

The Series 300 switch represents an integration of two-pole switching capabilities, low operating temperature, high LED lighting performance and Military grade reliability all in a sub-compact package! The Series 300 switch is designed for universal applications and it is the perfect solution where space is limited.

## Product Features

- Smallest switch of its type on the market
- Low touch temperature: +10° C above ambient
- Light weight : 6 grams
- Alternate, Momentary, or Indicator action
- One and two pole snap action
- NVIS compatible
- Sunlight readable
- Drip proof, splash proof, watertight seal and solvent resistant
- Crimp pin (M39029/22-192), Solder or PCB termination
- Actuation Force: 1 to 4 lbs.
- Actuation Travel: 0.070" typical
- Alternative Action Travel: (latch/hold): 0.04"
- Clarity of legends
- Non reflective surface
- Low power consumption
- Uniform LED illumination
- LED polarity insensitive
- Nonlinear dimming: 28 VDC
- Linear dimming: 5 VDC and 28 VDC

Meets and exceeds the requirements of MIL-PRF-22885, DO-160 and MIL-STD-3009

## Mechanical Specifications for Drip-Proof Design

- The Series 300 has the pushbutton attached as an integral part of the switch by means of a flexible circuit and cannot be separated from the switches' main body
- The pushbutton can be extracted from the switch body to access the mounting system

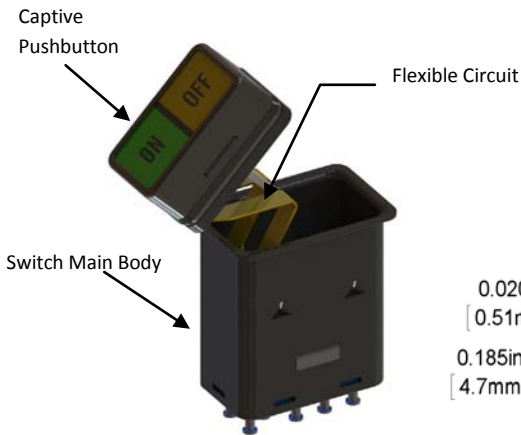


Figure 1: Pushbutton Switch, Drip Proof, PCB Termin

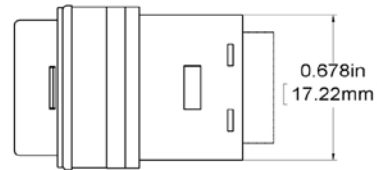


Figure 2: PCB/Solder Termination  
Top View

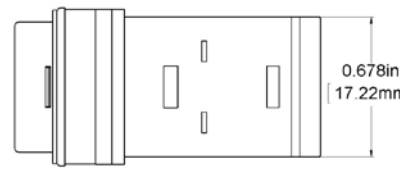


Figure 3: Crimp Termination  
Top View

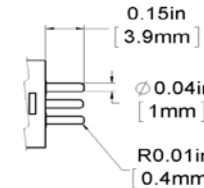


Figure 4: PCB Termination

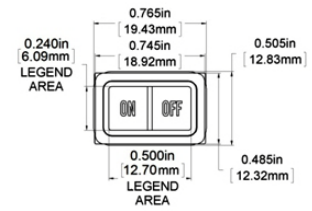


Figure 5: Front Legend View

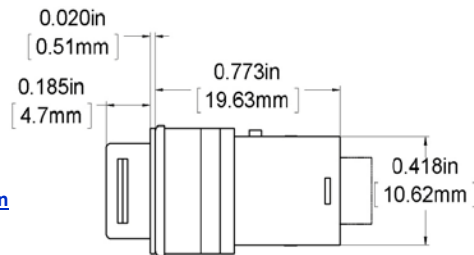


Figure 6: PCB/Solder Termination  
Side View

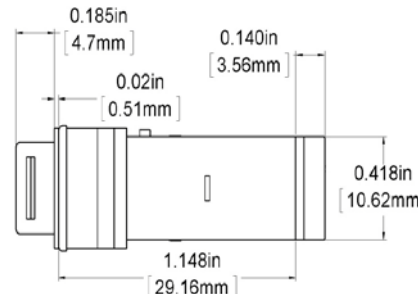


Figure 7: Crimp Termination  
Side View

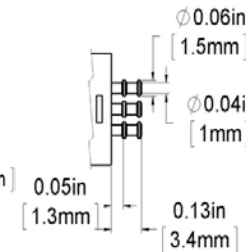


Figure 8: Solder Termination

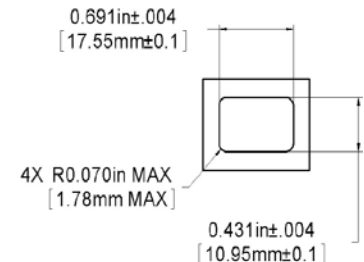


Figure 9: Panel Cutout

## Electrical Specifications

The Series 300 pushbutton switch offers two input voltages, 5 VDC and 28 VDC. For 5 VDC applications, the LED's are connected in parallel and use 50mA per half, when illuminated. For the 28 VDC applications, the LED's are connected in series and use 25mA per half when illuminated.

