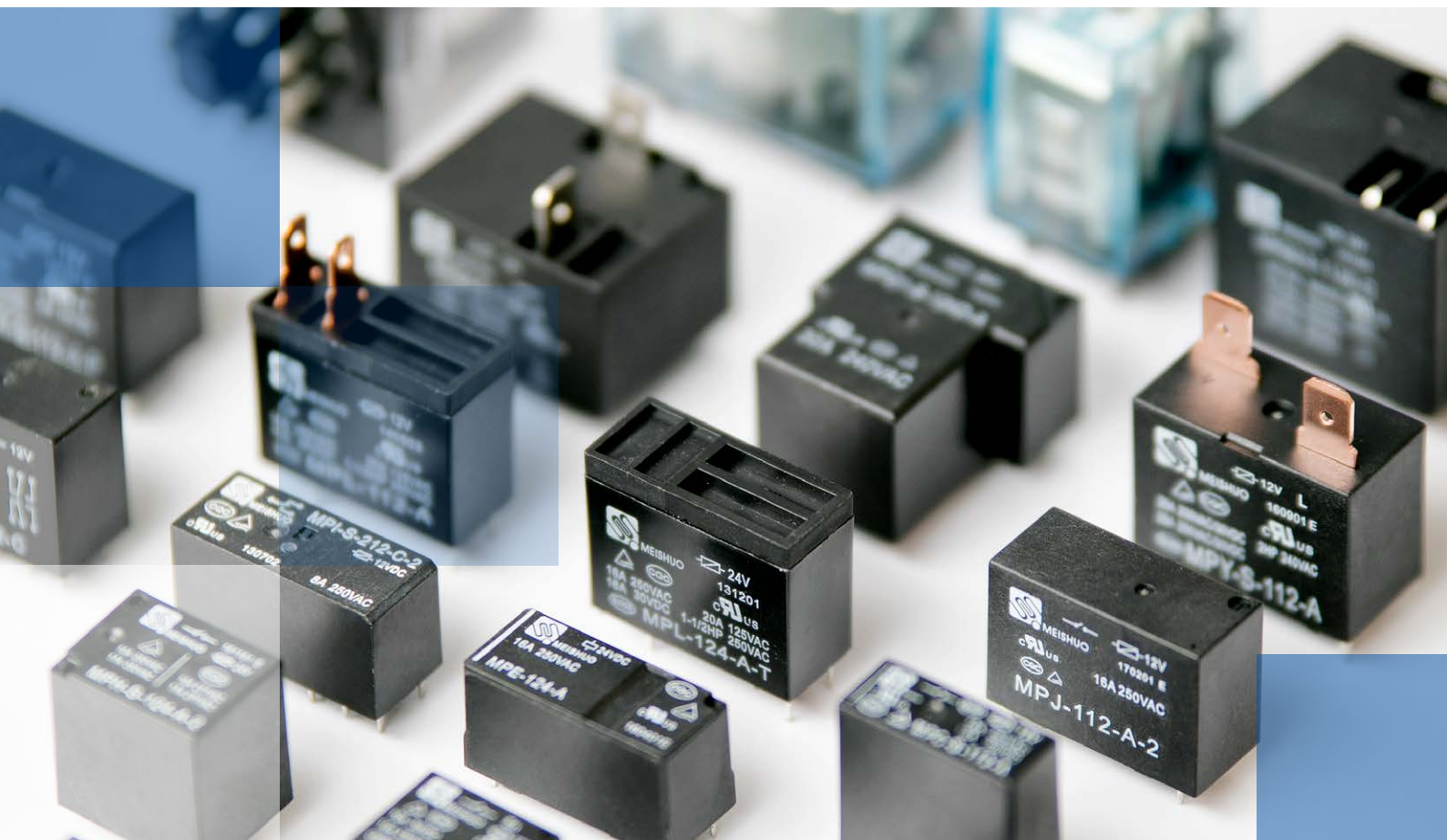




GENERAL-PURPOSE RELAY
通用继电器

产品选型手册
PRODUCTS CATALOGUE
2017 年 >>

企业简介

Brief Introduction

浙江美硕电气科技股份有限公司是一家专业研发、生产及销售继电器、电动水阀等产品的高新技术企业，产品广泛应用于家用电器、汽车电子、工业控制、电力电子、智能家居等领域。

公司秉承“严谨、拼搏、创新、进取”的企业精神，坚持以“品质是获得信任的砝码，是竞争致胜的关键，是永无止境的追求，价值和尊严的起点”为经营理念，不断进行管理创新、技术创新和服务创新，力争使美硕电气成为全球元器件优质供应商。

Zhejiang Meishuo Electric Technology Co., Ltd is a high and new technology enterprise, specialized in R&D, production and sales of relays and electric water valves, products are widely used in the area of home appliance, automotive, industry and intelligent home.

Meishuo had always been adhering to the business philosophy "quality is the weight of trust, is the key of competition success, is never-ending of pursuit, is the start of value and dignity". Continue to manage innovation, technological innovation, and service to be the best electronic components supplier in the world.



定制化开发

Customized development

美硕可为顾客提供专业的产品定制开发服务，满足客户的个性化需求。作为一家高新技术企业，美硕拥有雄厚的技术实力、完备的产品开发流程和先进的品质管控体系，确保了新产品开发的及时性和有效性。



Meishuo can provide customers with customized product development services to meet the individual needs of customers. As a high-tech enterprise, Meishuo has a strong technical force, a complete product development process and advanced quality control system to ensure that the development of new product in timeliness and effectiveness.

先进的制造技术

美硕拥有专业的自动化设计团队，不断吸收国外先进理念进行制造工艺和自动化设备的改进和优化，并参与到产品的前期设计开发过程中。

我们始终坚持以为客户提供更优质的产品为准则，将品质管控的思路注入到自动化生产过程中，大幅提高了产品的一致性和可靠性。



ADVANCED

MANUFACTURING TECHNOLOGY

Meishuo owns professional automated design team, continue to improve and optimize by absorbing foreign advanced concepts for manufacturing processes and automation equipment, and participate in the pre-design and development process.

We always adhere to the criterion to provide customers with better quality product, put quality control ideas into the automated production process, finally increase product consistency and reliability.

权威认证 品质保证

Authoritative certification and
quality assurance



高品质是赢得市场的保证，而有效的现代化管理和质量体系是支撑高品质的前提。美硕以力求突破创新的精神，作为不断追求精湛品质的动力。

High quality is the guarantee to win the market. Effective modern management and quality system are premise of high quality. MeiShuo strive to break through the spirit of innovation. As the constant pursuit of superb quality.

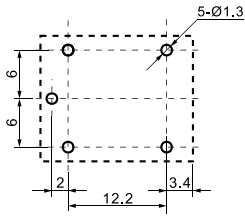
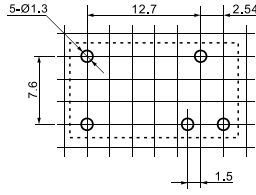
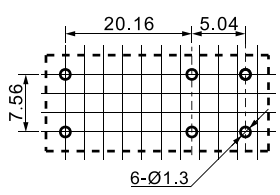
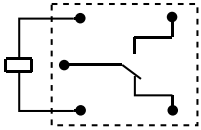
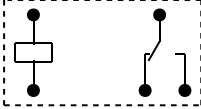


产品目录 Product Contents

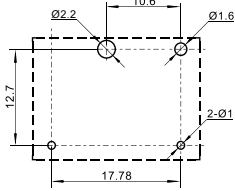
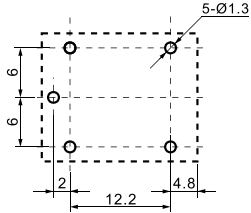
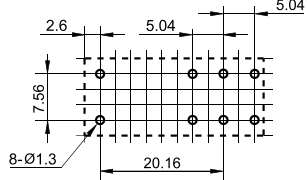
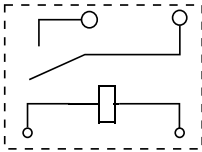
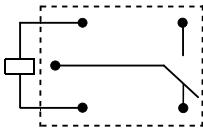
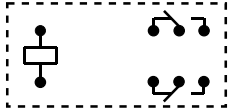


P.07	▶	MPA
P.10	▶	MPD
P.13	▶	MPE
P.16	▶	MPF
P.19	▶	MPH
P.22	▶	MPI
P.25	▶	MPJ
P.28	▶	MPL
P.31	▶	MPM
P.35	▶	MPN
P.39	▶	MPP
P.41	▶	MPQ1
P.46	▶	MPQ2
P.49	▶	MPQ4
P.52	▶	MPR
P.55	▶	MPY
P.58	▶	MALC
P.61	▶	MALN

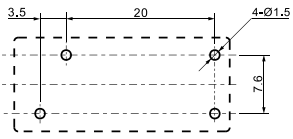
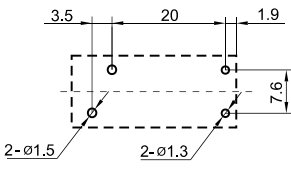
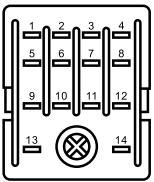
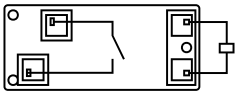
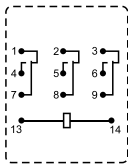
通用继电器简要参数一览表 SUMMARY PARAMETER LIST

产品型号 Model	MPA	MPD	MPE
产品照片 Product Picture			
外形尺寸 L × W × H(mm) Outline Dimensions	18.7 × 15.0 × 15.2	18.4 × 10.2 × 15.5	29.0 × 12.7 × 15.5
触点参数 Contact Data			
触点形式 Contact Arrangement	1A, 1B, 1C	1A, 1C	1A
额定负载 (阻性) Rated Load(Res.)	10A 250VAC/30VDC	标准型 Standard Type—— 1A: 10A 250VAC 5A 250VAC 1C: NO/NC 10A/3A 250VAC NO/NC 5A/3A 250VAC	16A 250VAC
		灵敏型 Sensitive Type—— 1A: 5A 250VAC	
电气寿命 (Min.) Electrical Life	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS
机械寿命 (Min.) Mechanical Life	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS
线圈参数 Coil Data			
额定电压 Rated Voltage	5, 6, 9, 12, 24, 48, 60, 72VDC	3, 5, 6, 9, 12, 18, 24, 48VDC	5, 6, 9, 12, 18, 24, 48VDC
功耗 Coil Power	0.36W, 0.45W	标准型 Standard Type: 0.45W 灵敏型 Sensitive Type: 0.2W	0.4W, 0.53W
性能参数 Characteristics			
绝缘电阻 (@ 500VDC) Insulation Resistanc	100MΩ	1000MΩ	1000MΩ
介质耐压 (触点与线圈间) Dielectric Strength (Between coil & contacts)	1500VAC	4000VAC	5000VAC
环境温度 Ambient Temperature	-40℃ ~+105℃	-40℃ ~+105℃	-40℃ ~+85℃
动作 / 释放时间 (最大) Operater/Release Time(Max.)	10ms/5ms	10ms/5ms	15ms/5ms
安装孔位图 (底视图) PCB Layout(Bottom View)			
接线图 (底视图) Wiring Diagram(Bottom View)			
引出端方式 Termination	印制板式 PCB	印制板式 PCB	印制板式 PCB
页码 Page	07-09	10-12	13-15

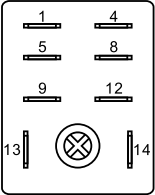
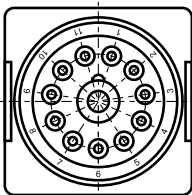
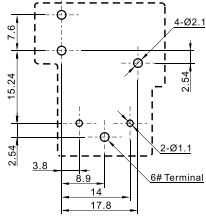
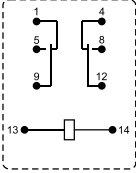
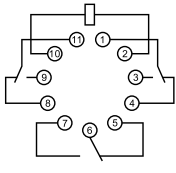
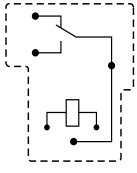
通用继电器简要参数一览表 SUMMARY PARAMETER LIST

产品型号 Model	MPF	MPH	MPI
产品照片 Product Picture			
外形尺寸 L × W × H(mm) Outline Dimensions	23.0 × 16.1 × 10.6	21.0 × 16.0 × 21.6	29.0 × 12.7 × 15.9
触点参数 Contact Data			
触点形式 Contact Arrangement	1A	1A, 1C	1A, 1B, 1C 2A, 2B, 2C
额定负载 (阻性) Rated Load(Res.)	普通型 Common Type—— 10A 250VAC	普通型 Common Type—— 10A 250VAC	1C: NO/NC: 16A/8A 250VAC NO/NC: 12A/6A 250VAC 2C: NO/NC: 8A/4A 250VAC
	高负载型 High Load Type—— 16A 250VAC	高负载型 High Load Type—— 17A 250VAC	
电气寿命 (Min.) Electrical Life	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS
机械寿命 (Min.) Mechanical Life	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS
线圈参数 Coil Data			
额定电压 Rated Voltage	5, 6, 9, 12, 18, 24, 48VDC	5, 6, 9, 12, 18, 24, 36, 48, 60VDC	5, 6, 9, 12, 18, 24, 48, 72, 110VDC
功耗 Coil Power	0.2W	0.36W	标准型: 0.53W 灵敏型: 0.4W
性能参数 Characteristics			
绝缘电阻 (@ 500VDC) Insulation Resistanc	1000MΩ	100MΩ	1000MΩ
介质耐压 (触点与线圈间) Dielectric Strength (Between coil & contacts)	2500VAC	2500VAC	5000VAC
环境温度 Ambient Temperature	-40℃ ~+105℃	-40℃ ~+105℃	-40℃ ~+105℃
动作 / 释放时间 (最大) Operater/Release Time(Max.)	15ms/8ms	15ms/5ms	15ms/8ms
安装孔位图 (底视图) PCB Layout(Bottom View)			
接线图 (底视图) Wiring Diagram(Bottom View)			
引出端方式 Termination	印制板式 PCB	印制板式 PCB	印制板式 PCB
页码 Page	16-18	19-21	22-24

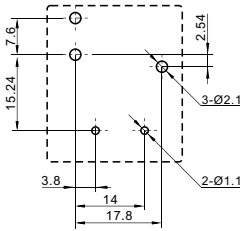
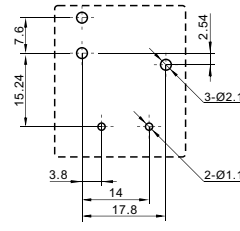
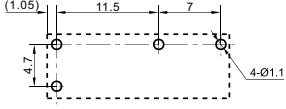
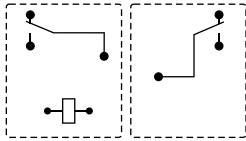
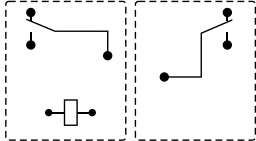
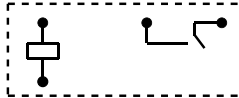
通用继电器简要参数一览表 SUMMARY PARAMETER LIST

产品型号 Model	MPJ	MPL	MPM
产品照片 Product Picture			
外形尺寸 L × W × H(mm) Outline Dimensions	29.2 × 12.8 × 20.6	29.0 × 12.6 × 24.2	28.0 × 21.5 × 35.0
触点参数 Contact Data			
触点形式 Contact Arrangement	1A	1A	2C, 3C, 4C
额定负载 (阻性) Rated Load(Res.)	普通型 Common Type—— 10A 250VAC/30VDC	16A 250VAC/30VDC	2C,3C—— 7A 250VAC/30VDC
	高负载型 High Load Type—— 16A 250VAC/30VDC		4C—— 5A 250VAC/30VDC
电气寿命 (Min.) Electrical Life	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS
机械寿命 (Min.) Mechanical Life	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS
线圈参数 Coil Data			
额定电压 Rated Voltage	5, 6, 9, 12, 18, 24, 48VDC	5, 6, 9, 12, 18, 24, 48VDC	DC: 5, 6, 12, 24, 48, 110VDC AC: 6, 12, 24, 48, 120, 220/240VAC
功耗 Coil Power	标准型: 0.72W 灵敏型: 0.54W	0.54W	DC: 0.9~1.1W AC: 1.2~1.8VA
性能参数 Characteristics			
绝缘电阻 (@ 500VDC) Insulation Resistanc	1000MΩ	1000MΩ	1000MΩ
介质耐压 (触点与线圈间) Dielectric Strength (Between coil & contacts)	5000VAC	5000VAC	1500VAC
环境温度 Ambient Temperature	-40℃ ~+105℃	-40℃ ~+105℃	-40℃ ~+70℃
动作 / 释放时间 (最大) Operator/Release Time(Max.)	20ms/8ms	20ms/10ms	25ms/25ms
安装孔位图 (底视图) PCB Layout(Bottom View)			
接线图 (底视图) Wiring Diagram(Bottom View)			
引出端方式 Termination	印制板式 PCB	印制板, 印制板 + 快连接式 PCB, PCB+QC	印制板式 PCB 插入式 Socket
页码 Page	25-27	28-30	31-34

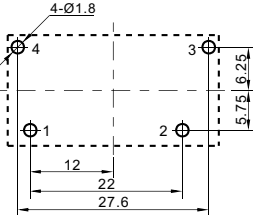
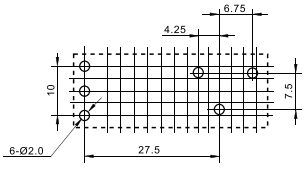
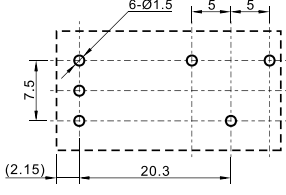
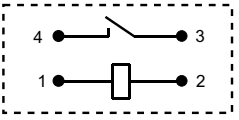
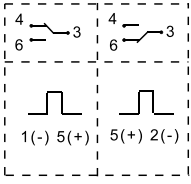
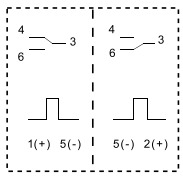
通用继电器简要参数一览表 SUMMARY PARAMETER LIST

产品型号 Model	MPN	MPP	MPQ1
产品照片 Product Picture			
外形尺寸 L × W × H(mm) Outline Dimensions	28.0 × 21.5 × 35.0	33.6 × 33.6 × 51.5	31.8 × 27.1 × 19.4
触点参数 Contact Data			
触点形式 Contact Arrangement	1C, 2C, 4C	2C, 3C	1A, 1B, 1C
额定负载 (阻性) Rated Load(Res.)	1C—— 15A 250VAC/30VDC 2C,4C—— 10A 250VAC/30VDC	2C—— 10A 250VAC/30VDC 3C—— NO: 10A 250VAC/30VDC NC: 5A 250VAC/30VDC	NO: 30A 240VAC/30VDC NC: 20A 240VAC/30VDC
电气寿命 (Min.) Electrical Life	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS	1 × 10 ⁶ 次 OPS
机械寿命 (Min.) Mechanical Life	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS
线圈参数 Coil Data			
额定电压 Rated Voltage	DC: 5, 6, 12, 24, 48, 110VDC AC: 6, 12, 24, 48, 120, 220/240VAC	DC: 5, 6, 12, 24, 48, 110VDC AC: 6, 12, 24, 48, 120, 220/240VAC	5, 6, 9, 12, 18, 24, 48, 110VDC
功耗 Coil Power	DC: 0.9~1.1W AC: 1.2~1.8VA	DC: 1.5W AC: 2.7VA	0.9W
性能参数 Characteristics			
绝缘电阻 (@ 500VDC) Insulation Resistanc	500MΩ	500MΩ	1000MΩ
介电耐压 (触点与线圈间) Dielectric Strength (Between coil & contacts)	1500VAC	2500VAC	3500VAC
环境温度 Ambient Temperature	-40℃ ~+70℃	-40℃ ~+70℃	-40℃ ~+105℃
动作 / 释放时间 (最大) Operator/Release Time(Max.)	25ms/25ms	25ms/25ms	15ms/10ms
安装孔位图 (底视图) PCB Layout(Bottom View)			
接线图 (底视图) Wiring Diagram(Bottom View)			
引出端方式 Termination	印制板式 PCB 插入式 Socket	标准电子管脚式引出端 Standard electronic tube end	印制板式 PCB
页码 Page	35-38	39-40	41-45

