

## AVC Series – Anti-Vandal Illuminated Capacitive Switches

### Applications

- Bath Accessories.
- Automotive Electronics.
- Strict Access Control Systems.
- Shipping Equipment.
- Medical Equipment.
- Horticulture.



TE Connectivity is pleased to introduce its AVC Series of Anti-Vandal illuminated Capacitive Pushbutton 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 AVC series of switches are characterised by 500mm long leads for more convenient installation.

### Features

- Zero Actuation Force.
- Flat Button Type.
- Momentary and Locking Actuation Available.
- Independent LED Control (2 or 3 colors).
- Operating Life Up to 50 Million Cycles.

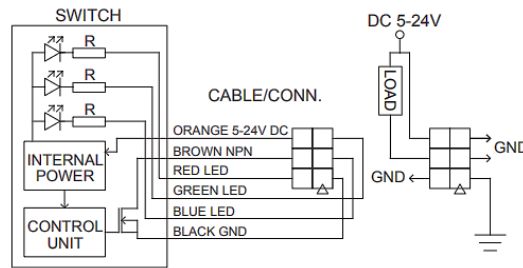
The AVC Switches are characterised by contact rating of 5-24VDC / 1A.

### AVC Series – Type Classification

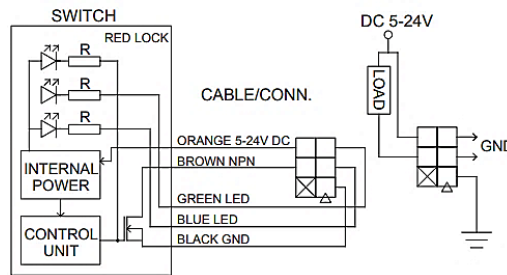
| Type                           | AVC16                                | AVC19                          | AVC22 |
|--------------------------------|--------------------------------------|--------------------------------|-------|
| Bushing Size                   | 16mm                                 | 19mm                           | 22mm  |
| Actuation                      | Locking/Momentary                    |                                |       |
| Rating                         | 5-24VDC / 1A                         |                                |       |
| Contact Resistance             | 1Ω Max.                              |                                |       |
| Illumination Power Consumption | 10mA Max.                            |                                |       |
| Operating Life                 | 50 Million Cycles.                   |                                |       |
| Sealing                        | Silicone, Epoxy.                     |                                |       |
| Wire Leads                     | 26AWG<br>500mm+2.54 2x3<br>Connector | 26AWG 500mm+2.54 1x6 Connector |       |
| Lead Length                    | 500mm                                |                                |       |
| Packaging                      | ESD Bag, Paper Box                   |                                |       |

**Circuits:**

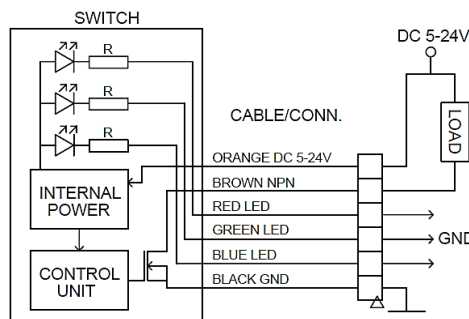
-“**D**” Color LED RGB (Red + Green + Blue) application diagram (Only for 16mm Bushing)



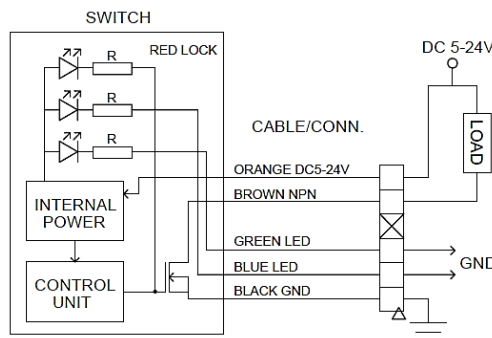
-“**3**” Color LED Red Lock (Green + Blue) application diagram (Only for 16mm Bushing)



-“**D**” Color LED RGB (Red + Green + Blue) application diagram (Only for 19/22mm Bushing)



