

PUSHBUTTON SWITCHES

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

Series H48M



ACTUAL SIZE

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

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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)

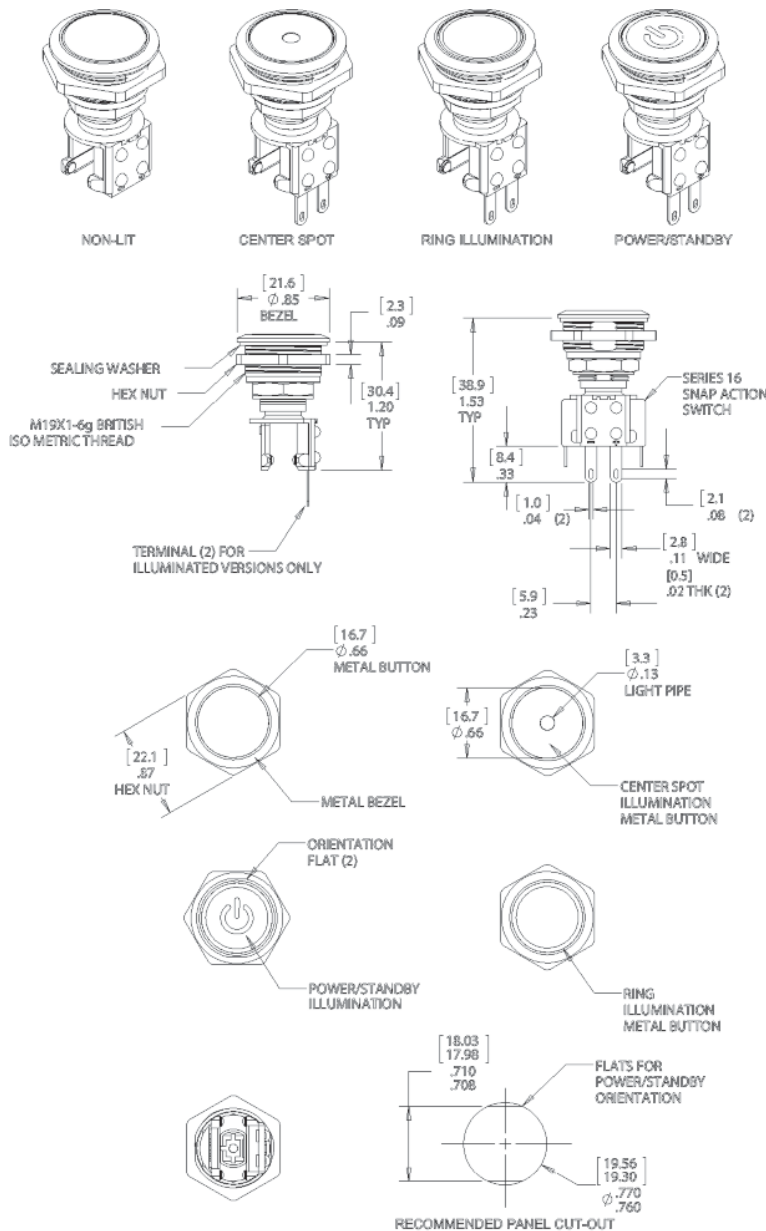
LED forward voltage:
 – Red, Amber & Yellow: 2 V
 – Green, Blue & White: 3.4 V

STANDARDS / AGENCY / RATINGS:



SERIES H48M: 19MM PANEL SEALED 10 AMP PUSHBUTTON

PRODUCT DRAWINGS



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)

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
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

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.



PUSHBUTTON SWITCHES

16MM PANEL SEALED 10 AMP, METAL PUSHBUTTON

The 10 Amp H57M is a miniature switch designed for rugged environments. The housing is zinc alloy with three optional finishes. It is available in maintained or momentary action. Lighting options include center spot, ring illumination and I/O Logo. This switch is ideal for ATM, medical and home automation industries.

