# **16MM MINIATURE PANEL SEALED METAL**

The 57M is a miniature switch designed for rugged environments. The housing alloy with velour chrome plating. It is available as maintained or momentary action, Electro-menchanical operation with Gold plated contacts and solder terminals. It is ideal for a multitude of applications.

#### **APPLICATIONS:**

- Security Equipment
- Industrial Control
- Medical Equipment
- Military Equipment
- Food Processing
- Transportation
- Computers

# Series 57M-EM ACTUAL SIZE

# **KEY FEATURES:**

- Zinc Alloy/Velour Chrome Plated
- Center Spot LED and Non-Lighted Versions
- · Maintained or Momentary Action
- Panel Sealed to IP67

- RoHS Compliant
- Electro-Mechanical
- · Gold Plated Contacts and Terminals
- 5A / 28VDC with UL61058

# **ORDERING INFORMATION:**

# Series: Blank Gold Contact IP67 S Silver Contact IP67

- N Silver Contact C Silver Contact Screw
- Terminal IP67 **D** Silver Contact Short Housing IP67
- G Silver Contact IP67/2A
- SA Silver Contact IP67/5A

# 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 Zinc Alloy, Velour Chrome
- 3 Zinc Alloy, Black
- 4 Stainless Steel, Natural

## Illumination:

- 0 Nin-lit
- 1 Center Spot Illumination
- 2 Ring Illumination
- 3 Standby Logo
- 4 High Button Non-Illumination

# Illumination

#### Amber Α Yellow

**LED Color:** 

None

Green

Red

N

**Voltage Resistor:** 

12 12V Forward

24 24V Forward

If Blank\* 05 5V Forward

- Blue R
- W White
- RB Red / Blue
- Red / Green RG

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

# STANDARDS / AGENCY / RATINGS:





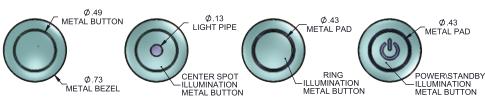


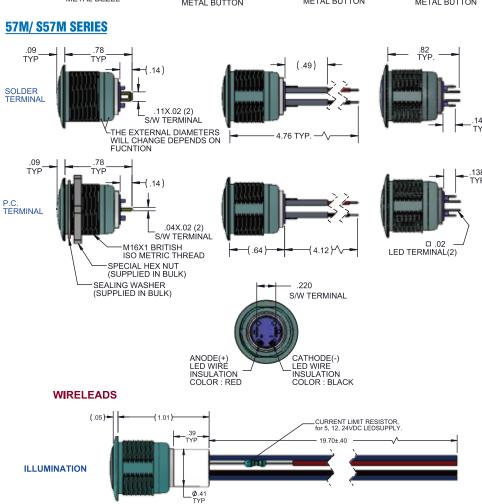




# SERIES 57M: 16MM MINIATURE PANEL SEALED METAL

# **PRODUCT DRAWINGS**





# MECHANICAL / ELECTRICAL CHARACTERISTICS:

#### **CIRCUIT**:

SPST-NO-DB

#### **BUTTON TRAVEL (Nominal):**

0.09inches / 2.3mm

#### **OPERATING FORCE (Nominal):**

3N / 306g

#### **CONTACT BOUNCE (Nominal):**

1 millisecond

#### **PANEL THICKNESS:**

0.20 - 0.120 inches/

0.5 - 3mm

#### **TEMPERATURE INDEX:**

-40°C to +85°C

#### **TORQUE (MAX):**

10 inch pounds

#### **LED OPERATION TEMPERATURE:**

 $-13^{\circ}$ F to  $+185^{\circ}$ F /  $-25^{\circ}$ C to  $+85^{\circ}$ C

## **CURRENT RATINGS(Resistive)**

#### 57M (Momentary)

250mA @ 12VDC, 100k Cycles

150mA @ 28VDC, 150k Cycles

100mA @ 48VDC, 100k Cycles

10mA @ 12VDC, 1,000k Cycles

#### 57M (Maintained)

50,000 Cycles Nominal

#### S57M (Momentary)

10mA @ 12VDC, 200k Cycles

#### **\$57M (Maintained)**

20k Cycles Nominal

#### **D57M (Momentary)**

10mA @ 12VDC,200K Cycles

#### **ELECTRICAL SPECIFICATIONS**

#### **DIELECTRIC STRENGTH:**

1.000 VAC

#### **INSULATION RESISTANCE:**

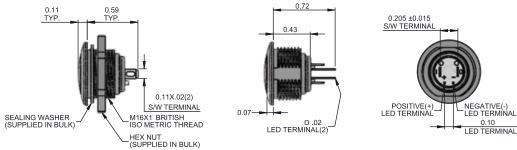
1GΩ

# CONTACT RESISTANCE:

 $50m\Omega$  max (intial)

