



# METAL PUSH SWITCH



**HUA-JIE GROUP**

<http://www.hua-jie.com>

## 公司簡介 Company Profile

台灣華傑股份有限公司(Hua-Jie) 成立於1989年，專注於開關之研發設計與製造生產，諸如 醫療產品、影音產品、家電產品、手機、電腦等，均可以一次滿足客戶之產品開關應用。

華傑集團在開關領域的堅持與持續經營，業務規模不斷擴大，旗下製造工廠主要分為4家：台灣華傑、蘇州華傑、廈門漢元、揚州展聖以及常州生產基地、浙江生產基地、東莞生產基地，藉以達成不同客戶對於各類開關之需求，成為客戶的最佳合作夥伴!



Taiwan Hua-Jie Co., Ltd. (Hua-Jie) was established in 1989, focusing on R & D and Manufacturing of Switches, such as Medical Products, Audio and Video Products, Home Appliances, Mobile Phones, Computers, etc., One-Stop Service can satisfy Customers' Switch Applications. Hua-Jie Group persist and continuously operate in the field of Switches, keep enlarging business scope, 4 main manufacturing plants of group are: Taiwan Hua-Jie, Suzhou Hua-Jie, Xiamen HiMake Technology and Yangzhou Zhansheng Electron and Changzhou production base、Zhejiang production base、Dongguan production base, aiming to meet different customers' demands for all kinds of Switches as and become the best partner of customers!

## 經營理念 Business Concept

- 高專業—專業的技術，卓越的品質，創造一流的企業。
- 重誠信—積極的態度，誠信的服務，成為客戶最佳的伙伴。
- 高品質—提升品質，培育人才，讓員工與顧客分享成果。
- 添關懷—參與公益，回饋社會，讓華傑為社會增添關懷。

- **High-Professional**—Professional Technology, Excellent Quality, Create a First-Class Enterprise.
- **Stress Honesty and Trust**—Positive Attitude, Honest Service, Customers' Best Partner.
- **Superior Quality**—Quality Enhancement, Talent Cultivation, Fruits Sharing with Employees and Customers.
- **Care for Society**—Participate in the None-Profit Activity, Contribute to Society, Hua-Jie add Care for Society.

## 競爭優勢 Competitive Advantage

- **產品策略清楚**—定位在 SMART 策略
  - Simple：簡單易用
  - Marketing：市場需要
  - Affordable：價格便宜
  - Reliable：可靠耐用
  - Timely to market：準時交貨
- **垂直整合**—擁有沖壓、射出、組裝生產製程。
- **自動化程度高**—擁有自動組立機台以及自動包裝檢測機台取代人工組裝生產，杜絕不良流出。



- **Definite Product Strategy**—Orientation of SMART Strategy
  - Simple: Easy to Use
  - Marketing: Market Demands
  - Affordable: Reasonable Price
  - Reliable: Trustworthy and Durable
  - Timely to Market: On-Time Delivery
- **Vertical Integration**—Possess Stamping, Ejection, Assembling Productive Process.
- **Highly Automation**— Possess Automatic Assembling Machines, Automatic Pack-Testing Machines, Replacing Manual Assembling Production, Eradicating Outflow of Defectives.





Metal Indicator  
金屬指示燈  
P6



Metal Push Button Switch  
Ø8~Ø12金屬按鈕開關  
P7-P8



Metal Push Button Switch  
Ø16金屬按鈕開關  
P9-P11



Metal Push Button Switch  
Ø19金屬按鈕開關  
P12-P16



Metal Push Button Switch  
Ø22金屬按鈕開關  
P17



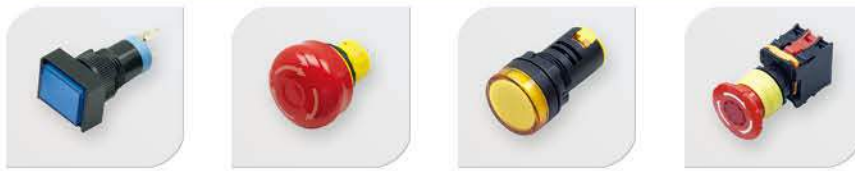
Plastic / Metal Push Button Switch  
Ø22塑膠按鈕開關  
Ø25金屬按鈕開關  
P18



Metal Push Button Switch  
Ø28金屬按鈕開關  
P19



Metal Push Button Switch  
Ø30~Ø40金屬按鈕開關  
P20



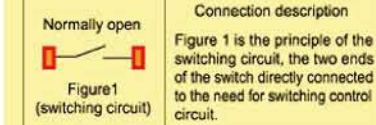
Plastic Push Button Switch  
塑膠按鈕開關  
P21-P22



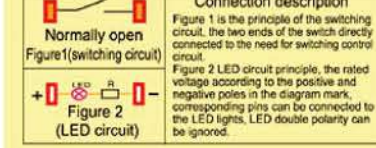
Metal Touch switch  
金屬觸摸開關  
P23

A Series

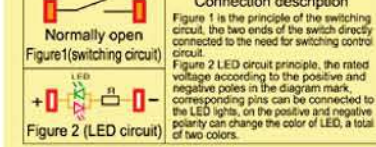
A series of switch electrical schematic diagram