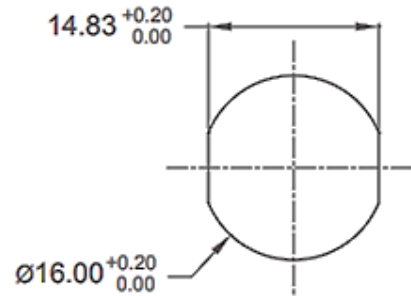
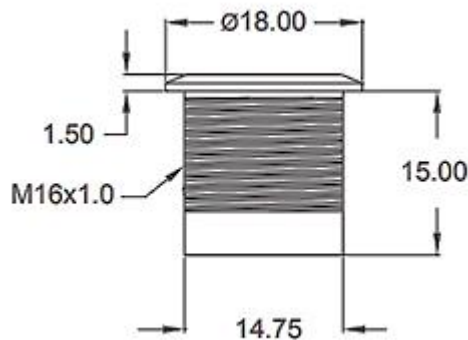
-“**3**” Color LED Red Lock (Green + Blue) application diagram (Only for 19/22mm Bushing)



### Bushings and Button Types:

-16mm, Flat Button

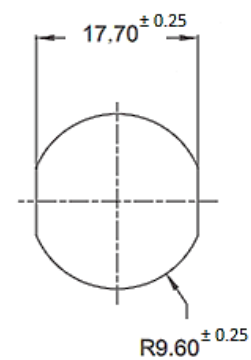
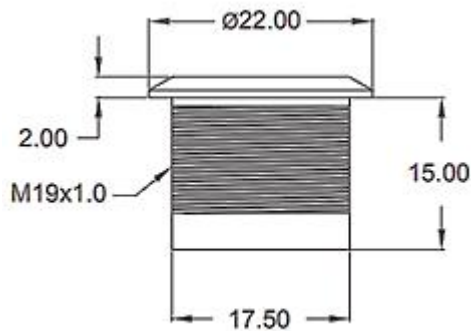
Panel Cut-out



Max. Panel Thickness: 8.0mm

-19mm, Flat Button

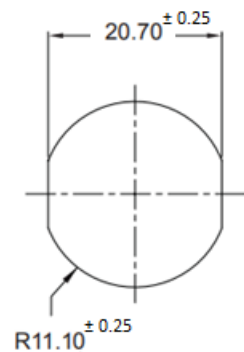
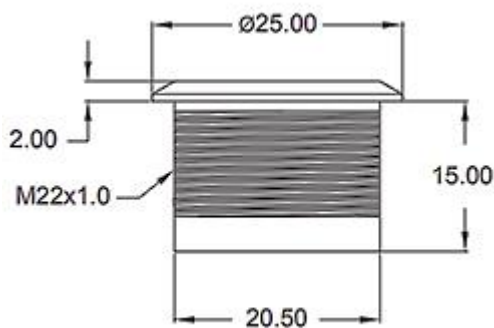
Panel Cut-out



Max. Panel Thickness: 10.0mm

-22mm, Flat Button

Panel Cut-out

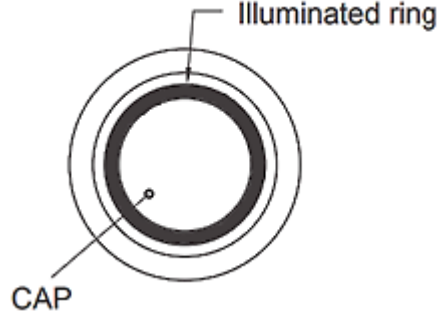
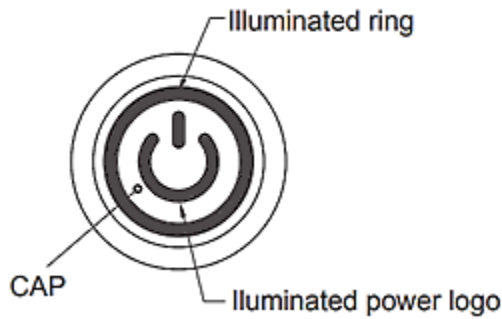


