Series 48M-EM

19MM PANEL SEALED METAL ELECTRO-MECHANICAL

Built on the proven series 48 platform these rugged switches come in stainless steel or chrome plated housings with either momentary or maintained action and lighted or unlighted versions. The variety of options in this compact package size make the 48M ideal for many applications

IN2CONNECT
ELECTRONIC CONNECTORS

ACTUAL SIZE

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
- Gold Plated Contact and Terminals

ORDERING INFORMATION:

SWITCH FUNCTION:
1. MECHANICAL, MOMENTARY, SOLDER TERMINAL
2. MECHANICAL, MAINTAINED, SOLDER TERMINAL
5. MECHANICAL, MOMENTARY, PC TERMINAL
6. MECHANICAL, MAINTAINED, PC TERMINAL
A. MECHANICAL, MOMENTARY, WIRE LEADS
B. MECHANICAL, MAINTAINED, WIRE LEADS
9. SPECIAL, DIGITS ARE IN SERIAL ORDER

HOUSING MATERIAL:
1. STAINLESS STEEL
2. ZINC ALLOY CHROME PLATED

ILLUMINATION:
0. NON-LIT
1. CENTER SPOT ILLUMINATION
2. RING ILLUMINATION
3. ILLUMINATED POWER SYMBOL

LED COLOR:
N. NONE
G. GREEN L.E.D.
R. RED L.E.D.
A. AMBER L.E.D.
B. BLUE L.E.D.
W. WHITE L.E.D.
RB. RED/BLUE L.E.D.
RG. RED/GREEN L.E.D.

VOLTAGE RESISTER
IF BLANK *
05 5V FORWARD **
12 5V FORWARD ***
24 5V FORWARD ***

48M- [ ] [ ] [ ] [ ] [ ]

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

** Resistor included, jacketed leads by special request.

*** Resistor and jacketed leads included

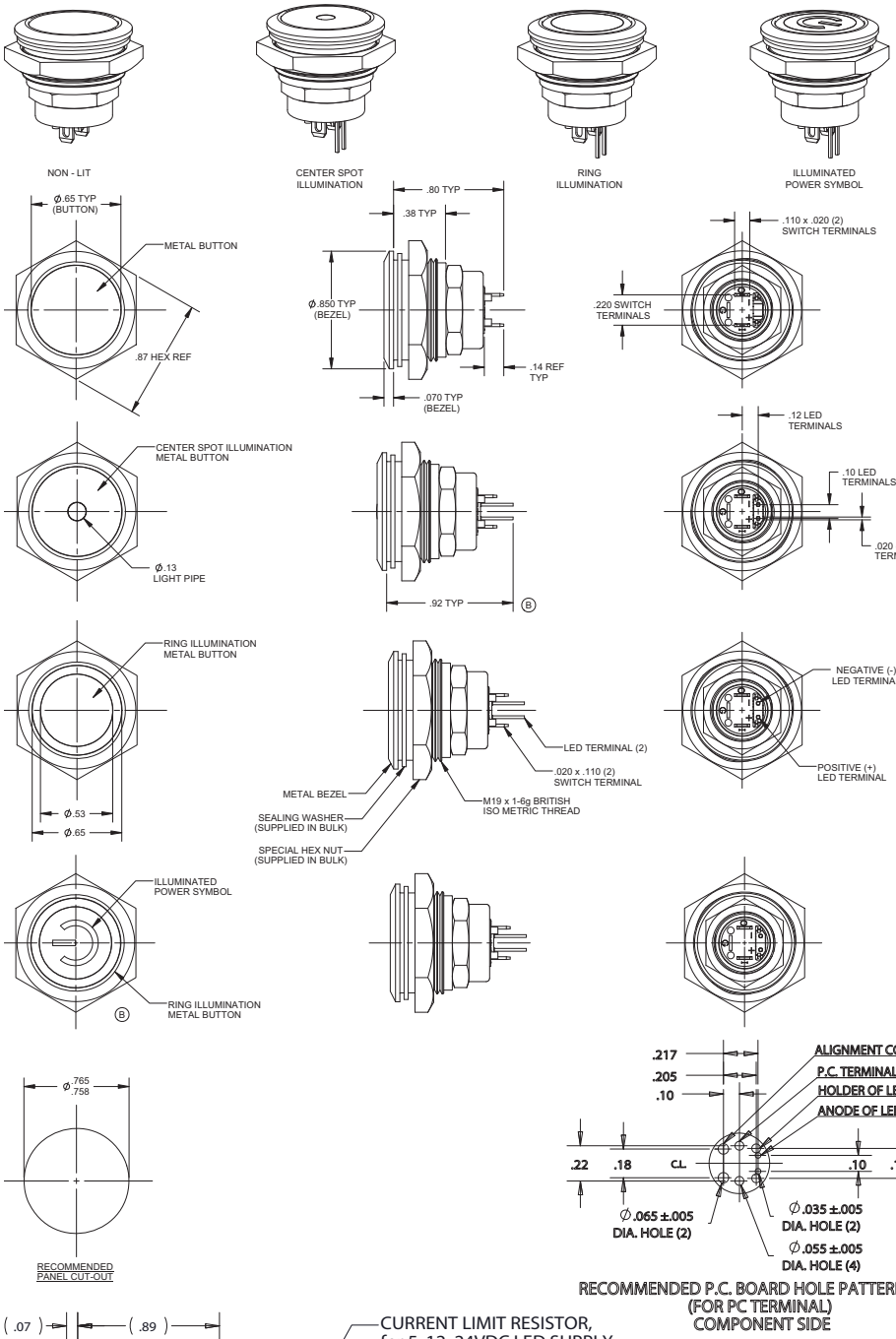
STANDARDS / AGENCY / RATINGS:

