Manufactured from durable stainless steel, Bulgin's vandal-resistant switches are engineered to withstand high resistance to wear and tear, corrosion, and harsh treatment. Ideal for potentially hostile environments such as public areas, industrial environments, and building management systems, these switches ensure long-lasting performance and security.

Built to endure extreme temperatures, dust, rain, snow, ice, dirt, and moisture, Bulgin's rugged anti-vandal switches are perfect for demanding applications subject to abuse and damage. Applications include kiosks, elevators, pedestrian crossings, and ticket machines.

Features:

- Front and rear panel mounted versions
- Vandal switches available in prominent, domed and low profile
- Various switching options such as latching,
- push on - push off, action.
- IP66, 68 front panel sealing options
- Dot and ring LED illuminated versions
- Illumination voltages 6, 12 and 24V sources,

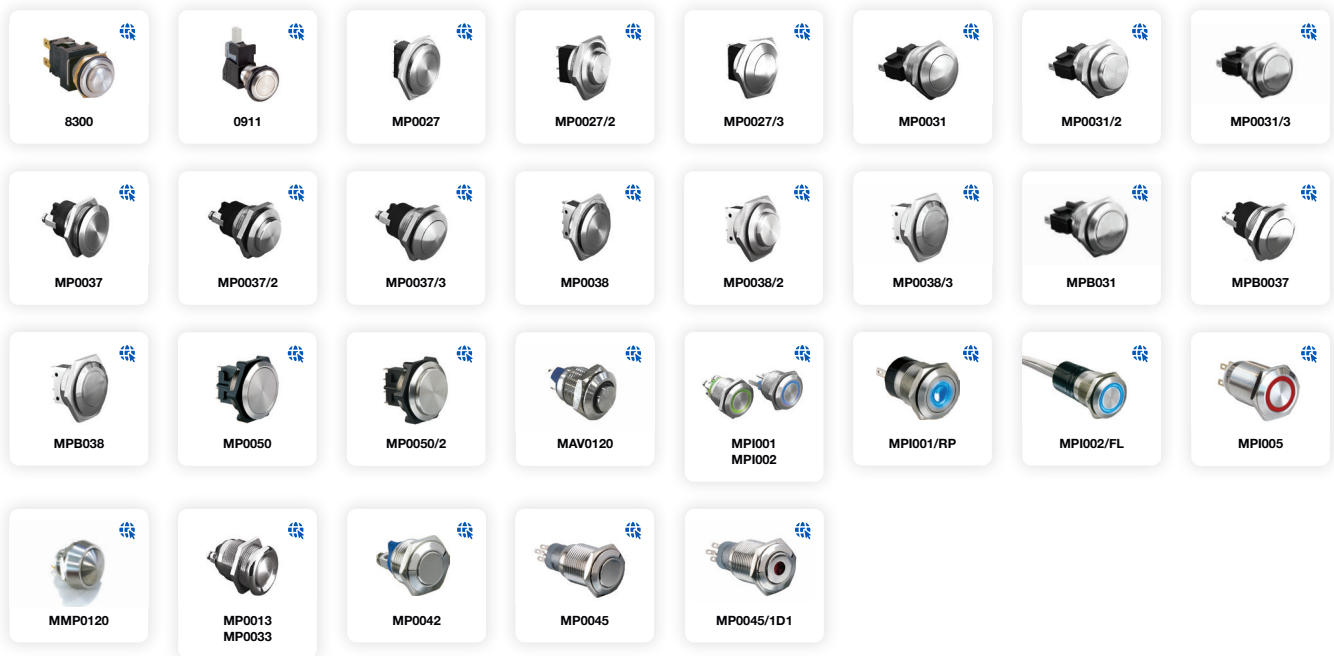Variety of illumination colours and are now available with front and rear of panel sealing options

Vandal Resistant Switches

Body Style & Part Number Information:

// Vandal Resistant Switches

○ **8300 Vandal Resistant Switches - R, V or P Actuators**
8300, 8301, 8350, 8351

○ **0911 Push Button Switches - V Actuator**
0911

○ **Stainless Steel Low Profile Vandal Resistant Push Button Switches**
MP0027, MP0031, MP0037, MP0038

○ **Stainless Steel Domed Vandal Resistant Push Button Switches**
MP0027/3, MP0031/3, MP0037/3, MP0038/3

○ **Brass Chrome Plated Low Profile Vandal Resistant Push Button Switches**
MPB031, MPB037, MPB038, MPB038/3

○ **27mm Panel Cutout Stainless Steel Large Diameter Vandal Resistant Push Button Switches**
MP0050, MP0050/2

○ **12mm Switches Miniature Stainless Steel Vandal Resistant Prominent Button / Flush Profile**
MAV0120, MAV0120/1, MAV0120/3

○ **Stainless Steel Illuminated Vandal Resistant Push Button Switches**
MPI001, MPI002

○ **Vandal Resistant Push Button Switch**
MPI005

○ **12mm Switches Miniature Domed Metal Vandal Resistant - None Illuminated - Metal Dome**
MMP0120, MMPI0120

○ **MP0013 Series 19mm Panel Cutout Push Button Switches**
MP0013, MP0013/2, MP0033, MP0033/2

○ **MP0042 Series Stainless Steel / Momentary Push Button Switch**
MP0042/1, MP0042/2, MP0042/3

○ **Stainless Steel - Momentary Push Button Switch**
MP0045/1D0NN000, MP0045/3D0NN000, MP0045/1E0NN000, MP0045/3E0NN000

○ **Stainless Steel Illuminated Momentary Push Button Switch**
MP0045/1D1, MP0045/1D2, MP0045/1E1, MP0045/1E2

// Vandal Resistant Switch Product Range:

8300	**0911**	**MP0027**	**MP0027/2**	**MP0027/3**	**MP0031**	**MP0031/2**	**MP0031/3**
MP0037	**MP0037/2**	**MP0037/3**	**MP0038**	**MP0038/2**	**MP0038/3**	**MPB031**	**MPB0037**
MPB038	**MP0050**	**MP0050/2**	**MAV0120**	**MPI001 MPI002**	**MPI001/RP**	**MPI002/FL**	**MPI005**
MMP0120	**MP0013 MP0033**	**MP0042**	**MP0045**	**MP0045/1D1**			

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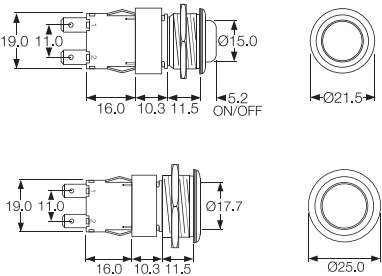an INFINIT⊖ brand

H8300RP - - -

Key Features

○ Momentary or latching action

○ Ratings up to 12(12) @ 250Vac

○ Single and double Contacts

○ Stainless steel button & bezel

○ Vandal resistant construction

○ Choice of body styles

○ 19.2mm or 22.5mm mounting holes

○ Front panel sealed to IP66
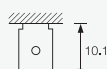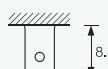
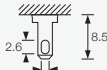○ Raised, flat or domed actuator options
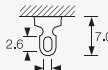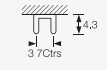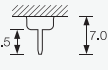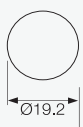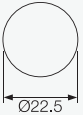
Approvals and specifications

12 A GP, 250 Vac, T85
13 A GP, 250 Vac, T85
1 hp, 250 Vac, T85, 6E3/1E4

12A 250Vac DP, 13A 250Vac SP
250Vac 1hp, 125Vac 1/2hp
UL 85°C, file E45221

In house test:
10(10)A 250Vac—Indicative rating only

3mm contact gap.

Dimensions

8300RP (H terminals shown)

19.0 11.0   Ø15.0
16.0 10.3 11.5   5.2 ON/OFF   Ø21.5

19.0 11.0   Ø17.7
16.0 10.3 11.5   Ø25.0

Terminal		Function	Actuator	Body Code
C 10.1	**H** 8.5	**8300** (alternate) Single Contact ON - OFF	**R** (for P body only) Raised top (stainless steel)	
K 2.6 / 1.5 / 8.5	**T** 2.6 / 1.5 / 7.0	**8301** (momentary ON) Single Contact ON - OFF		
V 4.3 / 3 7Ctrs	**X** 4.5 / 7.0	**8350** (alternate) Double Contact ON - OFF	**V** Flat top (stainless steel)	**P** (for R actuator only) Stainless steel, Soft profile bezel Ø19.2
		8351 (momentary ON) Double Contact ON - OFF		**M** Stainless steel Ø22.5

0911 Vandal Resistant Switches

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C0911VA - - -

Key Features

○ Snap action switches

○ Ratings up to 16A, 250Vac

○ Round and rectangular buttons

○ Single Contact C/O Switch
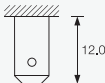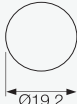
Approvals and specifications

Approvals apply to switch mechanism only. μ contact gap.

