AV series

Tactile security pushbutton switches with overmolded actuator • Ø 19 or 22 mm

DISTINCTIVE FEATURES

Tactile feedback
Illuminated or non-illuminated
Momentary (NO)
Overmolded marking available

ENVIRONMENTAL SPECIFICATIONS

- Front panel sealing : IP67 or IP69K 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 : 50 mA 24 VDC
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1,000 MΩ min. at 500 VDC
- Dielectric strength : 500 Vrms 50 Hz min. between terminals
  2,000 Vrms 50 Hz min. between terminals and frame
- Electrical life : 1,000,000 cycles at full load

LED COMPONENT SPECIFICATIONS			
LED color	Forward current	Typ. forward voltage	Max. forward voltage
Blue	20 mA	3.3 V	3.8 V
Green	20 mA	4 V	4.5 V
Yellow	20 mA	2 V	2.5 V
Red	20 mA	1.95 V	2.5 V
White	20 mA	3.3 V	4 V
Amber	20 mA	2.3 V	2.8 V
Red / green	20 mA	1.85 V / 2.2 V	2.5 V

A resistor must be series-connected by the user

$$\text{Resistor value} = \frac{\text{supply voltage - LED forward voltage}}{\text{LED forward current}}$$

The company reserves the right to change specifications without notice.

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GENERAL SPECIFICATIONS

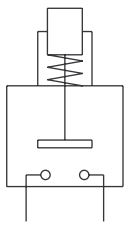
- **Travel : 0.7 mm** (.027) ± 0.1 mm (.003)
- Operating force : 7 N ± 2N - Sealing option K will increase the operating force.
- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 6 mm (.236) max.
- Hand soldering : 270 °C, 3 seconds max.

MATERIALS

- Case : PA46 UL94-V0
- Terminals : brass, gold plated
- Contacts : gold plated dome
- Bushing : see following pages
- Actuator : stainless steel, with thermoplastic overmolding
- LED

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

ELECTRICAL FUNCTIONS



Function 3 (NO)

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

BASIC PART NUMBER

AV — SERIES

BUSHING DIAMETERS

9	19 (.748)
3	22 (.866)

ILLUMINATION

S0	No
SL	Illuminated

CONTACTS

D	Gold plated dome

TERMINALS

2	Solder
9	Screw
4	Straight PC terminals
F	Overmolded flying leads IP65

OPTIONS

BUSHING MATERIALS

0 (std)	Nickel plated brass
2	Chrome plated brass
4	Stainless steel
5	Gold plated brass
6	Chrome plated brass, satin
7	Chrome plated brass, black

OVERMOLDING COLORS

1	Blue
2	Black*
3	Green
4	Grey*
5	Yellow
6	Red
7	White
8	Translucent
9	Orange

*non-illuminated only

LED COLORS

Blank	No LED
1	Blue
2	Red/green
3**	Green
V**	Green, high intensity
5	Yellow
6	Red
7	White
9	Amber

**To order a green LED for actuator style 002, always use code V. Other actuator styles can be ordered with LED code 3 or V.

ACTUATOR STYLES

002	Illuminated ring
006	Validation
009	Standby
010	Cancel
011	Power

Other styles: see website

SEALING

Blank	No sealing
K	Sealed to IP67 or IP69K

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.

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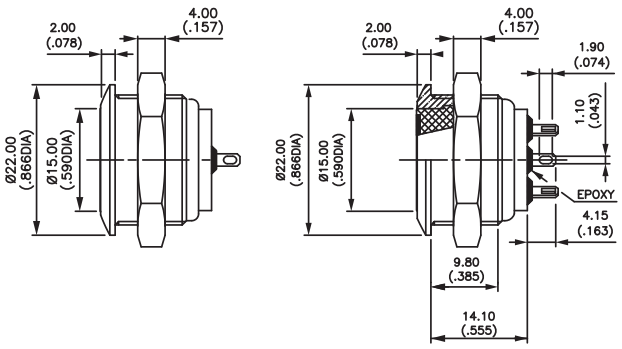
BUSHING Ø 19 (.748) - FLAT ACTUATOR SOLDER LUG TERMINALS

