



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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# AV series

Security pushbutton switches •  
 Ø 19 or 22 mm • momentary NO



## DISTINCTIVE FEATURES

Momentary (NO)

Momentary (NC) and alternate action also available

Long life

UL-CSA approved (long case only)

Marking available



## ENVIRONMENTAL SPECIFICATIONS

- Optional front panel sealing : IP65 according to IEC 60529
- Operating temperature : -30 °C to +70 °C (-22 °F to +158 °F)



## ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - A contacts : 4 A 12 VDC, 500,000 cycles
  - C contacts : 2 A 48 VDC, 10,000 cycles
- Approved ratings of models with long case and A contacts (AV..000) :
  - UL-CSA : 4 A 250 VAC - 8 A 125 VAC - 6,000 cycles
- Initial contact resistance : 50 mΩ max.
- Insulation resistance : 1,000 MΩ min. at 500 VDC
- Dielectric strength :
  - 2,000 Vrms 50 Hz min. between terminals and frame
  - 2,000 Vrms 50 Hz min. between terminals



## GENERAL SPECIFICATIONS

- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 11 mm (.433) max.
- Low level or mechanical life : 1,000,000 cycles
- Hand soldering : 300 °C (572 °F), 3 sec. max.



## MATERIALS

- Case : PBT
- Contacts : silver (A) or brass, silver plated (C)
- Bushing and actuator : see following pages

The company reserves the right to change specifications without notice.



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## AGENCY APPROVAL

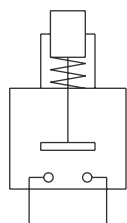


4 A 250 VAC / 8 A 125 VAC  
(long case only)

To order switches marked UL-CSA,  
add "UU" at the end of model number.



## ELECTRICAL FUNCTIONS



Function 3 (NO)



