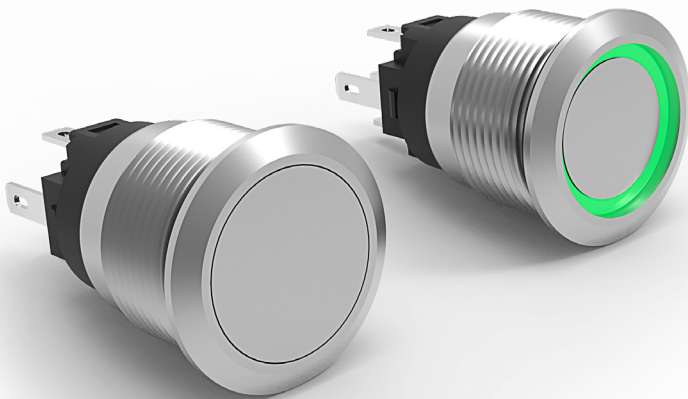
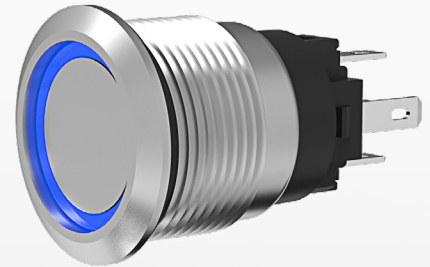


# AV/AVH-Series

Sealed Anti-Vandal Pushbutton Switches

**PRODUCT WEBPAGE**

*request sample, configure part, watch video*



The high powered AVH-Series also features ratings up to 30 amps, and safeguards internal switch circuitry with integrated overload protection and thermal cut off, while providing superior safety and performance capabilities. Switching options include ON-OFF, as well as progressive circuits perfectly suited for NAV/ANCHOR functions.

**1**

Pole

**3-30**

Amps

**6-48**

VDC

**IP67 Sealing**

Above-Panel

## Typical Applications

- Marine
- Security Panels
- Traffic Signals
- Harsh and/or Outdoor Environments
- Industrial Controls
- Public Transit Systems
- Emergency Phones

# Tech Specs

## AV-Series

### Electrical

Contact Rating	10.1A Resistive @ 12VDC
LED Ratings	12 VAC/DC @ 15mA
Dielectric Strength	1000V RMS 50-60 Hz
Insulation Resistance	50 M-ohms min. @500V DC
Initial Contact Endurance	≤10 mΩ
Electrical Endurance	Up to 25K Cycles
Contacts	Silver alloy
Terminals	110" x 0.020 [2.79 x 0.5 mm] plug-in terminal, copper alloy silver plate.

### Physical

Function	NO / NC contact (changeover)
Operation	Momentary or maintained
Illumination	Independent LED (Red, Green, Amber, White, Blue)
Seals	Silicone, Bezel and Button
Mounting	M19-P1.0 Nut (SUS316), Tightening torque: 2~3Nm
Base	Glass filled Nylon
Actuator	Stainless Steel 316
Lens	Polycarbonate, PC
Bushing	Stainless Steel 316
Actuation Force	7N max
Weight	18g

### Environmental

Storage Temperature	-55°C to +85°C
Operating Temperature	-30°C to +70°C (may affect endurance)
Vibration, High Frequency	Mil-Std 202G, Method 204D, Test Condition A 0.06 DA or 10G' s 10-500 Hz. Test criteria- No loss of circuit during test and pre and post test contact resistance.
Vibration, Random	Mil-Std 202G, Method 214A, Test Condition I and B 7.56G' s RMS. 8-hours in each of the 3 mutually perpendicular axes. Test criteria- No loss of circuit during test and pre and post test contact resistance.
Thermal Shock	MIL-STD 202G Method 107G, Condition A (Five cycles @ -55°C to +25°C to +85°C to +25°C)
Moisture Resistance	MIL-STD 202G Method 106G, i.e. 10~24-hour cycles @ +25°C to +60°C, 80~90% RH.
Sealing	IP67, for above-panel components of the actual switch; compliant with IEC 60529.
Ignition Protection	UL1500, ISO 8846, SAE J1171
Electro-Static Discharge	Compliant with EN61000-4-2 Discharge Level: Max. ±8KV; Discharge Level: Max. ±15KV

