



Switches

Manufactured from Stainless Steel, Bulgin's extensive range of vandal resistant security switches are designed with a high resistance to wear and tear, corrosion and harsh use in potentially hostile environments such as access control applications.

The front and rear panel mounted versions have three profiles – prominent, domed and low profile – with a choice of switching and IP66 & 68 front panel sealing that, combined together, meet the ergonomic, electrical and environmental demands of switch panel design. And where the ultimate strength of steel is not needed, there is a brass, chrome plated alternative. The low profile style switches are now also available with a latching, push on - push off, action.

The illuminated versions, available in dot and ring indication and a variety of illumination colours, are new to the range and will add that extra dimension to control panel layouts.

Other switch types include conventional push-button and toggle switches.

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Vandal Resistant Switches

ENGRAVING OPTIONS

The low profile and prominent vandal resistant switches MP0025, MP0027, MP0031, MP0034, MP0038, MP0025/2, MP0027/2, MP0031/2, MP0034/2 and MP0038/2 are also available with engraved non-rotating buttons.

| | | | | |
|----|-----|-----|----|----|
| 0 | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 |
| 20 | A1* | A2* | | |

How to Order

MP00xx/1/xx

Switch Style

MP0025, MP0025/2, MP0027, MP0027/2, MP0031, MP0031/2, MP0034, MP0034/2, MP0038, MP0038/2

Non Rotating Button

Engraving option

0 - 20 Numeric
A1 = Up Arrow
A2 = Down Arrow

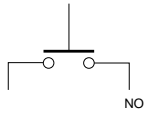
Examples

MP0031/1/A1 = MP0031 style switch, with non-rotating button engraved with an up arrow

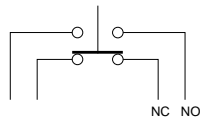
MP0027/2/1/13 = MP0027/2 style switch with prominent non-rotating button engraved with numeric characters 13

SWITCH OPERATION

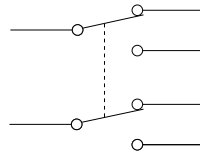
Switch Contact Operation



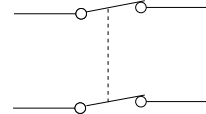
S.P. Push to Make
S.P.M.B.



S.P.C.O.



D.P.C.O.



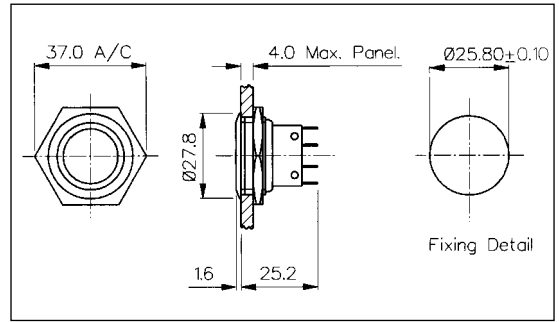
D.P.M.B.

Stainless Steel Low Profile Vandal Resistant - Momentary

FRONT PANEL MOUNTING



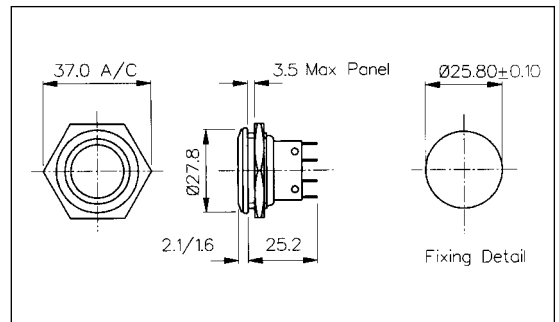
- 28mm diameter
- S.P.C.O. Microswitch
- 5A, 250V a.c.



FRONT PANEL MOUNTING



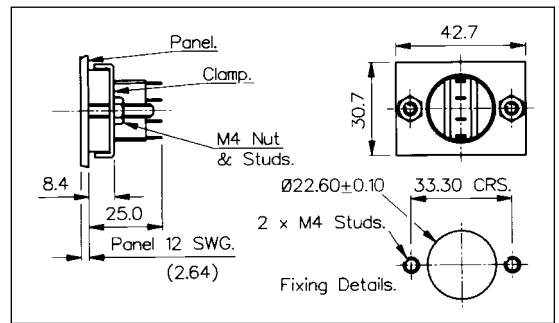
- Front Panel Sealed to IP66
- 28mm diameter
- S.P.C.O. Microswitch
- 5A, 250V a.c.



REAR PANEL MOUNTING



- 22mm diameter
- S.P.C.O. Microswitch
- 5A, 250V a.c.



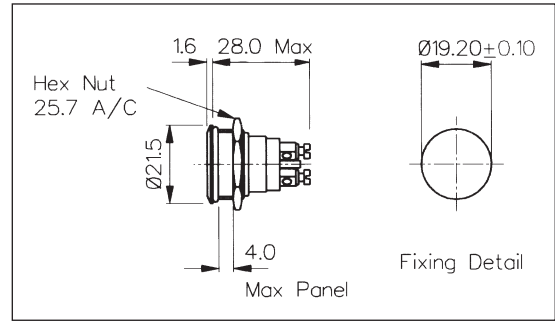
| Specification | MP0027 | MP0038 | MP0025 |
|--------------------------------|--|--|--|
| Terminations: | Solder Tags | Solder Tags | Solder Tags |
| Switching: | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) |
| Max. Rating: | 5A, 250V a.c. | 5A, 250V a.c. | 5A, 250V a.c. |
| Contact Resistance: | <10mΩ | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ³ MΩ | >10 ³ MΩ. | >10 ³ MΩ |
| Dielectric Strength: | >2.0kV a.c. | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | | Protection Classification: IP66 EN60529 1992 (Micro switch not sealed) | |
| Operations | | | |
| Mechanical: | 1,000,000 (min) | 1,000,000 (min) | 1,000,000 (min) |
| Electrical: | 35,000 (min) | 35,000 (min) | 35,000 (min) |
| Operating Pressure: | 7.5N (typ) | 12.5N (typ) | 6.1N (typ) |
| Rear Nut Fixing Torque: | 2.5Nm | 1.13Nm | - |
| Materials | | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Tin Plated | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Stainless Steel | Stainless Steel | Stainless Steel |
| Contacts: | Fine Silver | Fine Silver | Fine Silver |
| Variants: | Engraved Button, Non-Rotating Button, details on request | Engraved Button, Non-Rotating Button, details on request | Engraved Button, Non-Rotating Button, details on request |
| RoHS | Compliant | Compliant | Compliant |

Stainless Steel Low Profile Vandal Resistant - Momentary

FRONT PANEL MOUNTING



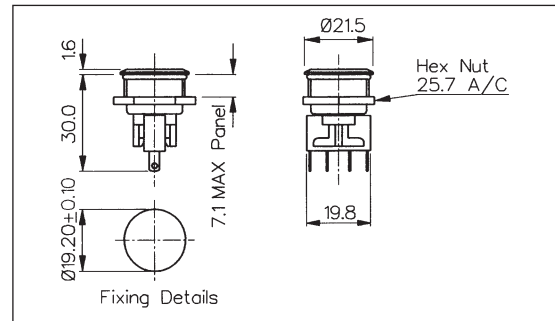
- Front Panel Sealed to IP68
- 21.5mm diameter
- S.P. Push to Make
- 1A, 50V a.c./d.c.
- Industry Standard Size



FRONT PANEL MOUNTING



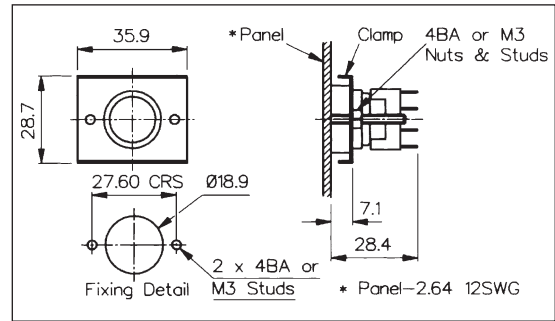
- Front Panel Sealed to IP66
- 21.5mm diameter
- S.P.C.O. Microswitch
- 5A, 250V a.c.



