

AV series

Security pushbutton switches •
Ø 19 or 22 mm • latching



DISTINCTIVE FEATURES

Latching

Illuminated or non-illuminated

Three terminal types



ENVIRONMENTAL SPECIFICATIONS

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



ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load : 2 A 48 VDC
- Initial contact resistance : 50 mΩ max.
- Insulation resistance : 1,000 MΩ min. at 500 VDC
- Dielectric strength : 1,000 Vrms 50 Hz min. between terminals
500 Vrms 50 Hz min. between terminals and frame
- Electrical life : 500,000 cycles at 2 A 48 VDC

LED COMPONENT SPECIFICATIONS

LED color	Forward current	Typ. forward voltage	Max. forward voltage
Red	20 mA	1.95 V	1.95 V
Yellow	20 mA	2 V	2.05 V
Green	20 mA	2.1 V	2.5 V
Blue	20 mA	3.2 V	4 V

A resistor must be series-connected by the user.

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



GENERAL SPECIFICATIONS

- Torque : 1.5 Nm min. - 4 Nm max. applied to nut
- Panel thickness : 1 (.039) to 9 mm (.354) max.
- Low level or mechanical life : 1,000,000 cycles
- Hand soldering : 300 °C (572 °F), 4 seconds max.

The company reserves the right to change specifications without notice.



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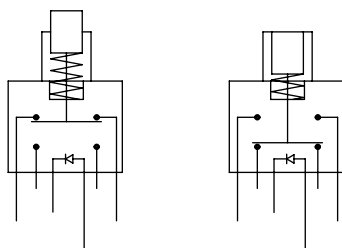
MATERIALS

- Case : PA6T UL94-V0
- Contacts : silver
- Bushing and actuator : see following pages
- LED

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



ELECTRICAL FUNCTIONS



MOUNTING

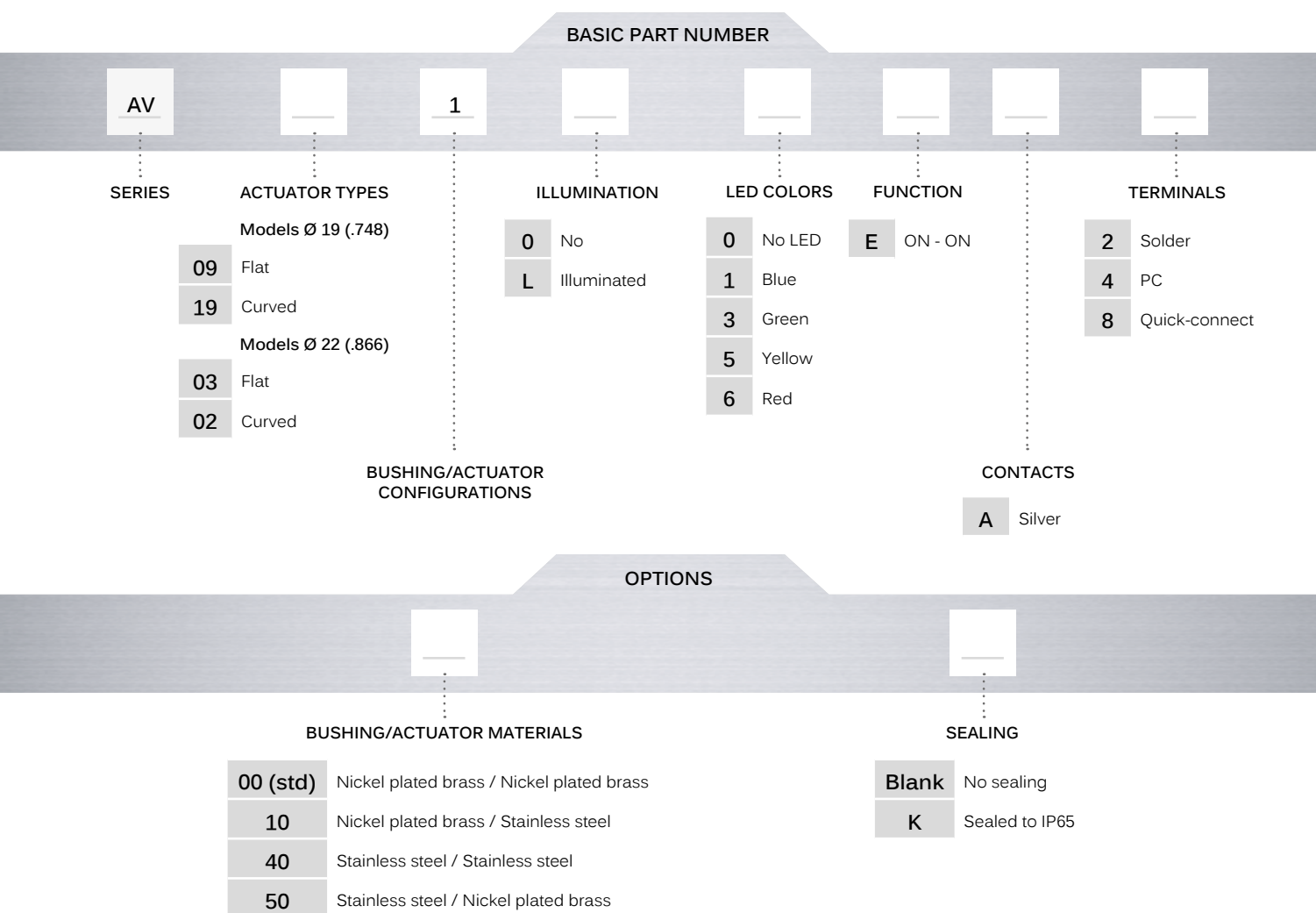
- Panel cut-out : Ø 19.2 mm (.755) or Ø 22.2 mm (.874)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181 x 1.181)

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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.

