



lan:ir[®]

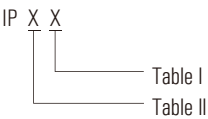
Anti vandal switch
www.langir.com

Anti-vandal series comparison

	Cutout Diameter / Depth	Functions available	Terminal type	Actuator options	Material Options		Illum. Options		Ring illumination	Bi-Color illumination	Water resistant (IP65 Min.)	RoHS compliant
					Nickel plated brass	Gold plated brass	Anodized aluminum	Stainless steel				
	V19 Vs19 short body Diameter: 19mm Max. Depth: 10mm	1 Pole: Off-(On) On-(Off)	Screw Solder	High Flat Domed	•	•	•	•			•	•
	V16 Diameter: 16mm Max. Depth: 6mm	1 Pole: Off-(On) On-(Off)	Screw Solder	High Flat Domed	•	•	•	•			•	•
	L16 Diameter: 16mm Max. Depth: 10mm	1 Pole: On-On On-(On) 2 Pole: On-On On-(On)	Solder	High Flat Concave Guarded	•	•	•	•	•	•	•	•
	L19 L19A Ls19 L19M Micro trip L19B High current L19Y High current for Marine Diameter: 19mm Max. current 21A Max. Depth: 10mm	1 Pole: On-On On-(On) 2 Pole: On-On On-(On) 1P Off-(On) + 1P On-(Off)	Screw Solder	Flat			•	•	•	•	•	•
	V22 Diameter: 22mm Max. Depth: 10mm	1 Pole: Off-(On) On-(Off)	Screw Solder	High Flat Domed	•	•	•	•			•	•
	V12 Diameter: 12mm Max. Depth: 6mm	1 Pole: Off-(On)	Screw Solder	Domed High	•		•	•			•	•
	Ls16 Diameter: 16mm Max. Depth: 9mm	1 Pole: Off-(On)	Solder	Flat	•		•	•	•	•	•	•
	L22 L22A L22B High current L22M Micro-trip Diameter: 22mm Max. current 21A Max. Depth: 10mm	2 Pole: 1P Off-(On) + 1P On-(Off)	Screw Solder	Flat			•	•	•	•	•	•
	L25 Diameter: 25mm Max. Depth: 12mm	2 Pole: 1P Off-(On) + 1P On-(Off) 4 Pole: 2P Off-(On) + 2P On-(Off)	Solder	Flat			•	•	•	•	•	•

Anti vandal switch

Degree of protection to EN60529/DIN 0470



IP Ratings Guide

The IP classification system designates the degree of protection provided by an enclosure against solid objects or water ingress. Table shows degrees of protection against solid objects. Table II shows degrees of protection against water.



Table I (1st characteristic numeral)
Degree of Protection against solid objects

Digit	
0	Non-protected
1	Protected against a solid object greater than 50mm, such as a hand.
2	Protected against a solid object greater than 12.5mm, such as a finger.
3	Protected against a solid object greater than 2.5mm, such as wire or a tool.
4	Protected against a solid object greater than 1.0mm, such as wire or thin strips.
5	Dust-protected. Prevents ingress of dust sufficient to cause harm.
6	Dust tight. No ingress of dust.

Table II (2nd characteristic numeral)
Degree of Protection against water

Digit	
0	Non-protected
1	Protected against dripping water.
2	Protected against dripping water when tilted up to 15°.
3	Protected against spraying water at an angle of up to 60°.
4	Protected against splashing water from any direction.
5	Protected against jets of water from any direction.
6	Protected against heavy seas or powerful jets of water. Prevents ingress sufficient to cause harm.
7	Protected against the effects of temporary immersion in water.
8	Protected against the effects of continuous immersion in water.

IK CODE	MECHANICAL IMPACT RESISTANCE
00	Unprotected
01	Impact = 0.15 joule
02	Impact = 0.20 joule
03	Impact = 0.35 joule
04	Impact = 0.50 joule
05	Impact = 0.70 joule
06	Impact = 1 joule
07	Impact = 2 joule
08	Impact = 5 joule
09	Impact = 10 joule
10	Impact = 20 joule



Non-Illuminated

Anti vandal switch $\varnothing 12\text{mm}$

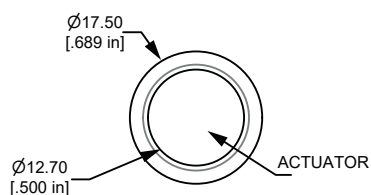


- Anti-Vandal IK09/ Sealed IP65
- 1,000,000 Cycles Momentary
- Variety Of Colors

ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Actuator Color Options
☐ V12	☐ B- Round	☐ P- Solder lug(2.0x0.5) ☐ NONE- Screw	☐ NONE- Momentary ☐ 1NO	☐ S- Stainless steel ☐ N- Nickel plated brass ☐ A- Zn-Al alloy black color	☐ W- White ☐ Y- Yellow ☐ B- Blue ☐ G- Green ☐ R- Red ☐ BK- Black

DESCRIPTION

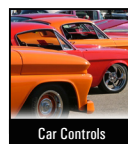
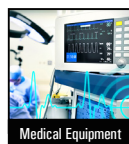
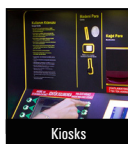
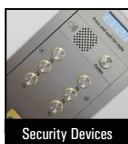


Panel Thickness: 1~4.0mm

TECHNICAL DATA

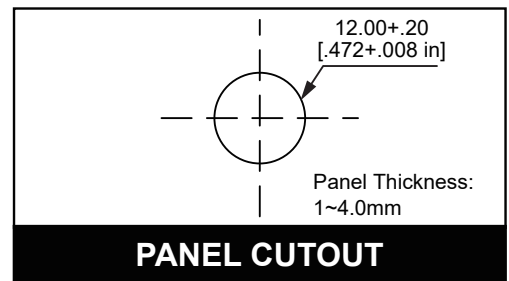
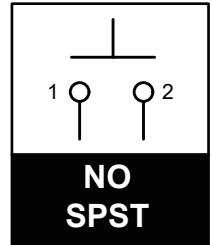
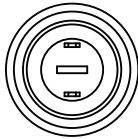
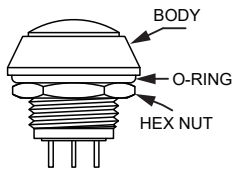
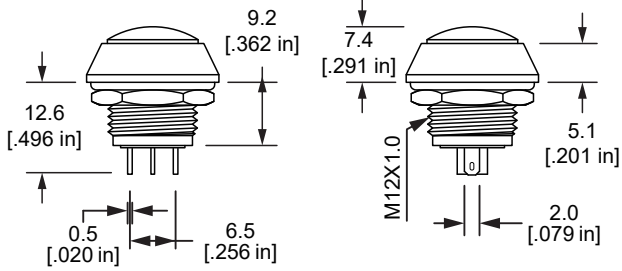
Type	V12-B-S	V12-B-N	V12-B-A
Illuminated Options	Non-illuminated		
Front Shape	Round		
Terminal	Screw/ Solder (2.0X0.5)		
Max. Switch Rating	2A 48VDC		
Contact Resistance	$\leq 50\text{m}\Omega$		
Insulation Resistance	$\geq 1000\text{m}\Omega$		
Dielectric Strength	2000VAC		
Operation Temp.	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	200,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 5N		
Protection	IP65/ IK08		
Material			
Actuator	Stainless Steel/ Brass/ PBT		
Body	Stainless Steel	Nickel plated brass	Zin-Al Alloy
Base	PBT		
Color	R G Y O B W BK		

APPLICATIONS / MARKETS

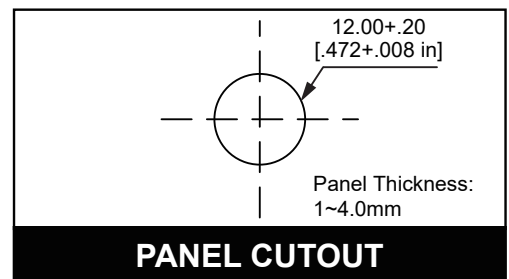
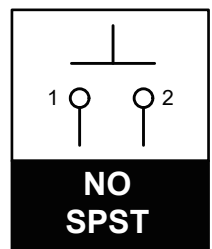
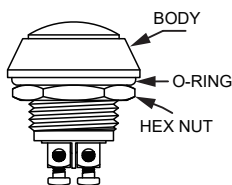
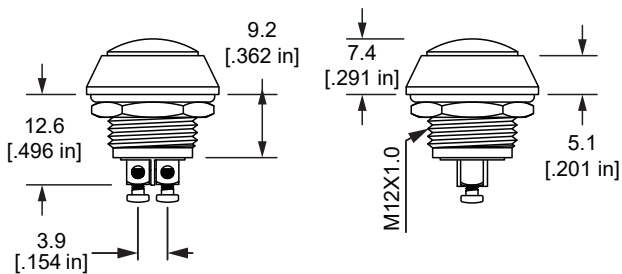


Anti vandal switch $\phi 12\text{mm}$

SOLDER TERMINAL



SCREW TERMINAL



Anti vandal switch $\varnothing 16\text{mm}$

APPLICATIONS / MARKETS



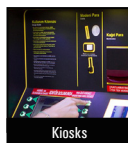
Yacht Controls



Security Devices



Industrial Controls



Kiosks



Electrical Housewares



Medical Equipment



Parking



Audio/ Visual



Kitchen



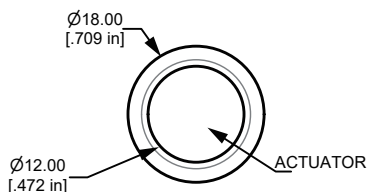
Car Controls



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Graphic Options
☐	☐	☐	☐	☐	☐
V16	F- Flat H- High B- Domed	P- Solder lug (2.8x0.5) NONE- Screw	Momentary 1- NO 2- NC	S- Stainless steel N- Nickel plated brass A- Anodized aluminum G- Gold plated brass	NONE- Non-marking LE- Laser etched

DESCRIPTION

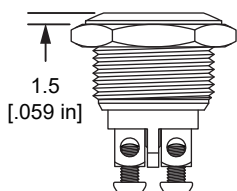


Panel Thickness: 1~6mm

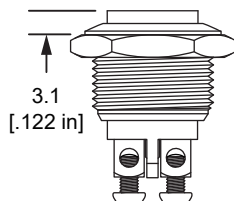
TECHNICAL DATA

Type	V16-F	V16-B	V16-H
Actuator Options	Flat Actuator	Domed Actuator	High Actuator
Terminal	Screw/ Solder (2.8X0.5)		
Max.Switch Rating	2A 48VDC		
Contact Resistance	$\leq 50\text{m}\Omega$		
Insulation Resistance	$\geq 1000\text{m}\Omega$		
Dielectric Strength	2000VAC		
Operation Temp	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	200,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 4N		
Protection	IP65/ IK08		
Material			
Actuator	Stainless steel/ Gold or Nickel plated brass/ Anodized aluminum		
Body	Stainless steel/ Gold or Nickel plated brass/ Anodized aluminum		
Base	PBT		

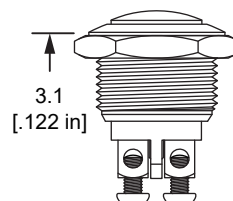
ACTUATOR OPTIONS



Flat Actuator



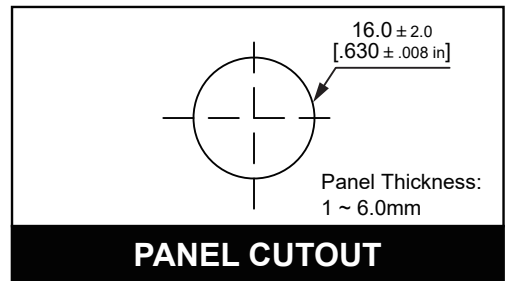
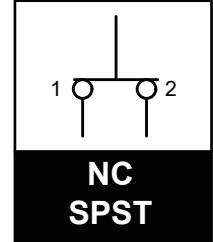
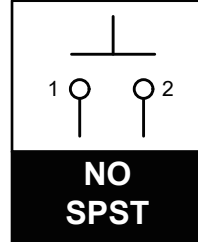
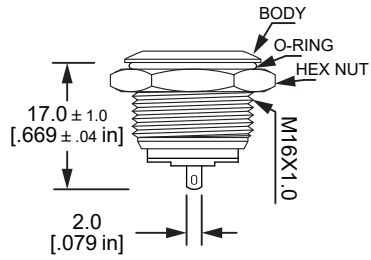
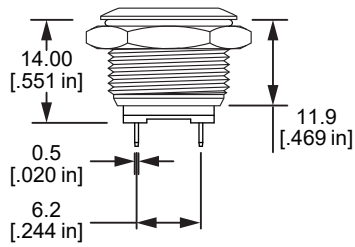
High Actuator



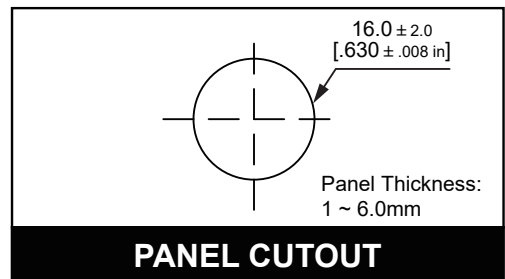
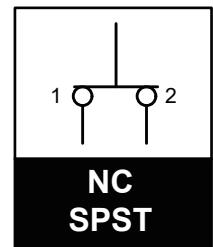
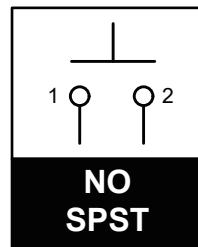
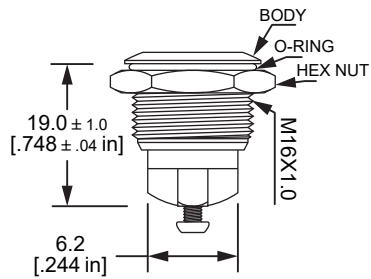
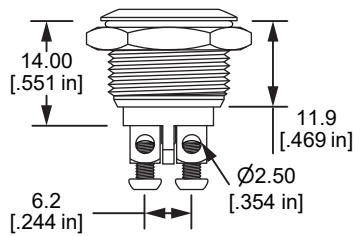
Domed Actuator

Anti vandal switch $\varnothing 16\text{mm}$

SOLDER TERMINAL



SCREW TERMINAL



Anti vandal switch $\varnothing 19\text{mm}$

APPLICATIONS / MARKETS



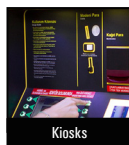
Yacht Controls



Security Devices



Industrial Controls



Kiosks



Electrical Housewares



Medical Equipment



Parking



Audio/ Visual



Kitchen



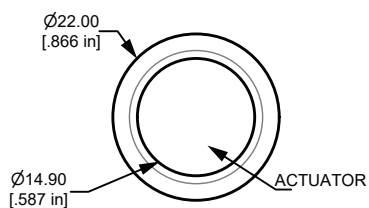
Car Controls



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Graphic Options
☐	☐	☐	☐	☐	☐
V19	F- Flat H- High B- Domed	P- Solder lug (2.8x0.5) NONE- Screw	Momentary 1- NO	S- Stainless steel N- Nickel plated brass A- Anodized aluminum G- Gold plated brass	NONE- Non-marking LE- Laser etched

DESCRIPTION

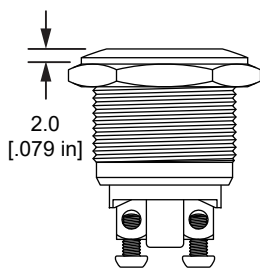


Panel Thickness: 1~8mm

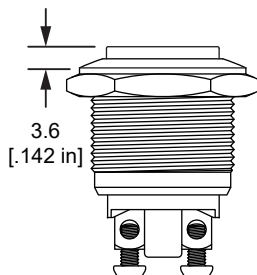
TECHNICAL DATA

Type	V19-F	V19-B	V19-H
Actuator Options	Flat Actuator	Domed Actuator	High Actuator
Terminal	Screw/ Solder (2.8X0.5)		
Max.Switch Rating	2A 48VDC		
Contact Resistance	$\leq 50\text{m}\Omega$		
Insulation Resistance	$\geq 1000\text{m}\Omega$		
Dielectric Strength	2000VAC		
Operation Temp	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	200,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 4N		
Protection	IP65/ IK08		
Material			
Actuator	Stainless steel/ Gold or Nickel plated brass/ Anodized aluminum		
Body	Stainless steel/ Gold or Nickel plated brass/ Anodized aluminum		
Base	PBT		

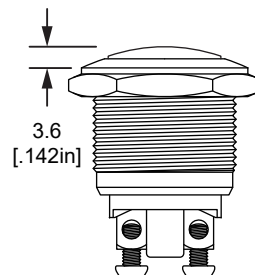
ACTUATOR OPTIONS



Flat Actuator



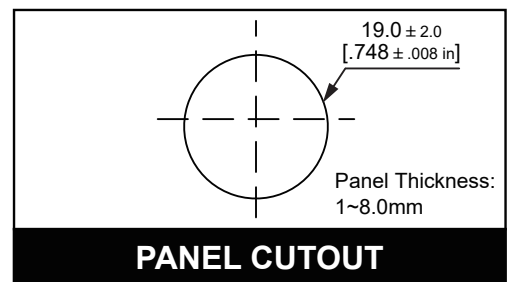
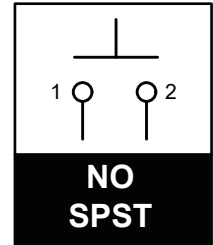
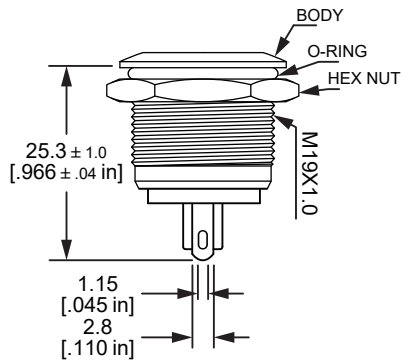
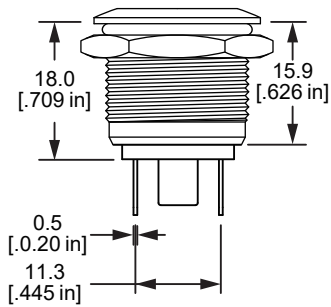
High Actuator



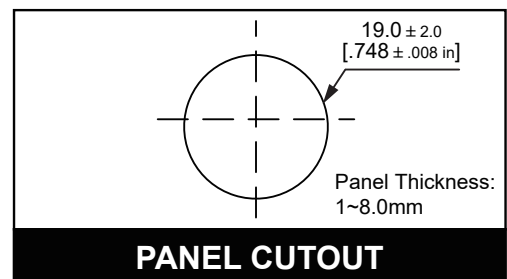
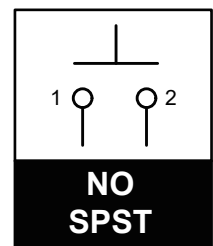
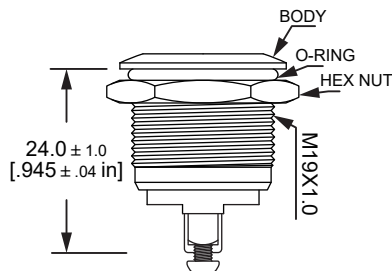
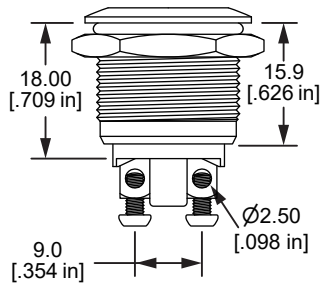
Domed Actuator

Anti vandal switch $\varnothing 19\text{mm}$

SOLDER TERMINAL

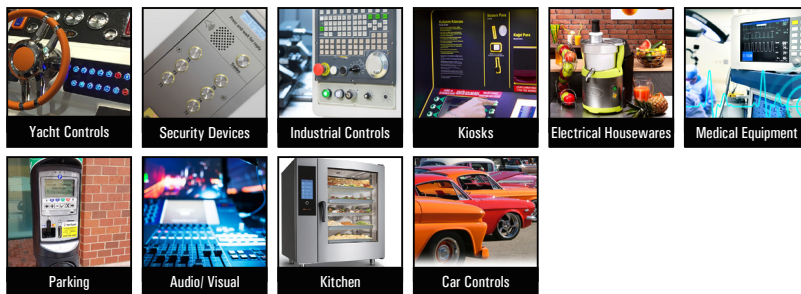


SCREW TERMINAL



Anti vandal switch $\varnothing 19\text{mm}$ (Short body)

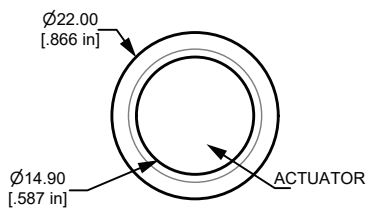
APPLICATIONS / MARKETS



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Graphic Options
☐ Vs19	☐ F- Flat ☐ H- High ☐ B- Domed	☐ P- Solder lug (2.8x0.5) ☐ NONE- Screw	☐ Momentary ☐ 1- NO ☐ 2- NC	☐ S- Stainless steel ☐ N- Nickel plated brass ☐ A- Anodized aluminum	☐ ☐ ☐ NONE- Non-marking LE- Laser etched

DESCRIPTION

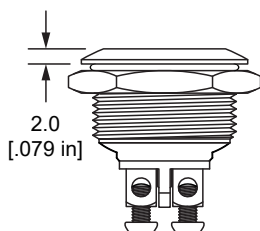


Panel Thickness: 1~6mm

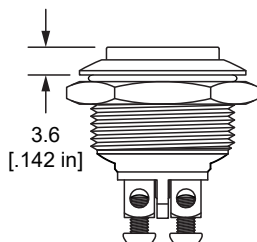
TECHNICAL DATA

Type	Vs19-F	Vs19-B	Vs19-H
Actuator Options	Flat Actuator	Domed Actuator	High Actuator
Terminal	Screw/ Solder (2.8X0.5)		
Max.Switch Rating	2A 48VDC		
Contact Resistance	$\leq 50\text{m}\Omega$		
Insulation Resistance	$\geq 1000\text{m}\Omega$		
Dielectric Strength	2000VAC		
Operation Temp	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	200,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 4N		
Protection	IP65/ IK08		
Material			
Actuator	Stainless steel/ Nickel plated brass/ Anodized aluminum		
Body	Stainless steel/ Nickel plated brass/ Anodized aluminum		
Base	PBT		

