

AV series

Security pushbutton switches •
 Ø 30 mm • illuminated momentary NC/NO



DISTINCTIVE FEATURES

- Large actuator
- With illuminated ring
- Momentary NC/NO
- Solder lug, flying lead or cable terminals
- Marking available on request



ENVIRONMENTAL SPECIFICATIONS

- Optional front panel sealing : IP67 according to IEC 60529
- Robustness : IK06 according to EN 62262 (1 joule)
- Operating temperature : -30 °C to +85 °C (-22 °F to +185 °F)



ELECTRICAL SPECIFICATIONS

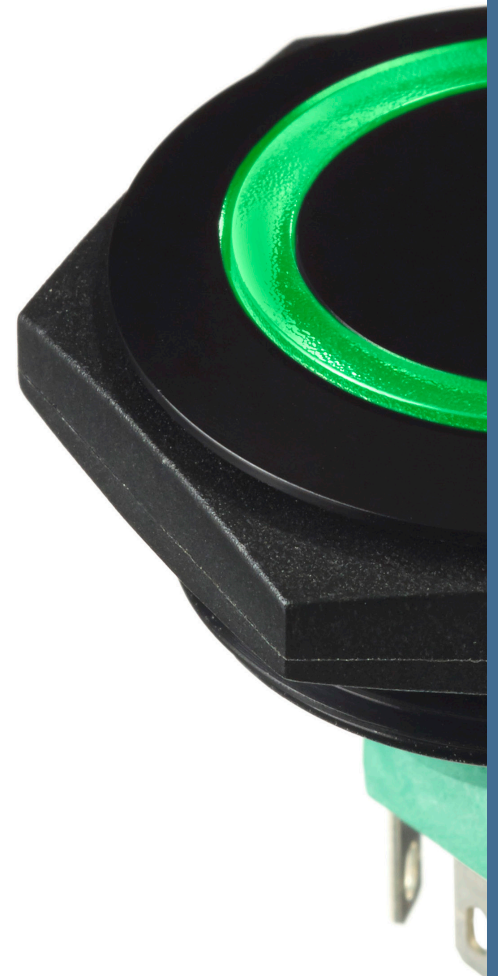
- Max. current/voltage rating with resistive load : 1 A 30 VDC
- LED voltage : 12 VDC, 24 VDC or 48 VDC
If not supplied by APEM, a resistor must be series-connected by the user : see LED component specifications below.
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 10 MΩ min. at 500 VDC
- Dielectric strength : 500 Vrms 50 Hz min. between terminals
1,000 Vrms 50 Hz min. between terminals and frame
- Electrical life : 250,000 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	2.2 V / 3.2 V	2.8 V / 4 V
Red / Green / Blue	20 mA	2.2 V / 3.2 V / 3.3 V	2.8 V / 4 V / 4 V

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

The company reserves the right to change specifications without notice.



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GENERAL SPECIFICATIONS

- Travel : 2.5 mm ± 0.3 mm (.003)
- Operating force : 5 N ± 2 N
- Torque : 10 Nm max.
- Panel thickness : 1 (.039) to 6 mm (.236) max.
- Low level or mechanical life : 1,000,000 cycles
- Hand soldering : 350 °C (662 °F), 5 seconds max.

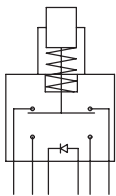


MATERIALS

- Case : polyamide, glass filled
- Contacts : silver
- Bushing : see following pages
- Actuator : see following pages
- Elastomeric membrane : silicone
- LED



ELECTRICAL FUNCTIONS



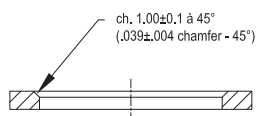
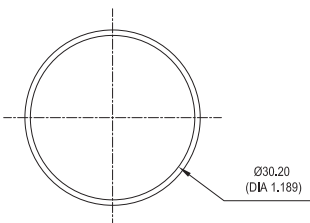
NC/NO



MOUNTING

- Panel cut-out : Ø 30.2 mm (1.189)
- Min. pitch for matrix mounting :
44 mm x 44 mm (1.732x1.732)
- Optional connector (*this connector ensures a unique mounting orientation*)

IP67 PANEL CUT-OUT (K OPTION)



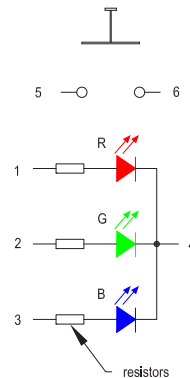
CONNECTIONS

WIRE COLORS (F OUTPUT)

1	Red	Red LED+
2	Green	Green LED+
3	Blue	Blue LED+
4	Black	LED GND
5	Orange	NO
6	Orange	NO

CABLE COLORS (C OUTPUT)

1	White	Red LED+
2	Brown	Green LED+
3	Green	Blue LED+
4	Yellow	LED GND
5	Pink	NO
6	Grey	NO



CONNECTOR COLORS

U3181	White
U3182	Black
U3183	Green
U3185	Yellow
U3186	Red
U3188	Natural
U3189	Orange