A series of switch electrical schematic diagram

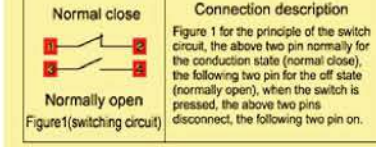


A series of switch electrical schematic diagram

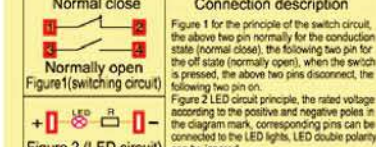


B Series

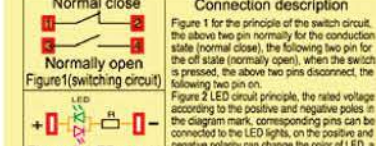
B series of switch electrical schematic diagram



B series of switch electrical schematic diagram

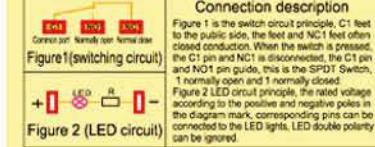


B series of switch electrical schematic diagram

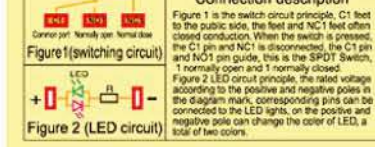


C Series

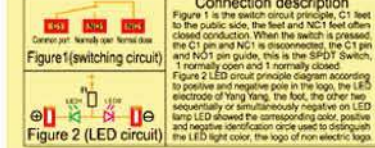
C series of switch electrical schematic diagram



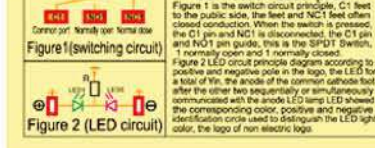
C series of switch electrical schematic diagram



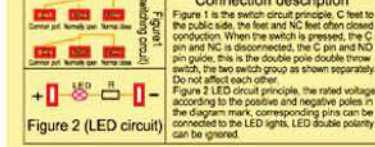
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C series of switch electrical schematic diagram

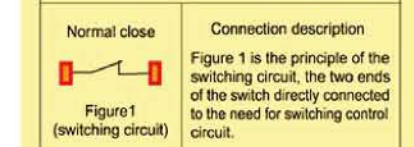


C series of switch electrical schematic diagram

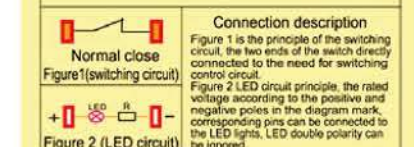


D Series

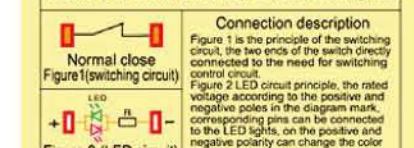
D series of switch electrical schematic diagram



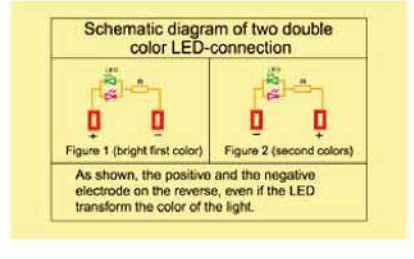
D series of switch electrical schematic diagram



D series of switch electrical schematic diagram



Custom-made double color lights



開關命名 Switch Naming

電路 Circuit	產品系列 Product Type	安裝孔尺寸 Mounting Hole Size	型號 Type	按柄形狀 Stem Shape	開關組合 Switch Combination	操作類型 Operation Type	燈珠顏色 Lamp Color	燈珠電壓 Lamp Voltage	外殼材質 Shell Material
A	MP (Metal Push Switch)	8: Ø8mm	A1-A3...	C:圓形 Circle	10:1NO	Z:自鎖 Latching	R:紅色 Red	2V	A:鋁Aluminum
B		12: Ø12mm	B1-B3...	D:凹面 Concave	11:1NO1NC	N:自復 Momentary	O:橙色 Orange	3V	BN:黃銅鍍鎳 Brass (Nickel-plated)
C	PP (Plastic Push Switch)	16: Ø16mm	C1-C3...	F:平頭 Flat	22:2NO2NC	MT:觸控 Touch	Y:黃色 Yellow	6V	BG:黃銅鍍金 Brass (Gold-plated)
D		19: Ø19mm	D1-D3...	H:高平頭 High Flat		B:蜂鳴 Buzzer	G:綠色 Green	12V	S:不銹鋼 Stainless steel
		22: Ø22mm	E1-E3...	K:鑰匙 Key			B:藍色 Blue	24V	P:塑膠 Plastic
		25: Ø25mm	F1-F3...	R:旋鈕 Knob			W:白色 White	36V	
		28: Ø28mm	.....	E:長方形 Rectangle				48V	
		30: Ø30mm		S:方形 Square				100V	
		40: Ø40mm						220V	

註：請仔細閱讀產品詳細訊息，根據不同產品結構狀態在該表中選取相對應代號。  
Note: Please read carefully product detailed information, according to different product structure state in the table select the corresponding code.