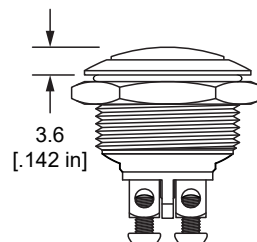
ACTUATOR OPTIONS



Flat Actuator



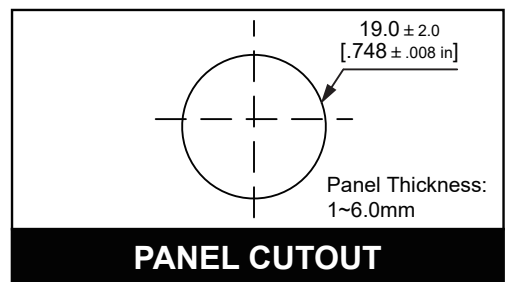
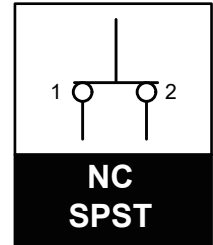
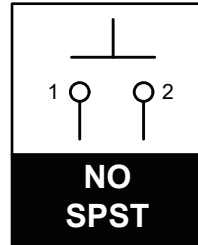
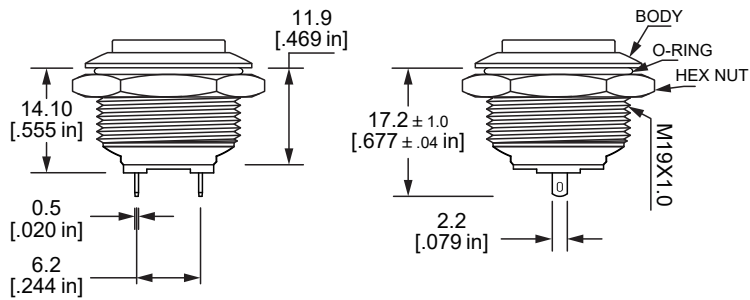
High Actuator



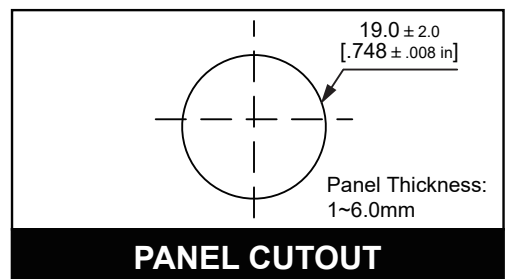
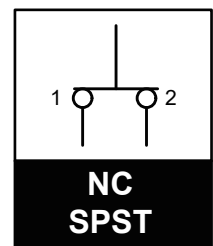
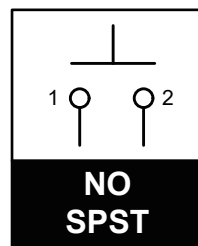
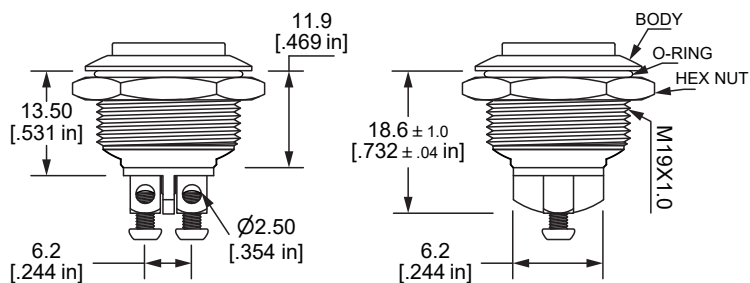
Domed Actuator

Anti vandal switch $\varnothing 19\text{mm}$ (Short body)

SOLDER TERMINAL



SCREW TERMINAL



Anti vandal switch $\varnothing 22\text{mm}$

APPLICATIONS / MARKETS



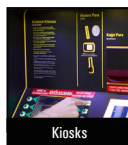
Yacht Controls



Security Devices



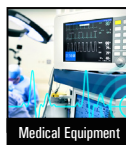
Industrial Controls



Kiosks



Electrical Housewares



Medical Equipment



Parking



Audio/ Visual



Kitchen



Car Controls

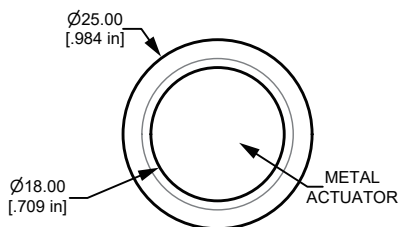


ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Graphic Options
☐ V22	☐ F- Flat ☐ H- High ☐ B- Domed	☐ P- Solder lug (2.8x0.5) ☐ NONE- Screw	☐ Momentary ☐ T- NO	☐ S- Stainless steel	☐ ☐ ☐

NONE- Non-marking
LE- Laser etched

DESCRIPTION

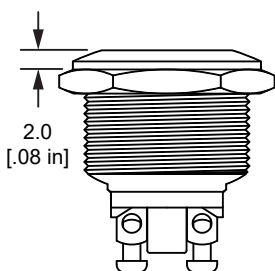


Panel Thickness: 1~8mm

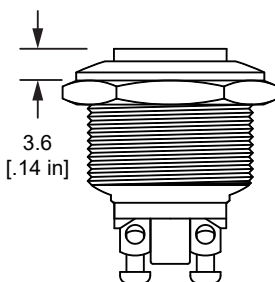
TECHNICAL DATA

Type	V22-F	V22-B	V22-H
Front Shape	Flat	Domed	High Flat
Terminal	Screw/ Pin (2.8X0.5)		
Max.Switch Rating	2A 48VDC		
Contact Resistance	$\leq 50\text{m}\Omega$		
Insulation Resistance	$\geq 1000\text{m}\Omega$		
Dielectric Strength	2000VAC		
Operation Temp	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	200,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 5.5N		
Protection	IP65/ IK09		
Material			
Actuator	Stainless Steel		
Body	Stainless Steel		
Base	PBT		

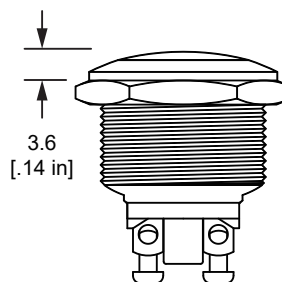
ACTUATOR OPTIONS



Flat Actuator



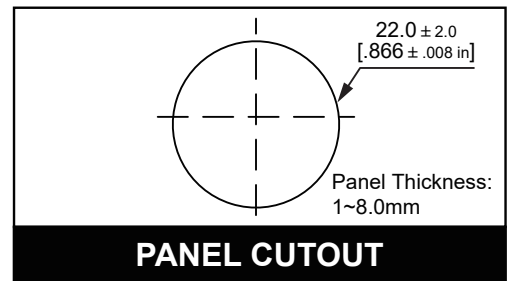
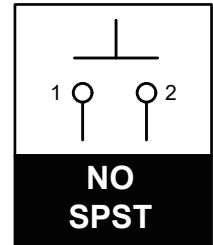
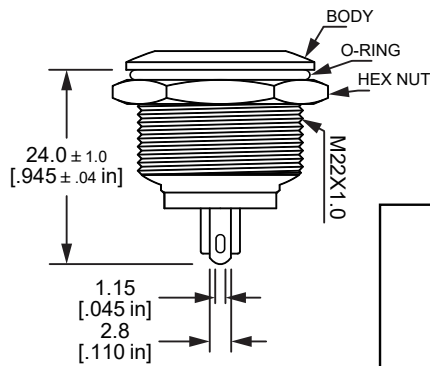
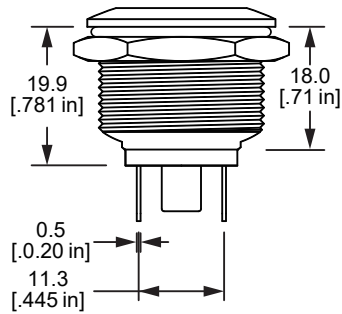
High Actuator



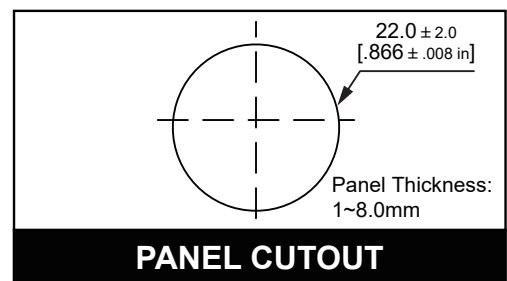
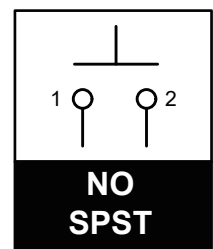
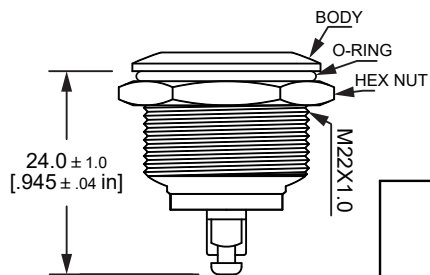
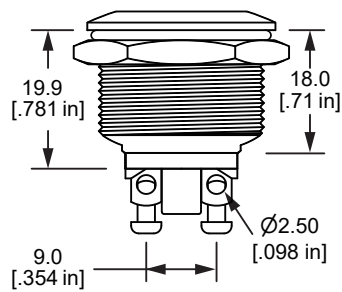
Domed Actuator

Anti vandal switch $\varnothing 22\text{mm}$

SOLDER TERMINAL



SCREW TERMINAL





Illuminated

Anti vandal switch Ø12mm

Applications / Markets



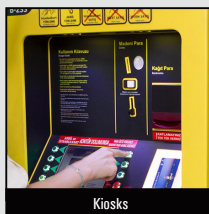
Yacht Controls



Security Devices



Industrial Controls



Kiosks



Electrical Housewares



Medical Equipment



SPECIFICATIONS

Electrical Rating: 2A36VDC
Mechanical Life: 200,000 Cycles
Electrical Life: 50,000 Cycles
Contact Resistance: 50mΩ Max.
Insulation Resistance: 1000 MΩ Min.
Dielectric Strength: 2,000VAC
Operating/Storage Temperature: -20°C to 55°C
Travel: 1.50mm
Moisture Protection: IP65
Actuation Force: 4N
Panel Thickness: 1-11mm
Mounting Nut Torque: 5-14Nm

FEATURES & BENEFITS

- 12mm diameter panel cutout
- Variety LED option
- Dot, ring illumination available
- Multiple actuator options
- Pilot indicator option
- IP65 rated,
- Momentary Off-(On), Latching Off-On

PART NUMBER CONFIGURATOR

Series	Actuator Options	Terminal Options	Function Options	Rating Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options
L12	☐ F - Flat ☐ H - High	☐ Solder Lug	☐ M - Momentary Off-(On) ☐ Z - Latching Off - On	☐ NONE - Max. 2A36VDC	☐ S - Stainless Steel ☐ B - Nickel plated brass	☐ NONE - Non-Illuminated ☐ D - Dot Illumination ☐ R - Ring Illumination	☐ NONE - Non-Illuminated ☐ W - White ☐ R - Red ☐ O - Orange ☐ G - Green ☐ B - Blue ☐ Y - Yellow	☐ NONE - Base Voltage* 3.3V 6V 12V 24V

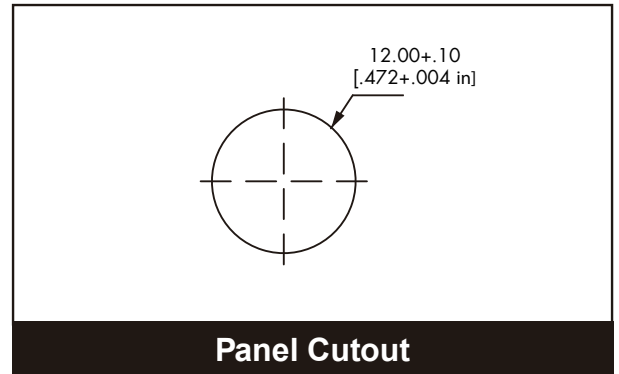
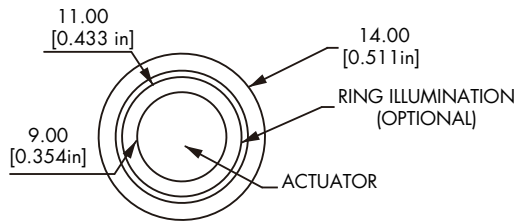
NOTES:

* Base voltage on LEDs:

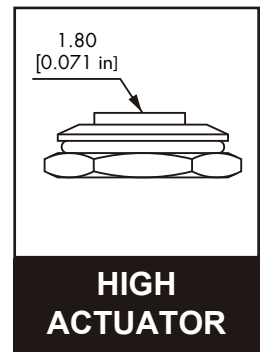
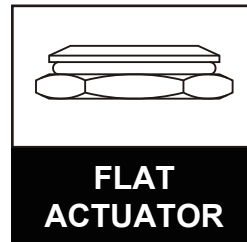
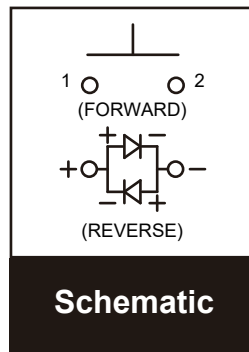
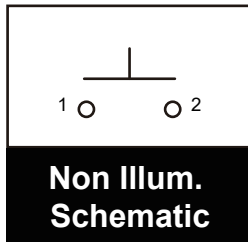
1.8V @ 20mA for Red, Yellow and Orange LED colors
 2.8V @ 20mA for Blue, Green and White LED colors

Specifications subject to change without notice

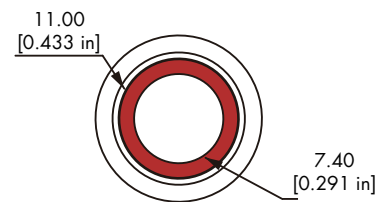
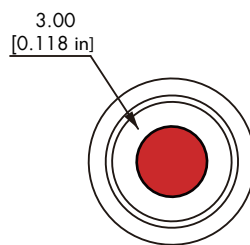
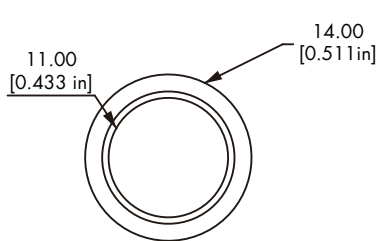
Anti vandal switch $\phi 12\text{mm}$



Schematic & Actuator

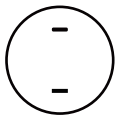
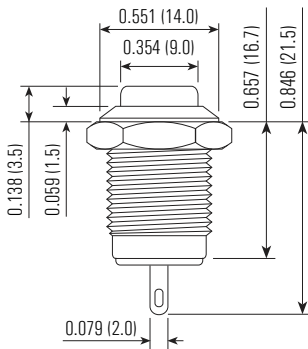


Illumination Options

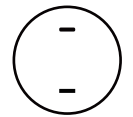
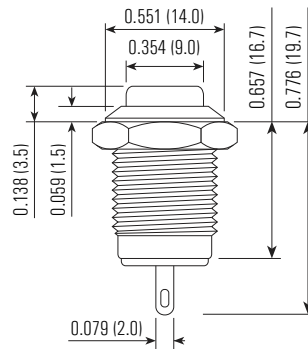
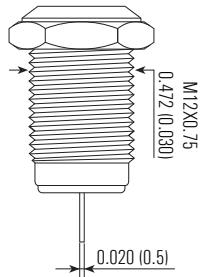


Anti vandal switch $\varnothing 12\text{mm}$

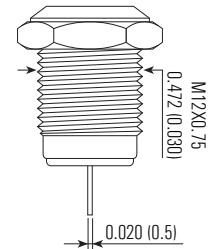
Non-illuminated



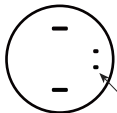
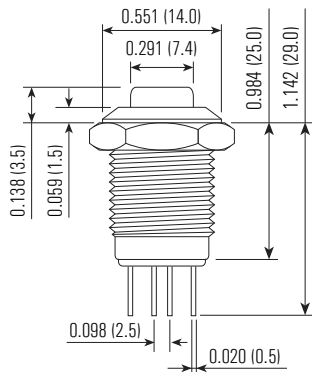
Latching



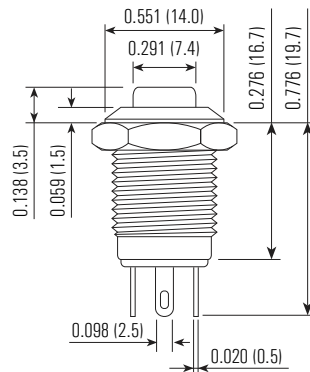
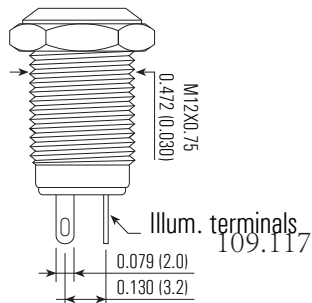
Momentary



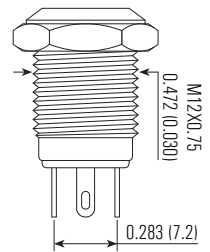
Ring-illuminated



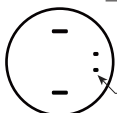
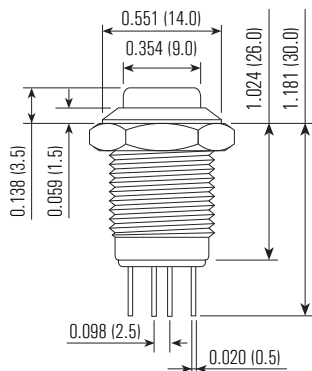
Latching
Illum. terminals



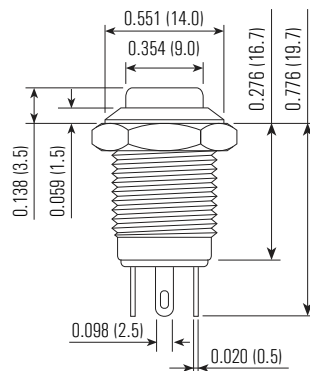
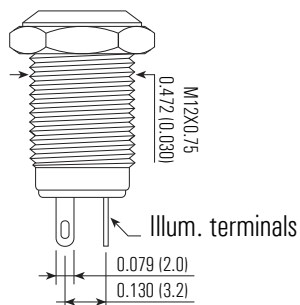
Momentary



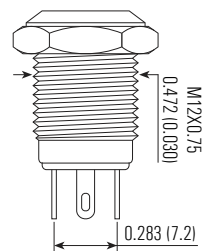
Dot-illuminated



Latching
Illum. terminals

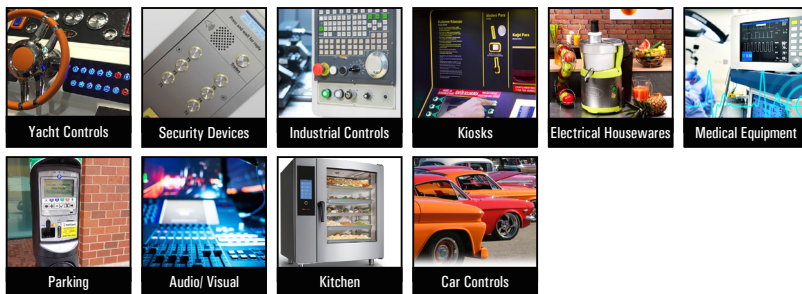


Momentary

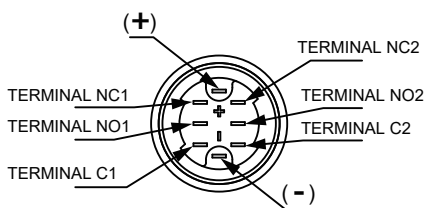


Anti vandal switch $\varnothing 16\text{mm}$

APPLICATIONS / MARKETS

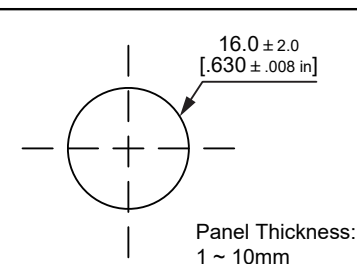
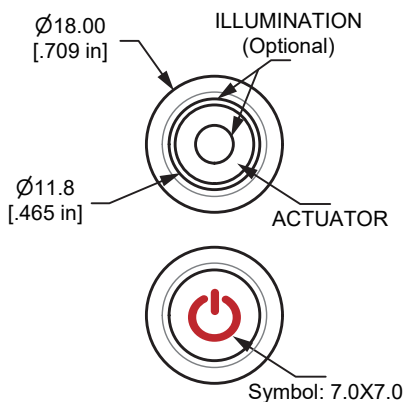


DESCRIPTION



C = Common
NO = Normally open
NC = Normally closed

Terminals (-) and (+) used with Illum. option only



PANEL CUTOUT

ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Protection	Graphic Options
L16	F- Flat H- Raised	NONE- Solder-lug (2.8x0.5)	M- Momentary 1- 1NO1NC 2- 2NO2NC Z- Latching 1- 1NO1NC 2- 2NO2NC	S- Stainless steel N- Nickel plated brass A- Anodized aluminum	D- Dot illum. R- Ring illum. NONE- non-illum.	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	NONE- Base Voltage* 3.3V 6V 12V 24V 36V 110V 220V	NONE- IP40 IP65	NONE- Non-marking LP- Laser etched PS- Symbol translucent power only

NOTES:

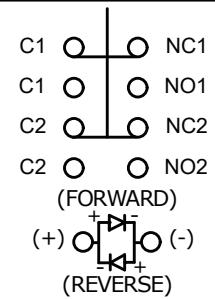
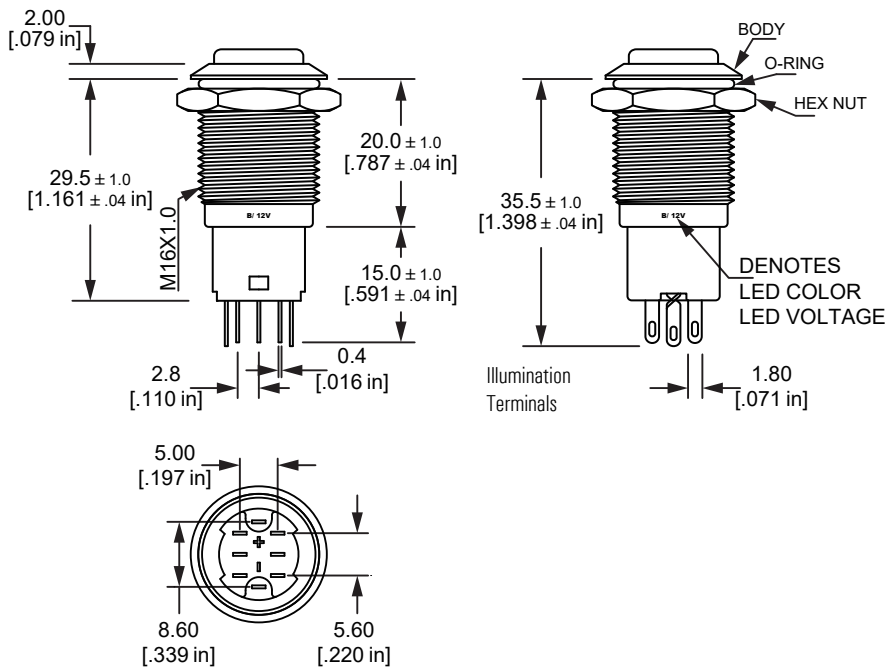
* Base voltage on LEDs:
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

TECHNICAL DATA

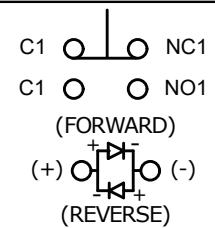
Type	L16-F/ L16-H
Illuminated Type	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Solder lug (1.8X0.4)
Max.Switch Rating	Ith: 3A Ui: 250VAC
Contact Resistance	$\leq 50\text{m}\Omega$
Insulation Resistance	$\geq 1000\text{m}\Omega$
Dielectric Strength	2000VAC
Operation Temp.	-20°C ~ +55°C
Mechanical Life	200,000 Cycles
Electrical Life	>50,000 Cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	approx. 3 ~ 5N
Protection	IP40, IP65/ IK09
Material	
Button	Stainless steel/ Nickel plated brass/ Anodized aluminum
Bodey	Stainless steel/ Nickel plated brass/ Anodized aluminum
Base	PBT
LED	
Color	3.3V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V R G Y O B W Approx, 40,000 hours

Anti vandal switch $\varnothing 16\text{mm}$

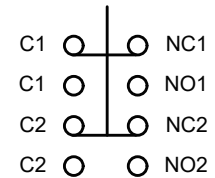
DIMENSIONS



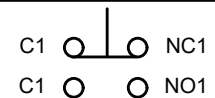
DPDT ILLUM.



