12mm Switches Miniature Stainless Steel Vandal Resistant

Prominent Button / Flush Profile

MAV0120



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





bulgin

Specification	MAV0120/3	MAV0120/1	M1220.75
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:	Copper, Gold Plated	Copper, Gold Plated	
Switch Body & Button:	Stainless Steel	Stainless Steel	
Contacts:	Silver Alloy	Silver Alloy	
Thread size:	M12x0.75	M12x0.75	
RoHS	Compliant	Compliant	

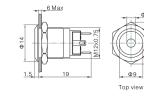
12mm Switches Miniature Stainless Steel Illuminated Vandal Resistant

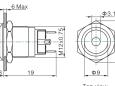
Illuminated traditional

MAV0120



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







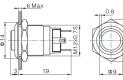


6 Max



bulgin

Φ3.1



Top view

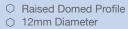
	MAV0120
Specification	MAV0120
Terminations:	P - Solder Tabs
Switching:	S.P. Push to make
Max Rating:	2A, 36Vdc
Profile:	Prominent /3 Flush /1
Illumination Type	/1 Dot /2 Ring
LED Ratings Part No. Colours Luminous Intensity Forward Voltage Forward Current Moulding Current	/RD /GN /BL /OR /AM Red Green Blue Orange Yellow 1.8V 2.8V 2.8V 1.8V 1.8V 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: Insulation Resistance: Dielectric Strength: Operating Temp. Range:	≥50MΩ ≥1000MΩ 1500V, AC 50Hz, 5 Secs *-25°C ~ +55°C
Operations	
Mechanical: Electrical:	500,000 (min) 200,000 (min)
Sealing (Front of Panel Only)	IP67
Shock Resistance	IK08
Rear Nut Fixing Torque:	0.6Nm
Materials	
Mouldings: Tags/Terminations: Switch Body & Button:	PA Copper, Gold Plated Stainless Steel
Contacts:	Silver Alloy
Thread size: RoHS	M12x0.75 Compliant

12mm Switches Miniature Domed Metal Vandal Resistant

None Illuminated - Metal Dome

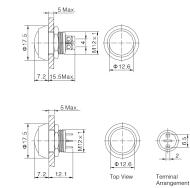
MMP0120





- 🗘 2A, 36Vac
- IP65 or IP67 (Front of Panel Only)

MMP0120



bulgin

Specification	MMP0120/S	MMP0120/N	
Terminations:	P - Solder Tabs	P - Solder Tabs	
	S - Screw Terminal	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	
Chook hesistanoo	1100	1100	
Rear Nut Fixing Torque:	0.3Nm	0.3Nm	
Materials			
Mouldings:	РВТ	PBT	
Tags/Terminations:	Brass, Silver Plated	Brass, Silver Plated	
Switch Body & Button:	/SS Stainless Steel	/N - Nickel Plated Brass	
Contacts:	Silver Alloy	Silver Alloy	
Thread size:	M12x1	M12x1	
RoHS	Compliant	Compliant	
	· ·		

12mm Switches Miniature Domed PBT Pushbutton

Non Illuminated - PBT

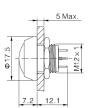
MMP0120/A



\bigcirc	Raised	Domed	Profile
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- O PBT Material
- 0 12mm Diameter
- 2A, 36Vac
 IP65 or IP67 (Front of Panel Only)

MMP0120/A



7.2 15.5Max.

5 Max.

M12×1

Φ12.