Dimensions

C0911VA

21.5

43.5

31.3

24.8   20.0

28.7

15.0

20.1

Terminal	Function	Actuator	Body Code
12.0	**0911** (momentary) ON - ON	**V** Flat top (stainless steel)	**A** Stainless steel Chamfer profile bezel Ø19.2 Panel cut-out Panel thickness up to 8.0mm

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Front Panel Mounting

- 28mm diameter
- S.P.C.O. Microswitch
- 5A, 250Vac

MP0027

37.0 A/C Ø27.8 1.6 25.2 4.0 Max. Panel. Ø25.80+0.10 Fixing Detail
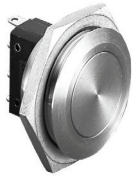
Front Panel Mounting

- Front Panel Sealed to IP66
- 28mm diameter
- S.P.C.O. Microswitch
- 5A, 250Vac
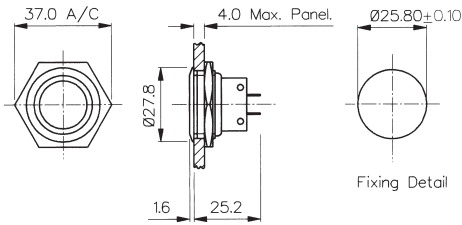
MP0038
Sealed to IP66

37.0 A/C Ø27.8 2.1/1.6 25.2 3.5 Max Panel Ø25.80+0.10 Fixing Detail
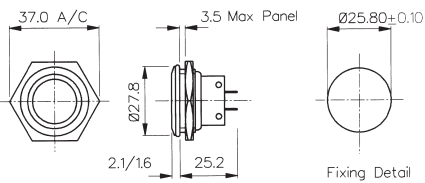
Specifications	MP0027	MP0038
Terminations:	Solder Tags	Solder Tags
Switching:	S.P.C.O. Momentary Action (Microswitch)	S.P.C.O. Momentary Action (Microswitch)
Max. Rating:	5A, 250Vac 2A, 28Vdc	5A, 250Vac 2A, 28Vdc
Contact Resistance:	<10mΩ	<10mΩ
Insulation Resistance:	>10³ MΩ	>10³ MΩ
Dielectric Strength:	>2.0kVac	>2.0kVac
Operating Temp. Range:	–20°C to +70°C	–20°C to +70°C
Sealing (Front of panel only):		Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
Operations Mechanical: Electrical:	1,000,000 (min) 35,000 (min)	1,000,000 (min) 35,000 (min)
Operating Pressure:	7.5N (typ)	12.5N (typ)
Rear Nut Fixing Torque:	2.5Nm	1.13Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Tin Plated Stainless Steel	Glass Filled Nylon Brass, Tin Plated Stainless Steel
Contacts:	Fine Silver	Fine Silver
Thread size:	1.0" x 26TPI	1.0" x 26TPI
RoHS	Compliant	Compliant

Stainless Steel Low Profile Vandal Resistant

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Front Panel Mounting

MP0037
Sealed to IP68

- Front Panel Sealed to IP68
- 21.5mm diameter
- S.P. Push to Make
- 1A, 50Vac/dc
- Industry Standard Size

1.6 26.8 Max
Hex Nut
25.7 A/C
Ø21.5
Ø19.20+0.10
4.0
Max Panel
Fixing Detail

Front Panel Mounting

MP0031
Sealed to IP66

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

1.6 Ø21.5
30.0
Hex Nut
25.7 A/C
7.1 MAX Panel
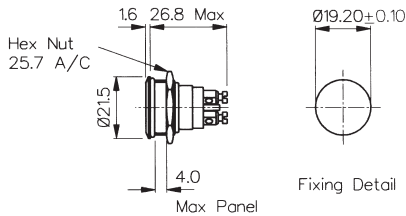Ø19.20+0.10
19.8
Fixing Details
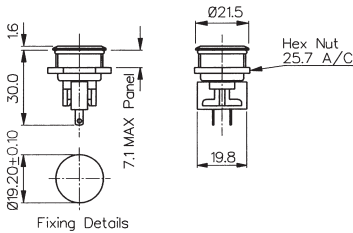
Specifications	MP0037	MP0031
Terminations:	Screw Terminals	Solder Tags
Switching:	S.P. Push to make Momentary action	S.P.C.O. Momentary Action (Microswitch)
Max. Rating:	1A, 50Vac/dc	5A, 250Vac 2A, 28Vdc
Contact Resistance:	<10mΩ	<10mΩ
Insulation Resistance:	>10^5 MΩ	>10^3 MΩ
Dielectric Strength:	>1.0kVac	>2.0kVac
Operating Temp. Range:	–20°C to +70°C	–20°C to +70°C
Sealing (Front of panel only):	Protection Classification: IP68 EN 60529:1992+A2:2013 (Micro switch not sealed)	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
IP68 rating 10M for 2 weeks test:	Passed	
Operations Mechanical: Electrical:	1,000,000 (min) 30,000 (min)	1,000,000 (min) 35,000 (min)
Operating Pressure:	10N (typ)	4.7N (typ)
Rear Nut Fixing Torque:	0.57Nm	0.57Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Silver Plated Stainless Steel	Glass Filled Nylon Brass, Tin Plated Stainless Steel
Contacts:	Brass, Silver Plated, Silver	Fine Silver
Thread size:	0.747" x 26TPI	0.747" x 26TPI
RoHS	Compliant	Compliant

Stainless Steel Illuminated Vandal Resistant

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Front Panel Mounting

MPI001- front panel seal to IP66

- Dot illumination
- 22mm diameter
- Single Contact push to make
- 50mA, 24Vdc contact rating
- Red, Green, Amber, Blue, White or dual colour illumination
- Bright daylight LEDs
- Independent LED terminals
- Front panel seal to IP66
- Integral supply resistors
- TVS protection
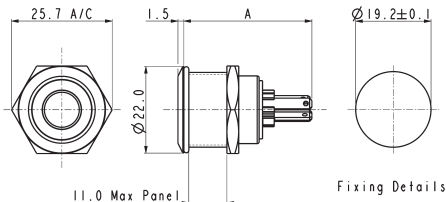

```
25.7 A/C        1.5        A         Ø19.2±0.1
                                     
                                     
                                     
Ø22.0                                Fixing Details
                                     
11.0 Max Panel
MPI001/TAG/COL A = 32.7
MPI001/TERM/COL A = 31.0 MAX.
```

Specifications   MPI001/Termination/Colour/Voltage

Illumination style:	Dot
Terminations:	/28 (2.8mm tabs),
	/TERM or /TE (screw terminals)
Switching:	Single Contact, push to make, tactile (momentary action)
Max. Switch Rating:	50mA, 24Vdc

LEDs (ratings @ 20mA)

Part No.	/RD	/GN	/AM	/BL	/WH	/D1	/D4	/D5
Colours	Red	Green	Amber	Blue	White	Red/Green	Red/Blue	Green/Blue
Luminous Intensity	900mcd	2500mcd	900mcd	1500mcd	900mcd	2500mcd/5000mcd	2000mcd/850mcd	4000mcd/2000mcd
Forward Voltage	1.85V	3.5V	2.3V	3.5V	3.6V	2.05V/3.6V	2.0V/3.6V	3.6V/3.6V
Forward Current	20mA	20mA	20mA	20mA	20mA	20mA	20mA	20mA
Moulding Colour	Red	Green	Amber	Blue	White	Black	Black	Black

Illumination Voltage:	/no suffix	No resistor fitted. An appropriate resistor must be series connected by the user. Voltages as above.
	/6	6Vdc
	/12	12Vdc
	/24	24Vdc
Contact Resistance:	<100mΩ	
Insulation Resistance:	>10³ MΩ	
Dielectric Strength:	Contact to Panel >2.0kV	
	Contact to Contact 1500	
Operating Temp. Range:	–30°C to +70°C	
Sealing (Front of panel only):	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)	
Operations		
Mechanical:	750,000 (min)	
Electrical:	35,000 (min)	
Operating Pressure:	12N	
Rear Nut Fixing Torque:	0.57Nm	
Screw Terminal Torque	0.2Nm Max	

Materials

Switch assembly:	UL94V-0 rated Polyamide (Nylon)
Tags:	Copper Alloy
Terminals:	Copper Alloy
Switch Body & Button:	Stainless Steel
Lens and Lens Body:	Polycarbonate
O ring:	Nitrile
Internal seal:	Silicone
Contact Plate:	Gold Plated
Thread size:	18.97mm x 26TPI

RoHS   Compliant

Dual Colour LED Configuration


```
/D1    +  ──►◄── Red / Green  ──  –
/D4    +  ──►◄── Red / Blue   ──  –
/D5    +  ──►◄── Green / Blue ──  –
```

Stainless Steel Illuminated Vandal Resistant

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Front Panel Mounting

MPI002- front panel seal to IP66

- ⬡ Ring illumination
- ⬡ 22mm diameter
- ⬡ Single Contact push to make
- ⬡ 50mA, 24Vdc contact rating
- ⬡ Red, Green, Amber, Blue, White or dual colour illumination
- ⬡ Bright daylight LEDs
- ⬡ Independent LED terminals
- ⬡ Front panel seal to IP66
- ⬡ Integral supply resistors
- ⬡ TVS protection

25.7 A/C   1.5   A   ∅19.2±0.1

∅22.0   11.0 Max Panel

Fixing Details

MPI002/TAG/COL A = 32.7
MPI002/TERM/COL A = 31.0 MAX.

