



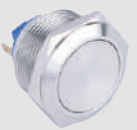








langir[®]

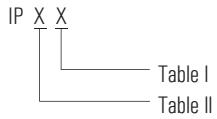
Anti vandal switch
www.langir.com

Anti-vandal series comparison

Cutout Diameter / Depth	Functions available	Terminal type	Actuator options	Material Options	Illum. Options				Water resistant (IP65 Min.)	RoHS compliant			
					Nickel plated brass	Gold plated brass	Anodized aluminum	Stainless steel			Dot illumination	Ring illumination	Bi-Color illumination
	V19 Vs19 shot 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 big current 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	•		•	•		•	•		
	Ls16 Diameter: 16mm Max. Depth: 9mm	1 Pole: Off-(On)	Solder	Flat	•		•	•	•	•	•	•	
	L22 L22B Big current Diameter: 22mm Max. current 21A Max. Depth: 10mm	2 Pole: 1P Off-(On) + 1P On-(Off)	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			•	•	•	•	•	•	

Vandal Resistant 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.

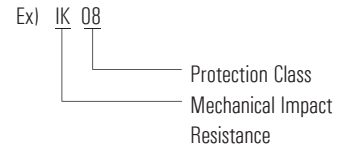


Table I (1st characteristic numeral)
Degree of Protection against solid objects

Digit	Description
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	Description
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

Vandal Resistant Pilot Lamp Φ 8mm 12mm

Anti-Vandal IK09/ Sealed IP65

Variety Of Colors

Brass



P8-P-N-D-G



P12-P-N-D-R

Order Code

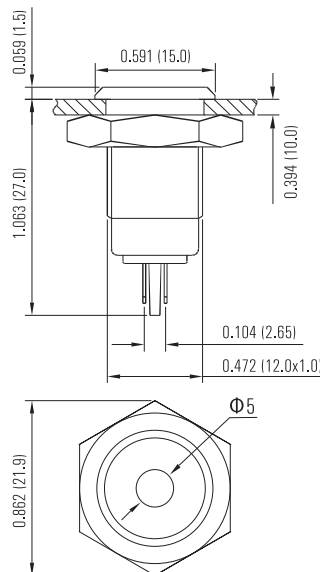
Series	Actuator Terminal	Material	Illuminated Options	Color	Color Voltage
<input type="checkbox"/> PB (8mm) <input type="checkbox"/> P12 (12mm)	<input type="checkbox"/> P- Pin (1.8x0.4)	<input type="checkbox"/> N- Nickel plated brass	<input type="checkbox"/> D- Dot	<input type="checkbox"/> W- White <input type="checkbox"/> Y- Yellow <input type="checkbox"/> B- Blue <input type="checkbox"/> G- Green <input type="checkbox"/> R- Red <input type="checkbox"/> O- Orange	<input type="checkbox"/> 6V <input type="checkbox"/> 12V <input type="checkbox"/> 24V

Technical Data

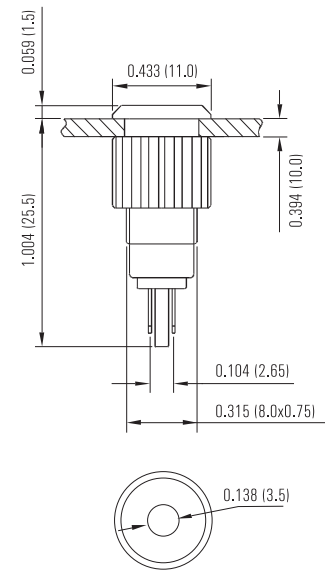
Type	P8	P12
Terminal	Pin(1.8X0.4mm)	
Dielectric Strength	1100VAC	
Operation Temp.	-20°C ~ +55°C	
Torque	5-14Nm	
Protection	IK10	
Material	PC	
Lampshade	Nickel Plated Brass	
Base	PBT	
Type	Indicator	
Voltage	6V/ 12V/ 24V	
Color	R G Y O B W	
Life	Approx.40,000 hours	

Note:Additional voltage available upon request. Please consult your salesperson.

Dimension



P12



P8

Vandal Resistant Switch $\Phi 12\text{mm}$

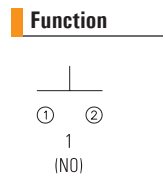


- Anti-Vandal IK09/ Sealed IP65
- 1,000,000 Cycles Momentary
- Variety Of Colors

Order Code

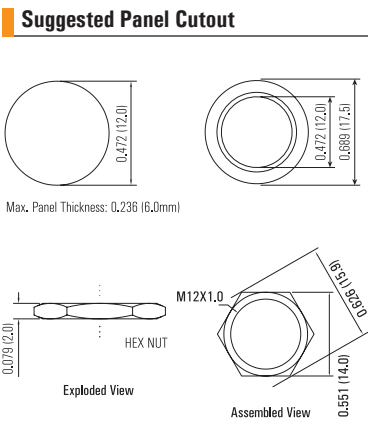
Series	Actuator Options	Terminal	Function	Body Material	Actuator Color
<input type="checkbox"/> V12	<input type="checkbox"/> B- Round	<input type="checkbox"/> P- Pin (2.0x0.5) Screw no letter	<input type="checkbox"/> Momentary no letter 1- NO	<input type="checkbox"/> S- Stainless Steel <input type="checkbox"/> N- Nickel plated brass <input type="checkbox"/> A- Zn- Al Alloy <input type="checkbox"/> Black	<input type="checkbox"/> BK- Black <input type="checkbox"/> W- White <input type="checkbox"/> Y- Yellow <input type="checkbox"/> B- Blue <input type="checkbox"/> G- Green <input type="checkbox"/> R- Red

11 The Actuator color only Zn-Al alloy material available

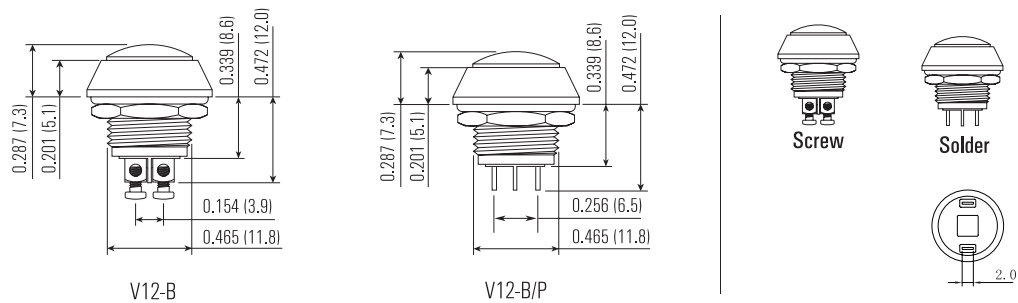


Technical Data

Type	V12-B/S	V12-B/N	V12-B/A
Illuminated Options	Non-illuminated		
Front Shape	Round		
Terminal	Screw/ Pin (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/ Brass/ Zn-Al Alloy		
Base	PBT		
Color	R G Y O B W BK		
Actuator(Zn-Al.alloy)			