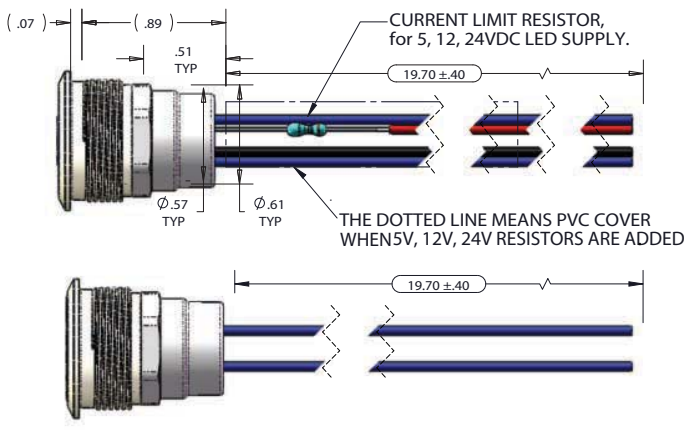
RoHS COMPLIANT 2002 / 95 / EC

IEC IP67 COMPLIANT

SERIES 48M: 19MM PANEL SEALED METAL PUSHBUTTON

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:
0.020" – 0.117" (0.5 – 4.5mm)

Temperature index:
-40°C to +85°C

LED operating temperature:
-13° F to +185° F /
-25° C to +85° C

Torque (max):
10 inch pounds

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)

ELECTRO-MECHANICAL

Dielectric strength:
1,000 VAC

Insulation resistance:
1 GΩ

Contact resistance:
50 MΩ max (initial)

250 mΩ max (initial, wireleads)

PANEL MOUNTING AND CONSTRUCTION INFORMATION

The series 48M 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.

ITW Switches
SENSORS, SWITCHES, ELECTRONIC CONTROLS

Designs and specifications are subject to change without notice due to product improvement.

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ITW Switches

NEW PRODUCT INTRODUCTION

C48M SERIES - SCREW TERMINALS

KEY FEATURES:

- Screw Terminals
- Momentary or Maintained Action
- Stainless Steel Housing
- Illumination Options: None, Centre Spot, Halo or I/O Logo
- Variety of LED colours
- Electro-Mechanical
- Panel Sealed to IP67
- ROHS Compliant
- Gold Plated Contact and Terminals

MECHANICAL / ELECTRICAL CHARACTERISTICS

Circuit:
SPST-NO-DB

Button Travel (nominal):
2.3mm (0.09“)

Operating Force (nominal):
3N / 306 grams

Contact Bounce (nominal):
1 millisecond

Panel Thickness:
1.3 ~ 3.8mm (0.05” ~ 0.15”)

Temperature Index:
-40°C to + 85°C

Torque (maximum):
1.2 Nm (10 inch pounds)

LED Operating Temperature:
-25°C to + 185°C

Current Ratings (resistive):
10mA @ 12VDC, 200,000 cycles (momentary)
10mA @ 12VDC, 20,000 cycles (maintain)

ELECTRO-MECHANICAL

Dielectric Strength:
1000V AC

Insulation Resistance
1 GΩ

Contact Resistance:
50 mΩ maximum (initial)

C48M Series - Panel Sealed Metal Pushbuttons

Built on the proven series 48 platform these rugged switches come in stainless steel housings, electro-mechanical with either momentary or maintained action and illuminated or non-illuminated versions.