開關結構 Switch Structure

形式 Type	符號 Sign	示意圖 raving	說明 Explanation
No.A			具有兩個100%銀點端子的 雙斷電慢快動觸類開關 With two silver point terminal of 100% Double power is slow moving contact switch
No.B			
No.C			
No.D			適用電路、阻性、感性，不建議用容性電路

表面效果圖 Surface Effect



燈珠參數 Lamp Parameters

燈珠類型 Lamp Type	雙向LED燈珠(交直流通用) LED Lamp(AC/DC)	<p>採用直流通用的LED燈珠，接線端子無正負極區分；燈珠內置保護電阻，不需外接。 Using AC/DC LED lamp, the terminals have no difference of anode and cathode; Using inner resistance, do not need connect outer resistance.</p>
額定電壓 Rated Voltage	AC/DC 6V AC/DC 12V	
額定電流 Rated Current	約15mA About 15mA	
燈珠顏色 LED Color	<b>R O Y G B W</b>	
燈珠壽命 LED Life	40000小時(參考值) 40000 hours (Reference)	

注意事項 Matters Needing Attention

在任何不正確的焊接操作都可能導致產品塑性變形、開關接觸不良等。使用者在使用引腳式按鈕開關、信號燈時，因焊接不當導致產品損壞的現象時有發生，故敬請各位使用者在接線操作時務必注意以下幾點：

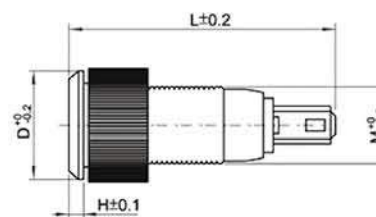
- 選擇合適的電烙鐵，加快焊接速度，建議使用25W電烙鐵於3秒內完成焊接。
- 助焊劑必須適量，焊接時盡量將開關引腳朝下。
- 盡量採用插線端子連接，避免焊接連接。

Any improper welding operation all possibly cause plastic deformation, bad-contact switch, etc.  
When soldering the pin-terminals of switches and indicators, pls pay attention to following points. Because it's easy to have the switch damaged if improperly operating:

- Using suitable electric soldering iron and quickening welding speed. We suggest you use 25W electric soldering iron and finish within 3 seconds.
- Using right amount of scaling powder and pouting the pin terminals downward when soldering.
- It's better to use connectors than directly weld.



示意圖 Schematic diagram



規格 Specification

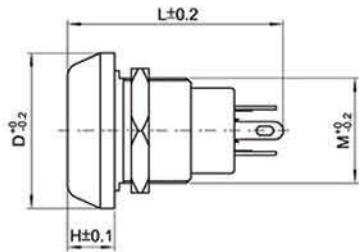
Items	Standard
絕緣強度 Dielectric Strength	1100VAC
環境溫度 Environment Temperature	-20°C~+85°C
螺母扭矩 Nut Torque	5~14Nm
防護等級 Protection Grade	IP67, IK10

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
A	MP6-LED	22.1	Ø10	4.0	M6x0.75	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP8-LED	25.3	Ø11	1.5	M8x0.75	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-LED-A	25.8	Ø15	1.5	M12x0.75	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-LED-B	23.9	Ø16	2.0	M12x1	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-LED-C	25.5	Ø16	2.0	M12x1	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-LED-A	22.0	Ø18	1.5	M16x1	R:環形 Ring	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-LED-B	26.7	Ø18	1.5	M16x1	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-LED-C	26.0	Ø18	1.5	M16x1	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-LED-A	26.1	Ø22	1.5	M19x1	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-LED-B	26.5	Ø22	1.5	M19x1	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP22-LED-A	27.1	Ø25	2.0	M22x1	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP22-LED-B	27.5	Ø25	2.0	M22x1	D:單點 Dot	<b>R O Y G B W</b>	1.8~250V	≤20mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



示意圖 Schematic diagram



規格 Specification

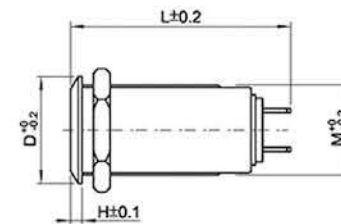
Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP65, IK08 ; IP67, IK08
操作類型 Operation Types	自鎖Latching ; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
A	MP8-A1	19.7	Ø12	3.3	M8x1			24VDC	1A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-A1	24.3	Ø17.5	5.3	M12x1			36VDC	1A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-A2	24.3	Ø17.5	5.3	M12x1			37VDC	1A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-A3	21.4	Ø17.5	5.3	M12x1			38VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-A4	21.4	Ø17.5	5.3	M12x1			39VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-A5	21.4	Ø17.5	5.3	M12x1			40VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-A6	19.8	Ø17.5	5.3	M12x1			41VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-A7	19.8	Ø17.5	5.3	M12x1			42VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-A8	19.8	Ø17.5	5.3	M12x1			43VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-B1	22.3	Ø14	1.5	M12x0.75			44VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-B2	22.8	Ø14	1.5	M12x0.75			45VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



示意圖 Schematic diagram



規格 Specification

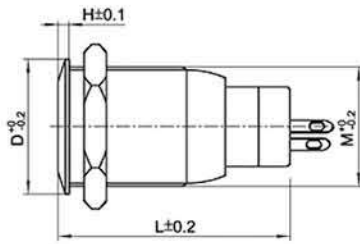
Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP65, IK08 ; IP67, IK08
操作類型 Operation Types	自鎖Latching ; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
A	MP12-C1	21.1	Ø14	1.5	M12x0.75	R:環形 Ring	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-C2	23	Ø14	1.5	M12x0.75	R:環形 Ring	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-D1	28.9	Ø14	1.5	M12x0.75			36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-D2	26.9	Ø14	1.5	M12x0.75			36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-D3	28.9	Ø14	1.5	M12x0.75	D:單點 Dot	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-D4	26.9	Ø14	1.5	M12x0.75	D:單點 Dot	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-D5	31.2	Ø14	1.5	M12x0.75	R:環形 Ring	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP12-D6	31.2	Ø14	1.5	M12x0.75	R:環形 Ring	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