Specifications	MPI002/Termination/Colour/Voltage

Illumination style:	Ring
Terminations:	/28 (2.8mm tabs),
	/TERM or /TE (screw terminals)
Switching:	Single Contact, push to make, tactile (momentary action)
Max. Switch Rating:	50mA, 24Vdc

LEDs (ratings @ 20mA)

Part No.	/RD	/GN	/AM	/BL	/WH	/D1	/D4	/D5	/D6
Colours	Red	Green	Amber	Blue	White	Red/Green	Red/Blue	Green/Blue	Green/White
Luminous Intensity	900mcd	2500mcd	900mcd	1500mcd	900mcd	2500mcd/5000mcd	2000mcd/850mcd	4000mcd/2000mcd	178mcd/450mcd
Forward Voltage	1.85V	3.5V	2.3V	3.5V	3.6V	2.05V/3.6V	2.0V/3.6V	3.6V/3.6V	3.4V/3.2V
Forward Current	20mA	20mA	20mA	20mA	20mA	20mA	20mA	20mA	20mA
Moulding Colour	Red	Green	Amber	Blue	White	Black	Black	Black	Black

Illumination Voltage:	/no suffix No resistor fitted. An appropriate resistor must be series connected by the user. Voltages as above.
	/6 6Vdc
	/12 12Vdc
	/24 24Vdc
Contact Resistance:	<100mΩ
Insulation Resistance:	>10³ MΩ
Dielectric Strength:	Contact to Panel >2.0kV
	Contact to Contact 1500
Operating Temp. Range:	−30°C to +70°C
Sealing (Front of panel only):	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
Operations	
Electrical:	35,000 (min)
Operating Pressure:	12N
Rear Nut Fixing Torque:	0.57Nm
Screw Terminal Torque	0.2Nm Max

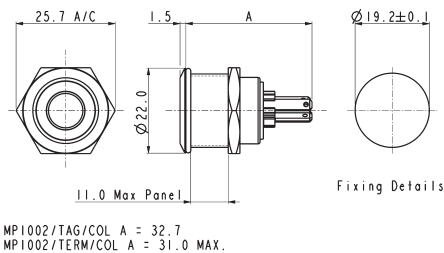| Materials	
Switch assembly:	UL94V-0 rated Polyamide (Nylon)
Tags:	Copper Alloy
Terminals:	Copper Alloy
Switch Body & Button:	Stainless Steel
Lens and Lens Body:	Polycarbonate
O ring:	Nitrile
Internal seal:	Silicone
Contact Plate:	Gold Plated
Thread size:	18.97mm x 26TPI

RoHS

Compliant

Dual Colour LED Configuration

/D1	+	Red / Green	–
/D4	+	Red / Blue	–
/D5	+	Green / Blue	–
/D6	+	Green / White	–

Stainless Steel Illuminated Vandal Resistant
Rear of panel IP66 seal

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Rear Panel Sealed - Flying Leads

- Dot or ring illumination
- 22mm diameter
- Single Contact push to make
- 50mA, 24Vdc contact rating
- Red, Green, Amber, Blue, White or dual colour illumination
- Bright daylight LEDs
- Independent LED terminals
- Front and rear panel seal to IP66
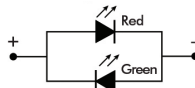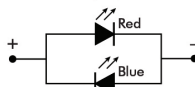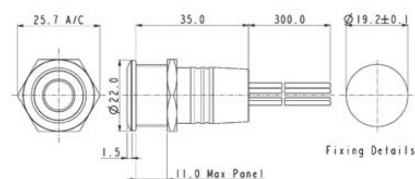- Integral supply resistors
- TVS protection

MPI002/FL/xx/x

Flying lead colours: LED: red + and black –. Switch contacts: white.

Rear Panel Sealed - Solder Tags

- Dot or ring illumination
- 22mm diameter
- Single Contact push to make
- 50mA, 24Vdc contact rating
- Red, Green, Amber, Blue & White illumination
- Bright daylight LEDs
- Independent LED terminals
- Front and rear panel seal to IP66
- Solder tag termination
- TVS protection

MPI001/RP/xx/x
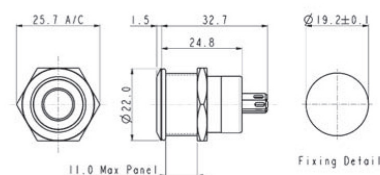
LED terminals marked + and –. Switch terminals unmarked.

Specifications	MPI001/Termination/Colour/Voltage					MPI002/Termination/Colour/Voltage				
Illumination style:	Dot					Ring				
Terminations:	/FL (Flying leads)					/FL (Flying leads)				
	/RP (Solder tags)					/RP (Solder tags)				
Switching:	Single Contact, push to make, tactile (momentary action)					Single Contact, push to make, tactile (momentary action)				
Max. Switch Rating:	50mA, 24Vdc					50mA, 24Vdc				
LEDs (ratings @ 20mA)										
Part No.	/RD	/GN	/AM	/BL	/WH	/RD	/GN	/AM	/BL	/WH
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
Forward Current	20mA	20mA	20mA	20mA	20mA	20mA	20mA	20mA	20mA	20mA
Moulding Colour	Red	Green	Amber	Blue	White	Red	Green	Amber	Blue	White

Illumination Voltage:	/no suffix No resistor fitted. An appropriate resistor must be series connected by the user. Voltages as above.	/no suffix No resistor fitted. An appropriate resistor must be series connected by the user. Voltages as above.
	/6 6Vdc	/6 6Vdc
	/12 12Vdc	/12 12Vdc
	/24 24Vdc	/24 24Vdc
Contact Resistance:	<100mΩ	<100mΩ
Insulation Resistance:	>10³ MΩ	>10³ MΩ
Dielectric Strength:	Contact to Panel >2.0kV	Contact to Panel >2.0kV
	Contact to Contact 1500	Contact to Contact 1500
Operating Temp. Range:	–30°C to +70°C	–30°C to +70°C
Sealing (Front of panel only):	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
Operations		
Mechanical:	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
Thread size:	18.97mm x 26TPI	18.97mm x 26TPI
RoHS	Compliant	Compliant

19mm Stainless Steel Illuminated Vandal Resistant

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Low Profile

MPI005

○ 22mm bezel diameter
○ 19.2mm ± 0.2mm fixing hole diameter
○ S.P.C.O

Ø9   11 Max.   Ø19±0.2
25.4   Ø22   M19×1
Ø15.4   2   L   Fixing Details
L₁ Momentary is 33.5
Latching is 39.5
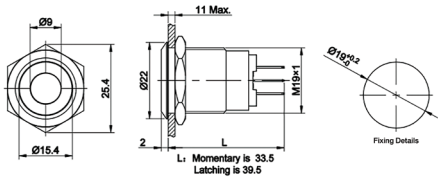
1, 2 are normally closed (NC)
3, 4 are normally opened (NO)
+, - are lamp terminals, the standard
LED terminals have no difference
of anode and cathode;.
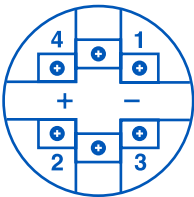
Screw Layout
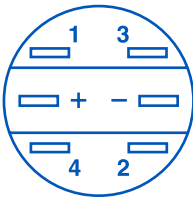
Plug Layout

Specifications	MPI005/Actuator/Terminal/Function/Material/Colour/Voltage
Terminations:	Plug Terminal or Screw Terminal
Switching:	S.P.C.O Momentary Action and Latching
Sealing:	IP65 (Momentary variants can be made to IP67 upon request)
Max. Rating:	5A @ 12VDC or 24 VDC 5A @ 125VAC 3A @ 250 VAC
Contact Resistance:	50mΩ max. @ 1A, 2V
Insulation Resistance:	>1000 MΩ @ 500Vdc
Dielectric Strength:	> 2.0kVac
Operating Temp. Range:	-25°C to +55°C
Operations Mechanical: Electrical:	1,000,000 (min) 50,000 (min)
Rear Nut Fixing Torque:	0.8Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Polycarbonate Brass, Gold Plated Stainless Steel / Aluminium Alloy
Contacts:	Silver
RoHS	Compliant

| MPI | / | 005 | / | X | / | X | / | X | / | X | / | X | / | X |

Series	Type	Actuator Type	Terminal	Switching Type	Material	Illumination	Voltage
19mm Metal **Push Button**	19mm Illuminated AV Switch	**D** = Dot Illumination **R** = Ring **P** = Illuminated Power **O** = Power Symbol / Ring	**28** = 2.8mm Plug Terminal **TE** = Screw Terminal	**M** = Momentary **L** = Latching	**S** = Stainless Steel **A** = Black Anodized Aluminum	**BL** **GN** **RD** **AM** **WH** **Others on request**	**12** = 12VAC Others Available on request

Examples:

MPI005/D/28/L/S/BL/12 = 19mm Metal Push Button, Dot Illumination, 2.8mm Plug Terminal, Latching, Stainless Steel, Blue, 12 Volt

Note:

Power Symbol / Ring not available in black anodized aluminum
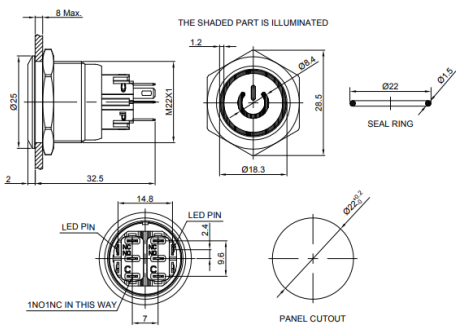
MP22 Illuminated Vandal Resistant Switch

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Power Symbol Illuminated vandal resistant switch

- Available in Red, Green, Blue, Yellow, White
- LED voltages available: 6v, 12v, 24v,110v, 220v
- Available in Stainless steel or Black coated Aluminium
- IP65
- SPDT and DPDT options available
- Can support Latching or Momentary action

MP22XXPINRXXXXXX

Power Symbol Illumination								
Series	Contact Structure	Operation	Illumination	Common Pin	LED Colour	LED Voltage	Shell Material	IP Rating
M22	S - SPDT	L - Latching	RI - Ring Illumination	NR - Not applicable	R - Red	006 - 6V	S - Stainless steel	5 - IP65
	D - DPDT	M - Momentary			G - Green	012 - 12V	A - Black Aluminium	
					Y - Yellow	024 - 24V		
					B - Blue	110 - 110V		
					W - White	220 - 220V		

Ring Illuminated vandal resistant switch

- Available in Red, Green, Blue, Yellow, White
- LED voltages available: 6v, 12v, 24v,110v, 220v
- Available in Stainless steel or Black coated Aluminium
- IP65
- SPDT and DPDT options available
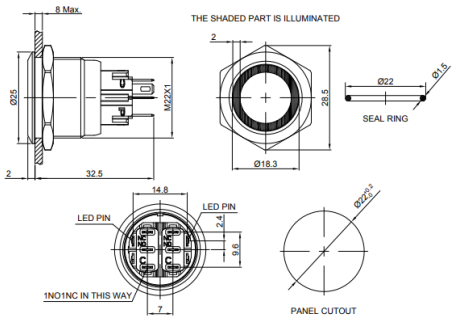- Can support Latching or Momentary action

