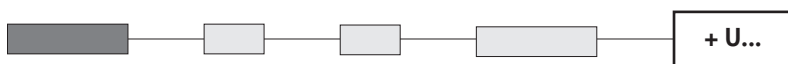


UL
CECC

Availability : consult factory for details of approved models.

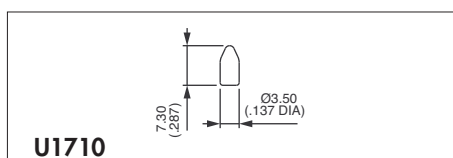
Marking : to order switches marked UL or CECC, please complete above box with desired approvals.
Blank : no agency approval required.

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 bracketed numbers.

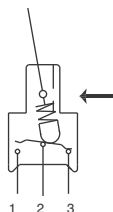


Mounting accessories : 2 hex nuts 8 mm (.314) across flats, 1 locking ring and 1 lockwasher
Standard and special hardware available are presented in section I.

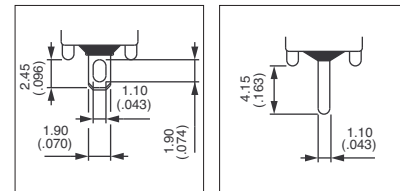


Packaging unit : 50 to 25 pieces depending on model.

→ 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

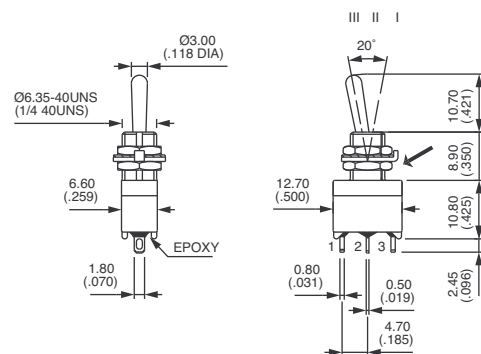
Solder lugs : SF..S0

→ 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



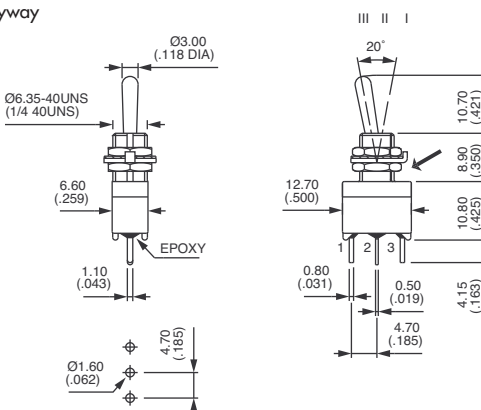
Straight PC terminals : SF..P0

→ Keyway

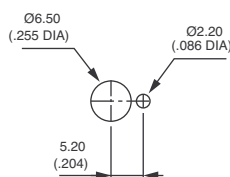


SF36P0
SF39P0
SF37P0
SF38P0
SF32P0

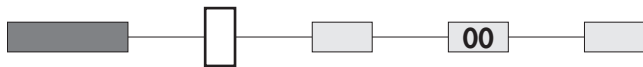
III	II	I
2-3		1-2
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM



PANEL CUT-OUT

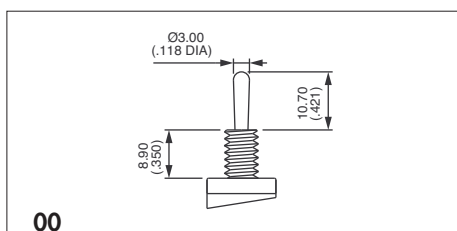


CONTACT AND TERMINAL MATERIALS



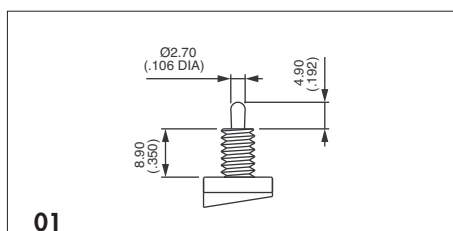
- 0 Brass, gold plated (standard)
- 1 Silver
- 2 Silver, gold plated
- 5 Special contact, lower rating, minimum quantity : consult factory.

LEVERS



00

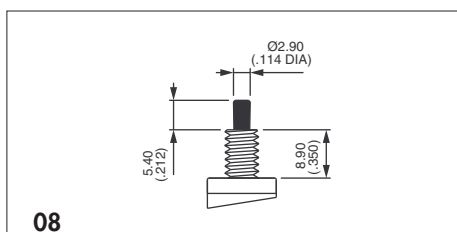
Standard



01

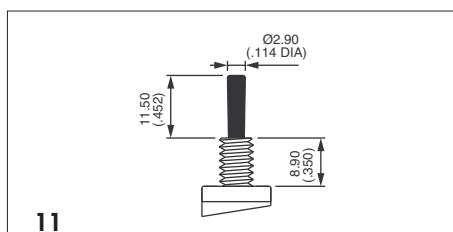
Insulated levers

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



08

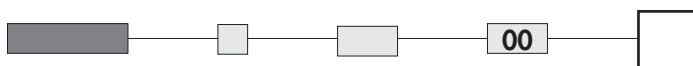
Short



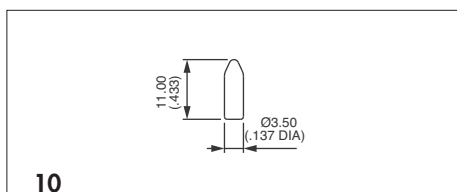
11

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Apem:

[SF32S00000016](#) [SF36P001100](#) [SF36P010000](#) [SF36S000000](#) [SF36S00000016](#) [SF36S011100](#) [SF36S020000](#)
[SF39S00000016](#) [SW232AD13UL](#) [SW236A13](#) [SW236AD7](#) [SW237CD13](#) [SW239A7](#) [SW246A7](#) [SWW232A7](#)
[SWW236A13](#) [SWW236A7](#) [SWW236AD7UL](#) [SWW239A7](#) [SWW246A7](#) [SWW249A7](#) [SY236A13](#) [SY246A13](#)
[SF32P010000](#) [SF32S010000](#) [SF36P000000](#) [SF36S010000](#) [SF37P000000](#) [SF37S010000](#) [SF38P000000](#)
[SF38S010000](#) [SF39P000000](#) [SF39S010000](#) [SW232CD7](#) [SW236A7](#) [SW236AD8X696UL](#) [SW236CD7](#)
[SW237CD8X696](#) [SW239CD7](#) [SW246CD7](#) [SW248CD7](#) [SW249CD7](#) [SWW236CD7](#) [SWW237CD7](#) [SWW238CD7](#)
[SWW239CD7](#) [SWW246CD7](#) [SWW249CD7](#) [SY232CD7](#) [SY236CD7](#) [SY237CD7](#) [SY239CD7](#) [SY244THCD7](#)
[SY246CD7](#) [SY247CD7](#) [SY249CD7](#)