Dimension



Vandal Resistant Switch $\Phi 16\text{mm}$



Anti-Vandal IK09/ Sealed IP65

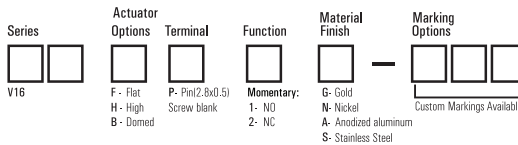
Normal Open

Domed/ Flat/ High Flat

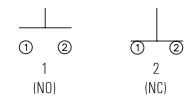
Stainless Steel/ Brass

1,000,000 Cycles Momentary

Order Code



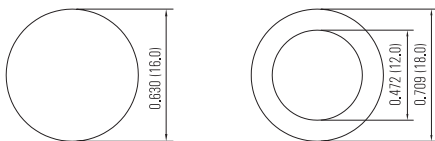
Function



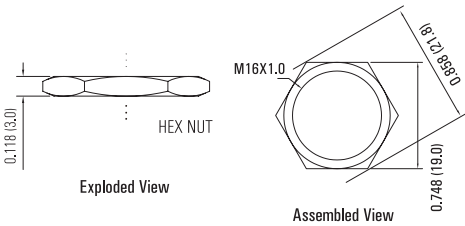
NC function: Screw terminal only



Suggested Panel Cutout



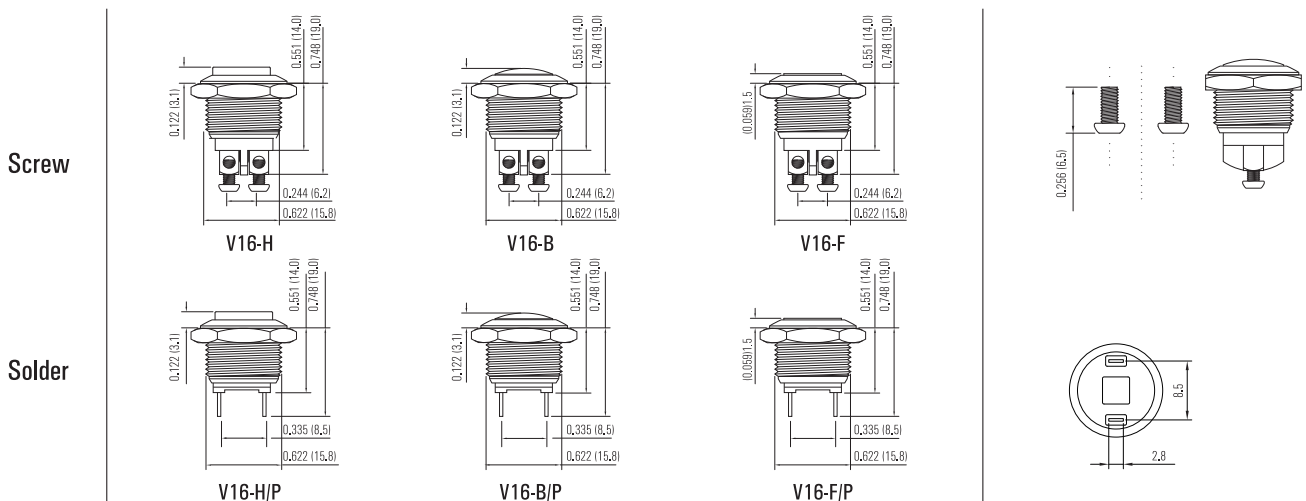
Max. Panel Thickness: 0.236 (6mm)



Technical Data

Type	V16-F	V16-B	V16-H
Actuator Options	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. 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		

Dimension



Vandal Resistant Switch $\Phi 19\text{mm}$



Anti-Vandal IK09/ Sealed IP65

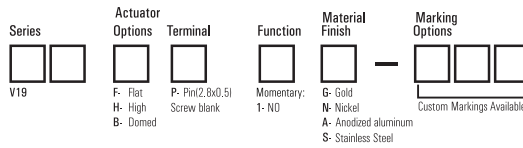
Normal Open/ Normal Closed

Domed/ Flat/ High Flat

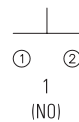
Stainless Steel/ Brass

1,000,000 Cycles Momentary

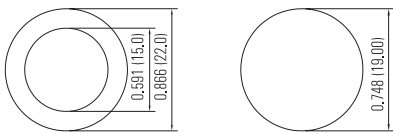
Order Code



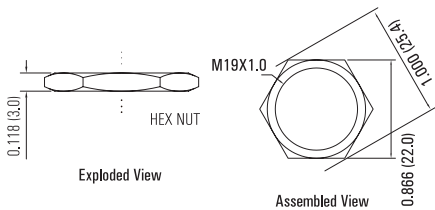
Function



Suggested Panel Cutout



Max. Panel Thickness: 0.394 (10mm)

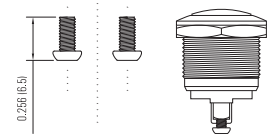
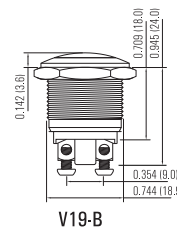
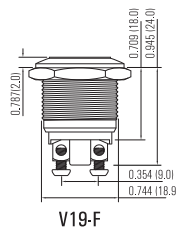
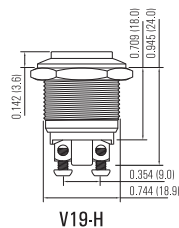


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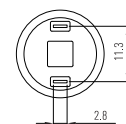
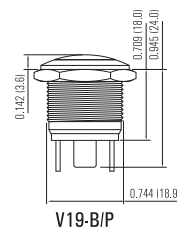
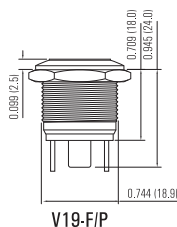
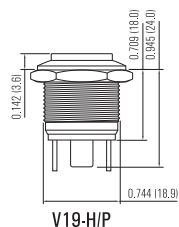
Type	V19-F	V19-B	V19-H
Front Shape	Flat	Domed	High Flat
Terminal	Screw/ Pin (2.8X0.5)		
Max.Switch Rating	2A 48VDC		
Contact Resistance	$\leq 50\text{m}\Omega$		
Insulation Resistance	$\geq 1000\text{m}\Omega$		
Dielectric Strength	2000VAC		
Operation Temp	$-20^\circ\text{C} \sim +55^\circ\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	200,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 5N		
Protection	IP65/ IK09		
Material			
Actuator	Stainless steel/ Gold or Nickel plated brass/ Anodized aluminum		
Body	Stainless steel/ Gold or Nickel plated brass/ Anodized aluminum		
Base	PBT		

Dimension

Screw



Solder



Vandal Resistant Switch Φ 19mm(Short)



Anti-Vandal IK09/ Sealed IP65

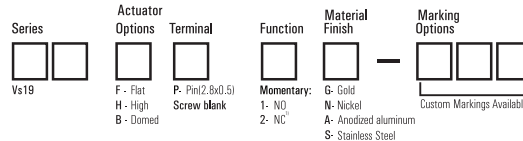
Normal Open/ Normal Closed

Domed/ Flat/ High Flat

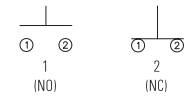
Stainless Steel/ Brass

1,000,000 Cycles Momentary

Order Code



Function



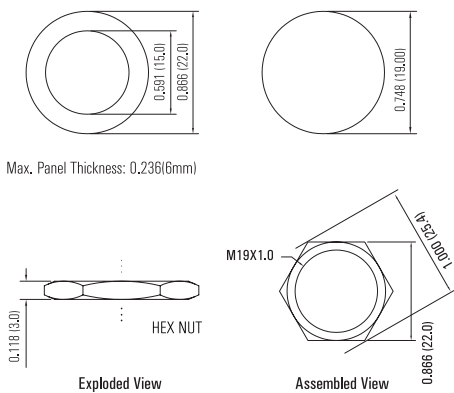
1): Screw terminal available.