Series H57M



ACTUAL SIZE

APPLICATIONS

- Access Controls
- Home Automation
- Medical Equipment
- Industrial Meters
- ATMs

KEY FEATURES:

- Zinc Alloy/Velour Chrome Plated
- Center Spot, Ring and I/O lighted versions
- Maintained or Momentary Action
- Panel Sealed to IP67
- RoHS Compliant
- Electro-Mechanical
- 16-4044 & 16-530004 (UL and CSA Certified): SPDT Form Z, Silver contacts

ORDERING INFORMATION:

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

H57M-

* 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

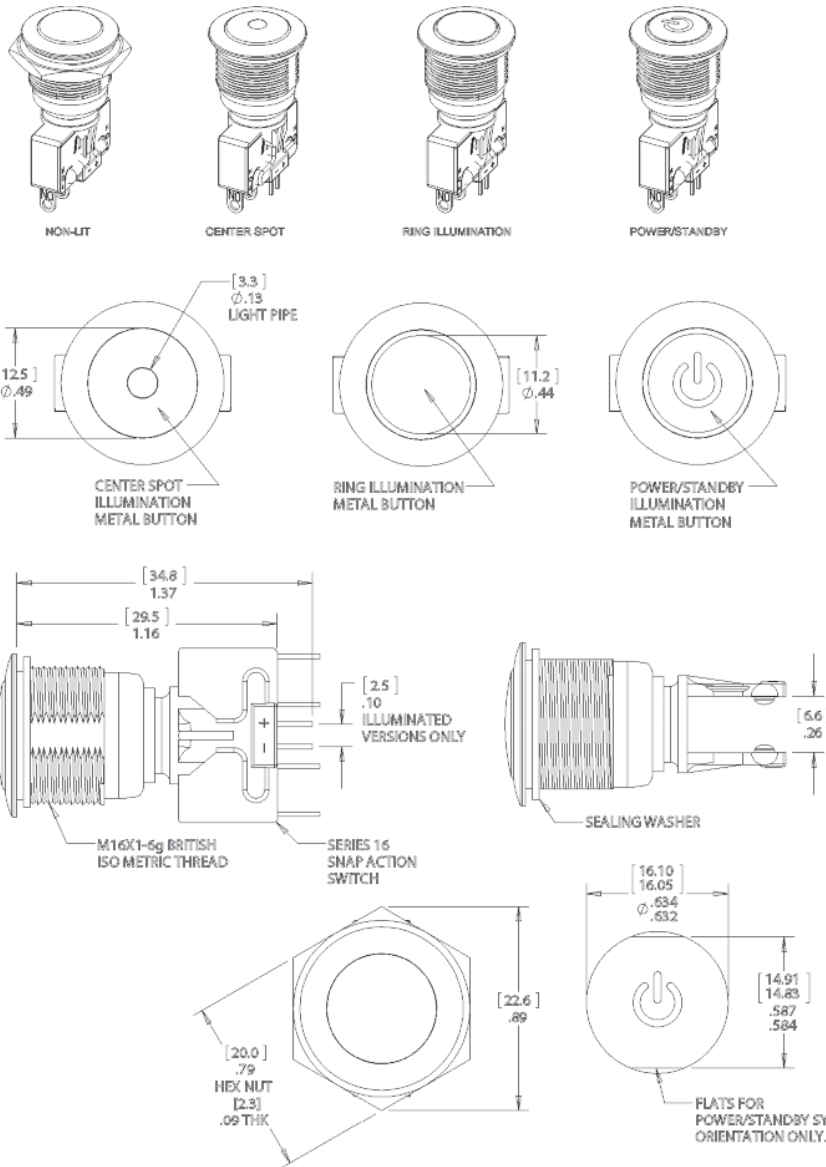
STANDARDS / AGENCY / RATINGS:



SERIES H57M: 16MM PANEL SEALED METAL PUSHBUTTON

PUSHBUTTON SWITCHES

PRODUCT DRAWINGS



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)

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

PANEL MOUNTING INFORMATION

The series H57M 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

PUSHBUTTON SWITCHES

22MM, PANEL SEALED 10 AMP METAL PUSHBUTTON

These rugged electromechanical pushbuttons come in stainless or aluminum housings, momentary or maintained actions and available with lighted ring option. The 22mm size makes the H58M ideal for many applications in the transportation, security, food processing and industrial control markets.