MP22XXRINRXXXXXX

Ring Illuminated								
Series	Contact Structure	Operation	Illumination	Common Pin	LED Colour	LED Voltage	Shell Material	IP Rating
M22	S - SPDT	L - Latching	RI - Ring Illumination	NR - Not applicable	R - Red	006 - 6V	S - Stainless steel	5 - IP65
	D - DPDT	M - Momentary			G - Green	012 - 12V	A - Black Aluminium	
					Y - Yellow	024 - 24V		
					B - Blue	110 - 110V		
					W - White	220 - 220V		

MP22 Non lluminated Vandal Resistant Switch

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Non Illuminated vandal resistant switch

- SPDT and DPDT options available
- Available in Stainless steel or Black coated Aluminium
- IP65
- Can support Latching or Momentary action

MP22XXNINRN000XX
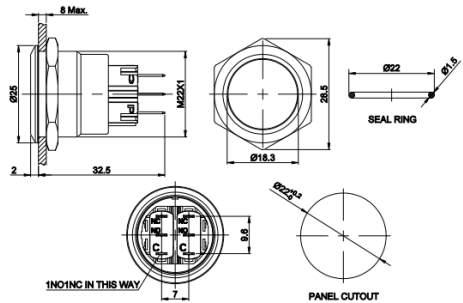
Not Illuminated

Series	Contact Structure	Operation	Illumination	Common Pin	LED Colour	LED Voltage	Shell Material	IP Rating
M22	S - SPDT	L - Latching	NI - Not Illumination	NR - Not applicable	N - No LED	000 - No Resistor	S - Stainless steel	5 - IP65
	D - DPDT	M - Momentary					A - Black Aluminium	

General Specifications

Electrical	
Switch Rating	Ui: 250V, Ith: 5A
Electrical Life	≥50,000 cycles
Initial Contact Resistance	≤50mΩ
Insulation Resistance	≥100MΩ(500VDC)
Power-Frequency Withstand Voltage	1,500V, RMS 50Hz, 1min
Terminal Type	Pin terminal (2.8X0.5mm)

Mechanical	
Mechanical Life	Momentary: ≥1,000,000 cycles, ≥Latching: 500,000 cycles
Torque	About 1.0N·m applied to nut
Operating Force	About 3N(1NO1NC), About 4N(2NO2NC)
Operating Travel	About 3mm
Front Panel IP Protection	IP65
IK Rating	IK09
Operating Temperature	-25°C~+55°C
Panel Mount Cutout	22mm
Max Panel Thickness	8mm

Materials	
Rohs Compliance	Yes
Contact Material	Silver Alloy
Button Material	Stainless Steel/PC
Body Material	Stainless Steel
Base Material	PA

Low Profile Brass Chrome Plated Vandal Resistant

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Front Panel Mounting

○ Front Panel Sealed to IP66
○ 28mm diameter
○ S.P.C.O. Microswitch
○ 5A, 250Vac

MPB038
Sealed to IP66

37.0 A/C   4.0 Max. Panel.   Ø25.80±0.10

Ø27.8

1.6   25.2

Fixing Detail
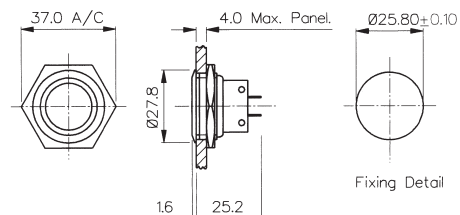
Front Panel Mounting

○ Front Panel Sealed to IP66
○ 21mm diameter
○ S.P.C.O. Microswitch
○ 5A, 250Vac

MPB031
Sealed to IP66

Ø21.5
Hex Nut 25.7 A/C

1.6
30.0
7.1 MAX Panel
Ø19.20±0.10
19.8

Fixing Details

Front Panel Mounting

○ Front Panel Sealed to IP68
○ 21.5mm diameter
○ S.P. Push to Make
○ 1A, 50Vac/dc
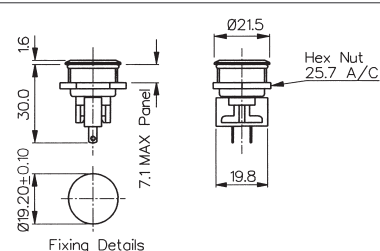
MPB037
Sealed to IP68

1.6 26.8 Max   Ø19.20±0.10
Hex Nut 25.7 A/C
Ø21.5
4.0
Max Panel   Fixing Detail
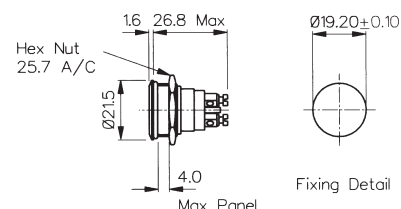
Specifications	MPB038	MPB031	MPB037
Terminations:	Solder Tags	Solder Tags	Screw Terminals
Switching:	S.P.C.O. Momentary Action (Microswitch)	S.P.C.O. Momentary Action (Microswitch)	S.P. Push to make Momentary action
Max. Rating:	5A, 250Vac. 2A, 28Vdc	5A, 250Vac. 2A, 28Vdc	1A, 50Vac/dc
Contact Resistance:	<10mΩ	<10mΩ	<10mΩ
Insulation Resistance:	>10^3 MΩ	>10^3 MΩ	>10^5 MΩ
Dielectric Strength:	>2.0kVac	>2.0kVac	>1.0kVac
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 EN60529-1:1992 + A2:2013. (Micro switch not sealed)	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)	Protection Classification: IP68 EN60529-1:1992 + A2:2013. (Micro switch not sealed) (10m for 2 weeks)
Operations Mechanical: Electrical:	1,000,000 (min) 35,000 (min)	1,000,000 (min) 35,000 (min)	1,000,000 (min) 30,000 (min)
Operating Pressure:	12.5N (typ)	4.7N (typ)	7.5N (typ)
Rear Nut Fixing Torque:	1.13Nm	0.57Nm	0.57Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Tin Plated Brass	Glass Filled Nylon Brass, Tin Plated Brass	Glass Filled Nylon Brass, Tin Plated Brass
Contacts:	Fine Silver	Fine Silver	Brass, Silver Plated, Silver
Thread size:	1.0" x 26TPI	0.747" x 26TPI	0.747" x 26TPI
RoHS	Compliant	Compliant	Compliant

Stainless Steel Large Diameter Vandal Resistant

Front Panel Mounting - Low Profile

MP0050

- Front Panel Sealed to IP68
- Flush button
- 32.0mm diameter
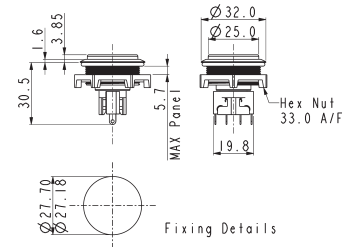- S.P.C.O. switching
- Momentary action
- 5A, 250Vac
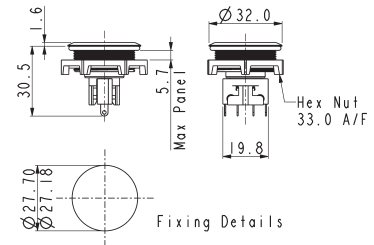
Front Panel Mounting - Protruding Profile

MP0050/2

- Front Panel Sealed to IP68
- Protruding button
- 32.0mm diameter
- S.P.C.O. switching
- Momentary action
- 5A, 250Vac

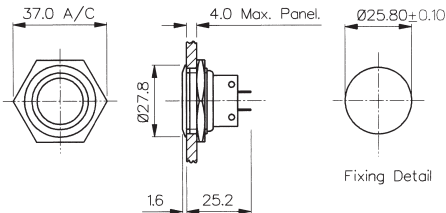| Specifications	MP0050	MP0050/2
Terminations:	Solder Tags	Solder Tags
Switching:	S.P.C.O. Momentary Action (Microswitch)	S.P.C.O. Momentary Action (Microswitch)
Max. Rating:	5A, 250Vac. 2A, 28Vdc	5A, 250Vac. 2A, 28Vdc
Contact Resistance:	<10mΩ	<10mΩ
Insulation Resistance:	>10³ MΩ	>10³ MΩ
Dielectric Strength:	>2.0kVac	>2.0kVac
Operating Temp. Range:	–20°C to +70°C	–20°C to +70°C
Sealing (Front of panel only):	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
Operations Mechanical: Electrical:	1,000,000 (min) 35,000 (min)	1,000,000 (min) 35,000 (min)
Operating Pressure:	4.7Nm	4.7N (typ)
Rear Nut Fixing Torque:	0.57Nm	0.57Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Tin Plated Stainless Steel	Glass Filled Nylon Brass, Tin Plated Stainless Steel
Contacts:	Fine Silver	Fine Silver
Thread size:	M27 x 1.0-6H	M27 x 1.0-6H
RoHS	Compliant	Compliant

Stainless Steel Domed Vandal Resistant

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Front Panel Mounting

MP0027/3

○ 28mm diameter
○ Domed Profile
○ S.P.C.O. Microswitch
○ 5A, 250Vac

37.0 A/C   4.0 Max. Panel.   Ø25.80±0.10
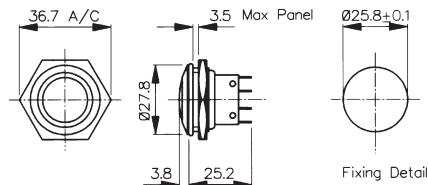
Ø27.8

1.6   25.2

Fixing Detail

Front Panel Mounting

MP0038/3
Sealed to IP66

○ Front Panel Sealed to IP66
○ 28mm diameter
○ Domed Profile
○ S.P.C.O. Microswitch
○ 5A, 250Vac

