## Farnell Switches

## Switch Selection

## Ratings

All voltage, current and power ratings quoted are for switching resistive loads unless otherwise stated or bracketed.
ie. $16(4) \mathrm{A} @ 250 \mathrm{~V}$ ac $=16 \mathrm{~A}$ resistive, 4 A inductive at 250 V ac.
Configurations


Single Pole Single Throw.
Also known as single pole on-off.
Single Pole Double Throw.
Also known as single pole changeover (SPCO) or single pole on-on.

Double Pole Single Throw. Also known as double pole on-off

Double Pole Double Throw.
Also known as double pole changeover (DPCO) or double pole on-on.
$\begin{array}{ll}\text { 3P, 4P } & \text { Multi-pole switches, } 3 \text { pole, } 4 \text { pole etc. } \\ \text { NO, NC } & \text { 'Normally Open' contacts are operated to 'make' (turn on), } \\ & \text { 'Normally Closed' contacts are operated to 'break' (turn off). }\end{array}$

## Characteristics

Momentary Action The state of the switch will change only whilst the operating force is applied. When released the switch will return to its original state.
Latching Action The state of the switch changes when an operating force is applied. It will change back to its original state when an additional force is applied. Also known as maintained action

## Examples of Alternative Descriptions:

$$
\begin{aligned}
& \text { SPDT } \\
& \text { SPDT - centre off } \\
& \text { SPDT - biased } \\
& \text { SPDT - centre off, two way bias } \\
& \text { SPDT - centre off, one way bias }
\end{aligned}
$$

> Single pole on-on Single pole on-off-on Single pole on-mom Single pole mom-off-mom Single pole on-off-mom


SPDT
$H=8.60, W=5.23, D=8.6$ Bush L=5.6, Dia $=4.72$


Panel cut-out Panel mounting

$$
H=8.6, W=5.3, D=8.1
$$



Horizontal mounting SPDT
$H=7.1, W=8.1, D=9.4$ Bush L=5.6, Dia $=4.72$

- Gold contacts allow low level switching
- Threaded bush types suitable for panel mounting
- Vertical and Horizontal mounting

Contact rating
Contact material Contact resistance Insulation resistance Electrical life

Mftrs. List No
TT11DGPC-1FN $=958-839$,
.4VA @ 20 V dc/ac gold contacts $3 \mathrm{~A} @ 125 \mathrm{~V}$ ac/28V dc silver contacts
Gold over nickel or Silver plate
$\leq 20 \mathrm{~m} \Omega$
$1000 \mathrm{M} \Omega$ @ 500 V dc
2 position (gold) 80,000 ops 3 position (gold) 60,000 ops
2 position (silver) 20,000 ops

TT11DGRA-1FN = 958-864,
TT11EGPC-1FN = 958-840


PCB Mounting 0.4VA @ 20V ac/dc

Vertical Body H=8.64 $\mathrm{W}=5$ (SPDT), 9.1 (DPDT) (DPDT)

## Subminiature Toggle Switches

Sealed PCB Mounting
KNITTER-SWITCH
50 mA @ 48 V ac


SPDT
Body
Minimum load
Contact resistance
Insulation resistanc
$1 \mu \mathrm{~A} @ 2$
$<50 \mathrm{~m} \Omega$
DPDT
$D=5$


PCB drilling plan

$$
\begin{array}{ll}
\text { Proof voltage } & 500 \mathrm{~V} \text { for } 1 \mathrm{~min} . \\
\text { Mechanical life } & 60000 \text { ops. } \\
\text { Operating temperature } & -20^{\circ} \mathrm{C} \text { to }+80^{\circ} \mathrm{C}
\end{array}
$$

Mftrs. List No. ATE1D $=219-435, \quad$ ATE2D $=219-447$
SW195

|  |  |  |  | Price Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Order Code | $1+$ | $25+$ | $100+$ | $250+$ | $1000+$ |
| SPDT | $219-435$ |  |  |  |  |  |
| DPDT | $219-447$ |  |  |  |  |  |

PCB Mount, Panel Mount, Sealed - TT Series
ALCOSWITC ThomaseBetts


