

## AVP Series – Anti-Vandal Illuminated and Non-Illuminated Piezo Switches

### Applications

- Industrial Control Products.
- Communication
  Equipment.
- Medical Equipment.

### Features

- High Strength.
- Corrosion Resistance.
- Easy Heat Dissipation.
- Flat, High Flat, and Concave Button Types Available.
- Momentary Actuation.
- Light Weight
- Operating Life Up to 50 Million Cycles.



- TE Connectivity is pleased to introduce its AVP Series of Anti-Vandal Illuminated and Non-Illuminated Piezo Switches. These IP68 rated Anti-Vandal switches are available in 16mm, 19mm, and 22mm diameter bushings for a wide range of possible applications. In addition, the AVP series of switches are characterised by 500mm long leads for more convenient installation.
  - The AVP Switches are characterised by contact rating of 5-24VDC / 1A, 5-24VAC / 1A.

### **AVP Series – Type Classification**

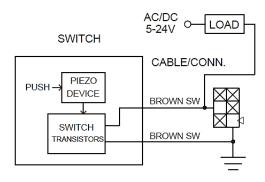
Туре	AVC16	AVC19	AVC22		
Bushing Size	16mm	19mm	22mm		
Actuation	Momentary (MOM. Pulse 200mS Min.)				
Rating	5-24VDC / 1A , 5-24VAC / 1A				
Contact Resistance	1Ω Max.				
Operating Life	50 Million Cycles.				
Sealing	Silicone, Epoxy.				
Wire Leads	26AWG 500mm+2.54 2x3 Connector	26AWG 500mm+2.54 1x6 Connector			
Lead Length	500mm				
Packaging	ESD Bag, Paper Box				

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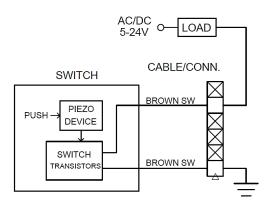


### Circuit

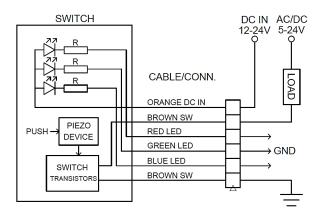
-"O" Without led application diagram (Only for 16mm Bushing)



-"0" Without led application diagram (Only for 19/22mm Bushing)



-"D" Color LED application diagram (Only for 19/22mm Bushing)



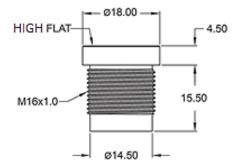
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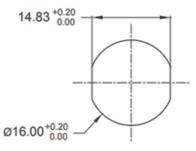


## **Bushing and Button Types:**

### -16mmHigh-Flat Button

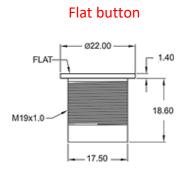
Panel Cut-out



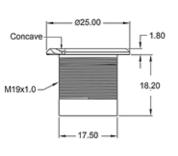


Panel thicknes: 8.0mm (Max.)

-19mm

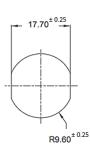


## Concave button

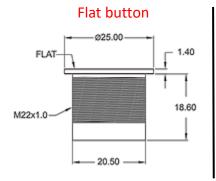


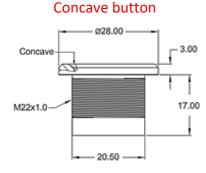
Panel thickness: 10.0mm (Max.)

### Panel Cut-out



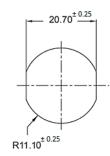
-22mm





Panel thickness: 10.0mm (Max.)

### Panel Cut-out

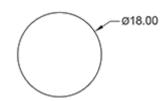


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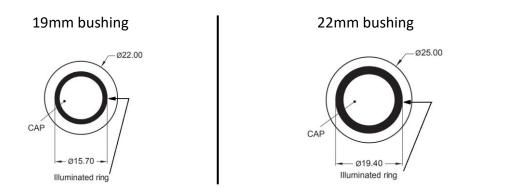


## Light Type:

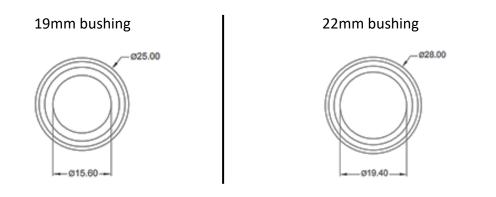
-"H" High-Flat button type (without LED)



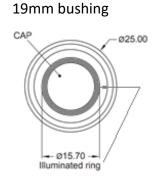
-"F" Flat button type (Illuminated LED ring)