36.7 A/C   3.5 Max Panel   Ø25.8±0.1

Ø27.8

3.8   25.2

Fixing Detail

Specifications	MP0027/3	MP0038/3
Terminations:	Solder Tags	Solder Tags
Switching:	S.P.C.O. Momentary Action (Microswitch)	S.P.C.O. Momentary Action (Microswitch)
Max. Rating:	5A, 250Vac. 2A, 28Vdc	5A, 250Vac. 2A, 28Vdc
Contact Resistance:	<10mΩ	<10mΩ
Insulation Resistance:	>10³ MΩ	>10³ MΩ
Dielectric Strength:	>2.0kVac	>2.0kVac
Operating Temp. Range:	–20°C to +70°C	–20°C to +70°C
Sealing (Front of panel only):		Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
Operations Mechanical: Electrical:	1,000,000 (min) 35,000 (min)	1,000,000 (min) 35,000 (min)
Operating Pressure:	7.5N (typ)	12.5N (typ)
Rear Nut Fixing Torque:	2.5Nm	1.13Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Tin Plated Stainless Steel	Glass Filled Nylon Brass, Tin Plated Stainless Steel
Contacts:	Fine Silver	Fine Silver
Thread size:	1.0" x 26TPI	0.747" x 26TPI
RoHS	Compliant	Compliant

Stainless Steel Domed Vandal Resistant

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Front Panel Mounting

MP0037/3
Sealed to IP68

⬡ Front Panel Sealed to IP68
⬡ 21.5mm diameter
⬡ Domed Profile
⬡ S.P. Push to Make
⬡ 1A, 50Vac/dc

Hex Nut 25.7 A/C
3.6 28.0 Ø19.20±0.10
Ø21.5
4.0 Max Panel
Fixing Detail

Front Panel Mounting

MP0031/3
Sealed to IP66

⬡ Front Panel Sealed to IP66
⬡ 21.5mm diameter
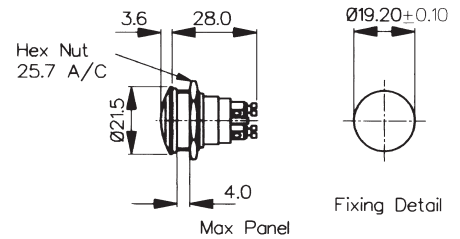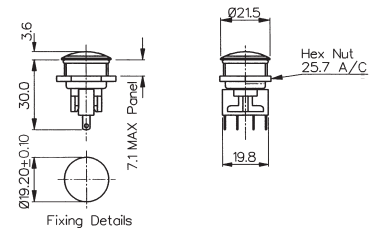⬡ Domed Profile
⬡ S.P.C.O. Microswitch
⬡ 5A, 250Vac

3.6 Ø21.5 Hex Nut 25.7 A/C
30.0 7.1 MAX Panel
Ø19.20±0.10 19.8
Fixing Details

Specifications	MP0037/3	MP0031/3
Terminations:	Screw Terminals	Solder Tags
Switching:	S.P. Push to make Momentary action	S.P.C.O. Momentary Action (Microswitch)
Max. Rating:	1A, 50Vac/dc	5A, 250Vac. 2A, 28Vdc
Contact Resistance:	<10mΩ	<10mΩ
Insulation Resistance:	>10^5 MΩ	>10^3 MΩ
Dielectric Strength:	>1.0kVac	>2.0kVac
Operating Temp. Range:	−20°C to +70°C	−20°C to +70°C
Sealing (Front of panel only):	Protection Classification: IP68 EN60529-1:1992 + A2:2013. (Micro switch not sealed) (10m for 2 weeks)	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
Operations Mechanical: Electrical:	1,000,000 (min) 35,000 (min)	1,000,000 (min) 35,000 (min)
Operating Pressure:	7.5N (typ)	4.7N (typ)
Rear Nut Fixing Torque:	2.5Nm	0.57Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Tin Plated Stainless Steel	Glass Filled Nylon Brass, Tin Plated Stainless Steel
Contacts:	Brass, Silver Plated, Silver	Fine Silver
Thread size:	0.747" x 26TPI	0.747" x 26TPI
RoHS	Compliant	Compliant

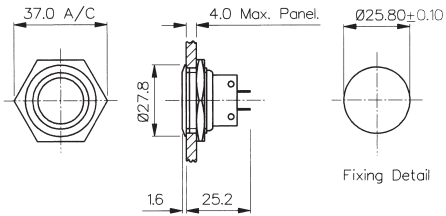# Stainless Steel Prominent Button Vandal Resistant

Front Panel Mounting

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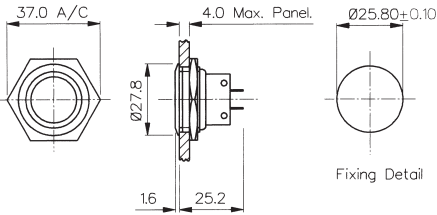- Prominent Button
- S.P.C.O. Microswitch
- 5A, 250Vac

MP0027/2

37.0 A/C · 4.0 Max. Panel. · Ø25.80±0.10 · Ø27.8 · 1.6 · 25.2 · Fixing Detail

Front Panel Mounting

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

MP0038/2
Sealed to IP66

37.0 A/C · 4.0 Max. Panel. · Ø25.80±0.10 · Ø27.8 · 1.6 · 25.2 · Fixing Detail

Specifications	MP0027/2	MP0038/2
Terminations:	Solder Tags	Solder Tags
Switching:	S.P.C.O. Momentary Action (Microswitch)	S.P.C.O. Momentary Action (Microswitch)
Max. Rating:	5A, 250Vac 2A, 28Vdc	5A, 250Vac. 2A, 28Vdc
Contact Resistance:	<10mΩ	<10mΩ
Insulation Resistance:	>10³ MΩ	>10³ MΩ
Dielectric Strength:	>2.0kVac	>2.0kVac
Operating Temp. Range:	−20°C to +70°C	−20°C to +70°C
Sealing (Front of panel only):		Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
Operations Mechanical: Electrical:	1,000,000 (min) 35,000 (min)	1,000,000 (min) 35,000 (min)
Operating Pressure:	7.5N (typ)	12.5N (typ)
Rear Nut Fixing Torque:	2.5Nm	1.13Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Tin Plated Stainless Steel	Glass Filled Nylon Brass, Tin Plated Stainless Steel
Contacts:	Fine Silver	Fine Silver
Thread size:	1.0" x 26TPI	1.0" x 26TPI
RoHS	Compliant	Compliant

Front Panel Mounting

MP0037/2
Sealed to IP68

- Front Panel Sealed to IP68
- 21.5mm diameter
- Prominent Button
- S.P. Push to Make
- 1A, 50Vac/dc

3.8   28.0 Max   Ø19.20±0.10
Ø21.5
4.0 Max Panel
Hex Nut 25.7 A/C
Fixing Detail

Front Panel Mounting

MP0031/2
Sealed to IP66

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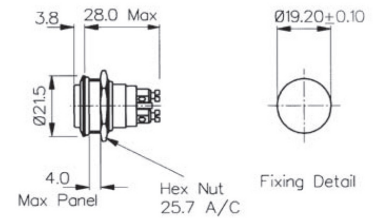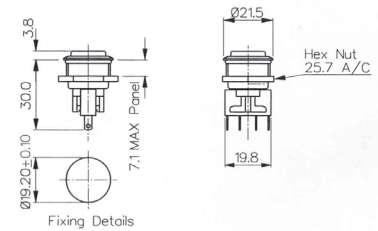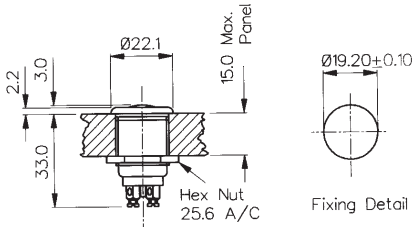- Prominent Button
- S.P.C.O. Microswitch
- 5A, 250Vac

3.8   Ø21.5
30.0   Hex Nut 25.7 A/C
Ø19.20±0.10   7.1 MAX Panel
19.8
Fixing Details

Specifications	MP0037/2	MP0031/2
Terminations:	Screw Terminals	Solder Tags
Switching:	S.P. Push to make Slow momentary action	S.P.C.O. Momentary Action (Microswitch)
Max. Rating:	1A, 50Vac/dc	5A, 250Vac. 2A, 28Vdc
Contact Resistance:	<10mΩ	<10mΩ
Insulation Resistance:	>10^5 MΩ	>10^3 MΩ
Dielectric Strength:	>1.0kVac	>2.0kVac
Operating Temp. Range:	–20°C to +70°C	–20°C to +70°C
Sealing (Front of panel only):	Protection Classification: IP68 EN60529-1:1992 + A2:2013. (Micro switch not sealed) (10m for 2 weeks)	Protection Classification: IP66 EN60529-1:1992 + A2:2013. (Micro switch not sealed)
Operations Mechanical: Electrical:	1,000,000 (min) 35,000 (min)	1,000,000 (min) 35,000 (min)
Operating Pressure:	7.5N (typ)	4.7N (typ)
Rear Nut Fixing Torque:	0.57Nm	0.57Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Tin Plated Stainless Steel	Glass Filled Nylon Brass, Tin Plated Stainless Steel
Contacts:	Brass, Silver Plated, Silver	Fine Silver
Thread size:	0.747" x 26TPI	0.747" x 26TPI
RoHS	Compliant	Compliant

Front Panel Mounting

MP0013
MP0033

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

Ø22.1
2.2
3.0
33.0
15.0 Max. Panel
Hex Nut 25.6 A/C
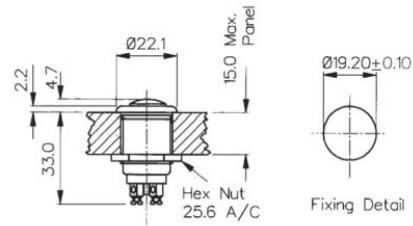Ø19.20+0.10
Fixing Detail