通用继电器简要参数一览表 SUMMARY PARAMETER LIST

产品型号 Model	MPQ2	MPQ4	MPR
产品照片 Product Picture			
外形尺寸 L × W × H(mm) Outline Dimensions	32 × 27.1 × 28.3	32 × 27.1 × 20.1	20.5 × 7.2 × 15
触点参数 Contact Data			
触点形式 Contact Arrangement	1A, 1B, 1C	1A, 1B, 1C	1A
额定负载 (阻性) Rated Load(Res.)	NO: 30A 240VAC/30VDC NC: 20A 240VAC/30VDC	NO: 30A 240VAC/30VDC NC: 20A 240VAC/30VDC	5A 250VAC/30VDC
电气寿命 (Min.) Electrical Life	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS
机械寿命 (Min.) Mechanical Life	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS
线圈参数 Coil Data			
额定电压 Rated Voltage	5, 6, 9, 12, 18, 24, 48, 110VDC	5, 6, 9, 12, 18, 24, 48, 110VDC	5, 6, 9, 12, 18, 24VDC
功耗 Coil Power	0.9W	0.9W	0.2W
性能参数 Characteristics			
绝缘电阻 (@ 500VDC) Insulation Resistanc	1000MΩ	1000MΩ	1000MΩ
介电耐压 (触点与线圈间) Dielectric Strength (Between coil & contacts)	3500VAC	3500VAC	4000VAC
环境温度 Ambient Temperature	-40℃ ~+105℃	-40℃ ~+105℃	-40℃ ~+85℃
动作 / 释放时间 (最大) Operator/Release Time(Max.)	15ms/10ms	15ms/10ms	10ms/10ms
安装孔位图 (底视图) PCB Layout(Bottom View)			
接线图 (底视图) Wiring Diagram(Bottom View)			
引出端方式 Termination	印制板式 + 快连接式 PCB+QC	印制板式 + 快连接式 PCB+QC	印制板式 PCB
页码 Page	46-48	49-51	52-54

通用继电器简要参数一览表 SUMMARY PARAMETER LIST

产品型号 Model	MPY	MALC	MALN
产品照片 Product Picture			
外形尺寸 L × W × H(mm) Outline Dimensions	30.2 × 15.8 × 23.3	39.0 × 15.0 × 29.3	29.0 × 12.8 × 16.8
触点参数 Contact Data			
触点形式 Contact Arrangement	1A	1A, 1B, 1C	1A, 1B, 1C
额定负载 (阻性) Rated Load(Res.)	20A 250VDC	50A 277VAC	16A 250VAC
电气寿命 (Min.) Electrical Life	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS	1 × 10 ⁵ 次 OPS
机械寿命 (Min.) Mechanical Life	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS	1 × 10 ⁶ 次 OPS
线圈参数 Coil Data			
额定电压 Rated Voltage	5, 12, 24, 48VDC	6, 9, 12, 24, 48VDC	6, 9, 12, 24VDC
功耗 Coil Power	0.9W	单线圈 : 1.5W 双线圈 : 3W	单线圈 : 0.4W 双线圈 : 0.6W
性能参数 Characteristics			
绝缘电阻 (@ 500VDC) Insulation Resistanc	1000MΩ	1000MΩ	1000MΩ
介质耐压 (触点与线圈间) Dielectric Strength (Between coil & contacts)	4500VAC	4000VAC	4000VAC
环境温度 Ambient Temperature	-25℃ ~+105℃	-40℃ ~+85℃	-40℃ ~+85℃
动作 / 释放时间 (最大) Operater/Release Time(Max.)	15ms/5ms	15ms/15ms	10ms/5ms
安装孔位图 (底视图) PCB Layout(Bottom View)			
接线图 (底视图) Wiring Diagram(Bottom View)			
引出端方式 Termination	印制板, 印制板 + 快连接式 PCB, PCB+QC	印制板式 PCB	印制板式 PCB
页码 Page	55-57	58-60	61-63



特性 FEATURES

- 15A 触点切换能力
- 具有一组常开、一组常闭、一组转换触点形式
- 超小型、标准印制板引出脚
- 外形尺寸 (18.7 × 15.0 × 15.2) mm
- 15A switching capability
- 1 form A, 1 form B, and 1 form C configurations
- Subminiature, standard PCB Layout
- Outline dimensions (18.7 × 15.0 × 15.2) mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A、1B、1C
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	10A 250VAC/30VDC
最大切换电流	Max. Switching Current	10A
最大切换电压	Max. Switching Voltage	250VAC/30VDC
最大切换功率	Max Switching Power	2500VA/300W
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	100MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 1500VAC 1min
		断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤10ms
复归时间	Release Time	≤5ms
环境温度	Ambient Temperature	-40℃ ~+105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G)
		强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	塑封型 Sealed
重量	Unit Weight	约 Approx. 10g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.5	6.5	70	约 Approx. 0.36
6	≤4.5	≥0.6	7.8	100	
9	≤6.75	≥0.9	11.7	225	
12	≤9	≥1.2	15.6	400	
24	≤18	≥2.4	31.2	1600	
48	≤36	≥4.8	62.4	6400	
5	≤3.75	≥1.7	6.5	55.5	约 Approx. 0.45
6	≤4.5	≥0.6	7.8	80	
9	≤6.75	≥0.9	11.7	180	
12	≤9	≥1.2	15.6	320	
24	≤18	≥2.4	31.2	1280	
48	≤36	≥4.8	62.4	5120	

安全认证 APPROVALS

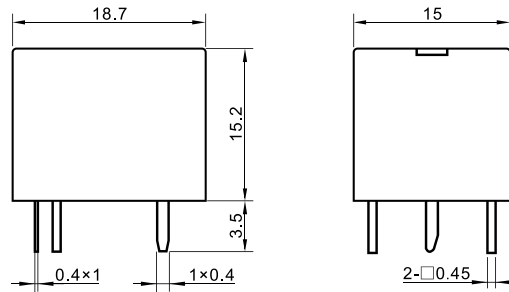
安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E313266	R50184948	CQC09002036999
负载 Rating	10A 250VAC/7A28VDC 15A 125VAC 15A 240VAC 5A 250VAC TV-5	10A 250VAC/30VDC 5A 250VAC	10A 250VAC/30VDC 5A 250VAC/30VDC 15A 125VAC

订货标记示例 ORDERING INFORMATION

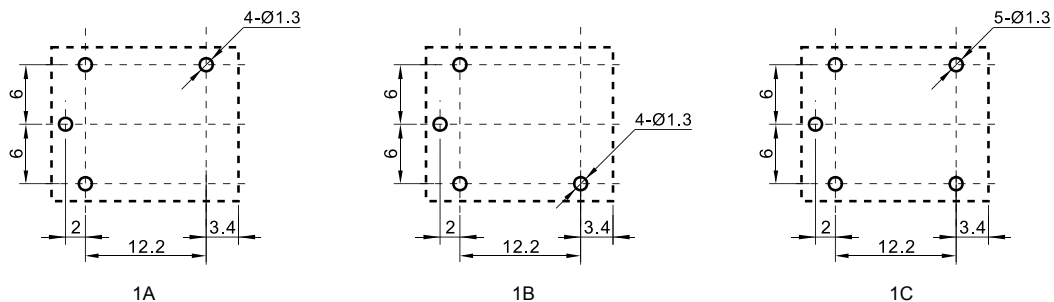
			MPA	-S	-1	12	-A
产品型号 Model:	MPA						
产品结构 Structure:	S: 塑封型 Sealed						
触点组数 Contact Group:	1: 1 组 1 Group						
线圈电压 Coil Voltage:	5、6、9、12、24、48、60、72 VDC						
触点形式 Contact Form:	A: 常开 B: 常开 C: 转换 A: NO B: NC C: NO/NC						

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT (单位 Unit: mm)

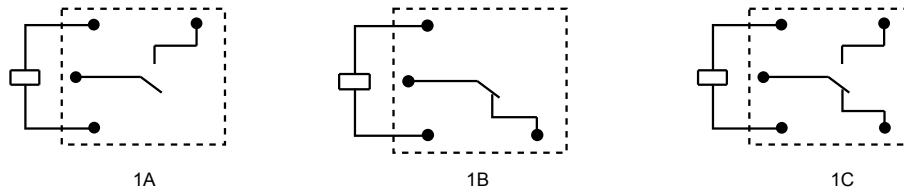
外形尺寸 OUTLINE DIMENSIONS



安装孔尺寸 PCB LAYOUT (底视 Bottom View)



接线图 WIRING DIAGRAM (底视 Bottom View)



备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;

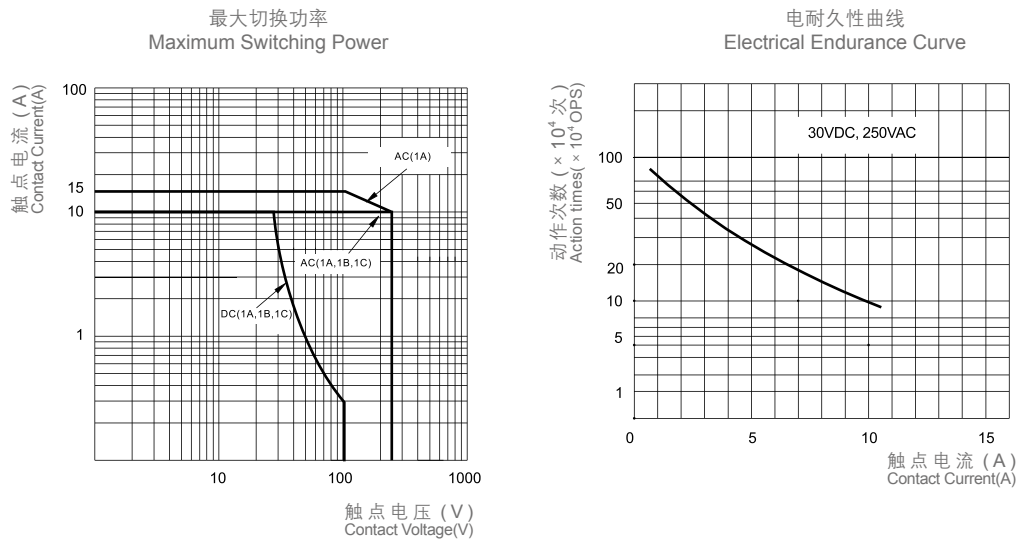
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



声明 STATEMENT:

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特性 FEATURES



- 10A 触点切换能力
 - 具有一组常开、一组转换触点形式
 - 标准印制板引出脚
 - 塑封型和防焊剂型可供选择
 - 外形尺寸 18.4 × 10.2 × 15.5mm
- 10A switching capability
 - 1 form A and 1 form C configurations
 - Standard PCB layout
 - Sealed and flux proofed types available
 - Outline dimensions 18.4 × 10.2 × 15.5mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A、1C	
触点材料	Contact Material	银合金 Silver Alloy	
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)	
额定负载 (阻性)	Rated Load(Res.)	标准型 Standard Type	NO: 5A/10A 250VAC/30VDC NC: 3A 250VAC/30VDC
		灵敏型 Sensitive Type	NO: 5A 250VAC/30VDC NC: 3A 250VAC/30VDC
最大切换电流	Max. Switching Current	10A	
最大切换电压	Max. Switching Voltage	250VAC/30VDC	
最大切换功率	Max Switching Power	2500VA/300W	
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS	
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS	

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 4000VAC 1min
		断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤10ms
复归时间	Release Time	≤5ms
环境温度	Ambient Temperature	-40℃ ~+105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G)
		强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	塑封型 Sealed, 防焊剂型 Flux Proofed
重量	Unit Weight	约 Approx. 6g

安全认证 APPROVALS

安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50184948	CQC10002049964
负载 Rating	10A 250VAC/30VDC 5A 250V/30VDC 10A 125VAC/30VDC	A:10A 250VAC/30VDC 5A 250VAC/30VDC C:3A 250VAC/30VDC	A:10A 250VAC/30VDC 5A 250VAC/30VAC C:3A 250VAC/30VDC

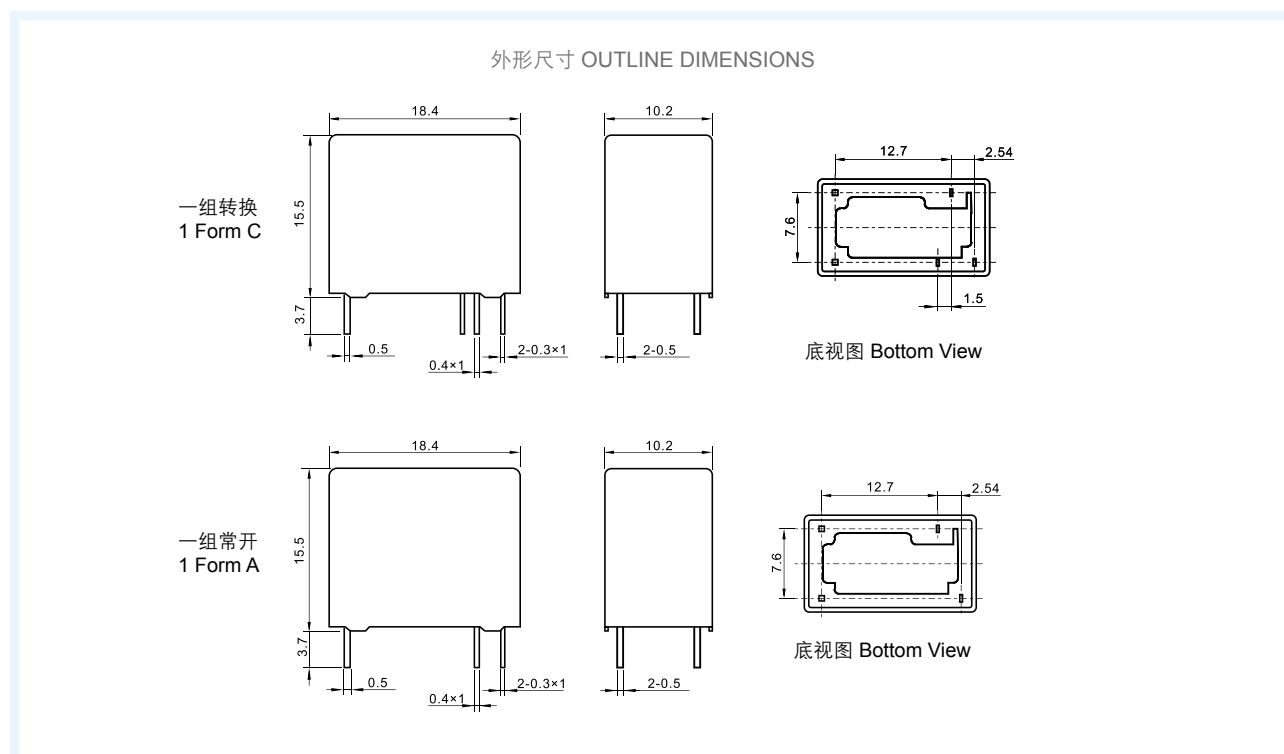
线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance $\Omega \pm 10\%$	线圈功耗 Coil Power W
3	≤ 2.25	≥ 0.15	3.9	20	约 Approx. 0.45
5	≤ 3.75	≥ 0.25	6.5	55.6	
6	≤ 4.5	≥ 0.3	7.8	80	
9	≤ 6.75	≥ 0.45	11.7	180	
12	≤ 9	≥ 0.6	15.6	320	
18	≤ 13.5	≥ 0.9	23.4	720	
24	≤ 18	≥ 1.2	31.2	1280	
48	≤ 36	≥ 2.4	62.4	5120	
3	≤ 2.25	≥ 0.15	3.9	45	约 Approx. 0.2
5	≤ 3.75	≥ 0.25	6.5	125	
6	≤ 4.5	≥ 0.3	7.8	180	
9	≤ 6.75	≥ 0.45	11.7	405	
12	≤ 9	≥ 0.6	15.6	720	
18	≤ 13.5	≥ 0.9	23.4	1620	
24	≤ 18	≥ 1.2	31.2	2880	
48	≤ 36	≥ 2.4	62.4	11520	

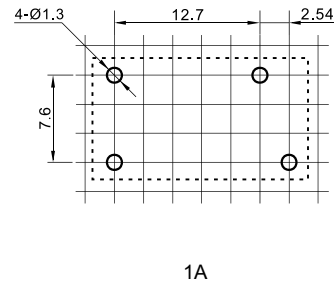
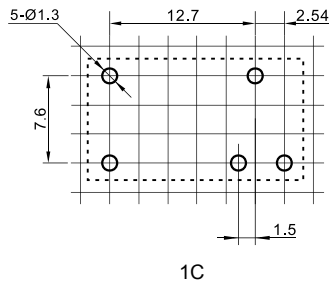
订货标记示例 ORDERING INFORMATION

			MPD	-S	-1	12	-A
产品型号 Model:	MPD						
产品结构 Structure:	S: 塑封型 Sealed 防焊剂型 Flux Proofed						
触点组数 Contact Group:	1 : 1 组 1 Group						
线圈电压 Coil Voltage:	3、5、6、9、12、18、24、48 VDC						
触点形式 Contact Form:	A: 常开 NO C: 转换 NO/NC						

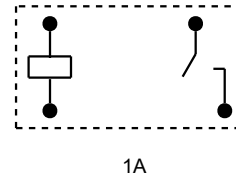
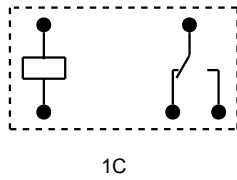
外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)



安装孔尺寸 PCB LAYOUT (底视图 Bottom View)



接线图 WIRING DIAGRAM (底视图 Bottom View)



备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;

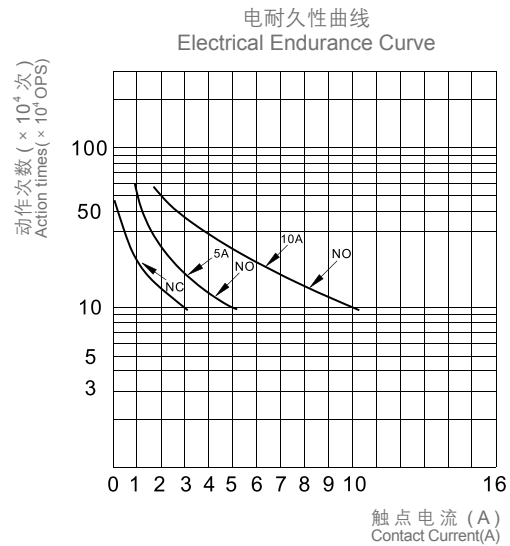
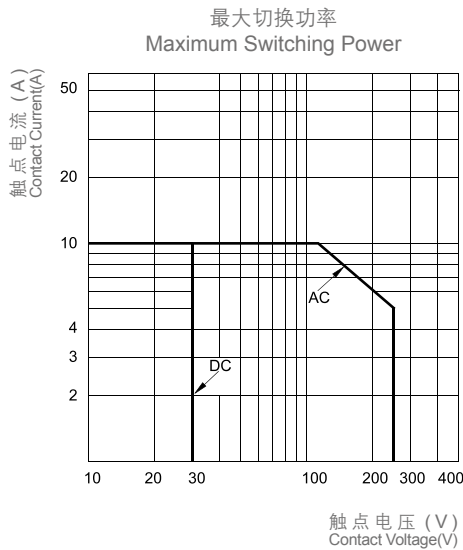
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



声明 STATEMENT:

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特性 FEATURES

- 16A 触点切换能力
- 触点与线圈间介质耐压 5KV
- 外形尺寸 29.0 × 12.7 × 15.5mm
- 16A switching capability
- 5KV dielectric strength between coil and contacts
- Outline dimensions 29.0 × 12.7 × 15.5mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	16A 250VAC
最大切换电流	Max. Switching Current	16A
最大切换电压	Max. Switching Voltage	250VAC
最大切换功率	Max Switching Power	4000VA
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (at 500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 5000VAC 1min 断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤5ms
环境温度	Ambient Temperature	-40℃ ~+85℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	塑封型 Seale, 防焊剂型 Flux Proofed
重量	Unit Weight	约 Approx. 13.5g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.5	6.5	62	约 Approx. 0.4
6	≤4.5	≥0.6	7.8	90	
9	≤6.75	≥0.9	11.7	202	
12	≤9.0	≥1.2	15.6	360	
18	≤13.5	≥1.8	23.4	810	
24	≤18	≥2.4	31.2	1440	
48	≤36	≥4.8	62.4	5760	约 Approx. 0.53
5	≤3.75	≥0.5	6.5	46	
6	≤4.5	≥0.6	7.8	67	
9	≤6.75	≥0.9	11.7	150	
12	≤9.0	≥1.2	15.6	267	
18	≤13.5	≥1.8	23.4	600	
24	≤18	≥2.4	31.2	1066	
48	≤36	≥4.8	62.4	4264	