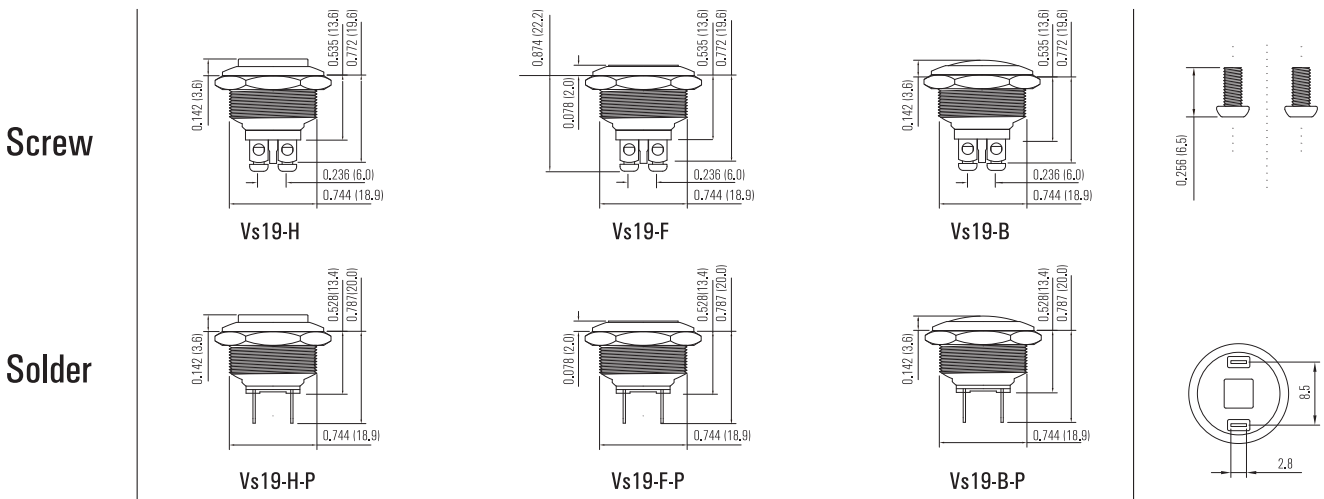
Technical Data

Type	Vs19-F	Vs19-B	Vs19-H
Actuator Options	Flat	Domed	High Flat
Terminal	Screw/ Pin (2.8X0.5)		
Max.Switch Rating	2A 48VDC		
Contact Resistance	$\leq 50m\Omega$		
Insulation Resistance	$\geq 1000m\Omega$		
Dielectric Strength	2000VAC		
Operation Temp	$-20^{\circ}C \sim +55^{\circ}C$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	200,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 5N		
Protection	IP65/ IK09		
Material			
Actuator	Stainless steel/ Gold or Nickel plated brass/ Anodized aluminum		
Body	Stainless steel/ Gold or Nickel plated brass/ Anodized aluminum		
Base	PBT		

Suggested Panel Cutout



Dimension



Vandal Resistant Switch $\Phi 22\text{mm}$



Anti-Vandal IK09/ Sealed IP65

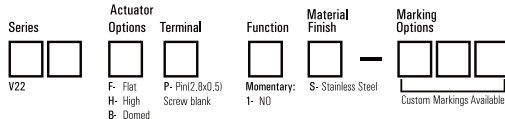
Normal Open/ Normal Closed

Domed/ Flat/ High Flat

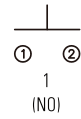
Stainless Steel

1,000,000 Cycles Momentary

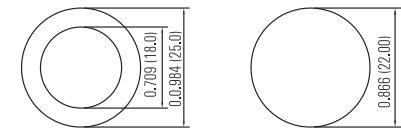
Order Code



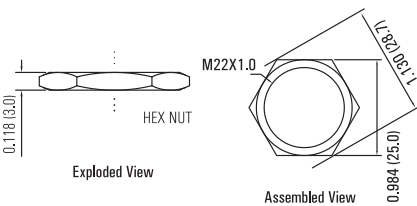
Function



Suggested Panel Cutout



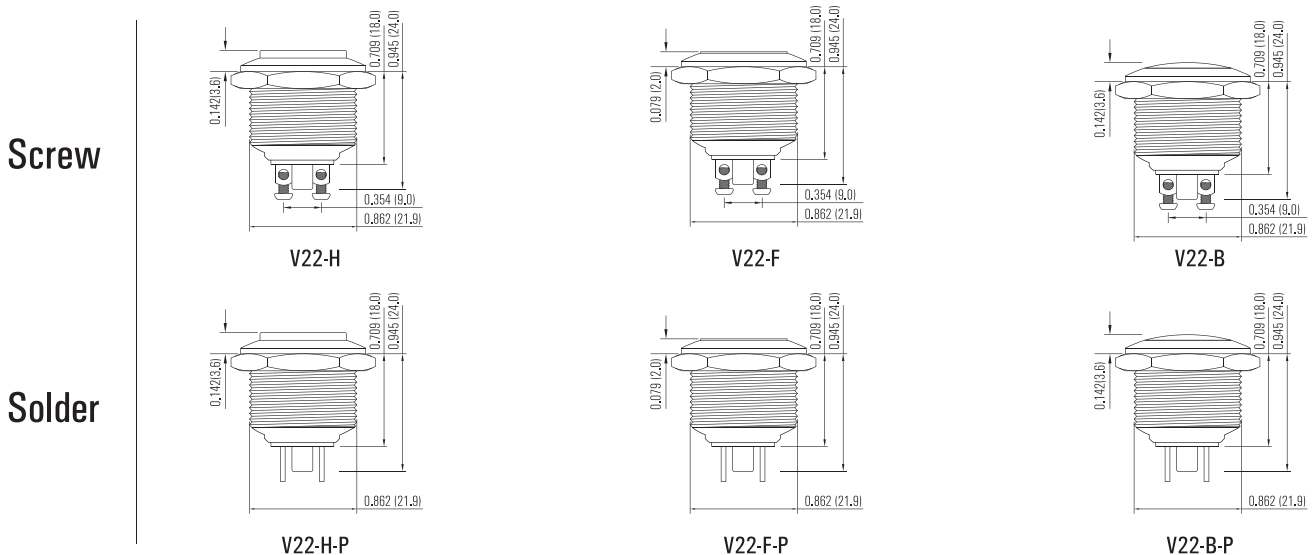
Max. Panel Thickness: 0.315 (8mm)



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	Stainless Steel		
Actuator	Stainless Steel		
Body	Stainless Steel		
Base	PBT		

Dimension





Vandal Resistant Switch $\Phi 16\text{mm}$

Anti-Vandal IK09/ Sealed IP65

Illuminated And Non-Illuminated

Flat/Concave

Momentary/ Latching

Variety Of Colors

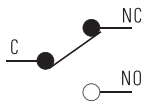
Momentary: Means that when you push Switch and then move your finger, the actuator will back to the original position.
Latching: Means that when you push Switch once it will change state and stay in this pushed-down position and will not come back to original position unless you push it again.

Order Code

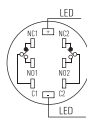
Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Protection
L16 L16S Short body	F- Flat H- Raised flat C- Concave G- Guarded concave	Pin(2,8x0,5) blank	M- Momentary 1 1NO1NC 2 2NO2NC Z- Latching 1 1NO1NC 2 2NO2NC	A- Anodized aluminum N- Nickel plated brass S- Stainless steel	D- Dot R- Ring Non-illuminated blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Blank IP40 IP65

Remark: L16S will be non-illuminated

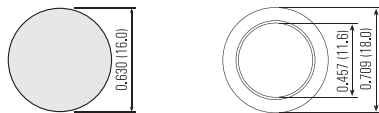
Operation



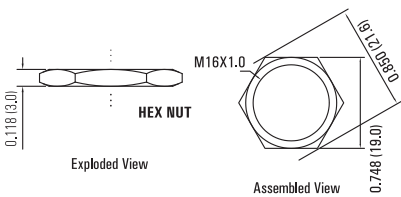
Description



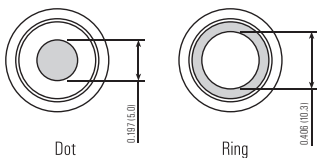
Suggested Panel Cutout



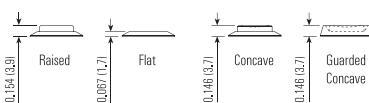
Max. Panel Thickness: 0.394 (10.0)



Illuminated Options



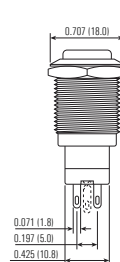
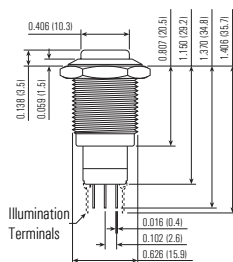
Actuator Options



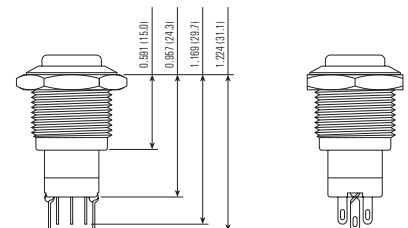
Technical Data

Type	L16-F/L16s-F	L16-F/R	L16-F/D
Illuminated Type	Non-Illuminated	Ring	Dot
Terminal	Pin (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.	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
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		
Color	R G Y O B W		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Life	Approx: 40,000 hours		