Illuminated
AV9SLD2

Non-illuminated
AV9S0D2

Hex nut 22 (.866) across flats

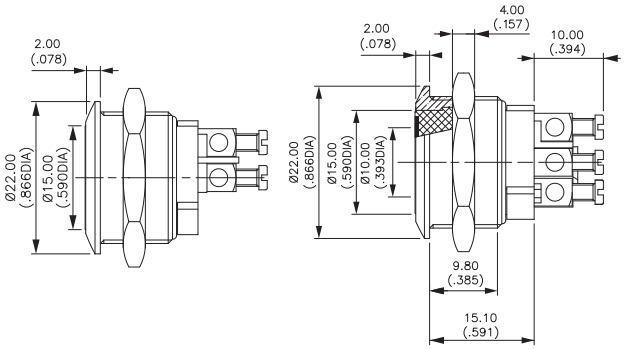


BUSHING Ø 19 (.748) - FLAT ACTUATOR SCREW TERMINALS

Illuminated
AV9SLD9

Non-illuminated
AV9S0D9

Hex nut 22 (.866) across flats

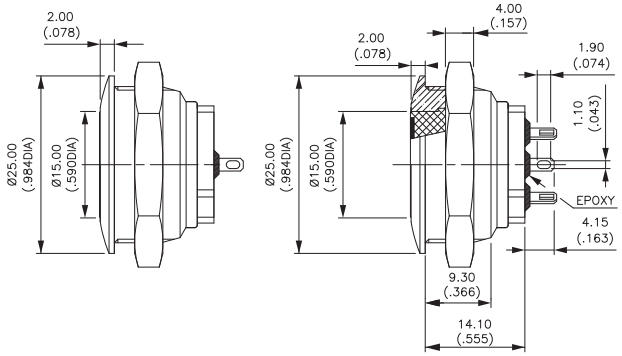


BUSHING Ø 22 (.866) - FLAT ACTUATOR SOLDER LUG TERMINALS

Illuminated
AV3SLD2

Non-illuminated
AV3S0D2

Hex nut 25 (.984) across flats

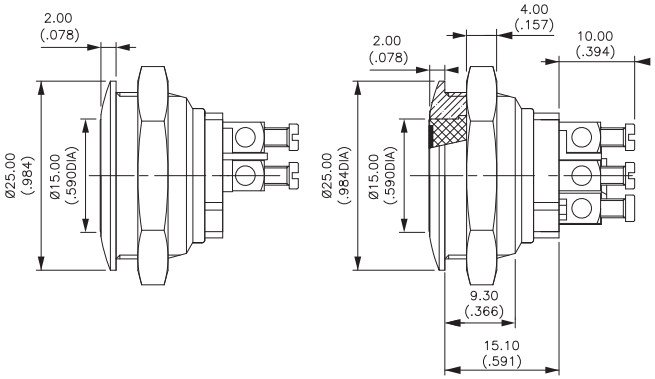


BUSHING Ø 22 (.866) - FLAT ACTUATOR SCREW TERMINALS

Illuminated
AV3SLD9

Non-illuminated
AV3S0D9

Hex nut 25 (.984) across flats



AV series

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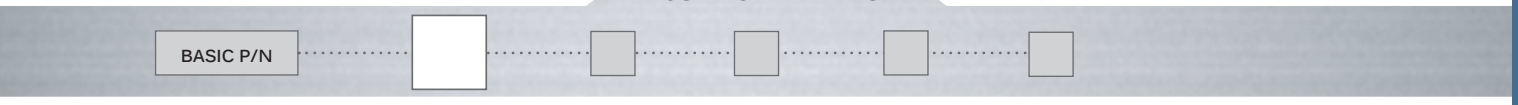
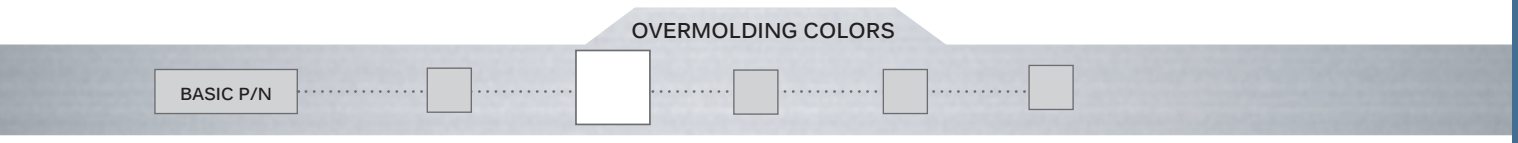
BUSHING MATERIALS