Front Panel Mounting

MP0013/2
MP0033/2

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

Ø22.1
2.2
4.7
33.0
15.0 Max. Panel
Hex Nut 25.6 A/C
Ø19.20+0.10
Fixing Detail

Specifications	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, 50Vac/dc	1A, 50Vac/dc
Contact Resistance:	<15mΩ	<15mΩ
Insulation Resistance:	>10^4 MΩ	>10^4 MΩ
Dielectric Strength:	>2.5kVac	>2.5kVac
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. (IP68 Internal Testing)	MP0033/2 only - internally sealed against ingress of water and dust. (IP68 Internal Testing)
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Glass Filled Nylon Brass, Silver Plated Body: Brass, Chrome Plated Button: Stainless Steel	Glass Filled Nylon Brass, Silver Plated Body: Brass, Chrome Plated Button: Stainless Steel
Contacts:	Copper, Silver Plated	Copper, Silver Plated
Thread Size:	0.747" x 26TPI	0.747" x 26TPI
RoHS	Compliant	Compliant

Stainless Steel - Momentary

Flush Profile

○ 18mm bezel diameter
○ 16mm panel hole
○ S.P. Push to make
○ Polished finish
○ 2A, 36Vdc
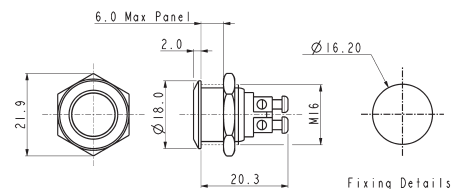
MP0042/1

Domed Profile

○ 18mm bezel diameter
○ 16mm panel hole
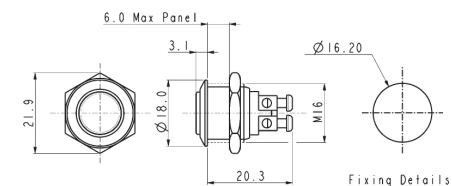○ S.P. Push to make
○ Polished finish
○ 2A, 36Vdc

MP0042/2

Prominent Button

○ 18mm bezel diameter
○ 16mm panel hole
○ S.P. Push to make
○ Polished finish
○ 2A, 36Vdc

MP0042/3

Specifications	MP0042/1	MP0042/2	MP0042/3
Terminations:	Screw Terminals	Screw Terminals	Screw Terminals
Switching:	S.P. Push to make	S.P. Push to make	S.P. Push to make
Max. Rating:	2A, 36Vdc	2A, 36Vdc	2A, 36Vdc
Contact Resistance:	50mΩ at 1A, 2V	50mΩ at 1A, 2V	50mΩ at 1A, 2V
Insulation Resistance:	>10³ MΩ @ 500Vdc	>10³ MΩ @ 500Vdc	>10³ MΩ @ 500Vdc
Dielectric Strength:	>2.0kVac	>2.0kVac	>2.0kVac
Operating Temp. Range:	−20°C to +55°C	−20°C to +55°C	−20°C to +55°C
Operations Mechanical:	1,000,000 (min)	1,000,000 (min)	1,000,000 (min)
Electrical:	100,000 (min)	100,000 (min)	100,000 (min)
Rear Nut Fixing Torque:	12Nm	12Nm	12Nm
Materials Mouldings:	Nylon	Nylon	Nylon
Tags/Terminations:	Brass, Silver Plated	Brass, Silver Plated	Brass, Silver Plated
Switch Body & Button:	Stainless Steel (Polished)	Stainless Steel (Polished)	Stainless Steel (Polished)
Contacts:	Silver	Silver	Silver
Thread size:	Gold Plated Brass version available	Gold Plated Brass version available	Gold Plated Brass version available
Sealing:	IP65	IP65	IP65
Impact Rating:	IK08	IK08	IK08
RoHS	Compliant	Compliant	Compliant

Stainless Steel - Momentary

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Low Profile

○ 18mm bezel diameter
○ 16mm fixing hole diameter
○ D.P.C.O
○ 1A, 110Vac & 0.5A, 220Vac
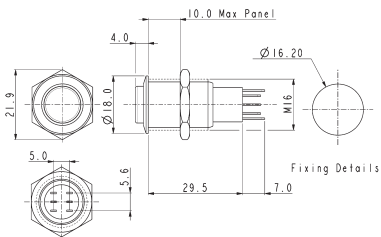○ 1A, 12Vdc & 1A, 24Vdc
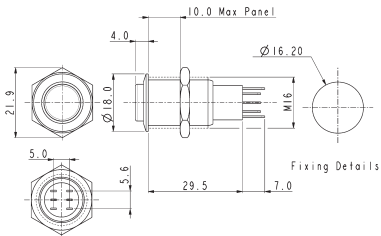
MP0045/1D

Prominent Button

○ 18mm bezel diameter
○ 16mm fixing hole diameter
○ D.P.C.O
○ 1A, 110Vac & 0.5A, 220Vac
○ 1A, 12Vdc & 1A, 24Vdc

MP0045/3D

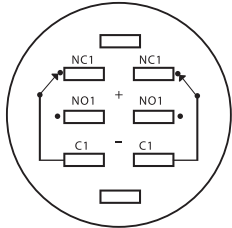| Specifications	MP0045/1D0NN000/Sealing	MP0045/3D0NN000/Sealing
Terminations:	Solder tags	Solder tags
Switching:	D.P.C.O Momentary Action	D.P.C.O Momentary Action
Sealing: Part No.	IP67　IP40 /S　　BLANK	IP67　IP40 /S　　BLANK
Max. Rating:	1A, 110Vac & 0.5A, 220Vac 1A, 12Vdc & 1A, 24Vdc	1A, 110Vac & 0.5A, 220Vac 1A, 12Vdc & 1A, 24Vdc
Contact Resistance:	50mΩ max. @ 1A, 2V	50mΩ max. @ 1A, 2V
Insulation Resistance:	>10^3 MΩ @ 500Vdc	>10^3 MΩ @ 500Vdc
Dielectric Strength:	> 2.0kVac	> 2.0kVac
Operating Temp. Range:	−20°C to +55°C	−20°C to +55°C
Operations Mechanical: Electrical:	200,000 (min) 30,000 (min)	200,000 (min) 30,000 (min)
Rear Nut Fixing Torque:	12Nm	12Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Nylon Brass, Silver Plated Stainless Steel	Nylon Brass, Silver Plated Stainless Steel
Contacts:	Silver	Silver
Variants:	Nickel Plated Brass version available Details on request	Nickel Plated Brass version available Details on request
RoHS	Compliant	Compliant

Contact Layout

Soldering Instructions:
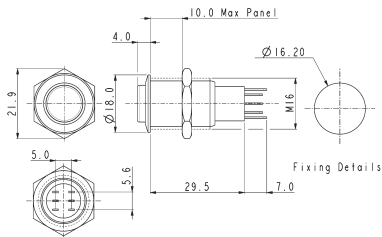
○ Soldering time less than 3 seconds
○ Do not push on the terminals
○ Recommended cuspidal soldering iron. Temperature around 280°C

Stainless Steel - Latching

Low Profile

- 18mm bezel diameter
- 16mm fixing hole diameter
- D.P.C.O.
- 1A, 110Vac & 0.5A, 220Vac
- 1A, 12Vdc & 1A, 24Vdc

MP0045/1E

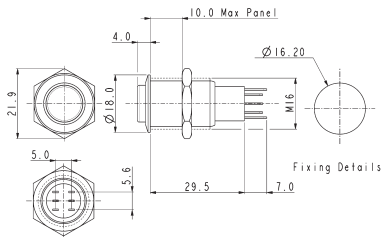**Prominent Button**

- 18mm bezel diameter
- 16mm fixing hole diameter
- D.P.C.O.
- 1A, 110Vac & 0.5A, 220Vac
- 1A, 12Vdc & 1A, 24Vdc

MP0045/3E

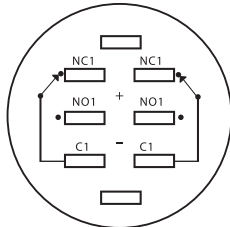| Specifications	MP0045/1E0NN000/Sealing	MP0045/3E0NN000/Sealing
Terminations:	Solder Tags	Solder Tags
Switching:	D.P.C.O. - Latching Action	D.P.C.O. - Latching Action
Sealing: Part No.	IP67 IP40 /S BLANK	IP67 IP40 /S BLANK
Max. Rating:	1A, 110Vac & 0.5A, 220Vac 1A, 12Vdc & 1A, 24Vdc	1A, 110Vac & 0.5A, 220Vac 1A, 12Vdc & 1A, 24Vdc
Contact Resistance:	50mΩ max. @ 1A, 2V	50mΩ max. @ 1A, 2V
Insulation Resistance:	>10^3 MΩ @ 500Vdc	>10^3 MΩ @ 500Vdc
Dielectric Strength:	>2.0kVac	>2.0kVac
Operating Temp. Range:	–20°C to +55°C	–20°C to +55°C
Operations Mechanical: Electrical:	200,000 (min) 30,000 (min)	200,000 (min) 30,000 (min)
Rear Nut Fixing Torque:	12Nm	12Nm
Materials Mouldings: Tags/Terminations: Switch Body & Button:	Nylon Brass, Tin Plated Stainless Steel (Polished)	Nylon Brass, Tin Plated Stainless Steel (Polished)
Contacts:	Silver	Silver
Thread size:	Nickel Plated Brass version Details on request	Nickel Plated Brass version Details on request
RoHS	Compliant	Compliant

Contact Layout

Soldering Instructions:

- Soldering time less than 3 seconds.
- Do not push on the terminals.
- Recommended cuspidal soldering iron. Temperature around 280°C.