安全认证 APPROVALS

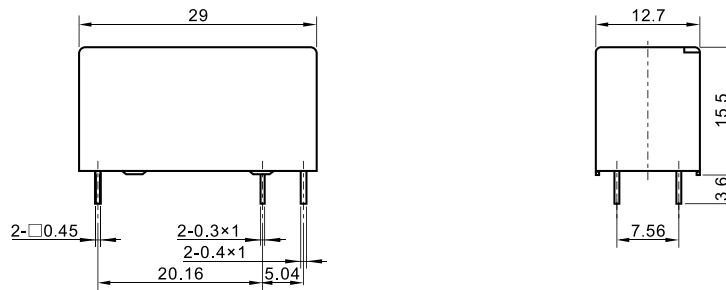
安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50302777	CQC15002122983
负载 Rating	16A 250VAC 16A 277VAC 1HP 250VAC 1/2HP 120VAC	16A 250VAC	16A 250VAC 16A 277VAC

订货标记示例 ORDERING INFORMATION

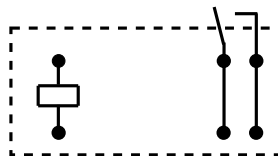
		MPE	-S	-1	12	-A	-N	F
产品型号 Model:		MPE						
产品结构 Structure:		S: 塑封型 Sealed 无 Nil: 防焊剂型 Flux proofed						
触点组数 Contact Group:		1 : 1 组 1 Group						
线圈电压 Coil Voltage:		5、6、9、12、18、24、48VDC						
触点形式 Contact Form:		A: 常开 NO						
线圈功耗 Coil Power:		无 Nil: 0.4W N: 0.53W						
绝缘等级 Insulation Class:		无: 标准型, B 级 Nil: Standard type, Class B	F: F 级 F: Class F					

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT (单位 Unit: mm)

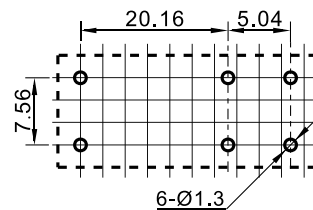
外形尺寸 OUTLINE DIMENSIONS



接线图 WIRING DIAGRAM
(底视 Bottom View)



安装孔尺寸 PCB LAYOUT
(底视 Bottom View)



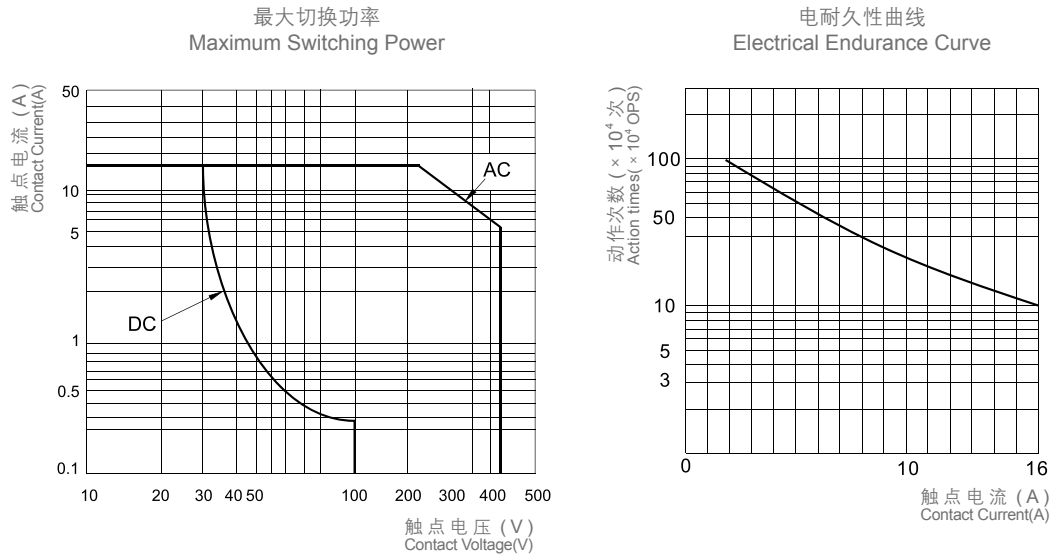
备注:

- (1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

- (1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



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特性 FEATURES

- 16A 触点切换能力
 - 低高度，仅为 10.6mm
 - 灵敏型产品功耗仅为 0.2W
 - 外形尺寸 23.0 × 16.1 × 10.6mm
- 16A switching capability
 - Low height: 10.6mm
 - Sensitive type coil power only 0.2W
 - Outline dimensions 23.0 × 16.1 × 10.6mm



触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	普通型 Common Type: 10A 250VAC 高负载型 High Load Type: 16A 250VAC
最大切换电流	Max. Switching Current	16A
最大切换电压	Max. Switching Voltage	250VAC
最大切换功率	Max Switching Power	普通型 Common Type: 2500VA 高负载型 High Load Type: 4000VA
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 2500VAC 1min 断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤8ms
环境温度	Ambient Temperature	-40℃ ~ +105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	塑封型 Sealed, 防焊剂型 Flux Proofed
重量	Unit Weight	约 Approx. 9g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.50	6.5	125	约 Approx. 0.2
6	≤4.50	≥0.6	7.8	180	
9	≤6.75	≥0.9	11.7	405	
12	≤9	≥1.2	15.6	720	
18	≤13.5	≥1.8	23.4	1620	
24	≤18	≥2.4	31.2	2880	
48	≤36	≥4.8	62.4	11520	

安全认证 APPROVALS

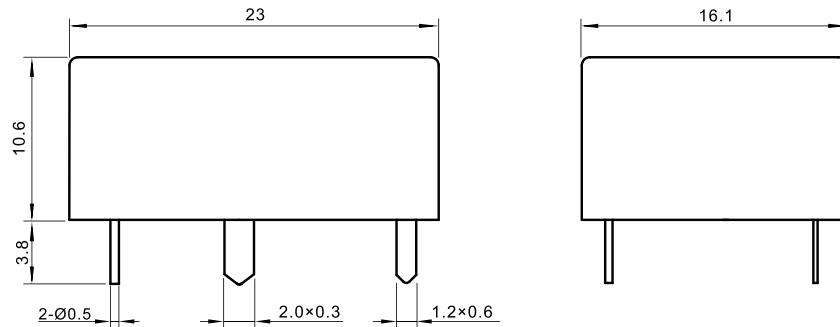
安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E313266	R50332928	CQC15002128204
负载 Rating	10A 250VAC/30VDC 15A 125VAC 16A 250VAC/30VDC	10A 250VAC/30VDC 16A 250VAC/30VDC	10A 250VAC/30VDC 16A 250VAC/30VDC

订货标记示例 ORDERING INFORMATION

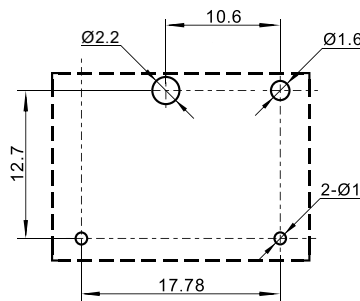
产品型号 Model:	MPF	-S	-1	12	-A	-2	F
产品结构 Structure:	S: 塑封型 Sealed 无 Nil: 防焊剂型 Flux Proofed						
触点组数 Contact Group:	1: 1 组 1 Group						
线圈电压 Coil Voltage:	5、6、9、12、18、24、48 VDC						
触点形式 Contact Form:	A: 常开 NO						
线圈功耗 Coil Power:	1: 普通型 Common Type 2: 高负载型 High Load Type						
绝缘等级 Insulation Class:	无: 标准型, B 级 Nil: Standard Type, Class B	F: F 级 F: Class F					

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)

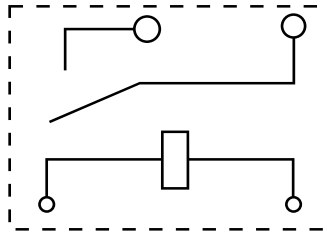
外形尺寸 OUTLINE DIMENSIONS



安装孔尺寸 PCB LAYOUT



接线图 WIRING DIAGRAM (底视 Bottom View)



备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;

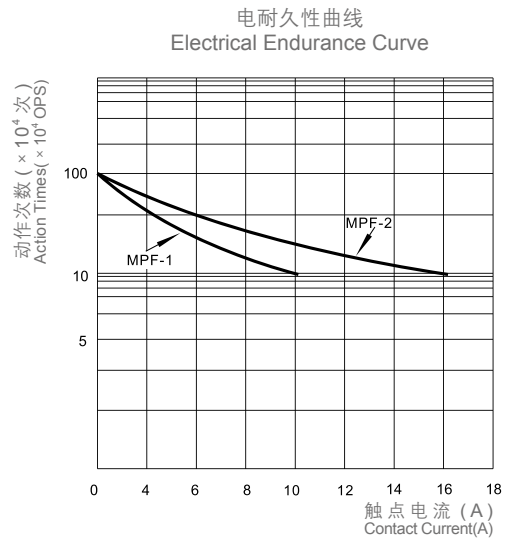
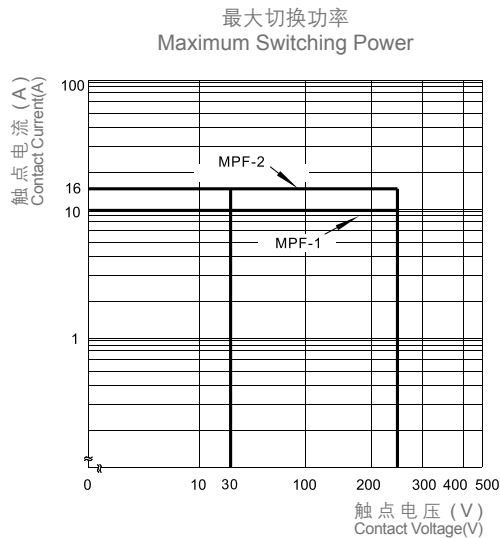
(2) 安装孔尺寸中未注尺寸公差均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



声明 STATEMENT:

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特性 FEATURES

- 17A 触点切换能力
- 具有一组常开一组转换触点形式
- 超小型、标准印制板引出脚
- 外形尺寸 21.0 × 16.0 × 21.6mm
- 17A switching capability
- 1 form A and 1 form C configurations
- Subminiature, standard PCB layout
- Outline dimensions 21.0 × 16.0 × 21.6mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A、1C
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	普通型 Common Type: 10A 250VAC 高负载型 High Load Type: 17A 250VAC
最大切换电流	Max. Switching Current	17A
最大切换电压	Max. Switching Voltage	277VAC
最大切换功率	Max Switching Power	普通型 Common Type: 2770VA 高负载型 High Load Type: 4700VA
电气寿命	Electrical Life	1 × 10 ⁶ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	100MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 2500VAC 1min 断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤5ms
环境温度	Ambient Temperature	-40℃ ~ +105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	塑封型 Sealed 防焊剂型 Flux Proofed
重量	Unit Weight	约 Approx. 11g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.5	6.5	70	约 Approx. 0.36
6	≤4.5	≥0.6	7.8	100	
9	≤6.75	≥0.9	11.7	225	
12	≤9	≥1.2	15.6	400	
18	≤13.5	≥1.8	23.4	900	
24	≤18	≥2.4	31.2	1600	
36	≤27	≥3.6	46.8	3600	
48	≤36	≥4.8	62.4	6400	
60	≤45	≥6.0	78	10000	

安全认证 APPROVALS

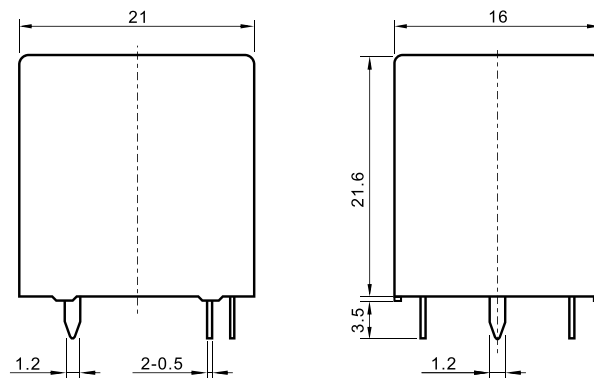
安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50342666	CQC16002150101
负载 Rating	10A 250VAC 16A 250VAC 17A 250VAC	10A 250VAC 16A 250VAC 17A 250VAC	10A 250VAC/277VAC 16A 250VAC/277VAC 17A 250VAC 17A 277VAC

订货标记示例 ORDERING INFORMATION

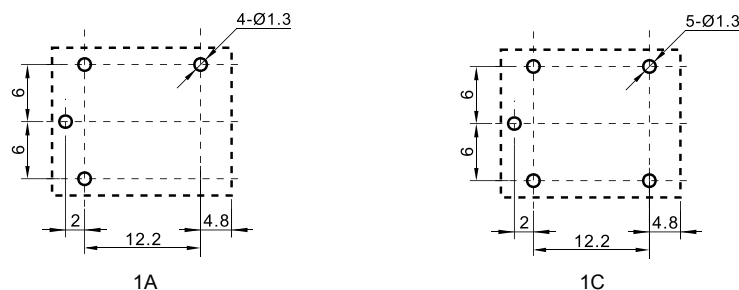
产品型号 Model:	MPH	-S	-1	12	-C	-1	F
产品结构 Structure:	S: 塑封型 Sealed 无 Ni: 防焊剂型 Flux Proofed						
触点组数 Contact Group:	1: 1 组 1 Group						
线圈电压 Coil Voltage:	5、6、9、12、18、24、36、48、60VDC						
触点形式 Contact Form:	A: 常开 NO C: 转换 NO/NC						
线圈功耗 Coil Power:	1: 普通型 Common Type 2: 高负载型 High load Type						
绝缘等级 Insulation Class:	无: 标准型, B 级 F: F 级 Nil: Standard type, Class B F: Class F						

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)

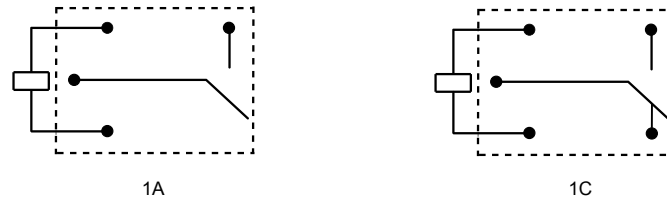
外形尺寸 OUTLINE DIMENSIONS



安装孔尺寸 PCB LAYOUT (底视 Bottom View)



接线图 WIRING DIAGRAM (底视 Bottom View)



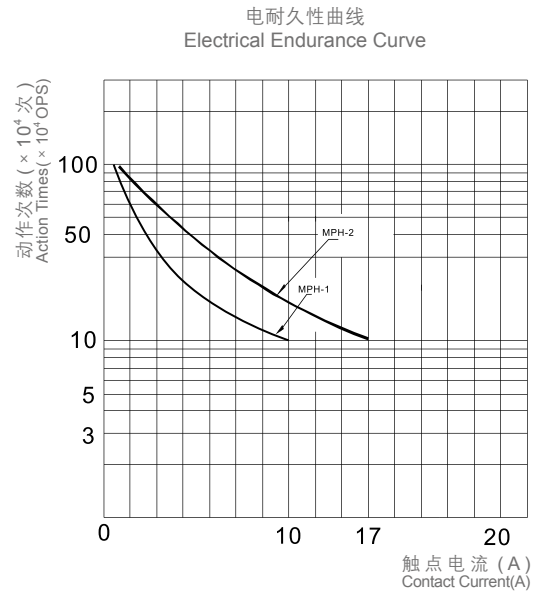
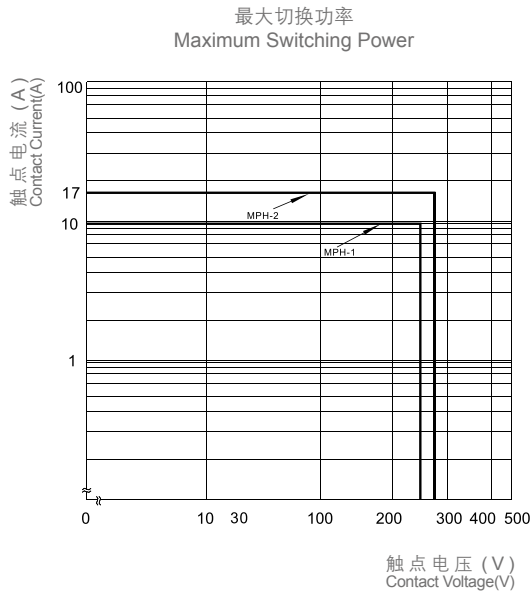
备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



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特性 FEATURES

- 16A 触点切换能力
- 低高度，仅为 15.7mm
- 多种触点形式可供选择
- 配有多种插座可供选择
- 外形尺寸 29.0 × 12.7 × 15.9mm
- 16A contact switching capability
- Low height: 15.7mm
- Kinds contact form available
- Kinds socket available
- Outline dimensions 29.0 × 12.7 × 15.9mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A、1B、1C	2A、2B、2C
触点材料	Contact Material	银合金 Silver Alloy	
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)	
额定负载 (阻性)	Rated Load(Res.)	NO/NC: 12A/6A 250VAC NO/NC: 16A/8A 250VAC	NO/NC: 8A/4A 250VAC
最大切换电流	Max. Switching Current	12A/ 16A	8A
最大切换电压	Max. Switching Voltage	440VAC/30VDC	
最大切换功率	Max Switching Power	3000VA/4000VA	2000VA
电气寿命	Electrical Life	1 × 10 ⁶ 次 OPS	
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS	

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 5000VAC 1min 断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤8ms
环境温度	Ambient Temperature	-40℃ ~+105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	塑封型 Sealed 防焊剂型 Flux proofed
重量	Unit Weight	约 Approx. 13.5g

线圈规格表 COIL DATA(23℃)

灵敏型 Sensitive Type					
额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.25	6.5	62	约 Approx. 0.4
6	≤4.5	≥0.3	7.8	90	
9	≤6.75	≥0.45	11.7	202.5	
12	≤9.0	≥0.6	15.6	360	
18	≤13.5	≥0.9	23.4	810	
24	≤18	≥1.2	31.2	1440	
48	≤36	≥2.4	62.4	5520	
72	≤54	≥3.6	93.5	12960	
110	≤82.5	≥5.5	143	30250	

标准型 Standard Type

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance $\Omega \pm 10\%$	线圈功耗 Coil Power W
5	≤ 3.75	≥ 0.25	6.5	46	约 Approx. 0.53
6	≤ 4.5	≥ 0.3	7.8	67	
9	≤ 6.75	≥ 0.45	11.7	150	
12	≤ 9.0	≥ 0.6	15.6	267	
18	≤ 13.5	≥ 0.9	23.4	600	
24	≤ 18	≥ 1.2	31.2	1066	
48	≤ 36	≥ 2.4	62.4	4266	
72	≤ 54	≥ 3.6	93.5	9600	
110	≤ 82.5	≥ 5.5	143	22407	

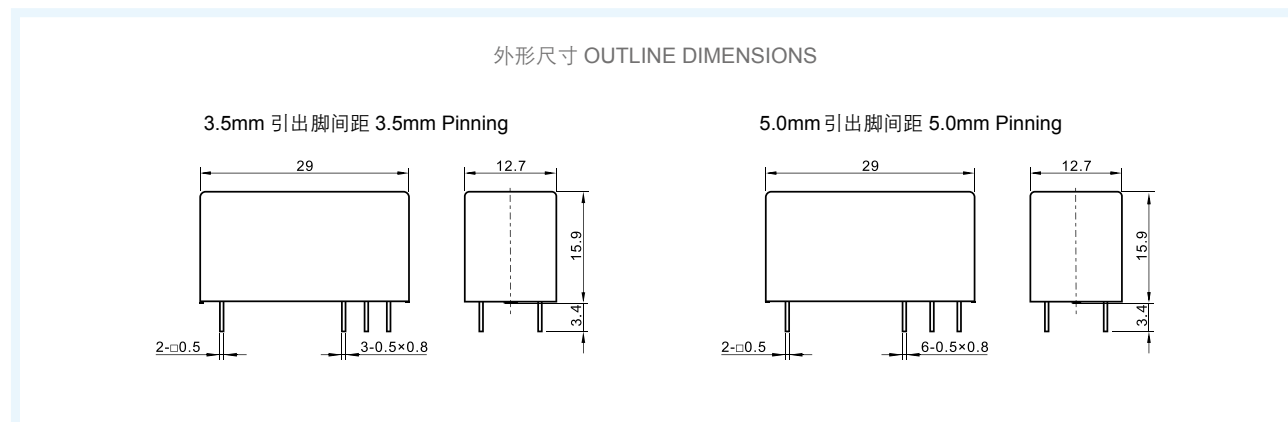
安全认证 APPROVALS

安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50302776	CQC15002122984
负载 Rating	8A 250VAC 16A 250VAC 4A 277VAC	8A 250VAC 16A 250VAC 12A 250VAC	8A 250VAC 16A 250VAC 12A 277VAC