## PANEL MOUNTING

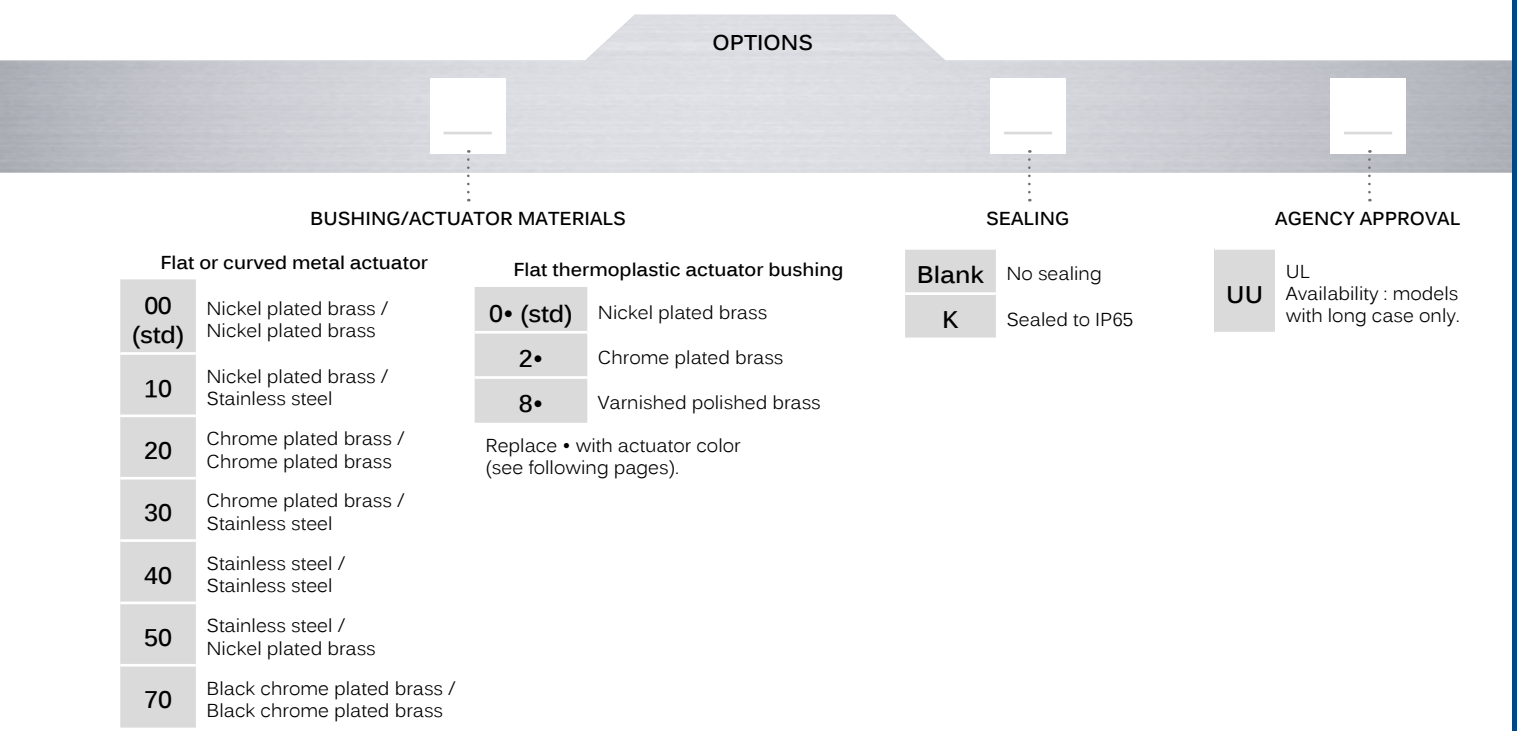
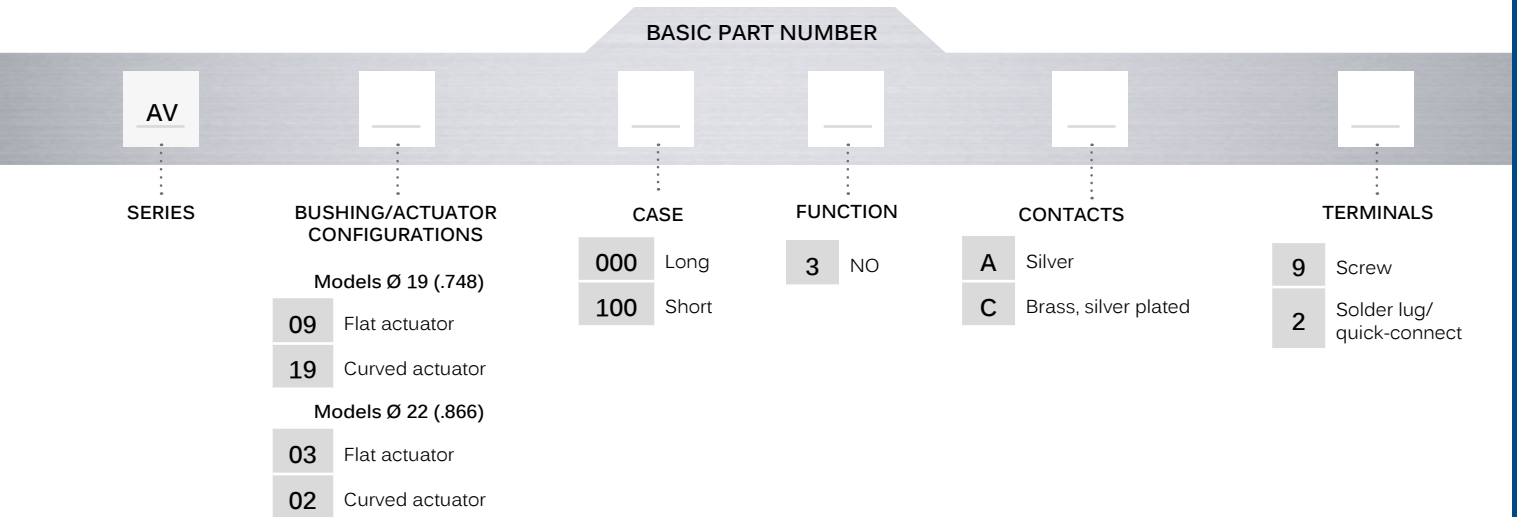
- Panel cut-out : Ø 19,2 mm (.755) or Ø 22.2 mm (.874)
- Min. pitch for matrix mounting :  
30 mm x 30 mm (1.181x1.181)

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## BUILD YOUR PART NUMBER



## 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.

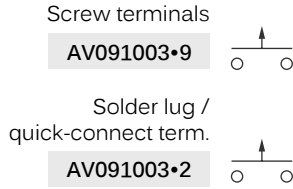
**Notice:** please note that not all combinations of above numbers are available. Refer to the following pages for further information.