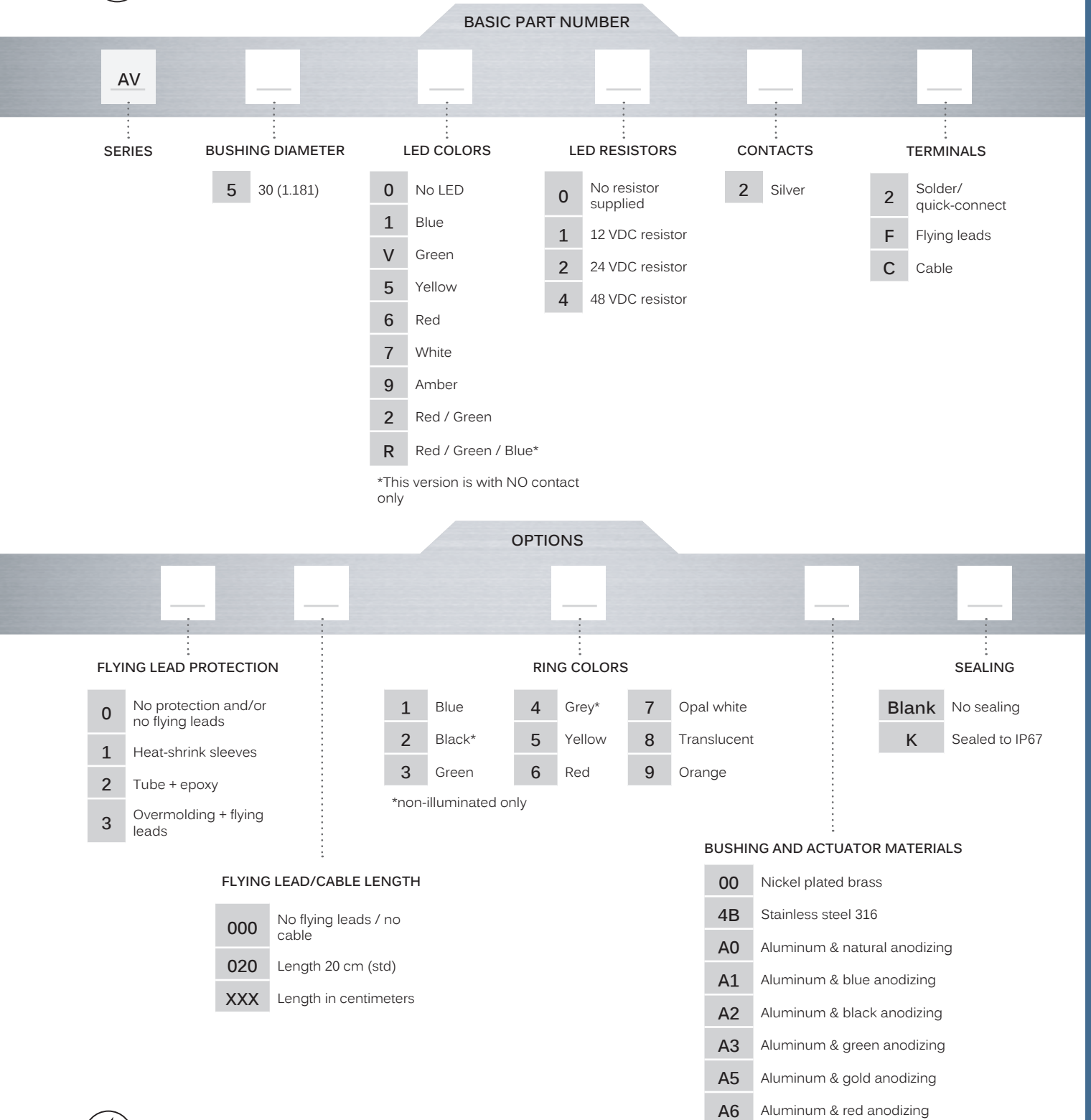
Tabs to be fitted by the user : TE 63241-3 or similar

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BUILD YOUR PART NUMBER



*This version is with NO contact only

*non-illuminated only



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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FLAT ACTUATOR - SOLDER LUG TERMINALS



Illuminated*
AV5•022

Non-illuminated
AV50022

* Select LED color on previous page - No LED resistor supplied on this model.

FLAT ACTUATOR - FLYING LEAD TERMINALS



Illuminated*
AV5••2F3

Non-illuminated
AV5002F3

* Select LED color & resistor on previous page.