SPDT ILLUM.



DPDT NON-ILLUM.



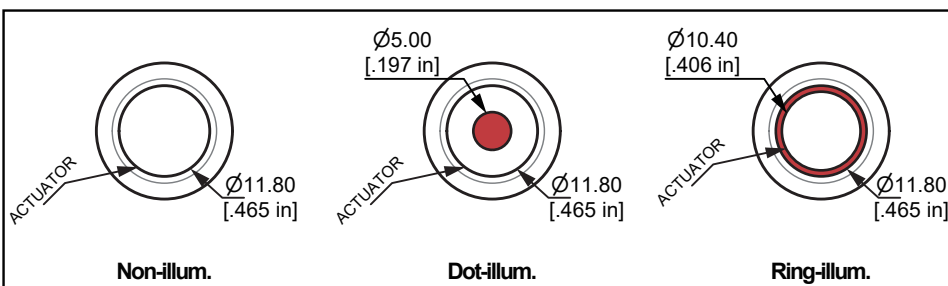
SPDT NON-ILLUM.

ACTUATOR OPTIONS



ACTUATOR OPTIONS

ILLUM. OPTIONS



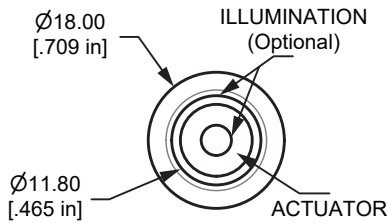
LENS OPTIONS

Anti vandal switch Ø16mm

APPLICATIONS / MARKETS



DESCRIPTION



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
Ls16	F- Flat	NONE- Solder-lug (2.8x0.5)	M- Momentary 1- 1NO	S- Stainless steel N- Nickel plated brass A- Anodized aluminum	D- Dot illum. R- Ring illum. NONE- non-illum.	W- White Y- Yellow B- Blue G- Green R- Red O- Orange 3A- Red/ Green/ Blue	NONE- Base voltage* 3.3V 6V 12V 24V 36V	NONE- Non-marking LE- Laser etched

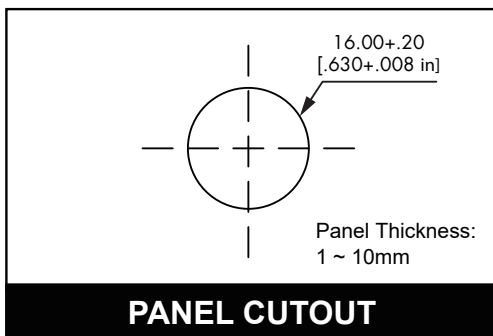
NOTES:

* Base voltage on LEDs:
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

TECHNICAL DATA

Type	Ls16-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Solder lug (2.8X0.5)
Max. Switch Rating	2A 36VDC
Contact Resistance	≤50mΩ
Insulation Resistance	≥1000mΩ
Dielectric Strength	2000VAC
Operation Temp	-20℃ ~ +55℃
Mechanical Life	1,000,000 Cycles
Electrical Life	200,000 Cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	approx. 3 ~ 5N
Protection	IP65/ IK08
Material	
Actuator	Stainless Steel/ Nickel Plated Brass/ Anodized Aluminum
Body	Stainless Steel/ Nickel Plated Brass/ Anodized Aluminum
Base	PBT
Color	LED 3.3V/ 6V/ 12V/ 24V/ 36V(The resistor is external) R G Y O B W Approx, 40,000 hours

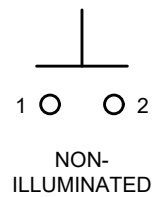
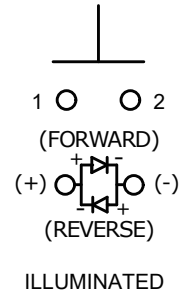
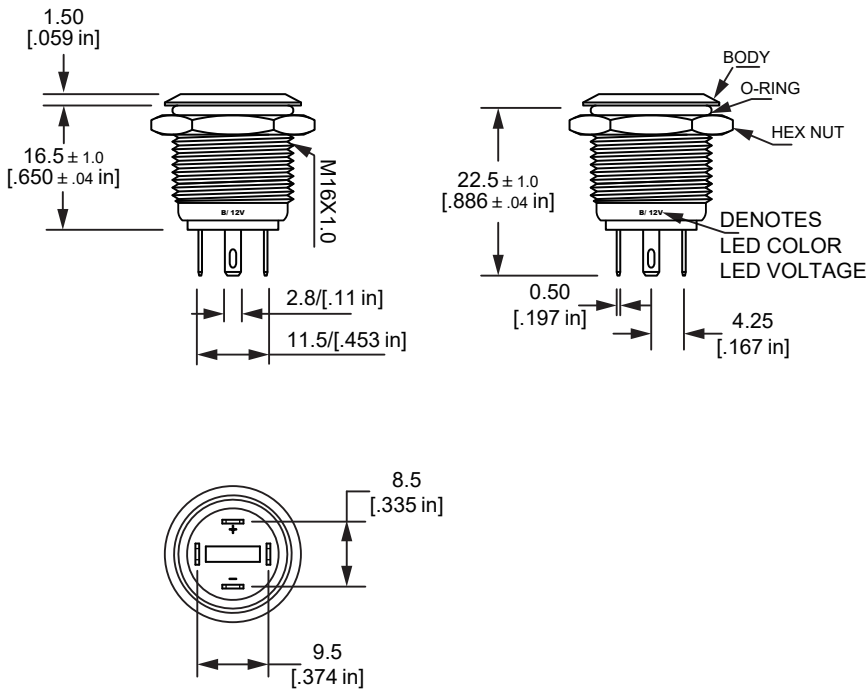
PANEL CUTOUT



Current-limiting Resistance Configuration Table	Operating Voltage(U)		6V	12V	24V	36V	Formula $R = \frac{U-U_e}{I_e}$
	Current-limiting Resistance(R)		210Ω, 1/4W	510Ω, 1/2W	1.2kΩ, 3/4W	2.2kΩ, 1W	
			160Ω, 1/4W	460Ω, 1/2W	1.2kΩ, 3/4W	2.2kΩ, 1W	

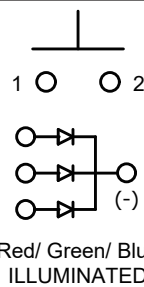
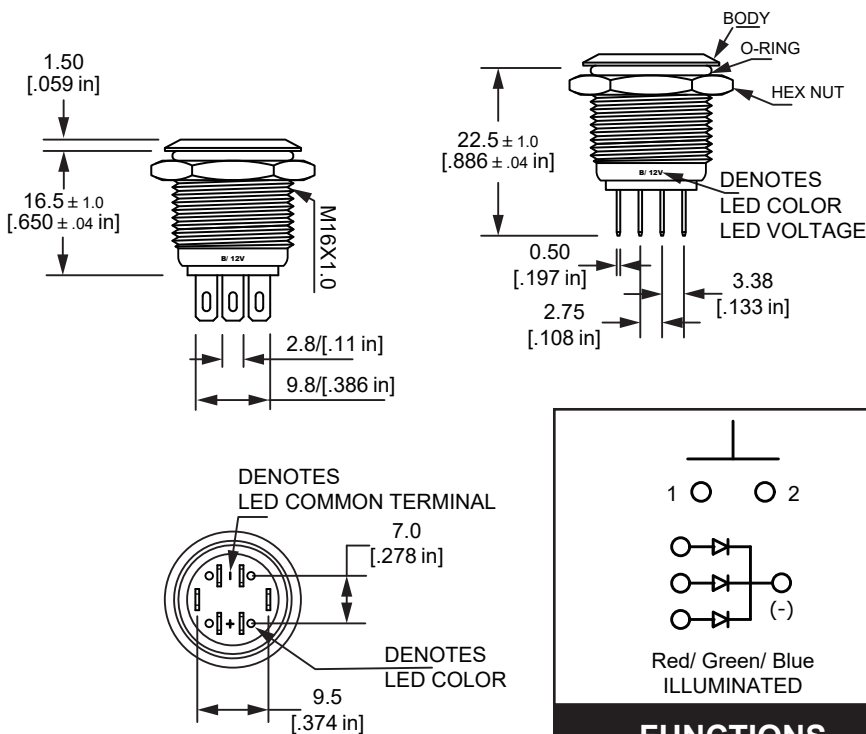
Anti vandal switch $\varnothing 16\text{mm}$

STANDARD ILLUM.

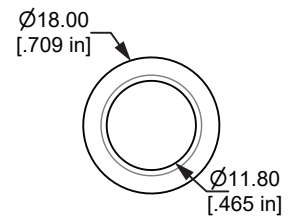


FUNCTIONS

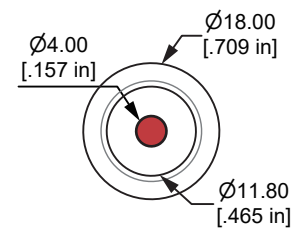
TRI-COLOR



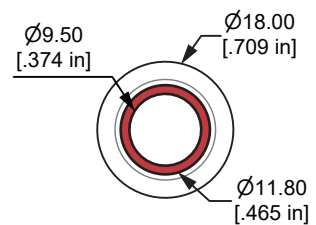
FUNCTIONS



Non-illum.



Dot-illum.

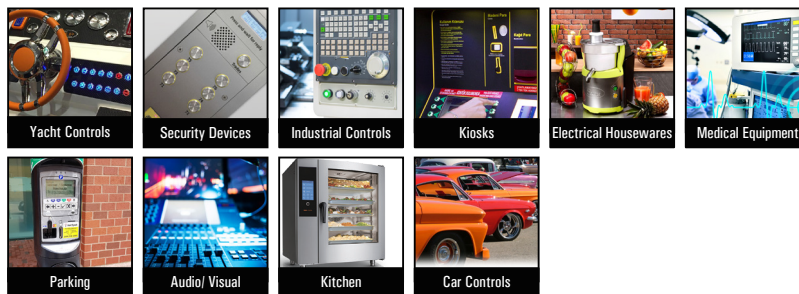


Ring-illum.

LENS OPTIONS

Anti vandal switch Ø19mm

APPLICATIONS / MARKETS



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
L19	F- Flat	NONE- Solder-lug (2.8x0.5) N- Screw	M- Momentary 1- 1NO1NC L- Alternated 1- 1NO1NC	S- Stainless steel A- Anodized aluminum	D- Dot illum. R- Ring illum. NONE- non-illum. X- Backlit Label Kit**	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	NONE- Base Voltage* 3.3V 6V 12V 24V 36V 110V 220V	NONE- Non-marking LE- Laser etched

NOTES:

* Base voltage on LEDs:

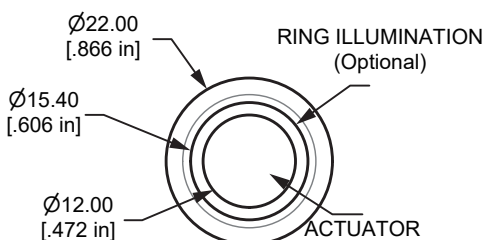
1.8V @ 20mA for Red, Yellow and Orange LED colors / 2.8V @ 20mA for Blue, Green and White LED colors

** 5 ICON labels included, 5 icon labels included, Flat actuator only

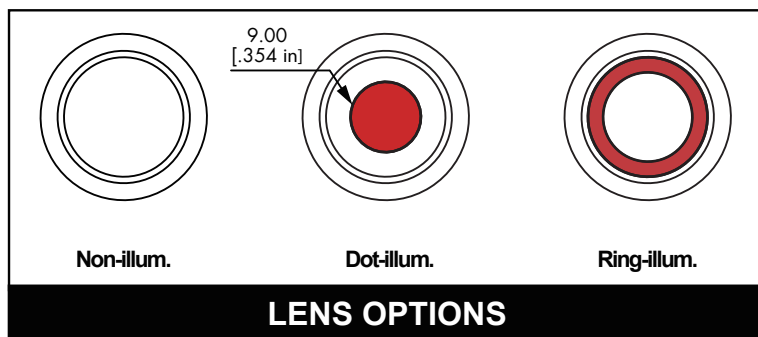
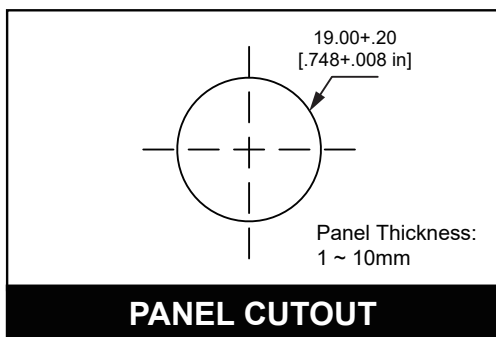
TECHNICAL DATA

Type	L19-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated/ Backlit label kit
Terminal	Screw and Solder lug (2.8X0.5)
Max. Switch Rating	Ith: 5A Ui: 250VAC
Contact Resistance	≤50mΩ
Insulation Resistance	≥1000mΩ
Dielectric Strength	2000VAC
Operation Temp	-20℃ ~ +55℃
Mechanical Life	1,000,000 Cycles
Electrical Life	>50,000 Cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	approx. 8N
Protection	IP65/ IK10
Material	
Actuator	Stainless steel/ Anodized aluminum
Body	Stainless steel/ Anodized aluminum
Base	PA
	LED
Color	3.3V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V R G Y O B W Approx, 40,000 hours

DESCRIPTION

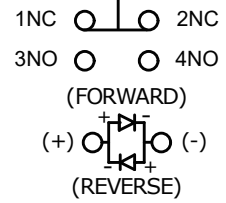
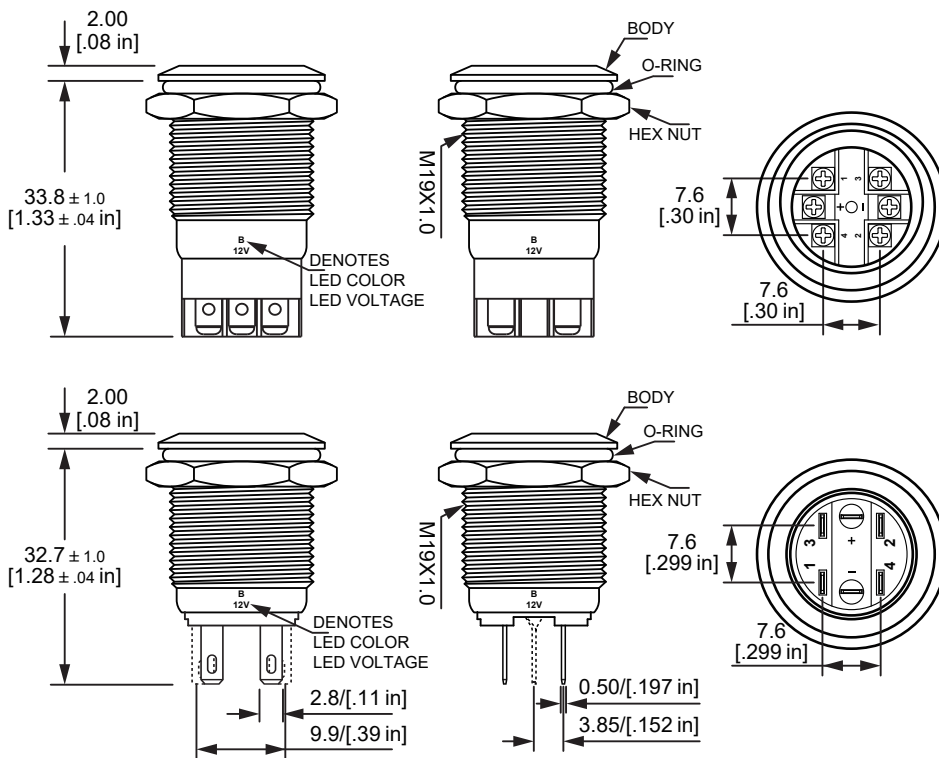


PANEL CUTOUT & ILLUMINATED OPTIONS

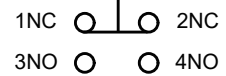


Anti vandal switch $\phi 19\text{mm}$

MOMENTARY



SPST ILLUM.



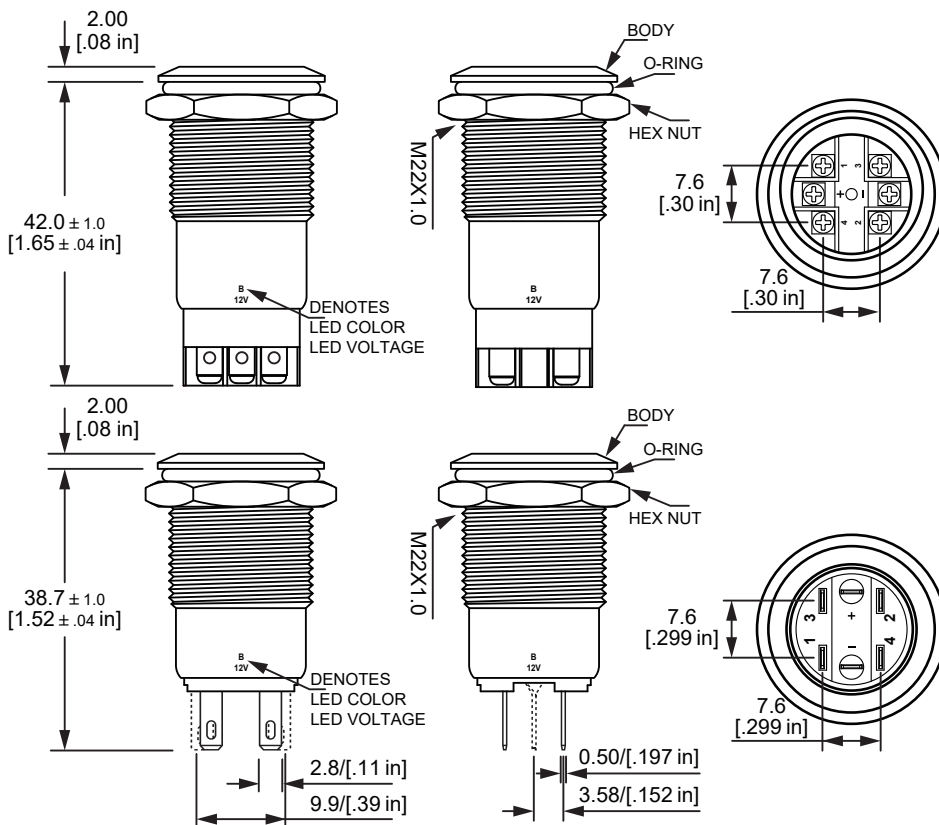
SPST NON-ILLUM.