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AV19100EA2	ON	ON
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AV02100EA2	ON	ON
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Technical drawing of a 1/2" NPT female connector. The drawing includes a side view on the left and a front view on the right. Dimensions are provided in inches and millimeters.

Dimensions:

- Overall length: 3.60 (.141)
- Thread length: 2.00 (.078)
- Thread outer diameter: $\varnothing 19.00 \times 1.00$ SI ($\varnothing 19.00 \times 1.00$ IS)
- Thread pitch: 4.00 (.157)
- Overall outer diameter: $\varnothing 22.00$ (.866 D/A)
- Inner diameter: $\varnothing 15.00$ (.590 D/A)
- Thread pitch (bottom): 13.50 (.531)
- Thread pitch (top): 10.70 (.421)
- Thread pitch (bottom): 2.80 (.110)
- Thread pitch (top): 1.40 (.055)
- Thread pitch (bottom): 2.30 (.090)
- Thread pitch (top): 0.50 (.019)

Labels:

- NC (Not Connected)
- NO (Normally Open)
- NC (Not Connected)

Technical drawing of a 4-position rotary switch. The drawing shows a side view of the switch with various dimensions and labels. The dimensions are as follows:

- Overall length: 13.50 (531)
- Distance from front face to center of first contact: 10.70 (421)
- Distance from front face to center of last contact: 2.80 (110)
- Distance between centers of adjacent contacts: 4.00 (157)
- Distance from front face to center of last contact (alternative): 2.00 (.078)
- Distance from front face to center of last contact (alternative): 0.50 (.019)
- Distance from front face to center of last contact (alternative): 1.40 (.055)
- Distance from front face to center of last contact (alternative): 0.320 (1250/A)
- Distance from front face to center of last contact (alternative): 0.150 (590/A)
- Distance from front face to center of last contact (alternative): 0.220 (860/A)
- Distance from front face to center of last contact (alternative): 0.150 (590/A)
- Distance from front face to center of last contact (alternative): 0.220 (860/A)

The drawing also includes labels for the contacts: NC (Normally Closed), NO (Normally Open), and NC (Normally Closed).

[illegible]

Technical drawing of a 3-position rotary switch. The drawing shows a side view of the switch with various dimensions and labels. The dimensions are given in millimeters (mm) and inches (in). The labels include NC (Normally Closed), NO (Normally Open), and NC (Normally Closed) for the switch positions. The dimensions are as follows:

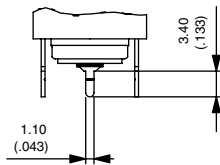
- Overall diameter: Ø25.00 (0.984 DIA)
- Shaft diameter: Ø15.00 (0.590 DIA)
- Shaft diameter at the end: Ø20 (0.787 DIA)
- Distance from the end of the shaft to the center of the switch: 12.70 (0.500)
- Distance from the center of the switch to the center of the output terminals: 11.50 (0.453)
- Distance from the center of the switch to the center of the output terminals (alternative dimension): 2.80 (0.110)
- Distance from the center of the switch to the center of the output terminals (alternative dimension): 4.00 (0.157)
- Distance from the center of the switch to the center of the output terminals (alternative dimension): 2.00 (0.078)
- Distance from the center of the switch to the center of the output terminals (alternative dimension): 0.50 (0.019)
- Distance from the center of the switch to the center of the output terminals (alternative dimension): 1.40 (0.055)
- Distance from the center of the switch to the center of the output terminals (alternative dimension): 2.30 (0.090)
- Distance from the center of the switch to the center of the output terminals (alternative dimension): 0.50 (0.019)

4

AV series

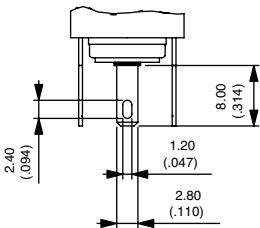
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STRAIGHT PC TERMINALS



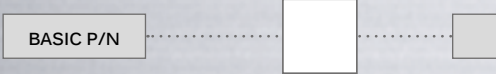
Replace 2 with 4 at the end of the model numbers shown on previous page.

QUICK-CONNECT TERMINALS



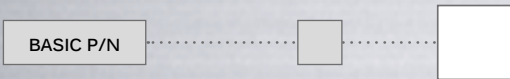
Replace 2 with 8 at the end of the model numbers shown on previous page.

BUSHING/ACTUATOR MATERIALS



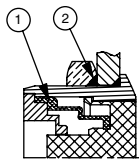
CODE	BUSHING	ACTUATOR
00 (std)	Nickel plated brass	Nickel plated brass
10	Nickel plated brass	Stainless steel
40	Stainless steel	Stainless steel
50	Stainless steel	Nickel plated brass

SEALING



Blank No sealing
K Front panel sealing to IP65

OPTION K



- ① - elastomeric membrane
- ② - external gasket