Series 48EM

12MM 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, PC terminals or Wireleads
- 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		**12** - 12V forward **
Maintained	PC	**48-6**	**SC** - Square, Chrome	**Y** - Yellow	**BL** - Blue		**24** - 24V forward **
Momentary	Wire Leads	**48-A**		**A** - Amber	**YL** - Yellow		
Maintained	Wire Leads	**48-B**		**B** - Blue	**OR** - Orange		
				W - White	**CR** - Chrome		
				RB - Red / Blue	**PK** - Black with Standby Symbol		
				RG - Red / Green	**WH** - White		

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

† Lighted switches come with wires on LEDs to protect from solder heat.

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

** 12 and 24 V resistors are available with wirelead versions only.

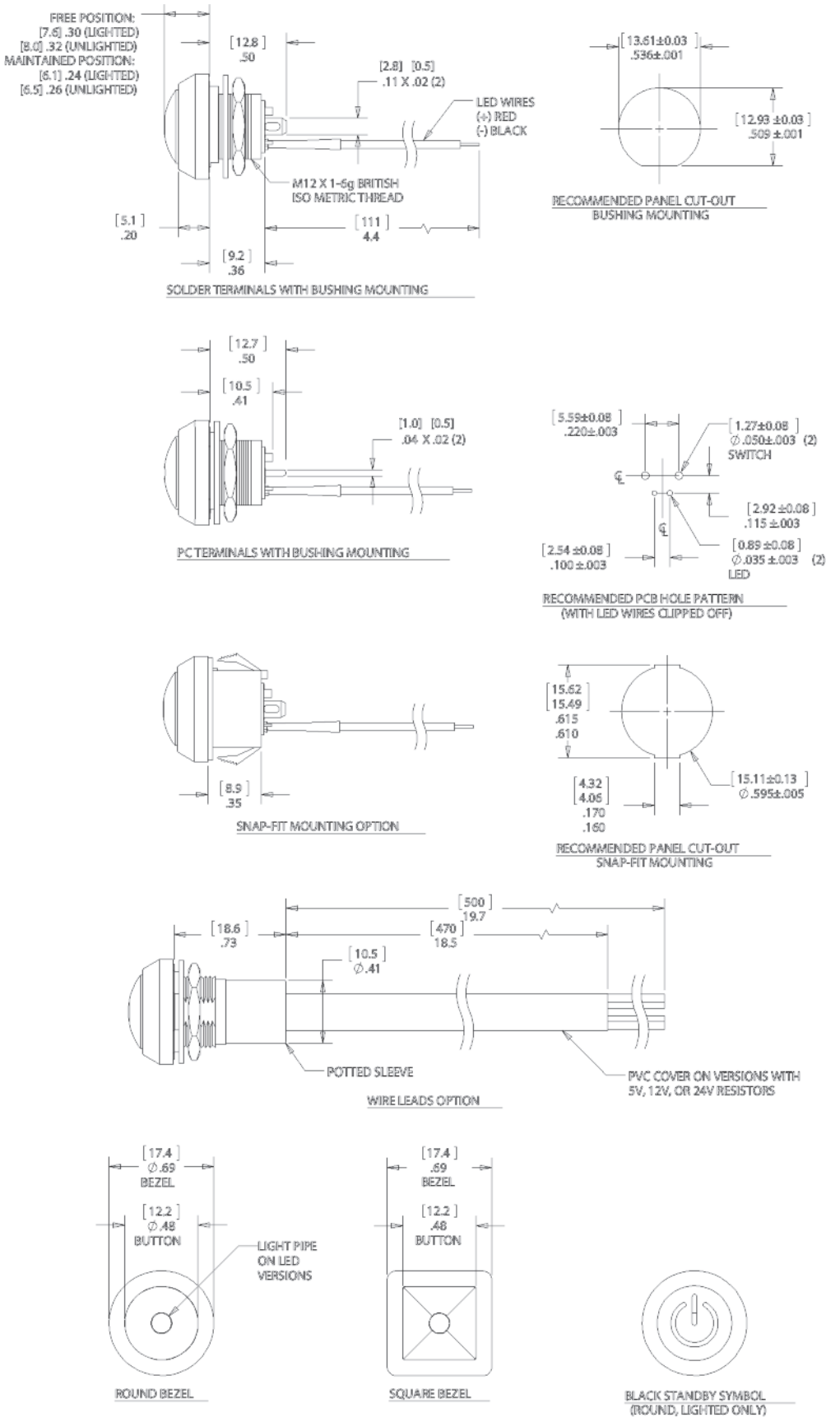
STANDARDS / AGENCY / RATINGS:

RoHS COMPLIANT 2002/95/EC

IEC IP67 COMPLIANT

SERIES 48: 12MM MINIATURE SEALED ELECTRO-MECHANICAL

PRODUCT DRAWINGS



MECHANICAL CHARACTERISTICS

CIRCUIT:
SPST-NO-DB (FORM X)

BUTTON TRAVEL (NOM):
[2.3] .09

OPERATING FORCE (NOM):
[3N] 306g

CONTACT BOUNCE (NOM):
1 ms

PANEL THICKNESS:
BUSHING MOUNTING: [0.5-3.0] .02-.12
SNAP-FIT MOUNTING: [1.3-3.0] .05-.12

NUT TORQUE (MAX):
[11.5 kgf/cm] 10 lb/in

HARDWARE
BUSHING MOUNTING: BULK PACKAGED SEALING WASHER AND HEX NUT ARE INCLUDED.

ENVIRONMENTAL SPECIFICATIONS

ACTUATOR INGRESS PROTECTION:
IP67

OPERATING TEMPERATURE:
[-40 C to +85 C] -40 F to +185 F

ELECTRICAL SPECIFICATIONS

CURRENT RATING (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:
50m OHMS

WIRE LEADS:
UL STYLE 1007
26 AWG, STRANDED

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SENSORS, SWITCHES, ELECTRONIC CONTROLS

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