BL195

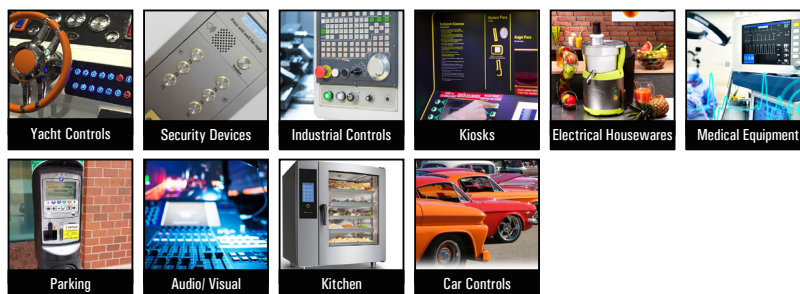
5 ICON labels included

ALTERNATED

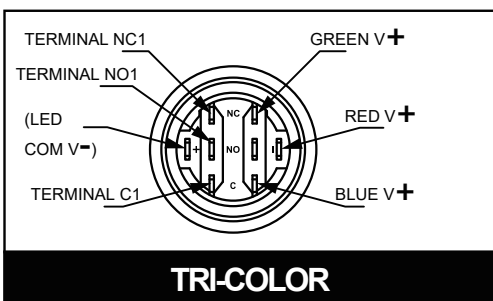
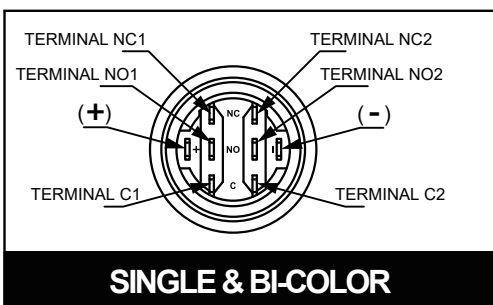


Anti vandal switch Ø19mm

APPLICATIONS / MARKETS

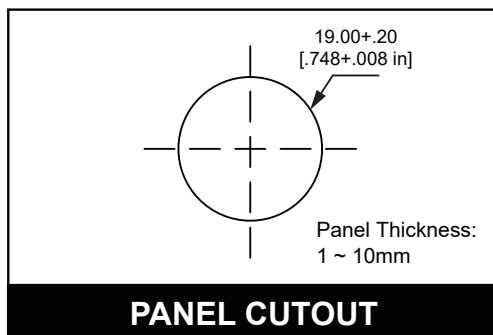


DESCRIPTION



C = Common
NO = Normally open
NC = Normally closed

Terminals (-) and (+) used with Illum. option only



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
L19A	F- Flat	NONE- Solder-lug (2.8x0.5)	M- Momentary 1- 1NO1NC 2- 2NO2NC Z- Alternated 1- 1NO1NC 2- 2NO2NC	S- Stainless steel	D- Dot illum. R- Ring illum. NONE- non-illum.	W- White Y- Yellow B- Blue G- Green R- Red O- Orange 3A- Red/ Green/ Blue	NONE- Base Voltage* 3.3V 6V 12V 24V 36V 110V 220V	NONE- Non-marking LE- Laser etched PS- Symbol translucent power only

NOTES:

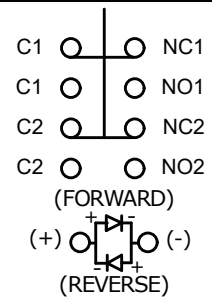
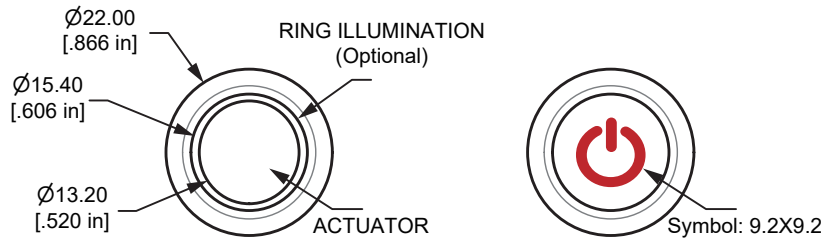
* Base voltage on LEDs:
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

TECHNICAL DATA

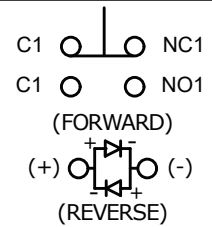
Type	L19A-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Solder lug (2.8X0.5)
Max. Switch Rating	Ith: 5A Ui: 250VAC
Contact Resistance	≤50mΩ
Insulation Resistance	≥1000mΩ
Dielectric Strength	2000VAC
Operation Temp	-20℃ ~ +55℃
Mechanical Life	1,000,000 Cycles
Electrical Life	>50,000 Cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	approx. 8N
Protection	IP65/ IK10
Material	
Actuator	Stainless steel
Body	Stainless steel
Base	PBT
LED	
Color	3.3V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V R G Y O B W Approx, 40,000 hours

Anti vandal switch $\varnothing 19\text{mm}$

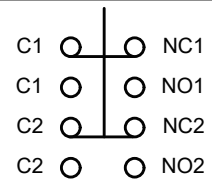
MOMENTARY



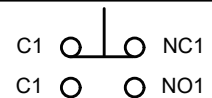
DPDT ILLUM.



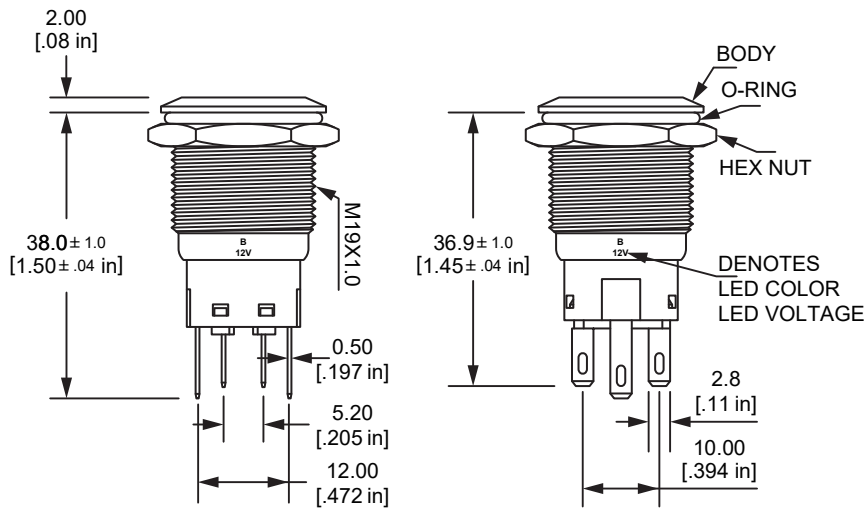
SPDT ILLUM.



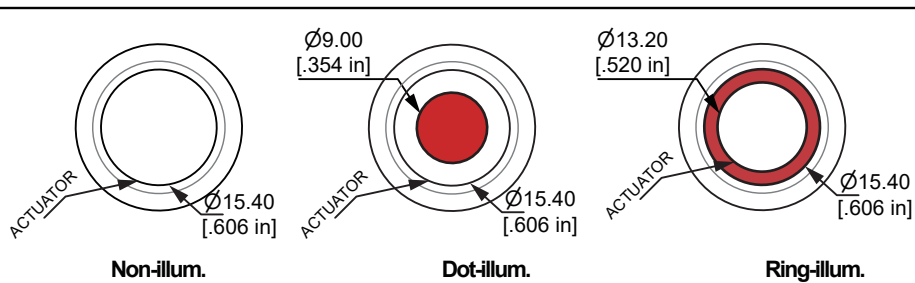
DPDT NON-ILLUM.



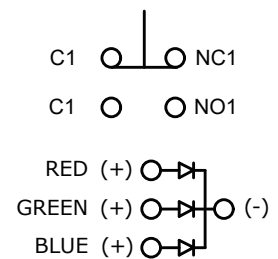
SPDT NON-ILLUM.



ILLUM. OPTIONS



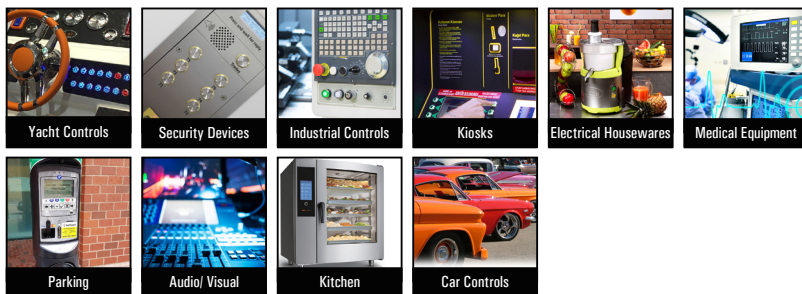
LENS OPTIONS



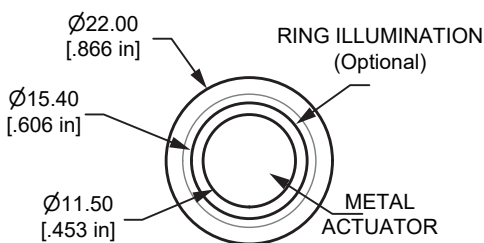
**SPDT
RGB COLOR**

Anti vandal switch Ø19mm

APPLICATIONS / MARKETS



DESCRIPTION



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
Ls19	F- Flat	NONE- Solder-lug (2.8x0.5)	M- Momentary 1- 1NO	S- Stainless steel	D- Dot illum. R- Ring illum. NONE- non-illum.	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	NONE- Base voltage* 3.3V 6V 12V 24V 36V	NONE- Non-marking LE- Laser etched

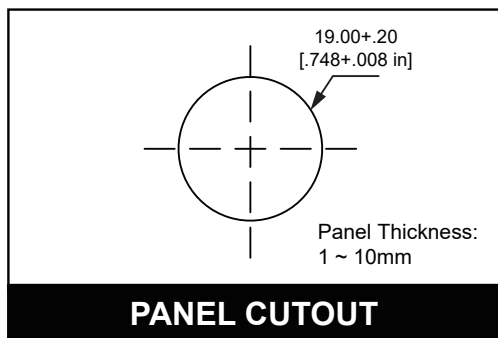
NOTES:

* Base voltage on LEDs:
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

TECHNICAL DATA

Type	Ls19-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Solder lug (2.8X0.5)
Max. Switch Rating	2A 36VDC
Contact Resistance	≤50mΩ
Insulation Resistance	≥1000mΩ
Dielectric Strength	2000VAC
Operation Temp	-20℃ ~ +55℃
Mechanical Life	1,000,000 Cycles
Electrical Life	200,000 Cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	approx. 3 ~ 5N
Protection	IP65/ IK08
Material	
Actuator	Stainless steel
Body	Stainless steel
Base	PBT
Color	LED 3.3V/ 6V/ 12V/ 24V/ 36V(The resistor is external) R G Y O B W Approx, 40,000 hours

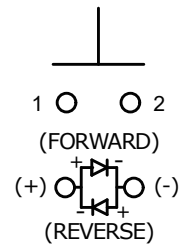
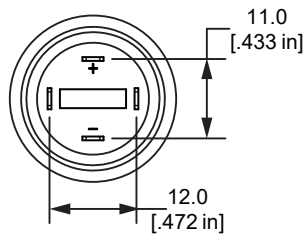
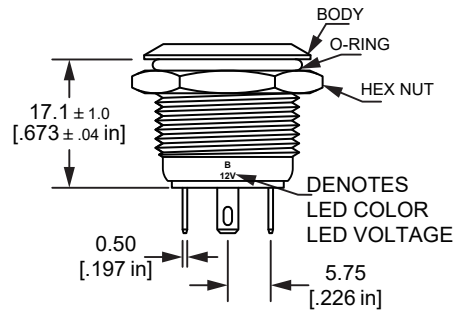
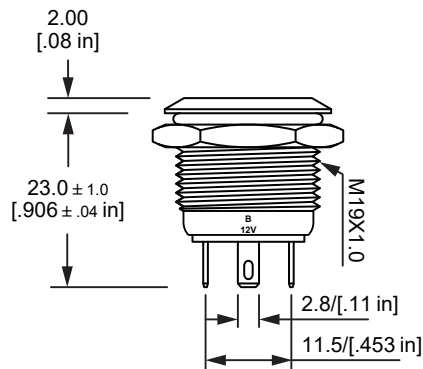
PANEL CUTOUT



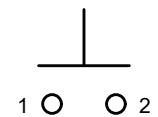
Current-limiting Resistance Configuration Table	Operating Voltage(U)	6V	12V	24V	36V	Formula
		R Y O	210Ω, 1/4W	510Ω, 1/2W	1.2kΩ, 3/4W	2.2kΩ, 1W
		G B W	160Ω, 1/4W	460Ω, 1/2W	1.2kΩ, 3/4W	2.2kΩ, 1W
						R = U-Ue / Ie

Anti vandal switch $\phi 19\text{mm}$

DIMENSIONS



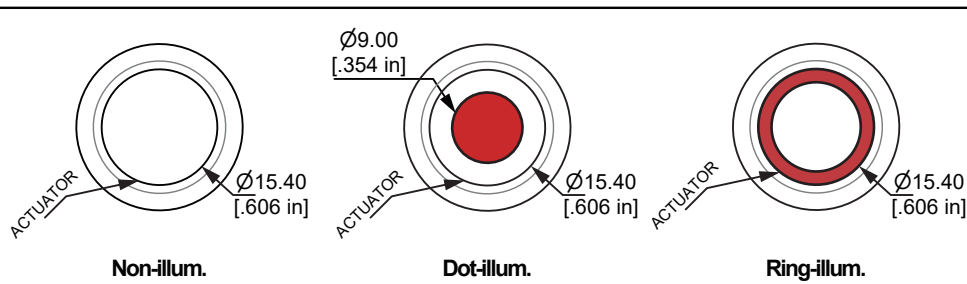
ILLUMINATED



NON-
ILLUMINATED

FUNCTIONS

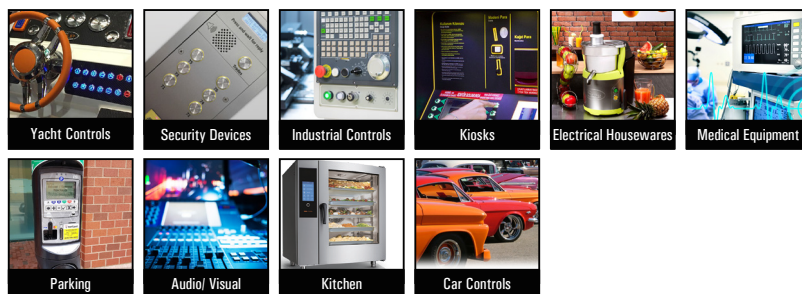
ILLUM. OPTIONS



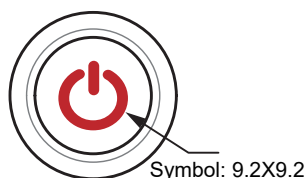
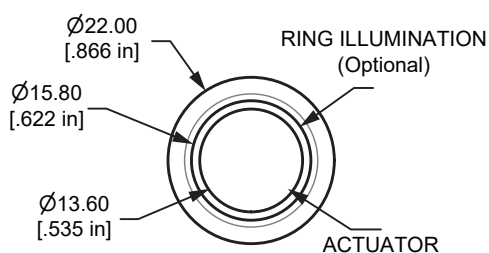
LENS OPTIONS

Micro-trip anti vandal switch Ø19mm

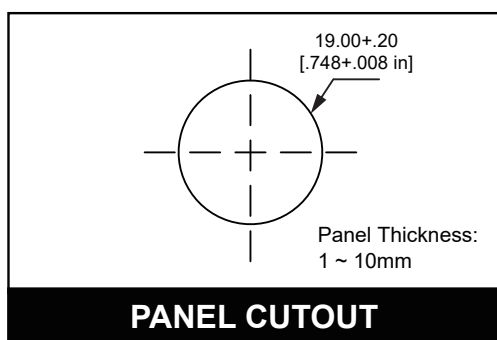
APPLICATIONS / MARKETS



DESCRIPTION



PANEL CUTOUT



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
☐	☐	☐	☐	☐	☐	☐	☐	☐
L19M Micro-trip	F- Flat	NONE- Solder-lug (2.8x0.5) N- Screw	M- Momentary 1- 1NO	S- Stainless steel	D- Dot illum. R- Ring illum. NONE- non-illum.	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	NONE- Base voltage* 3.3V 6V 12V 24V 36V	NONE- Non-marking LE- Laser etched PS- Symbol translucent power only

NOTES:

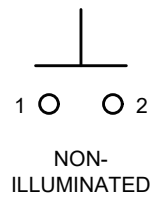
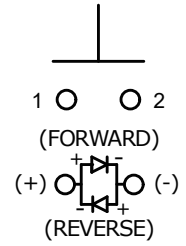
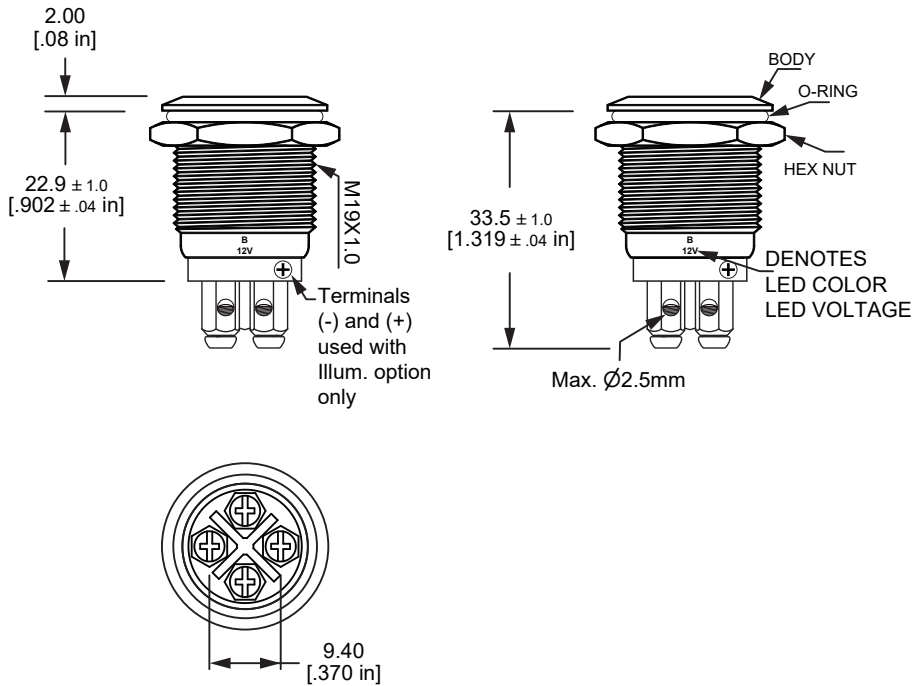
* Base voltage on LEDs:
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

TECHNICAL DATA

Type	L19M-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Screw and Solder lug (2.8X0.8)
Max. Switch Rating	50mA 24VDC
Contact Resistance	≤100mΩ
Insulation Resistance	≥1000mΩ
Dielectric Strength	2000VAC
Operation Temp	-20℃ ~ +55℃
Mechanical Life	1,000,000 Cycles
Electrical Life	50,000 Cycles
Contact Material	Silver Alloy
Rear Nut Fixing Torque	0.57Nm
Operation Pressure	approx. 8N
Protection	IP65/ IK09
Material	
Switch Assembly	UL94V-0 Rated Polyamide (Nylon)
Tags	Copper Alloy
Terminals	Copper Alloy
Switch Body & Button	Stainless Steel/ *Anodized Aluminum
Lens and Lens Body	Polycarbonate
Internal Seal	Silicone
O Ring	Nitrile
	LED
Color	3.3V/ 6V/ 12V/ 24V/ 36V R G Y O B W
	Approx, 40,000 hours

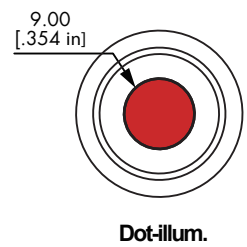
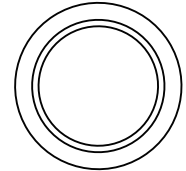
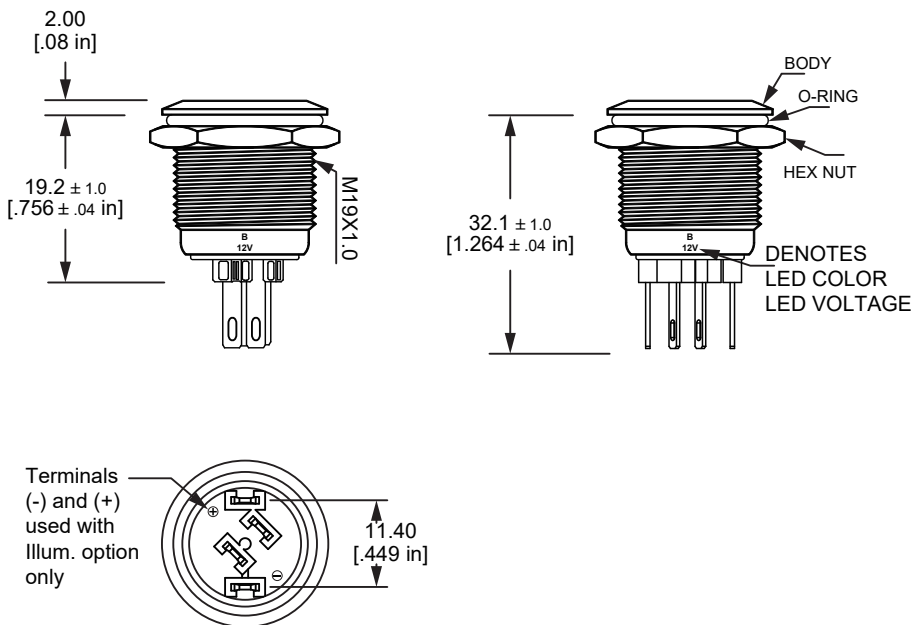
Micro-trip anti vandal switch $\varnothing 19\text{mm}$

SCREW TERMINAL



FUNCTIONS

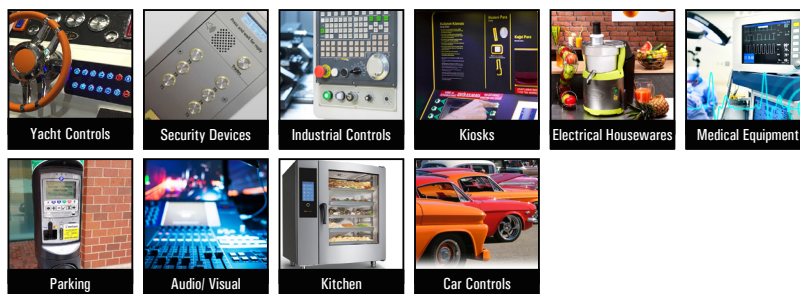
SOLDER TERMINAL



LENS OPTIONS

High current anti vandal switch $\varnothing 19\text{mm}$

APPLICATIONS / MARKETS



ORDER CODE

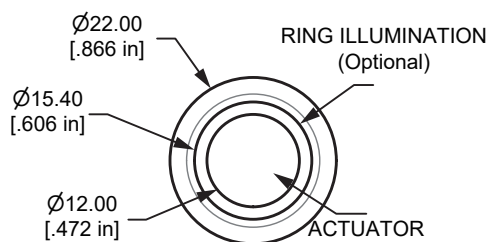
Series	Actuator Options	Terminal Options	Function Options	Current Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
L19B	F- Flat	NONE- quick connect terminal (6.35x0.8)	M- Momentary 1 1NO (SPST) 2 1NC (SPST) 3 1NO1NC (SPDT) Z- Alternated 1 1NO (SPST) 2 1NC (SPST) 3 1NO1NC (SPDT)	02- 2.5A 03- 3A 05- 5A 08- 8A 10- 10A 16- 16A 21- 21A 06- 0.6A/ 125VDC 03- 0.3A/ 250VDC	S- Stainless steel	D- Dot illum. R- Ring illum. NONE- non-illum.	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	NONE- Base Voltage* 3.3V 6V 12V 24V 36V 110V 220V	NONE- Non-marking LE- Laser etched