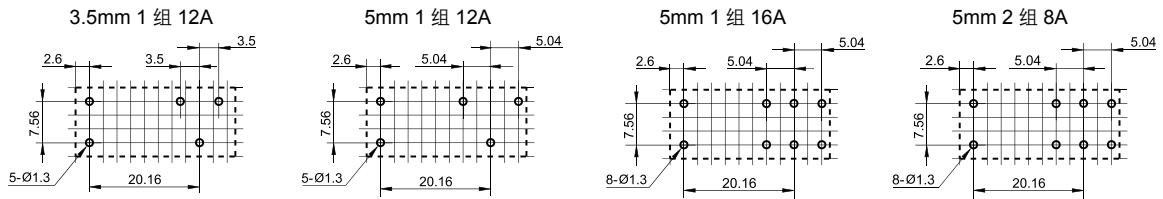
订货标记示例 ORDERING INFORMATION

		MPI	-S	-1	12	-C	-1	N	F
产品型号 Model:	MPI								
产品结构 Structure:	S: 塑封型 Sealed 无 Nil: 防焊剂型 Flux proofed								
触点组数 Contact Group:	1: 1 组 1 Group 2: 2 组 2 Groups								
线圈电压 Coil Voltage:	5、6、9、12、18、24、48、110VDC								
触点形式 Contact arrangement:	A: 常开 NO B: 常闭 NC C: 转换 NO/NC								
结构形式 Contact Form:	1:1 组, 3.5mm 12A 1 Group 12A 2:1 组, 5.0mm 12A 1 Group 12A 3:1 组, 5.0mm 16A 1 Group 16A 4:2 组, 5.0mm 8A 2 Groups 8A								
线圈功耗 Coil power:	无 Nil: 0.4W N: 0.53W								
绝缘等级 Insulation Class:	无: 标准型, B 级 F: F 级 Nil: Standard Type, Class B F: Class F								

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)



安装孔尺寸 PCB LAYOUT (底视 Bottom View)



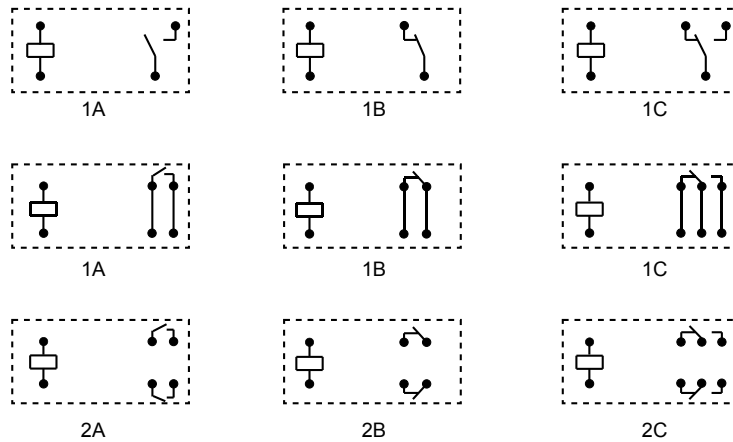
备注:

- (1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

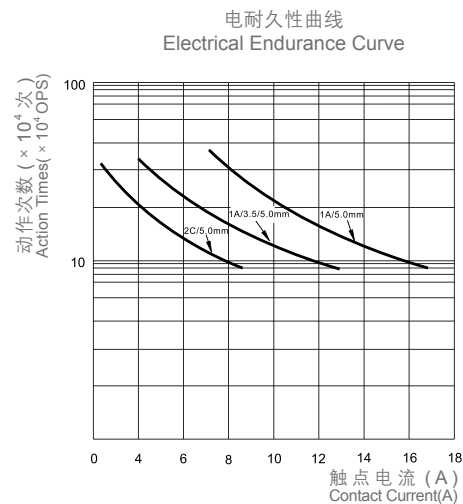
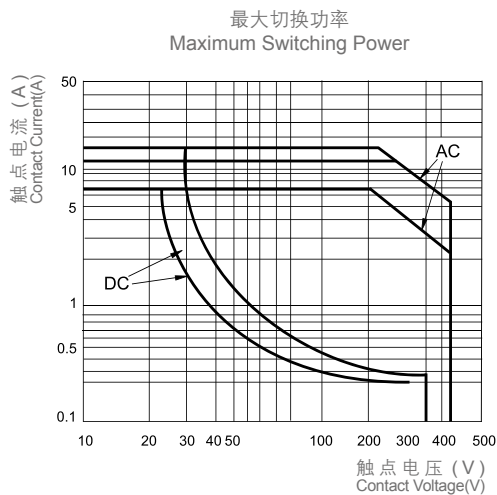
REMARK:

- (1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

接线图 WIRING DIAGRAM (底视 Bottom View)



性能曲线图 PERFORMANCE CURVE



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特性 FEATURES

- 16A 触点切换能力
- 配有多种插座可供选择
- 灵敏型产品功耗仅为: 0.54W
- 外形尺寸 29.2 × 12.8 × 20.6mm
- 16A contact switching capability
- Kinds socket Available
- Sensitive type coil power only 0.54W
- Outline dimensions 29.2 × 12.8 × 20.6mm



触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	16A 250VAC/30VDC
最大切换电流	Max. Switching Current	16A
最大切换电压	Max. Switching Voltage	250VAC/30VDC
最大切换功率	Max Switching Power	4000VA/480W
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 5000VAC 1min
		断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤8ms
环境温度	Ambient Temperature	-40℃ ~+105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G)
		强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	塑封型 Sealed, 防焊剂型 Flux proofed
重量	Unit Weight	约 Approx. 13g

安全认证 APPROVALS

安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50294981	CQC15002131098
负载 Rating	16A 250VAC/30VDC 12A 120VAC/30VDC 8A 250VAC/30VDC	16A 250VA/30VDC 10A 250VAC//30VDC	16A 277VAC/250VAC/30VDC 8A 250VAC/30VDC 10A 277VAC/30VDC

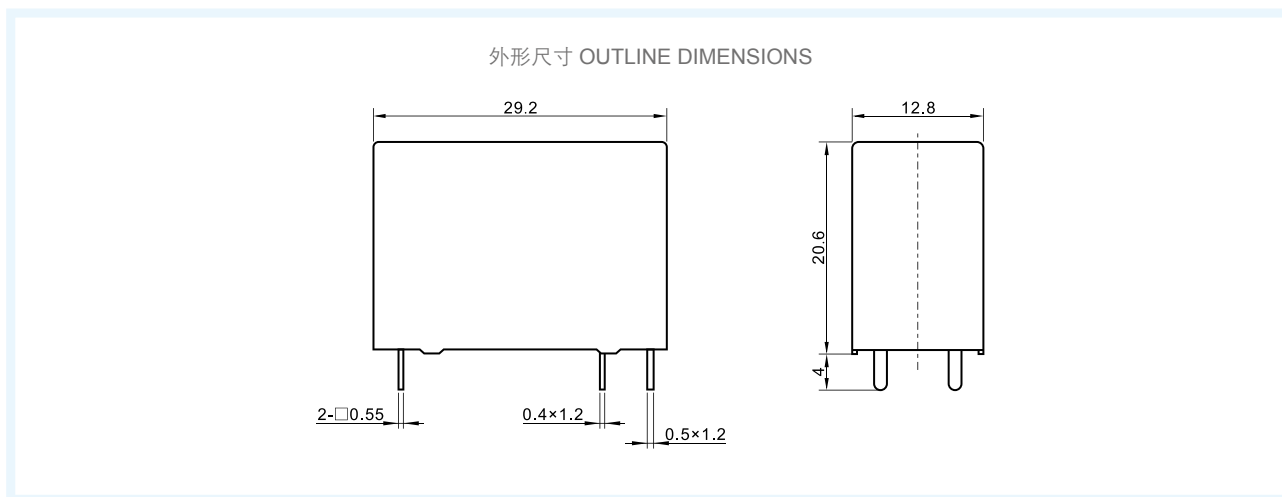
线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance $\Omega \pm 10\%$	线圈功耗 Coil Power W
5	≤ 3.75	≥ 0.5	6.5	36	约 Approx. 0.72
6	≤ 4.5	≥ 0.6	7.8	50	
9	≤ 6.75	≥ 0.9	11.7	115	
12	≤ 9	≥ 1.2	15.6	200	
18	≤ 13.5	≥ 1.8	23.4	460	
24	≤ 18	≥ 2.4	31.2	820	
48	≤ 36	≥ 4.8	62.4	3300	约 Approx. 0.54
5	≤ 3.75	≥ 0.25	6.5	47	
6	≤ 4.5	≥ 0.3	7.8	68	
9	≤ 6.75	≥ 0.45	11.7	155	
12	≤ 9	≥ 0.6	15.6	270	
18	≤ 13.5	≥ 0.9	23.4	620	
24	≤ 18	≥ 1.2	31.2	1100	
48	≤ 36	≥ 4.8	62.4	4400	

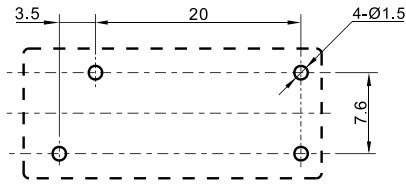
订货标记示例 ORDERING INFORMATION

产品型号 Model:	MPJ	-S	-1	12	-A	-1	N
产品结构 Structure:	S: 塑封型 Sealed 无 Nil: 防焊剂型 Flux proofed						
触点组数 Contact Group:	1 : 1 组 1 Group						
线圈电压 Coil Voltage:	5、6、9、12、18、24、48VDC						
触点形式 Contact Form:	A: 常开 NO						
负载类型 Load Type:	1: 普通型 Common Type 2: 高负载型 High Load Type						
线圈功耗 Coil Power:	无 Nil: 0.54W N: 0.72W						

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)



安装孔尺寸 PCB LAYOUT (底视 Bottom View)



接线图 WIRING DIAGRAM (底视 Bottom View)



备注:

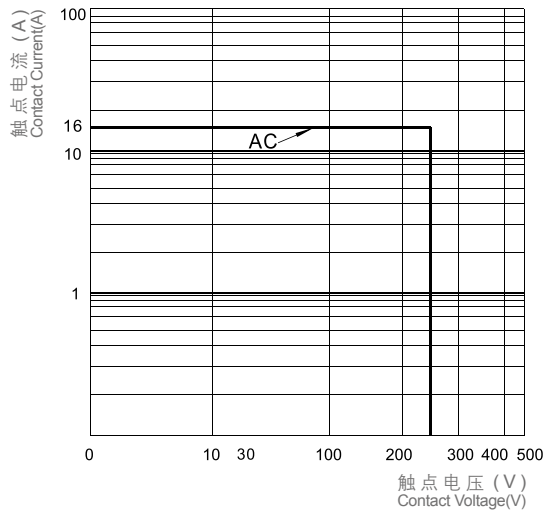
(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

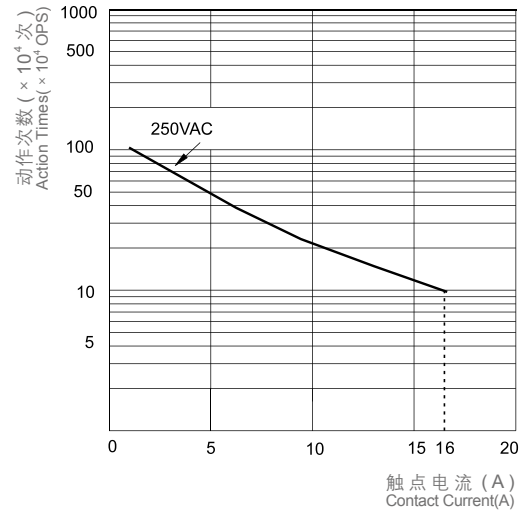
(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE

最大切换功率
Maximum Switching Power



电耐久性曲线
Electrical Endurance Curve



声明 STATEMENT:

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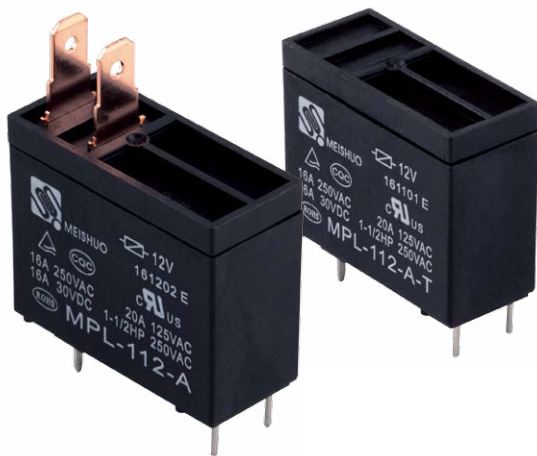
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特性 FEATURES

- 16A 触点切换能力
- 适用于微波炉等产品
- 触点与线圈间介质耐压 5KV
- 外形尺寸 29.0 × 12.6 × 24.2mm
- 16A contact switching capability
- Suitable for microwave oven
- 5KV dielectric strength between coil and contact
- Outline dimensions 29.0 × 12.6 × 24.2mm



触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	16A 250VAC/30VDC
最大切换电流	Max. Switching Current	16A
最大切换电压	Max. Switching Voltage	277VAC/30VDC
最大切换功率	Max Switching Power	4000VA/480W
电气寿命	Electrical Life	1 × 10 ⁶ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil &Contacts: 5000VAC 1min 断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤20ms
复归时间	Release Time	≤10ms
环境温度	Ambient Temperature	-40℃ ~+105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	MPL: 印制板 + 快连接式 PCB+QC MPL-T: 印制板式 PCB
封装形式	Construction	防尘罩型 Dust Protected
重量	Unit Weight	约 Approx. 15g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤4	≥0.5	6.5	47	约 Approx. 0.54
6	≤4.8	≥0.6	7.8	68	
9	≤7.2	≥0.9	11.7	155	
12	≤9.6	≥1.2	15.6	270	
18	≤14.4	≥1.8	23.4	620	
24	≤19.2	≥2.4	31.2	1100	
48	≤38.4	≥4.8	62.4	4400	

安全认证 APPROVALS

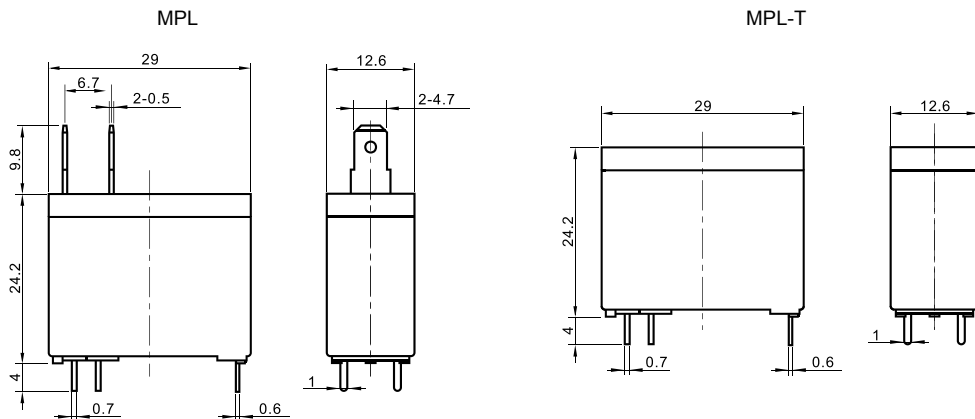
安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50236892	CQC12002086219
负载 Rating	16A 250VAC/30VDC 20A 125VAC 1-1/2HP 250VAC	16A 250VAC/30VDC	16A 250VAC/30VDC 20A 125VAC

订货标记示例 ORDERING INFORMATION

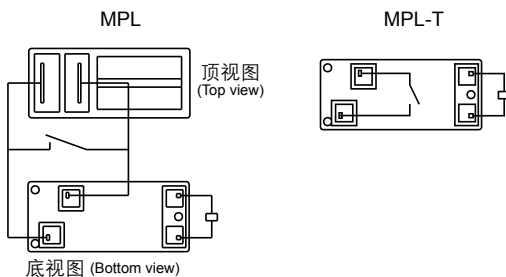
			MPL	-1	12	-A	-T	-F
产品型号 Model:	MPL							
触点组数 Contact Group:	1 : 1 组 1 Group							
线圈电压 Coil Voltage:	5、6、9、12、18、24、48VDC							
触点形式 Contact Form:	A: 常开 NO							
引出端形式 Termination:	T: 印制板式 PCB 无 Nil: 印制板式 + 快连接式 PCB + QC							
绝缘等级 Insulation Class:	无: 标准型, B 级 F: F 级 Nil: Standard Type, Class B F: Class F							

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT (单位 Unit: mm)

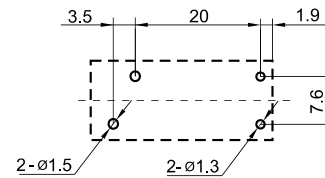
外形尺寸 OUTLINE DIMENSIONS



接线图 WIRING DIAGRAM (底视 Bottom View)



安装孔尺寸 PCB LAYOUT (底视 Bottom View)



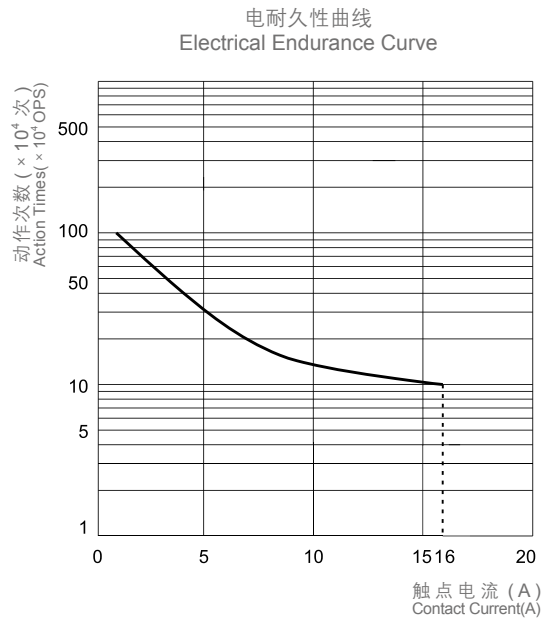
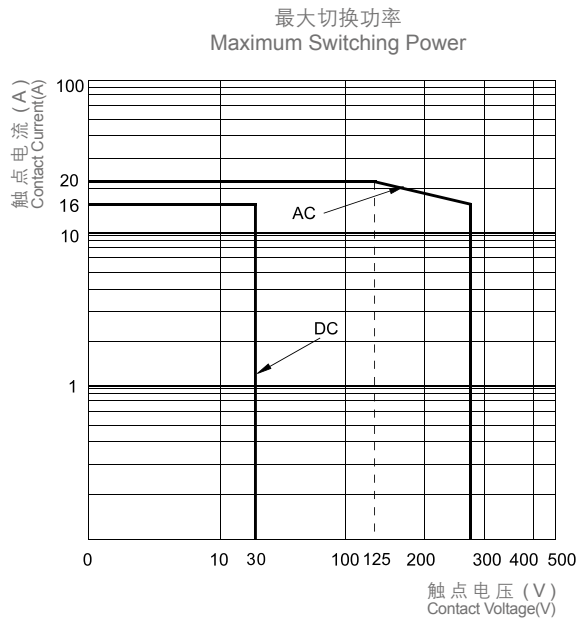
备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
 (2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
 (2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



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特性 FEATURES

- 7A 触点切换能力
- 1.5KV 耐压（触点线圈间）
- 配有多种插座可供选择
- 外形尺寸：28.0 × 21.5 × 35.0mm
- 7A switching capability
- 1.5KV dielectric strength(between coil and contacts)
- Kinds socket available
- Outline dimensions: 28.0 × 21.5 × 35.0mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	2C,3C	4C
触点材料	Contact Material	银合金 Silver Alloy	
接触电阻（初始）	Contact Resistance(Initial)	50mΩ (1A 6VDC)	100mΩ (1A 6VDC)
额定负载（阻性）	Rated Load(Res.)	7A 250VAC/30VDC	5A 250VAC/30VDC
最大切换电流	Max. Switching Current	7A	5A
最大切换电压	Max. Switching Voltage	250VAC/30VDC	
最大切换功率	Max. Switching Power	1750VA/210W	1250VA/150W
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS	
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS	