REAR PANEL MOUNTING




- Rear Panel Mounting
- Flush with Panel
- 19mm diameter
- S.P.C.O. Microswitch
- 5A, 250V a.c.



| Specification | MP0037 | MP0031 | MP0034 |
|--------------------------------|--|---|---|
| Terminations: | Screw Terminals | Solder Tags | Solder Tags |
| Switching: | S.P. Push to make Momentary action | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) |
| Max. Rating: | 1A, 50V a.c./d.c. | 5A, 250V a.c. | 5A, 250V a.c. |
| Contact Resistance: | <10mΩ | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ⁵ MΩ | >10 ³ MΩ. | >10 ³ MΩ |
| Dielectric Strength: | >1.0kV a.c. | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | Protection Classification: IP68 EN60529 1992 (Terminals not sealed) | Protection Classification: IP66 EN60529 1992 (Micro switch not sealed) | |
| Operations | | | |
| Mechanical: | 1,000,000 (min) | 1,000,000 (min) | 250,000 (min) |
| Electrical: | 30,000 (min) | 35,000 (min) | 35,000 (min) |
| Operating Pressure: | 7.5N (typ) | 4.7N (typ) | 2.7N (typ) |
| Rear Nut Fixing Torque: | 0.57Nm | 0.57Nm | - |
| Materials | | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Silver Plated | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Stainless Steel | Stainless Steel | Stainless Steel |
| Contacts: | Brass, Silver Plated, Silver | Fine Silver | Fine Silver |
| Variants: | - | Engraved Button, Non-Rotating Button, details on request | Engraved Button, Non-Rotating Button, details on request |
| RoHS | Compliant | Compliant | Compliant |

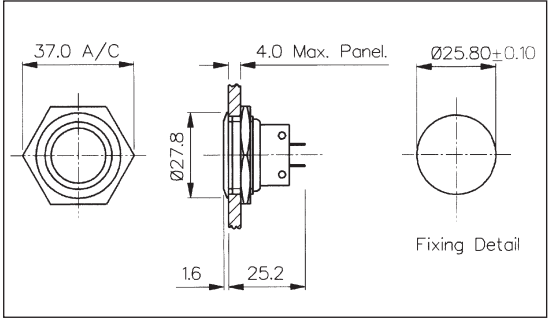
Stainless Steel Low Profile Vandal Resistant - Latching

FRONT PANEL MOUNTING



MPL027

- 28mm diameter
- 2A, 50V a.c./d.c.
- Single pole push to make
- Latching switch

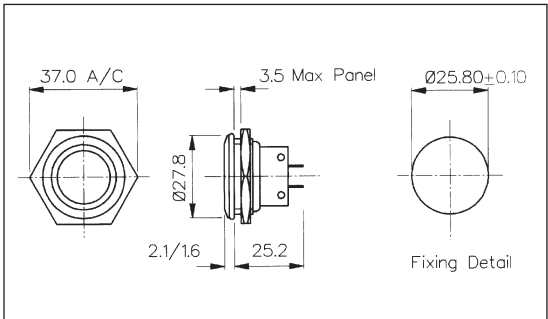


FRONT PANEL MOUNTING

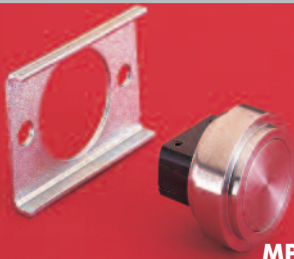


MPL038
Sealed to IP66

- Front Panel Sealed to IP66
- 28mm diameter
- 2A, 50V
- Single pole push to make
- Latching switch

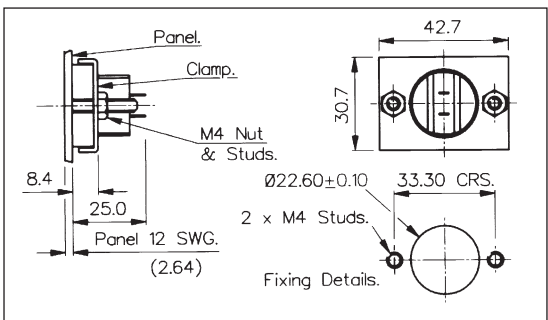


REAR PANEL MOUNTING



MPL025

- 22mm diameter
- 2A, 50V
- Single pole push to make
- Latching switch



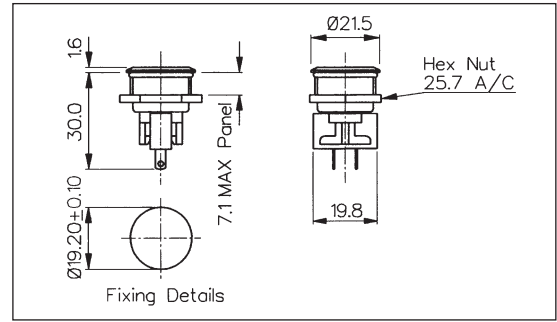
| Specification | MPL027 | MPL038 | MPL025 |
|--------------------------------|------------------------------------|--|------------------------------------|
| Terminations: | Solder Tags | Solder Tags | Solder Tags |
| Switching: | S.P.M.B. - Latching | S.P.M.B. - Latching | S.P.M.B. - Latching |
| Max. Rating: | 2A, 50V a.c./d.c. | 2A, 50V | 2A, 50V |
| Contact Resistance: | <10mΩ | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ³ MΩ | >10 ³ MΩ. | >10 ³ MΩ |
| Dielectric Strength: | >2.0kV a.c. | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | | Protection Classification: IP66 EN60529 1992 (Switch not sealed) | |
| Operations | | | |
| Mechanical: | 8,000 (min) | 8,000 (min) | 8,000 (min) |
| Electrical: | 8,000 (min) | 8,000 (min) | 8,000 (min) |
| Operating Pressure: | 5.5N (typ) | 5.5N (typ) | 5.5N (typ) |
| Rear Nut Fixing Torque: | 2.5Nm | 1.13Nm | - |
| Materials | | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Tin Plated | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Stainless Steel | Stainless Steel | Stainless Steel |
| Contacts: | Fine Silver | Fine Silver | Fine Silver |
| Variants: | Engraved Button details on request | Engraved Button details on request | Engraved Button details on request |
| RoHS | Compliant | Compliant | Compliant |

Stainless Steel Low Profile Vandal Resistant - Latching

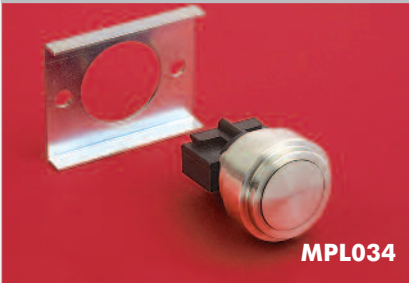
FRONT PANEL MOUNTING



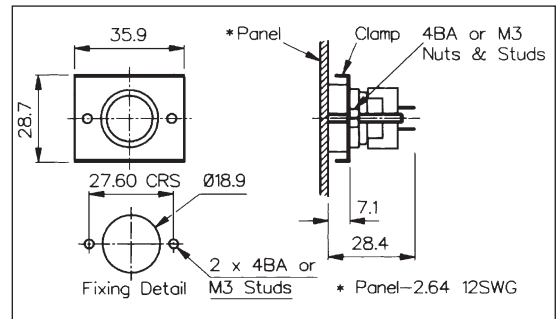
- Front Panel Sealed to IP66
- 21.5mm diameter
- 2A, 50V a.c./d.c.
- Single pole push to make
- Latching switch