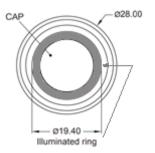
### -"C" Concave button type (Without LED)



## -"C" Concave button type (Illuminated LED ring)



### 22mm bushing

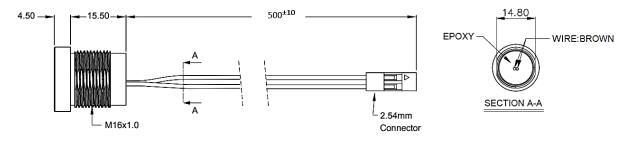


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## Wire leads:

-"H" (16mm Bushing, High-Flat button, Without LED)

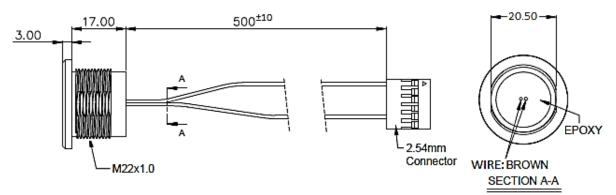


-"C" (Concave button, Without LED)

19mm bushing

- 1.80 18.20 500<sup>±10</sup> A M19x1.0 A MIPx1.0 A A Connector A WIRE:BROWN

  - 22mm bushing

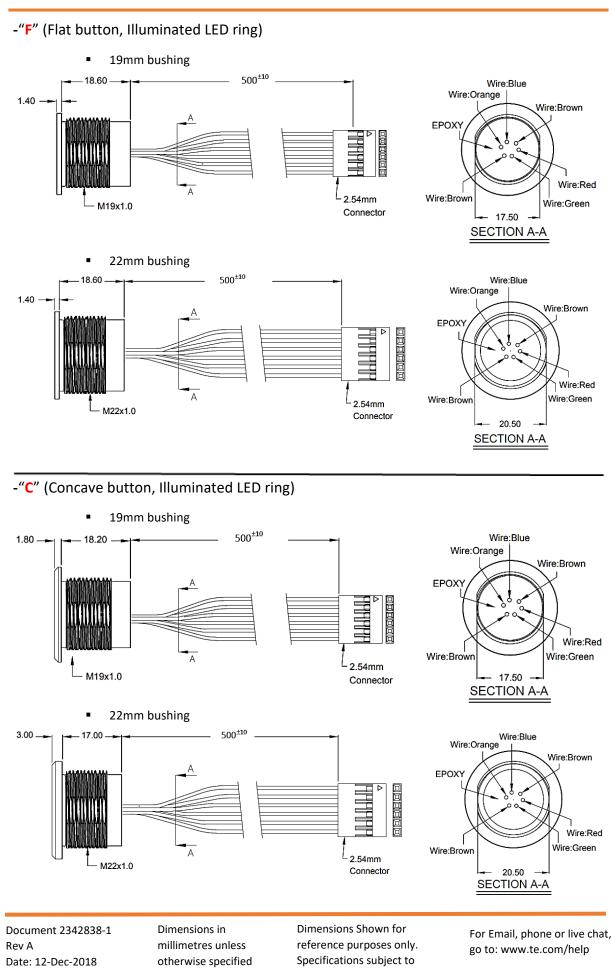


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SECTION A-A





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### 1. Style

- 1.1 Operating Temperature Range: -20 °C to +65°C
- 1.2 Storage Temperature Range: -40 °C to +85°C
- 2. Current Range: 1A, 5-24VDC Max. / 1A, 5-24VAC Max.
- 3. Type of Actuation: Momentary.

#### 4. Test Sequence:

	Item	Description	Test Conditions	Requirements		
Appearance	1	Visual Examination	By visual examination without any pressure or testing.	There shall be no defects that affect the performance of the product.		
Electrical Performance	2	Contact Resistance	At 1A, 5VDC. For transistor resistance from drain to source.	1Ω Max.		
	3	Current Rating	With 5Ω resistor.	1A / 5VDC.		
Mechanical Performance	4	Actuation force	Touch	2N – 5N.		
	5	Operating life	Life cycle tester	50 Million cycles.		
	6	Cable retention force to switch	Force Analyzer	10KG Min.		