Max. Panel Thickness: 10.0mm

**Light Types:**

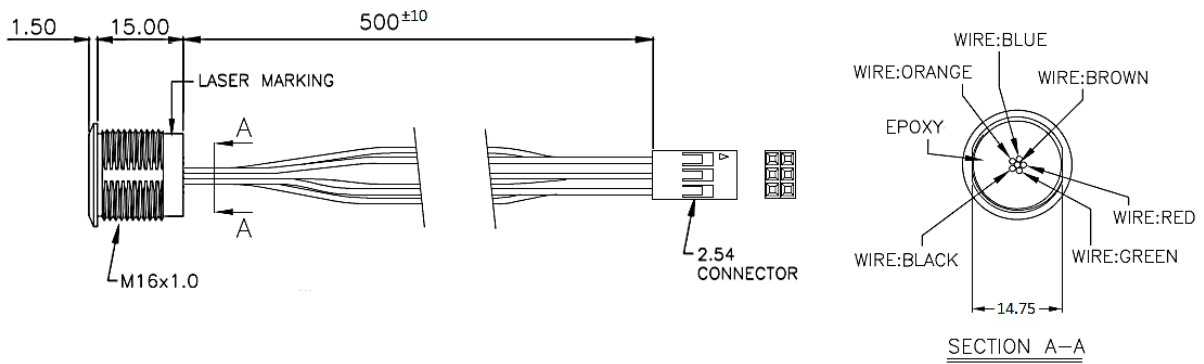
-“E1” Illuminated Ring and Power logo

-“EO” Illuminated Ring

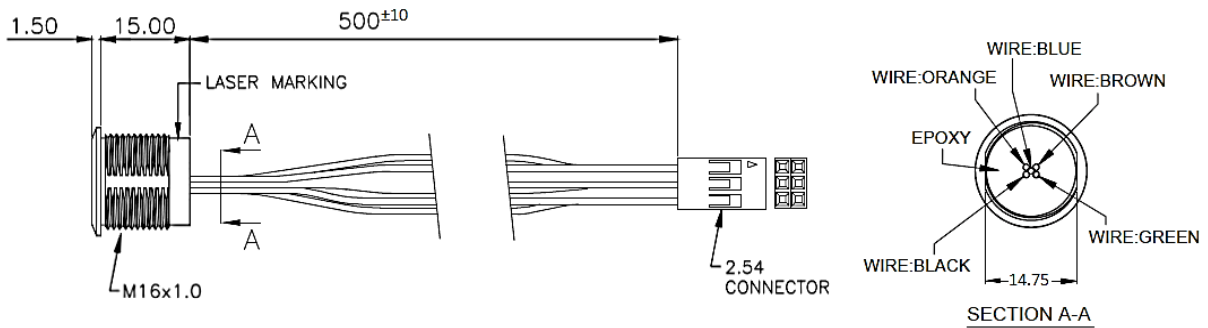


**Wire leads:**

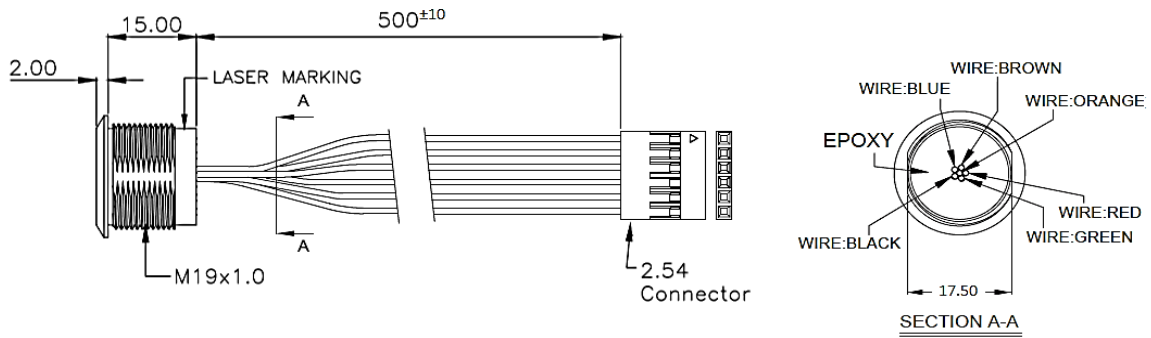
-“F” 16mm Bushing, Flat Button, LED Color: RGB (Red + Green + Blue)