REAR PANEL MOUNTING



- Rear Panel Mounting
- Flush with Panel
- 19mm diameter
- 2A, 50V
- Single pole push to make
- Latching switch



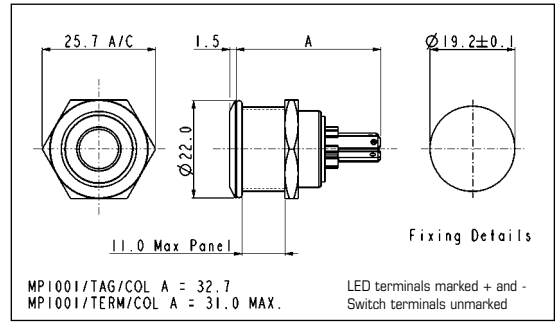
| Specification | MPL031 | MPL034 |
|--------------------------------|--|------------------------------------|
| Terminations: | Solder Tags | Solder Tags |
| Switching: | S.P.M.B. - Latching | S.P.M.B. - Latching |
| Max. Rating: | 2A, 50V a.c./d.c. | 2A, 50V |
| Contact Resistance: | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ³ MΩ | >10 ³ MΩ |
| Dielectric Strength: | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | Protection Classification: IP66 EN60529 1992 (Switch not sealed) | |
| Operations | | |
| Mechanical: | 8,000 (min) | 8,000 (min) |
| Electrical: | 8,000 (min) | 8,000 (min) |
| Operating Pressure: | 5.5N (typ) | 5.5N (typ) |
| Rear Nut Fixing Torque: | 0.57Nm | - |
| Materials | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Stainless Steel | Stainless Steel |
| Contacts: | Fine Silver | Fine Silver |
| Variants: | Engraved Button details on request | Engraved Button details on request |
| RoHS | Compliant | Compliant |

Stainless Steel Illuminated Vandal Resistant

FRONT PANEL MOUNTING



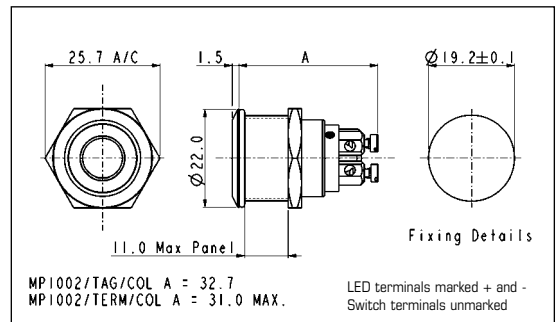
- Dot Illuminated
- 22mm diameter
- S.P. Push to Make
- 50mA, 24V dc contact rating
- Red, Green, Amber, Blue or White Illumination
- Bright Daylight LEDs
- Separate LED Terminals



FRONT PANEL MOUNTING



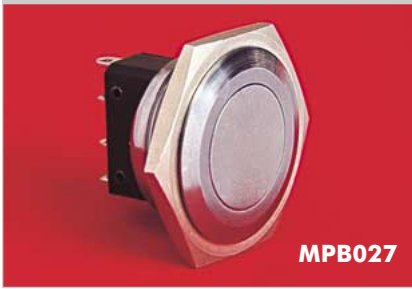
- Ring Illuminated
- 22mm diameter
- S.P. Push to Make
- 50mA, 24V dc contact rating
- Red, Green, Amber, Blue or White Illumination
- Bright Daylight LEDs
- Separate LED Terminals



| Specification | MPI001/Termination/Col | MPI002/Termination/Col |
|--------------------------------|---|---|
| Terminations: | /28 (2.8mm tabs), /Term (screw terminals) | /28 (2.8mm tabs), /Term (screw terminals) |
| Switching: | S.P. Push to make, tactile | S.P. Push to make, tactile |
| Max. Switch Rating: | 50mA, 24V d.c. | 50mA, 24V d.c. |
| LEDs (ratings @ 20mA) | | |
| Colours | Red Green Amber Blue White | Red Green Amber Blue White |
| Luminous Intensity | 900mcd 2500mcd 900mcd 1500mcd 900mcd | 900mcd 2500mcd 900mcd 1500mcd 900mcd |
| Forward Voltage* | 1.85V 3.5V 2.3V 3.5V 3.6V | 1.85V 3.5V 2.3V 3.5V 3.6V |
| Part No. | /RD /GN /AM /BL /WH | /RD /GN /AM /BL /WH |
| | *An appropriate resistor must be series connected by the user | |
| Contact Resistance: | <100mΩ | <100mΩ |
| Insulation Resistance: | >10 ³ MΩ | >10 ³ MΩ. |
| Dielectric Strength: | Contact to Panel >2.0kV Contact to Contact 1500V | Contact to Panel >2.0kV Contact to Contact 1500V |
| Operating Temp. Range: | -30°C to +70°C | -30°C to +70°C |
| Sealing (Front of panel only): | Protection Classification: IP66 EN60529 1992 | Protection Classification: IP66 EN60529 1992 |
| Operations | | |
| Mechanical: | 750,000 (min) | 750,000 (min) |
| Electrical: | 35,000 (min) | 35,000 (min) |
| Operating Pressure: | 12N | 12N |
| Rear Nut Fixing Torque: | 0.57Nm | 0.57Nm |
| Materials | | |
| Switch assembly: | UL94V-0 rated Polyamide (Nylon) | UL94V-0 rated Polyamide (Nylon) |
| Tags: | Copper Alloy | Copper Alloy |
| Terminals: | Copper Alloy | Copper Alloy |
| Switch Body & Button: | Stainless Steel | Stainless Steel |
| Lens and Lens Body: | Polycarbonate | Polycarbonate |
| O ring: | Nitrile | Nitrile |
| Internal seal: | Silicone | Silicone |
| Contact Plate: | Gold Plated | Gold Plated |
| RoHS | Compliant | Complaint |

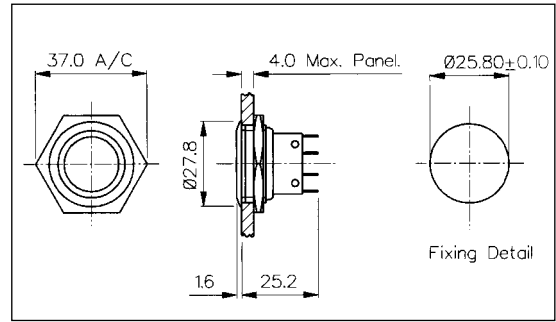
Low Profile Brass Chrome Plated Vandal Resistant

FRONT PANEL MOUNTING



MPB027

- 28mm diameter
- S.P.C.O. Microswitch
- 5A, 250V a.c.

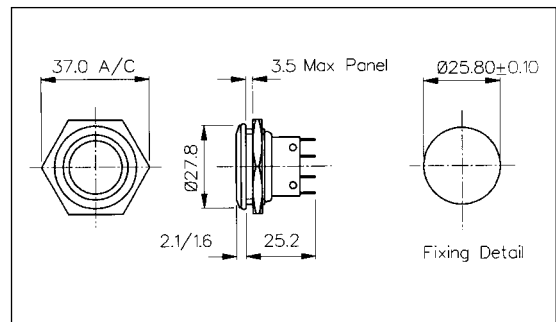


FRONT PANEL MOUNTING



MPB038
Sealed to IP66

- Front Panel Sealed to IP66
- 28mm diameter
- S.P.C.O. Microswitch
- 5A, 250V a.c.

