12mm Metal Pushbutton

12MM METAL 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 12mm Metal Switches offers all these options in one compact package 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
- Metal bezel / housing
- Raised button

ORDERING INFORMATION:

Series:	Module Type:	Switch Function:	Switch Termination:
BLANK Gold Contact IP67	48-1	Momentary	Solder
S Silver Contact IP67	48-2	Maintained	Solder
G Silver Contact IP67/2A	48-5	Momentary	PC
	48-6	Maintained	PC
	48-A	Momentary	Wire Leads
	48-B	Maintained	Wire Leads

Bezel Type:	Led#	Button@ Color:	Mounting Type:	Voltage Resistor:
RMB Round, Matte Black$	N None	(H)RD Red (for High Button)	B Bushing	If Blank*
RMG Round, Glossy Black$	R Red	(H)GR Green (for High Button)	S Snap-fit	05 5V Forward
RMS Round, Velour Chrome$	G Green	(H)BK Black (for High Button)		12 12V Forward
RMC Round, Bright Chrome$	Y Yellow	(H)BL Blue (for High Button)		24 24V Forward
	A Amber	(H)YL Yellow (for High Button)		
	B Blue	(H)OR Orange (for High Button)		
	W White	(H)WH White (for High Button)		
		PK Standby Symbol		

48- ☐ - ☐ - ☐ - ☐ - ☐ - ☐

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

$ Metal Bezel only for Momentray.

@ H__ only for High Button type.

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

STANDARDS / AGENCY / RATINGS:

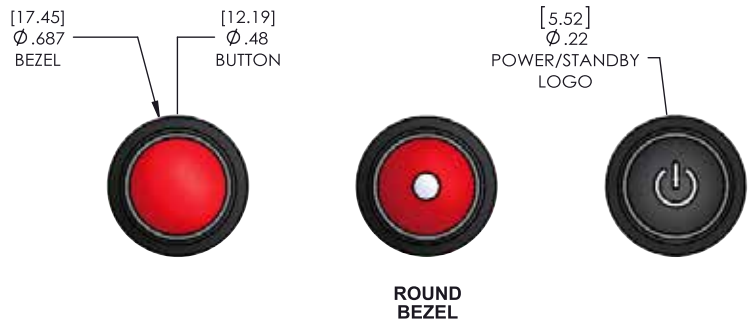
RoHS COMPLIANT 2002 / 95 / EC

IEC IP67 COMPLIANT

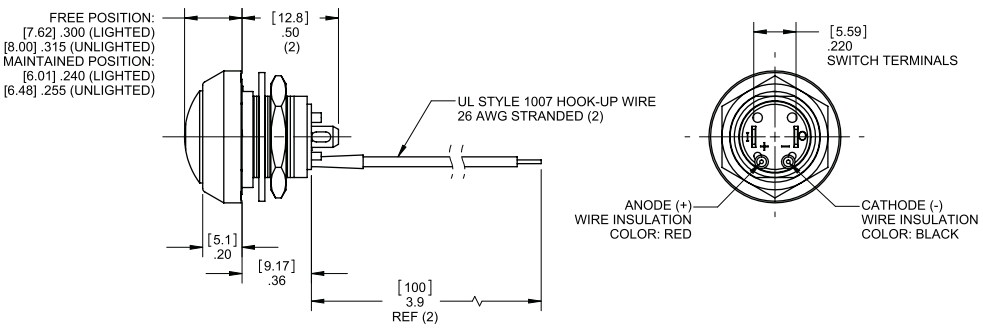
Contact an Authorized Distributor or Factory for Pricing