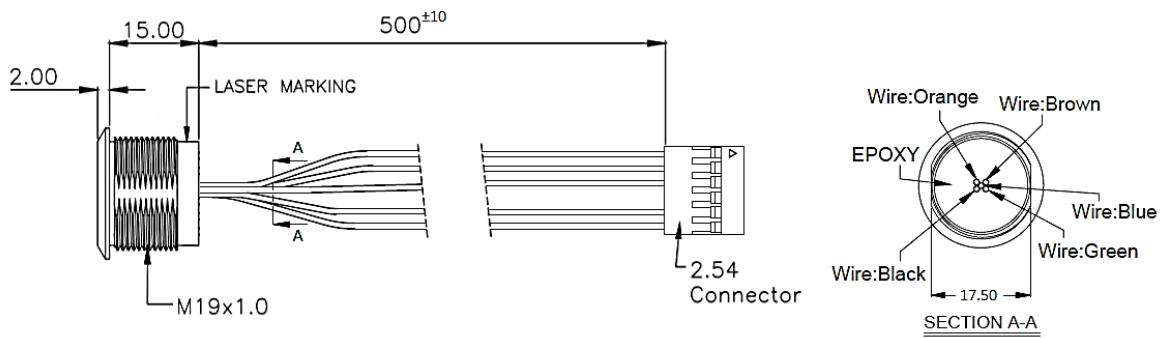
-“F” 16mm Bushing, Flat Button, LED Color: Red Lock (Green + Blue)



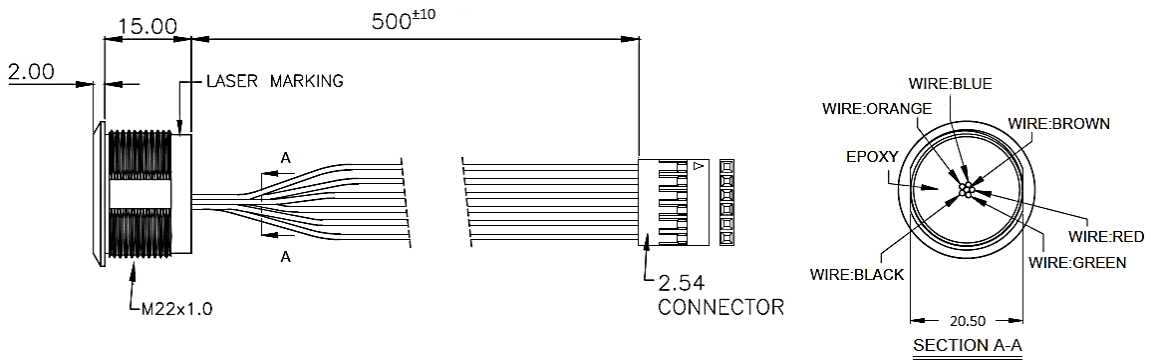
-“F” 19mm Bushing, Flat Button, LED Color: RGB (Red + Green + Blue)



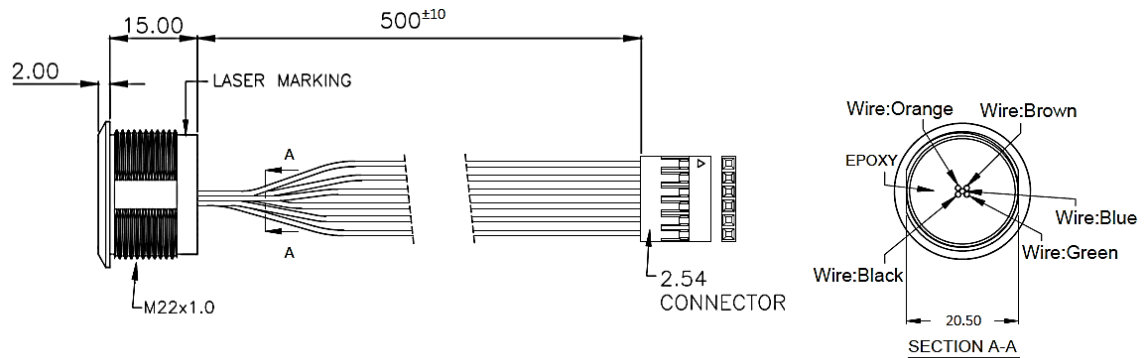
-“F” 19mm Bushing, Flat Button, LED Color: Red Lock (Green + Blue)



-“F” 22mm Bushing, Flat Button, LED Color: RGB (Red + Green + Blue)



-“F” 22mm Bushing, Flat Button, LED Color: Red Lock (Green + Blue)