**Mounting accessories:** standard hardware supplied : 1 hex nut. Standard and special hardware is presented in the "Hardware" section of website.

# AV series

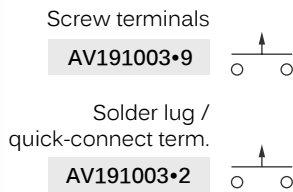
Security pushbutton switches • Ø 19 or 22 mm • momentary NO

## BUSHING Ø 19 (.748) - FLAT ACTUATOR SHORT CASE - 48 VDC



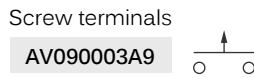
• Contacts. Replace with A or C.

## BUSHING Ø 19 (.748) - CURVED ACTUATOR SHORT CASE - 48 VDC



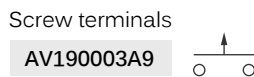
• Contacts. Replace with A or C.

## BUSHING Ø 19 (.748) - FLAT ACTUATOR LONG CASE- 4 A 250 VAC/8 A 125 VAC - UL/CSA



To order switches marked UL-CSA, add "UU" at the end of model number.

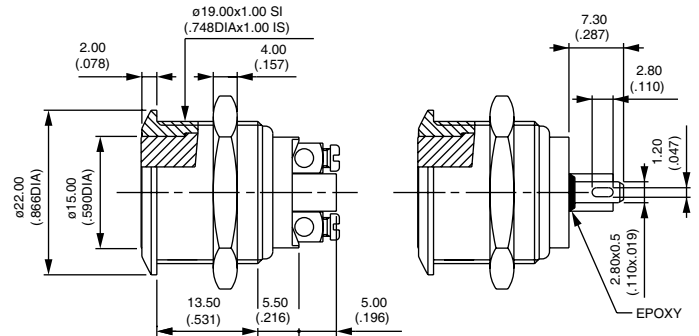
## BUSHING Ø 19 (.748) - CURVED ACTUATOR LONG CASE - 4 A 250 VAC/8 A 125 VAC - UL/CSA



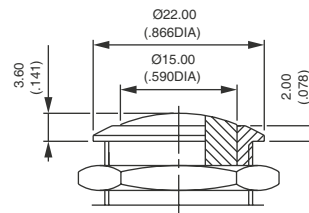
To order switches marked UL-CSA, add "UU" at the end of model number.

Screw terminals for wires 1.5 mm<sup>2</sup> max.

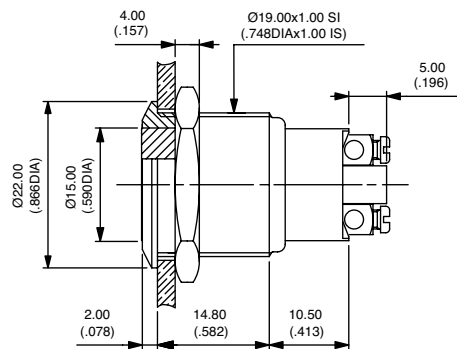
Hex nut 22 (.866) across flats



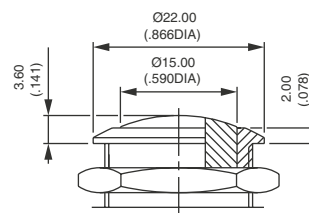
Hex nut 22 (.866) across flats



Hex nut 22 (.866) across flats



Hex nut 22 (.866) across flats



## BUSHING Ø 22 (.866) - FLAT ACTUATOR SHORT CASE - 48 VDC



Screw terminals

AV031003•9



Solder lug /  
quick-connect term.

AV031003•2



• Contacts. Replace with A or C.

## BUSHING Ø 22 (.866) - CURVED ACTUATOR SHORT CASE - 48 VDC



Screw terminals

AV021003•9



Solder lug /  
quick-connect term.

AV021003•2



• Contacts. Replace with A or C.

## BUSHING Ø 22 (.866) - FLAT ACTUATOR LONG CASE - 4 A 250 VAC/8 A 125 VAC - UL/CSA



Screw terminals

AV030003A9



To order switches marked UL-CSA, add "UU" at the end of model number.