NOTES:

* Base voltage on LEDs:

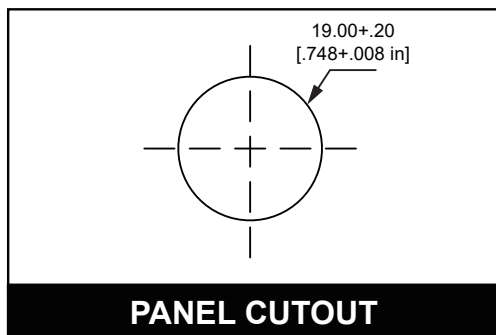
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

DESCRIPTION



Panel Thickness: 1-12mm

PANEL CUTOUT

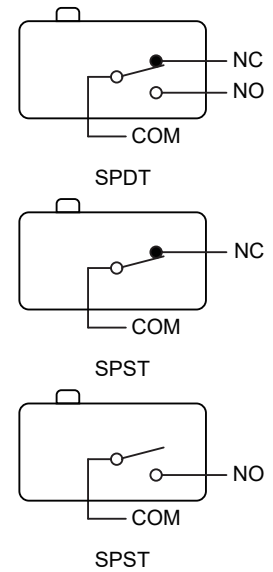
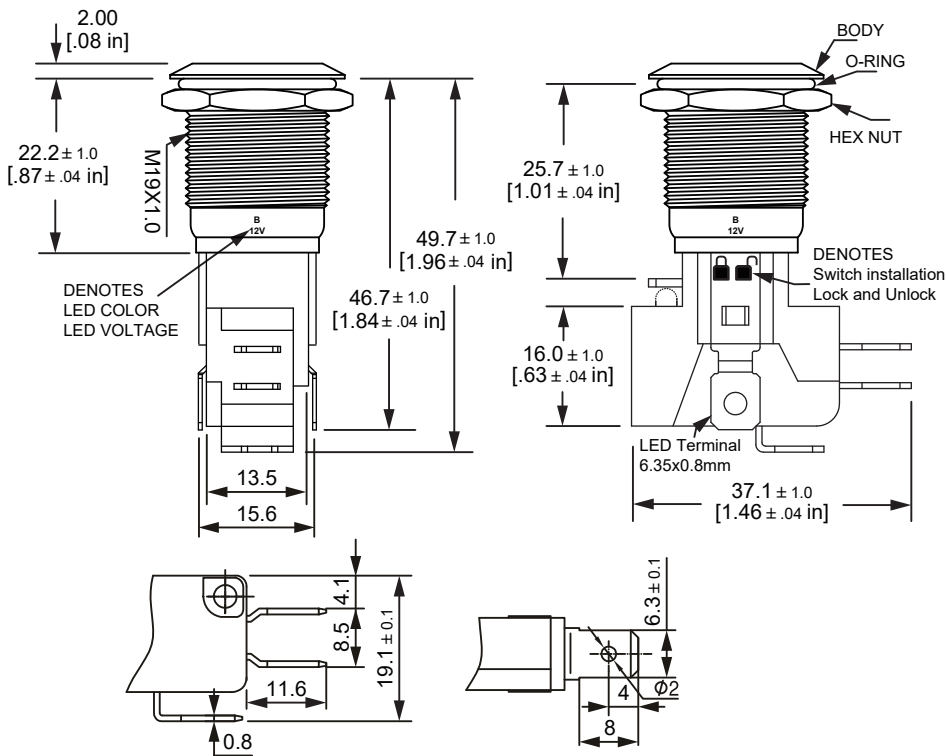


TECHNICAL DATA

Type	L19B-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Quick connect terminal (6.35x0.8)
Max. Switch Rating	3A 5A 8A 10A 15A(16A) 20A(21A)/ 250VAC, 125VAC 0.6A/ 125VDC 0.3A/ 250VDC
Contact Resistance	$\leq 25\text{m}\Omega$
Insulation Resistance	$\geq 100\text{m}\Omega$
Dielectric Strength	Between non-consecutive terminals 1,000Vrms, 50/60Hz for 1min Between non-current carrying metal parts and each terminal 1,500Vrms, 50/60Hz for 1min Between ground and each terminal 1,500Vrms, 50/60Hz for 1min
Shock resistance	Detraction: O.F. > 0.5N: 1000m/s ² (approx. 100g), O.F. $\leq$ 0.5N: 400m/s ² (approx. 40g) Malfunction: O.F. > 0.5N: 200m/s ² (approx. 20g), O.F. $\leq$ 0.5N: 100m/s ² (approx. 10g)
Vibration Resistance	10 - 50Hz, 1.5mm Double Amplitude
Ambient Temp.	-25 C ~ +85 C
Mechanical Life	2,000,000cycles
Electrical Life	50,000cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	10N
Protection	IP65/ IK09
Material	
Actuator	Stainless steel
Body	Stainless steel
	LED
Color	3.3V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V R G Y O B W Approx. 40, 000

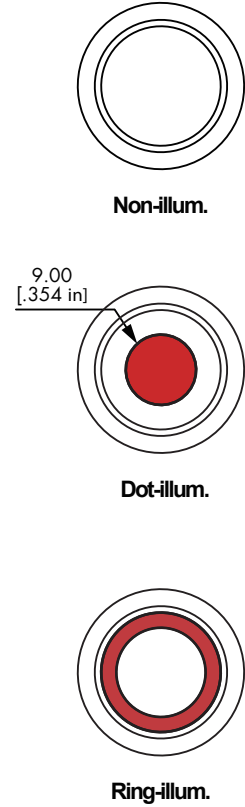
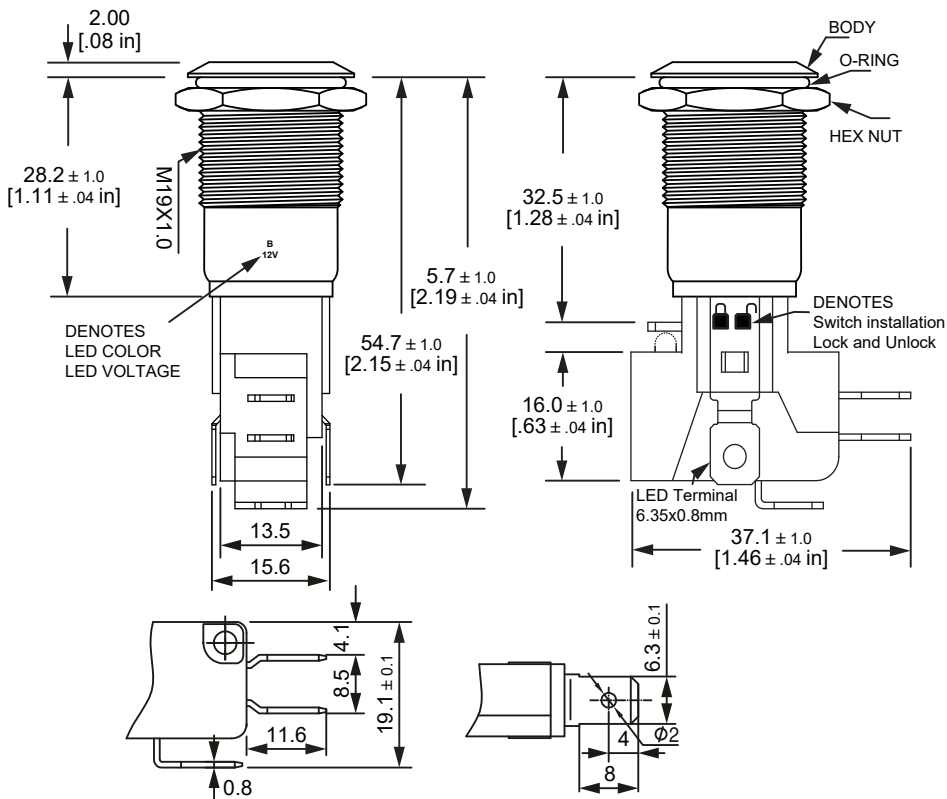
High current anti vandal switch $\varnothing 19\text{mm}$

MOMENTARY



CONTACT

ALTERNATED



LENS OPTIONS

Applications / Markets



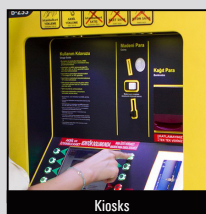
Yacht Controls



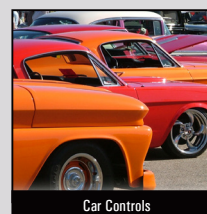
Security Devices



Industrial Controls



Kiosks



Car Controls



Medical Equipment



SPECIFICATIONS

Electrical Rating: 21A, 24VDC
Mechanical Life: 1,000,000 Cycles
Electrical Life: 50,000 Cycles
Contact Resistance: 50mΩ Max.
Insulation Resistance: 1000 MΩ Min.
Dielectric Strength: 2,000VAC
Operating/Storage Temperature: -20°C to 55°C
Travel: 1.50mm
Moisture Protection: IP67
Actuation Force: 4N
Panel Thickness: 1-11mm
Mounting Nut Torque: 5-14Nm
LED state for output image option :
 1 LED : the LED is ON when the output is closed.
 2 LEDs : first color is ON when the output is open. Second color is ON when the output is closed.

FEATURES & BENEFITS

- 19mm diameter panel cutout
- Backlit label kit option
- Variety LED option
- Dot, ring or power symbol illumination available
- Multiple actuator options
- Pilot indicator option
- IP65 rated,
- Momentary Off-(On), Latching Off-On

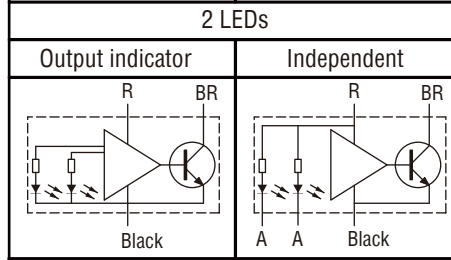
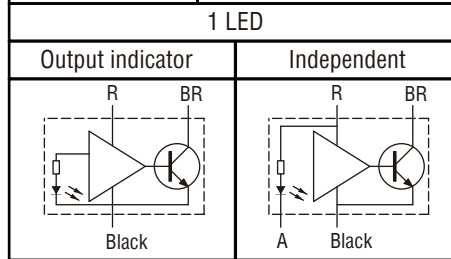
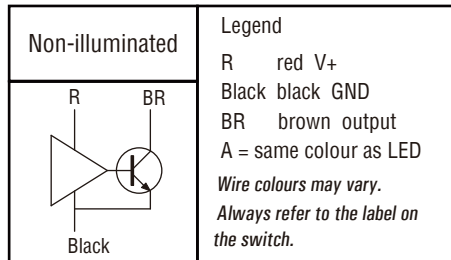
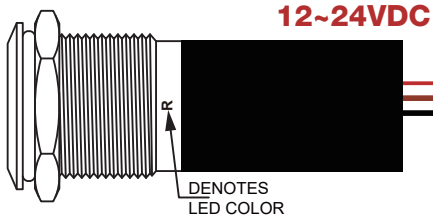
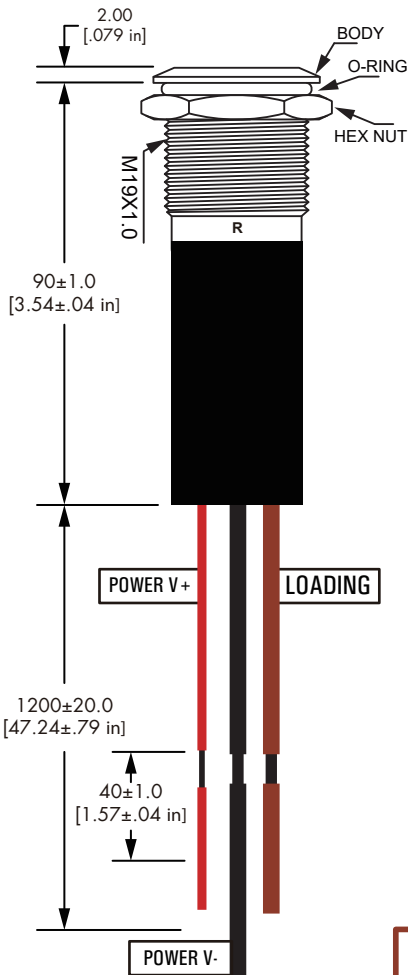
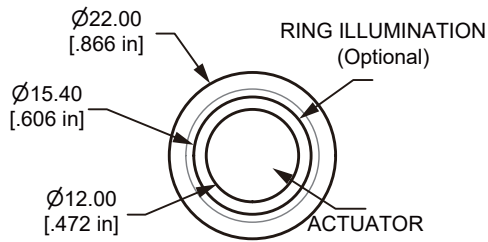
PART NUMBER CONFIGURATOR

Series	Actuator Options	Terminal Options	Function Options	Rating Options	Material Options	Illumination Style Options	LED-Color Options	Illumination Voltage Options	LED Functions	Graphic (Optional)
L19Y	 F - Flat H - High	 C - Cable*	 M - Momentary Off-(On) Z - Latching Off - On	 NONE - Max. 21A24V DC	 S - Stainless Steel A - Black Anodized	 NONE - Non-Illuminated D - Dot Illumination R - Ring Illumination X - Backlit Label Kit***	 NONE - Non-Illuminated W - White R - Red O - Orange G - Green B - Blue Y - Yellow RG - Red/Green RB - Red/Blue	 NONE - Non-Illuminated 1 - Base Voltage**	 S - Independent C - Output indicator	 LE - Laser etched

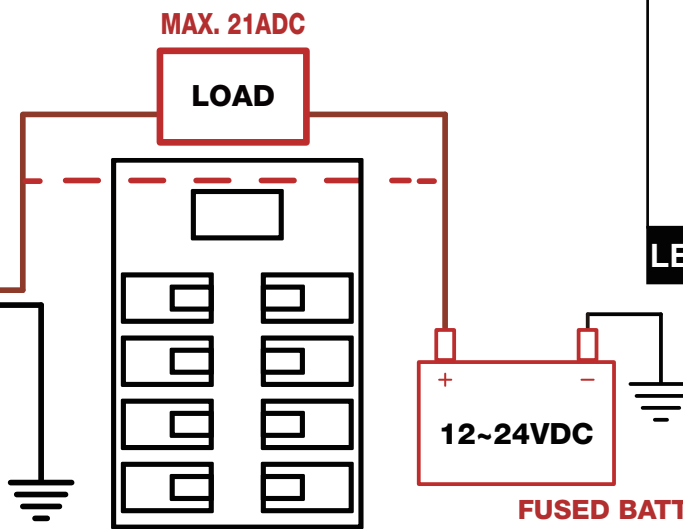
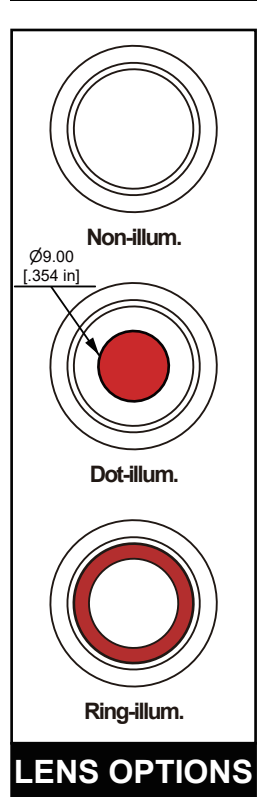
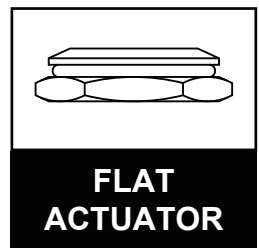
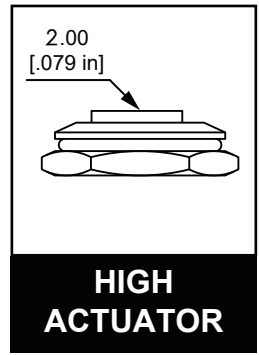
NOTES:
 () denotes function is momentary
 * Cable length 1200mm
 ** The base voltage for rating
 *** 5 ICON labels included, 5 icon labels included, Flat actuator only

Specifications subject to change without notice

High current anti vandal switch $\varnothing 19\text{mm}$



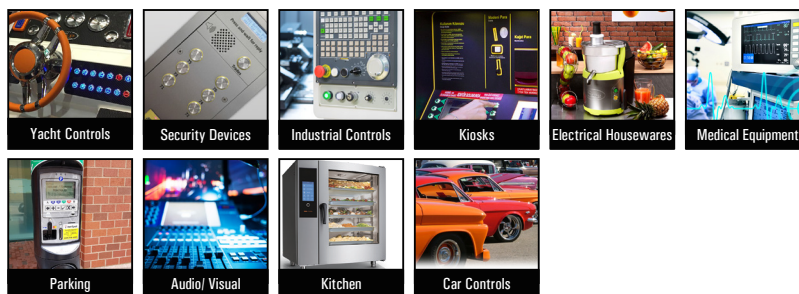
WIRING DIAGRAMS



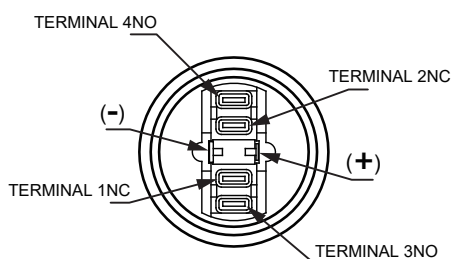
Important: Proper wiring must be followed!
Improper wiring may cause damage to switch

Anti vandal switch $\varnothing 22\text{mm}$

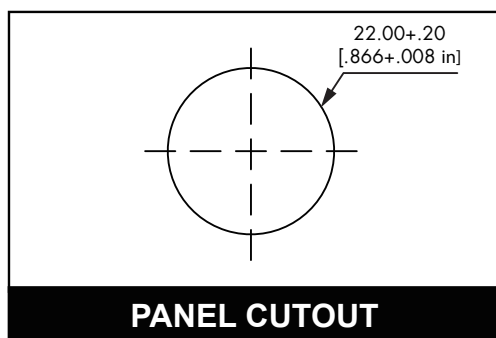
APPLICATIONS / MARKETS



DESCRIPTION



Terminals (-) and (+) used with Illum. option only



Panel Thickness:
1-12mm for Alternated
1-10mm for Momentary

ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
L22	F- Flat	NONE- Solder-lug (2.8X0.5)	M- Momentary 1- 1NO1NC Z- Alternated 1- 1NO1NC	S- Stainless steel A- Anodized aluminum*	D- Dot illum. R- Ring illum. NONE- non-illum.	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	NONE- Base Voltage** 3.3V 6V 12V 24V 36V 110V 220V	NONE- Non-marking LE- Laser etched

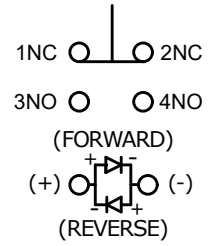
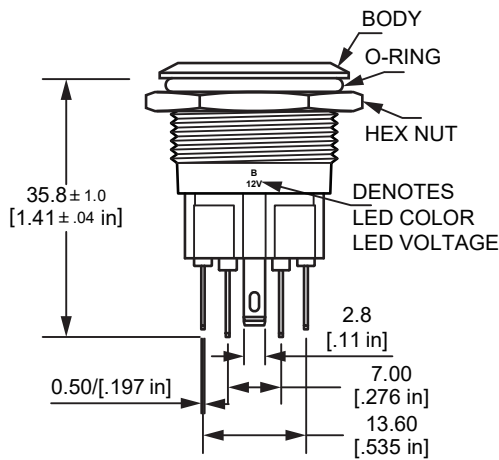
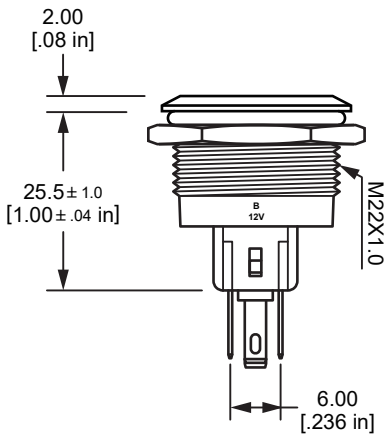
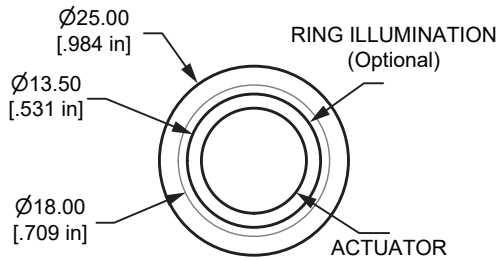
NOTES:
* Anodized aluminum: variety of colors(MQ 500pcs/color), standard for black anodized
** Base voltage on LEDs:
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

TECHNICAL DATA

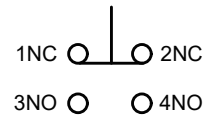
Type	L22-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Solder lug (2.8X0.5)
Max. Switch Rating	Ith: 5A Ui: 250VAC
Contact Resistance	$\leq 50\text{m}\Omega$
Insulation Resistance	$\geq 1000\text{m}\Omega$
Dielectric Strength	2000VAC
Operation Temp	-20°C ~ +55°C
Mechanical Life	1,000,000 Cycles
Electrical Life	>50,000 Cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	approx. 8N
Protection	IP65/ IK10
Material	
Actuator	Stainless Steel/ *Anodized Aluminum
Body	Stainless Steel/ *Anodized Aluminum
Base	PA
LED	
Color	3.3V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V R G Y O B W Approx, 40,000 hours