#### **D57M SERIES**

NON-ILLUMINATION





# Mechanical / Electrical

#### CIRCUIT:

SPST-NO-DB

#### **BUTTON TRAVEL (Nominal):**

**CHARACTERISTICS:** 

0.09inches / 2.3mm

#### **OPERATING FORCE (Nominal):**

3N / 306g

#### **CONTACT BOUNCE (Nominal):**

1 millisecond

#### **PANEL THICKNESS:**

0.20 - 0.120 inches/ 0.5 - 3mm

#### **TEMPERATURE INDEX:**

 $-40^{\circ}$ C to  $+85^{\circ}$ C

#### **TORQUE (MAX):**

10 inch pounds

#### **LED OPERATION TEMPERATURE:**

 $-13^{\circ}$ F to  $+185^{\circ}$ F /  $-25^{\circ}$ C to  $+85^{\circ}$ C

#### **CURRENT RATINGS(Resistive)**

#### **G57M (Momentary)**

2A @ 24VDC, 40k Cycles 1A @ 250VAC, 40k Cycles

#### **G57M (Maintained)**

2A @ 24VDC, 20k Cycles 1A @ 250VAC, 20k Cycles

#### **N57M (Momentary)**

10mA @ 12VDC, 200k Cycles

#### **N57M (Maintained)**

20k Cycles Nominal

#### **ELECTRICAL SPECIFICATIONS**

#### **DIELECTRIC STRENGTH:**

1,000 VAC

#### **INSULATION RESISTANCE:**

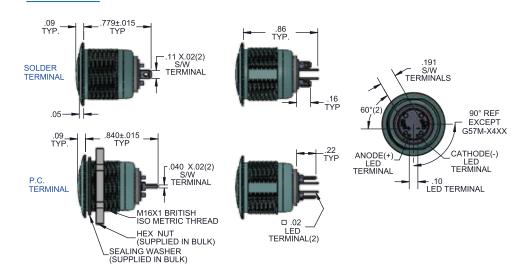
1GΩ

#### **CONTACT RESISTANCE:**

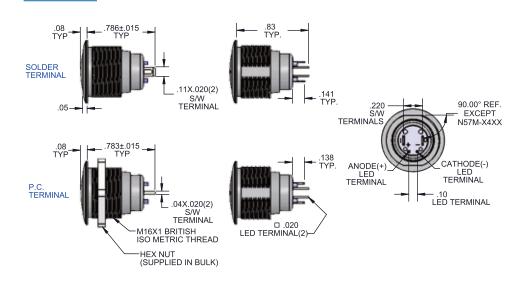
 $50m\Omega$  max (intial)

# SERIES 57M: 16MM MINIATURE PANEL SEALED METAL

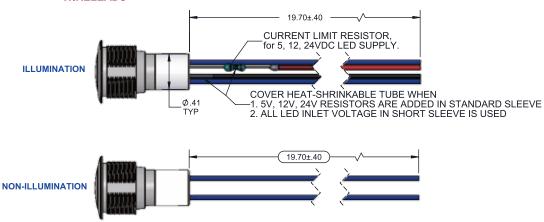
#### **G57M SERIES**



#### **N57M SERIES**

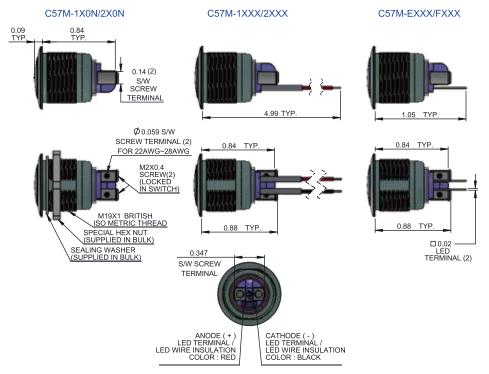


#### **WIRELEADS**

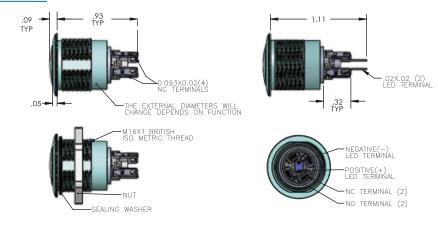


# SERIES 57M: 16MM MINIATURE PANEL SEALED METAL

#### **C57M SERIES**



#### **SA57M SERIES**



# .110x.020 (x2) S/W TERMINAL

**HIGH BUTTON TYPE** 

# Mechanical / Electrical Characteristics:

#### **CIRCUIT:**

SPST-NO-DB

#### **BUTTON TRAVEL (Nominal):**

0.09inches / 2.3mm

#### **OPERATING FORCE (Nominal):**

3N / 306g

#### **CONTACT BOUNCE (Nominal):**

1 millisecond

#### **PANEL THICKNESS:**

0.20 - 0.120 inches/

0.5 - 3mm

#### **TEMPERATURE INDEX:**

 $-40^{\circ}$ C to  $+85^{\circ}$ C

# **TORQUE (MAX):**

10 inch pounds

#### **LED OPERATION TEMPERATURE:**

 $-13^{\circ}$ F to  $+185^{\circ}$ F /  $-25^{\circ}$ C to  $+85^{\circ}$ C

### **CURRENT RATINGS(Resistive)**

#### C57M (Momentary)

10mA @ 12VDC,200K Cycles

#### **C57M (Maintained)**

20k Cycles Nominal

#### SA57M (Momentary)

5A@28VDC,125/250 VAC 25K Cycles Nominal

#### **ELECTRICAL SPECIFICATIONS**

# DIELECTRIC STRENGTH:

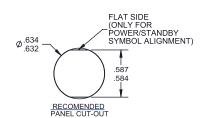
1,000 VAC

#### **INSULATION RESISTANCE:**

1GΩ

#### **CONTACT RESISTANCE:**

 $50m\Omega$  max (intial)



SENSORS, SWITCHES, ELECTRONIC CONTROLS

# PANEL MOUNTING AND CONSTRUCTION INFORMATION

The series 57M mounts easily into panels of minimum 0.20"(0.5mm) and maximum 0.120"(3mm) thicknesses. Front panel sealing to IP67 is achieved by a sealing washer which is fitted to the body of the switch before it is inserted into the panel hole cutout. It is held onto the panel by means of a metal hex nut tightened down to a torque of 10 inch pounds to achieve the correct sealing pressure. Designs and specifications are subject to change without notice due to productim provement.

974 TYP

19.7 TYP.