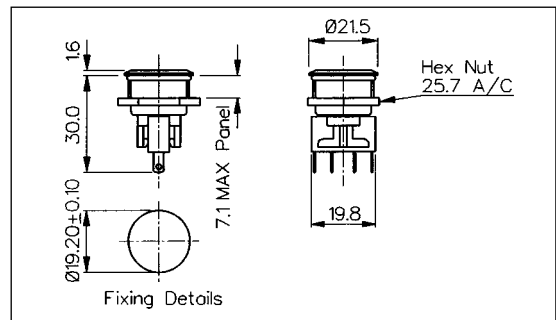


FRONT PANEL MOUNTING



MPB031
Sealed to IP66

- Front Panel Sealed to IP66
- 21mm diameter
- S.P.C.O. Microswitch
- 5A, 250V a.c.



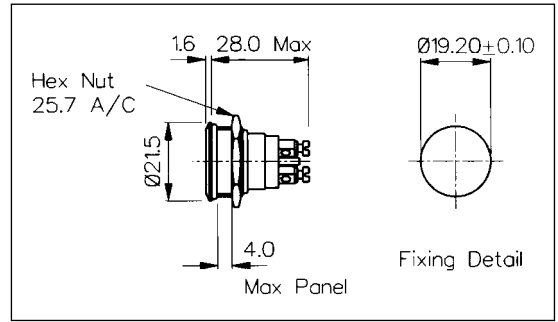
| Specification | MPB027 | MPB038 | MPB031 |
|--------------------------------|---|--|--|
| Terminations: | Solder Tags | Solder Tags | Solder Tags |
| Switching: | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) |
| Max. Rating: | 5A, 250V a.c. | 5A, 250V a.c. | 5A, 250V a.c. |
| Contact Resistance: | <10mΩ | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ³ MΩ | >10 ³ MΩ. | >10 ³ MΩ |
| Dielectric Strength: | >2.0kV a.c. | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | | Protection Classification: IP66 EN60529 1992 (Micro switch not sealed) | Protection Classification: IP66 EN60529 1992 (Micro switch not sealed) |
| Operations | | | |
| Mechanical: | 1,000,000 (min) | 1,000,000 (min) | 1,000,000 (min) |
| Electrical: | 35,000 (min) | 35,000 (min) | 35,000 (min) |
| Operating Pressure: | 7.5N (typ) | 12.5N (typ) | 4.7N (typ) |
| Rear Nut Fixing Torque: | 2.5Nm | 1.13Nm | 0.57Nm |
| Materials | | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Tin Plated | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Brass, Chrome Plated | Brass, Chrome Plated | Brass, Chrome Plated |
| Contacts: | Fine Silver | Fine Silver | Fine Silver |
| Variants: | Non-Rotating Button, details on request | Non-Rotating Button, details on request | Non-Rotating Button, details on request |
| RoHS | Compliant | Compliant | Compliant |

Low Profile Brass Chrome Plated Vandal Resistant

FRONT PANEL MOUNTING



- Front Panel Sealed to IP68
- 21.5mm diameter
- S.P. Push to Make
- 1A, 50V



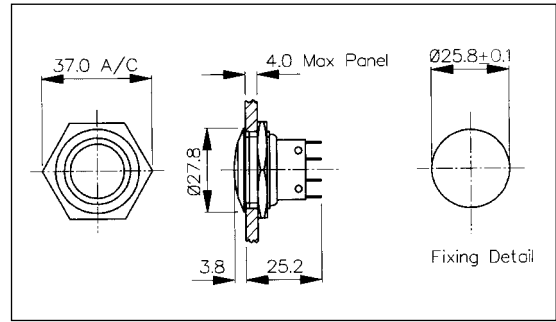
| Specification | MPB037 |
|--------------------------------|--|
| Terminations: | Screw Terminals |
| Switching: | S.P. Push to make Momentary action |
| Max. Rating: | 1A, 50V |
| Contact Resistance: | < 10mΩ |
| Insulation Resistance: | > 10 ⁵ MΩ |
| Dielectric Strength: | > 1.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C |
| Sealing (Front of panel only): | Protection Classification: IP68 EN60529 1992 (Terminals not sealed) |
| Operations | |
| Mechanical: | 1,000,000 (min) |
| Electrical: | 30,000 (min) |
| Operating Pressure: | 7.5N (typ) |
| Rear Nut Fixing Torque: | 0.57Nm |
| Materials | |
| Mouldings: | Glass Filled Nylon |
| Tags/Terminations: | Brass, Silver Plated |
| Switch Body & Button: | Brass, Chrome Plated |
| Contacts: | Brass, Silver Plated, Silver |
| Variants: | |
| RoHS | Compliant |

Stainless Steel Domed Vandal Resistant

FRONT PANEL MOUNTING



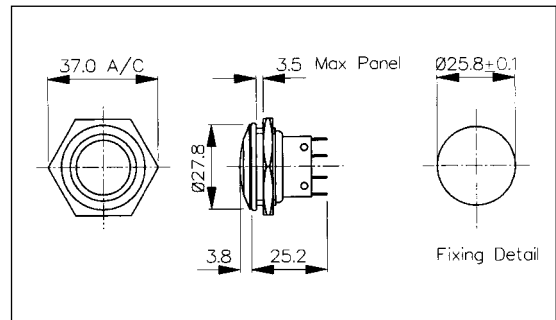
- 28mm diameter
- Domed Profile
- S.P.C.O. Microswitch
- 5A, 250V a.c.



FRONT PANEL MOUNTING



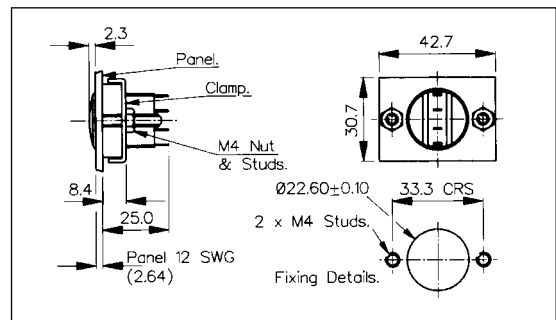
- Front Panel Sealed to IP66
- 28mm diameter
- Domed Profile
- S.P.C.O. Microswitch
- 5A, 250V a.c.



REAR PANEL MOUNTING



- 22mm diameter
- Domed Profile
- S.P.C.O. Microswitch
- 5A, 250V a.c.



| Specification | MP0027/3 | MP0038/3 | MP0025/3 |
|--------------------------------|---|--|---|
| Terminations: | Solder Tags | Solder Tags | Solder Tags |
| Switching: | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) |
| Max. Rating: | 5A, 250V a.c. | 5A, 250V a.c. | 5A, 250V a.c. |
| Contact Resistance: | <10mΩ | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ³ MΩ | >10 ³ MΩ. | >10 ³ MΩ |
| Dielectric Strength: | >2.0kV a.c. | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | | Protection Classification: IP66 EN60529 1992 (Micro switch not sealed) | |
| Operations | | | |
| Mechanical: | 1,000,000 (min) | 1,000,000 (min) | 1,000,000 (min) |
| Electrical: | 35,000 (min) | 35,000 (min) | 35,000 (min) |
| Operating Pressure: | 7.5N (typ) | 12.5N (typ) | 6.1N (typ) |
| Rear Nut Fixing Torque: | 2.5Nm | 1.13Nm | - |
| Materials | | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Tin Plated | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Stainless Steel | Stainless Steel | Stainless Steel |
| Contacts: | Fine Silver | Fine Silver | Fine Silver |
| Variants: | Non-Rotating Button, details on request | Non-Rotating Button, details on request | Non-Rotating Button, details on request |
| RoHS | Compliant | Compliant | Compliant |

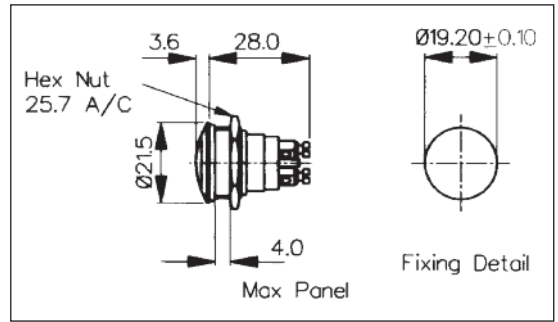
Stainless Steel Domed Vandal Resistant

FRONT PANEL MOUNTING



MP0037/3
Sealed to IP68

- Front Panel Sealed to IP68
- 21.5mm diameter
- Domed Profile
- S.P. Push to Make
- 1A, 50V a.c./d.c.