Anti vandal switch $\varnothing 22\text{mm}$

MOMENTARY



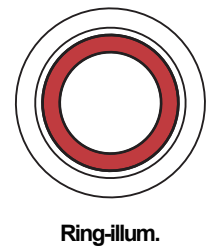
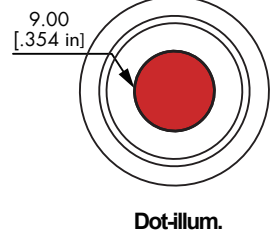
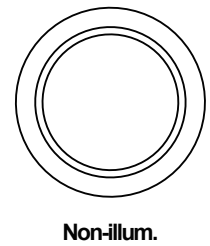
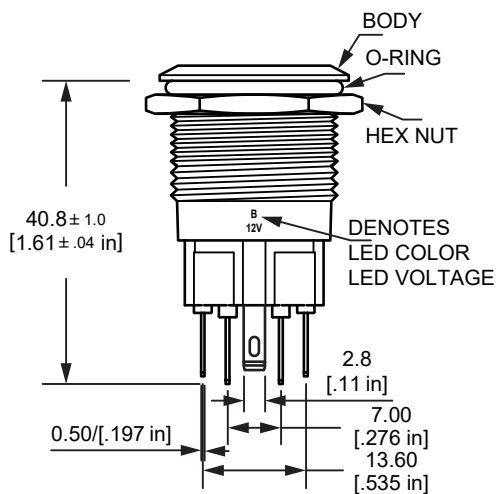
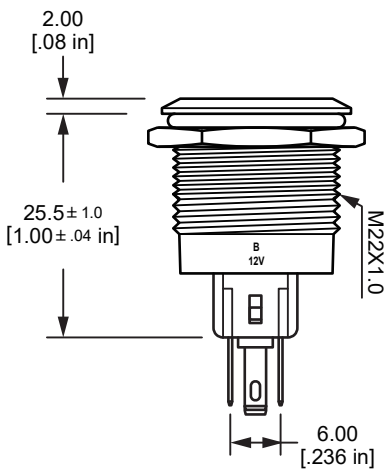
CONTACT CONFIGURATION ILLUMINATED



CONTACT CONFIGURATION NON-ILLUMINATED

FUNCTIONS

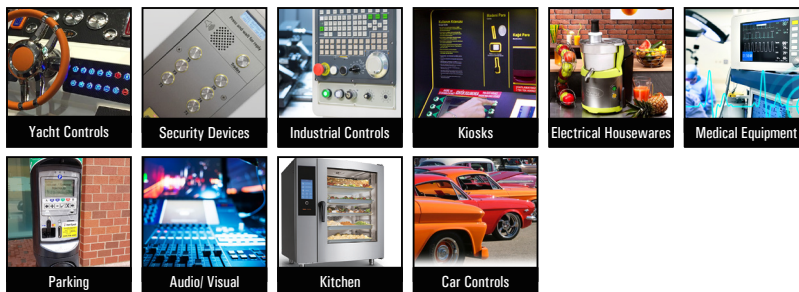
ALTERNATED



LENS OPTIONS

Anti vandal switch Ø22mm

APPLICATIONS / MARKETS



ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
L22A	F- Flat	NONE- Solder-lug (2.8X0.5) N- Screw	M- Momentary 1- 1N01NC Z- Alternated 1- 1N01NC	S- Stainless steel	D- Dot illum. R- Ring illum. NONE- non-illum. X- Backlit Label Kit**	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	NONE- Base Voltage* 3.3V 6V 12V 24V 36V 110V 220V	NONE- Non-marking LE- Laser etched

NOTES:

* Base voltage on LEDs:

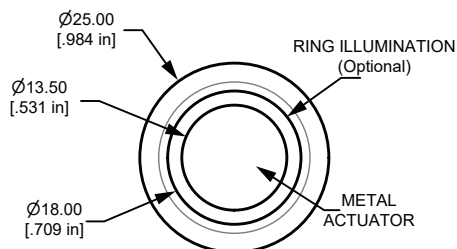
1.8V @ 20mA for Red, Yellow and Orange LED colors / 2.8V @ 20mA for Blue, Green and White LED colors

** 5 ICON labels included, 5 icon labels included, Flat actuator only

TECHNICAL DATA

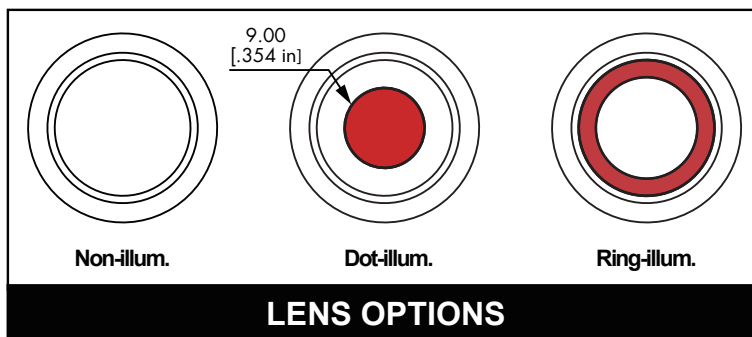
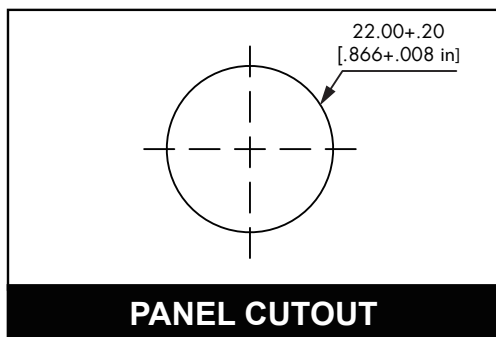
Type	L22A-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated/ Backlit label kit
Terminal	Screw and Solder lug (2.8X0.5)
Max. Switch Rating	Ith: 5A Ui: 250VAC
Contact Resistance	≤50mΩ
Insulation Resistance	≥1000mΩ
Dielectric Strength	2000VAC
Operation Temp	-20℃ ~ +55℃
Mechanical Life	1,000,000 Cycles
Electrical Life	>50,000 Cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	approx. 8N
Protection	IP65/ IK10
Material	
Actuator	Stainless Steel
Body	Stainless Steel
Base	PA
Color	LED 3.3V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V R G Y O B W Approx. 40,000 hours

DESCRIPTION



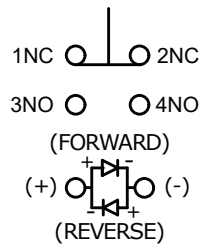
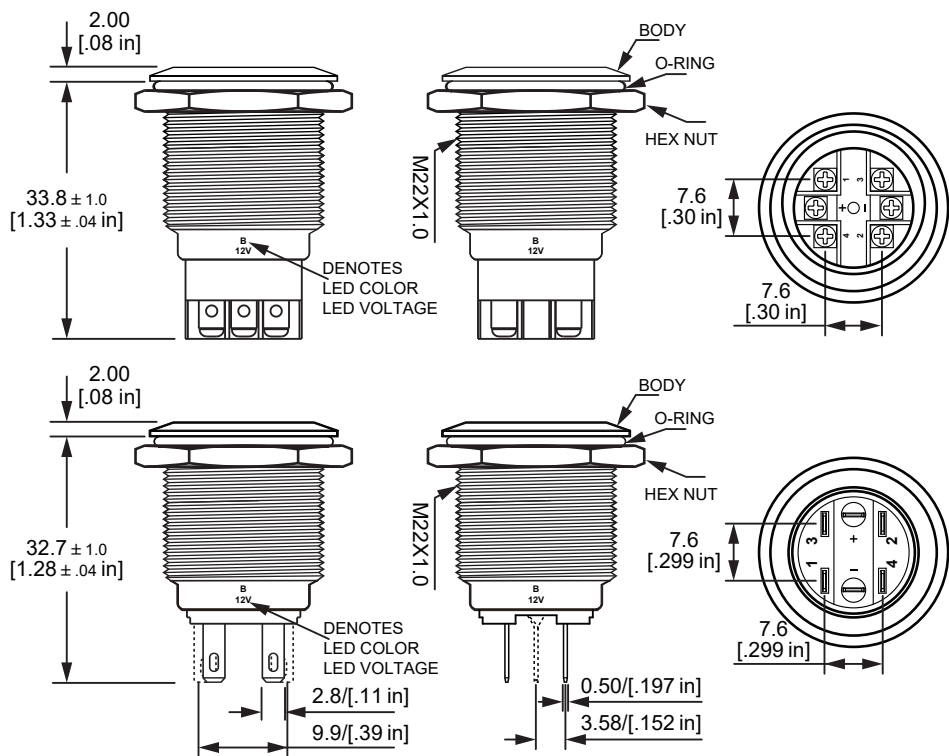
Panel Thickness:
1-10mm for Momentary
1-12mm for Alternated

PANEL CUTOUT & ILLUMINATED OPTIONS

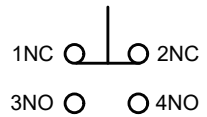


Anti vandal switch $\varnothing 22\text{mm}$

MOMENTARY



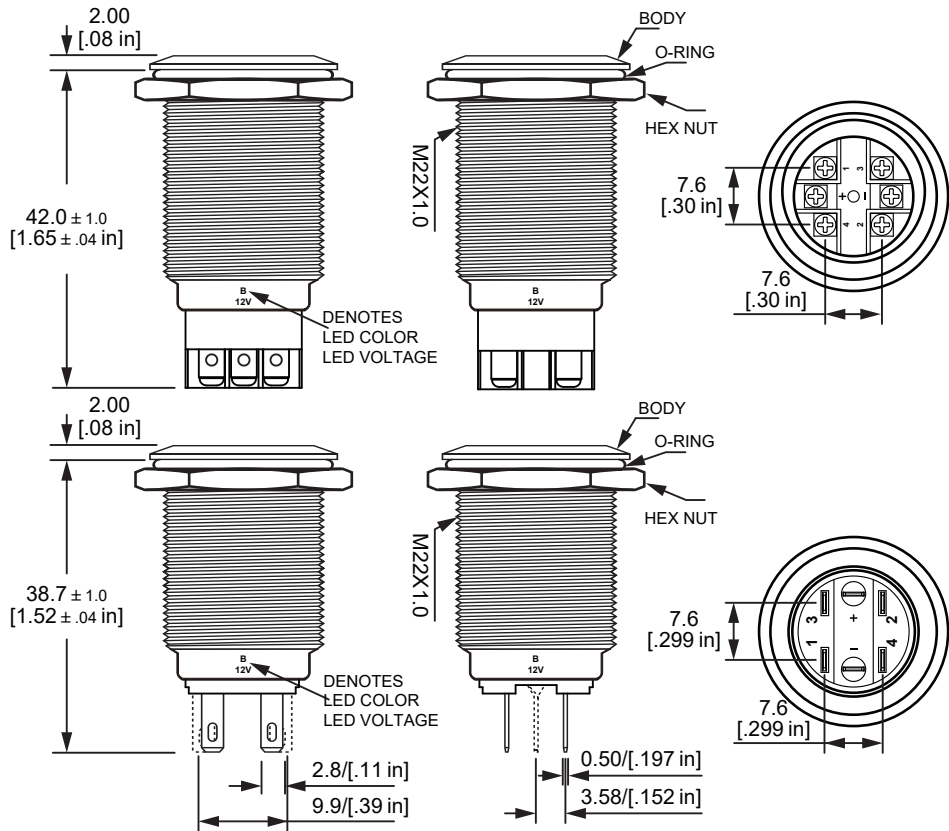
CONTACT CONFIGURATION
ILLUMINATED



CONTACT CONFIGURATION
NON-ILLUMINATED

FUNCTIONS

ALTERNATED

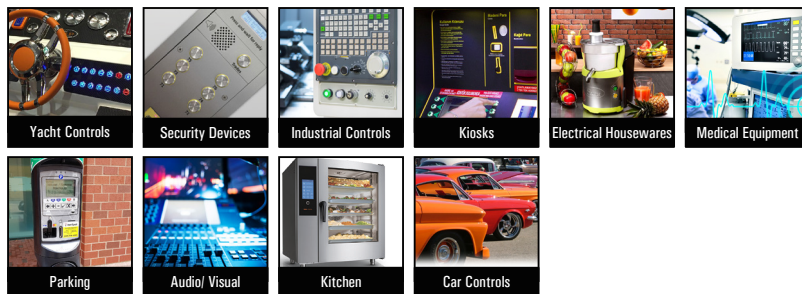


5 ICON labels included

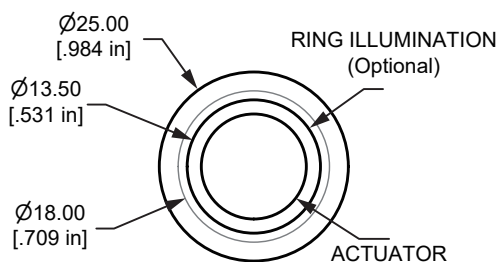
BL225

Micro-trip anti vandal switch Ø22mm

APPLICATIONS / MARKETS



DESCRIPTION



Panel Thickness: 1-12mm

ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
☐ L22M Micro-trip	☐ F- Flat	☐ NONE- Solder-lug (2.8x0.5)	☐ M- Momentary 1- 1NO	☐ S- Stainless steel	☐ D- Dot illum.	☐ W- White	☐ NONE- Base voltage*	☐ Non-marking
		☐ N- Screw			☐ R- Ring illum.	☐ Y- Yellow	☐ 3.3V	☐ LE- Laser etched
					☐ NONE- non-illum.	☐ B- Blue	☐ 6V	
						☐ G- Green	☐ 12V	
						☐ R- Red	☐ 24V	
						☐ O- Orange	☐ 36V	

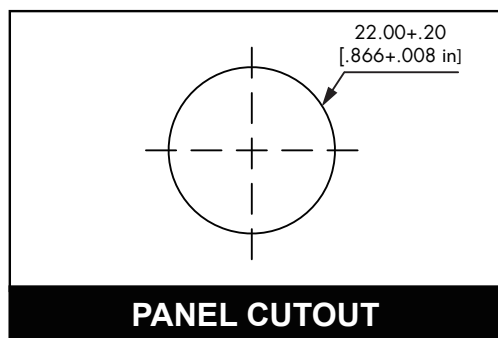
NOTES:

* Base voltage on LEDs:
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

TECHNICAL DATA

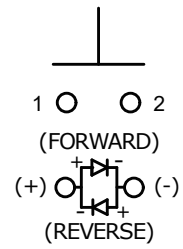
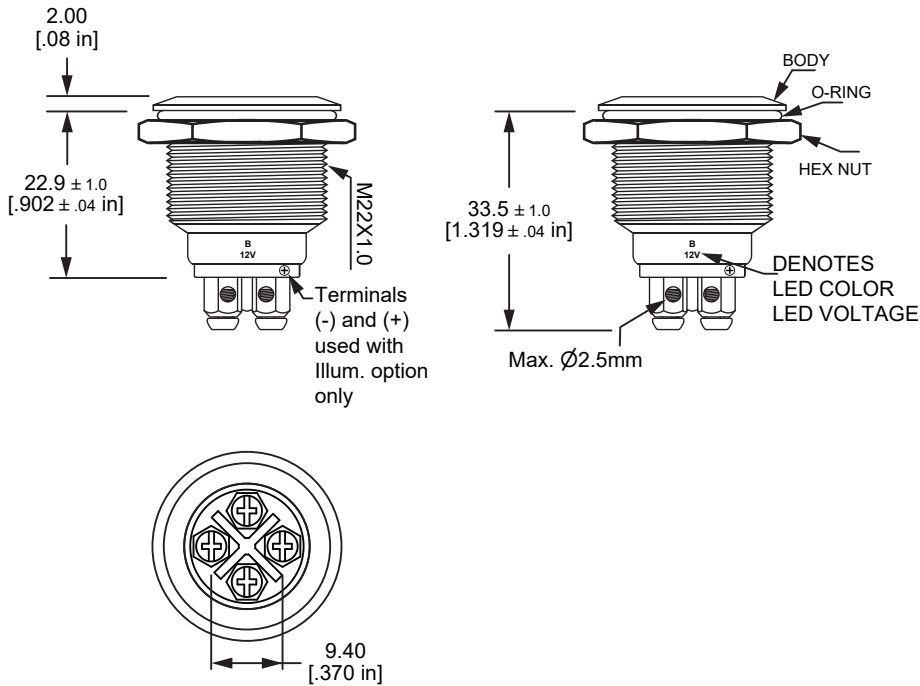
Type	L22M-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Screw and Solder lug (2.8X0.8)
Max. Switch Rating	50mA 24VDC
Contact Resistance	≤100mΩ
Insulation Resistance	≥1000mΩ
Dielectric Strength	2000VAC
Operation Temp	-20℃ ~ +55℃
Mechanical Life	1,000,000 Cycles
Electrical Life	50,000 Cycles
Contact Material	Silver Alloy
Rear Nut Fixing Torque	0.57Nm
Operation Pressure	approx. 8N
Protection	IP65/ IK09
Material	
Switch Assembly	UL94V-0 Rated Polyamide (Nylon)
Tags	Copper Alloy
Terminals	Copper Alloy
Switch Body & Button	Stainless steel
Lens and Lens Body	Polycarbonate
Internal Seal	Silicone
O Ring	Nitrile
	LED
Color	3.3V/ 6V/ 12V/ 24V/ 36V
	☐ R ☐ G ☐ Y ☐ O ☐ B ☐ W
	Approx, 40,000 hours

PANEL CUTOUT

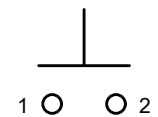


Micro-trip anti vandal switch $\varnothing 22\text{mm}$

SCREW TERMINAL



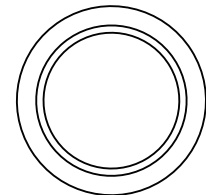
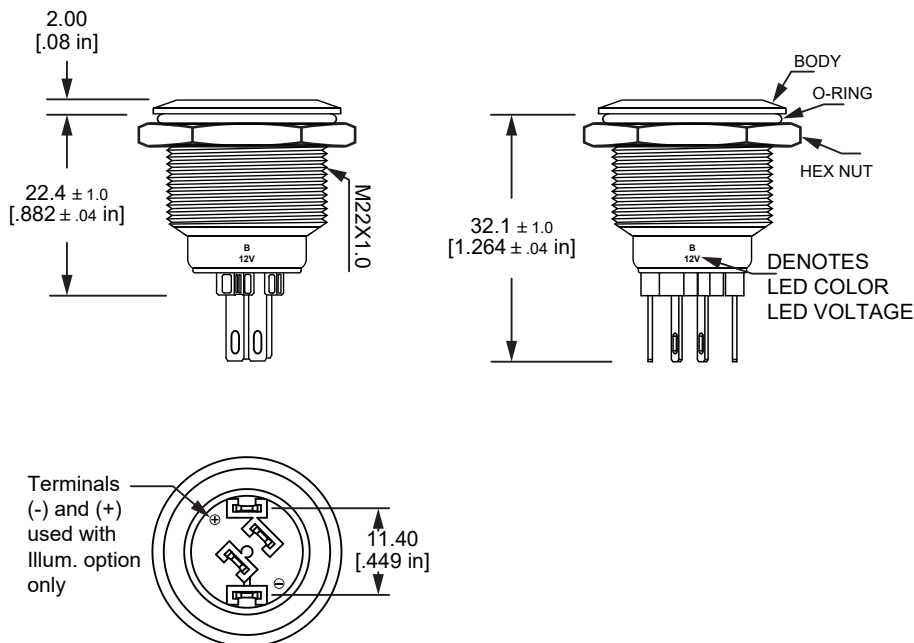
ILLUMINATED



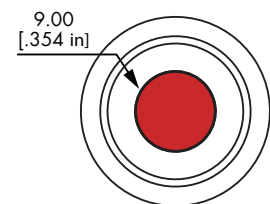
NON-
ILLUMINATED

FUNCTIONS

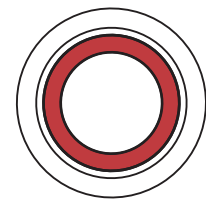
SOLDER TERMINAL



Non-illum.



Dot-illum.

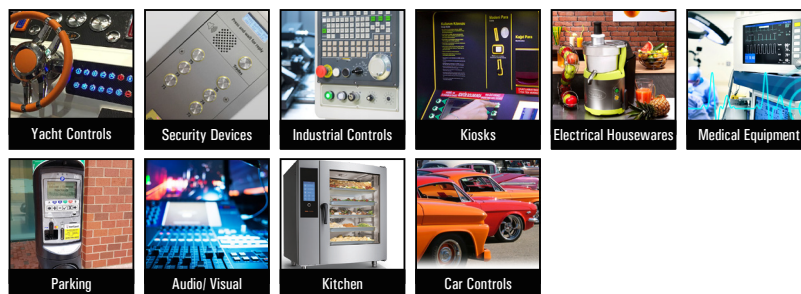


Ring-illum.

