

SPECIFICATIONS

Electrical Ratings	125mA @ 50VDC / 125VAC
Electrical Life	500,000 cycles
Mechanical Life	1,000,000 cycles
Contact Resistance	≤ 50 mΩ max initial
Dielectric Strength	1,000Vrms min
Actuation Force	300 +/- 100gF
Travel	1.5 +/- .25mm
Insulation Resistance	≥ 1000MΩ min
Internal / External Panel Sealing	IP 67
Operating Temperature	-30°C (-40 without LED) to 85°C
Storage Temperature	-30°C (-40 without LED) to 85°C



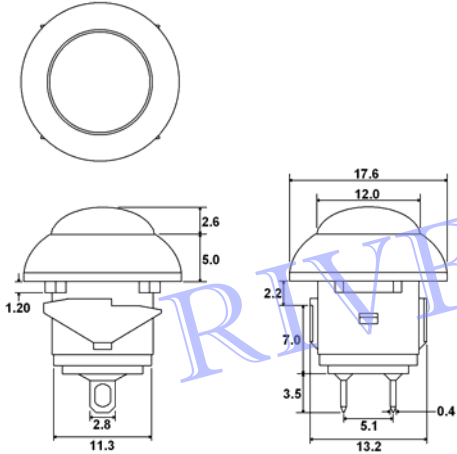
MATERIALS ←RoHS COMPLIANT

Actuator	6/6 Nylon
Housing	6/6 Nylon
Base	DAP – Diallyl Phthalate
Contacts	Copper Alloy, Gold over Silver plated
Terminals	Copper Alloy, Gold over Silver plated

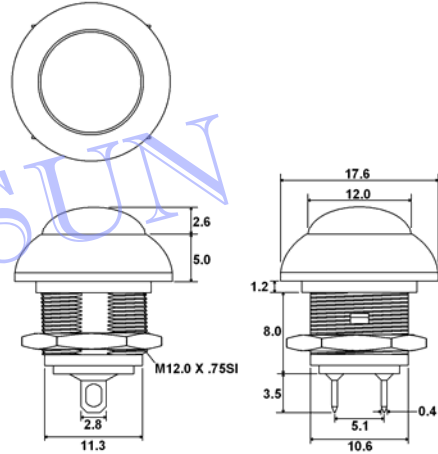
ORDERING INFORMATION

Series:	ES	A	N	M	D	3	G	B	B
<p>Contact Configuration: A = SPST N.O B = SPST N.C. **Not available with LED</p> <p>Switch Function: N = Momentary</p> <p>Housing / Actuator Finish: M = Matte finish</p> <p>Actuator Style: D = round (no LED) F = round with flat (no LED) L = round with flat (with LED)</p> <p>Actuator Color: 1 = White 2 = Black 3 = Red 4 = Yellow 5 = Green 6 = Orange 7 = Blue 8 = Dark Gray</p> <p>Bushing: G = 12 X 0.75 SI Threaded F = Snap in (0.8 ~ 1.8mm thk. panel)</p> <p>Terminals: B = Solder Lugs</p> <p>LED Colors: R = Red Y = Yellow G = Green PG = Pure Green B = Blue W = White X = No LED</p> <p>RY = Red/Yellow dual LED RG = Red/Green dual LED RB = Red/Blue dual LED YG = Yellow/Green dual LED YB = Yellow/Blue dual LED GB = Green/Blue dual LED **White & Pure Green are only available as a single color LED</p>									

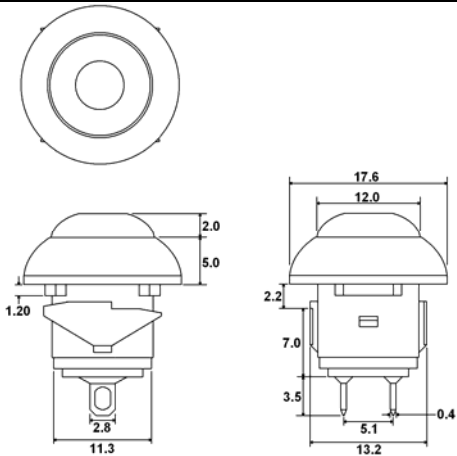
ACTUATOR STYLES



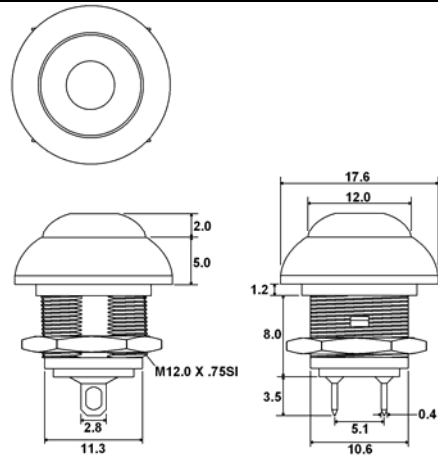
Round Actuator with no LED – D Snap In Bushing – F