Dimming the luminance to the desired level is accomplished by varying the applied voltage. The Series 300 switch has both linear and non-linear dimming circuits with built-in voltage control. 5VDC switches are available with linear dimming circuits only. 28 VDC switches are available in either linear or non-linear dimming circuits.

The Series 300 switch contacts are designed for universal applications, 10pA to 10A. However, contacts subjected to a high current (>100mA) lose their low current capability (<100 mA.)

Table 1		
Power Consumption	VDC	Watt
	28	0.728
	5	0.260
Low Touch Temperature: +10° C above ambient.		
Electrical load range: 10 µA to 10 A		
Switch contact simultaneity: 250 µs		
Switch contact bounce: 2 milliseconds MAX.		
Contact resistance: 0.025 Ω MAX.		

Table 2			
Switch Contact Rating		Sea level	70,000 ft
		(Ampere)	
28 VDC	Resistive	10.0	5
	Inductive	5.0	2.5
115 VAC, 60Hz	Resistive	7.0	---
	Inductive	3.5	---
LOW LEVEL	Resistive	10 microamperes	
	Inductive		

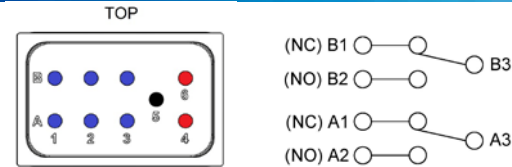


Figure 10: Two-Pole. Double Pole shown

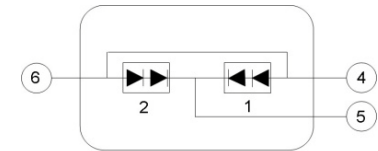


Figure 11: Rear View, Common Ground and Two Wire Input shown

Rows A, B and Columns: 1, 2, 3: Identify Switch Contact Terminations  
Pins 4 and 6: Identify Backlight Circuit Terminations  
Pin 5: Identifies Ground Termination

## Display Specifications

Table 3	
Display Style	
Full Screen	2-way Split / Vertical
LEGEND	LGND LGND

Table 4											
Display Types											
MIL-PRF-22885G	C	B	H	N	W	S	S	Additional Display Types			
TYPE	1	2	3	4	5	6	7	A	E	F	G
NON-ILLUMINATED	LED			LED	LED			LED	LED		LED
ILLUMINATED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED	LED

Table 5			
Non-NVIS		NVIS	
Illuminating color		Illuminating color	
MIL-PRF-22885G	Description	MIL-PRF-22885G	Description
W	White		Blue
R	Red	L	Red
G	Green	J	Green B
Y	Aviation yellow	K	Yellow B
D	Lunar white		White
---	---	K	Yellow A
B	Blue	H	Green A
Z	Aviation green		

Type 1: Legends appear black against a colored background when illuminated and non-illuminated  
Type 2: Black legend on a colored background when lighted, black legend on a black background when unlighted  
Type 3: Legend appears in color on a black background when lighted, but is hidden with black on black appearance when unlighted  
Type 4: Legend appears white on a black background until illuminated and legend appears in color, the background remains black  
Type 5: Legend appears black on white background until illuminated and then background appears in color, legend remains black  
Type 6: (SLR) Legend is not legible until illuminated and then characters appear in color, background remains black  
Type 7: Same as Type 6, except, legend appears in color of NVG-compatible filter when illuminated

Type A: Always visible opaque white legends on an obscured, colored background. When illuminated, the legends remain opaque white, while the background appears in color  
Type E: Always trans-reflective white legends on an opaque black background. When illuminated, the legends appear in color while the opaque background remains black  
Type F: White translucent background with obscured legends. When illuminated, the legends appear opaque white, while background appears in color  
Type G: Translucent color background with visible opaque white legends. When illuminated, the legends remain opaque white, while the background appears in color