**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.

**3. Type of Actuation:** Locking / Momentary

**4. Test Sequence:**

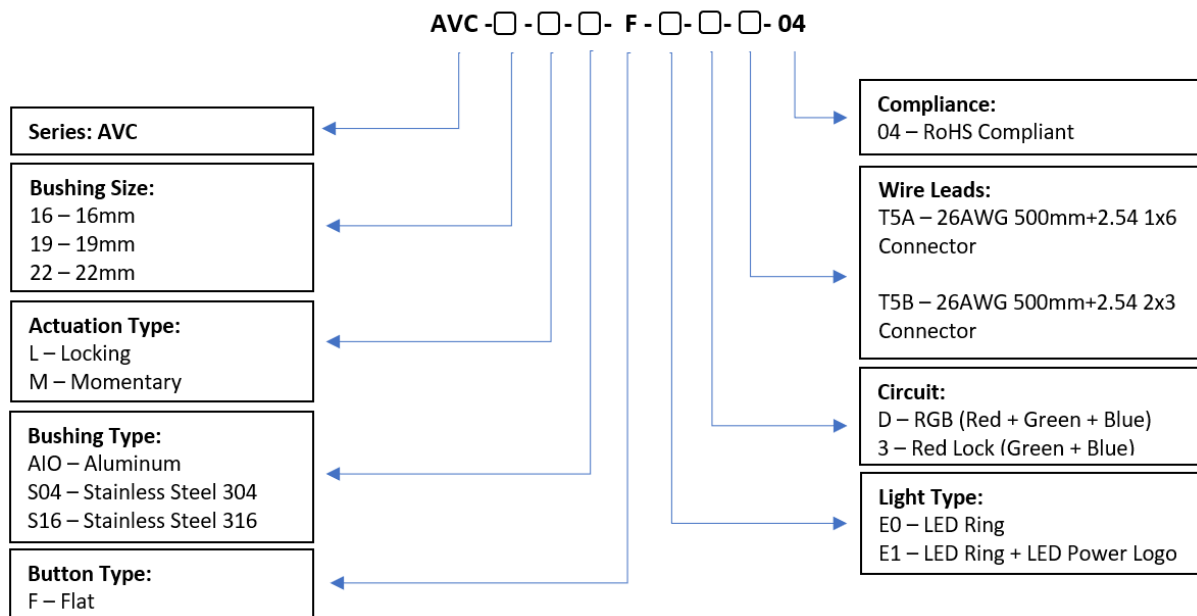
|                        | Item | Description                        | Test Conditions                                              | Requirements                                                          |
|------------------------|------|------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------|
| 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                     | 1 Hour with 5Ω resistor.                                     | 1A / 5VDC.                                                            |
|                        | 4    | Power consumption w/o illumination | Without LED                                                  | 2mA Max.                                                              |
|                        | 5    | Illumination power consumption     | Red, Green and Blue Color (RGB) illumination                 | 10mA Max.                                                             |
|                        | 6    | Operating life                     | Life cycle tester with Touch pen                             | 50 Million cycles.                                                    |
|                        | 7    | Cable retention force to switch    | Force Analyzer                                               | 10KG Min.                                                             |



|                         |    |                       |                                                                                                                                                                                                                                                                                             |                                                                               |
|-------------------------|----|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Environmental Endurance | 9  | Operating temperature | 1) Low Temperature: -20±3°C, 96 Hours.<br>2) High temperature: 65±3°C, 96 Hours.                                                                                                                                                                                                            | As shown in items 2 to 6.                                                     |
|                         | 10 | IP68                  | As per parameters specified by IEC 60529 standards.                                                                                                                                                                                                                                         | Pass.                                                                         |
|                         | 11 | 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:<br>1) Temperature: 35±2°C<br>2) The ratio of salt-water: 5%.<br>3) The spray amount of salt-water: 1 to 2 ml/h.<br>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: AVC16LAIIOFE1DT5B04