Dimension



Short Body Version



Vandal Resistant Switch $\Phi 16\text{mm}$



Anti-Vandal IK08/ Sealed IP65

Illuminated

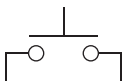
Momentary

Variety Of Colors

Order Code

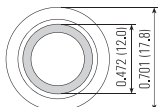
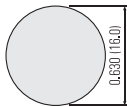
Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
Ls16	F- Flat	Pin(2,0x0,5) blank	M- Momentary 1- 1NO	S- Stainless Steel A- Anodized Aluminum N- Nickel plated brass	D- Dot R- Ring Non-illuminated blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Custom Markings Available

Operation

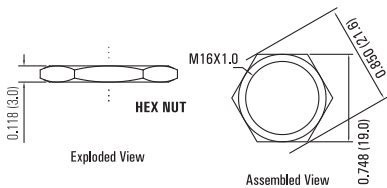


Switch terminals blank
LED terminals marked + and

Suggested Panel Cutout



Max. Panel Thickness: 0.394 (10.0)



Exploded View

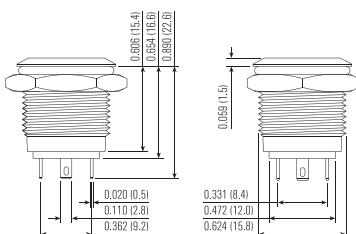
Assembled View

Technical Data

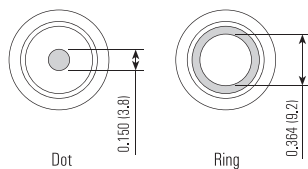
Type	Ls16-F	Ls16-F/R	Ls16-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Pin (2.8X0.5)		
Max. Switch Rating	2A 36VDC		
Contact Resistance	$\leq 50\text{m}\Omega$		
Insulation Resistance	$\geq 1000\text{m}\Omega$		
Dielectric Strength	2000VAC		
Operation Temp	$-20^\circ\text{C} \sim +55^\circ\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	200,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 3 ~ 5N		
Protection	IP65/ IK08		
Material			
Actuator	Stainless steel/ Nickel plated brass/ Anodized aluminum		
Body	Stainless steel/ Nickel plated brass/ Anodized aluminum		
Base	PBT		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

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

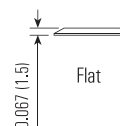
Dimension



Illuminated Options



Actuator Options



Vandal Resistant Pilot Lamp $\Phi 19\text{mm}$



- Anti-Vandal IK09/ Sealed IP65
- Illuminated And Non-Illuminated
- Momentary/ Latching
- Variety Of Colors

Momentary: Means that when you push Switch and then move your finger, the actuator will back to the original position;
Latching: Means that when you push Switch once it will change state and stay in this pushed-down position and will not come back to original position unless you push it again.

Order Code

Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
L19	F- Flat	Pin(2.8x0.5) blank N- Screw	M- Momentary 1 1NO1NC Z- Latching 1 1NO1NC	S- Stainless Steel A- Anodized Aluminum	D- Dot R- Ring non-illum, blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Custom Markings Available

Operation

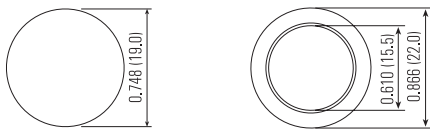


Description

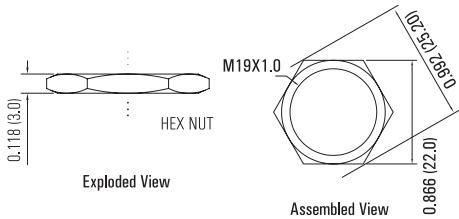


Switch terminals 1, 2 for NC and 3, 4 for NO
LED terminals marked + and -

Suggested Panel Cutout



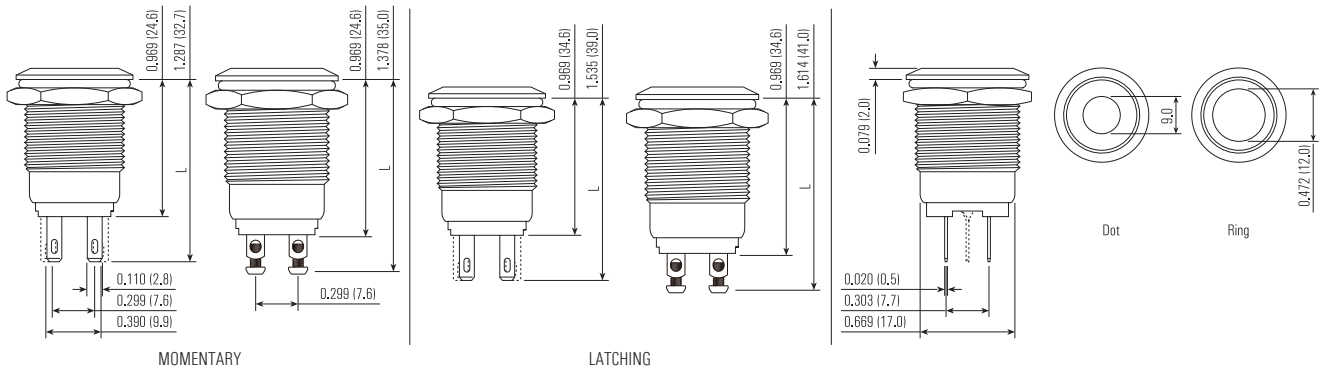
Max. Panel Thickness: 0.394 (10.0)



Technical Data

Type	L19-F	L19-F/R	L19-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Screw Pin (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	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	50,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 5N		
Protection	IP65 or IP67/ IK09		
Material	Stainless steel/ Anodized aluminum		
Actuator	Stainless steel/ Anodized aluminum		
Body	Stainless steel/ Anodized aluminum		
Base	PBT		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

Dimension



Vandal Resistant Switch $\Phi 19\text{mm}$



Anti-Vandal IK09/ Sealed IP65

Illuminated And Non-Illuminated

Variety Of Colors

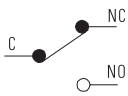
Momentary/ Latching

Momentary: Means that when you push Switch and then move your finger, the actuator will back to the original position;
Latching: Means that when you push Switch once it will change state and stay in this pushed-down position and will not come back to original position unless you push it again.

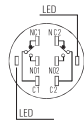
Order Code

Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
L19A	F- Flat	Pin(2.8x0.5)blank	M- Momentary 1 1NO1NC 2 2NO2NC Z- Latching 1 1NO1NC 2 2NO2NC	S- Stainless Steel A- Anodized Aluminum	D- Dot R- Ring non-illum.blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Custom Markings Available

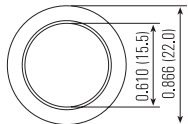
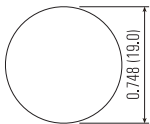
Operation



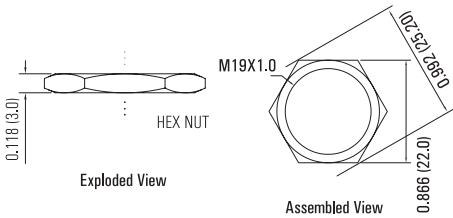
Description



Suggested Panel Cutout



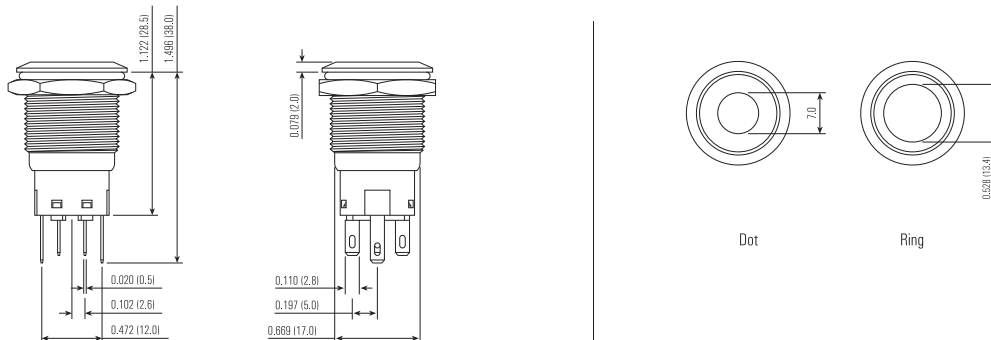
Max. Panel Thickness: 0.394 (10.0)