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VAC)
介电耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 1500VAC 1min
		断开触点间 Between Open Contacts: 1000VAC 1min
		触点组间 Between Contact Sets: 1500VAC 1min
动作时间	Operate Time	≤25ms
复归时间	Release Time	≤25ms
环境温度	Ambient Temperature	-40℃ ~+70℃
线圈温升	Temperature Rise	≤60K
振动	Vibration	10Hz~55Hz 1mm 双振幅
冲击	Shock	稳定性 Functional: 98m/s ² (10G)
		强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式、插入式 PCB, Socket
封装形式	Construction	防尘罩型 Dust Protected
重量	Unit Weight	约 Approx. 37g

线圈规格表 COIL DATA(23℃)

直流型 DC Type					
额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤4.0	≥0.5	5.5	27.5	约 Approx. 0.9~1.1
6	≤4.8	≥0.6	6.6	40	
12	≤9.6	≥1.2	13.2	160	
24	≤19.2	≥2.4	26.4	650	
48	≤38.4	≥4.8	52.8	2600	
110	≤88	≥11	121	11000	

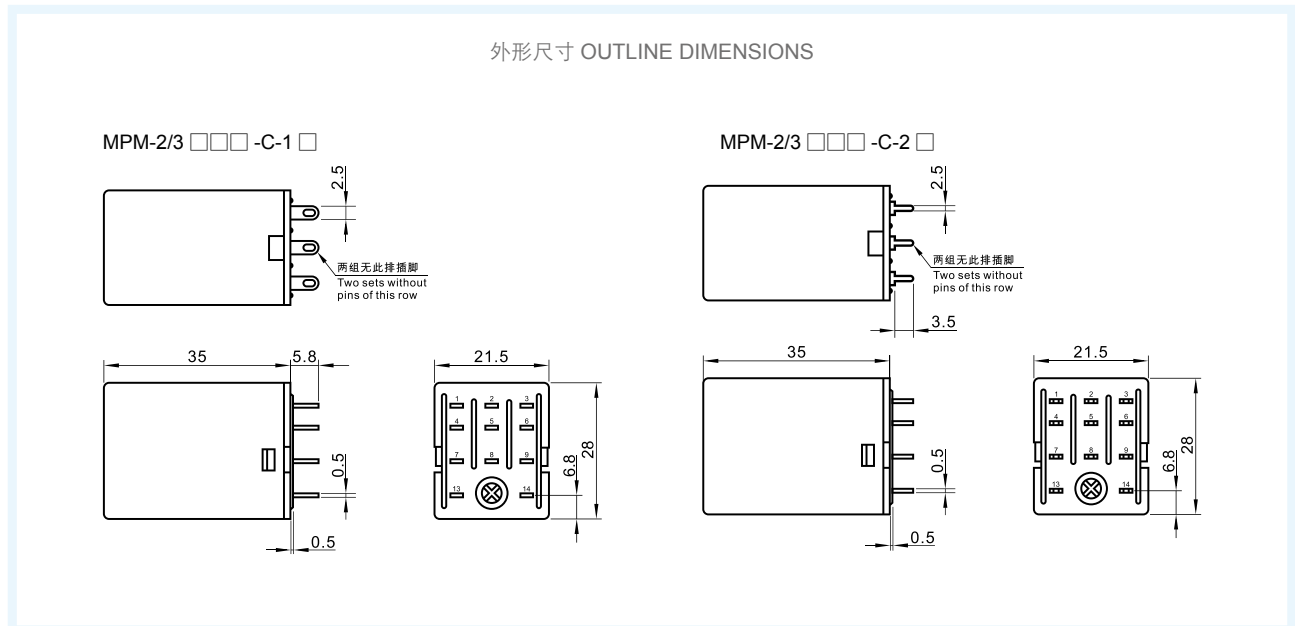
交流型 AC Type

额定电压 Rated Voltage VAC	动作电压 Operate Voltage VAC	释放电压 Release Voltage VAC	最大允许电压 Max Allowable Voltage VAC	线圈电阻 Coil Resistance $\Omega \pm 10\%$	线圈功耗 Coil Power VA
6	≤ 4.8	≥ 1.8	6.6	11.5	约 Approx. 1.2~1.8
12	≤ 9.6	≥ 3.6	13.2	46	
24	≤ 19.2	≥ 7.2	26.4	184	
48	≤ 38.4	≥ 14.4	52.8	735	
120	≤ 96	≥ 36	132	4550	
220/240	≤ 176	≥ 72	264	14400	

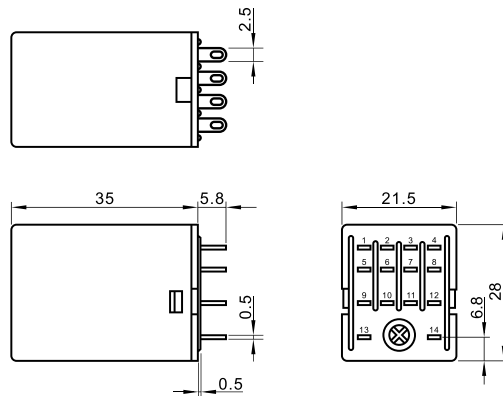
订货标记示例 ORDERING INFORMATION

			MPM	-2	12	D	-C	1	D
产品型号	Model:	MPM							
触点组数	Contact Group:	2: 2组 2 Groups							
		3: 3组 3 Groups							
		4: 4组 4 Groups							
线圈电压	Coil Voltage:	5、6、12、24、48、110VDC							
		6、12、24、48、120、220/240VAC							
线圈电源	Coil power	A: 交流 AC							
		D: 直流 DC							
触点形式	Contact Form:	C: 转换 NO/NC							
安装方式	Mounting termination:	1: 插座式安装 2: 印制板式安装 3: 法兰盘安装							
		1:Socket 2:PCB 3:Flange-Mounting							
发光二极管	LED:	D: 带发光二极管 无: 不带发光二极管							
		D:With LED Nil: Without LED							

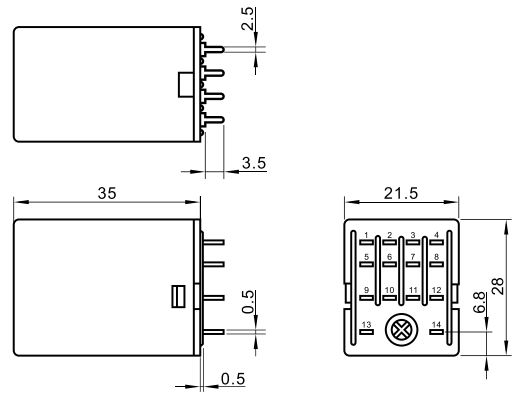
外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)



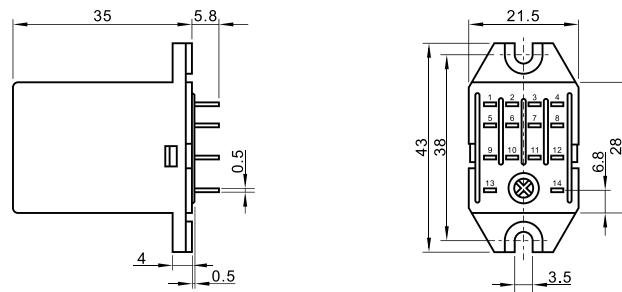
MPM-4 □□□ -C-1 □



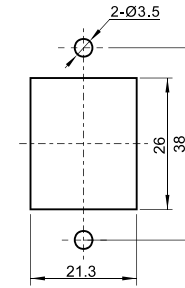
MPM-4 □□□ -C-2 □



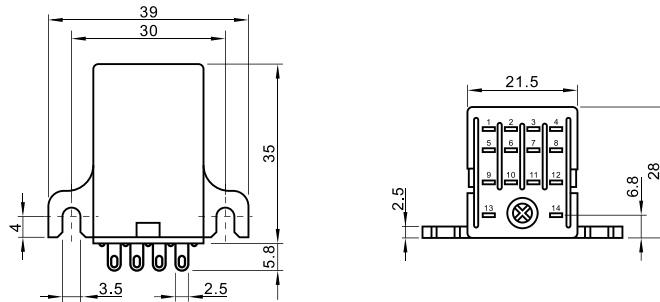
MPM-4 □□□ -C-31 □



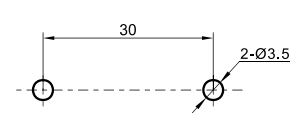
法兰盘安装尺寸
Flange-mounting



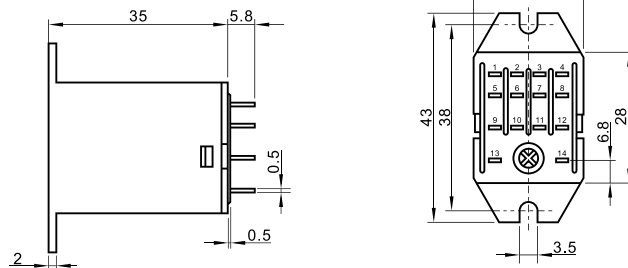
MPM-4 □□□ -C-32 □



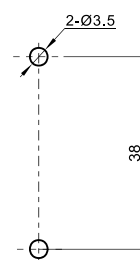
法兰盘安装尺寸
Flange-mounting



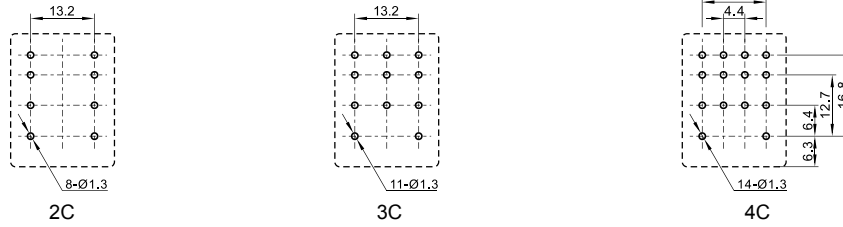
MPM-4 □□□ -C-33 □



法兰盘安装尺寸
Flange-mounting



安装孔尺寸 PCB LAYOUT (底视 Bottom View)



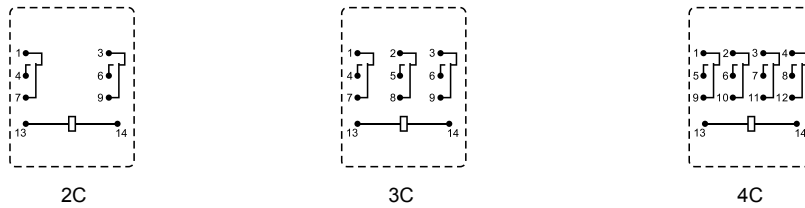
备注:

- (1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

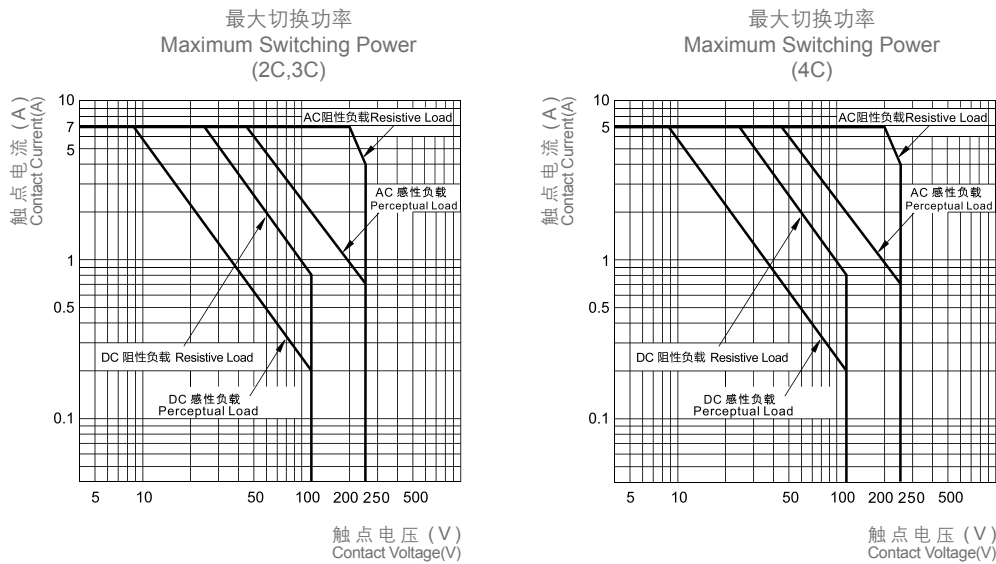
REMARK:

- (1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

接线图 WIRING DIAGRAM (底视 Bottom View)



性能曲线图 PERFORMANCE CURVE



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特性 FEATURES



- 15A 触点切换能力
- 多种类型继电器，包括内置发光二极管
- 具有一组、二组、四组触点形式
- 多种引出端形式
- 配有多种插座可供选择
- 外形尺寸：28.0 × 21.5 × 35.0mm
- 15A switching capability
- Various types of relays, including built-in LED
- 1, 2 & 4 poles configurations
- Various terminal forms available
- Sockets available
- Outline dimensions: 28.0 × 21.5 × 35.0mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1C	2C	4C
触点材料	Contact Material	银合金 Silver Alloy		
接触电阻 (初始)	Contact Resistance(Initial)	100mΩ (1A 6VDC)		
额定负载 (阻性)	Rated Load(Res.)	15A 250VAC/30VDC	10A 250VAC/30VDC	
最大切换电流	Max. Switching Current	15A	10A	
最大切换电压	Max. Switching Voltage	250VAC/30VDC		
最大切换功率	Max. Switching Power	3750VA/450W	2500VA/300W	
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS		
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS		

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	500MΩ (500VAC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 1500VAC 1min
		断开触点间 Between Open Contacts: 1000VAC 1min
		触点组间 Between Contact sets: 1500VAC 1min
动作时间	Operate Time	≤25ms
复归时间	Release Time	≤25ms
环境温度	Ambient Temperature	-40℃ ~70℃
线圈温升	Temperature Rise	≤60K
振动	Vibration	10Hz~55Hz 1mm 双振幅
冲击	Shock	稳定性 Functional: 98m/s ² (10G)
		强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式、插入式 PCB, Plug-in
封装形式	Construction	防尘罩型 Dust Protected
重量	Unit Weight	约 Approx. : 37g

线圈规格表 COIL DATA(23℃)

直流型 DC Type					
额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤4.0	≥0.5	5.5	27.5	约 Approx. 0.9~1.1
6	≤4.8	≥0.6	6.6	40	
12	≤9.6	≥1.2	13.2	160	
24	≤19.2	≥2.4	26.4	650	
48	≤38.4	≥4.8	52.8	2600	
110	≤88	≥11	121	11000	

交流型 AC Type

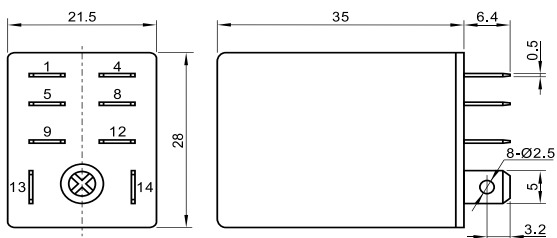
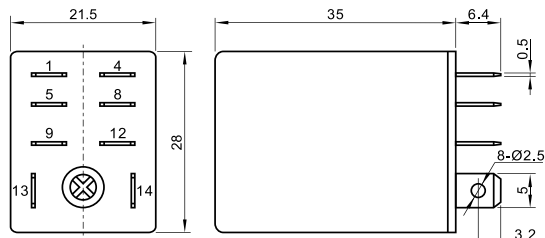
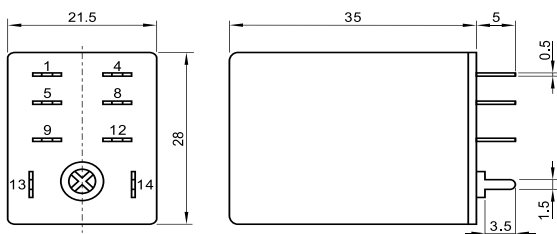
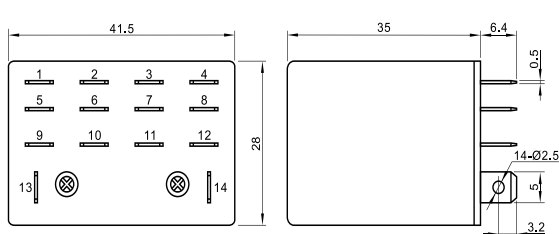
额定电压 Rated Voltage VAC	动作电压 Operate Voltage VAC	释放电压 Release Voltage VAC	最大允许电压 Max Allowable Voltage VAC	线圈电阻 Coil Resistance $\Omega \pm 10\%$	线圈功耗 Coil Power VA
6	≤4.8	≥1.8	6.6	11.5	约 Approx. 1.2~1.8
12	≤9.6	≥3.6	13.2	46	
24	≤19.2	≥7.2	26.4	184	
48	≤38.4	≥14.4	52.8	735	
120	≤96	≥36	132	4550	
220/240	≤176	≥72	264	14400	

订货标记示例 ORDERING INFORMATION

			MPN	-1	12	D	-C	1	D
产品型号	Model:	MPN							
触点组数	Contact Group:	1: 1 组 1 Group 2: 2 组 2 Groups 4: 4 组 4 Groups							
线圈电压	Coil Voltage:	5、6、12、24、48、110VDC 6、12、24、48、120、220/240VAC							
线圈电源	Coil power:	A: 交流 AC D: 直流 DC							
触点形式	Contact Form:	C: 转换 NO/NC							
安装方式	Mounting termination:	1: 插座式安装 2: 印制板式安装 3: 法兰盘安装 1:Socket 2:PCB 3:Fiange-Mounting							
发光二极管	LED:	D: 带发光二极管 无: 不带发光二极管 D:With LED Nil: Without LED							

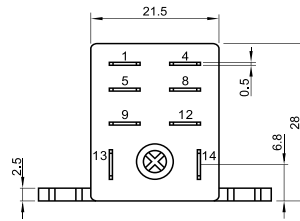
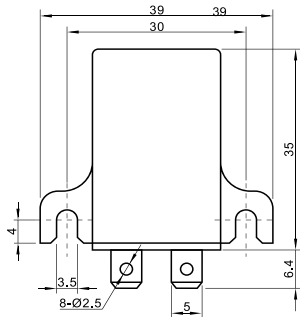
外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT (单位 Unit: mm)

外形尺寸 OUTLINE DIMENSIONS

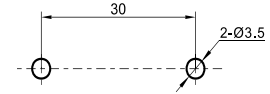
MPN-1 -C-1 MPN-2 -C-1 MPN- -C-1 MPN-4 -C-1 

外形尺寸 OUTLINE DIMENSIONS

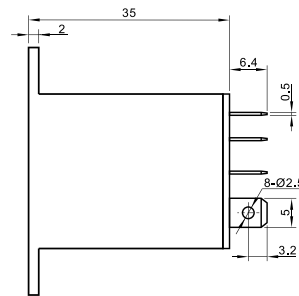
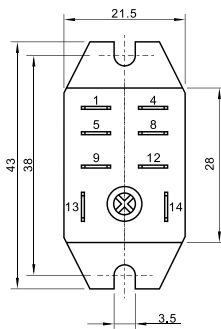
MPN-□□□□-C-32 □



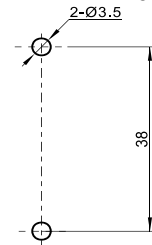
法兰盘安装尺寸 Flange-Mounting



MPN-□□□□-C-33 □



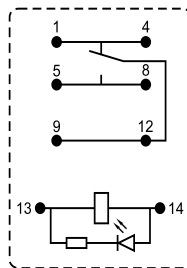
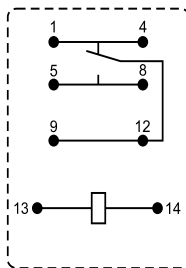
法兰盘安装尺寸 Flange-Mounting



接线图 WIRING DIAGRAM (底视 BOTTOM VIEW)

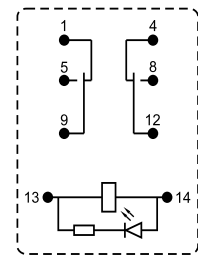
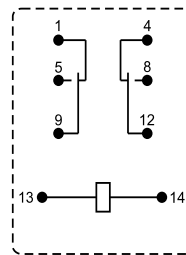
MPN-1 □□□□-C-□□

with LED



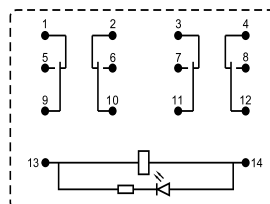
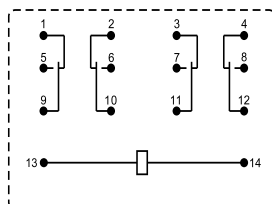
MPN-2 □□□□-C-□□

with LED

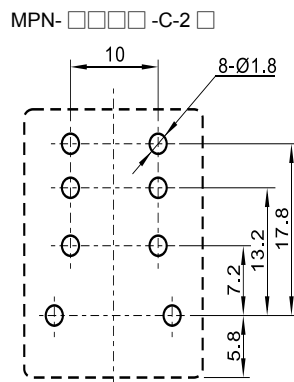


MPN-4 □□□□-C-□□

with LED



安装孔尺寸 PCB Layout (底视 Bottom View)



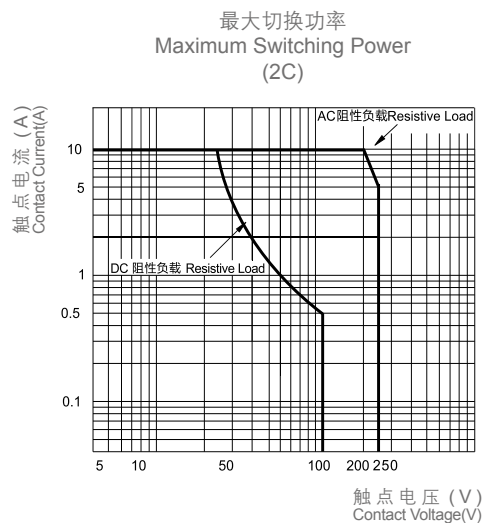
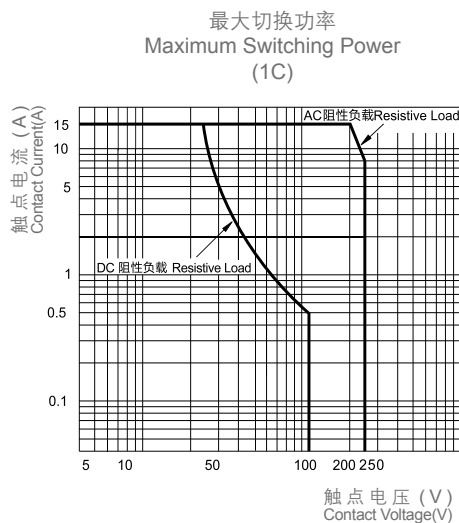
备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



声明 STATEMENT:

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The customer should select the matching product according to the use condition. Any questions, please feel free contact us to get more technical support. However, product selection responsibility only by the customer.