示意圖 Schematic diagram



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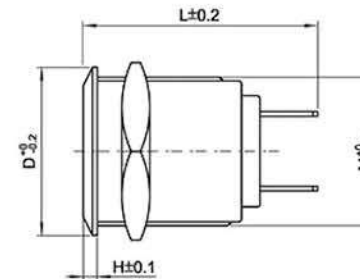
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螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP65, IK08 ; IP67, IK08
操作類型 Operation Types	自鎖Latching ; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
A	MP16-A1	22.0	Ø18	1.5	M16x1			250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-A2	23.3	Ø18	1.5	M16x1			250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-A3	23.3	Ø18	1.5	M16x1			250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-A4	21.9	Ø18	1.5	M16x1			250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-A5	21.9	Ø18	1.5	M16x1			250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-A6	21.9	Ø18	1.5	M16x1			250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-B1	36.6	Ø18	1.5	M16x1			250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-B2	38.6	Ø18	1.5	M16x1			250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-C1	36.6	Ø18	1.5	M16x1	R:環形 Ring	ROYGBW	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-C2	38.6	Ø18	1.5	M16x1	R:環形 Ring	ROYGBW	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-C3	36.6	Ø18	1.5	M16x1	D:單點 Dot	ROYGBW	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-C4	38.6	Ø18	1.5	M16x1	D:單點 Dot	ROYGBW	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-C5	36.6	Ø18	1.5	M16x1	C:字符 Character	ROYGBW	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP65,IK08 ; IP67,IK08
操作類型 Operation Types	自鎖Latching ; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
A	MP16-D1	22.9	Ø18	1.5	M12x0.75			36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-D2	22.9	Ø18	1.5	M12x0.75			36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-D3	22.9	Ø18	1.5	M12x0.75			36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-D4	22.0	Ø18	1.5	M12x0.75	R:環形 Ring	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-D5	24.0	Ø18	1.5	M12x0.75	R:環形 Ring	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-D6	22.0	Ø18	1.5	M12x0.75	D:單點 Dot	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-D8	22.0	Ø18	1.5	M16x1	C:字符 Character	ROYGBW	36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-E1	29.8	Ø18	1.5	M16x1			36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP16-E2	29.2	Ø18	1.5	M16x1			36VDC	2A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



MP16-F1



MP16-F2



MP16-F3



MP16-F4



MP16-F5

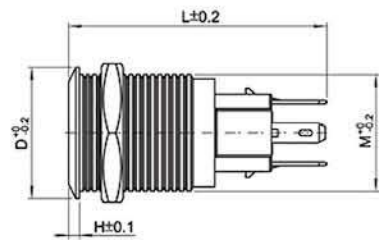


MP16-F6



MP16-F7

示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP67,IK08
操作類型 Operation Types	自鎖Latching；自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
C	MP16-F1	35.5	Ø18	1.5	M19x1	R:環形Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-F2	35.5	Ø18	1.5	M19x1	R:環形Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-F3	35.5	Ø18	1.5	M19x1	D:單點Dot	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-F4	35.5	Ø18	1.5	M19x1	D:單點Dot	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-F5	35.5	Ø18	1.5	M19x1	C:字符Character	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-F6	35.5	Ø18	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP16-F7	35.5	Ø18	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



MP19-A1



MP19-A2



MP19-A3



MP19-A4



MP19-A5



MP19-A6



MP19-B1

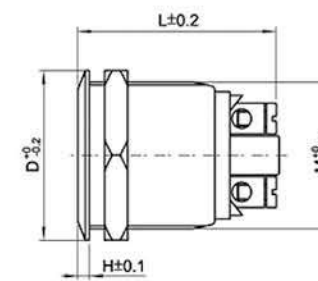


MP19-B2



MP19-B3

示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP65, IK08；IP67, IK08
操作類型 Operation Types	自鎖Latching；自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
A	MP19-A1	25.8	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-A2	25.8	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-A3	28.2	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-A4	21.6	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-A5	21.6	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-A6	21.6	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-B1	19.5	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-B2	19.5	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-B3	19.5	Ø22	1.5	M19x1	-	-	250VAC	3A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



MP19-C1



MP19-C2



MP19-C3



MP19-C4



MP19-C5



MP19-C6



MP19-C7

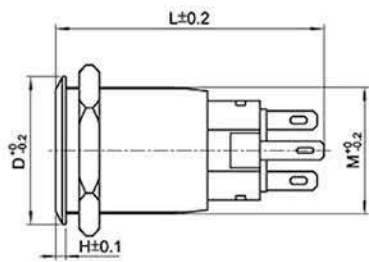


MP19-D1



MP19-D2

示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP65,IK08; IP67,IK10
操作類型 Operation Types	自鎖Latching; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
C	MP19-C1	39.9	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-C2	39.9	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-C3	39.9	Ø22	1.5	M19x1	D:單點 Dot	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-C4	39.9	Ø22	1.5	M19x1	D:單點 Dot	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-C5	39.9	Ø22	1.5	M19x1	C:字符 Character	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-C6	39.9	Ø22	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-C7	39.9	Ø22	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-D1	22.1	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-D2	22.1	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