Technical Data

Type	L19A-F	L19A-F/R	L19A-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Pin (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	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
Mechanical Life	1,000,000 Cycles		
Electrical Life	50,000 Cycles		
Contact Material	Silver Alloy		
Torque	5 ~ 14Nm		
Operation Pressure	approx. 5N		
Protection	IP65/ IK09		
Material			
Actuator	Stainless Steel/ *Anodized Aluminum		
Body	Stainless Steel/ *Anodized Aluminum		
Base	PBT		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

Dimension



Micro-trip Anti vandal switch $\Phi 19\text{mm}$



Anti-Vandal IK09/ Sealed IP65

Illuminated And Non-Illuminated

Momentary

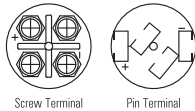
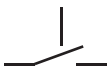
Variety of Colors

Order Code

Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
L19M Micro-trip	F- Flat	Pin(2.8X0.8) blank N- Screw	Momentary Blank	S- Stainless Steel	D- Dot R- Ring Non-Illuminated blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V	Custom Markings Available

Operation

Description

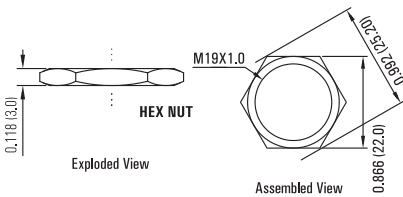


LED terminals marked + and Switch terminals unmarked.

Suggested Panel Cutout



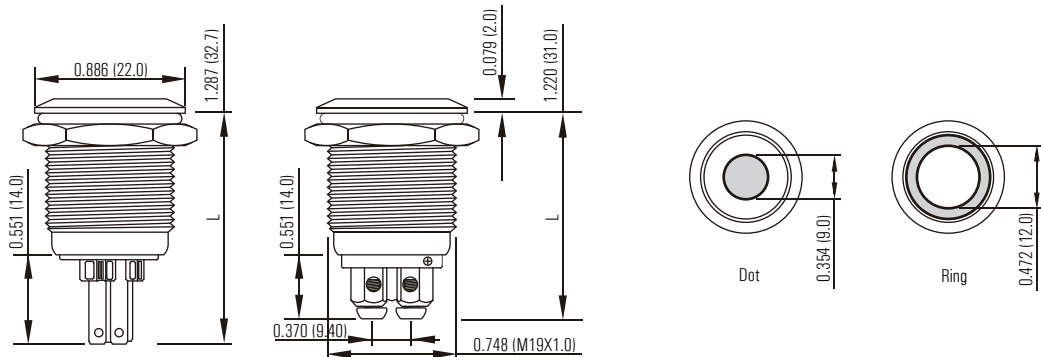
Max. Panel Thickness: 0.394 (10.0)



Technical Data

Type	L19M-F	L19M-F/R	L19M-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Screw and Pin (2.8X0.8)		
Max. Switch Rating	0.5A 24VDC		
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	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		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

Dimension



BIG Current Anti vandal switch $\Phi 19\text{mm}$



Big range current:

3A 5A 8A 10A (15A)16A 20A(21A)

Snap action, compact design, suit for small space

Variety Of Colors

Anti-Vandal IK09/ Sealed IP65

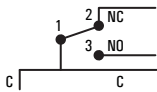
Illuminated and Non-Illuminated

Order Code

Series	Actuator Options	Terminal	Function	Current Voltage	Material Finish	Illuminated Options	Color	Color Voltage	Marking Current
L19B	F- Flat blank	6.35X0.8(#250) quick connect terminal (T=0.8) blank	M- Momentary 1 1NO (SPST) 2 1NC (SPST) 3 1NO1NC (SPDT) Z- Latching 1 1NO (SPST) 2 1NC (SPST) 3 1NO1NC (SPDT)	O2- 2.5A O3- 3A O5- 5A O8- 8A O10- 10A O16- 16A O21- 21A O6- 0.6A/ 125VDC O3- 0.3A/ 250VDC	S- Stainless Steel	D- Dot R- Ring Non-Illuminated blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Custom Markings Available



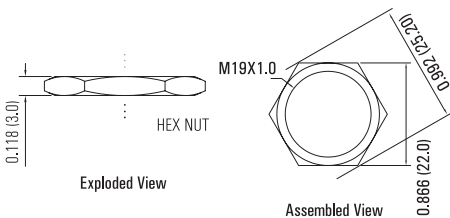
Operation



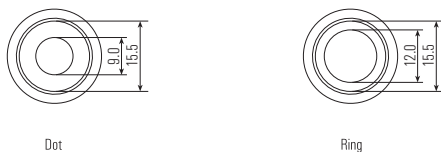
Suggested Panel Cutout



Max. Panel Thickness: 0.394 (10.0)



Illuminated



Technical Data

Type	L19B-F	L19B-F/R	L19B-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	PIN (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	Destruction: 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		
Color			
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx. 40, 000hours		

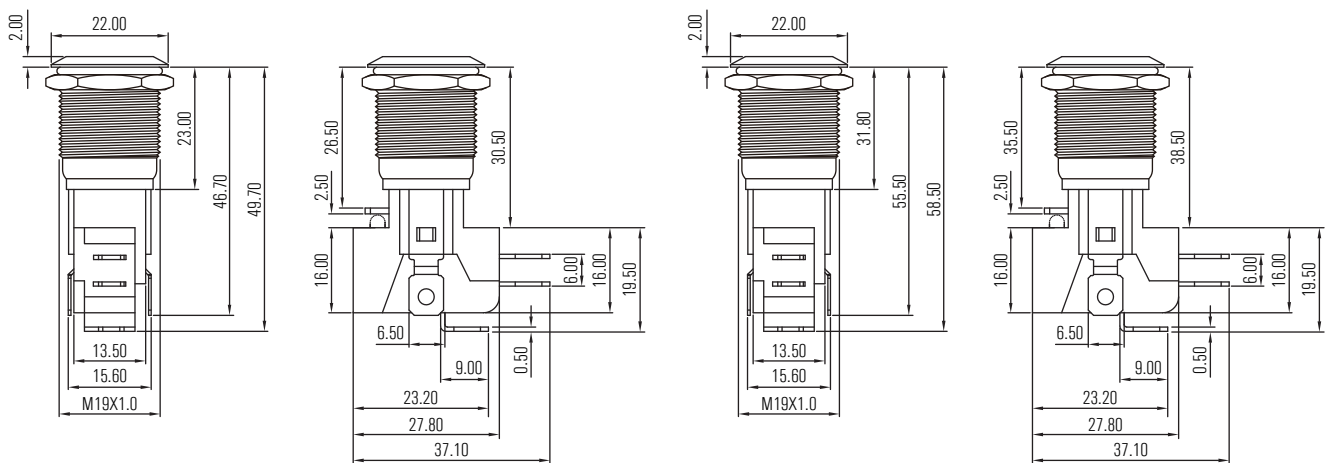
Terminal

端子种类 Terminal types	快接端子#250(t=0.8) Quick-connect terminal #187	端子尺寸 Dimensions
下公共端 Bottom common terminal		

Contact type

公共端类型 Common terminal types	转换式 SPDT	常闭式 SPST-NC	常开式 SPST-NO
公共端在底部 Bottom common terminal			

Dimension



MOMENTARY

LATCHING

Vandal Resistant Switch $\Phi 19\text{mm}$



Anti-Vandal IK08/ Sealed IP65

Illuminated

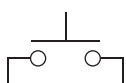
Momentary

Variety Of Colors

Order Code

Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
<input type="checkbox"/> Ls19	<input type="checkbox"/> F- Flat	<input type="checkbox"/> Pin(2.0x0.5) blank	<input type="checkbox"/> M- Momentary 1- 1NO	<input type="checkbox"/> S- Stainless Steel A- *Anodized Aluminum	<input type="checkbox"/> D- Dot R- Ring Non-illuminated blank	<input type="checkbox"/> W- White Y- Yellow B- Blue G- Green R- Red O- Orange	<input type="checkbox"/> 6V <input type="checkbox"/> 12V <input type="checkbox"/> 24V <input type="checkbox"/> 36V	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Custom Markings Available

