

12MM MINIATURE PANEL SEALED METAL SWITCHES

The 12M is a miniature switch designed for rugged environments. The housing is stainless steel and aluminum alloy. It is available as maintained or momentary action, electro-mechanical operation with Gold or Silver plated contacts and terminals. It is ideal for a multitude of applications.

APPLICATIONS

- Communications
- Hand-held Control Modules
- Security Equipment
- Food Processing
- Industrial Machinery
- Outdoor Controls
- Transportation: Mass-transit, Lift Truck

Series 12M



KEY FEATURES:

- Momentary or Maintained Action
- Stainless Steel/ Aluminum Housing
- Ring Illumination
- Variety of LED Colors
- Panel Sealed to IP67
- Gold or Silver Plated
- Solder, PC Terminal

ORDERING INFORMATION:

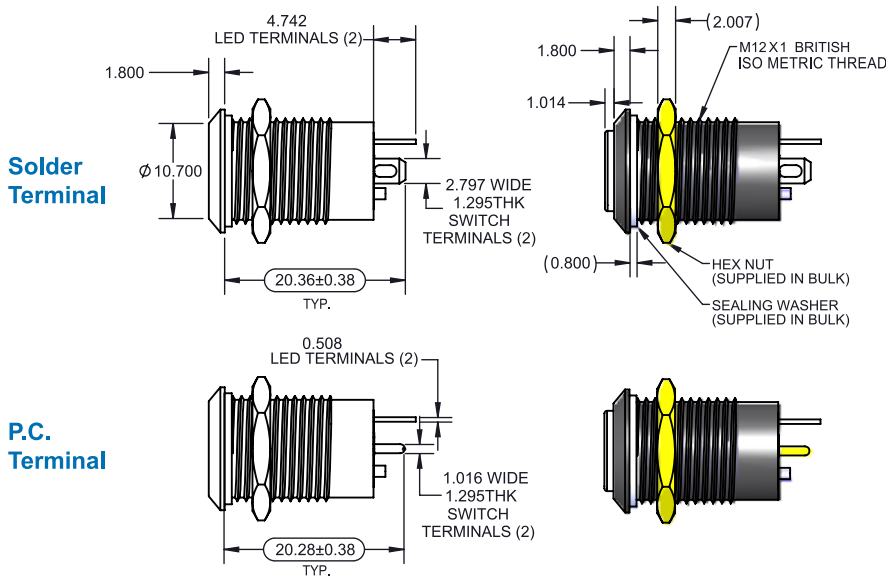
Series:	Switch Function:	Bezel Material/Color:	Button Material/Color:	Illumination:	LED Color:	Voltage Resistor:
Blank Gold Plated	A Mechanical, Momentary, Wireleads B Mechanical, Maintained, Wireleads E Mechanical, Momentary, Solder Terminal F Mechanical, Maintained, Solder Terminal G Mechanical, Momentary, PC Terminal H Mechanical, Maintained, PC Terminal	1 Stainless, Natural K Aluminum Alloy, Anodized, Black Y Aluminum Alloy, Anodized, Yellow R Aluminum Alloy, Anodized, Red G Aluminum Alloy, Anodized, Green S Aluminum Alloy, Anodized, Silver	1 Stainless, Natural K Aluminum Alloy, Anodized, Black Y Aluminum Alloy, Anodized, Yellow R Aluminum Alloy, Anodized, Red G Aluminum Alloy, Anodized, Green S Aluminum Alloy, Anodized, Silver	2 Ring Illumination	N None G Green R Red A Amber B Blue W White Y Yellow RB Red/Blue RG Red/Green	If Blank* 05 5V Forward 12 12V Forward** 24 24V Forward**
S Silver Plated	A Mechanical, Momentary, Wireleads B Mechanical, Maintained, Wireleads 1 Mechanical, Momentary, Solder Terminal 2 Mechanical, Maintained, Solder Terminal 5 Mechanical, Momentary, PC Terminal 6 Mechanical, Maintained, PC Terminal					

