

19MM PANEL SEALED 10 AMP METAL PUSHBUTTONS

These rugged electromechanical pushbuttons are available in stainless steel or zinc alloy housings and come in momentary or maintained action. Lighting options include center spot, or ring illumination. This 19mm size make the H48M ideal for many applications in the transportation, security, food processing and medical markets.

APPLICATIONS

- Outdoor Controls
- Security Equipment
- Medical Equipment
- Food Processing Equipment
- Military Equipment
- Industrial Machinery
- Transportation: Mass-Transit, Lift Trucks

KEY FEATURES:

- Momentary or Maintained Action
- Stainless Steel Housing
- Center Spot or Ring Illumination
- Variety of LED colors
- Electro-Mechanical
- Panel Sealed to IP67
- ROHS Compliant
- 16-4044 & 16-530004 (UL and CSA Certified): SPDT Form Z, Silver contacts



ACTUAL SIZE

ORDERING INFORMATION:

SWITCH FUNCTION:	HOUSING MATERIAL:	BUTTON STYLE:	LED COLOR:	VOLTAGE RESISTOR	SERIES 16 SWITCH
1 MECHANICAL, MOMENTARY	1 STAINLESS STEEL	0 NON-LIT	N NONE	IF BLANK *	/4044 BOTTOM SOLDER TERMINALS
2 MECHANICAL, MAINTAINED	2 ZINC ALLOY VELOUR CHROME PLATED	1 CENTER SPOT	G GREEN	05 5V FORWARD	/530004 BOTTOM QC .110 TERMINALS
		2 RING ILLUMINATION	R RED	12 12V FORWARD	
		3 STANDBY / POWER	A AMBER	24 24V FORWARD	
			B BLUE		
			W WHITE		
			Y YELLOW		
			RB RED / BLUE		
			RG RED / GREEN		

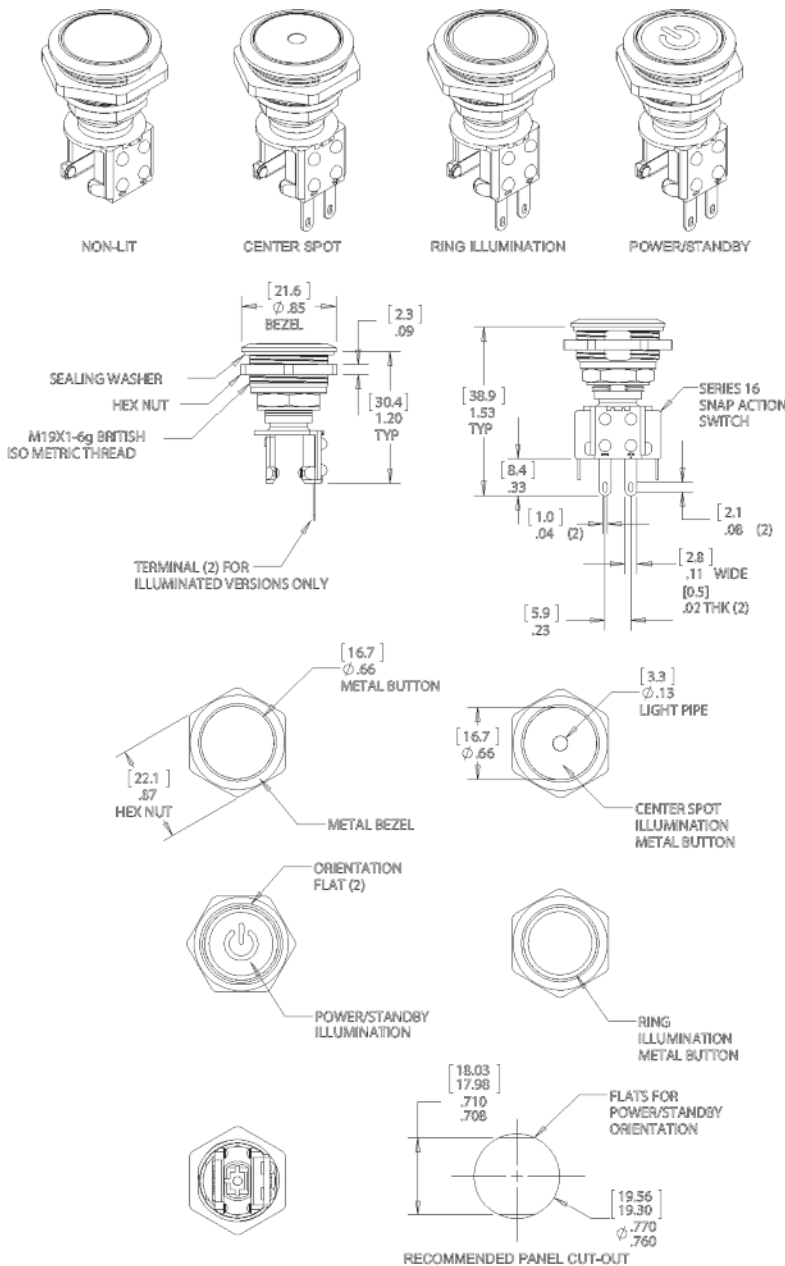
* Current limiting resistor is required to limit LED forward current to 20 mA (not included)