Φ12

Top View

Φ17.5



Terminal Arrangement

Terminations:P - Solder Tabs S - Sorew TerminalSwitching:S.P. Push to makeMax Rating:2A, 36VdcContact Resistance:≥50MJInsulation Resistance:≥100UJDielectric Strength:1500V, AC 50Hz, 5 SecsOperating Temp Range:*25°C - +55°CMechanical:1,000,000 (min)Electrical:200,000 (min)Sock ResistanceIKO8Rear Nut Fixing Torque:0,3NmMaterialsPBTMuldings:PBTSwitch Body/ASwitch Button:Nickel Plated Brass RDSwitch Button:Silver AluzyContacts:Silver AluzyContacts:Silver AluzyRend Size:M12×1RoHSSilver Aluzy	Specification	MMP0120/A				
Max Rating: $2A, 36Vdc$ Contact Resistance: $\geq 50M\Omega$ Insulation Resistance: $\geq 1000M\Omega$ Dielectric Strength: $1500V, AC 50Hz, 5 Secs$ Operating Temp Range: $*-25^{\circ}C - +55^{\circ}C$ Operations $1,000,000$ (min)Beatrical: $200,000$ (min)Electrical: $200,000$ (min)Sealing (Front of Panel Only) $IP65 \circ IP67$ Shock Resistance $IK08$ Materials $0.3Nm$ Materials PBT Materials PBT Switch Body $/A$ Switch Button: $/MB$ Nickel Plated Brass $/RD$ $RED PBT$ $/RD$	Terminations:					
Contact Resistance: $\geq 50M\Omega$ Insulation Resistance: $\geq 1000M\Omega$ Dielectric Strength: $1500V, AC 50Hz, 5 Secs$ Operating Temp Range: $*-25^{\circ}C ~ +55^{\circ}C$ Operations $1,000,000$ (min)Bectrical: $200,000$ (min)Sealing (Front of Panel Only)IP65 or IP67Shock ResistanceIK08Rear Nut Fixing Torque: $0.3Nm$ Materials PBT MaterialsIP65 secsSwitch Body/ASwitch BodyIASwitch Button:/ASilver PlatedSwitch Button:/ABlack AnodisedSuitch Button:Silver AlloyContacts:Silver AlloyContacts:Silver AlloyThread size:M12x1	Switching:	S.P. Push to make				
Insulation Resistance: $\geq 1000M\Omega$ Dielectric Strength: $1500V$, AC 50Hz, 5 SecsOperating Temp Range: $^{+}25^{\circ}C \sim +55^{\circ}C$ Operations $^{+}25^{\circ}C \sim +55^{\circ}C$ Mechanical: $1,000,000$ (min)Electrical: $200,000$ (min)Sealing (Front of Panel Only)IP65 or IP67Shock ResistanceIK08Rear Nut Fixing Torque: $0.3Nm$ Materials PBT MaterialsPBTSwitch Body/A Black AnodisedSwitch Button:/NB Nickel Plated Brass /RD RED PBT /BL BLUE PBT /BK BLACK PBTContacts:Silver AlloyThread size:Silver Alloy	Max Rating:	2A, 36Vdc				
Dielectric Strength:1500W. AC 50Hz, 5 SecsOperating Temp Range:*-25°C ~ +55°CMechanical:1,000,000 (min)Electrical:200,000 (min)Electrical:200,000 (min)Sealing (Front of Panel Only)IP65 or IP67Shock ResistanceIK08Rear Nut Fixing Torque:0.3NmMaterialsPBTMaterialsPBTSwitch Body/ASwitch Button:/ASwitch Button:Silver PlatedSwitch Button:Silver AlloyContacts:Silver AlloyThread size:M12x1	Contact Resistance:	≥50MΩ				
Operating Temp Range:*-25°C ~ +55°COperations1,000,000 (min)Mechanical:1,000,000 (min)Electrical:200,000 (min)Sealing (Front of Panel Only)IP65 or IP67Shock ResistanceIK08Rear Nut Fixing Torque:0.3NmMaterialsPBTMouldings:PBTTags/Terminations:Brass, Silver PlatedSwitch Body/ABlack AnodisedSwitch Button:,NBNDRED PBT (SNContacts:Silver AlloyThread size:M12x1	Insulation Resistance:	≥1000MΩ				
Number of the second	Dielectric Strength:	1500V, AC 50Hz, 5 Secs				
Mechanical:1,000,000 (min)Electrical:200,000 (min)Sealing (Front of Panel Only)IP65 or IP67Shock ResistanceIK08Rear Nut Fixing Torque:0.3NmMaterialsMouldings:PBTTags/Terminations:Brass, Silver PlatedSwitch Body/ABlack AnodisedSwitch Button:/NBNickel Plated BrassRBDRED PBT//BLBLUE PBT//BLBLUE PBT//BLBLUE PBT//BLBLUE PBT//BLBLUE PBT//BLSilver Alloy//Date Size:M12x1	Operating Temp Range:	*-25°C ~ +55°C				
Mechanical:1,000,000 (min)Electrical:200,000 (min)Sealing (Front of Panel Only)IP65 or IP67Shock ResistanceIK08Rear Nut Fixing Torque:0.3NmMaterialsIMouldings:PBTTags/Terminations:Brass, Silver PlatedSwitch Body/ABlack AnodisedSwitch Button:/NBNickel Plated BrassContacts:Silver AlloyItread size:M12x1						
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, Silver Plated Switch Body /A Black Anodised Switch Button: //NB Nickel Plated Brass /RD RED PBT /GN GREEN PBT /GN GREEN PBT /BL BLUE PBT	Operations					
Sealing (Front of Panel Only) IP65 or IP67 Shock Resistance IK08 Rear Nut Fixing Torque: 0.3Nm Materials PBT Tags/Terminations: PBT Tags/Terminations: Brass, Silver Plated Switch Body /A Black Anodised Switch Button: /NB Nickel Plated Brass /RD RED PBT /GN GREEN PBT /GN GREEN PBT /BL BLUE PBT /BL BLUE PBT /BL BLUE PBT /BL BLUE PBT /BL BLUE PBT /BL BLUE PBT	Mechanical:	1,000,000 (min)				
Shock ResistanceIK08Rear Nut Fixing Torque:0.3NmMaterials0.3NmMaterialsPBTMouldings:PBTTags/Terminations:Brass, Silver PlatedSwitch Body/ABlack AnodisedSwitch Button:/NBNickel Plated Brass /RDRED PBT /GNRED PBT /GNRED PBT /BLContacts:Silver AlloyThread size:M12x1	Electrical:	200,000 (min)				
Rear Nut Fixing Torque:0.3NmMaterialsPBTMouldings:PBTTags/Terminations:Brass, Silver PlatedSwitch Body/ABlack AnodisedSwitch Button:/NBNickel Plated Brass'RDRED PBT'GNGREEN PBT'BLBLUE PBT'BKBLACK PBT'Contacts:Silver AlloyThread size:M12x1	Sealing (Front of Panel Only)	IP65 or IP67				
MaterialsMouldings:PBTTags/Terminations:Brass, Silver PlatedSwitch Body/ABlack AnodisedSwitch Button:/NBNickel Plated Brass'RDRED PBT'GNGREEN PBT'BLBLUE PBT'BKBLACK PBT'Contacts:Silver AlloyThread size:M12x1	Shock Resistance	IK08				
Mouldings:PBTTags/Terminations:Brass, Silver PlatedSwitch Body/ABlack AnodisedSwitch Button:/NBNickel Plated Brass /RDRED PBT /GNGREEN PBT /BLBLUE PBT /BKBLUE PBTContacts:Silver AlloyM12x1	Rear Nut Fixing Torque:	0.3Nm				
Tags/Terminations: Brass, Silver Plated Switch Body /A Black Anodised Switch Button: /NB Nickel Plated Brass /RD RED PBT /GN /BL BLUE PBT /BL ACK PBT /Contacts: Silver Alloy Thread size: M12x1	Materials					
Switch Body/ABlack AnodisedSwitch Button:/NBNickel Plated Brass /RDRED PBT /GN//GNGREEN PBT /BLBLUE PBT /BLBLUE PBT /BKContacts:Silver AlloyThread size:M12x1	Mouldings:	PBT				
Switch Button:/NBNickel Plated Brass/RDRED PBT/GNGREEN PBT/BLBLUE PBT/BKBLACK PBTContacts:Silver AlloyThread size:M12x1	Tags/Terminations:	Brass, Silver Plated				
/RD RED PBT /GN GREEN PBT /BL BLUE PBT /BK BLACK PBT Ontacts: Silver Alloy Thread size: M12x1	Switch Body	/A Black Anodised				
Thread size: M12x1	Switch Button:	/RD RED PBT /GN GREEN PBT /BL BLUE PBT				
	Contacts:	Silver Alloy				
RoHS Compliant	Thread size:	M12x1				
	RoHS	Compliant				