12M-

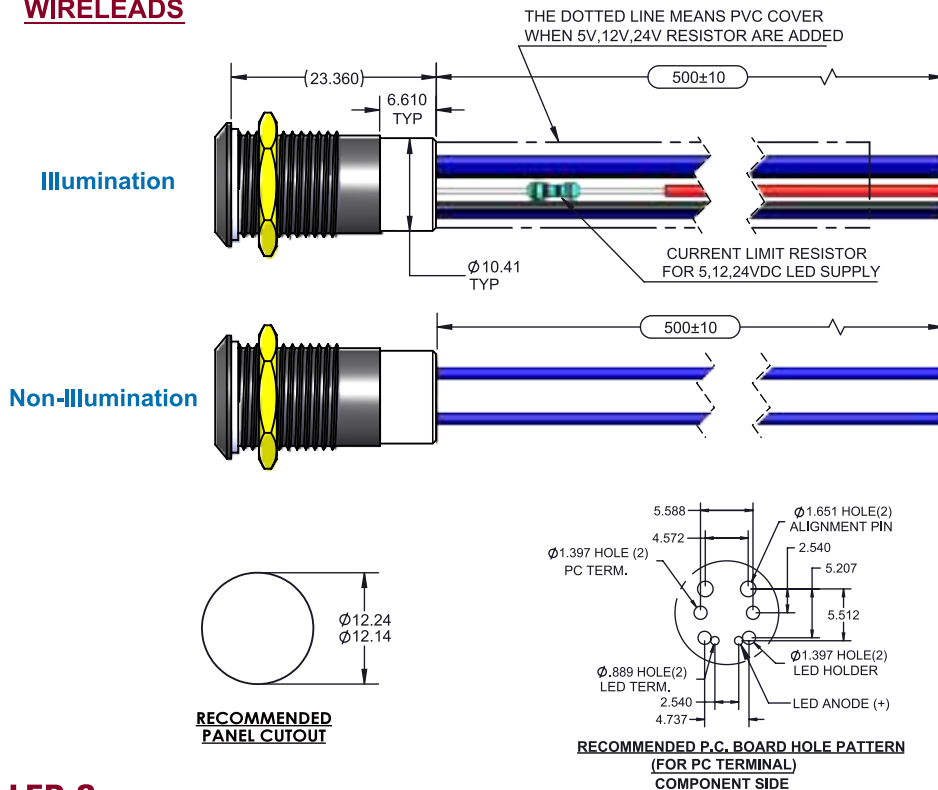
*Current limiting resistor is required to limit LED forward current to 20mA.(not included)
**12 and 24V resistors are available with wirelead versions only.

SERIES 12M: 12MM MINIATURE PANEL SEALED METAL SWITCHES

PRODUCT DRAWINGS



WIRELEADS



LED SPECIFICATIONS

LED CODE	LED		CIRCUITRY	V _I (VDC)		I _F (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 form body) : 280°C for 5 seconds
2.) Head Soldering Temperature (4mm form body) : 320°C for 3 seconds

MECHANICAL CHARACTERISTICS:

Circuit:

SPST-NO-DB (Form X)

Button Travel (Nominal):

0.099inches [2.5mm]

Operating Force (Nominal):

3N [306g]

Contact Bounce (Nominal):

1ms

Panel Thickness:

0.020" - 0.236" [0.5 - 6.0mm]

Nut Torque Force:

Max 5.2 lb-in [6 kgf-cm]

ENVIRONMENTAL SPECIFICATIONS:

Actuator Ingress Protection:

IP67 (Front Panel)

Operating Temperature:

Non-illumination type:

-40° to +185° F [-40° to +85° C]

Illumination type:

-13° to +185° F [-25° to +85° C]

ELECTRICAL SPECIFICATIONS:

Current Ratings: (Momentary)

12M Series:

250mA@12VDC, 100k Cycles

150mA@28VDC, 150k Cycles

100mA@48VDC, 100k Cycles

10mA@12VDC, 1000k Cycles

S12M Series:

10mA@12VDC, 200k Cycles

Current Ratings: (Maintained)

12M Series: 50,000 Cycles Nominal

S12M Series: 20,000 Cycles Nominal

Dielectric Strength:

1,000 VAC

Insulation Resistance:

1GΩ

Contact Resistance:

Max 50mΩ (initial)