Stainless Steel Illuminated Momentary

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Front Panel Mounting

○ Dot Illuminated
○ 18mm bezel diameter
○ D.P.C.O.
○ 1A, 110Vac & 0.5A, 220Vac
○ 1A, 12Vdc & 1A, 24Vdc
○ Red, Green, Amber or Blue Illumination
○ Separate LED Terminals

MP0045/1D1

Front Panel Mounting

○ Ring Illuminated
○ 18mm bezel diameter
○ D.P.C.O.
○ 1A, 110Vac & 0.5A, 220Vac
○ 1A, 12Vdc & 1A, 24Vdc
○ Red, Green, Amber or Blue Illumination
○ Separate LED Terminals

MP0045/1D2

Specifications	MP0045/1D1/Colour/Voltage/Sealing	MP0045/1D2/Colour/Voltage/Sealing
Terminations:	Solder Tags	Solder Tags
Illumination:	Dot	Ring
Switching:	D.P.C.O. Momentary Action	D.P.C.O. Momentary Action
Sealing: Part No.	IP67 IP40 /S BLANK	IP67 IP40 /S BLANK
Max. Switch Rating:	1A, 110Vac & 0.5A, 220Vac 1A, 12Vdc & 1A, 24Vdc	1A, 110Vac & 0.5A, 220Vac 1A, 12Vdc & 1A, 24Vdc
LEDs Colours Part No.	Red Green Amber Blue /RD /GN /AM /BL	Red Green Amber Blue /RD /GN /AM /BL
Voltage Part No.	12Vdc 220Vdc /012 /220	12Vdc 220Vdc /012 /220
Contact Resistance:	50mΩ max. @ 1A, 2Vdc	50mΩ max. @ 1A, 2Vdc
Insulation Resistance:	>10³ MΩ @ 500Vac	>10³ MΩ @ 500Vac
Dielectric Strength:	>2.0kVac	>2.0kVac
Operating Temp. Range:	–20°C to +55°C	–20°C to +55°C
Operations Mechanical: Electrical:	200,000 (min) 30,000 (min)	200,000 (min) 30,000 (min)
Rear Nut Fixing Torque:	12Nm	12Nm
Materials Mouldings: Tags: Switch Body & Button: Variants	Nylon Brass, Silver Plated Stainless Steel (Polished) Prominent Button, details on request	Nylon Brass, Silver Plated Stainless Steel (Polished) Prominent Button, details on request
RoHS	Compliant	Compliant

LED terminal +

NC1	NC1
NO1	NO1
C1	C1

LED terminal -

Contact Layout

Soldering Instructions:

○ Soldering time less than 3 seconds.
○ Do not push on the terminals.
○ Recommended cuspidal soldering iron. Temperature around 280°C.

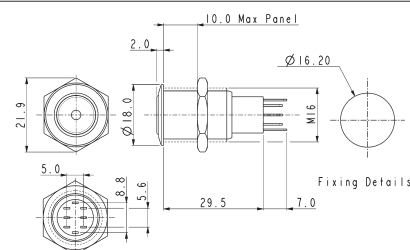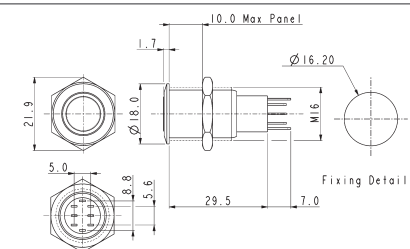# Stainless Steel Illuminated Latching

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Front Panel Mounting

MP0045/1E1

- Dot Illuminated
- 18mm bezel diameter
- D.P.C.O.
- 1A, 110Vac & 0.5A, 220Vac
- 1A, 12Vdc & 1A, 24Vdc
- Red, Green, Amber or Blue Illumination
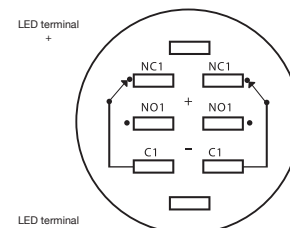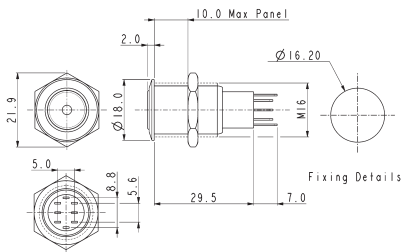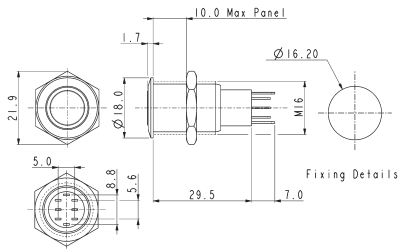- Separate LED Terminals

Front Panel Mounting

MP0045/1E2

- Ring Illuminated
- 18mm bezel diameter
- D.P.C.O.
- 1A, 110Vac & 0.5A, 220Vac
- 1A, 12Vdc & 1A, 24Vdc
- Red, Green, Amber or Blue Illumination
- Separate LED Terminals

Contact Layout

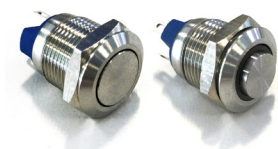| Specifications	MP0045/1E1/Colour/Voltage/Sealing				MP0045/1E2/Colour/Voltage/Sealing			
Terminations:	Solder Tags				Solder Tags			
Illumination:	Dot				Ring			
Switching:	D.P.C.O. Latching Action				D.P.C.O. Latching Action			
Sealing: Part No.	IP67 /S	IP40 BLANK			IP67 /S	IP40 BLANK		
Max. Switch Rating:	1A, 110Vac & 0.5A, 220Vac 1A, 12Vdc & 1A, 24Vdc				1A, 110Vac & 0.5A, 220Vac 1A, 12Vdc & 1A, 24Vdc			
LEDs Colours Part No.	Red /RD	Green /GN	Amber /AM	Blue /BL	Red /RD	Green /GN	Amber /AM	Blue /BL
Voltage Part No.	12Vdc /012	220Vdc /220			12Vdc /012	220Vdc /220		
Contact Resistance:	50mΩ max. @ 1A, 2Vdc				50mΩ max. @ 1A, 2Vdc			
Insulation Resistance:	>10³ MΩ @ 500Vac				>10³ MΩ @ 500Vac			
Dielectric Strength:	>2.0kVac				>2.0kVac			
Operating Temp. Range:	−20°C to +55°C				−20°C to +55°C			
Operations Mechanical: Electrical:	200,000 (min) 30,000 (min)				200,000 (min) 30,000 (min)			
Rear Nut Fixing Torque:	12Nm				12Nm			
Materials Mouldings: Tags: Switch Body & Button: Variants	Nylon Brass, Silver Plated Stainless Steel (Polished) Prominent Button, details on request				Nylon Brass, Silver Plated Stainless Steel (Polished) Prominent Button, details on request			
RoHS	Compliant				Compliant			

Soldering Instructions:

- Soldering time less than 3 seconds.
- Do not push on the terminals.
- Recommended cuspidal soldering iron. Temperature around 280°C.

Miniature Stainless Steel Vandal Resistant

Prominent Button / Flush Profile

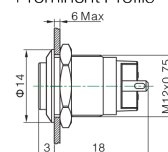**bulgin**
an INFINITO brand

MAV0120
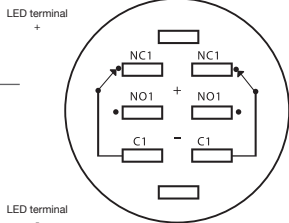
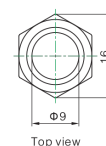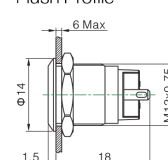MAV0120/1   MAV0120/3

○ Prominent and Flush Profile
○ 12mm Diameter
○ 2A, 36 dc
○ IP67 (Front of Panel Only)

Prominent Profile

6 Max
Φ14
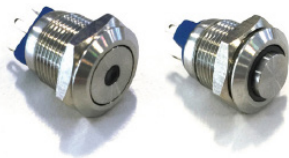M12x0.75
3   18

Flush Profile

6 Max
Φ14
M12x0.75
1.5   18

16
Φ9
Top view

Specification	MAV0120/1	MAV0120/3
Terminations:	P - Solder Tabs	P - Solder Tabs
Switching:	S.P. Push to make	S.P. Push to make
Max Rating:	2A, 36Vdc	2A, 36Vdc
Contact Resistance:	≥50MΩ	≥50MΩ
Insulation Resistance:	≥1000MΩ	≥1000MΩ
Dielectric Strength:	1500V, AC 50Hz, 5 Secs	1500V, AC 50Hz, 5 Secs
Operating Temp Range:	*-25°C ~ +55°C	*-25°C ~ +55°C
Operations		
Mechanical:	500,000 (min)	500,000 (min)
Electrical:	200,000 (min)	200,000 (min)
Sealing (Front of Panel Only)	IP67	IP67
Shock Resistance	IK08	IK08
Rear Nut Fixing Torque:	0.6Nm	0.6Nm
Materials		
Mouldings:	PA	PA
Tags/Terminations:	Brass, Silver Plated	Brass, Silver Plated
Switch Body & Button:	Stainless Steel	Stainless Steel
Contacts:	Silver Alloy	Silver Alloy
Thread size:	M12x0.75	M12x0.75
RoHS	Compliant	Compliant

Miniature Stainless Steel Illuminated Vandal Resistant

Illuminated traditional

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MAV0120

MAV0120

○ Dot and Ring Illumination
○ Prominent and Flush Profile
○ 12mm Diameter
○ 2A, 36 dc
○ Bright daylight LEDs
○ IP67 (Front of Panel Only)
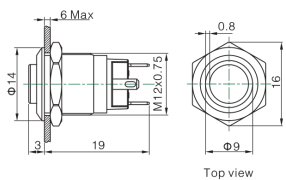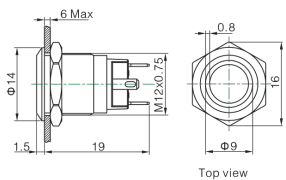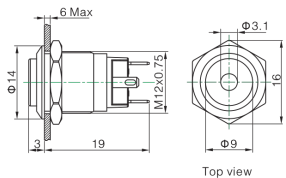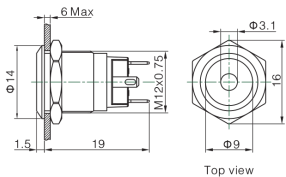
Specification — MAV0120