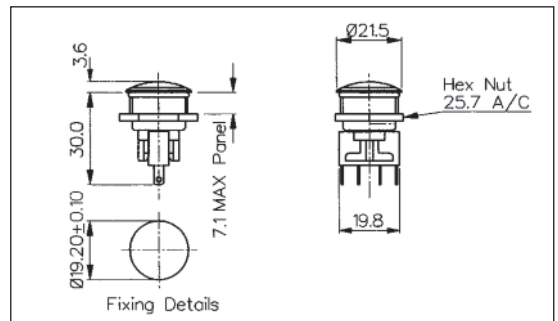


FRONT PANEL MOUNTING



MP0031/3
Sealed to IP66

- Front Panel Sealed to IP66
- 21.5mm diameter
- Domed Profile
- S.P.C.O. Microswitch
- 5A, 250V a.c.

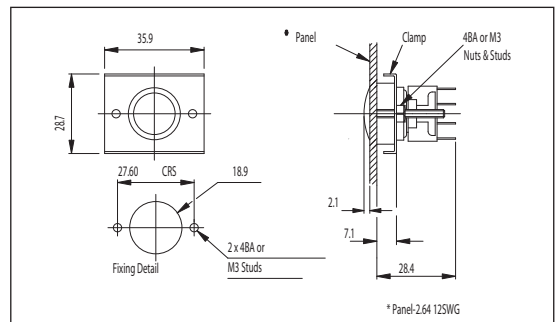


REAR PANEL MOUNTING



MP0034/3

- Rear Panel Mounting
- 19mm diameter
- Domed Profile
- S.P.C.O. Microswitch
- 5A, 250V a.c.



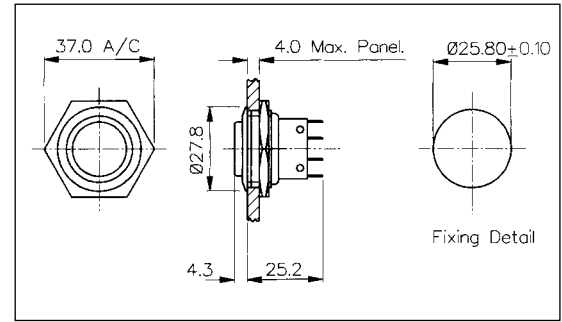
| Specification | MP0037/3 | MP0031/3 | MP0034/3 |
|--------------------------------|--|---|--|
| Terminations: | Screw Terminals | Solder Tags | Solder Tags |
| Switching: | S.P. Push to make Momentary action | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) |
| Max. Rating: | 1A, 50V a.c./d.c. | 5A, 250V a.c. | 5A, 250V a.c. |
| Contact Resistance: | <10mΩ | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ⁵ MΩ | >10 ³ MΩ. | >10 ³ MΩ |
| Dielectric Strength: | >1.0kV a.c. | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | Protection Classification: IP68 EN60529 1992 (Terminals not sealed) | Protection Classification: IP66 EN60529 1992 (Micro switch not sealed) | - |
| Operations | | | |
| Mechanical: | 1,000,000 (min) | 1,000,000 (min) | 250,000 (min) |
| Electrical: | 30,000 (min) | 35,000 (min) | 35,000 (min) |
| Operating Pressure: | 7.5N (typ) | 4.7N (typ) | 2.7N (typ) |
| Rear Nut Fixing Torque: | 0.57Nm | 0.57Nm | - |
| Materials | | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Silver Plated | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Stainless Steel | Stainless Steel | Stainless Steel |
| Contacts: | Brass, Silver Plated, Silver | Fine Silver | Fine Silver |
| Variants: | | Non-Rotating Button, details on request | |
| RoHS | Compliant | Compliant | Compliant |

Stainless Steel Prominent Button Vandal Resistant

FRONT PANEL MOUNTING



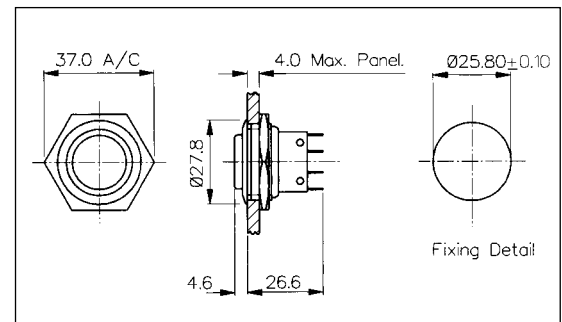
- 28mm diameter
- Prominent Button
- S.P.C.O. Microswitch
- 5A, 250V a.c.



FRONT PANEL MOUNTING



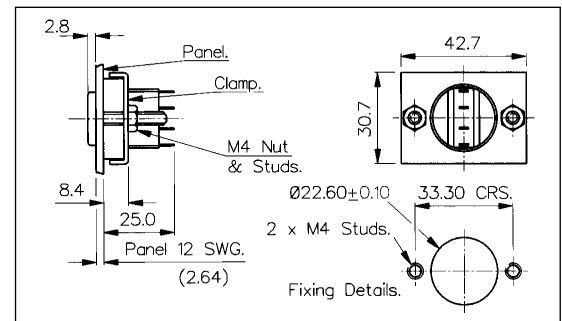
- Front Panel Sealed to IP66
- 28mm diameter
- Prominent Button
- S.P.C.O. Microswitch
- 5A, 250V a.c.



REAR PANEL MOUNTING



- 22mm diameter
- Prominent Button
- S.P.C.O. Microswitch
- 5A, 250V a.c.



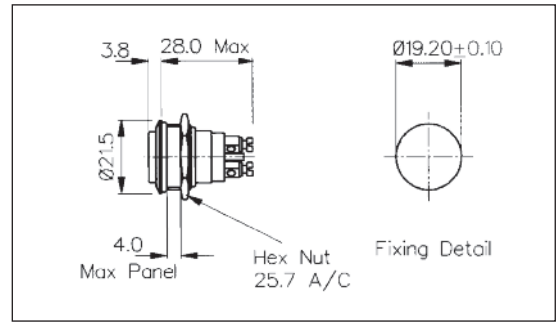
| Specification | MP0027/2 | MP0038/2 | MP0025/2 |
|--------------------------------|--|--|--|
| Terminations: | Solder Tags | Solder Tags | Solder Tags |
| Switching: | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) |
| Max. Rating: | 5A, 250V a.c. | 5A, 250V a.c. | 5A, 250V a.c. |
| Contact Resistance: | <10mΩ | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ³ MΩ | >10 ³ MΩ. | >10 ³ MΩ |
| Dielectric Strength: | >2.0kV a.c. | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | - | Protection Classification: IP66 EN60529 1992 (Micro switch not sealed) | - |
| Operations | | | |
| Mechanical: | 1,000,000 (min) | 1,000,000 (min) | 1,000,000 (min) |
| Electrical: | 35,000 (min) | 35,000 (min) | 35,000 (min) |
| Operating Pressure: | 7.5N (typ) | 12.5N (typ) | 6.1N (typ) |
| Rear Nut Fixing Torque: | 2.5Nm | 1.13Nm | - |
| Materials | | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Tin Plated | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Stainless Steel | Stainless Steel | Stainless Steel |
| Contacts: | Fine Silver | Fine Silver | Fine Silver |
| Variants: | Engraved Button, Non-Rotating Button, details on request | Engraved Button, Non-Rotating Button, details on request | Engraved Button, Non-Rotating Button, details on request |
| RoHS | Compliant | Compliant | Compliant |

Stainless Steel Prominent Button Vandal Resistant

FRONT PANEL MOUNTING



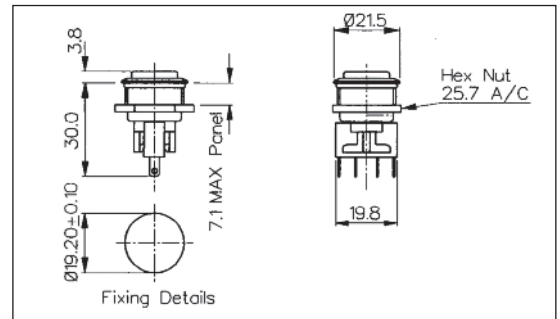
- Front Panel Sealed to IP68
- 21.5mm diameter
- Prominent Button
- S.P. Push to Make
- 1A, 50V a.c./d.c.