12mm Switches Miniature Domed Illuminated Pushbutton Stainless Steel and PBT



MMPI0120	 Raised Domed Profile Dot Illumination Bright daylight LEDs 12mm Diameter 24 36Vac 	5 Max.
MMPI0120	 2A, 36Vac IP65 (Front of Panel Only) 	7.4 16.6 Top View Terminal Arrangement

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



12mm Miniature Vandal Resistant Stainless Steel Switch

MAV0120	/	X	/	X	/	X	/	X	/	X
Series MAV0120		Button 1 = Flush 3 = Prominent		Switching Type D = Momentary		Type of Illumination Blank = None 1 = Dot 2 = Ring		Illumination Colour Blank = None RD = RED GN = GREEN BL = BLUE AM = AMBER/YELLOW OR = ORANGE		Lamp Voltage 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
Series MMP0120 = Non Illuminated MMPI0120 = Illuminated	Body Material S = Stainless Steel N = Nickel Plated Brass A = Black Anodized	Button Material & Colour SS = Nickel Plated Brass RD = RED PBT GN = GREEN PBT BL = BLUE PBT BK = BLACK PBT	Sealing Blank = IP65 67 = IP67 IP67 (non-illuminated only)	Illumination Colour Blank = None RD = RED GN = GREEN BL = BLUE AM = AMBERYYELLOW OR = ORANGE	Lamp Voltage Blank = None 012 = 12V 024 = 24V Other voltages require external resistor	Termination 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, Pin Terminals