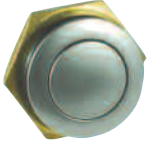


### SERIES 57M-EM:



ACTUAL SIZE



### MINIATURE PANEL SEALED METAL PUSHBUTTON SWITCHES

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

#### 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

#### APPLICATIONS

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

#### 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. ZINC ALLOY, VELOUR CHROME PLATED
2. ZINC ALLOY, BLACK CHROME PLATED

##### ILLUMINATION:

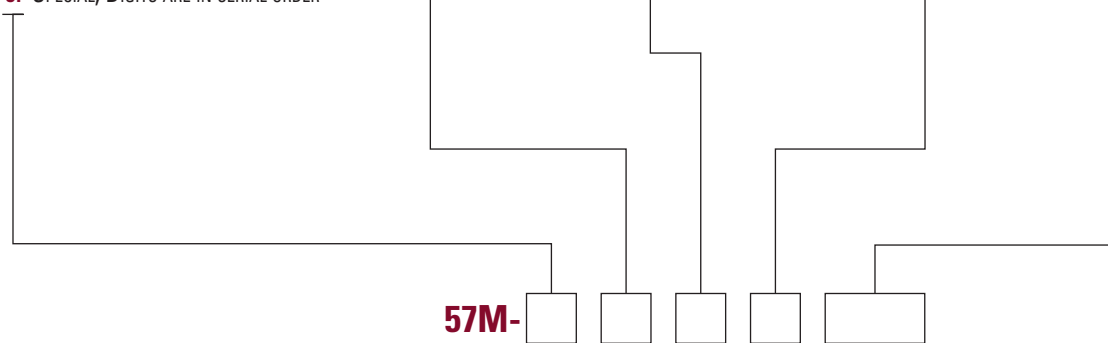
0. NON-LIT
1. CENTER SPOT ILLUMINATION
2. RING ILLUMINATION
3. STANBY LOGO ILLUMINATION

