## : ©hipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation, and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


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## 21000 N series

Low profile toggle switches

## DISTINCTIVE FEATURES

Threaded or plain bushing, with mounting plate
Low profile
Same height for single and double pole
Wave solderable only

## (4) <br> ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load
- silver contacts (A) : 4 A 30 VDC
- gold plated brass contacts (LD) : 100 mA 30 VDC
- Minimum load :
- silver contacts (A) : 100 mA 10 V
- gold plated brass contacts (LD) : $10 \mu \mathrm{~A} 5 \mathrm{VDC}-10 \mathrm{~mA} 50 \mathrm{mV}$
- Initial contact resistance : $20 \mathrm{~m} \Omega$ max.
- Insulation resistance : $1,000 \mathrm{M} \Omega \mathrm{min}$. at 500 VDC
- Dielectric strength :

1,000 Vrms 50 Hz min. between terminals $2,000 \mathrm{Vrms} 50 \mathrm{~Hz}$ min. between poles
2,000 Vrms 50 Hz min. between terminals and frame

- Electrical life at full load :
- silver contacts (A) : 20,000 cycles
- gold plated brass contacts (LD) : 50,000 cycles


## GENERAL SPECIFICATIONS

- Low level or mechanical life : 100,000 cycles.
- Operating temperature : $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right.$ to $\left.+185^{\circ} \mathrm{F}\right)$


## MATERIALS

## - Case and cover : PBT

- Actuator : brass, nickel plated
- Bushing : brass, nickel plated
- Contacts : A : silver, LD : brass, gold plated
- Terminal seal : epoxy

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.
The company reserves the right to change specifications without notice.

## 21000 N series

Low profile toggle switches

PANEL CUT-OUT

## (4) ELECTRICAL FUNCTIONS


$\leadsto$ POSITIONS AND CONNECTIONS


## § BUILD YOUR PART NUMBER

BASIC PART NUMBER

21

SERIES

TERMINALS AND BUSHINGS

1 Straight PC terminals, threaded bushing

2 Straight PC terminals, plain bushing


NUMBER OF POLES

| 3 | Single pole |
| :--- | :--- |
| 4 | Double pole |

VERSION

## N

For all models.

ELECTRICAL FUNCTIONS

| 6 | ON | - | ON |
| ---: | :--- | :--- | ---: |
| 9 | ON | OFF | ON |
| 7 | MOM | OFF | MOM |
| $\mathbf{8}$ | ON | OFF | MOM |
| 2 | ON | - | MOM |

## OPTIONS

CONTACT MATERIALS

## FINISH

| A | Silver |
| :---: | :--- |
| LD Brass, gold plated |  |


| Blank | Bright chrome finish |
| :---: | :--- |
| G | Black finish on bushing, <br> actuator and hardware. |

Blank
Epoxy sealed terminals standard

K
Sealing by O-ring

## (4) <br> ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.
(I) Notice : please note that not all combinations of above numbers are available. Refer to the following pages for further information.
(B) Mounting accessories : standard hardware supplied with all models with threaded bushing : 2 hex nuts $8 \mathrm{~mm}(.314)$ across flats. Standard and special hardware available is presented in the "Hardware" section of website.

## 21000 N series

Low profile toggle switches

THREADED BUSHING - SINGLE POLE


|  | $\underset{2-3}{111}$ | II |
| :---: | :---: | :---: |
| 21136N | ON | - |
| 21139N | ON | OFF |
| 21137N | MOM | OFF |
| 21138N | ON | OFF |
| 21132N | ON |  |

$$
\begin{array}{r}
1 \\
1-2 \\
\mathrm{ON} \\
\mathrm{ON} \\
\mathrm{MOM} \\
\mathrm{MOM} \\
\mathrm{MOM}
\end{array}
$$

THREADED BUSHING - DOUBLE POLE


|  | III | II | । |
| :---: | :---: | :---: | :---: |
|  | 2-3 |  | 1-2 |
|  | 5-6 |  | 4-5 |
| 21146N | ON | - | ON |
| 21149N | ON | OFF | ON |
| 21147N | MOM | OFF | MOM |
| 21148N | ON | OFF | MOM |
| 21142N | ON | - | MOM |

PLAIN BUSHING - SINGLE POLE


|  | III | II | I |
| :--- | :--- | ---: | ---: |
|  | $2-3$ |  | $1-2$ |
| $21236 N$ | ON | - | ON |
| 21239N | ON | OFF | ON |
| 21237N | MOM | OFF | MOM |
| 21238N | ON | OFF | MOM |
| 21232N | ON | - | MOM |

PLAIN BUSHING - DOUBLE POLE


|  | III | II | I |
| :--- | :--- | :--- | ---: |
|  | $2-3$ |  | $1-2$ |
|  | $5-6$ |  | $4-5$ |
| $\mathbf{2 1 2 4 6 N}$ | ON | - | ON |
| $\mathbf{2 1 2 4 9 N}$ | ON | OFF | ON |
| $\mathbf{2 1 2 4 7 N}$ | MOM | OFF | MOM |
| $\mathbf{2 1 2 4 8 N}$ | ON | OFF | MOM |
| $\mathbf{2 1 2 4 2 N}$ | ON | - | MOM |




Low profile toggle switches

## CONTACT MATERIALS

BASIC P/N


A Silver
LD Brass, gold plated

## FINISH

BASIC P/N

Blank Nickel plating on bushing, actuator and hardware.
G Black finish on bushing, actuator and hardware.

## SEALING

BASIC P/N $\square$
Epoxy sealed terminals are standard.
Blank No sealing except standard.
K Bushing internally sealed by one O-ring (version without washer U360). Protects the switch against water and dust.