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特性 FEATURES

- 10A 触点切换能力
- 标准电子管插脚
- 配有多种插座可供选择
- 外形尺寸: 33.6 × 33.6 × 51.5mm
- 10A switching capability
- Standard tube pin
- Various terminals available
- Outline dimensions: 33.6 × 33.6 × 51.5mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	2C 3C
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	100mΩ (1A 6VDC)
触点负载 (阻性)	Contact rating(Res. load)	2C:10A 250VAC/30VDC 3C:(NO)10A 250VAC/30VDC (NC)5A250VAC/30VDC
最大切换电流	Max. Switching Current	10A
最大切换电压	Max. Switching Voltage	250VAC/30VDC
最大切换功率	Max. Switching Power	2500VA/300W
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	500MΩ (500VDC)
介电耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 2500VAC 1min 断开触点间 Between Open Contacts: 2000VAC 1min
动作时间	Operate Time	≤25ms
复归时间	Release Time	≤25ms
环境温度	Ambient Temperature	-40℃ ~+70℃
线圈温升	Temperature Rise	≤60K
振动	Vibration	10Hz~55Hz 1.5mm 双振幅
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	标准电子管管脚式引出端 Standard electronic tube end
封装形式	Construction	防尘罩型 Dust protected
重量	Unit Weight	约 Approx. 85g

线圈规格表 COIL DATA(23℃)

直流型 DC Type					
额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤4	≥0.5	6.0	16.7	约 Approx. 1.5
6	≤4.8	≥0.6	7.2	24	
12	≤9.6	≥1.2	14.4	95	
24	≤19.2	≥2.4	28.8	430	
48	≤38.4	≥4.8	57.6	1630	
60	≤48	≥6	72	1920	
110	≤88	≥11	132	7300	

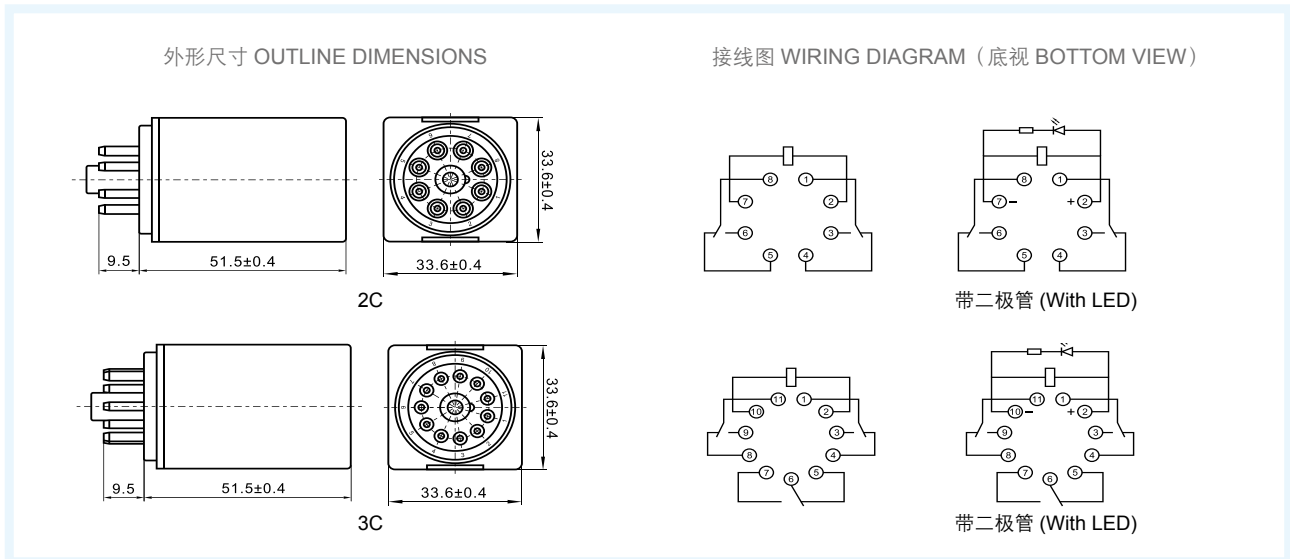
交流型 AC Type

额定电压 Rated Voltage VAC	动作电压 Operate Voltage VAC	释放电压 Release Voltage VAC	最大允许电压 Max Allowable Voltage VAC	线圈电阻 Coil Resistance $\Omega \pm 10\%$	线圈功耗 Coil Power VA
6	≤ 4.8	≥ 1.8	7.2	3.9	约 Approx. 2.7
12	≤ 9.6	≥ 3.6	14.4	16.9	
24	≤ 19.2	≥ 7.2	28.8	70	
48	≤ 38.4	≥ 14.4	57.6	315	
120	≤ 88	≥ 36	132	1600	
220/240	≤ 176	≥ 72	264	6950	

订货标记示例 ORDERING INFORMATION

			MPP	-2	12	D	-C	D
产品型号	Model:	MPP						
触点组数	Contact Group:	2: 2组 2 Groups 4: 4组 4 Groups						
线圈电压	Coil Voltage:	5、6、12、24、48、110VDC 6、12、24、48、120、220/240VAC						
线圈电源	Coil power:	A: 交流 AC D: 直流 DC						
触点形式	Contact Form:	A: 常开 NO B: 常闭 NC C: 转换 NO/NC						
发光二极管	LED:	D: 带发光二极管 无: 不带发光二极管 D: With LED Nil: Without LED						

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT (单位 Unit: mm)



备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;

(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

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The customer should select the matching product according to the use condition. Any questions, please feel free contact us to get more technical support. However, product selection responsibility only by the customer.



特性 FEATURES

- 30A 触点切换能力
- 触点与线圈间耐压 3.5KV
- 敞开型、塑封型和防尘罩型可供选择
- F 级线圈绝缘等级
- 外形尺寸 31.8 × 27.1 × 19.4mm
- 30A switching capability
- 3.5KV dielectric strength (Between coil and contacts)
- Open type, sealed and dust protected available
- Class F insulation available
- Outline dimensions 31.8 × 27.1 × 19.4mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A、1B、1C
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	NO: 30A 240VAC/30VDC
		NC: 20A 240VAC/30VDC
最大切换电流	Max. Switching Current	NO: 30A
		NC: 20A
最大切换电压	Max. Switching Voltage	240VAC/30VDC
最大切换功率	Max. Switching Power	7200VA/560W
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Bet ween Coil & Contacts: 3500VAC 1min
		断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤10ms
环境温度	Ambient Temperature	-40℃ ~+105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G)
		强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	敞开型, 塑封型, 防尘罩型 Unenclosed, Sealed, Dust Protected
重量	Unit Weight	约 Approx. 36g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.5	6.5	28	约 Approx. 0.9
6	≤4.5	≥0.6	7.8	40	
9	≤6.75	≥0.9	11.7	90	
12	≤9.0	≥1.2	15.6	160	
18	≤13.5	≥1.8	23.4	360	
24	≤18	≥2.4	31.2	640	
48	≤36	≥4.8	62.4	2560	
110	≤82.5	≥11	143	13440	

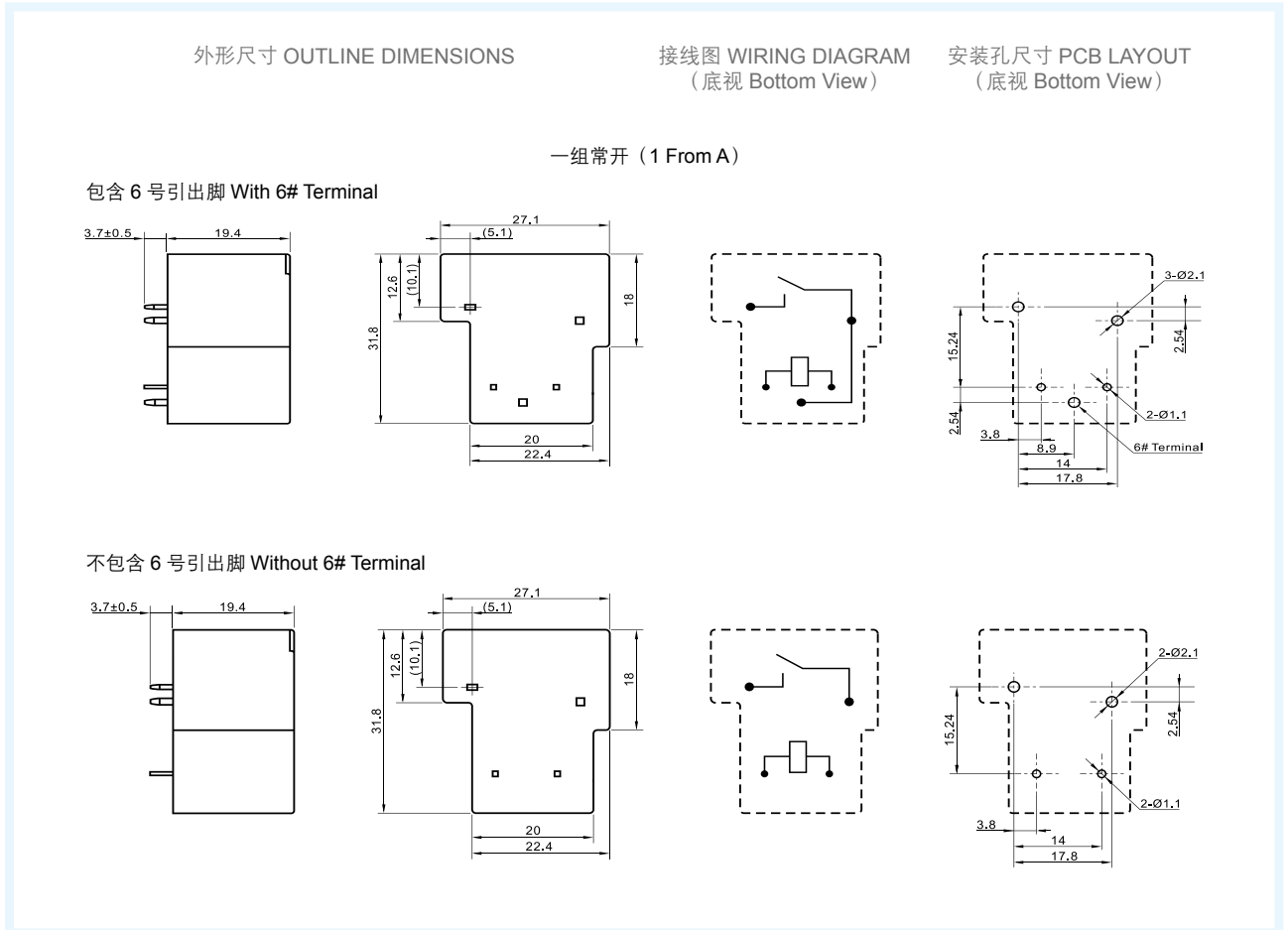
安全认证 APPROVALS

安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50184977	CQC10002051838
负载 Rating	1A: 30A 240VAC 20A 30VDC 1B: 20A 240VAC/30VDC 1C(NO): 30A 240VAC 20A 30VDC 1C(NC): 20A 240VAC/30VDC	1A: 30A 240VAC/30VDC 1C(NO): 20A 240VAC/30VDC 1C(NC): 10A 240VAC/30VDC	NO: 30A 240VAC/30VDC NC: 20A 240VAC/30VDC

订货标记示例 ORDERING INFORMATION

产品型号 Model:	MPQ1	-S	-1	12	D	-C	-6
产品结构 Structure:	S: 塑封型 Sealed 无 Nil: 防尘罩型 Dust Protected						
触点组数 Contact Group:	1: 1 组 1 Group						
线圈电压 Coil Voltage:	5、6、9、12、18、24、48、110 VDC						
线圈电源 Coil Power:	D: 直流 DC						
触点形式 Contact Arrangement:	A: 常开 NO B: 常闭 NC C: 转换 NO/NC						
引出端形式 Termination:	6: 有 6 号引出脚 (With #6 Terminal) 无 Nil: 没有 6 号引出脚 (Without #6 Terminal)						

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT (单位 Unit: mm)



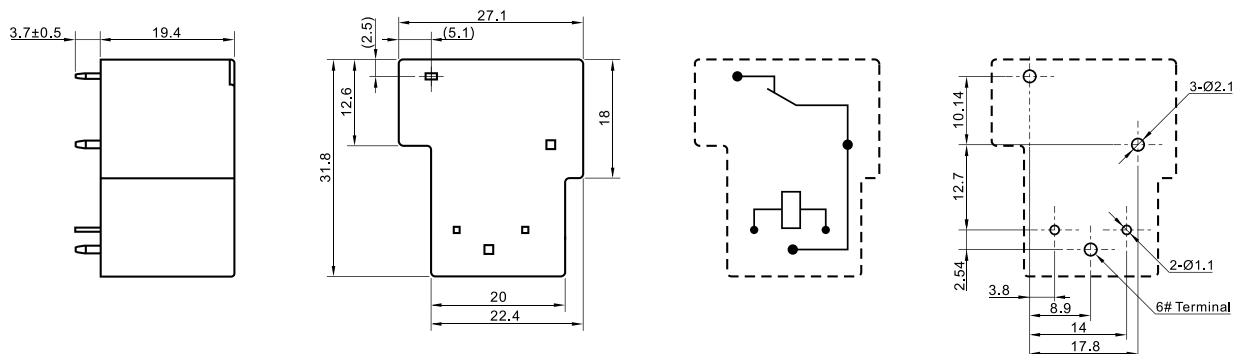
外形尺寸 OUTLINE DIMENSIONS

接线图 WIRING DIAGRAM
(底视 Bottom View)

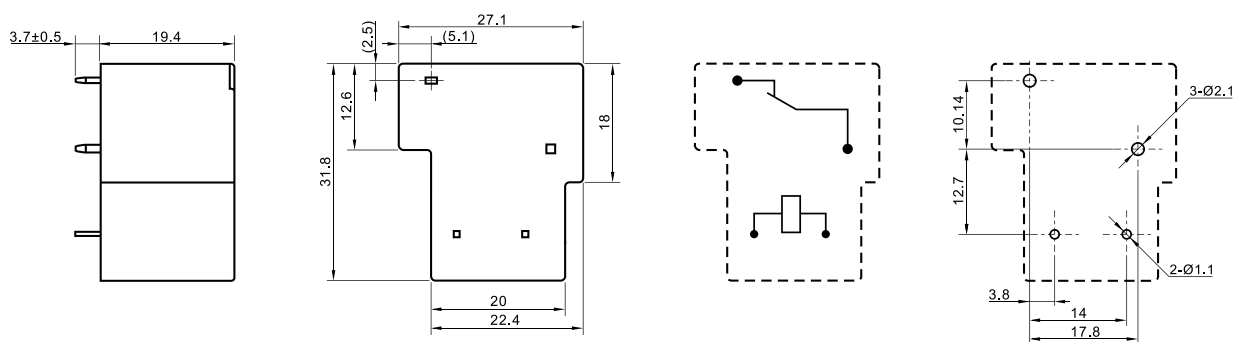
安装孔尺寸 PCB LAYOUT
(底视 Bottom View)

一组常闭 (1 From B)

包含 6 号引出脚 With 6# Terminal

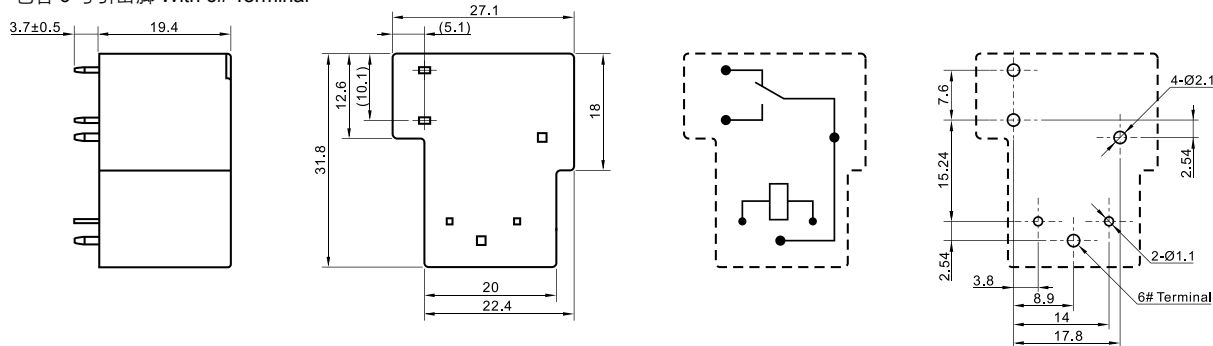


不包含 6 号引出脚 Without 6# Terminal

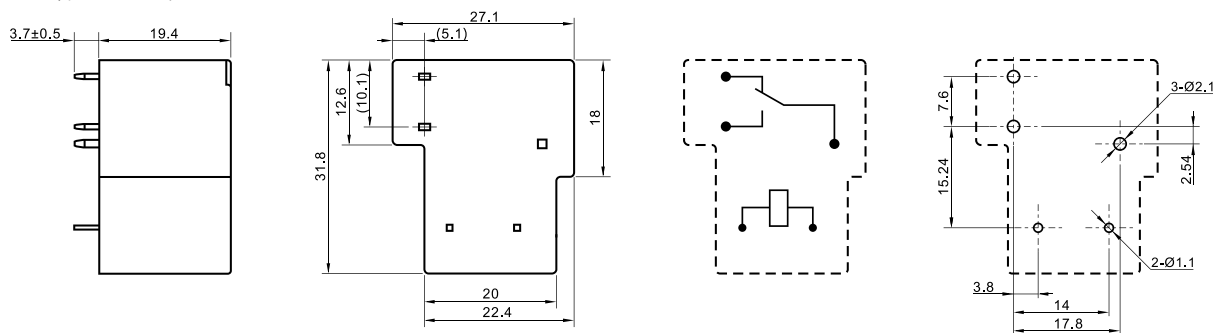


一组转换 (1 From C)