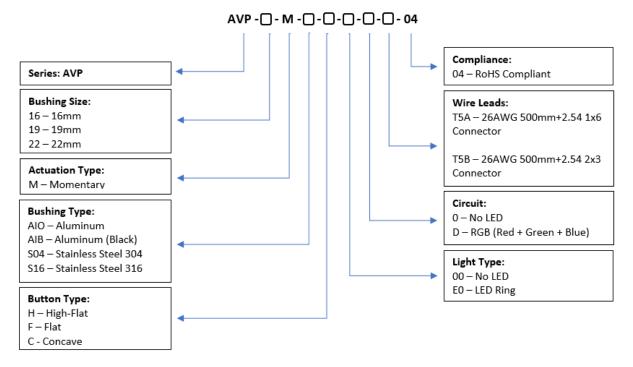
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	7	Operating temperature	1) Low Temperature: -20±3°C, 96 Hours. 2) High temperature: 65±3°C, 96 Hours.	As shown in items 2 to 6.	
Environmental	8	IP68	As per parameters specified by IEC 60529 standards	Pass.	
Endurance	9	Salt Spray Testing	Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made: 1) Temperature: $35\pm2^{\circ}C$ 2) The ratio of salt-water: 5%. 3) The spray amount of salt-water: 1 to 2 ml/h. 4) Time: 48 hours	The testing standard based on bubble, crack, and magnifying glass with gauge.	

4. Packaging: ESD bag, Paper box.

## Part numbering – How to order



#### -Example PN: AVP16MAIOH000T5B04

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# **PN** List

Smart PN	Bushing Size	Bushing Type	Button Type	Light Type	Circuit	Wire Leads	MOQ	TE PN
AVP16MAIOH000T5B04	16mm	Aluminum	High-Flat	No LED	No LED	500mm+2.54 2x3 Connector	100	2342838-1
AVP16MAIBH000T5B04	16mm	Aluminum (Black)	High-Flat	No LED	No LED	500mm+2.54 2x3 Connector	100	2342838-2
AVP16MS04H000T5B04	16mm	Stainless Steel 304	High-Flat	No LED	No LED	500mm+2.54 2x3 Connector	100	2342838-3
AVP16MS16H000T5B04	16mm	Stainless Steel 316	High-Flat	No LED	No LED	500mm+2.54 2x3 Connector	100	2342838-4
AVP19MAIOFE0DT5A04	19mm	Aluminum	Flat	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342839-1
AVP19MAIOCE0DT5A04	19mm	Aluminum	Concave	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342840-1
AVP19MAIOC000T5A04	19mm	Aluminum	Concave	No LED	No LED	500mm+2.54 1x6 Connector	100	2342841-1
AVP19MAIBFE0DT5A04	19mm	Aluminum (Black)	Flat	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342839-2
AVP19MAIBCE0DT5A04	19mm	Aluminum (Black)	Concave	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342840-2
AVP19MAIBC000T5A04	19mm	Aluminum (Black)	Concave	No LED	No LED	500mm+2.54 1x6 Connector	100	2342841-2
AVP19MS04FE0DT5A04	19mm	Stainless Steel 304	Flat	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342839-3
AVP19MS04CE0DT5A04	19mm	Stainless Steel 304	Concave	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342840-3
AVP19MS04C000T5A04	19mm	Stainless Steel 304	Concave	No LED	No LED	500mm+2.54 1x6 Connector	100	2342841-3
AVP19MS16FE0DT5A04	19mm	Stainless Steel 316	Flat	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342839-4
AVP19MS16CE0DT5A04	19mm	Stainless Steel 316	Concave	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342840-4
AVP19MS16C000T5A04	19mm	Stainless Steel 316	Concave	No LED	No LED	500mm+2.54 1x6 Connector	100	2342841-4
AVP22MAIOFE0DT5A04	22mm	Aluminum	Flat	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342842-1
AVP22MAIOCE0DT5A04	22mm	Aluminum	Concave	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342843-1
AVP22MAIOC000T5A04	22mm	Aluminum	Concave	No LED	No LED	500mm+2.54 1x6 Connector	100	2342844-1
AVP22MAIBFE0DT5A04	22mm	Aluminum (Black)	Flat	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342842-2
AVP22MAIBCE0DT5A04	22mm	Aluminum (Black)	Concave	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342843-2
AVP22MAIBC000T5A04	22mm	Aluminum (Black)	Concave	No LED	No LED	500mm+2.54 1x6 Connector	100	2342844-2
AVP22MS04FE0DT5A04	22mm	Stainless Steel 304	Flat	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342842-3
AVP22MS04CE0DT5A04	22mm	Stainless Steel 304	Concave	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342843-3
AVP22MS04C000T5A04	22mm	Stainless Steel 304	Concave	No LED	No LED	500mm+2.54 1x6 Connector	100	2342844-3
AVP22MS16FE0DT5A04	22mm	Stainless Steel 316	Flat	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342842-4
AVP22MS16CE0DT5A04	22mm	Stainless Steel 316	Concave	LED Ring	RGB	500mm+2.54 1x6 Connector	100	2342843-4
AVP22MS16C000T5A04	22mm	Stainless Steel 316	Concave	No LED	No LED	500mm+2.54 1x6 Connector	100	2342844-4

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