# Ordering Scheme

Sample Part Number AV 1 - 1 A 2 1 1 A - R 00

Selection 1 2 3 4 5 6 7 8 9 10

## 1. SERIES

**AV** Anti-Vandal Pushbutton Switch

## 2. MOUNTING

**1** M19 Threaded Bushing

## 3. MATERIAL / FINISH

**1** Stainless Steel Bushing / Button

## 4. CIRCUIT

**A** Momentary NC / NO      **B** Maintained NC / NO

## 5. RATING

<b>1</b> 10.1A Resistive, 6VDC	<b>4</b> 5A Resistive, 36VDC
<b>2</b> 10.1A Resistive, 12VDC	<b>5</b> 3A Resistive, 48VDC
<b>3</b> 10.1A Resistive, 24VDC	

## 6. TERMINATION

**1** .110" Quick Connect Tabs - Silver Plated

## 7. LENS / BUTTON

**1** Flush

## 8. LED COLOR

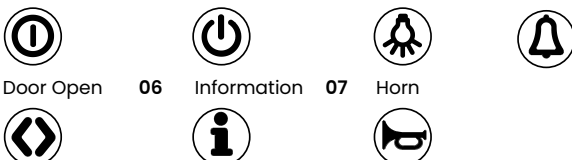
<b>N</b> No LED	<b>B</b> Green	<b>D</b> White
<b>A</b> Red	<b>C</b> Amber	<b>E</b> Blue

## 9. ILLUMINATION STYLE

**N** None      **R** Ring

## 10. AGENCY APPROVAL

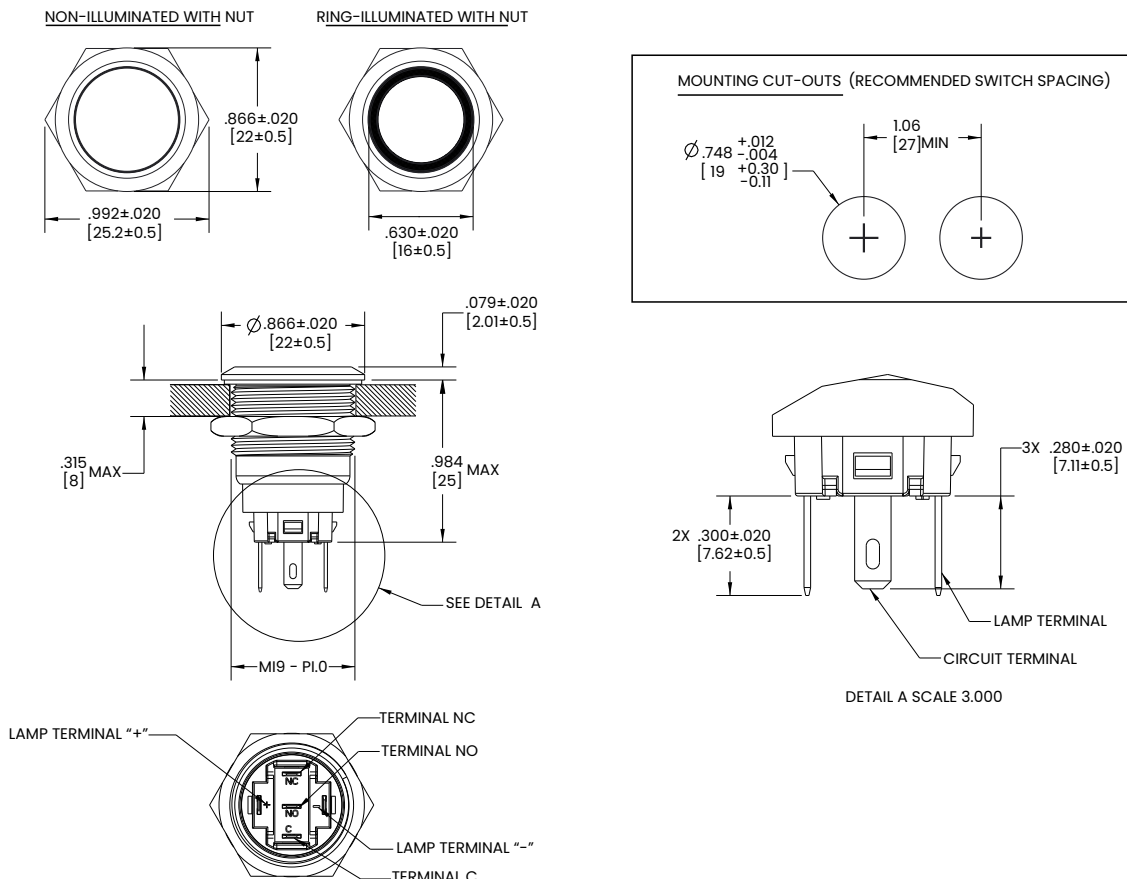
<b>00</b> No Legend	<b>02</b> Stand By	<b>03</b> Light	<b>04</b> Bell
<b>01</b> On/Off	<b>05</b> Door Open	<b>06</b> Information	<b>07</b> Horn