MP19-E1



MP19-E2



MP19-E3



MP19-E4



MP19-E5



MP19-E6



MP19-L2

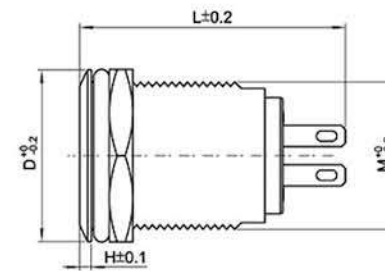


MP19-L4



MP19-L5

示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP65, IK08; IP67, IK08
操作類型 Operation Types	自鎖Latching; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
B	MP19-E1	35.0	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
B	MP19-E2	35.0	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
B	MP19-E3	35.0	Ø22	1.5	M19x1	D:單點 Dot	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
B	MP19-E4	35.0	Ø22	1.5	M19x1	C:字符 Character	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
B	MP19-E5	35.0	Ø22	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
B	MP19-E6	35.0	Ø22	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
B	MP19-L2	37.3	Ø22	1.5	M19x1	H:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
B	MP19-L4	37.3	Ø22	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
B	MP19-L5	37.3	Ø22	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel





MP19-F1



MP19-F2



MP19-J



MP19-J1



MP19-S1



MP19-S2



MP19-S3



MP19-S4



MP19-S5

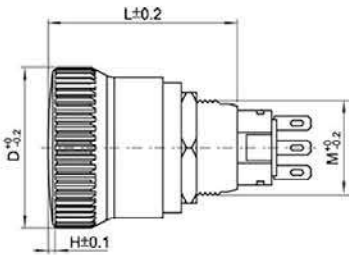


MP19-S6



MP19-金屬蜂鳴器

示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP50,IK10; IP67,IK10
操作類型 Operation Types	自鎖Latching; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
C	MP19-F1	40.1	Ø22	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-F2	38.8	Ø22	1.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-J	52.2	Ø31.9	22.8	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-J1	50.0	Ø25.5	21.5	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-S1	38.65	Ø21.8	2.0	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-S2	40.65	Ø21.8	2.0	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-S3	38.65	Ø21.8	2.0	M19x1	D:單點 Dot	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-S4	38.65	Ø21.8	2.0	M19x1	C:字符 Character	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-S5	38.65	Ø21.8	2.0	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
C	MP19-S6	40.65	Ø21.8	2.0	M19x1			250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19- 金屬蜂鳴器	55.1	Ø31.9	1.5	M19x1	R:環形 Ring	ROYGBW	250VAC	5A	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



MP19-G1



MP19-G2



MP19-G3



MP19-G4



MP19-G5



MP19-H1



MP19-H2



MP19-H3

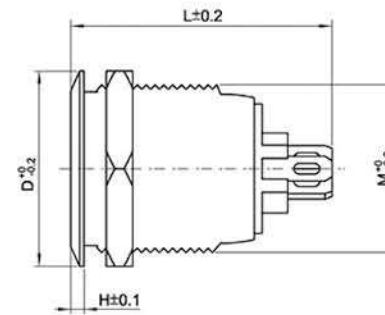


MP19-H4



MP19-H5

示意圖 Schematic diagram



規格 Specification

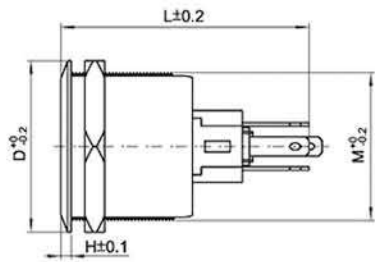
Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP67,IK10
操作類型 Operation Types	自鎖Latching; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
A	MP19-G1	34.3	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-G2	36.3	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-G3	34.3	Ø22	1.5	M19x1	D:單點 Dot	ROYGBW	36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-G4	34.3	Ø22	1.5	M19x1			36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-G5	36.3	Ø22	1.5	M19x1			36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-H1	31.9	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-H2	33.9	Ø22	1.5	M19x1	R:環形 Ring	ROYGBW	36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-H3	31.9	Ø22	1.5	M19x1	D:單點 Dot	ROYGBW	36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-H4	31.9	Ø22	1.5	M19x1			36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel
A	MP19-H5	33.9	Ø22	1.5	M19x1			36VDC	50mA	黃銅鍍鎳/不銹鋼 Nickel plated brass/Stainless steel



示意圖 Schematic diagram



規格 Specification

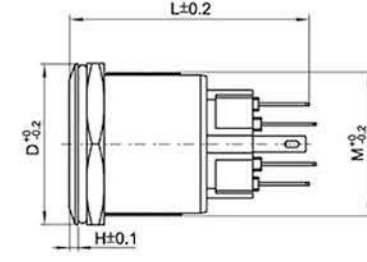
Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP67,IK10
操作類型 Operation Types	自鎖Latching；自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
B	MP22-A1	38.1	Ø25	1.5	M22x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP22-A2	38.1	Ø25	1.5	M22x1	D:單點 Dot	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP22-A3	38.1	Ø25	1.5	M22x1	C:字符 Character	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP22-B1	38.1	Ø25	1.5	M22x1			250VAC	5A	不銹鋼 Stainless steel
B	MP22-B2	38.1	Ø25	1.5	M22x1			250VAC	5A	不銹鋼 Stainless steel
B	MP22-B3	40.1	Ø25	1.5	M22x1			250VAC	5A	不銹鋼 Stainless steel
A	MP22-C1	25.8	Ø25	1.5	M22x1			250VAC	5A	不銹鋼 Stainless steel
A	MP22-C2	25.8	Ø25	1.5	M22x1			250VAC	5A	不銹鋼 Stainless steel
A	MP22-C3	28.3	Ø25	1.5	M22x1			250VAC	5A	不銹鋼 Stainless steel
A	MP22-D1	22.1	Ø25	1.5	M22x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
A	MP22-D2	26.6	Ø25	1.5	M22x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
C	MP22-E	30.7	Ø25	2.0	M22x1			250VAC	5A	不銹鋼 Stainless steel