FRONT PANEL MOUNTING



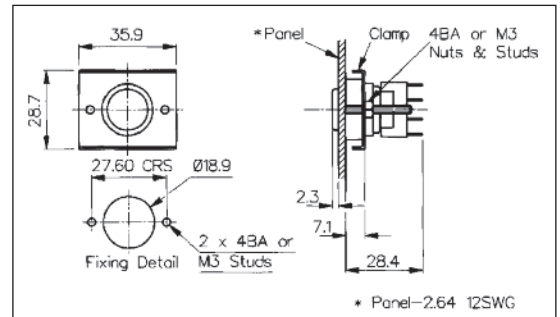
- Front Panel Sealed to IP66
- 21.5mm diameter
- Prominent Button
- S.P.C.O. Microswitch
- 5A, 250V a.c.



REAR PANEL MOUNTING



- 19mm diameter
- Prominent Button
- S.P.C.O. Microswitch
- 5A, 250V a.c.



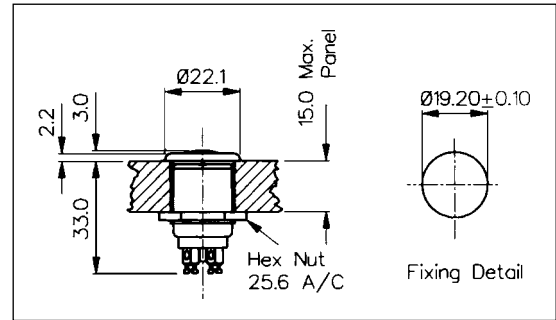
| Specification | MP0037/2 | MP0031/2 | MP0034/2 |
|--------------------------------|---|--|--|
| Terminations: | Screw Terminals | Solder Tags | Solder Tags |
| Switching: | S.P. Push to make Slow momentary action | S.P.C.O. Momentary Action (Microswitch) | S.P.C.O. Momentary Action (Microswitch) |
| Max. Rating: | 1A, 50V a.c./d.c. | 5A, 250V a.c. | 5A, 250V a.c. |
| Contact Resistance: | <10mΩ | <10mΩ | <10mΩ |
| Insulation Resistance: | >10 ⁵ MΩ | >10 ³ MΩ. | >10 ³ MΩ |
| Dielectric Strength: | >1.0kV a.c. | >2.0kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C | -20°C to +70°C |
| Sealing (Front of panel only): | Protection Classification: IP68 EN60529 1992 (Terminals not sealed) | Protection Classification: IP66 EN60529 1992 (Micro switch not sealed) | - |
| Operations | | | |
| Mechanical: | 1,000,000 (min) | 1,000,000 (min) | 250,000 (min) |
| Electrical: | 30,000 (min) | 35,000 (min) | 35,000 (min) |
| Operating Pressure: | 7.5N (typ) | 4.7N (typ) | 2.7N (typ) |
| Rear Nut Fixing Torque: | 0.57Nm | 0.57Nm | - |
| Materials | | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Silver Plated | Brass, Tin Plated | Brass, Tin Plated |
| Switch Body & Button: | Stainless Steel | Stainless Steel | Stainless Steel |
| Contacts: | Brass, Silver Plated, Silver | Fine Silver | Fine Silver |
| Variants: | - | Engraved Button, Non-Rotating Button, details on request | Engraved Button, Non-Rotating Button, details on request |
| RoHS | Compliant | Compliant | Compliant |

Push Button

FRONT PANEL MOUNTING



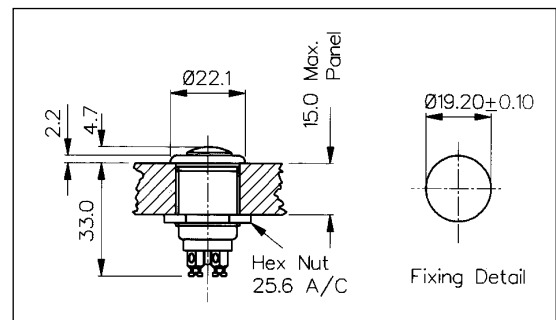
- Proud Fitting
- 22mm diameter
- S.P. Push to Make
- 1A, 50V
- Brass, Chrome Plated Body, Stainless Steel Button
- MP0033 Internally Sealed



FRONT PANEL MOUNTING



- Prominent Button
- 22mm diameter
- S.P. Push to Make
- 1A, 50V
- Brass, Chrome Plated Body, Stainless Steel Button
- MP0033/2 Internally Sealed



| Specification | MP0013, MP0033 | MP0013/2, MP0033/2 |
|--------------------------------|---|---|
| Terminations: | Screw Terminals | Screw Terminals |
| Switching: | S.P. Push to make Slow momentary action | S.P. Push to make Slow momentary action |
| Max. Rating: | 1A, 50V a.c. | 1A, 50V a.c. |
| Contact Resistance: | <15mΩ | <15mΩ |
| Insulation Resistance: | >10 ⁴ MΩ | >10 ⁴ MΩ |
| Dielectric Strength: | >2.5kV a.c. | >2.5kV a.c. |
| Operating Temp. Range: | -20°C to +85°C | -20°C to +85°C |
| Sealing (Front of panel only): | MP0033 only - internally sealed against ingress of water and dust | MP0033/2 only - internally sealed against ingress of water and dust |
| Materials: | | |
| Mouldings: | Glass Filled Nylon | Glass Filled Nylon |
| Tags/Terminations: | Brass, Silver Plated | Brass, Silver Plated |
| Switch Body & Button: | Body: Brass, Chrome Plated Button: Stainless Steel | Body: Brass, Chrome Plated Button: Stainless Steel |
| Contacts: | Copper, Silver Plated | Copper, Silver Plated |
| Variants: | | |
| RoHS | Compliant | Compliant |

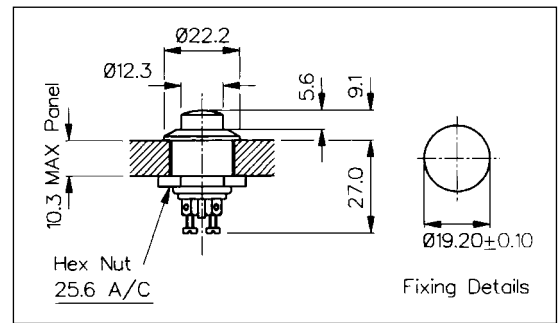
Push Button

FRONT PANEL MOUNTING



MP0012/Col

- 22mm diameter
- Prominent Button
- S.P. Push to Make
- Screw Terminals
- Brass, Chrome Plated Body, Glass Filled Nylon Button