LED forward voltage:
 - Red, Amber & Yellow: 2 V
 - Green, Blue & White: 3.4 V

STANDARDS / AGENCY / RATINGS:



PRODUCT DRAWINGS



LED SPECIFICATIONS

LED CODE	LED		CIRCUITRY	Vf (VDC)		If (mA)
	Color 1	Color 2		Color 1	Color 2	
A	AMBER	-		1.6 ~ 2.0	-	20
R	RED	-		1.6 ~ 2.0	-	20
Y	YELLOW	-		1.6 ~ 2.0	-	20
B	BLUE	-		2.8 ~ 3.4	-	20
G	GREEN	-		2.8 ~ 3.4	-	20
W	WHITE	-		2.8 ~ 3.4	-	20
RB	RED	BLUE		1.6 ~ 2.0	2.8 ~ 3.4	20
RG	RED	GREEN		1.6 ~ 2.0	2.8 ~ 3.4	20

Notes:
 1.) Lead Soldering Temperature (4mm from Body): 280°C for 5 seconds
 2.) Hand Soldering Temperature (4mm from Body): 320°C for 3 seconds

MECHANICAL / ELECTRICAL CHARACTERISTICS:

- Circuit:** SPDT-DB (Form Z)
- Button travel (nominal):** 0.09 inches (2.3 mm)
- Operating force (nominal):** 5.2N (520 grams)
- Contact bounce (nominal):** 1 millisecond
- Panel thickness:** 0.020" – 0.177" (0.5 – 4.5 mm)
- Temperature index:** -40° C to +85° C (momentary)
-40° C to +65° C (maintained)
- Torque (max):** 10 inch pounds
- LED operating temperature:** -13° F to +185° F (-25° C to +85° C)
- Current ratings:** 10A @ 125/250 VAC (res)
10A @ 28 VDC (ind)
- Actuator life (nominal):** 500,000 cycles (momentary)
50,000 cycles (maintained)

ELECTRO-MECHANICAL

- Dielectric strength:** 1,000 VAC
- Insulation resistance:** 1 GΩ
- Contact resistance:** 50 mΩ max (initial)

PANEL MOUNTING INFORMATION

The series H48M mounts easily into panels of minimum 0.020" (0.5 mm) and maximum 0.177" (4.5 mm) thickness. Front panel sealing to IP67 is achieved by a sealing o-ring fitted to the body of the switch before it is inserted into the panel hole cut-out. It is held onto the panel by means of a metal hex nut tightened down to a torque of 10 inch pounds to achieve the correct sealing pressure. The Basic Switch (16-4044 or 16-530004) has to be installed after the pushbutton actuator is firmly secured to specified torque onto the panel.

ITW Switches
 SENSORS, SWITCHES, ELECTRONIC CONTROLS