示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP67,IK10
操作類型 Operation Types	自鎖Latching；自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
C	MP22-F1	30.8	Ø24.9		M22x1	Y:圓形 Circle	ROYGBW	250VAC	5A	塑料 Plastic PA66
C	MP22-F2	30.8	Ø24.9		M22x1	C:字符 Character	ROYGBW	250VAC	5A	塑料 Plastic PA66
C	MP22-F3	30.8	Ø24.9		M22x1			250VAC	5A	塑料 Plastic PA66
C	MP22-G1	42.8	Ø25		M22x1	S:方形 Square	ROYGBW	250VAC	5A	塑料 Plastic PA66
C	MP22-G2	42.8	Ø25		M22x1	C:字符 Character	ROYGBW	250VAC	5A	塑料 Plastic PA66
C	MP22-G3	42.8	Ø25		M22x1			250VAC	5A	塑料 Plastic PA66
B	MP25-A1	38.2	Ø27.8	1.5	M25x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP25-A2	41.0	Ø27.8	1.5	M25x1	D:單點 Dot	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP25-A3	41.0	Ø27.8	1.5	M25x1	C:字符 Character	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP25-B1	38.2	Ø27.8	1.5	M25x1			250VAC	5A	不銹鋼 Stainless steel
B	MP25-B2	38.2	Ø27.8	1.5	M25x1			250VAC	5A	不銹鋼 Stainless steel
B	MP25-B3	38.2	Ø19.5	2.0	M25x1			250VAC	5A	不銹鋼 Stainless steel



MP28-A1



MP28-A2



MP28-A3



MP28-B1

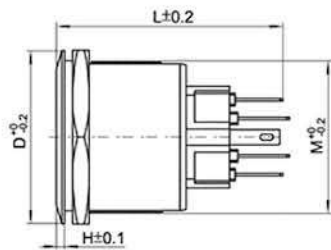


MP28-B2



MP28-B3

示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP67,IK10
操作類型 Operation Types	自鎖Latching；自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
B	MP28-A1	41.0	Ø31.8	1.5	M28x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP28-A2	41.0	Ø31.6	1.5	M28x1	D:單點 Dot	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP28-A3	41.0	Ø31.8	1.5	M28x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP28-B1	41.0	Ø31.8	1.5	M28x1			250VAC	5A	不銹鋼 Stainless steel
B	MP28-B2	41.0	Ø31.8	1.5	M28x1			250VAC	5A	不銹鋼 Stainless steel
B	MP28-B3	43.1	Ø31.8	1.5	M28x1			250VAC	5A	不銹鋼 Stainless steel



MP30-A1



MP30-A2



MP30-A3



MP30-B1



MP30-B2



MP30-B3

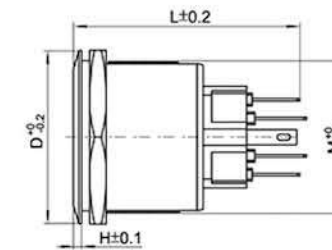


MP40-A1



MP40-A2

示意圖 Schematic diagram



規格 Specification

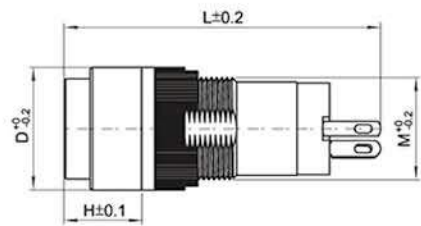
Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	5~14Nm
操作壓力 Actuating Force	2~5N
防護等級 Protection Grade	IP67,IK10
操作類型 Operation Types	自鎖Latching；自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
B	MP30-A1	41.0	Ø34	1.5	M30x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP30-A2	41.0	Ø34	1.5	M30x1	D:單點 Dot	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP30-A3	41.0	Ø34	1.5	M30x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP30-B1	41.0	Ø34	1.5	M30x1			250VAC	5A	不銹鋼 Stainless steel
B	MP30-B2	41.0	Ø34	1.5	M30x1			250VAC	5A	不銹鋼 Stainless steel
B	MP30-B3	43.1	Ø34	2.0	M30x1			250VAC	5A	不銹鋼 Stainless steel
B	MP40-A1	42.5	Ø44.5	2.5	M40x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel
B	MP40-A2	40.5	Ø44.5	2.5	M40x1	R:環形 Ring	ROYGBW	250VAC	5A	不銹鋼 Stainless steel



