## SERIES 48:

ACTUAL SIZE

### FLEX-TECH MINIATURE SEALED PUSHBUTTON SWITCHES

This rugged multi-option sealed pushbutton series offers the utmost in choices for mounting style, colors, terminations, bezels, lighting and momentary or alternate-action switching. The Series 48 offers all these options in one compact package size.

### KEY FEATURES:

- Momentary or maintained action
- Gold contacts
- Many button colors
- Choice of LED colors (or non-lighted versions)
- Long life
- Solder or PC terminals
- Panel sealed to IP 67

### APPLICATIONS

- Office equipment
- Medical equipment
- Industrial machinery
- Outdoor controls
- Mass transportation
- Food processing equipment

### 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 |
| | | | | A - Amber | YL - Yellow | | |
| | | | | B - Blue | OR - Orange | | |
| | | | | W - White | CR - Chrome | | |

| 48-X | -XX | -X | -XX | -X | -X |
|---|---|---|---|---|---|

### ACCESSORIES — CABLE QUICK CONNECTS

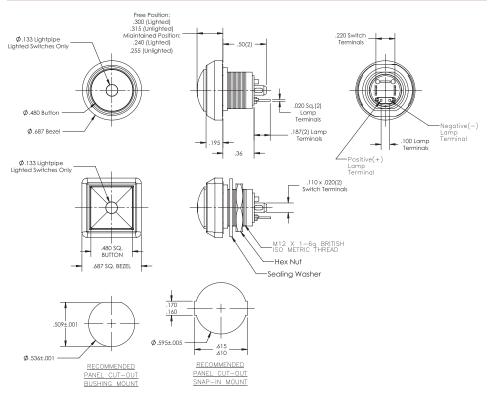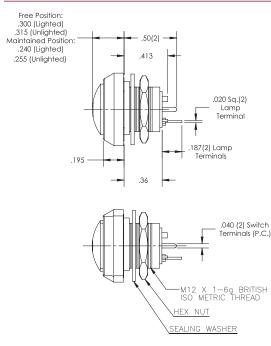| Part Number | Description | Length | Spacing (CL) |
|---|---|---|---|
| 80-480084 | Connectors on both ends to fit PCB terminals | 20 inches | 0.200 |
| 80-480085 | Connector on one end to fit PCB terminals and stripped wires on the other | 20 inches | 0.200 |
| 80-480086 | Connectors on both ends to fit LED terminals | 20 inches | 0.100 |
| 80-480087 | Connector on one end to fit LED terminals and stripped wires on the other | 20 inches | 0.100 |

### STANDARDS / AGENCY / RATINGS:

RoHS COMPLIANT 2002 / 95 / EC

IEC IP67 COMPLIANT

## SOLDER TAB TERMINALS



Free Position:
.300 (Lighted)
.315 (Unlighted)
Maintained Position:
.240 (Lighted)
.255 (Unlighted)

Ø.133 Lightpipe Lighted Switches Only

Ø.480 Button

Ø.687 Bezel

.50(2)

.195

.36

.020 Sq.(2) Lamp Terminals

.187(2) Lamp Terminals

.220 Switch Terminals

Negative(−) Lamp Terminal

Positive(+) Lamp Terminal

.100 Lamp Terminals

Ø.133 Lightpipe Lighted Switches Only

.480 SQ. BUTTON

.687 SQ. BEZEL

.110 x .020(2) Switch Terminals

M12 X 1−6g BRITISH ISO METRIC THREAD

Hex Nut

Sealing Washer

.509±.001

Ø.536±.001

RECOMMENDED PANEL CUT−OUT BUSHING MOUNT

.170
.160

Ø.595±.005

.615
.610

RECOMMENDED PANEL CUT−OUT SNAP−IN MOUNT

## PC TERMINALS

Free Position:
.300 (Lighted)
.315 (Unlighted)
Maintained Position:
.240 (Lighted)
.255 (Unlighted)

.50(2)

.413

.195

.36

.020 Sq.(2) Lamp Terminal

.187(2) Lamp Terminals

.040 (2) Switch Terminals (P.C.)

M12 X 1−6g BRITISH ISO METRIC THREAD

HEX NUT

SEALING WASHER

## MECHANICAL / ELECTRICAL CHARACTERISTICS:

**Circuit:**
SPST-NO-DB

**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

**Contact bounce (nominal:**
1 millisecond

**Panel thickness:**
0.02 – 0.12 inches / 0.5 – 3mm

**Temperature index:**
-40°F to + 185°F

**Current ratings:**
400mA, 32 VAC Resistive
100 mA, 50 VDC Resistive
125mA, 125 VAC Resistive

**Dielectric strength:**
1,000 VAC

**Insulation resistance:**
1G OHM

**Contact resistance:**
50m OHMS Max (initial)

**Torque (max):**
10 inch pounds

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

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

# ITW Switches
SENSORS, SWITCHES, ELECTRONIC CONTROLS

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