

Series 48EM

MINIATURE SEALED ELECTRO-MECHANICAL

This rugged multi-option sealed pushbutton series offers the utmost in choices of mounting styles, colors, terminations, bezels, lighting and momentary or alternate-action switching. The Series 48 offers all these options in one compact package size.



ACTUAL SIZE

APPLICATIONS

- Office equipment
- Medical equipment
- Industrial machinery
- Outdoor controls
- Mass transportation
- Food processing equipment

KEY FEATURES:

- Momentary or maintained action
- Gold contacts
- Many button colors
- Choice of LED colors (or non-lighted versions)
- Long life
- Solder or PC terminals
- Panel sealed to IP 67

ORDERING INFORMATION:

Switch Function	Switch Termination	Module Type	Bezel Type	LED Color	Button Color	Mounting Type	Voltage Resistor
Momentary	Solder Tabs	48-1	RB - Round, Black	N - None	RD - Red	B - Bushing	If Blank*
Maintained	Solder Tabs	48-2	SB - Square, Black	R - Red	GR - Green	S - Snap-fit	05 - 5V forward
Momentary	PC	48-5	RC - Round, Chrome	G - Green	BK - Black		
Maintained	PC	48-6	SC - Square, Chrome	Y - Yellow	BL - Blue		
Momentary	Wire Leads	48-A		A - Amber	YL - Yellow		
Maintained	Wire Leads	48-B		B - Blue	OR - Orange		
				W - White	CR - Chrome		
					PK - Black with Standby Symbol		
					WH - White		

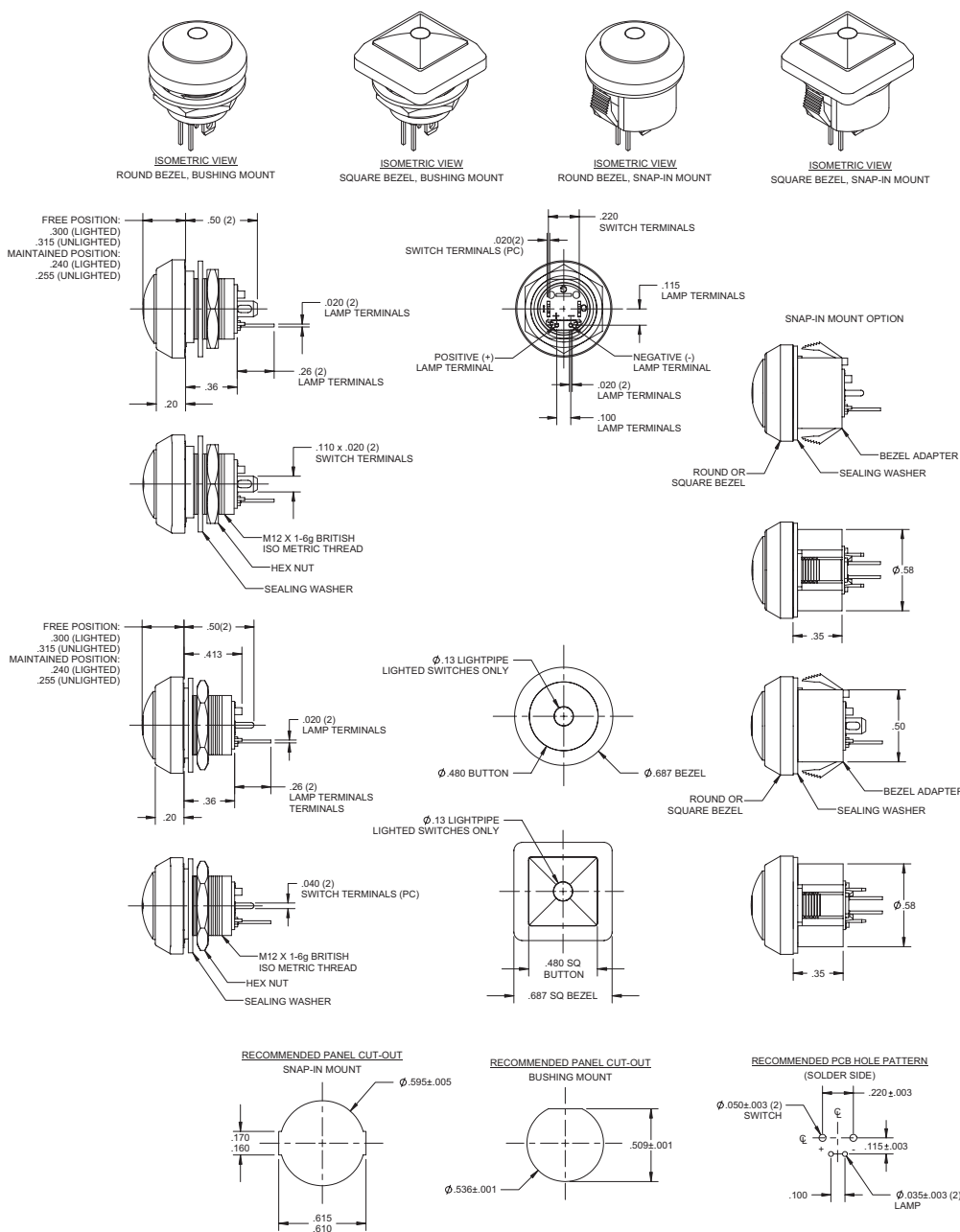
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\* Current limiting resistor is required to limit LED forward current to 20 mA (not included).

STANDARDS / AGENCY / RATINGS:



## PRODUCT DRAWINGS



## MECHANICAL / ELECTRICAL CHARACTERISTICS:

### Circuit:

SPST-NO-DB

### Button travel (nominal):

0.09 inches / 2.3 mm

### Operating force (nominal):

3N / 306 grams

### Contact bounce (nominal):

1 millisecond

### Panel thickness:

0.02 – 0.12 inches / 0.5 – 3mm

### Temperature index:

-40° F to + 185° F

### LED operating temperature:

-13° F to +185° F /

-25° C to +85° C

### Current ratings (resistive):

250mA @ 12VDC, 100K cycles

150mA @ 28VDC, 150K cycles  
(momentary)

100mA @ 48VDC, 100K cycles

10mA @ 12VDC, 1 million cycles  
(momentary)

### Dielectric strength:

1,000 VAC

### Insulation resistance:

1G OHM

### Contact resistance:

50 mΩ max (initial)

### Torque (max):

10 inch pounds

# Mouser Electronics

Authorized Distributor

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## ITW Switches:

[48-2-RC-N-CR-B](#) [48-1-SB-N-BK-B](#) [48-1-RB-N-BK-B](#) [48-1-SB-N-RD-B](#) [48-1-RB-N-RD-B](#) [48-5RB-G-BK-B](#) [48-5-RB-N-BK-B](#) [48-2-RB-R-BK-B](#) [48-1-RB-R-BK-B](#) [48-2-RB-N-BK-B](#) [48-2-RB-N-RD-B](#) [48-1-RC-N-CR-B](#) [48-1-SB-R-BK-B](#) [48-1-SB-R-GR-B](#) [48-1-RB-N-YL-B](#) [48-1-RB-N-GR-B](#) [48-1-RB-N-OR-B](#) [48-1-RB-N-BL-B](#) [48-1-RB-N-BK-S](#) [48-2-RB-W-YL-B-05](#) [48-2-RB-W-YL-B](#) [48-1-RB-G-BK-B](#) [48-1-RB-N-RD-S](#)