**PN List**

| Smart PN           | Bushing Size | Actuation Type | Bushing Type        | LED Illumination | Circuit  | Wire Leads     | MOQ | TE PN     |
|--------------------|--------------|----------------|---------------------|------------------|----------|----------------|-----|-----------|
| AVC16LAIOFE1DT5B04 | 16mm         | Locking        | Aluminum            | Ring + Logo      | RGB      | 500mm+2.54 2x3 | 100 | 2342833-1 |
| AVC16LAIOFE13T5B04 | 16mm         | Locking        | Aluminum            | Ring + Logo      | Red Lock | 500mm+2.54 2x3 | 100 | 2342833-2 |
| AVC16LAIOFE0DT5B04 | 16mm         | Locking        | Aluminum            | Ring             | RGB      | 500mm+2.54 2x3 | 100 | 2342832-1 |
| AVC16LAIOFE03T5B04 | 16mm         | Locking        | Aluminum            | Ring             | Red Lock | 500mm+2.54 2x3 | 100 | 2342832-2 |
| AVC16LS04FE1DT5B04 | 16mm         | Locking        | Stainless Steel 304 | Ring + Logo      | RGB      | 500mm+2.54 2x3 | 100 | 2342833-3 |
| AVC16LS04FE13T5B04 | 16mm         | Locking        | Stainless Steel 304 | Ring + Logo      | Red Lock | 500mm+2.54 2x3 | 100 | 2342833-4 |
| AVC16LS04FE0DT5B04 | 16mm         | Locking        | Stainless Steel 304 | Ring             | RGB      | 500mm+2.54 2x3 | 100 | 2342832-3 |
| AVC16LS04FE03T5B04 | 16mm         | Locking        | Stainless Steel 304 | Ring             | Red Lock | 500mm+2.54 2x3 | 100 | 2342832-4 |
| AVC16LS16FE1DT5B04 | 16mm         | Locking        | Stainless Steel 316 | Ring + Logo      | RGB      | 500mm+2.54 2x3 | 100 | 2342833-5 |
| AVC16LS16FE13T5B04 | 16mm         | Locking        | Stainless Steel 316 | Ring + Logo      | Red Lock | 500mm+2.54 2x3 | 100 | 2342833-6 |
| AVC16LS16FE0DT5B04 | 16mm         | Locking        | Stainless Steel 316 | Ring             | RGB      | 500mm+2.54 2x3 | 100 | 2342832-5 |
| AVC16LS16FE03T5B04 | 16mm         | Locking        | Stainless Steel 316 | Ring             | Red Lock | 500mm+2.54 2x3 | 100 | 2342832-6 |
| AVC16MAIOFE1DT5B04 | 16mm         | Momentary      | Aluminum            | Ring + Logo      | RGB      | 500mm+2.54 2x3 | 100 | 2342833-7 |
| AVC16MAIOFE0DT5B04 | 16mm         | Momentary      | Aluminum            | Ring             | RGB      | 500mm+2.54 2x3 | 100 | 2342832-7 |
| AVC16MS04FE1DT5B04 | 16mm         | Momentary      | Stainless Steel 304 | Ring + Logo      | RGB      | 500mm+2.54 2x3 | 100 | 2342833-8 |
| AVC16MS04FE0DT5B04 | 16mm         | Momentary      | Stainless Steel 304 | Ring             | RGB      | 500mm+2.54 2x3 | 100 | 2342832-8 |
| AVC16MS16FE1DT5B04 | 16mm         | Momentary      | Stainless Steel 316 | Ring + Logo      | RGB      | 500mm+2.54 2x3 | 100 | 2342833-9 |
| AVC16MS16FE0DT5B04 | 16mm         | Momentary      | Stainless Steel 316 | Ring             | RGB      | 500mm+2.54 2x3 | 100 | 2342832-9 |
| AVC19LAIOFE1DT5A04 | 19mm         | Locking        | Aluminum            | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342835-1 |
| AVC19LAIOFE13T5A04 | 19mm         | Locking        | Aluminum            | Ring + Logo      | Red Lock | 500mm+2.54 1x6 | 100 | 2342835-2 |
| AVC19LAIOFE0DT5A04 | 19mm         | Locking        | Aluminum            | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342834-1 |
| AVC19LAIOFE03T5A04 | 19mm         | Locking        | Aluminum            | Ring             | Red Lock | 500mm+2.54 1x6 | 100 | 2342834-2 |
| AVC19LS04FE1DT5A04 | 19mm         | Locking        | Stainless Steel 304 | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342835-3 |
| AVC19LS04FE13T5A04 | 19mm         | Locking        | Stainless Steel 304 | Ring + Logo      | Red Lock | 500mm+2.54 1x6 | 100 | 2342835-4 |
| AVC19LS04FE0DT5A04 | 19mm         | Locking        | Stainless Steel 304 | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342834-3 |
| AVC19LS04FE03T5A04 | 19mm         | Locking        | Stainless Steel 304 | Ring             | Red Lock | 500mm+2.54 1x6 | 100 | 2342834-4 |