示意圖 Schematic diagram



規格 Specification

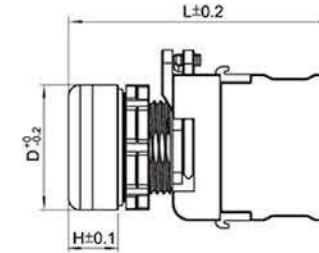
Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	ITH 10A
操作壓力 Actuating Force	約About 10~35N
防護等級 Protection Grade	IP65,IK08 ; IP40,IK08
操作類型 Operation Types	自鎖Latching ; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	帶燈類型 LED Type	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
C	PP12-A1	37.9	Ø18.2	9.5	M12x1	E:長方形 Rect	ROYGBW	1.8~250V	5A	塑料 Plastic PA66
C	PP12-A2	37.4	Ø14.3	9.0	M12x1	S:方形 Square	ROYGBW	1.8~250V	5A	塑料 Plastic PA66
C	PP12-A3	36.7	Ø14.2	9.0	M12x1	Y:圓形 Circle	ROYGBW	1.8~250V	5A	塑料 Plastic PA66
C	PP16-A1	40.0	Ø24	10.0	M16x1	E:長方形 Rect	ROYGBW	1.8~250V	5A	塑料 Plastic PA66
C	PP16-A2	40.0	Ø18	10.0	M16x1	S:方形 Square	ROYGBW	1.8~250V	5A	塑料 Plastic PA66
C	PP16-A3	40.0	Ø18	10.0	M16x1	Y:圓形 Circle	ROYGBW	1.8~250V	5A	塑料 Plastic PA66
C	PP16-B1	45.5	Ø24	15.5	M16x1	N:旋鈕 Knob	ROYGBW	1.8~250V	5A	塑料 Plastic PA66
C	PP16-B2	45.5	Ø18	15.5	M16x1	N:旋鈕 Knob	ROYGBW	1.8~250V	5A	塑料 Plastic PA66
C	PP16-B3	37.5	Ø30	18.0	M16x1	Y:圓形 Circle		1.8~250V	5A	塑料 Plastic PA66
C	PP16-C1	39.0	Ø24	9.0	M16x1	K:鑰匙型 Key		1.8~250V	5A	塑料 Plastic PA66
C	PP16-C2	39.0	Ø18	9.0	M16x1	K:鑰匙型 Key		1.8~250V	5A	塑料 Plastic PA66
C	PP16-C3	39.0	Ø18	9.0	M16x1	K:鑰匙型 Key		1.8~250V	5A	塑料 Plastic PA66



示意圖 Schematic diagram



規格 Specification

Items	Standard
接觸電阻 Contact Resistance	≤50mΩ
絕緣電阻 Insulation Resistance	≥100MΩ
絕緣強度 Dielectric Strength	2000VAC
環境溫度 Environment Temperature	-20°C~+55°C
機械壽命 Mechanical Life	100,000~500,000次cycles
電氣壽命 Electrical Life	10,000~50,000次cycles
螺母扭矩 Nut Torque	ITH 10A
操作壓力 Actuating Force	約About 10~35N
防護等級 Protection Grade	IP65,IK08 ; IP40,IK08
操作類型 Operation Types	自鎖Latching ; 自復Momentary

開關參數 Switch Parameters

開關結構 Switch Structure	型號 Model No.	L	D	H	安裝孔 M Hole Size	操作行程 Operating Travel	燈珠顏色 Led Color	額定電壓 Rated Voltage	額定電流 Rated Current	外殼材料 Material
A	PP38-A1	61.3	Ø29	11.5	M22x1	≈ 5mm	ROYGBW	1.8~380V	15A	塑料 Plastic PA66
A	PP38-A2	65.8	Ø29	16.0	M22x1	≈ 5mm	ROYGBW	1.8~380V	15A	塑料 Plastic PA66
A	PP38-A3	65.8	Ø29	16.0	M22x1	≈ 5mm		1.8~380V	15A	塑料 Plastic PA66
A	PP38-B1	77.8	Ø40	27.8	M22x1	≈ 5mm	ROYGBW	1.8~380V	15A	塑料 Plastic PA66
A	PP38-B2	77.8	Ø30	27.8	M22x1	≈ 5mm	ROYGBW	1.8~380V	15A	塑料 Plastic PA66
A	PP38-C1	75.6	Ø22	38.4	M22x1	≈ 5mm		1.8~380V	15A	塑料 Plastic PA66
A	PP38-C2	75.6	Ø22	25.8	M22x1	≈ 5mm	ROYGBW	1.8~380V	15A	塑料 Plastic PA66
A	PP38-D1	70.9	Ø22	21.1	M22x1	≈ 5mm	ROYGBW	1.8~380V	15A	塑料 Plastic PA66
A	PP38-Z	65.0	55x30	15.2	M22x1	≈ 5mm	ROYGBW	1.8~380V	15A	塑料 Plastic PA66
A	PP22-指示燈	50.5	Ø29	12.5	M22x1	≈ 5mm		1.8~380V	15A	塑料 Plastic PA66



MT16-A1



MT19-A1



MT22-A1



MT25-A1



MT16-B1



MT19-B1



MT22-B1



PP16-B2

開關功能：自鎖、自復、分段調光、無極調光、雙色燈  
Switch function: latching, momentary, step adjusted, stepless adjusted, double color light

這是一款單通道觸摸調光按鍵，芯片採用獨特的電容感應式觸摸演算法，廣泛適用於面板為接觸式控制的產品。採用帶背光指示的外型設計，即使在黑暗中也很方便找到開關，而且一體化的設計，體積小，安裝方便適用於各種面板安裝，如金屬、木頭、陶瓷...等。

This is a single touch dimmer switch chip uses a unique touch capacitive sensing algorithm, widely used in the panel for touch control products. Using touch-tone exterior design, with backlight indication that is very easy to find it in dark, integrated design, small size, easy installation, and for a variety of panel installation. such as metal, wood, ceramic, etc.