Operation

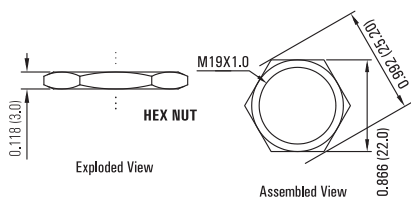


Switch terminals blank
LED terminals marked + and

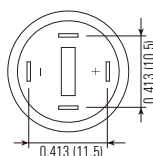
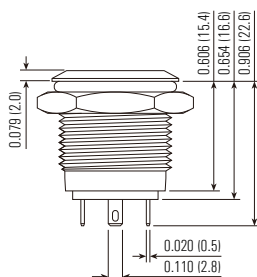
Suggested Panel Cutout



Max. Panel Thickness: 0.394 (10.0)

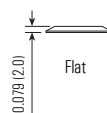


Dimension



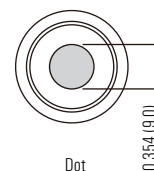
Bottom View

Actuator Options

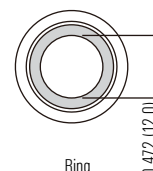


Flat

Illuminated Options



Dot



Ring

Technical Data

Type	Ls19-F	Ls19-F/R	Ls19-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Pin (2.8X0.5)		
Max. Switch Rating	2A 36VDC		
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. 3 ~ 5N		
Protection	IP65/ IK08		
Material			
Actuator	Stainless Steel/ *Anodized Aluminum		
Body	Stainless Steel/ Nickel Plated Brass/ *Anodized Aluminum		
Base	PBT		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

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

Buzzer & Flicker Buzzer $\Phi 19\text{mm}$



Sealed IP40

Buzzer/ Flicker Buzzer

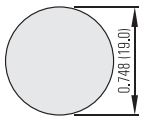
Variety Of Colors

Illuminated And Non-Illuminated

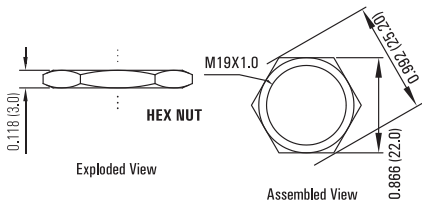
Order Code

Series	Functioning Options	Terminal	Material Finish	Illum. Options	Color	Color Voltage
Lf19	<p>Buzzer blank ONLY BUZZER flashing</p> <p>F- Flicker Buzzer</p> <p>A- Alternately flashing color</p> <p>C- LED close when buzzer pause</p> <p>H- LED always lighting when buzzer pause</p> <p>S- Bi-color LED Strobe, The buzzer call in Slow</p> <p>Blank LED with Buzzer not pause</p> <p>The functioning can be customized.</p> <p>Remark:</p> <p>The functioning 'A' standard color for Red and Green.</p> <p>The functioning 'C' and 'H' standard color for Red.</p> <p>The functioning 'S' standard color for Red and Blue.</p>	Blank screw	Blank Stainless Steel	Blank Ring-illum.	<p>Blank</p> <p>Non-illum.</p> <p>B Blue</p> <p>G Green</p> <p>R Red</p> <p>Y Yellow</p> <p>W White</p> <p>RG Red/green</p> <p>RY Red/yellow</p> <p>RB Red/blue</p> <p>RW Red/white</p> <p>GB Green/blue</p> <p>GY Green/yellow</p> <p>GW Green/white</p> <p>BY Blue/yellow</p> <p>YW Yellow/white</p>	<p>DC12V</p> <p>DC24V</p> <p>AC110V</p> <p>AC220V</p>

Suggested Panel Cutout



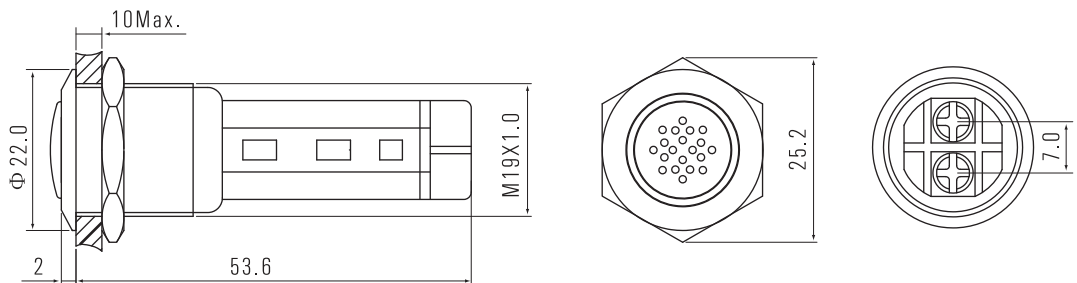
Max. Panel Thickness: 0.394 (10.0)



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°C ~ +55°C	
Mechanical Life	--	
Electrical Life	--	
Contact Material	--	
Torque	5 ~ 14Nm	
Operation Pressure	--	
Protection	IP50, IKD4	
Material	--	
Actuator	Stainless	
Body	Stainless Steel	
Base	PA	
Buzzer Spec.		
Type	Buzzer	Flicker Buzzer
Voltage	DC12V/ DC24V	
Color	--	R G Y O B W
Sound Inten	≥80dB(0.1m)	

Dimension



Vandal Resistant Switch $\Phi 22\text{mm}$



Anti-Vandal IK09/ Sealed IP65

Illuminated and Non-Illuminated

Flat/ Concave

Momentary/ Latching

Variety of Colors

Momentary: Means that when you push Switch and then move your finger, the actuator will back to the original position;
Latching: Means that when you push Switch once it will change state and stay in this pushed-down position and will not come back to original position unless you push it again.

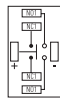
Order Code

Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
L22	F: Flat C: Concave	Pin(2,8x0,5) no letter	M- Momentary 1- 1N01NC Z- Latching 1- 1N01NC	S- Stainless Steel A- *Anodized Aluminum	D- Dot R- Ring non-illuminated no letter	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Custom Markings Available

Operation



Description

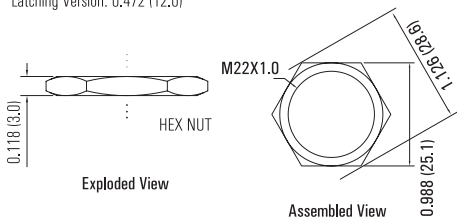


'+' and '-' for LED Lamp

Suggested Panel Cutout



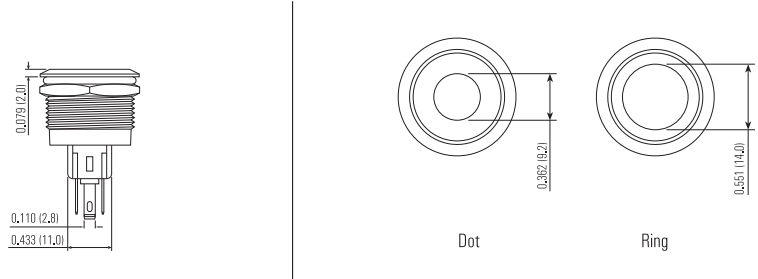
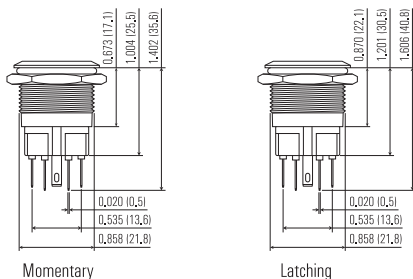
Max. Panel Thickness:
Momentary Version: 0.315 (8.0)
Latching Version: 0.472 (12.0)



Technical Data

Type	L22-F	L22-F/R	L22-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Pin (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	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
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	Stainless Steel/ *Anodized Aluminum		
Actuator	Stainless Steel/ *Anodized Aluminum		
Body	Stainless Steel/ *Anodized Aluminum		
Base	PA		
Color	LED		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

Dimension



Vandal Resistant Switch $\Phi 22\text{mm}$



Anti-Vandal IK09/ Sealed IP65

Illuminated and Non-Illuminated

Flat/ Concave

Momentary/ Latching

Variety of Colors

Momentary: Means that when you push Switch and then move your finger, the actuator will back to the original position;
Latching: Means that when you push Switch once it will change state and stay in this pushed-down position and will not come back to original position unless you push it again.