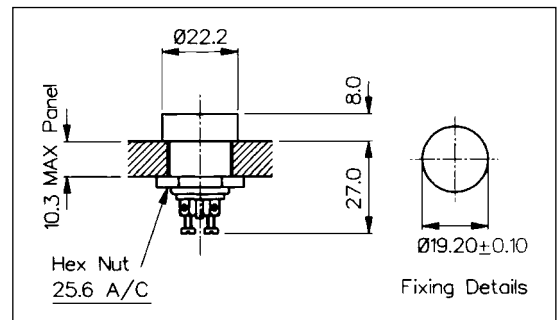
Fixing Details

FRONT PANEL MOUNTING



MP0012/1/Col

- 22mm diameter
- Recessed Button
- S.P. Push to Make
- Screw Terminals
- Brass, Chrome Plated Body, Glass Filled Nylon Button



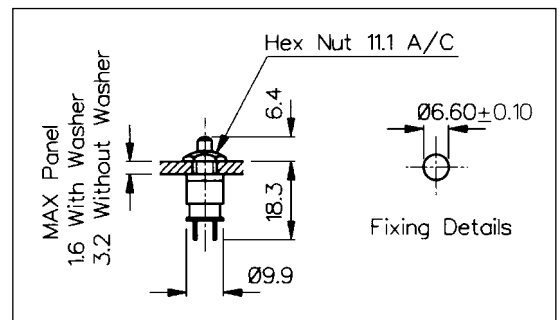
Fixing Details

REAR PANEL MOUNTING



MP0016

- S.P. Push to Make
- Solder Tags
- 1A, 28V a.c./d.c.
- Brass Nickel Plated Body, Glass Filled Nylon Button

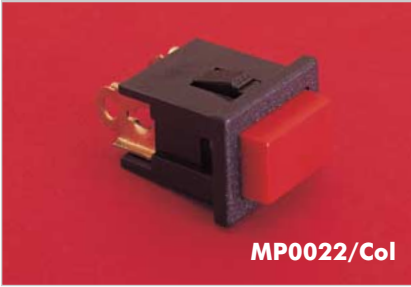


Fixing Details

| Specification | MP0012/Colour | MP0012/1/Colour | MP0016/Colour |
|---------------------------|---|---|---|
| Terminations: | Screw Terminals | Screw Terminals | Solder Tags |
| Switching: | S.P. Push to Make Slow Momentary Action | S.P. Push to Make Slow Momentary Action | S.P. Push to Make Slow Momentary Action |
| Max. Rating: | 0.25A. 250V a.c., 1A. 110V a.c., 2A. 12V a.c./d.c. | 0.25A. 250V a.c., 1A. 110V a.c., 2A. 12V a.c./d.c. | 1A 28V a.c./d.c. (non-inductive) |
| Contact Resistance: | <15mΩ | <15mΩ | <15mΩ |
| Insulation Resistance: | >10 ⁴ MΩ | >10 ⁴ MΩ. | >10 ⁴ MΩ |
| Dielectric Strength: | >2.5kV a.c. | >2.5kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +85°C | -20°C to +85°C | -20°C to +85°C |
| Operating Pressure (typ): | 936gms (33ozs) | 936gms (33ozs) | 634gms (22ozs) |
| Materials: | | | |
| Moulding: | Glass Filled Nylon | Glass Filled Nylon | Glass Filled Nylon |
| Body: | Brass, Chrome Plated | Brass, Chrome Plated | Brass, Chrome Plated |
| Contacts/Terms: | Brass, Silver Plated | Brass, Silver Plated | Brass, Silver Plated |
| Variants: | Button Colour: Standard - Black, /RD (Red) | Button Colour: Standard - Black, /RD (Red) | Button Colour: Standard - Black, /RD (Red) |
| RoHS | Compliant | Compliant | Compliant |

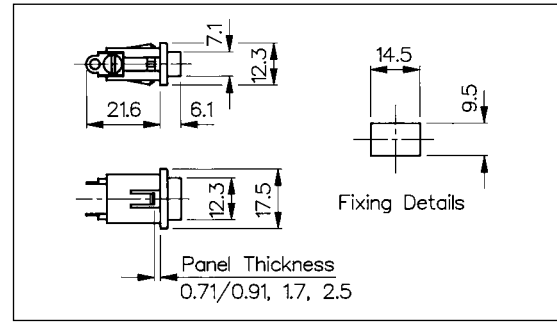
Push Button

FRONT PANEL MOUNTING



MP0022/Col

- S.P. Push to Make
- Solder Tags
- Nylon Body & Button

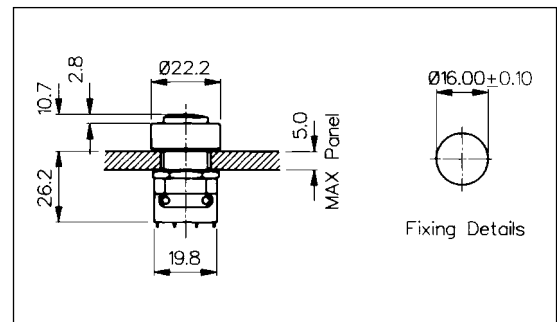


FRONT PANEL MOUNTING



SX0904/Col
(Sealed to IP66)

- Front Panel Sealed to IP66
- S.P.C.O. Microswitch
- Solder Tags
- 5A, 250V a.c.
- Black Anodised Aluminium Body
- Black, red or green Buttons



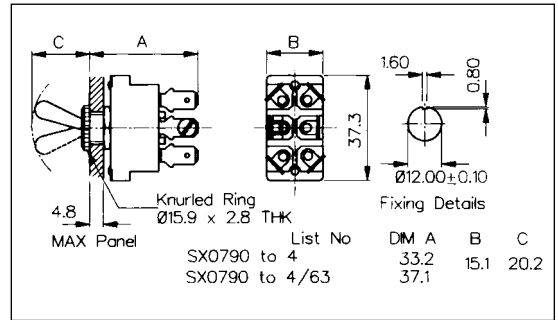
| Specification | MP0022/Colour | SX0904/Colour |
|------------------------|--|---|
| Terminations: | Solder Tags | Solder Tags |
| Switching: | S.P. Push to Make Slow Momentary Action | S.P.C.O. Momentary Action (Microswitch) |
| Max. Rating: | 0.25A. 250V a.c., 0.5A. 110V a.c., 1A. 0.1 to 28V a.c./d.c. | 5A. 250V a.c. |
| Contact Resistance: | <15mΩ | <10mΩ |
| Insulation Resistance: | >10 ⁴ MΩ | >10 ³ MΩ. |
| Dielectric Strength: | >2.5kV a.c. | >2.0kV a.c. |
| Operating Temp. Range: | -20°C to +70°C | -20°C to +70°C |
| Sealing: | | Protection Classification IP66 EN60529 1992 (Microswitch not sealed) |
| Materials: | | |
| Moulding: | Nylon | Glass Filled Nylon |
| Tags: | Brass, Silver Plated | Brass, Tin Plated |
| Body: | Nylon | Black anodised aluminium |
| Contacts/Terms: | Brass, Silver Plated | Fine Silver |
| Variants: | Button Colours: Standard - Black, /WH (White) and /RD (Red). /TERM - (Screw terminals) | Button Colours: Standard - Black, /RD (Red) and /GN (Green). |
| RoHS | Compliant | Compliant |




Toggle

SINGLE POLE



- 6.3mm tabs or Screw Terminals
- 10A, 250V a.c.



| Single Pole List No. | Description | 1  | 2  | 3  |
|----------------------|--|--|--|--|
| SX0790 | Change-over. Centre off | ON | OFF | ON |
| SX0791 | Change-over. Centre off One position biased off | ON | OFF | ON |
| SX0792 | Change-over. Centre off Two position biased off | ON | OFF | ON |
| SX0793 | Change-over Two positions only | ON | - | ON |
| SX0794 | ON/OFF Two positions only | OFF | - | ON |