Terminations:	P - Solder Tabs
Switching:	S.P. Push to make
Max Rating:	2A, 36Vdc
Profile:	Prominent /3 Flush /1
Illumination Type	/1 Dot /2 Ring

LED Ratings

Part No.					
Colours	/RD	/GN	/BL	/OR	/AM
Luminous Intensity	Red	Green	Blue	Orange	Yellow
Forward Voltage	1.8V	2.8V	2.8V	1.8V	1.8V
Forward Current					
Moulding Current	15mA	15mA	15mA	15mA	15mA

Illumination Voltage: /no suffix - No resistor fitted. An Appropriate resistor must be series connected by the user. Voltages as above

/12 12V
/24 24V

Contact Resistance:	≥50MΩ
Insulation Resistance:	≥1000MΩ
Dielectric Strength:	1500V, AC 50Hz, 5 Secs
Operating Temp. Range:	*-25°C ~ +55°C

Operations

Mechanical:	500,000 (min)
Electrical:	200,000 (min)
Sealing (Front of Panel Only)	IP67
Shock Resistance	IK08
Rear Nut Fixing Torque:	0.6Nm

Materials

Mouldings:	PA
Tags/Terminations:	Brass, Silver Plated
Switch Body & Button:	Stainless Steel
Contacts:	Silver Alloy
Thread size:	M12x0.75
RoHS	Compliant

Miniature Domed Metal Vandal Resistant
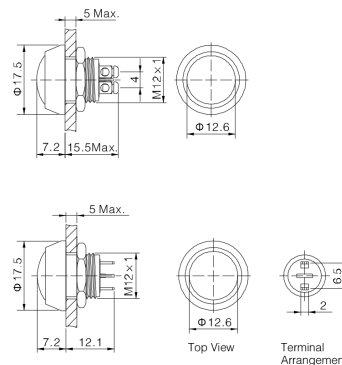None Illuminated - Metal Dome

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an INFINIT brand

MMP0120

MMP0120

○ Raised Domed Profile
○ 12mm Diameter
○ 2A, 36Vac
○ IP65 or IP67 (Front of Panel Only)

Specification	MMP0120/S	MMP0120/N
Terminations:	P - Solder Tabs S - Screw Terminal	P - Solder Tabs S - Screw Terminal
Switching:	S.P. Push to make	S.P. Push to make
Max Rating:	2A, 36Vdc	2A, 36Vdc
Contact Resistance:	≥50MΩ	≥50MΩ
Insulation Resistance:	≥1000MΩ	≥1000MΩ
Dielectric Strength:	1500V, AC 50Hz, 5 Secs	1500V, AC 50Hz, 5 Secs
Operating Temp Range:	*-25°C ~ +55°C	*-25°C ~ +55°C
Operations		
Mechanical:	500,000 (min)	500,000 (min)
Electrical:	200,000 (min)	200,000 (min)
Sealing (Front of Panel Only)	IP65 or IP67	IP65 or IP67
Shock Resistance	IK08	IK08
Rear Nut Fixing Torque:	0.3Nm	0.3Nm
Materials		
Mouldings:	PBT	PBT
Tags/Terminations:	Brass, Gold Plated	Brass, Gold Plated
Switch Body & Button:	/SS Stainless Steel	/N - Nickel Plated Brass
Contacts:	Silver Alloy	Silver Alloy
Thread size:	M12x1	M12x1
RoHS	Compliant	Compliant

Miniature Domed PBT Pushbutton
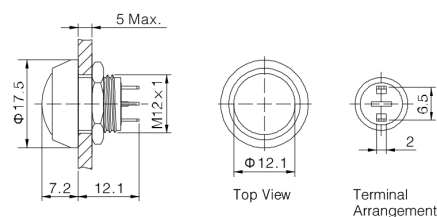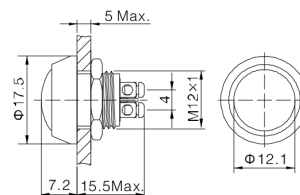Non Illuminated - PBT

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MMP0120/A

MMP0120/A

○ Raised Domed Profile
○ PBT Material
○ 12mm Diameter
○ 2A, 36Vac
○ IP65 or IP67 (Front of Panel Only)

Specification	**MMP0120/A**
Terminations:	P - Solder Tabs S - Screw Terminal
Switching:	S.P. Push to make
Max Rating:	2A, 36Vdc
Contact Resistance:	≥50MΩ
Insulation Resistance:	≥1000MΩ
Dielectric Strength:	1500V, AC 50Hz, 5 Secs
Operating Temp Range:	*-25°C ~ +55°C
Operations	
Mechanical:	1,000,000 (min)
Electrical:	200,000 (min)
Sealing (Front of Panel Only)	IP65 or IP67
Shock Resistance	IK08
Rear Nut Fixing Torque:	0.3Nm
Materials	
Mouldings:	PBT
Tags/Terminations:	Brass, Gold Plated
Switch Body	/A Black Anodised
Switch Button:	/NB Nickel Plated Brass /RD RED PBT /GN GREEN PBT /BL BLUE PBT /BK BLACK PBT
Contacts:	Silver Alloy
Thread size:	M12x1
RoHS	Compliant

Miniature Domed Illuminated Pushbutton
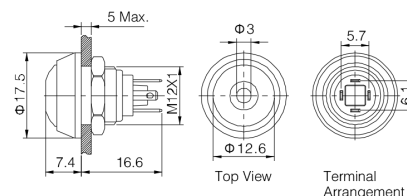
Stainless Steel and PBT

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an INFINIT◻ brand

MMPI0120

MMPI0120

○ Raised Domed Profile
○ Dot Illumination
○ Bright daylight LEDs
○ 12mm Diameter
○ 2A, 36Vac
○ IP65 (Front of Panel Only)

5 Max. | Φ3 | 5.7
Φ17.5 | M12X1 | Φ12.6 | 6.1
7.4 | 16.6 | Top View | Terminal Arrangement

Specification	**MMPI0120**				
Terminations:	P - Solder Tabs				
Switching:	S.P. Push to make				
Max Rating:	2A, 36Vdc				
LED Ratings					
Part No.	SS-RD	SS-GN	NN-RD	ABK-RD	AG-RD
Colours	Red	Green	Red	Red	Red
Luminous Intensity					
Forward Voltage	1.8V	2.8V	1.8V	1.8V	1.8V
Forward Current					
Moulding Current	15mA	15mA	15mA	15mA	15mA
Illumination Voltage	/no suffix - No resistor fitted. An Appropriate resistor must be series connected by the user. Voltages as above				
	/12				
Contact Resistance:	≥50MΩ				
Insulation Resistance:	≥1000MΩ				
Dielectric Strength:	1500V, AC 50Hz, 5 Secs				
Operating Temp. Range:	*-25°C ~ +55°C				
Operations					
Mechanical:	1,000,000 (min)				
Electrical:	200,000 (min)				
Sealing (Front of Panel Only)	IP65				
Shock Resistance	IK08				
Rear Nut Fixing Torque:	0.3Nm				
Materials					
Mouldings:	PBT				
Tags/Terminations:	Brass, Gold Plated				
Switch Body & Button:	Stainless Steel	Stainless Steel	Nickel Plated Brass	Black Anodized Body, Black PBT Button	Black Anodized Body, Green PBT Button
Contacts:	Silver Alloy				
Thread size:	M12x1				
RoHS	Compliant				

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an INFINIT❖ brand

12mm Miniature Vandal Resistant Stainless Steel Switch

MAV0120 / **X** / **X** / **X** / **X** / **X**

Series	Button	Switching Type	Type of Illumination	Illumination Colour	Lamp Voltage
MAV0120	1 = Flush 3 = Prominent	D = Momentary	Blank = None 1 = Dot 2 = Ring	Blank = None RD = RED GN = GREEN BL = BLUE AM = AMBER/YELLOW OR = ORANGE	Blank = None 012 = 12V 024 = 24V

Examples:

MAV0120/3D = 12mm Prominent Actuator, Momentary, Non Illuminated
MAV0120/3D1BL024 = 12mm Prominent Actuator, Momentary, Blue Dot Illuminated, 24V
MAV0120/3D2GN012 = 12mm Prominent Actuator, Momentary, Green Ring Illuminated, 12V

12mm Miniature Metal/Plastic Domed Pushbutton Switch

MMPXXX / **X** / **X** / **X** / **X** / **X** / **X**

Series	Body Material	Button Material & Colour	Sealing	Illumination Colour	Lamp Voltage	Termination
MMP0120 = Non Illuminated MMPI0120 = Illuminated	S = Stainless Steel N = Nickel Plated Brass A = Black Anodized	SS = Stainless Steel NB = Nickel Plated Brass RD = RED PBT GN = GREEN PBT BL = BLUE PBT BK = BLACK PBT	Blank = IP65 67 = IP67 IP67 (non-illuminated only)	Blank = None RD = RED GN = GREEN BL = BLUE AM = AMBER/YELLOW OR = ORANGE	Blank = None 012 = 12V 024 = 24V Other voltages require external resistor	S = Screw Terminals P= Solder Terminals (2.0mm x 0.5mm)

Examples:

MMP0120/SSSS = 12mm, Non Illuminated, All Stainless Steel, IP65, Screw Terminals
MMP0120/ARD67/S = 12mm, Non Illuminated, Black anodized body, Red PBT button, IP67, screw terminals
MMPI0120/NNBRD012P = 12mm, Illuminated , All Nickel Plated Brass with 12V Red Dot illumination, IP65, Plug Terminals