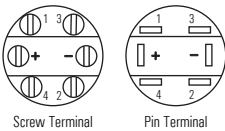
Order Code

Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
L22A	F- Flat C- *Concave	Pin(2.8x0.5) blank N- Screw	M- Momentary 1- 1NO1NC Z- Latching 1- 1NO1NC	S- Stainless Steel A- *Anodized Aluminum	D- Dot R- Ring Non-illuminated blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Custom Markings Available

Operation



Description

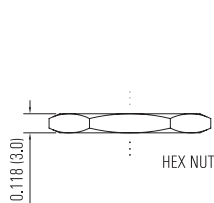
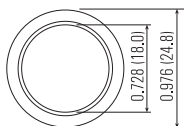
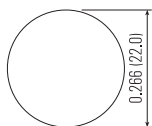


Switch terminals 1, 2 for NC and 3, 4 for NO
LED terminals marked + and -

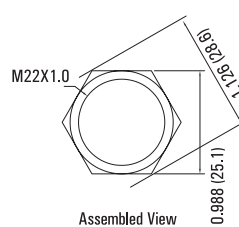
Technical Data

Type	L22A-F	L22A-F/R	L22A-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Pin (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	$-20^\circ\text{C} \sim +55^\circ\text{C}$		
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		
Color			
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

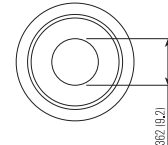
Suggested Panel Cutout



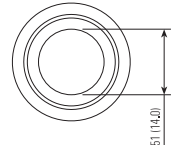
Exploded View



Assembled View



Dot

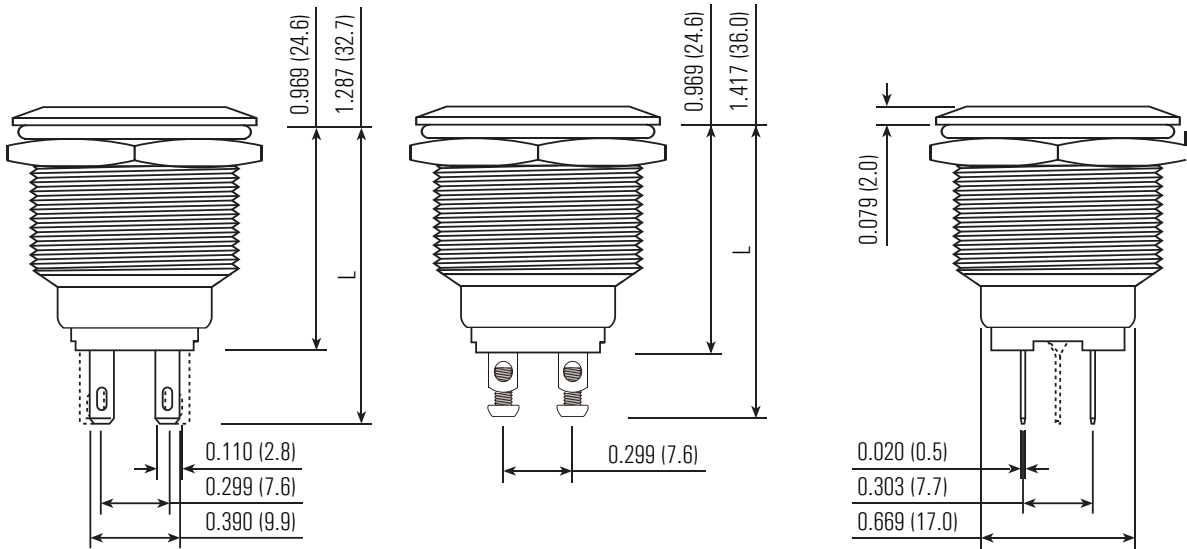


Ring

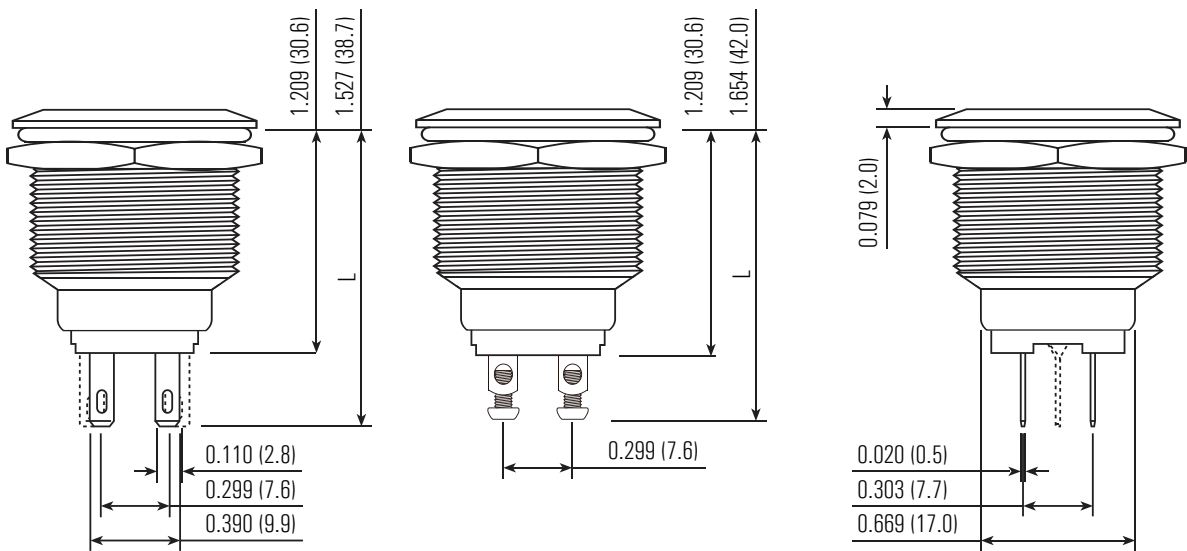
Max. Panel Thickness:
Momentary Version: 0.315 (8.0)
Latching Version: 0.472 (12.0)

Vandal Resistant Switch $\Phi 22\text{mm}$

Dimension



MOMENTARY



LATCHING

BIG Current Anti vandal switch $\Phi 22\text{mm}$

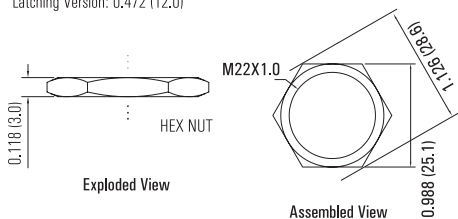
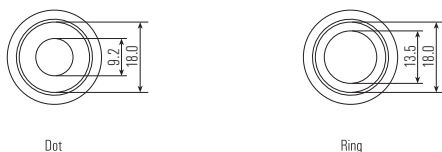

Big range current:
3A 5A 8A 10A (15A)16A 20A(21A)
Snap action, compact design, suit for small space
Variety Of Colors
Anti-Vandal IK09/ Sealed IP65
Illuminated and Non-Illuminated
Order Code

Series	Actuator Options	Terminal	Function	Current Voltage	Material Finish	Illuminated Options	Color	Color Voltage	Marking Current
L22B	F- Flat blank	6.35X0.8(#250) quick connect terminal (T=0.8) blank	M- Momentary 1 1NO (SPST) 2 1NC (SPST) 3 1NO1NC (SPDT) Z- Latching 1 1NO (SPST) 2 1NC (SPST) 3 1NO1NC (SPDT)	Q2- 2.5A Q3- 3A Q5- 5A Q8- 8A Q10- 10A Q16- 16A Q21- 21A D6- 0.6A/ 125VDC D3- 0.3A/ 250VDC	S- Stainless Steel	D- Dot R- Ring Non-Illuminated blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Custom Markings Available


Operation

Suggested Panel Cutout


Max. Panel Thickness:
Momentary Version: 0.315 (8.0)
Latching Version: 0.472 (12.0)


Illuminated

Technical Data

Type	L22B-F	L22B-F/R	L22B-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	PIN (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	Destruction: 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		
Color			
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx. 40, 000hours		