## BUSHING Ø 22 (.866) - CURVED ACTUATOR LONG CASE - 4 A 250 VAC/8 A 125 VAC - UL/CSA



Screw terminals

AV020003A9

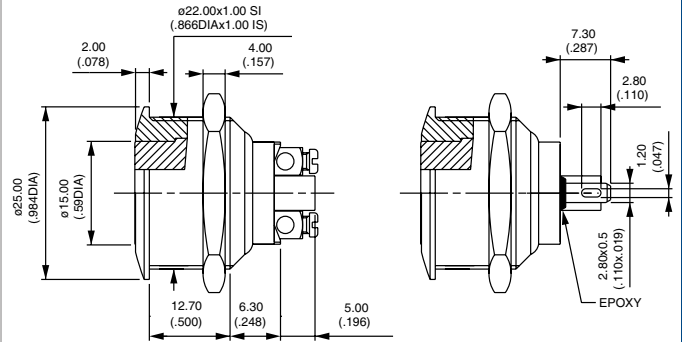


To order switches marked UL-CSA, add "UU" at the end of model number.

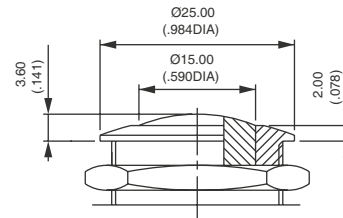
Screw terminals for wires 1.5 mm<sup>2</sup> max.

## Security pushbutton switches • Ø 19 or 22 mm • momentary NO

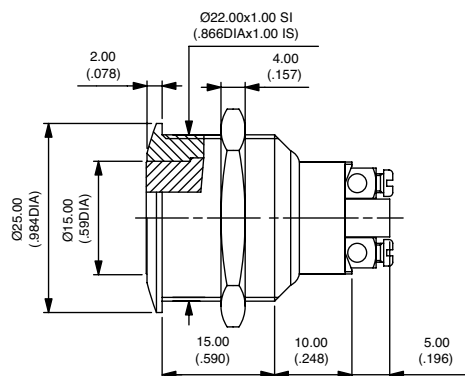
Hex nut 25 (.984) across flats



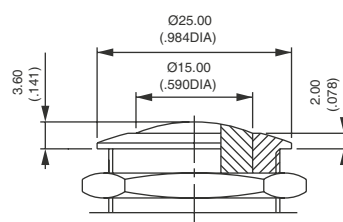
Hex nut 25 (.984) across flats



Hex nut 25 (.984) across flats



Hex nut 25 (.984) across flats



# AV series

Security pushbutton switches • Ø 19 or 22 mm • momentary NO

## BUSHING Ø 22 (.866) - MOMENTARY, NORMALLY CLOSED

- Single pole, screw terminals, without marking
- Silver plated copper contacts (C)
- Max. current/voltage rating with resistive load :  
2 A 250 VAC - 3 A 125 VAC - 2.5 A 24 VDC
- Dielectric strength :  
2,000 Vrms 50 Hz min. betw. terminal and frame  
2,000 Vrms. 50 Hz min. between terminals
- Electrical life : 100,000 cycles at 0.3 A 24 VAC or DC  
10,000 cycles at full load

Flat actuator

AV031202C9



Curved actuator

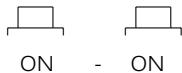
AV021202C9



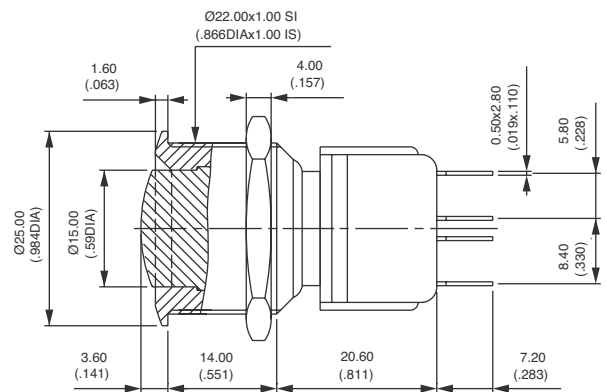
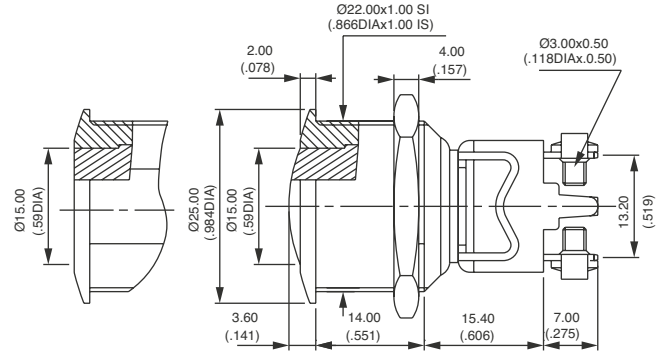
## BUSHING Ø 22 (.866) - ALTERNATE ACTION