##### 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.

##### VOLTAGE RESISTOR

- IF BLANK \*
- 05 5V FORWARD

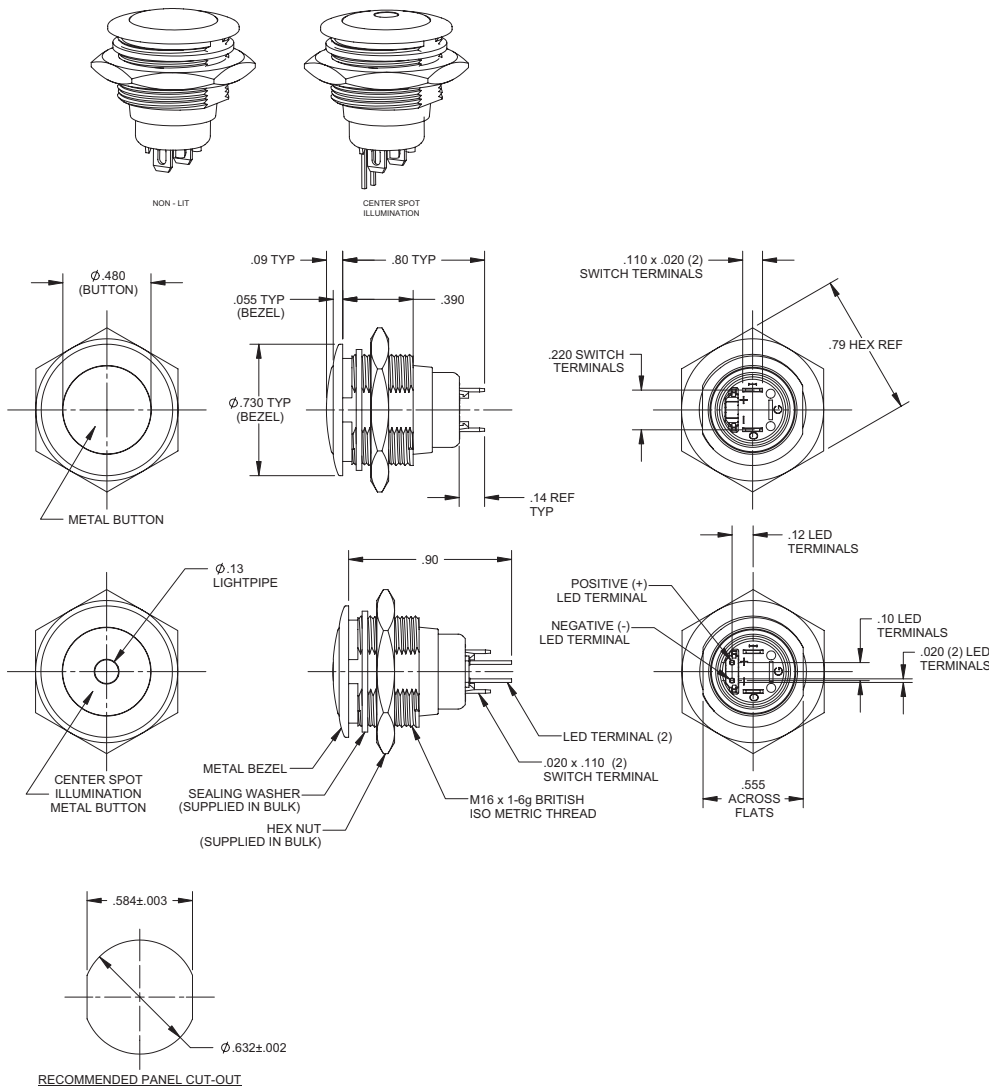


\* Current limiting resistor is required to limit LED forward current to 20 mA (not included).

#### STANDARDS / AGENCY / RATINGS:



## PRODUCT DRAWINGS



## MECHANICAL / ELECTRICAL CHARACTERISTICS:

### Circuit:

SPST-NO-DB

### Button travel (nominal):

0.09 inches / 2.3 mm

### 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 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

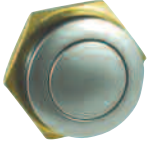
### Contact resistance:

50 mΩ max (initial)

## 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 brass hex nut tightened down to a torque of 10 inch pounds to achieve the correct sealing pressure.

### SERIES 57M-SS:



ACTUAL SIZE



### MINIATURE PANEL SEALED METAL PUSHBUTTON SWITCHES

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

#### KEY FEATURES:

- Zinc Alloy/Velour Chrome Plated
- Center Spot LED and Non-Lighted Versions
- Maintained or Momentary Action
- Panel Sealed to IP67
- RoHS Compliant
- Solid State
- Gold Plated Contacts and Terminals

#### APPLICATIONS

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

#### ORDERING INFORMATION:

##### SWITCH FUNCTION:

- 3. SOLID STATE, MOMENTARY, SOLDER TERMINAL
- 4. SOLID STATE, MAINTAINED, SOLDER TERMINAL
- 7. SOLID STATE, MOMENTARY, PC TERMINAL
- 8. SOLID STATE, MAINTAINED, PC TERMINAL
- C. SOLID STATE, , MOMENTARY, WIRE LEADS
- D. SOLID STATE, , MAINTAINED, WIRE LEADS
- 9. SPECIAL, DIGITS ARE IN SERIAL ORDER

##### HOUSING MATERIAL:

- 1. ZINC ALLOY, VELOUR CHROME PLATED
- 2. ZINC ALLOY, BLACK CHROME PLATED

##### BUTTON STYLE:

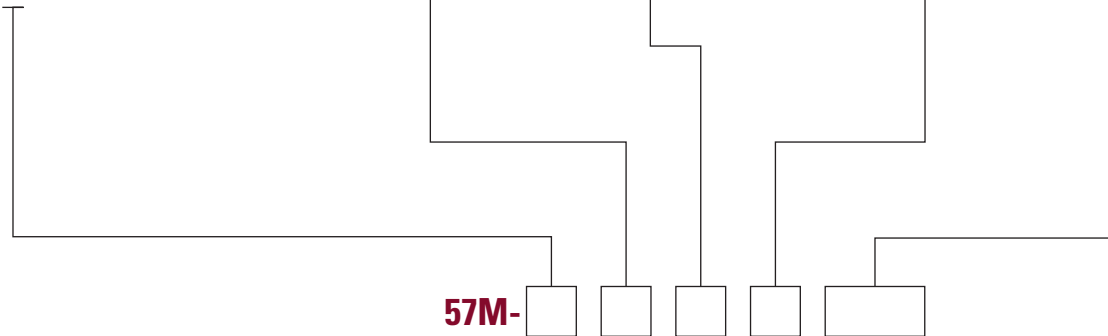
- 0. NON-LIT
- 1. CENTER SPOT ILLUMINATION
- 2. RING ILLUMINATION
- 3. STANBY LOGO ILLUMINATION