BIG Current Anti vadnal switch $\Phi 22\text{mm}$

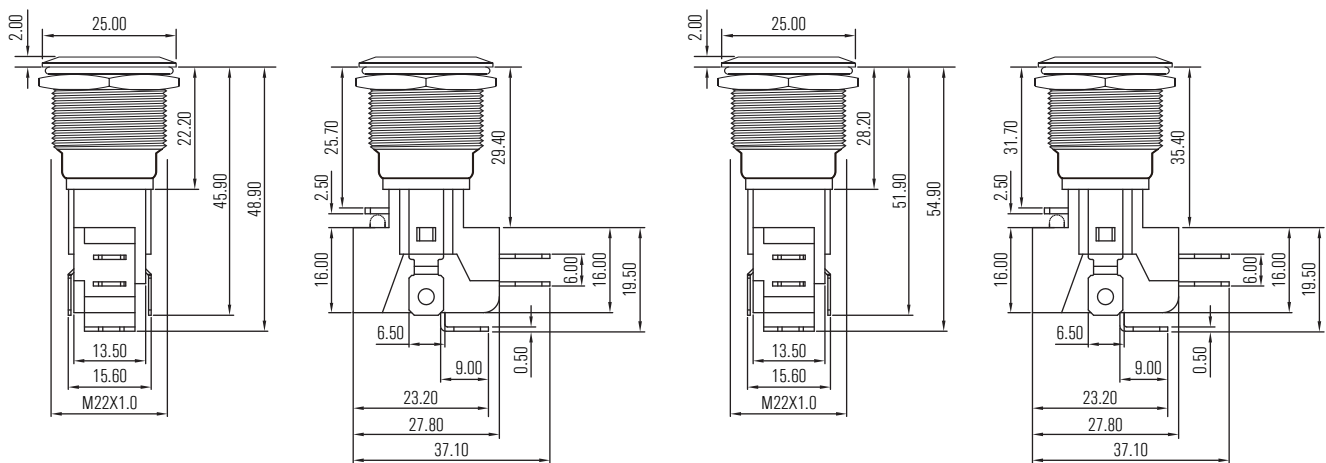
Terminal

端子种类 Terminal types	快接端子#250(t=0.8) Quick-connect terminal #187	端子尺寸 Dimensions
下公共端 Bottom common terminal		

Contact type

公共端类型 Common terminal types	转换式 SPDT	常闭式 SPST-NC	常开式 SPST-NO
公共端在底部 Bottom common terminal			

Dimension



MOMENTARY

LATCHING

Micro-trip Anti vandal switch $\Phi 22\text{mm}$

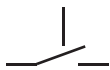


- Anti-Vandal IK09/ Sealed IP65
- Illuminated And Non-Illuminated
- Momentary
- Variety of Colors

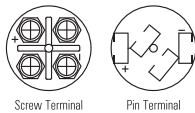
Order Code

Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
L22M Micro-trip	F- Flat	Pin(2.8x0.8) blank N- Screw	Momentary Blank	S- Stainless Steel	D- Dot R- Ring Non-illuminated blank	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V	Custom Markings Available

Operation



Description

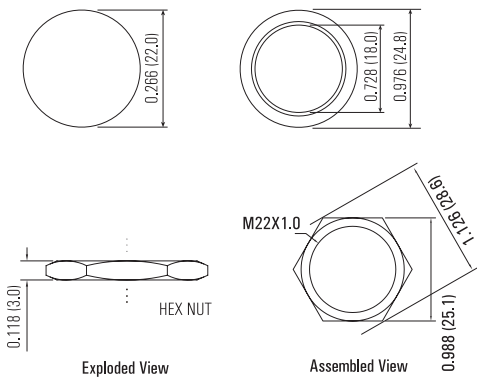


LED terminals marked + and Switch terminals unmarked.

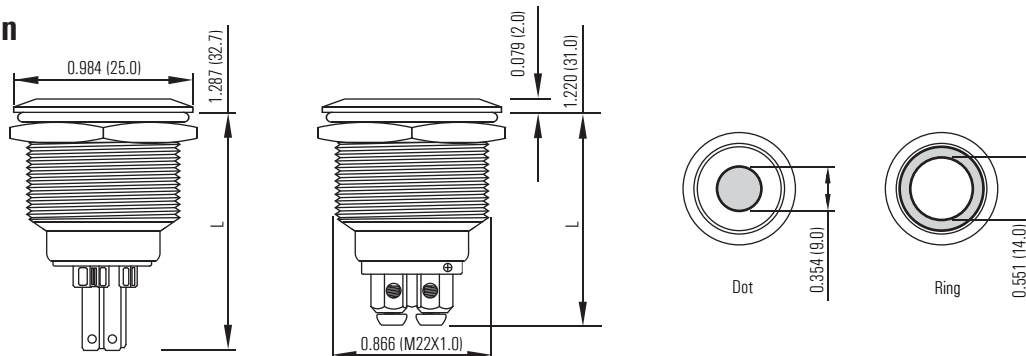
Technical Data

Type	L22M-F	L22M-F/R	L22M-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Screw and Pin (2.8X0.8)		
Max. Switch Rating	0.5A 24VDC		
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	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		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

Suggested Panel Cutout



Dimension



Vandal Resistant Switch $\Phi 25\text{mm}$



Anti-Vandal IK09/ Sealed IP65

Illuminated and Non-Illuminated

Flat/ Concave

Momentary/ Latching

Variety of Colors

Momentary: Means that when you push Switch and then move your finger, the actuator will back to the original position;
Latching: Means that when you push Switch once it will change state and stay in this pushed-down position and will not come back to original position unless you push it again.

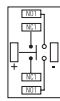
Order Code

Series	Actuator Options	Terminal	Function	Material Finish	Illuminated Options	Color	Color Voltage	Marking Options
L25	F- Flat C- Concave	Pin(2.8x0.5) no letter	M- Momentary 1- 1N01NC 2- 2N02NC Z- Latching 1- 1N01NC 2- 2N02NC	S- Stainless Steel A- *Anodized Aluminum	D- Dot R- Ring non-Illuminated no letter	W- White Y- Yellow B- Blue G- Green R- Red O- Orange	6V 12V 24V 36V 110V 230V	Custom Markings Available

Operation



Description

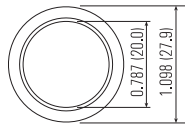
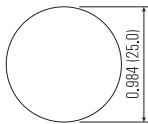


'+' and '-' for LED Lamp

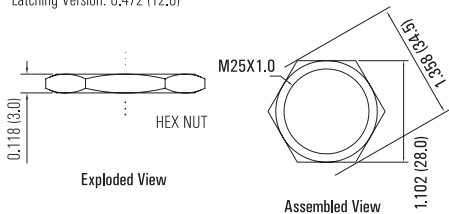
Technical Data

Type	L25-F	L25-F/R	L25-F/D
Illuminated Options	Non-Illuminated	Ring	Dot
Terminal	Pin (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	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$		
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		
Type	LED		
Voltage	6V/ 12V/ 24V/ 36V/ 110V/ 230V		
Color	R G Y O B W		
Life	Approx, 40,000 hours		

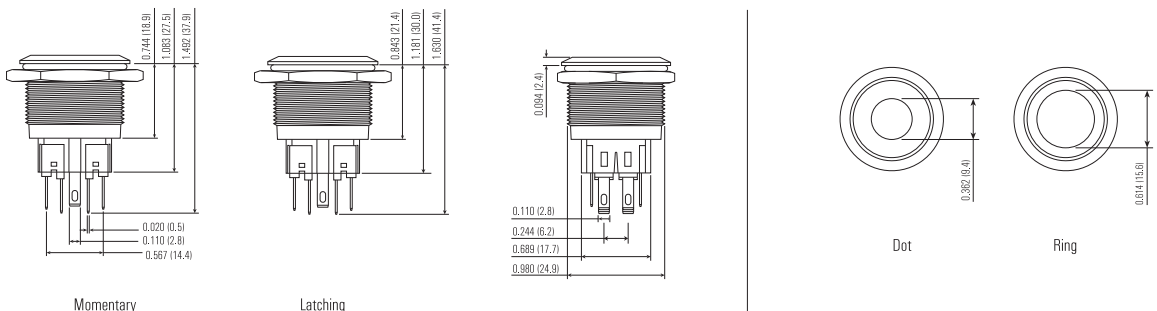
Suggested Panel Cutout



Max. Panel Thickness:
Momentary Version: 0.394 (10.0)
Latching Version: 0.472 (12.0)



Dimension



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