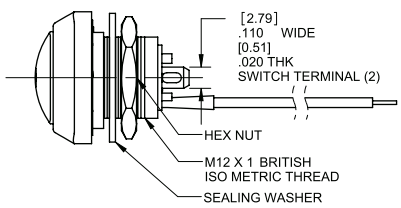
12MM METAL MINIATURE SEALED ELECTRO-MECHANICAL

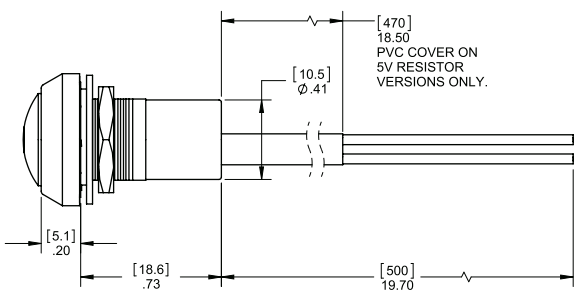
PRODUCT DRAWINGS



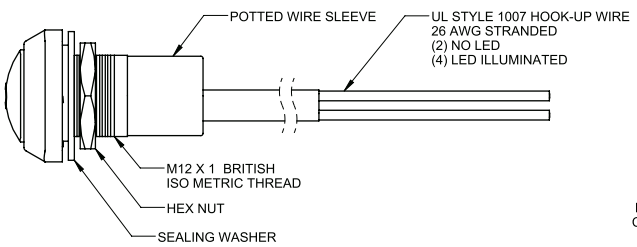
48 SERIES

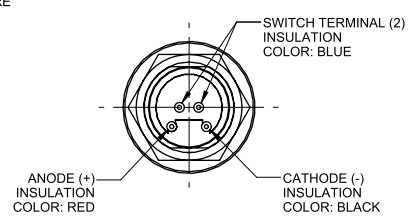






WIRELEADS





MECHANICAL CHARACTERISTICS

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):
[6 kgf-cm] 5.2 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):

48 (Momentary)
250mA @ 12VDC, 100K CYCLES
150mA @ 28VDC, 150K CYCLES
100mA @ 48VDC, 100K CYCLES
10mA @ 12VDC, 1 MILLION CYCLES

48 (Maintained)
50K CYCLES NOMINAL

DIELECTRIC STRENGTH:
1,000 VAC
INSULATION RESISTANCE:
1G OHM
CONTACT RESISTANCE:
50m OHMS
WIRE LEADS:
UL STYLE 1007
26 AWG, STRANDED

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

12MM METAL MINIATURE SEALED ELECTRO-MECHANICAL

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):
[6 kgf-cm] 5.2 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):

G48 (Momentary)
2A @ 24VDC,40K CYCLES
2A @ 250VAC,40K CYCLES

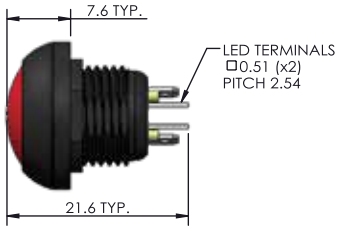
G48 (Maintained)
2A @ 24VDC,20K CYCLES
2A @ 250VAC,20K CYCLES

SA48
5A @ 28VDC,25K CYCLES
5A @ 125/250VAC,25K CYCLES

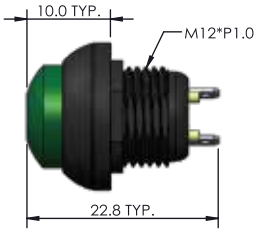
DIELECTRIC STRENGTH:
1,000 VAC
INSULATION RESISTANCE:
1G OHM
CONTACT RESISTANCE:
50m OHMS
WIRE LEADS:
UL STYLE 1007
26 AWG, STRANDED