APPLICATIONS

- Industrial Machinery
- Access Controls
- Food Processing Equipment
- Mass Transportation
- Lift Trucks
- Military/Aerospace

Series H58M



ACTUAL SIZE

KEY FEATURES:

- Momentary or Maintained Action
- Stainless Steel or Aluminum Housing
- Non Lit 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

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. ALUMINUM	2 RING ILLUMINATION	G GREEN	05 5V FORWARD	/530004 BOTTOM QC .110 TERMINALS
		R RED, NON-LIT	R RED	12 12V FORWARD	
			B BLUE	24 24V FORWARD	
			W WHITE		
			RB RED / BLUE		
			RG RED / GREEN		

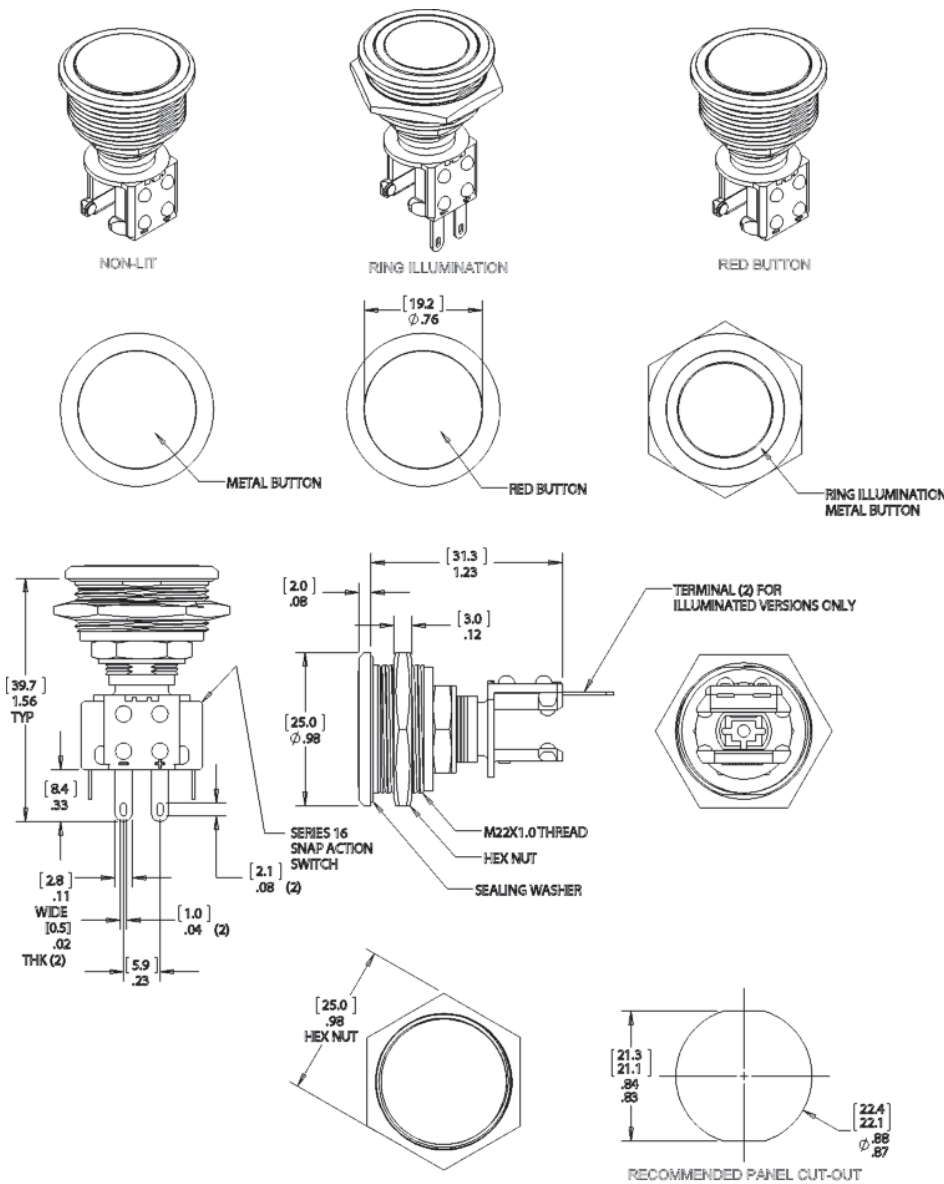
* Current limiting resistor is required to limit LED forward current to 20 mA (not included)

LED forward voltage:
– Green, Blue & White: 3.4 V

STANDARDS / AGENCY / RATINGS:



PRODUCT DRAWINGS



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)

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
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

PANEL MOUNTING INFORMATION

The series H58M 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.

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