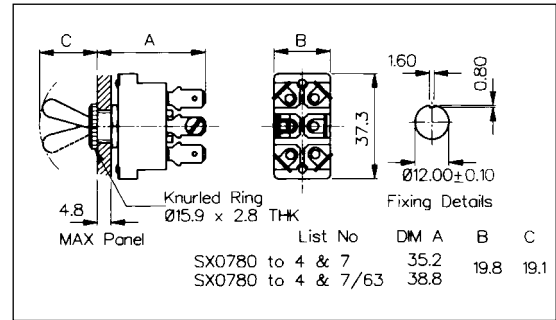
| Specification | SX0790 Series |
|------------------------|---|
| Terminations: | Screw Terminals |
| Switching: | See table for types Slow Make, Slow Break |
| Max. Rating: | 10A, 250V a.c. 10A, 0-28V d.c. (non-reactive circuits) |
| Contact Resistance: | <10mΩ |
| Insulation Resistance: | >10 ³ MΩ |
| Dielectric Strength: | >2.5kV a.c. |
| Operating Temp. Range: | -20°C to +85°C |
| Materials: | |
| Mouldings: | Glass Filled Polyester |
| Tags: | Brass, Silver Plated |
| Contacts: | Copper with Silver face |
| Variants: | /63 (6.3mm tabs) - (except SX0791) |
| Accessories: | SX0550 (see page 195) |
| RoHS | Compliant |

Toggle

DOUBLE POLE



- 6.3mm tabs or Screw Terminals
- 10A, 250V a.c.



| Double Pole List No. | Description | 1 | 2 | 3 |
|----------------------|---|-----|-----|----|
| SX0780 | Change-over. Centre off | ON | OFF | ON |
| SX0782 | Change-over. Centre off Two position biased off | ON | OFF | ON |
| SX0783 | Change-over Two positions only | ON | - | ON |
| SX0784 | ON/OFF Two positions only | OFF | - | ON |
| SX0787 | Change-over. Two positions only biased to one position | ON | - | ON |

| Specification | SX0780 Series |
|------------------------|---|
| Terminations: | Screw Terminals |
| Switching: | See table for types Slow Make, Slow Break |
| Max. Rating: | 10A, 250V a.c. 10A, 0-28V d.c. (non-reactive circuits) |
| Contact Resistance: | <10mΩ |
| Insulation Resistance: | >10 ³ MΩ |
| Dielectric Strength: | >2.5kV a.c. |
| Operating Temp. Range: | -20°C to +85°C |
| Materials: | |
| Mouldings: | Glass Filled Polyester |
| Tags: | Brass, Silver Plated |
| Contacts/Terms: | Copper with Silver face |
| Variants: | /63 (6.3mm tabs) |
| Accessories: | SX0550 (see page 195) |
| RoHS | Compliant |

PVC BOOT



- PVC Boot
- Water and Dust Resistant
- Glass Filled Nylon or Brass, Nickel Plated Insert
- For use with all BulginToggle Switches

SX0550

SILICON RUBBER BOOT



- Completely Covers Toggle
- Brass, Nickel Plated Insert

NX1030

SILICON RUBBER BOOT



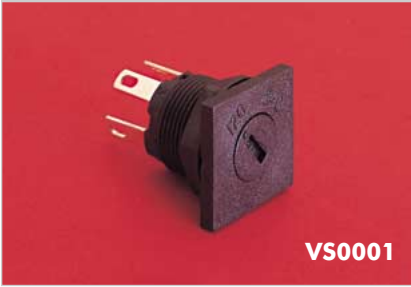
- Switch Toggle Protrudes
- Brass, Nickel Plated Insert

NX1030/B

| Specification | SX0550, SX0550/Brass | NX1030, NX1030/B |
|------------------------|---|---|
| | Water and dust resistant Black PVC cover for use with all Bulgin /PD switches | NX1030 Completely covers toggle NX1030/B Switch toggle protrudes |
| Thread: | 15/32" x 32 TPI. Whit Form, BS84 | 15/32" - 32NS - 2B |
| Operating Temperature: | 0°C to +60°C | -70° to +205°C |
| Materials: | | |
| Boot: | Black PVC | Silicone rubber |
| Inserts: | Glass Filled Nylon SX0550/BRASS: Brass, Nickel Plated | Brass, Nickel Plated |
| RoHS | Compliant | Compliant - 4th qtr 2005 |

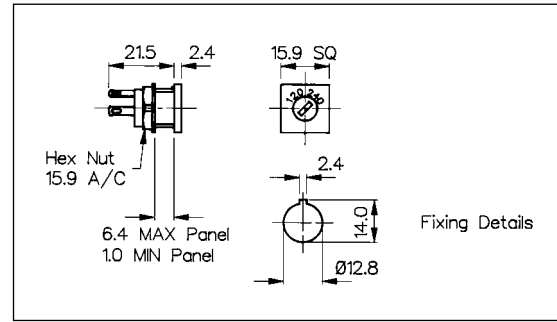
Voltage Selectors

120/240V VOLTAGE SELECTOR



VS0001

- 2.8 series tabs/solder tags
- Square Front Bezel
- 6.3A
- CSA, SEMKO & VDE approvals

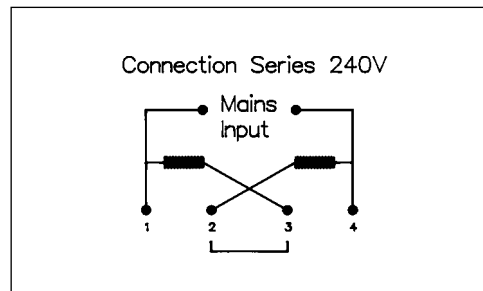
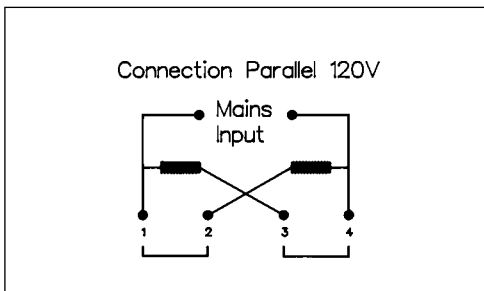
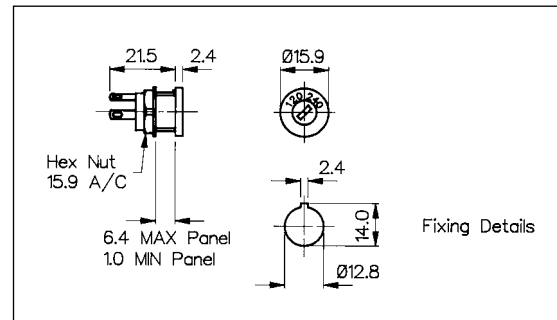


120/240V VOLTAGE SELECTOR



VS0002

- 2.8 series tabs/Solder tags
- Round Front Bezel
- 6.3A
- CSA, SEMKO & VDE approvals



| Specification | VS0001 | VS0002 |
|------------------------|------------------------------------|------------------------------------|
| Max. Rating: | 6.3A, 120/240V | 6.3A, 120/240V |
| Insulation Resistance: | >10 ⁶ MΩ | >10 ⁶ MΩ. |
| Termination: | 2.8 series tabs/solder tags | 2.8 series tabs/solder tags |
| Temperature Range: | -20°C to +85°C | -20°C to +85°C |
| Materials: | | |
| Mouldings: | Glass Filled Nylon UL94V-1 | Glass Filled Nylon UL94V-1 |
| Tags: | Brass, Silver Plated | Brass, Silver Plated |
| Contacts: | Copper Silver Alloy | Copper Silver Alloy |
| Approvals: | | |
| Variants: | Other markings, details on request | Other markings, details on request |
| RoHS | Compliant | Compliant |