0 (std)	Nickel plated brass
2	Chrome plated brass
4	Stainless steel
5	Gold plated brass
6	Chrome plated brass, satin
7	Chrome plated brass, black

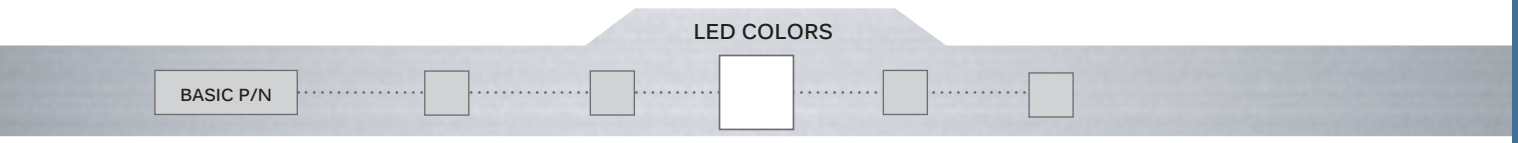
OVERMOLDING COLORS



1	Blue
2	Black*
3	Green
4	Grey*
5	Yellow
6	Red
7	White
8	Translucent
9	Orange

*** non-illuminated only**

LED COLORS



Blank	No LED
1	Blue
2	Red / green
3**	Green
V**	Green, high intensity
5	Yellow
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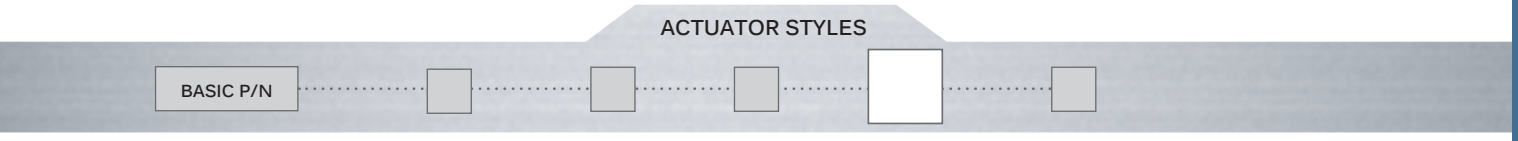
7	White
9	Amber

**** To order a green LED for actuator style 002, always use code V. Other actuator styles can be ordered with LED code 3 or V.**

ACTUATOR STYLES



The ring and symbols are obtained by photochemical engraving of a stainless steel insert. The insert is then overmolded in the desired color.

The following actuator styles are available. For other types, consult factory.

001	002	003	004	005	006	008	009	010	011
Illuminated ring and disc	Illuminated ring	Arrow	Loudspeaker OFF	Opening	Validation	Closing	Standby	Cancel	Power

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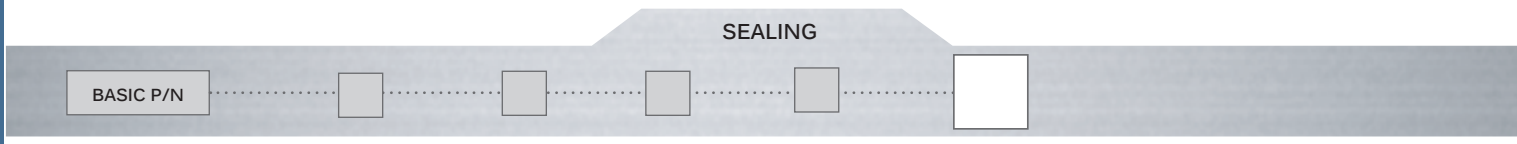
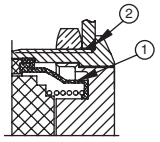
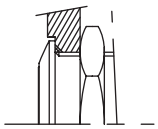


Blank No sealing
K Front panel sealing to IP67 or IP69K

OPTION K - FRONT PANEL SEALING IP67



① - internal membrane

② - external gasket

OPTION K - FRONT PANEL SEALING IP69K