The variety of options in this compact package size make the 48M Series ideal for many applications: outdoor controls, security products, food processing and medical products.

Contact us to learn more about the options available!

TYPICAL APPLICATIONS:

- Outdoor Controls
- Kiosks
- Security Equipment
- Medical Equipment
- Food Processing Equipment
- Transportation: Mass-Transit
- Marine
- Military Equipment
- Industrial Machinery

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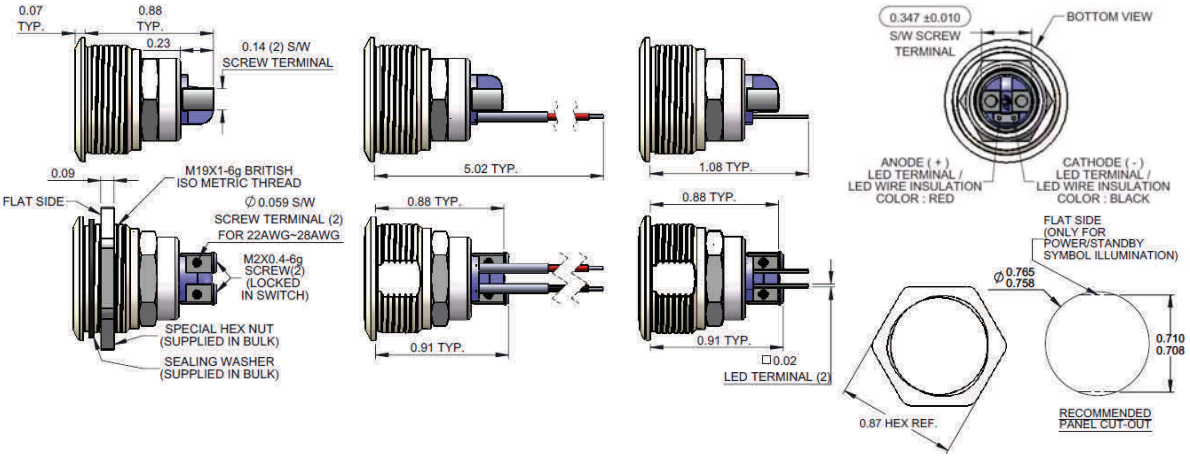
ITW Switches

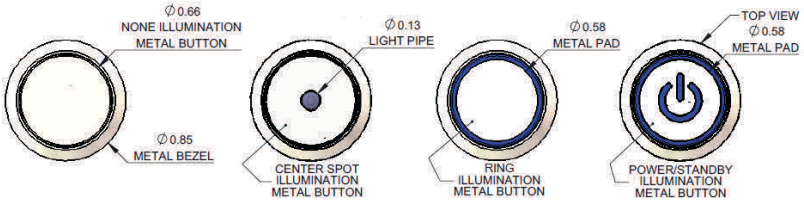
NEW PRODUCT INTRODUCTION

C48M SERIES - SCREW TERMINALS

DIMENSIONS:



ILLUMINATION OPTIONS:



HOW TO ORDER:

C48M- [X] [X] [X] [X] [XX]

SWITCH FUNCTION CODE	SWITCH FUNCTION DESCRIPTION	HOUSING MATERIAL CODE	HOUSING DECSRIPTION	ILLU. TYPE CODE	ILLUMINATION TYPE DESCRIPTION	LED COLOR CODE	LED COLOR	LED INLET VOLTAGE CODE	LED INLET VOLTAGE
1	MECHANICAL,MOMENTARY,SCREW TERMINAL	1	STAINLESS STEEL	0	NONE ILLUMINATION	N	NONE	IF BLANK*	(SEE NOTE)
2	MECHANICAL,MAINTAINED,SCREW TERMINAL	2	ZINC ALLOY, CHROME PLATED	1	CENTER SPOT ILLUMINATION	G	GREEN	05	5V
E	MECHANICAL,MOMENTARY, SCREW TERMINAL			2	RING ILLUMINATION	R	RED		
F	MECHANICAL,MAINTAINED, SCREW TERMINAL			3	POWER/STANDBY SYMBOL ILLUMINATION	A	AMBER		
						B	BLUE		
						W	WHITE		
						Y	YELLOW		
						RB	RED/BLUE		
						RG	RED/GREEN		

NOTE:
1. ONLY SUPPLY C48M-1X0N / C48M-2X0N FOR NONE ILLUMINATION TYPE SWITCHES
2. THE FEATURE OF BEZEL WILL CHANGE DEPENDS ON THE ILLUMINATION TYPE
3. THE USABLE WIRE-LEADS IS 22AWG TO 28AWG

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