| AVC19LS16FE1DT5A04 | 19mm         | Locking        | Stainless Steel 316 | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342835-5 |
| AVC19LS16FE13T5A04 | 19mm         | Locking        | Stainless Steel 316 | Ring + Logo      | Red Lock | 500mm+2.54 1x6 | 100 | 2342835-6 |
| AVC19LS16FE0DT5A04 | 19mm         | Locking        | Stainless Steel 316 | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342834-5 |
| AVC19LS16FE03T5A04 | 19mm         | Locking        | Stainless Steel 316 | Ring             | Red Lock | 500mm+2.54 1x6 | 100 | 2342834-6 |
| AVC19MAIOFE1DT5A04 | 19mm         | Momentary      | Aluminum            | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342835-7 |
| AVC19MAIOFE0DT5A04 | 19mm         | Momentary      | Aluminum            | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342834-7 |
| AVC19MS04FE1DT5A04 | 19mm         | Momentary      | Stainless Steel 304 | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342835-8 |
| AVC19MS04FE0DT5A04 | 19mm         | Momentary      | Stainless Steel 304 | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342834-8 |
| AVC19MS16FE1DT5A04 | 19mm         | Momentary      | Stainless Steel 316 | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342835-9 |
| AVC19MS16FE0DT5A04 | 19mm         | Momentary      | Stainless Steel 316 | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342834-9 |
| AVC22LAIOFE1DT5A04 | 22mm         | Locking        | Aluminum            | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342837-1 |
| AVC22LAIOFE13T5A04 | 22mm         | Locking        | Aluminum            | Ring + Logo      | Red Lock | 500mm+2.54 1x6 | 100 | 2342837-2 |
| AVC22LAIOFE0DT5A04 | 22mm         | Locking        | Aluminum            | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342836-1 |
| AVC22LAIOFE03T5A04 | 22mm         | Locking        | Aluminum            | Ring             | Red Lock | 500mm+2.54 1x6 | 100 | 2342836-2 |
| AVC22LS04FE1DT5A04 | 22mm         | Locking        | Stainless Steel 304 | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342837-3 |
| AVC22LS04FE13T5A04 | 22mm         | Locking        | Stainless Steel 304 | Ring + Logo      | Red Lock | 500mm+2.54 1x6 | 100 | 2342837-4 |
| AVC22LS04FE0DT5A04 | 22mm         | Locking        | Stainless Steel 304 | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342836-3 |
| AVC22LS04FE03T5A04 | 22mm         | Locking        | Stainless Steel 304 | Ring             | Red Lock | 500mm+2.54 1x6 | 100 | 2342836-4 |
| AVC22LS16FE1DT5A04 | 22mm         | Locking        | Stainless Steel 316 | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342837-5 |
| AVC22LS16FE13T5A04 | 22mm         | Locking        | Stainless Steel 316 | Ring + Logo      | Red Lock | 500mm+2.54 1x6 | 100 | 2342837-6 |
| AVC22LS16FE0DT5A04 | 22mm         | Locking        | Stainless Steel 316 | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342836-5 |
| AVC22LS16FE03T5A04 | 22mm         | Locking        | Stainless Steel 316 | Ring             | Red Lock | 500mm+2.54 1x6 | 100 | 2342836-6 |
| AVC22MAIOFE1DT5A04 | 22mm         | Momentary      | Aluminum            | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342837-7 |
| AVC22MAIOFE0DT5A04 | 22mm         | Momentary      | Aluminum            | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342836-7 |
| AVC22MS04FE1DT5A04 | 22mm         | Momentary      | Stainless Steel 304 | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342837-8 |
| AVC22MS04FE0DT5A04 | 22mm         | Momentary      | Stainless Steel 304 | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342836-8 |
| AVC22MS16FE1DT5A04 | 22mm         | Momentary      | Stainless Steel 316 | Ring + Logo      | RGB      | 500mm+2.54 1x6 | 100 | 2342837-9 |
| AVC22MS16FE0DT5A04 | 22mm         | Momentary      | Stainless Steel 316 | Ring             | RGB      | 500mm+2.54 1x6 | 100 | 2342836-9 |