G48 SERIES

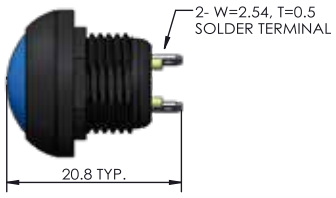
ILLUMINATION & BUSHING TYPE

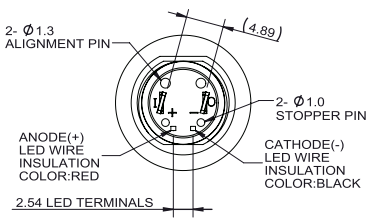


NON-ILLUMINATION & HIGH BUTTON TYPE



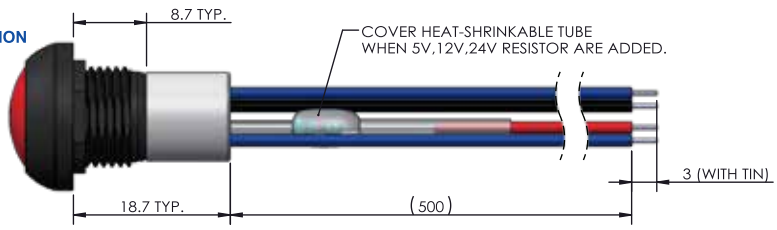
NON-ILLUMINATION & BUSHING TYPE



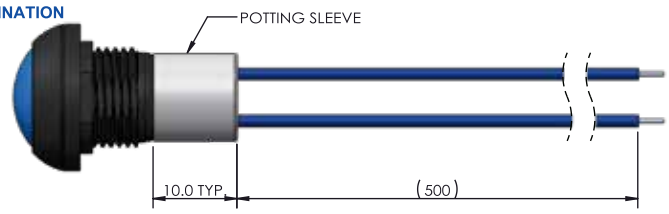


WIRELEADS

ILLUMINATION



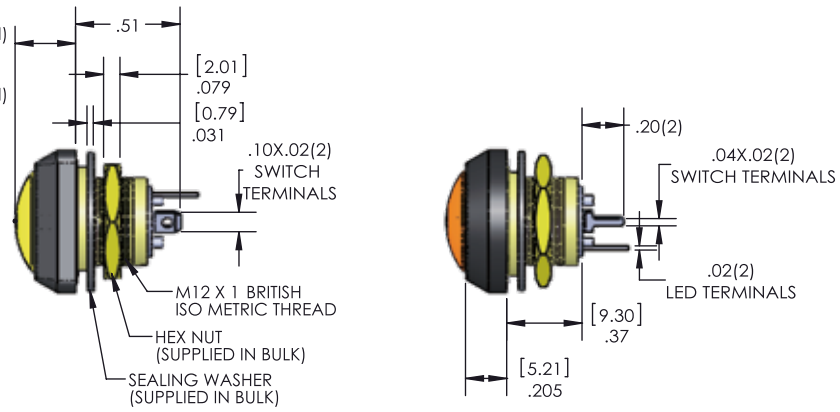
NON-ILLUMINATION

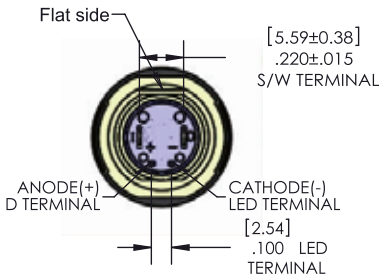


12MM METAL MINIATURE SEALED ELECTRO-MECHANICAL

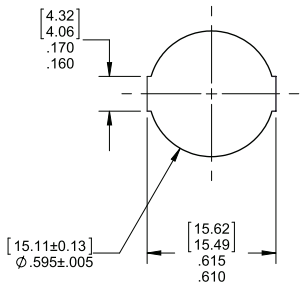
S48 SERIES

Free Position:
.300 [7.62](Lighted)
.315 [8.00](Unlighted)
Maintained Position:
.240[6.01](Lighted)
.255 [6.48](Unlighted)

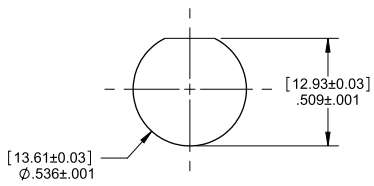




RECOMMENDED PANEL CUT-OUT



SNAP-IN MOUNT



BUSHING MOUNT

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):
[6 kgf-cm] 5.2 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):
S48 (Momentary)
10mA @ 12VDC,200K CYCLES
S48 (Maintained)
20K CYCLES NOMINAL

DIELECTRIC STRENGTH:
1,000 VAC
INSULATION RESISTANCE:
1G OHM
CONTACT RESISTANCE:
50m OHMS
WIRE LEADS:
UL STYLE 1007
26 AWG, STRANDED