- Double pole, solder lug/quick-connect terminal, curved actuator
- Silver contacts
- Max. current/voltage rating with resistive load :  
3 (1.5) A 250 VAC - 6 A 125 VAC - 3 A 24 VAC or DC
- Dielectric strength : 3,000 Vrms min. between terminals and frame
- Electrical life : 10,000 cycles at full load  
50,000 cycles at 1 A 24 VAC or DC
- Mechanical life : 100,000 cycles

AV044746A2



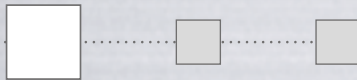
Hex nut 25 (.984) across flats



For further specifications, see previous pages

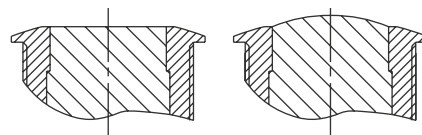
### BUSHING/ACTUATOR MATERIALS

BASIC P/N



FLAT OR CURVED METAL ACTUATOR

CODE	BUSHING	ACTUATOR
00 (std)	Nickel plated brass	Nickel plated brass
10	Nickel plated brass	Stainless steel
20	Chrome plated brass	Chrome plated brass
30	Chrome plated brass	Stainless steel
40	Stainless steel	Stainless steel
50	Stainless steel	Nickel plated brass
70	Black chrome plated brass	Black chrome plated brass



# AV series

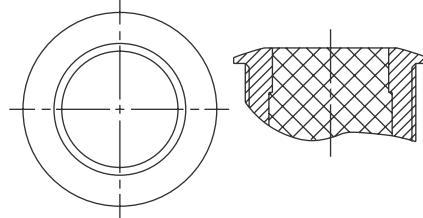
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## BUSHING/ACTUATOR MATERIALS (CONTINUED)



### FLAT THERMOPLASTIC ACTUATOR

CODE	BUSHING	ACTUATOR
0• (std)	Nickel plated brass	Replace • with one of the following codes : 1 : blue - 1/4 : dark blue - 2 : black - 3 : green - 4 : grey - 5 : yellow - 6 : red - 7/1 : white - 9 : orange
2•	Chrome plated brass	
8•	Varnished polished brass	

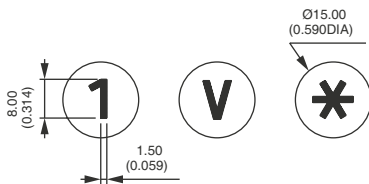


## MARKING



For **flat or curved actuator**: by laser etching on non-illuminated brass or stainless steel actuator.

For **flat actuator**: by hot stamping on thermoplastic insert (illuminated actuators). Not available for AV031202C9 and AV044746A2.



Select an option from each of the two paragraphs opposite (Type /Color).

### TYPE OF MARKING

- 0 to 9 Numbers 0 to 9
- X Symbol \*
- Y Symbol #
- A to N Letters A to N
- P to W Letters P to W
- 0 Letter O

Letter O : same code and same design as number 0.  
For special symbols, consult factory.  
Minimum order : 500 pieces

### COLOR OF MARKING

#### Brass actuator

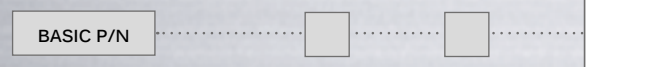
- 0 (std) Same as finish
- 2 Black

Note : a finished product supplied in version "0" cannot be modified to version "2".

#### Thermoplastic actuator

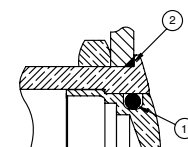
- 2 Black
- 7 White

## SEALING



- Blank No sealing
- K Front panel sealing to IP65

### OPTION K



- ① - internal gasket
- ② - external gasket