LENS OPTIONS

High current anti vandal switch $\varnothing 22\text{mm}$

APPLICATIONS / MARKETS



ORDER CODE

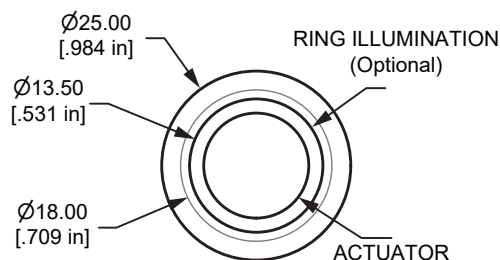
Series	Actuator Options	Terminal Options	Function Options	Current Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
L22B	F- Flat	NONE- quick connect terminal (6.35x0.8)	M- Momentary 1 1NO (SPST) 2 1NC (SPST) 3 1NO1NC (SPDT) Z- Alternated 1 1NO (SPST) 2 1NC (SPST) 3 1NO1NC (SPDT)	02- 2.5A 03- 3A 05- 5A 08- 8A 10- 10A 16- 16A 21- 21A 06- 0.6A/ 125VDC 03- 0.3A/ 250VDC	S- Stainless steel	D- Dot illum. R- Ring illum. NONE- non-illum.	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	NONE- Base Voltage* 3.3V 6V 12V 24V 36V 110V 220V	NONE- Non-marking LE- Laser etched

NOTES:

* Base voltage on LEDs:

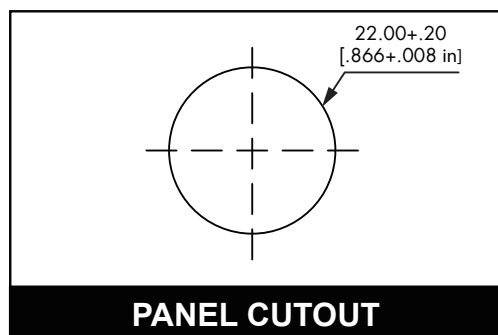
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

DESCRIPTION



Panel Thickness: 1-12mm

PANEL CUTOUT

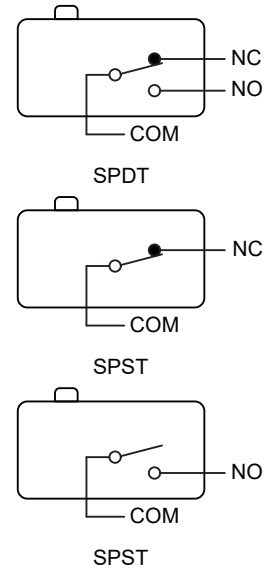
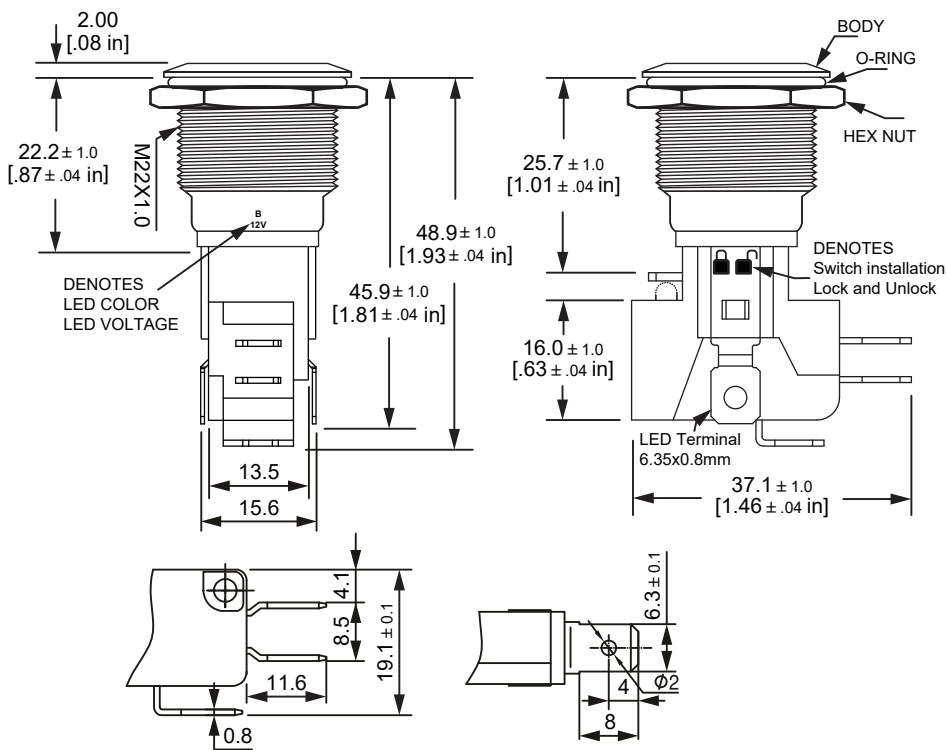


TECHNICAL DATA

Type	L22B-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Quick connect terminal (6.35x0.8)
Max. Switch Rating	3A 5A 8A 10A 15A(16A) 20A(21A)/ 250VAC, 125VAC 0.6A/ 125VDC 0.3A/ 250VDC
Contact Resistance	$\leq 25\text{m}\Omega$
Insulation Resistance	$\geq 100\text{m}\Omega$
Dielectric Strength	Between non-consecutive terminals 1,000Vrms, 50/60Hz for 1min Between non-current carrying metal parts and each terminal 1,500Vrms, 50/60Hz for 1min Between ground and each terminal 1,500Vrms, 50/60Hz for 1min
Shock resistance	Detraction: O.F. > 0.5N: 1000m/s ² (approx. 100g), O.F. $\leq$ 0.5N: 400m/s ² (approx. 40g) Malfunction: O.F. > 0.5N: 200m/s ² (approx. 20g), O.F. $\leq$ 0.5N: 100m/s ² (approx. 10g)
Vibration Resistance	10 - 50Hz, 1.5mm Double Amplitude
Ambient Temp.	-25 °C ~ +85 °C
Mechanical Life	2,000,000cycles
Electrical Life	50,000cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	10N
Protection	IP65/ IK09
Material	
Actuator	Stainless steel
Body	Stainless steel
	LED
Color	3.3V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V R G Y O B W Approx. 40, 000

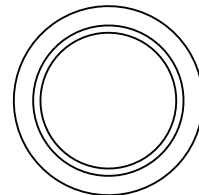
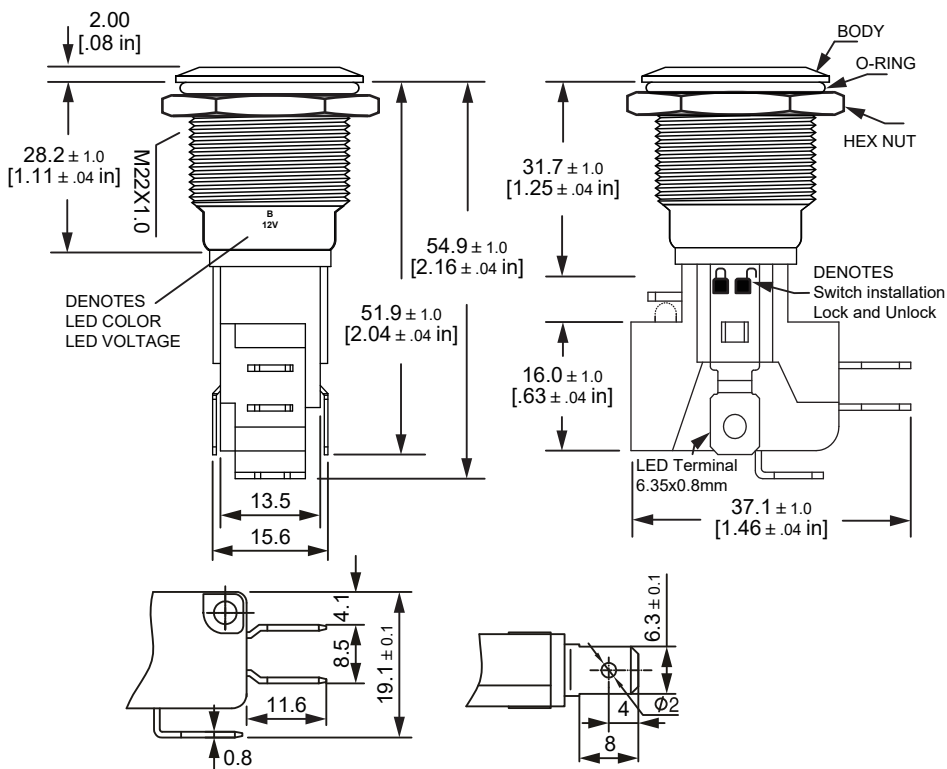
High current anti vandal switch $\varnothing 22\text{mm}$

MOMENTARY

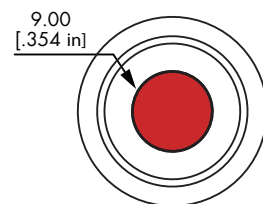


CONTACT

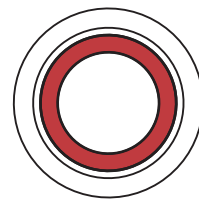
ALTERNATED



Non-illum.



Dot-illum.

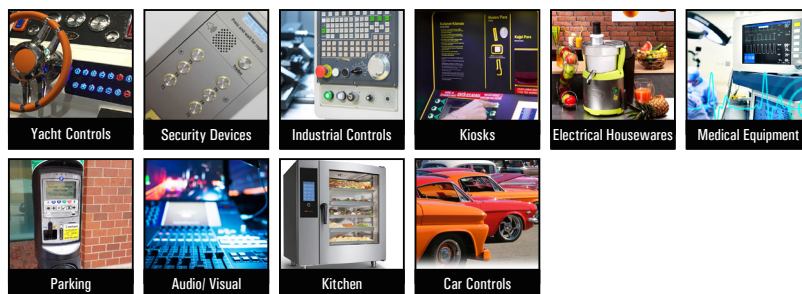


Ring-illum.

LENS OPTIONS

Anti vandal switch $\varnothing 25\text{mm}$

APPLICATIONS / MARKETS



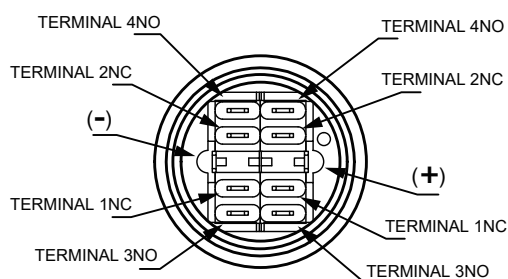
ORDER CODE

Series	Actuator Options	Terminal Options	Function Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options	Graphic Options
☐ L25	☐ F- Flat	☐ NONE- Solder lug (2.8x0.5)	☐ M- Momentary 1- 1NO1NC 2- 2NO2NC Z- Alternated 1- 1NO1NC 2- 2NO2NC	☐ S- Stainless steel A- Anodized aluminum	☐ D- Dot illum. R- Ring illum. NONE- non-illum.	☐ W- White Y- Yellow B- Blue G- Green R- Red O- Orange	☐ NONE- Base Voltage* 3.3V 6V 12V 24V 36V 110V 220V	☐ NONE- Non-marking LE- Laser etched

NOTES:

* Base voltage on LEDs:
1.8V @ 20mA for Red, Yellow and Orange LED colors
2.8V @ 20mA for Blue, Green and White LED colors

DESCRIPTION

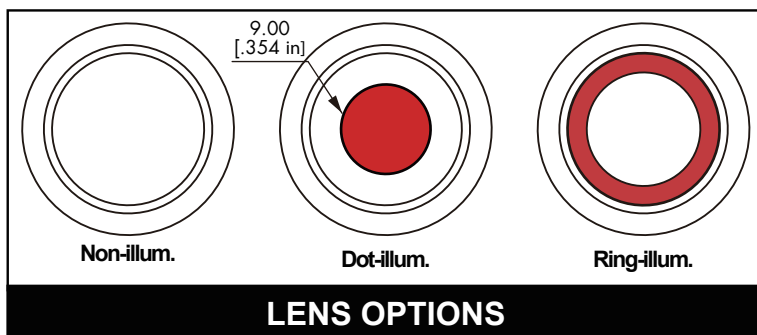
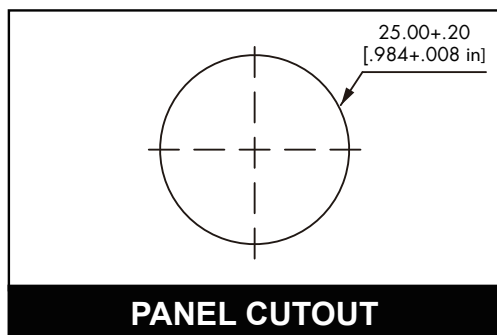


Terminals (-) and (+) used with Illum. option only

TECHNICAL DATA

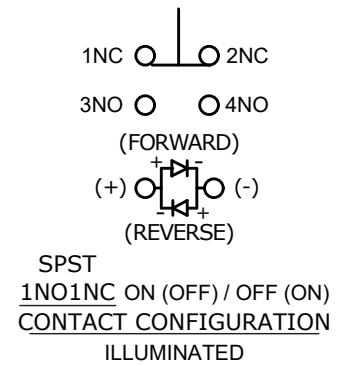
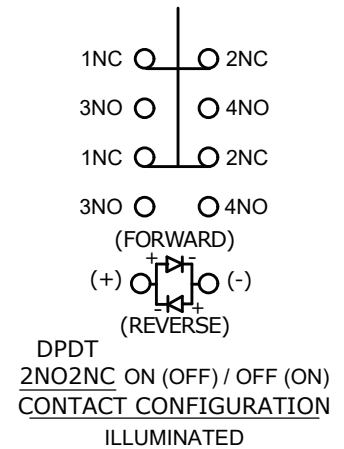
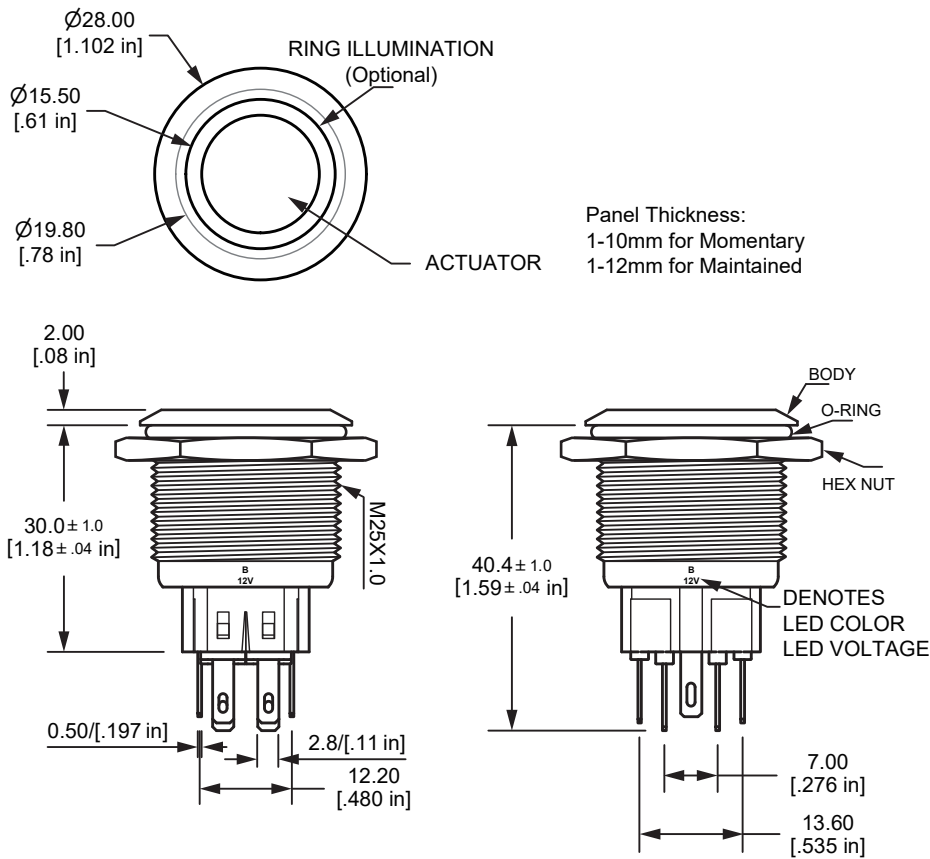
Type	L25-F
Illuminated Options	Non-Illuminated/ Ring Illuminated/ Dot Illuminated
Terminal	Solder lug (2.8X0.5)
Max. Switch Rating	Ith: 5A Ui: 250VAC
Contact Resistance	$\leq 50\text{m}\Omega$
Insulation Resistance	$\geq 1000\text{m}\Omega$
Dielectric Strength	2000VAC
Operation Temp	-20°C ~ +55°C
Mechanical Life	1,000,000 Cycles
Electrical Life	>50,000 Cycles
Contact Material	Silver Alloy
Torque	5 ~ 14Nm
Operation Pressure	approx. 8N
Protection	IK10
Material	
Actuator	Stainless Steel/ *Anodized Aluminum
Body	Stainless Steel/ *Anodized Aluminum
Base	PA
Color	LED 3.3V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V R G Y O B W Approx, 40,000 hours

PANEL CUTOUT & ILLUMINATED OPTIONS

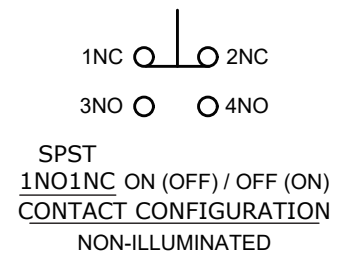
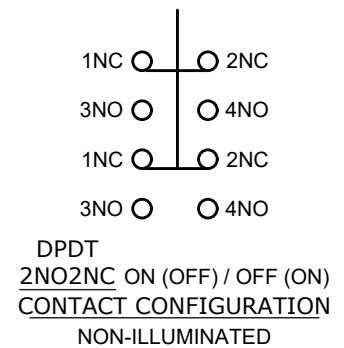
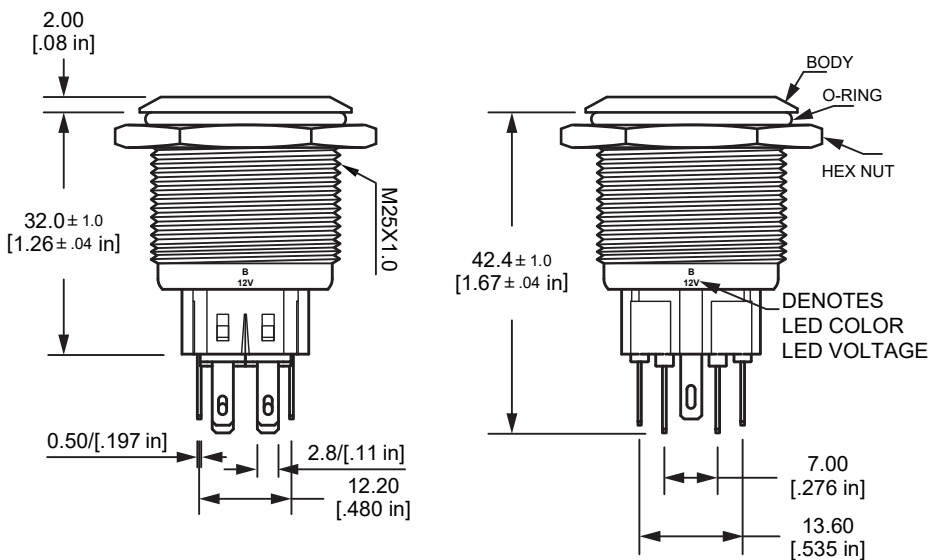


Anti vandal switch $\varnothing 25\text{mm}$

MOMENTARY



ALTERNATED



FUNCTIONS

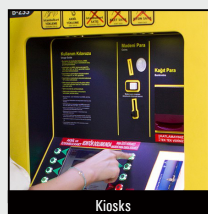


Alarm
Indicator
Backlit label kit

Anti vandal pilot indicator



Applications / Markets



SPECIFICATIONS

Contact Arrangement: Lamp indicator
Operating/Storage Temperature: -25°C to 55°C
Lamp Life: 40,000 Hours Nominal
Ingress Protection: IP67
Panel Thickness: 1-6mm or 1-10mm, (depending on mounting diameter)
Mounting Nut Torque: 5-14Nm

FEATURES & BENEFITS

- Pilot indicator light
- Multiple panel cutout sizes: 6mm to 19mm dia.
- Multiple illumination voltage options
- Multiple LED color options
- IP67 rated

PART NUMBER CONFIGURATOR

Series



PI
PV*

Indicator Diameter



06- 6mm Dia.
 08- 8mm Dia.
 10- 10mm Dia.
 12- 12mm Dia.
 14- 14mm Dia.
 16- 16mm Dia.
 19- 19mm Dia.

Lens



F- Flat
C- Chamfer

Illumination Style Options



D- Dot illum.
R- Ring illum.

Material Options



S- Stainless steel
N- Nickel plated brass

Led-Color Options



W- White
Y- Yellow
B- Blue
G- Green
R- Red
O- Orange

Illumination Voltage Options



NONE- Base voltage**
 3.3V
 6V
 12V
 24V
 36V
 110V

NOTES:

* PV: only 8mm and 12mm

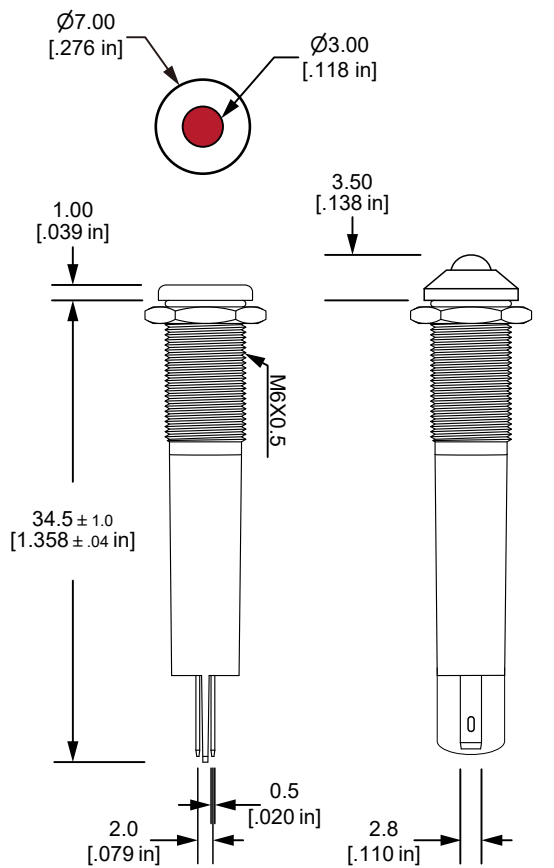
** Base voltage on LEDs: 1.8V @ 20mA for Red, Yellow and Orange LED colors / 2.8V @ 20mA for Blue, Green and White LED colors