包含 6 号引出脚 With 6# Terminal



不包含 6 号引出脚 Without 6# Terminal



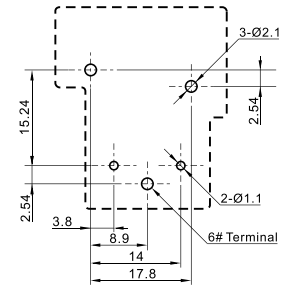
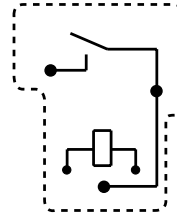
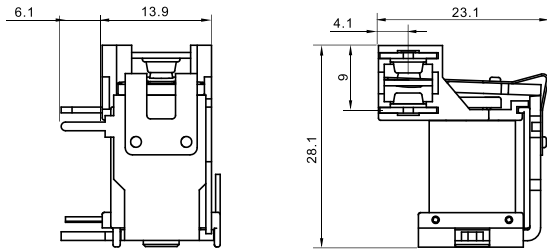
外形尺寸 OUTLINE DIMENSIONS

接线图 WIRING DIAGRAM
(底视 Bottom View)

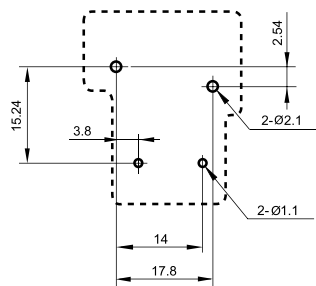
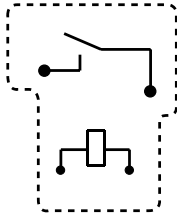
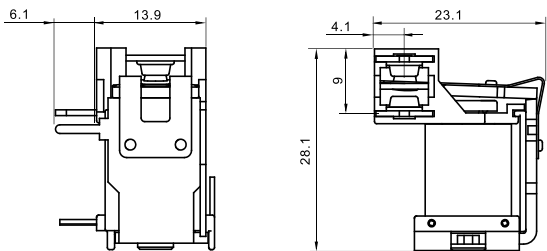
安装孔尺寸 PCB LAYOUT
(底视 Bottom View)

敞开型一组常开 (1 From A Unenclosed)

包含 6 号引出脚 With 6# Terminal

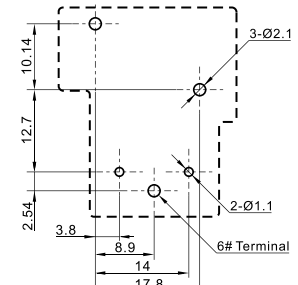
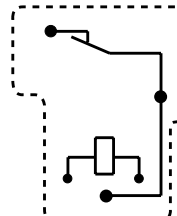
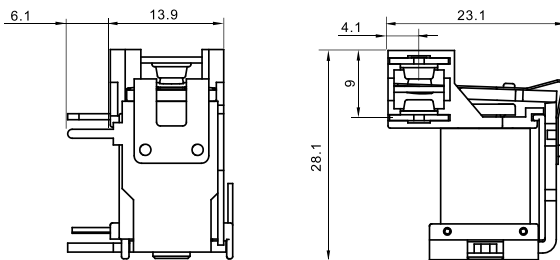


不包含 6 号引出脚 Without 6# Terminal

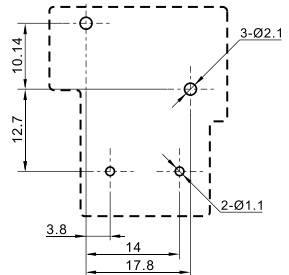
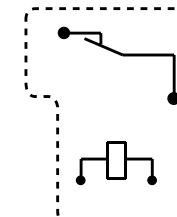
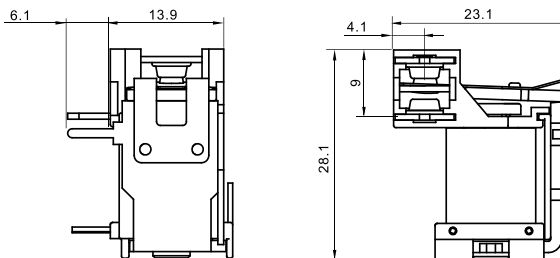


敞开型一组常闭 (1 From B Unenclosed)

包含 6 号引出脚 With 6# Terminal



不包含 6 号引出脚 Without 6# Terminal



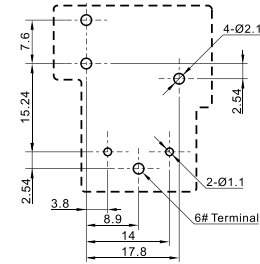
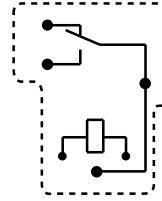
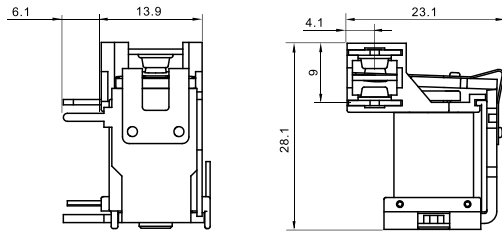
外形尺寸 OUTLINE DIMENSIONS

接线图 WIRING DIAGRAM
(底视 Bottom View)

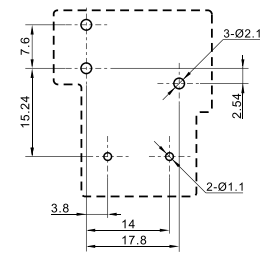
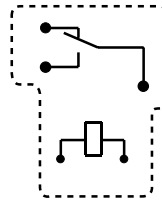
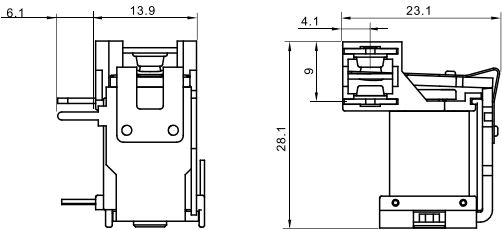
安装孔尺寸 PCB LAYOUT
(底视 Bottom View)

敞开型一组转换 (1 From C Unenclosed)

包含 6 号引出脚 With 6# Terminal



不包含 6 号引出脚 Without 6# Terminal



备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;

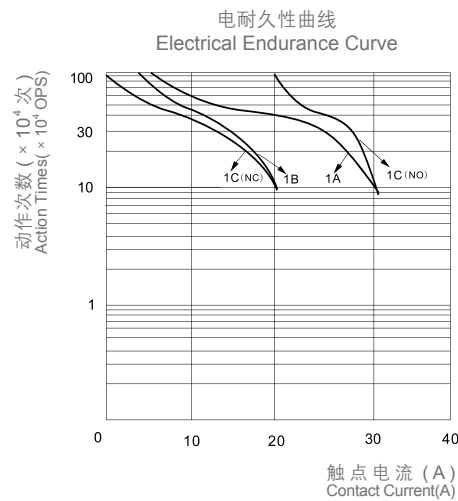
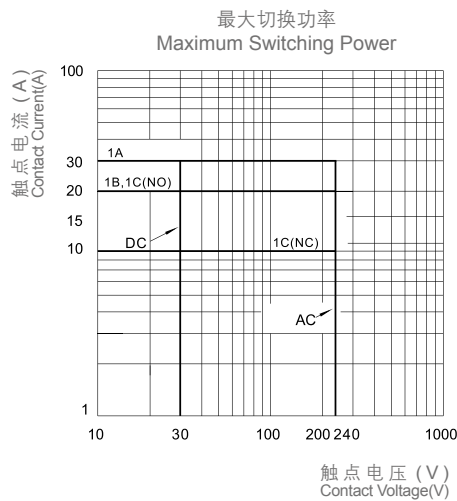
(2) 安装孔尺寸中未注尺寸公差均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



声明 STATEMENT:

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特性 FEATURES

- 30A 触点切换能力
- F 级线圈绝缘等级
- 塑封型和防尘罩型可供选择
- 印制板式引出端，触点快连接引出端
- 外形尺寸 32.0 × 27.1 × 28.3mm
- 30A switching capability
- Class F insulation available
- Sealed & dust protected available
- PCB layout & contact QC layout
- Outline dimensions 32.0 × 27.1 × 28.3mm



触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A、1B、1C
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤50mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	NO: 30A 240VAC/30VDC NC: 20A 240VAC/30VDC
最大切换电流	Max. Switching Current	NO: 30A NC: 20A
最大切换电压	Max. Switching Voltage	240VAC/30VDC
最大切换功率	Max. Switching Power	7200VA/560W
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介电耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 3500VAC 1min 断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤10ms
环境温度	Ambient Temperature	-40℃ ~+105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式和快连接式 PCB & QC
封装形式	Construction	塑封型 Sealed type, 防尘罩型 Dust Protected
重量	Unit Weight	约 Approx.: 36g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.5	6.5	28	约 Approx.0.9
6	≤4.5	≥0.6	7.8	40	
9	≤6.75	≥0.9	11.7	90	
12	≤9.0	≥1.2	15.6	160	
18	≤13.5	≥1.8	23.4	360	
24	≤18	≥2.4	31.2	640	
48	≤36	≥4.8	62.4	2560	
110	≤82.5	≥11	143	13440	

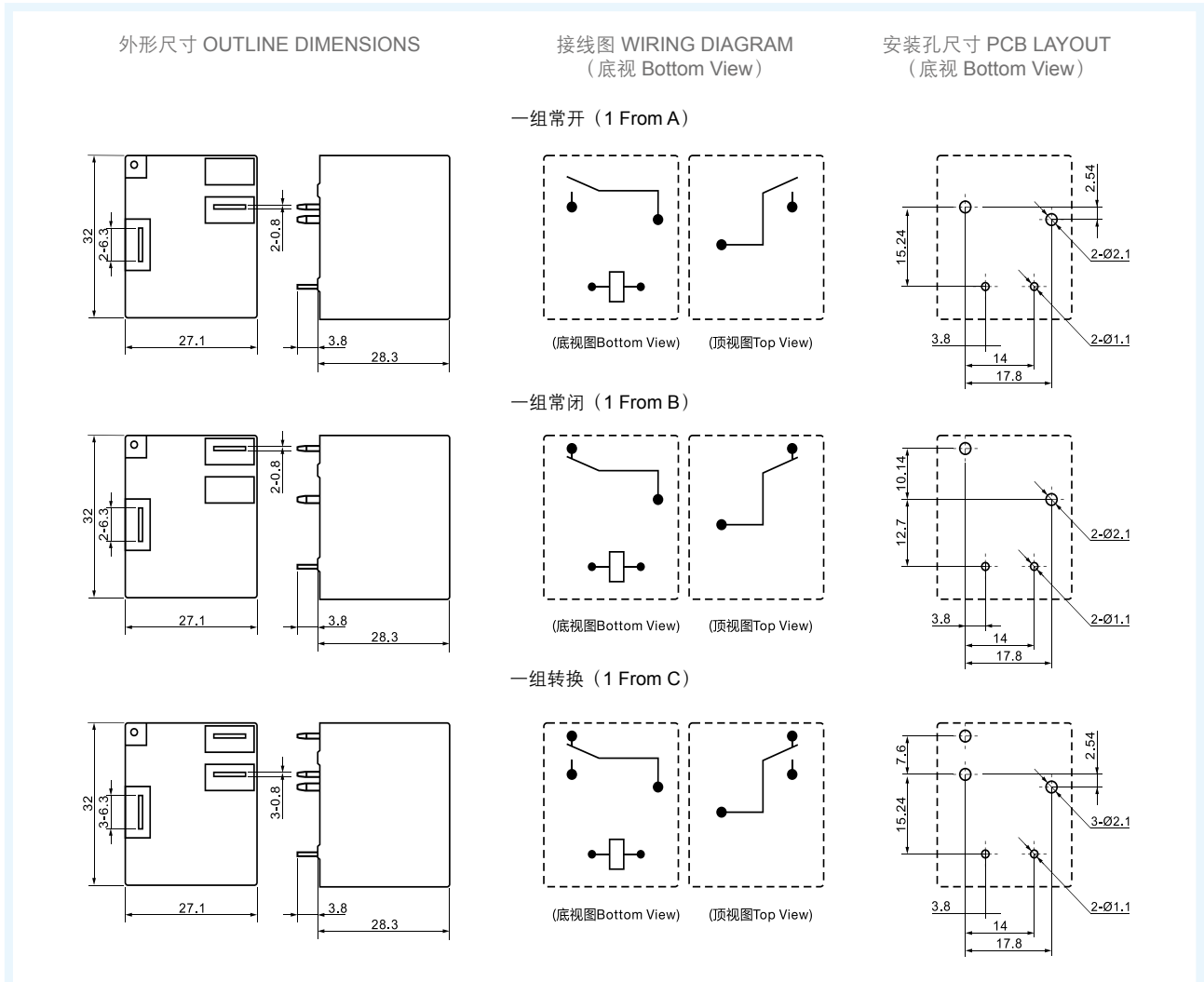
安全认证 APPROVALS

安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50184977	CQC10002051838
负载 Rating	1A: 30A 240VAC 20A 30VDC 1B: 20A 240VAC/30VDC 1C(NO): 30A 240VAC 20A 30VDC 1C(NC): 20A 240VAC/30VDC	1A: 30A 240VAC/30VDC 1C(NO): 20A 240VAC/30VDC 1C(NC): 10A 240VAC/30VDC	NO: 30A 240VAC/30VDC NC: 20A 240VAC/30VDC

订货标记示例 ORDERING INFORMATION

产品型号 Model:	MPQ2	-S	-1	12	D	-C
产品结构 Structure:	S: 塑封型 Sealed 无 Nil: 防尘罩型 Dust Protected					
触点组数 Contact Group:	1: 1组 Group					
线圈电压 Coil Voltage:	5、6、9、12、18、24、48、110VDC					
线圈电源 Coil Power:	D: 直流 DC A: 常开 NO B: 常闭 NC C: 转换 NO/NC					
触点形式 Contact Arrangement:						

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)



备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;

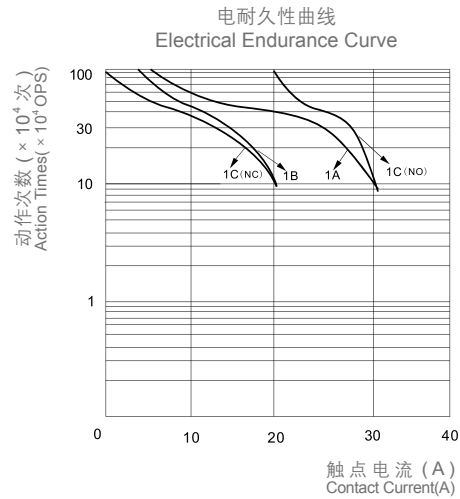
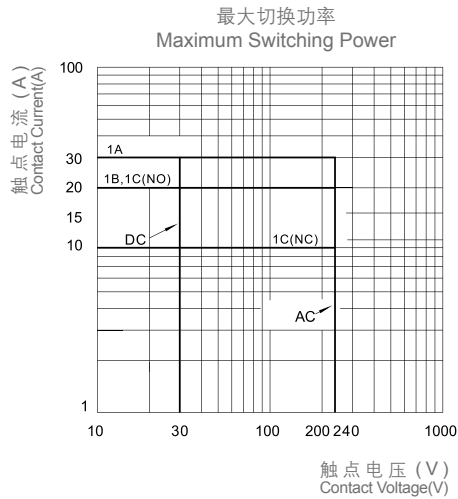
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



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特性 FEATURES

- 30A 触点切换能力
- F 级线圈绝缘等级
- 塑封型和防尘罩型可供选择
- 印制板式引出端，触点快连接引出端
- 外形尺寸 32.0 × 27.1 × 20.1mm
- 30A switching capability
- Class F insulation available
- Sealed & dust protected available
- PCB layout & contact QC layout
- Outline dimensions 32.0 × 27.1 × 20.1mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A、1B、1C
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤50mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	NO: 30A 240VAC/30VDC
		NC: 20A 240VAC/30VDC
最大切换电流	Max. Switching Current	NO: 30A
		NC: 20A
最大切换电压	Max. Switching Voltage	240VAC/30VDC
最大切换功率	Max. Switching Power	7200VA/560W
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 3500VAC 1min
		断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤10ms
环境温度	Ambient Temperature	-40℃ ~+105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G)
		强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印制板式和快连接式 PCB & QC
封装形式	Construction	塑封型 Sealed, 防尘罩型 Dust Protected
重量	Unit Weight	约 Approx. 35g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.5	6.5	28	约 Approx. 0.9
6	≤4.5	≥0.6	7.8	40	
9	≤6.75	≥0.9	11.7	90	
12	≤9.0	≥1.2	15.6	160	
18	≤13.5	≥1.8	23.4	360	
24	≤18	≥2.4	31.2	640	
48	≤36	≥4.8	62.4	2560	
110	≤82.5	≥11	143	13440	

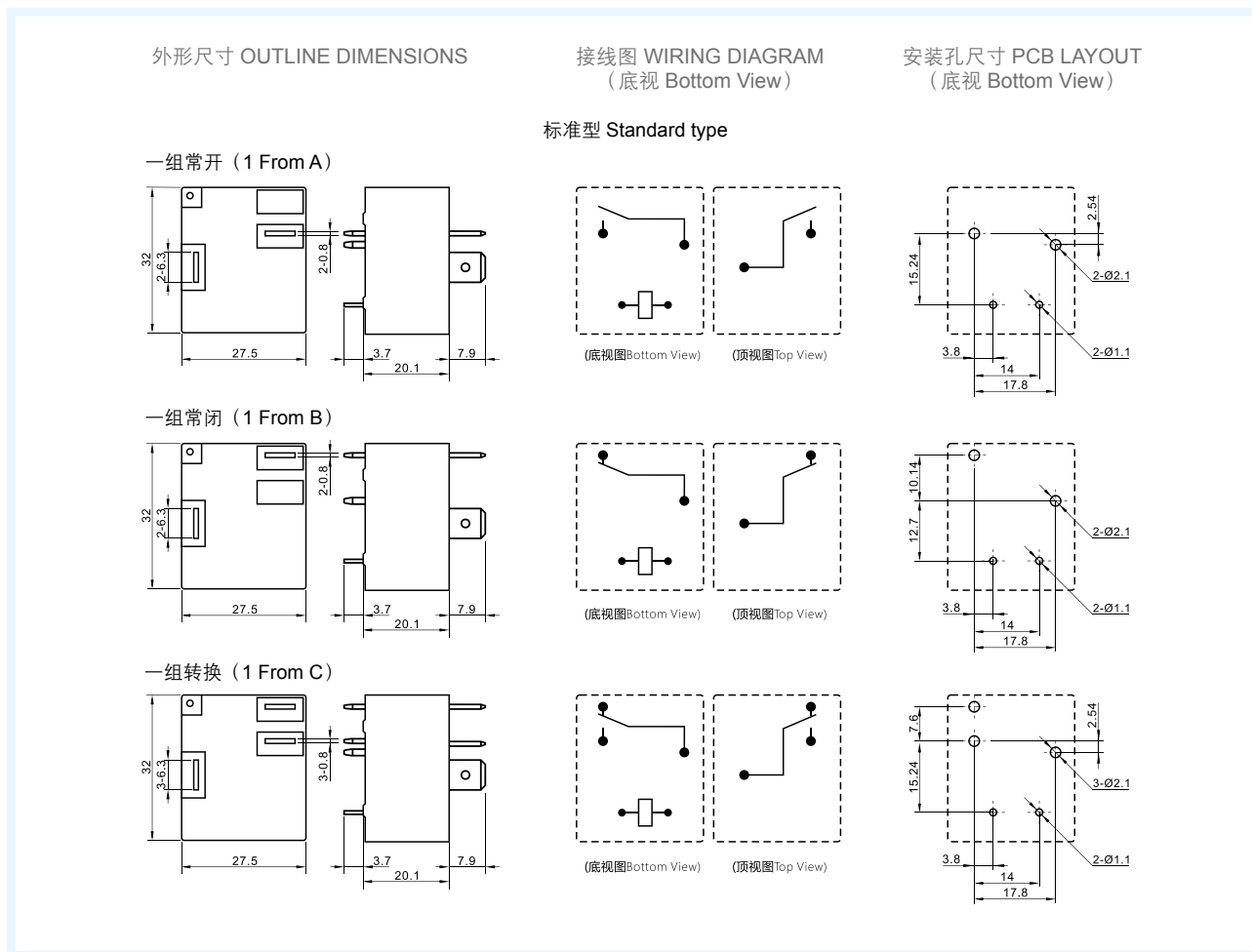
安全认证 APPROVALS

安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50184977	CQC10002051838
负 载 Rating	1A: 30A 240VAC 20A 30VDC 1B: 20A 240VAC/30VDC 1C(NO): 30A 240VAC 20A 30VDC 1C(NC): 20A 240VAC/30VDC	1A: 30A 240VAC/30VDC 1C(NO): 20A 240VAC/30VDC 1C(NC): 10A 240VAC/30VDC	NO: 30A 240VAC/30VDC NC: 20A 240VAC/30VDC