##### 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.

##### VOLTAGE RESISTOR

- IF BLANK \*
- 05 5V FORWARD

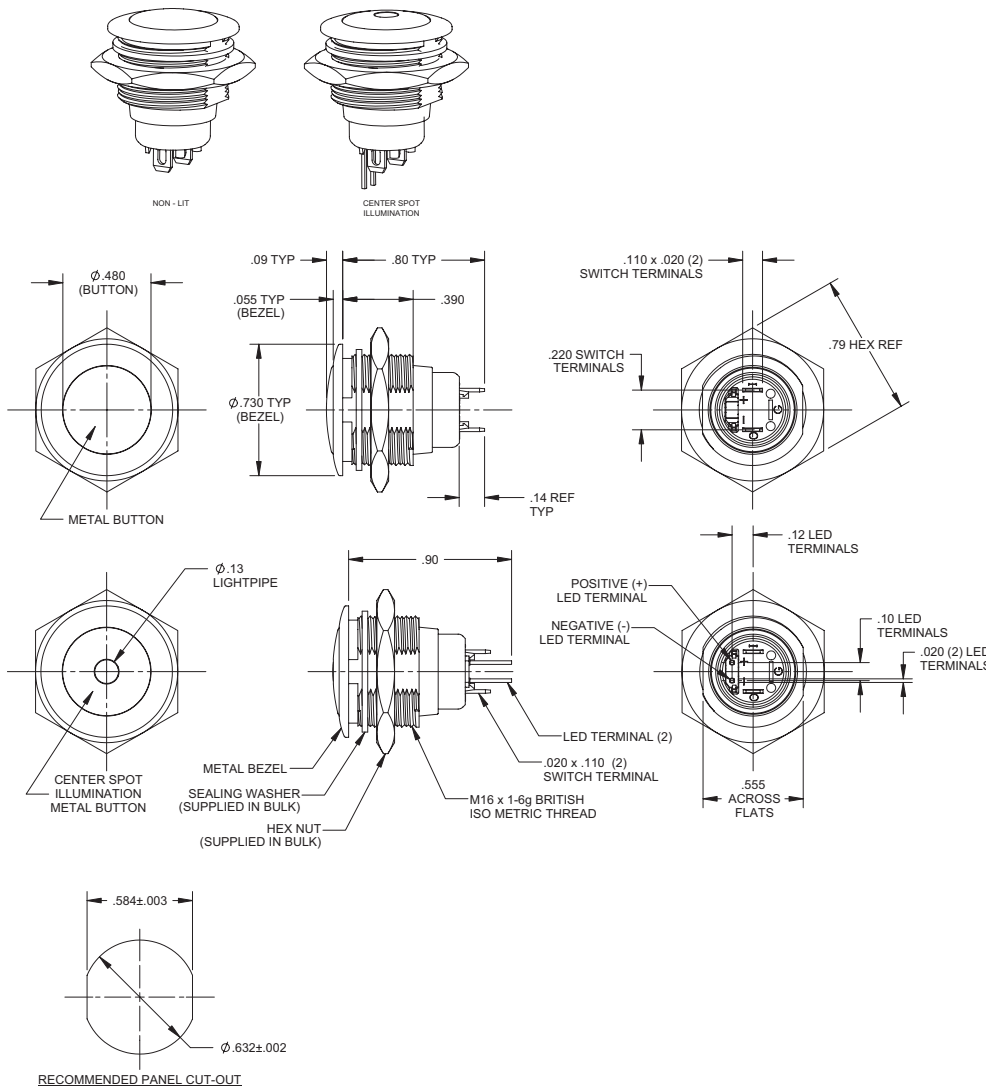


\* Current limiting resistor is required to limit LED forward current to 20 mA (not included).

#### STANDARDS / AGENCY / RATINGS:



## PRODUCT DRAWINGS



## MECHANICAL / ELECTRICAL CHARACTERISTICS:

### Circuit:

SPST-NO

### Button travel (nominal):

0.09 inches / 2.3 mm

### Life (mechanical) (nominal):

1,000,000 cycles (momentary)  
100,000 cycles (maintained)

### Operating force (nominal):

3N / 306 grams

### Panel thickness:

0.02 – 0.12 inches / 0.5 – 3mm

### Temperature index:

-40°F to +185°F

### LED operating temperature:

-13° F to +185° F /  
-25° C to +85° C

### Supply voltage:

4.2V to 24V, 26.5V Max.

### Supply current:

B<Brp, Vcc=12V: 3mA Typ.  
To 8mA Max.  
B>Bop, Vcc=12V: 4mA Typ.  
To 8mA Max.

### Output current:

20 mA

### Reverse battery voltage:

-30V Max.

### Reverse output current:

-50mA Max.

### Torque (max):

10 inch pounds



**IN2CONNECT**  
ELECTRONIC CONNECTORS

Tel: +44(0)1962 773004  
Fax: +44(0)1962 773104  
[sales@in2connect.uk.com](mailto:sales@in2connect.uk.com)  
[www.in2connect.uk.com](http://www.in2connect.uk.com)

## PANEL MOUNTING AND CONSTRUCTION INFORMATION

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