[Configure Complete Part Number >](#)

# Dimensional Specs

inches [millimeters]



# Tech Specs

## AVH-Series

### Electrical

Supply Voltage Range	9VDC – 16VDC
Overtemp. Protection	≥150°C (SmartFET temperature), Latched status signal
Reverse Polarity Protection	16 VDC
Insulation Resistance	50 M-ohms min. @500VDC
Initial Contact Resistance	≤10 mΩ
Electrical Endurance	Up to 50K Cycles

### Circuit B (High-Current Latching) 1

Current Rating	20A 12VDC, 80A surge (300 ms), 14 AWG lead wire 30A 12VDC, 100A surge (300 ms), 12 AWG lead wire Function ON / OFF
Function	ON / OFF
Overload Protection	≥135A, Output does not function. Switch reset by cycling through OFF position (unless overload continues).
Connections	14AWG, 12 AWG Lead Wire (20A, 30A, respectively), 6" Lg. 0.187" PC Quick Connect Terminal Ground Connection.

### Circuit C (Nav-Anchor) 2

Current Rating	10A total, 5A each Output; 10A surge each Output (300 ms)
Function	NAV-ANC, First press: Load 1 ON & Load 2 ON, Red Ring Illuminated Second press: Load 1 ON, Load 2 OFF, Blue Ring Illuminated Third Press: OFF
Overload Protection	≥60A, Output does not function Switch reset by cycling through OFF position (unless overload continues).
Connections	16AWG, 5A per Output, 6" Lg. 0.187" PC Quick Connect Terminal Ground Connection.

### Circuit D (Dual-Output) 2

Current Rating	10A total, 5A each Output; 10A surge each Output (300 ms)
Function	First press: OFF Second press: Load 1 ON, Load 2 OFF, Red Ring Illuminated Third Press: Load 1 OFF, Load 2 ON, Blue Ring Illuminated.
Overload Protection	≥60A, Output does not function Switch reset by cycling through OFF position (unless overload continues).
Connections	16AWG, 5A per Output, 6" Lg. 0.187" PC Quick Connect Terminal Ground Connection.

### Physical

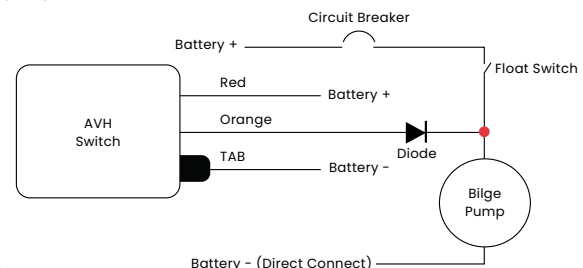
Operation	Push button, Momentary (Circuit C & D), Maintained (Circuit B)
Illumination	Dependent LED
Seals	Gasket, bezel silicone, potted housing
Mounting	M19-P1.0 Nut, Tightening torque: 2-3Nm
Housing	Aluminum 6061 T6, Anodized per MIL-STD-8625, Type II, Class 2; Black
Actuator	Stainless steel 316
Lens	Polycarbonate, PC
Bushing	Stainless steel 316
Actuation Force	7N max
Weight	45-50g

### Environmental

Storage Temperature	-55°C to +85°C
Operating Temperature	-30°C to +70°C (may affect endurance)
Vibration	Mil-Std 202G, Method 204D, Test Condition A 0.06 DA or 10G' s 10-500 Hz. Test criteria - No loss of circuit during test and pre and post test contact resistance.
Vibration, Random	Mil-Std 202G, Method 214A, Test Condition I and B 7.56G' s RMS. 8-hours in each of the 3 mutually perpendicular axes. Test criteria - No loss of circuit during test and pre & post test contact resistance.
Shock	Mil-Std 202G, Method 213B, Test Condition K @ 30g's, 11ms normal duration. No resistance value loss pre and post test and no function malfunction. No loss of contact or unintended contact making.
Thermal Shock	MIL-STD 202G Method 107G, Condition A (Five cycles @ -55°C to +25°C to +85°C to +25°C)
Moisture Resistance	MIL-STD 202G Method 106G, i.e. 10-24-hour cycles @ +25°C to +60°C, 80-90% RH.
Sealing	IP67, for above-panel components of the actual switch compliant with IEC 60529.
Ignition Protection	UL1500, ISO 8846, SAE J1171

#### Notes:

- 1 The switch was designed to directly control the load and is not recommended for any application where the load may be removed via another switch.
- 2 For backfeed protection, it is recommended to use a diode in series for pump control circuits as shown below.