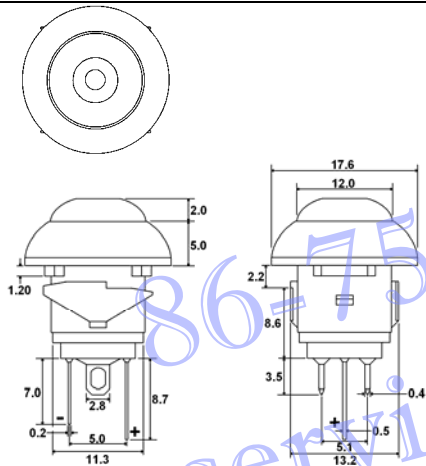
Round Actuator with no LED – D Threaded Bushing – G



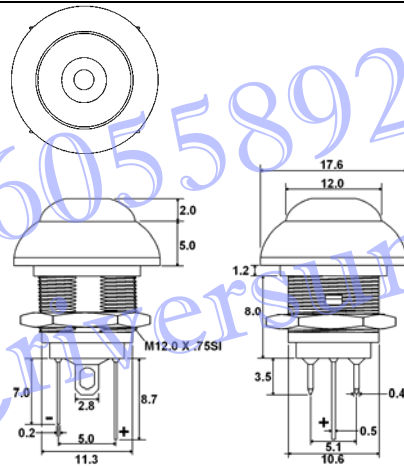
Round Actuator with Flat, no LED – F Snap In Bushing – F



Round Actuator with Flat, no LED – F Threaded Bushing – G

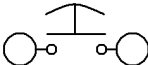

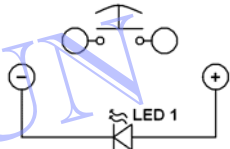
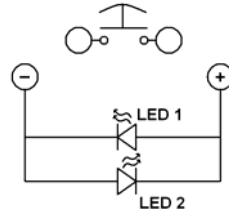


Round Actuator with Flat, with LED – L Snap In Bushing – F

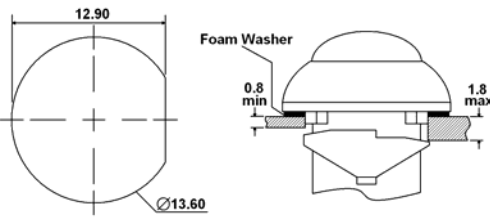
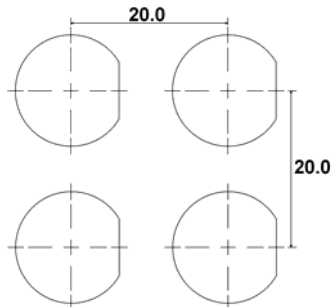
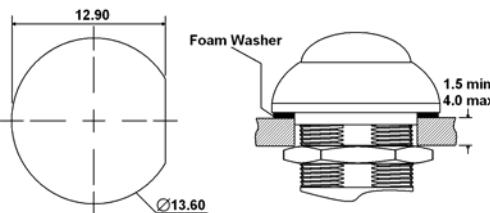
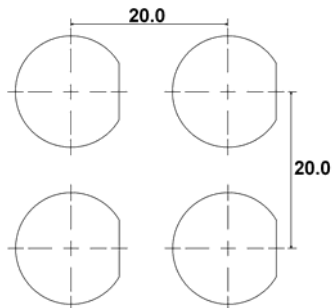


Round Actuator with Flat, with LED – L Threaded Bushing – G

SCHEMATICS

			
SPST N.O.	SPST N.C.	SPST N.O. with LED	SPST N.O. with Dual Color LED

PANEL CUT OUTS

 <p>Snap-in Bushing - F</p>	
 <p>Threaded Bushing - G</p>	

LED CHARACTERISTICS

LED Ratings		COLORS							Units
		R	Y	G	B	PG	W		
Reverse Voltage	V_R	5	5	5	5	5	5	V	
Forward Current (avg)	I_F	30	30	30	30	30	30	mA	
Forward Current (peak)	I_{FS}	100	100	100	100	100	100	mA	
Reverse Current $V_R = 5V$	I_R	100	100	100	100	100	100	μA	
Power Dissipation	P_T	80	100	100	120	120	120	mW	
Operating & Storage Temperature	T_A	-25~+80						°C	
Forward Voltage (typ.), $I_F = 20mA$	V_F	2.1	2.1	2.0	3.2	3.2	3.2	V	
Forward Voltage (max.), $I_F = 20mA$	V_F	2.6	2.6	2.6	3.6	3.6	3.6	V	
Wavelength at Peak Emmission, $I_F = 20mA$	λ_P	645	590	570	470	525	N/A	nm	
Spectral Line Half-Width, $I_F = 20mA$	$\Delta\lambda$	22	15	30	30	30	N/A	nm	
Luminous Intensity, $I_F = 20mA$	LI	100	200	100	150	300	250	mcd	
Viewing Angle	Θ	35	35	35	35	35	35	Deg	