FLAT ACTUATOR - CABLE TERMINALS

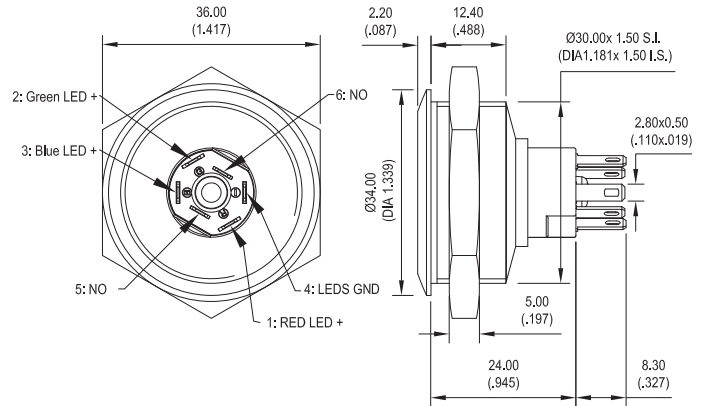


Illuminated*
AV5••2C

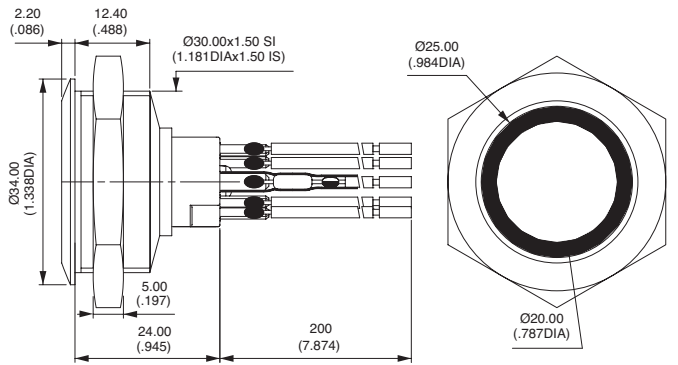
Non-illuminated
AV5002C

* Select LED color & resistor on previous page.

Plastic hex nut 36 (1.417) across flats

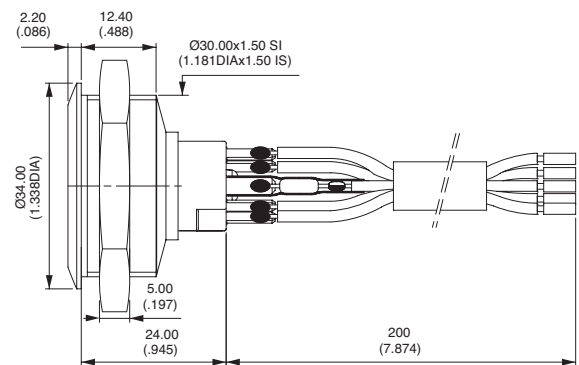


Plastic hex nut 36 (1.417) across flats



Wire colors : black: NC, orange: NO, red: LED anode (+), blue : LED cathode (-)

Plastic hex nut 36 (1.417) across flats



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FLYING LEAD PROTECTION



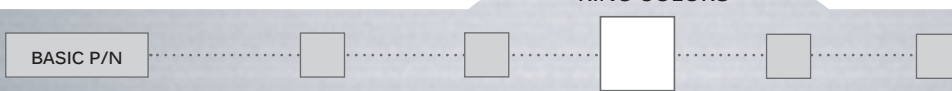
- 0 No protection and/or no flying leads
- 1 Heat-shrink sleeves
- 2 Tube + epoxy

FLYING LEAD/CABLE LENGTH



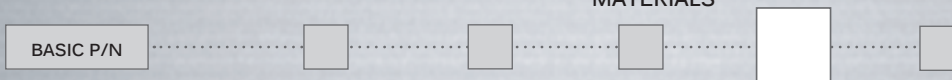
- 000 No flying leads / no cable
- 020 Length 20 cm (standard)
- XXX Length in centimeters

RING COLORS

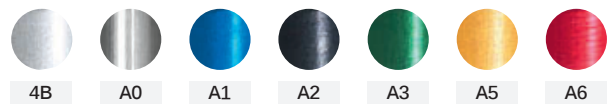


- | | |
|-----------|------------------------|
| 1 Blue | 6 Red |
| 2 Black * | 7 Opal white (std) |
| 3 Green | 8 Translucent |
| 4 Grey * | 9 Orange |
| 5 Yellow | * non-illuminated only |

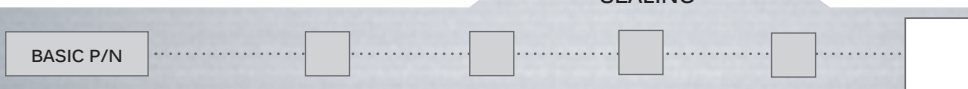
BUSHING/ACTUATOR MATERIALS



- | | |
|---------------------------------|-------------------------------|
| 00 (std) Nickel plated brass | A3 Aluminum & green anodizing |
| 4B Stainless steel 316 | A5 Aluminum & gold anodizing |
| A0 Aluminum & natural anodizing | A6 Aluminum & red anodizing |
| A1 Aluminum & blue anodizing | Other : on request. |
| A2 Aluminum & black anodizing | |



SEALING



- Blank No sealing
- K Front panel sealing to IP67

OPTION K



- ① - internal membrane
- ② - external gasket