# Ordering Scheme

Sample Part Number **AVH 1 - 1 B 2 6 - R E N A**

Selection 1 2 3 4 5 6 7 8 9 10

## 1. SERIES

**AVH** Anti-Vandal High Current Pushbutton Switch

## 2. MOUNTING

**1** M19 Threaded Bushing

## 3. MATERIAL / FINISH

**1** Stainless Steel Bushing / Button

## 4. CIRCUIT 1,2

<b>B</b>	ON - OFF	(Output 1 - None)	Maintained
<b>C</b>	ON - ON - OFF	(Output 1&2 - Output 1 - None)	Momentary
<b>D</b>	OFF - ON - ON	(None - Output 1 - Output 2)	Momentary

## 5. RATING 3

<b>1</b>	30A 12VDC
<b>2</b>	20A 12VDC
<b>3</b>	5A 12VDC (Per Output) / 10A 12VDC (Total)

## 6. WIRE LENGTH

**6** 6 inches (152.4 mm) with 0.187" (4.8mm) Ground Tab Terminal

## 7. ILLUMINATION STYLE 4

<b>N</b>	None	<b>R</b>	Ring
----------	------	----------	------

## 8. POSITION 1 LED COLOR

<b>N</b>	No LED	<b>B</b>	Green	<b>D</b>	White
<b>A</b>	Red	<b>C</b>	Amber	<b>E</b>	Blue

## 9. POSITION 2 LED COLOR 5,6

<b>N</b>	No LED	<b>E</b>	Blue
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## 10. ILLUMINATION TYPE 7

<b>N</b>	None
<b>A</b>	Dependent (LED illuminates when the specified output is "ON")

### Notes:

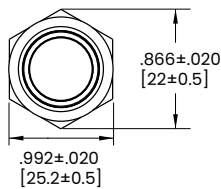
- Circuit code B requires rating code 1 or 2 only.
- Circuit codes C & D require rating code 3.
- Rating will determine the wire gauge used.
- Illumination Style code N requires: Position 1 LED Color N; Position 2 LED Color code N; Illumination Type code N.
- Circuit codes C & D require Position 2 LED color E.
- Circuit code B requires Position 2 LED Color code N.
- Other lighting options available: Consult Manufacturer.

[Configure Complete Part Number >](#)

# Dimensional Specs

inches [millimeters]

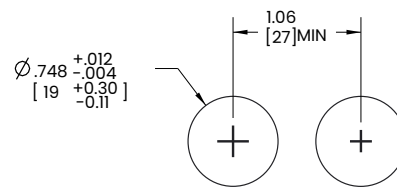
NON-ILLUMINATED WITH NUT



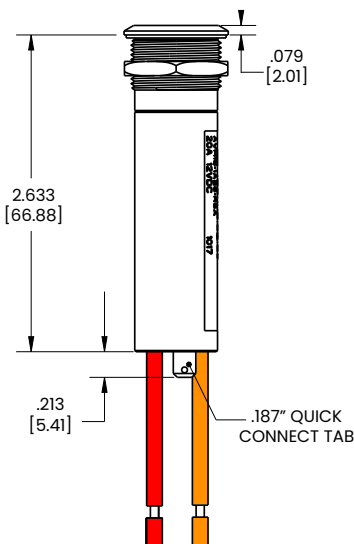
RING-ILLUMINATED WITH NUT



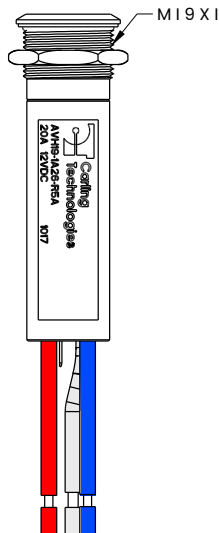
MOUNTING CUT-OUTS (RECOMMENDED SWITCH SPACING)



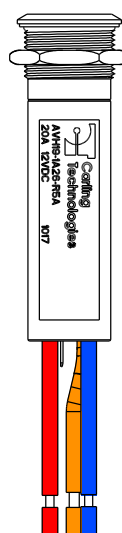
CIRCUIT B



CIRCUIT C



CIRCUIT D



CIRCUIT B:	BATTERY (+):	RED WIRE
	LOAD 1:	ORANGE WIRE
	GROUND:	TAB OR BLACK
CIRCUIT C:	BATTERY (+):	RED WIRE
	LOAD 1:	BLUE WIRE
	LOAD 2:	WHITE WIRE
	GROUND:	TAB
CIRCUIT D:	BATTERY (+):	RED WIRE
	LOAD 1:	BLUE WIRE
	LOAD 2:	ORANGE WIRE
	GROUND:	TAB

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