使用方式：

在面板上鑽出對應的孔徑，將觸摸開關插入孔中，鎖上螺帽後接上負載和電源，通電後即可使用。

Method of application: To drill the corresponding hole on the panel and put then touch switch into the hole to bring gongs cap is tightened and connected to the load power supply, can be used after power.

產品特性Product feature:

- 內置上電復位(POR) Power-On Reset
- 內置低電壓復位(LVR) Low voltage Reset
- 採用低功耗的CMOS技術 Use low power consumption CMOS Technology
- 寬電源電壓：輸入電源端，給予6~24V直流電源，產品功耗低，工作穩定  
Wide supply voltage range : power input end supply 6~24V,low power products, work stably
- 抗傳導、抗輻射干擾，近距離，多角度手機干涉及對講機干擾，均不影響產品靈敏度與可靠性  
Resist-conduction、Great radiated interference characteristics, close range, multi-angle phone and interphone, do not affect the sensitivity and reliability of product.

產品功能Product Function:

- 產品尺寸 Product siz: 16mm 19mm 22mm 25mm
- 產品材質 Product material : Stainless steel, Nickel plated brass
- 面板外型A：凹面 P平面 Panel shape A:concave B:Flat
- 連接方式：J：接插腳 X：引線 Connection wat: J:Connector X:wiring
- 連接線長度 Wire length:10cm 15cm 20cm
- 操作類型 Operation type: T: 無極調光 Stepless adjusted、F: 分段調光 Step adjusted、Z: 自鎖Latching、N: 自復Momentary

電氣參數 Product parameter :

- 工作電壓 Working power voltage:6~24VDC
- 工作電流 Load current:0~7A
- 環境溫度 Environment Temperature:-20°C~+70°C

特殊符號 Special Symbols								1	2	3	4	5	6	7						
文字符號 Special Symbols											8	9	10	11	12	13	14	15	16	17
											18	19	20	21	22	23	24	25	26	27
數字及符號 Numbers and Symbols											28	29	30	31	32	33	34	35	36	37
											38	39	40	41	42	43	44	45	46	47
其他符號 Other Symbols											48	49	50	51	52	53	54	55	56	57
											58	59	60	61	62	63	64	65	66	67

註：1.客戶可自行提供各種符號進行訂製。  
2.採用各種先進的技術滿足您的任何要求，標籤具有良好的性能，耐磨耐腐蝕。  
Note: 1. Customers can provide a variety of customized symbols.  
2. Adopting kinds of advanced technology to meet your any requirement. The label has good performance in abrase and erode resistant.

1. 表面雷射雕刻  
Laser Symbol



2. 頭部形狀訂製  
The Head Shape Custom



3. 頭部形狀訂製  
The Head Shape Custom



4. 顏色外觀訂製  
Color Customization



5. 外觀顏色訂製  
Color Customization



6. 外觀顏色訂製  
Color Customization



7. 外觀顏色訂製  
Color Customization



8. 發光圈訂製  
Luminous Ring Custom



9. 發光圈訂製  
Luminous Ring Custom



10. 發光圈訂製  
Luminous Ring Custom



11. 表面雷射刻字  
Laser Symbol



12. 表面雷射刻字  
Laser Symbol



MP16尾部接線端子  
MP16 Socket



MP19尾部接線端子  
MP19 Socket



MP22尾部接線端子  
MP22 Socket



MP25尾部接線端子  
MP25 Socket



註：金屬按鈕產品根據客戶需要要求訂製各式規格，包括雷射刻字、更改安裝尺寸、改變外觀顏色、改變材料...等。  
Note: The metal button products according to customer demand customize various specifications, including laser lithography characters, change the installation size, changed appearance color, material, etc.



RoHS Compliant & Halogen Free Support



- 品質保證制度— IATF16949, ISO 9001, ISO 14001, OHSAS 18001。
- 品質政策—精益求精，持續滿足客戶需求。
- 品質承諾—建立品質管理系統，全員參與品質活動，創造高品質產品，滿足客戶的需求。

- **Quality Assurance System**—IATF16949, ISO 9001, ISO 14001, OHSAS 18001.
- **Quality Policy**—Constant Pursuit of Excellence. Continuous Satisfying Customers' Demands.
- **Quality Promise**—Establish Quality Management System, Full Participation in Quality Control Activities Create High-quality Products, Satisfy Customer Demands.



華傑集團產品，均符合並優於RoHS，Reach即無鹵素之規範要求，包括：

- RoHS(歐盟危害物質限用指令)
- WEEE(電子及電器設備廢棄物處理指令)
- 全氟辛烷磺酸(PFOS)的銷售與限用指令

All Products of Hua-Jie Group conform and are superior to RoHS and Non-Halogen specification and requirement, include

- RoHS (Restriction of Hazardous Substance)
- REACH (Registration, Evaluation, Authorisation and Restriction of Chemical)
- WEEE (Directive on Waste Electrical and Electronic Equipment)
- Restriction of Perfluorooctane Sulfonate (PFOS)

- ◆ Pb < 1000ppm
- ◆ Cd < 100ppm
- ◆ Hg < 5ppm
- ◆ Cr<sup>6+</sup> < 0ppm
- ◆ PBB < 0ppm
- ◆ PBDE < 0ppm
- ◆ Br < 900ppm
- ◆ Cl < 900ppm
- ◆ Br+Cl < 1500ppm

期許 扮演人類與物理世界  
溝通的介面，

建立起人類通往  
未來科技世界的通道。

Yangzhou plant ■  
Suzhou plant ■  
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