Specifications subject to change without notice

Anti vandal pilot indicator

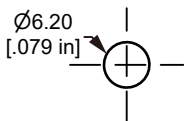
DIMENSIONS

PI06

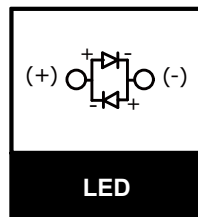


FLAT

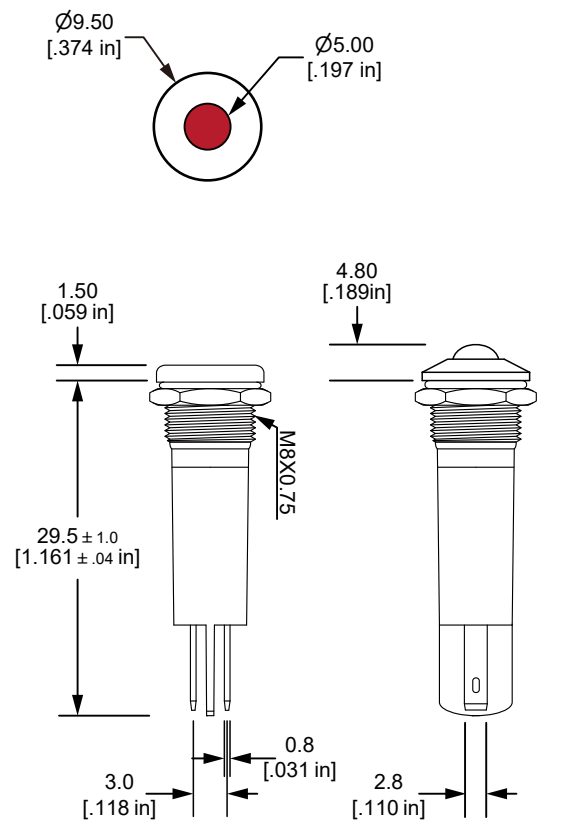
CHAMFER



Panel Thickness:
1 ~ 6mm

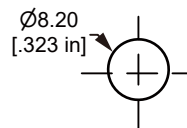


PI08

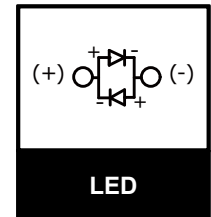


FLAT

CHAMFER

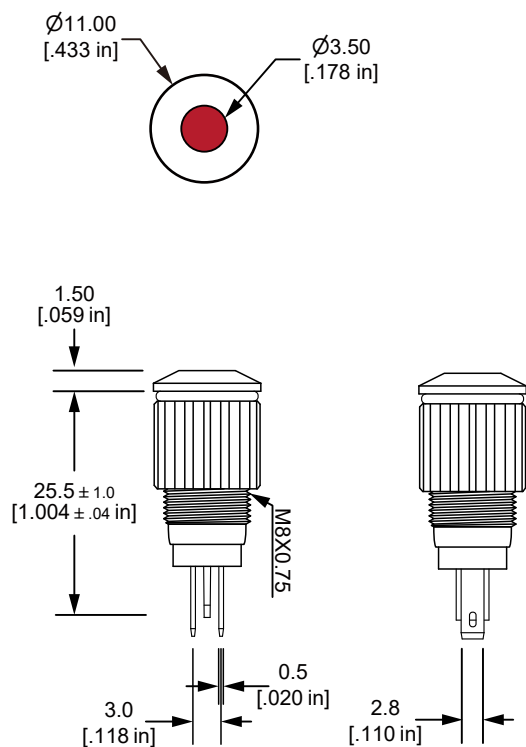


Panel Thickness:
1 ~ 6mm

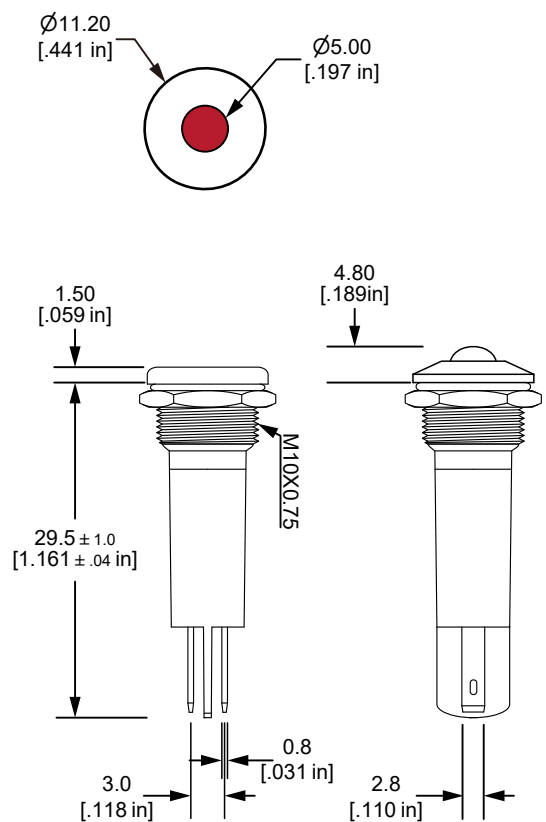


DIMENSIONS

PV8

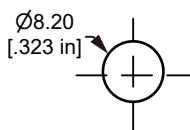


PI10

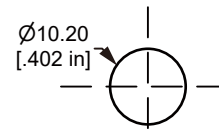
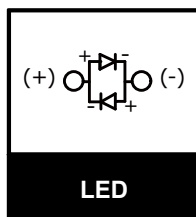


FLAT

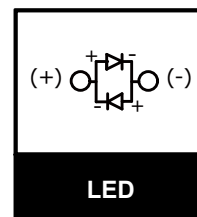
CHAMFER



Panel Thickness:
1 ~ 6mm



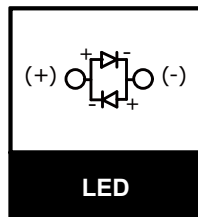
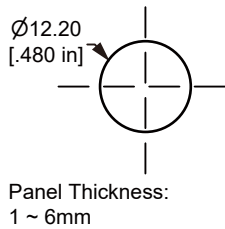
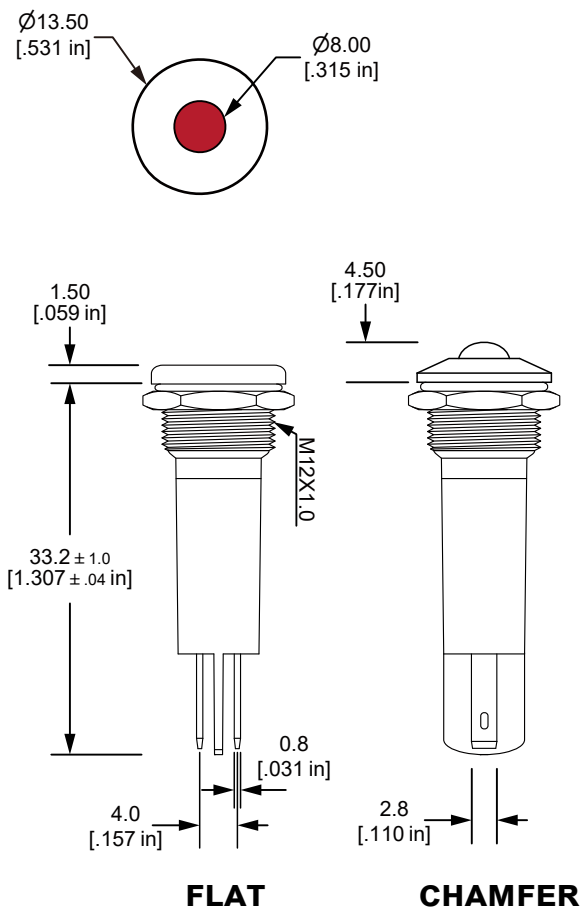
Panel Thickness:
1 ~ 6mm



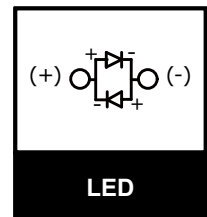
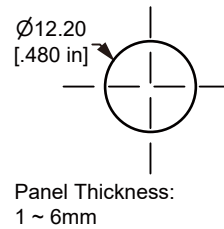
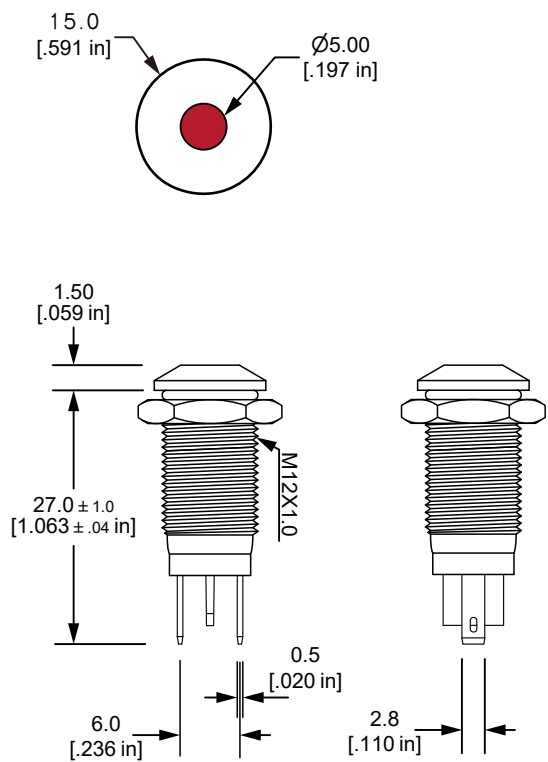
Anti vandal pilot indicator

DIMENSIONS

PI12

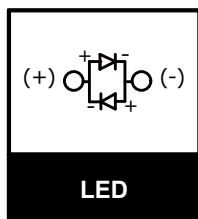
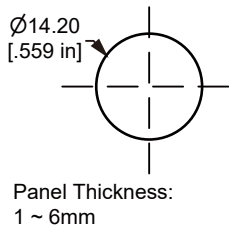
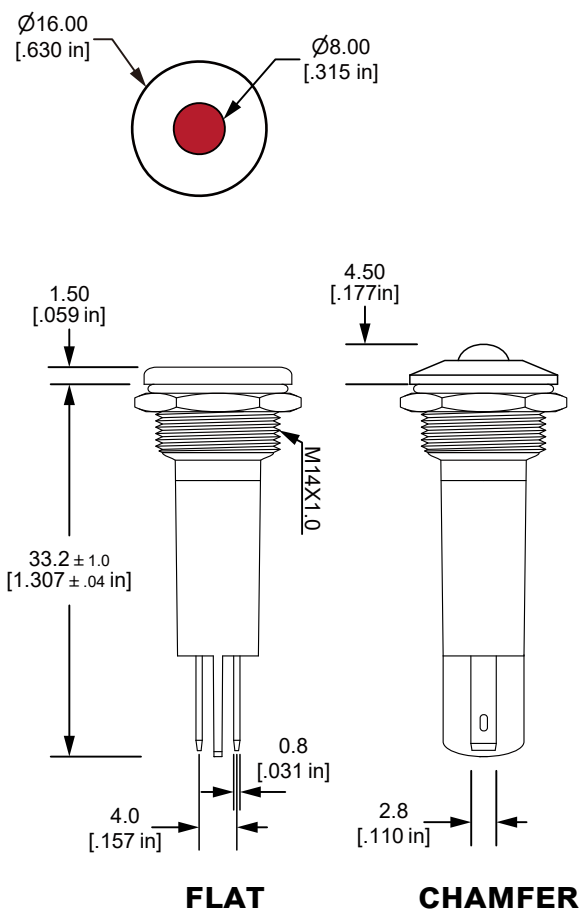


PV12

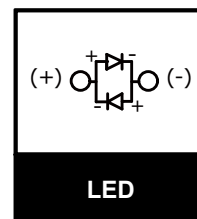
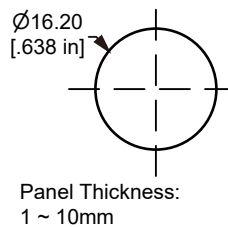
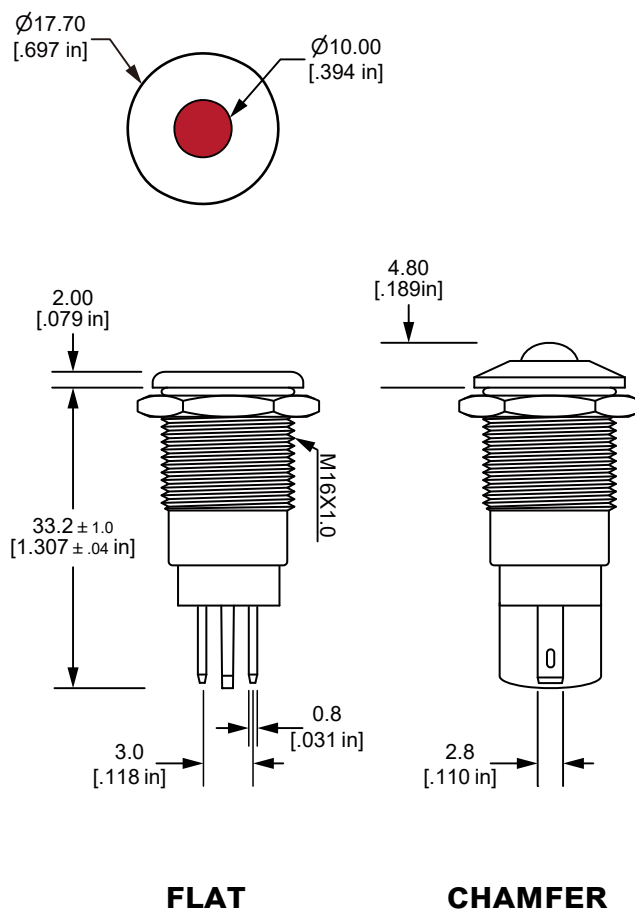


DIMENSIONS

PI14

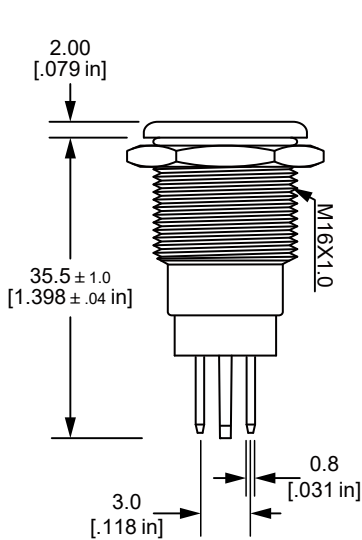
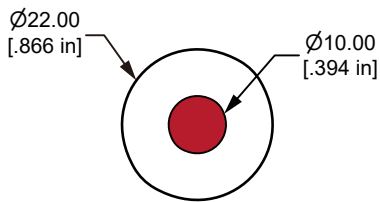


PI16



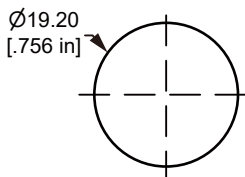
DIMENSIONS

PI19

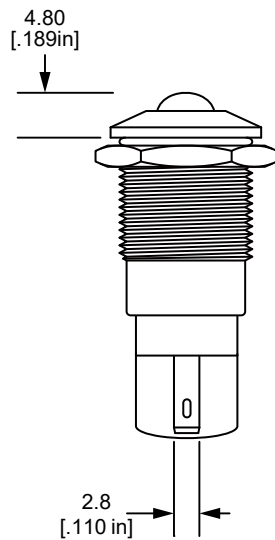


FLAT

FLAT

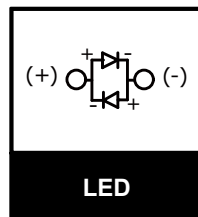


Panel Thickness:
1 ~ 10mm



CHAMFER

CHAMFER



Buzzer

APPLICATIONS / MARKETS



ORDER CODE

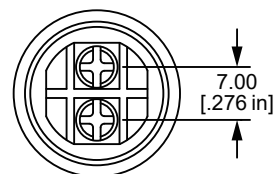
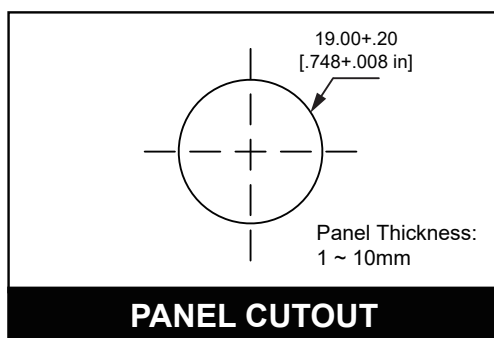
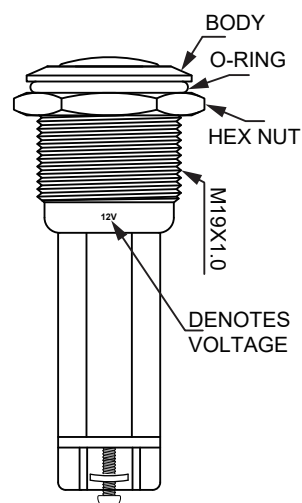
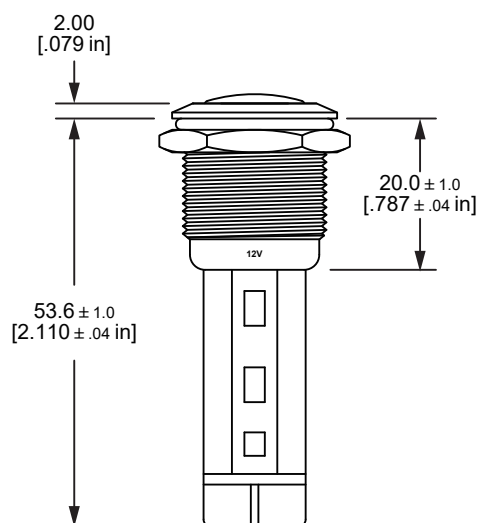
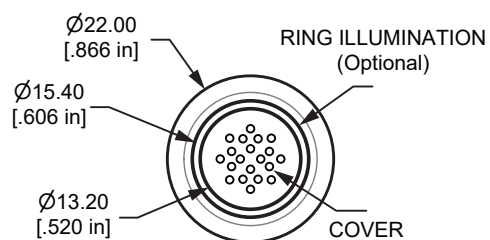
Series	Function Options	Terminal Options	Material Options	Illumination Style Options	Led-Color Options	Illumination Voltage Options
☐	☐	☐	☐	☐	☐	☐
Lf19	NONE- Buzzer flashing and non-illum. F- Flicker buzzer A- Alternately flashing color C- LED close when buzzer pause H- LED always lighting when buzzer pause S- Bi-color LED strobe, the buzzer call in slow The function can be customized	NONE - Screw	NONE - Stainless steel	NONE - Ring illum.	W- White Y- Yellow B- Blue G- Green R- Red	12V 24V
Remark: 'A' standard color for Red and Green 'C' standard color for Red 'S' standard color for Red and Blue						

TECHNICAL DATA

Type	Lf19	Lf19-F
Function	Buzzer	Flicker Buzzer
Terminal	Screw	
Max. Switch Rating	--	
Contact Resistance	--	
Insulation Resistance	--	
Dielectric Strength	2000VAC	
Operation Temp	-20℃ ~ +55℃	
Mechanical Life	--	
Electrical Life	--	
Contact Material	--	
Torque	5 ~ 14Nm	
Operation Pressure	--	
Protection	IP50, IK04	
Material	--	
Actuator	Stainless	
Body	Stainless Steel	
Base	PA	
Buzzer Spec.	3.2V/ 6V/ 12V/ 24V/ 36V/ 110V/ 220V	
Type	Buzzer	Flicker Buzzer
Voltage	DC12V/ DC24V	
Color	Approx, 40,000 hours	R G Y O B W
Sound Inten	≥80dB(0.1m)	

Buzzer

DIMENSIONS



Backlit LED switch Label Kit

When the Dual or Single Color LED function switches are turned on, the Blue LED lights up through the actuator. Activate a particular function by pressing one of the switches. This will change the Blue LED to Red, indicating that the chosen function is turned on. The switch color can customization.

With a IP67 waterproof rating and Stainless Steel SS316 body, our switch can be installed on your boat or other vehicle in wet and dusty environments, but not under water. The first switch can be designated as the night time Blue LED On/Off switch.

Identifying the function of each push button switch is simple with our **interchangeable 3M adhesive backed actuator Backlit Labels**. It's the only actuator that **allows the LEDs in the switch body to pass light through the label**. The result is excellent visibility at night. There are **53 Switch Function Icons to choose from!** **Custom Icon Labels can be made to your design specifications**. Please check with the factory.



*Backlit Label in **Daytime Mode**. LED light is off.*

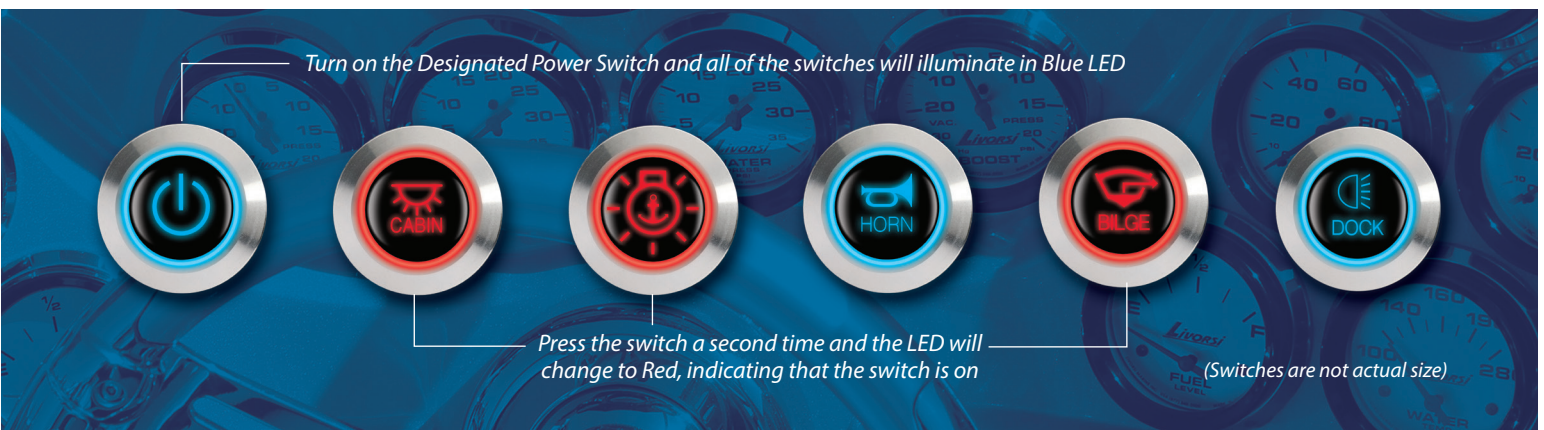


*Backlit Label in **Nighttime Mode**. The Blue LED provides great visibility of all the function switches and lets you know that the switches are in the off position.*



*Backlit Label in **Nighttime Mode**. The Red LED lets you know that the switch is on.*

**All specifications are subject to change without notice.*



Backlit LED switch Label Kit

HOW TO ORDER

Series	Switch Options	Icon Options
 		
BL	19- 19mm switch 22- 22mm switch	5- 5 Icon labels included 50- 50 Icon labels included L450 - 1 Icon label (check list)

Features & Benefits

- Scratch resistant polycarbonate material
 - Back printed for durability
 - Waterproof adhesive for longevity in wet environments
 - Custom Icon Labels can be made to your design specifications
- Please check with the factory.

Backlit Labels Icon & Part Number Legend



5 ICON labels included



50 ICON labels included

Icon Style	Part No.	Icon Style	Part No.	Icon Style	Part No.	Icon Style	Part No.
	L450-0001		L450-0015		L450-0029		L450-0043
	L450-0002		L450-0016		L450-0030		L450-0044
	L450-0003		L450-0017		L450-0031		L450-0045
	L450-0004		L450-0018		L450-0032		L450-0046
	L450-0005		L450-0019		L450-0033		L450-0047
	L450-0006		L450-0020		L450-0034		L450-0048
	L450-0007		L450-0021		L450-0035		L450-0049
	L450-0008		L450-0022		L450-0036		L450-0050
	L450-0009		L450-0023		L450-0037		L450-0051
	L450-0010		L450-0024		L450-0038		L450-0052
	L450-0011		L450-0025		L450-0039		L450-0053
	L450-0012		L450-0026		L450-0040		
	L450-0013		L450-0027		L450-0041		
	L450-0014		L450-0028		L450-0042		



Customized Service

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