订货标记示例 ORDERING INFORMATION

			MPQ4	-S	-1	12	D	-A	-T
产品型号	Model:	MPQ4							
产品结构	Structure:	S: 塑封型 Sealed							
		无 Nil: 防尘罩型 Dust protected							
触点组数	Contact Group:	1: 1 组 1 Group							
线圈电压	Coil Voltage:	5、6、9、12、18、24、48、110VDC							
线圈电源	Coil Power:	D: 直流 DC							
触点形式	Contact Arrangement:	A: 常开 NO							
		B: 常闭 NC							
		C: 转换 NO/NC							
结构形式	Structural Style:	无 Nil: 标准型 Standard type							
		T: 铜端子结构 Copper Terminal Structure							
		L: 螺纹端子结构 Thread Terminal Structure							

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT (单位 Unit: mm)

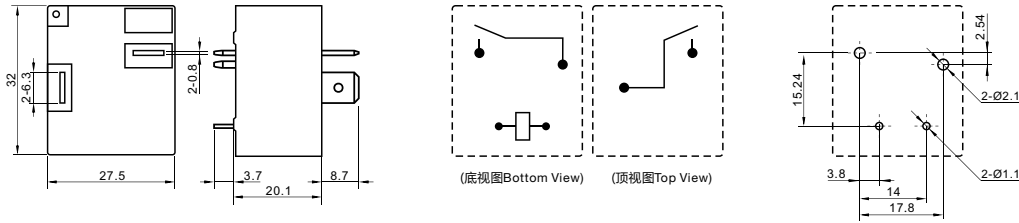


外形尺寸 OUTLINE DIMENSIONS

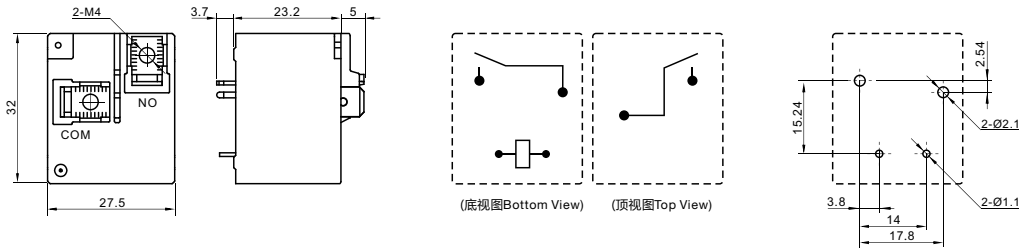
接线图 WIRING DIAGRAM
(底视 Bottom View)

安装孔尺寸 PCB LAYOUT
(底视 Bottom View)

铜端子结构 Copper Terminal Structure



螺纹端子结构 Thread Terminal Structure



备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;

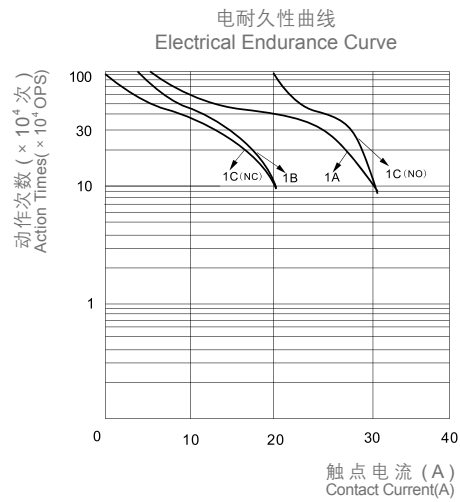
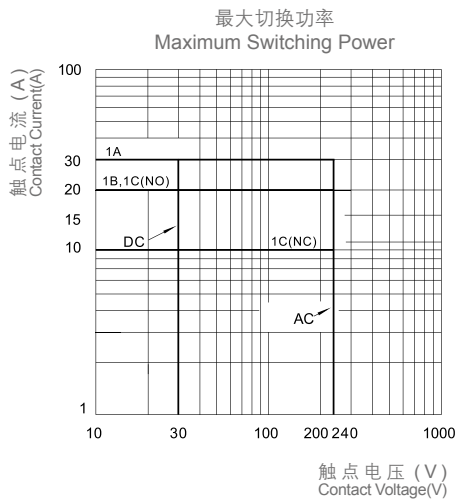
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



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特性 FEATURES

- 5A 触点切换能力
 - 宽度不超过 7.2mm，适合高密度安装
 - 高灵敏度，功耗仅为 200mW
 - 外形尺寸 20.5 × 7.2 × 15.0mm
- 5A contact switching capability
 - Height not exceed 7.2mm
 - High sensitive coil power only 200mW
 - Outline dimensions 20.5 × 7.2 × 15.0mm



触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	5A 250VDC/30VDC
最大切换电流	Max. Switching Current	5A
最大切换电压	Max. Switching Voltage	250VDC/30VDC
最大切换功率	Max. Switching Power	1250VA
电气寿命	Electrical Life	1 × 10 ⁶ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 4000VAC 1min
		断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤10ms
复归时间	Release Time	≤10ms
环境温度	Ambient Temperature	-40℃ ~+85℃
振动	Vibration	10Hz~500Hz 49m/S ² (5G)
冲击	Shock	稳定性 Functional: 100m/s ² (10G)
		强度 Destructive: 1000m/s ² (100G)
引出端方式	Terminal Form	印制板式 PCB
封装形式	Construction	塑封型 Sealed, 防焊剂型 Flux proofed
重量	Unit Weight	约 Approx. 3g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.25	6.5	125	约 Approx. 0.2
6	≤4.5	≥0.3	7.8	180	
9	≤6.75	≥0.45	11.7	405	
12	≤9	≥0.6	15.6	720	
18	≤13.5	≥0.9	23.4	1620	
24	≤18	≥1.2	31.2	2880	

安全认证 APPROVALS

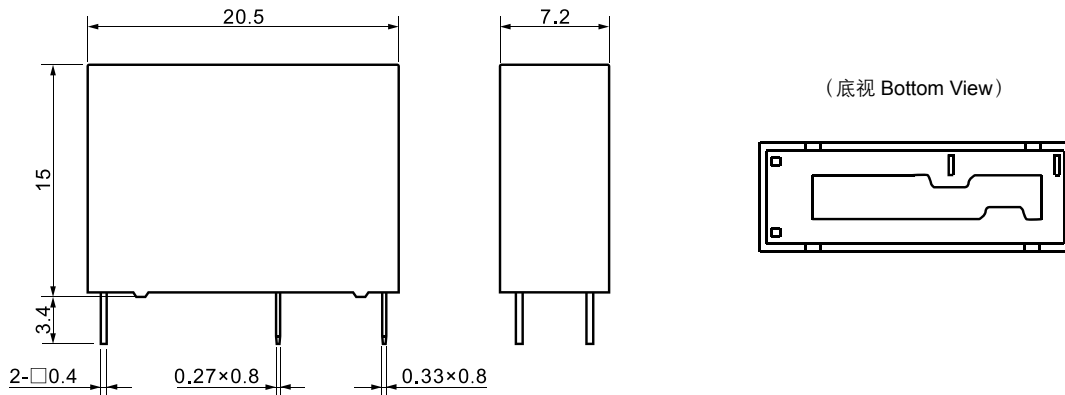
安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E313266	R50217035	CQC11002059553
负载 Rating	5A 250VAC/30VDC 1/10HP 277VAC	5A 250VAC/30VDC 3A 250VAC/30VDC	5A 250VAC/30VDC 3A 250VAC/30VDC

订货标记示例 ORDERING INFORMATION

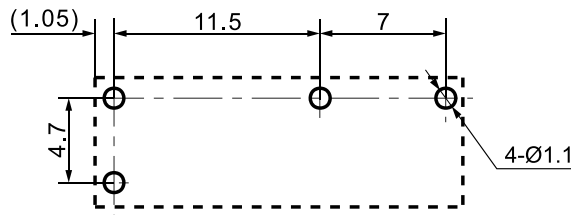
			MPR	-S	-1	12	-A
产品型号 Model:	MPR						
产品结构 Structure:	S: 塑封型 Sealed 无 NiI: 防焊剂型 Flux proofed						
触点组数 Contact Group:	1 : 1 组 1 Group						
线圈电压 Coil Voltage:	5、6、9、12、18、24VDC						
线圈电源 Coil Power:	A: 常开 NO						

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)

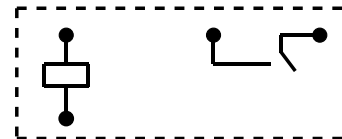
外形尺寸 Outline Dimensions



安装孔尺寸 PCB layout(底视图 Bottom view)



接线图 Wiring Diagram(底视图 Bottom view)



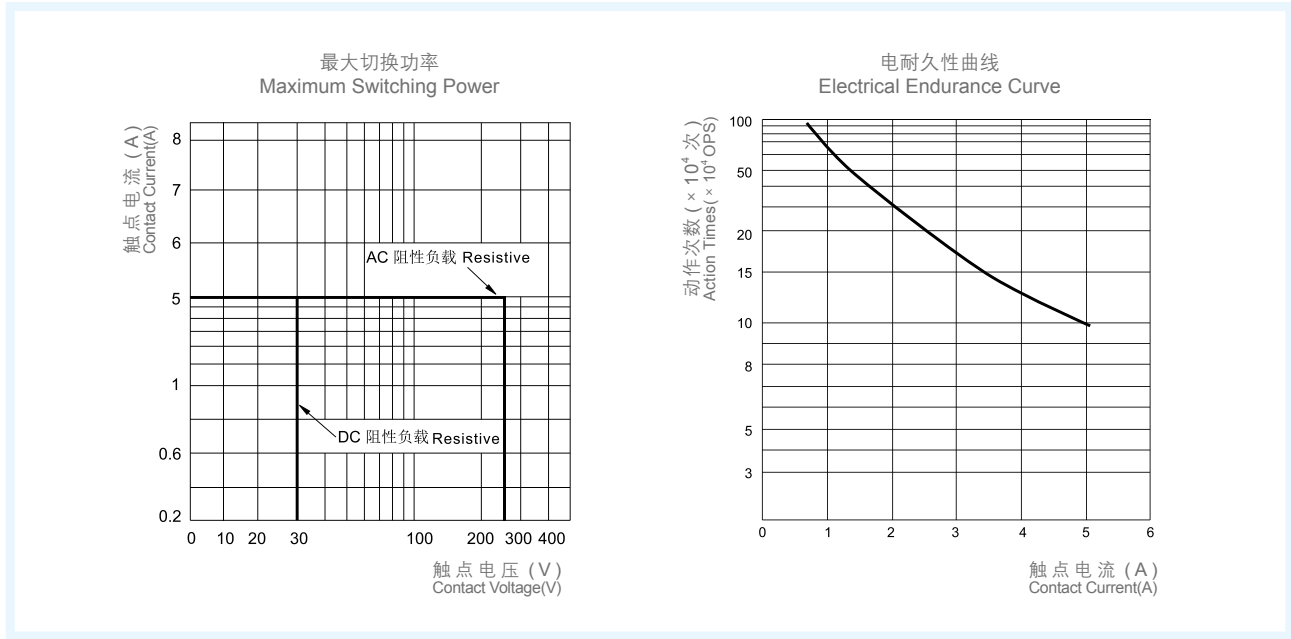
备注:

- (1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差均为 $\pm 0.1\text{mm}$ 。

REMARK:

- (1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



声明 STATEMENT:

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特性 FEATURES

- 25A 触点切换能力
- 适用于切换电机负载
- 防尘罩型封装结构
- 印制板式和快连接方式引出脚
- 外形尺寸 30.2 × 15.8 × 23.3mm
- 25A contact switching capability
- Suitable for switching motor load
- Dusty construction
- PCB and QC terminal available
- Outline dimensions 30.2 × 15.8 × 23.3mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤100mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	20A 250VAC
最大切换电流	Max. Switching Current	25A
最大切换电压	Max. Switching Voltage	250VAC
最大切换功率	Max. Switching Power	5000VA
电气寿命	Electrical Life	1 × 10 ⁵ 次 OPS
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介电耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 4500VAC 1min 断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Operate Time	≤15ms
复归时间	Release Time	≤5ms
环境温度	Ambient Temperature	-25℃ ~ +105℃
振动	Vibration	10Hz~55Hz 1.5mm 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	MPY: 印刷板 + 快连接式 PCB+QC MPY-P: 印刷板式 PCB
封装形式	Construction	防尘罩型 Dust Protected, 塑封型 Sealed
重量	Unit Weight	约 Approx. 23g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	最大允许电压 Max Allowable Voltage VDC	线圈电阻 Coil Resistance Ω ± 10%	线圈功耗 Coil Power W
5	≤3.75	≥0.5	6.5	27.8	约 Approx. 0.9
12	≤9.0	≥1.2	15.6	160	
24	≤18	≥2.4	31.2	640	
48	≤36	≥4.8	62.4	2560	

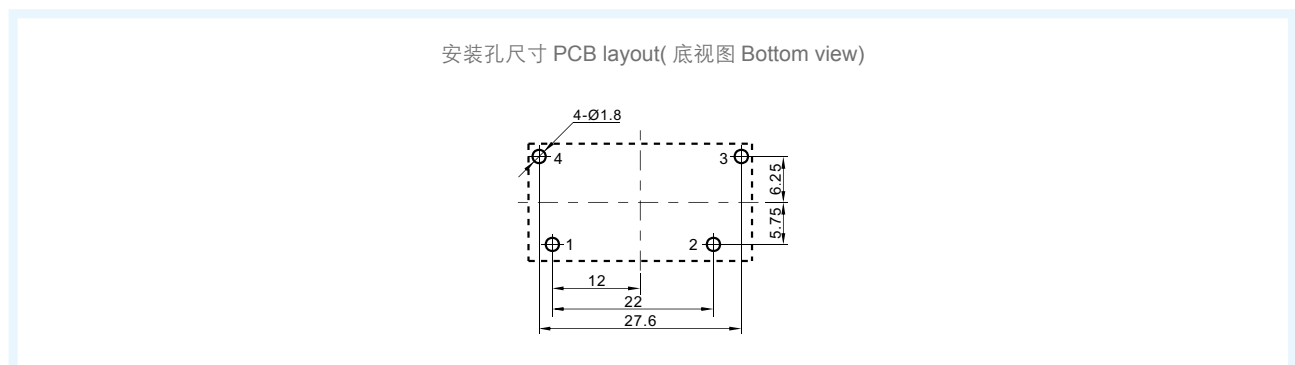
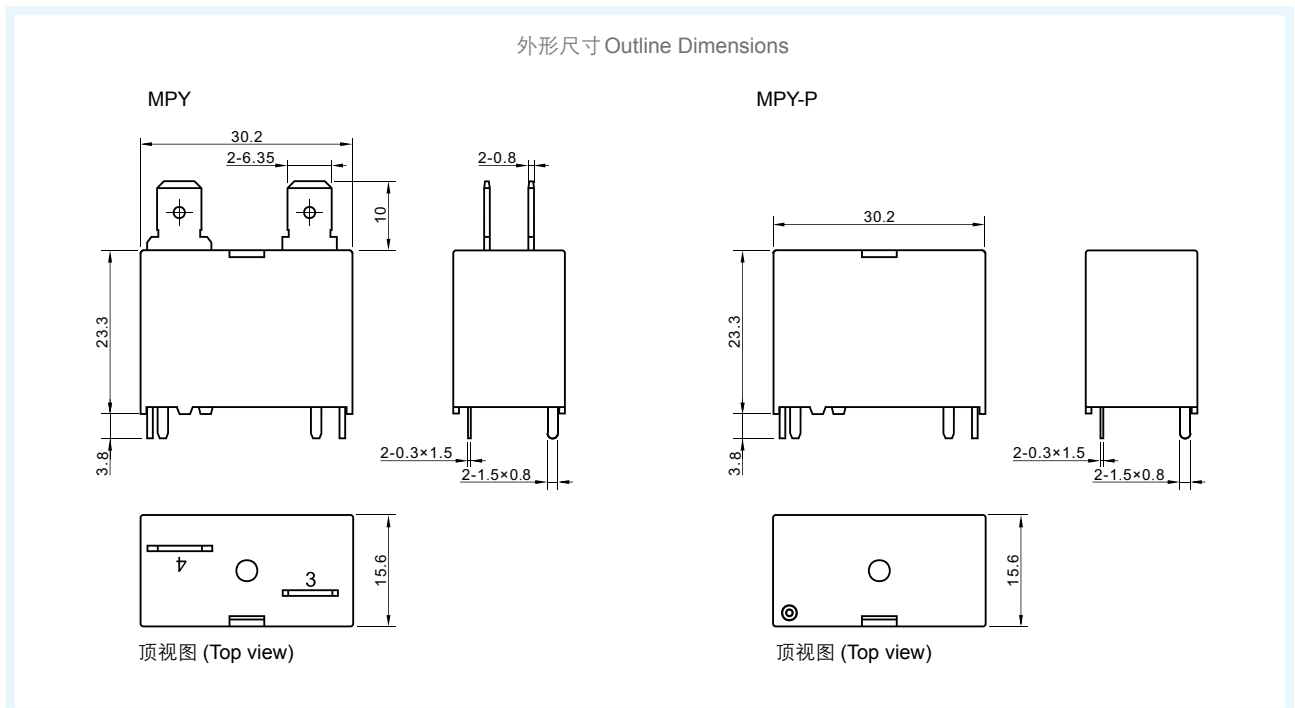
安全认证 APPROVALS

安全认证 Approvals	UL	TUV	CQC
证书编号 Certificate Number	E358149	R50204088	CQC11002059
负载 Rating	20A 250VAC/30VDC 2HP 277VAC	25A 250VAC/30VDC 20A 250VAC/30VDC	25A 250VAC/30VDC 20A 250VAC/30VDC 16A 250VAC/30VDC

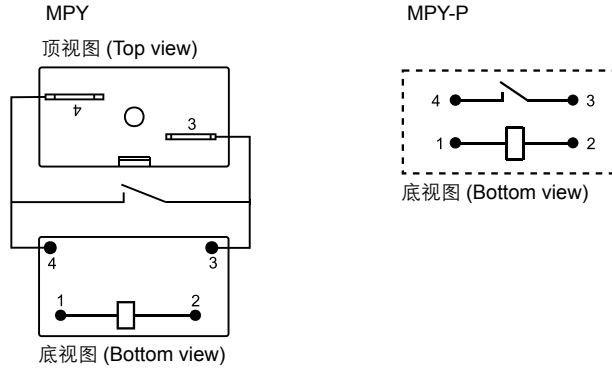
订货标记示例 ORDERING INFORMATION

			MPY	-S	-1	12	-A	-P
产品型号 Model:	MPY							
产品结构 Structure:	S: 塑封型 Sealed 无 Nil: 防焊剂型 Flux proofed							
触点组数 Contact Group:	1 : 1 组 1 Group							
线圈电压 Coil Voltage:	05、12、24、48 VDC							
触点形式 Contact Form:	A: 常开 NO							
引出端形式 Termination:	无: 印刷板 + 快连接式 P: 印刷板式 Nil: PCB+QC P: PCB							

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)



接线图 Wiring Diagram (底视图 Bottom view)



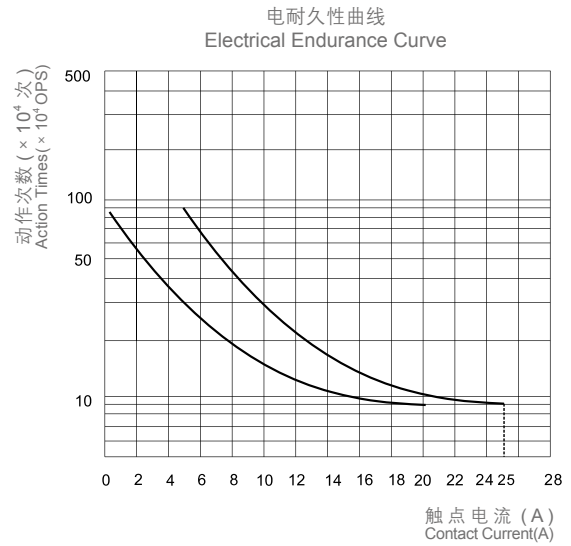
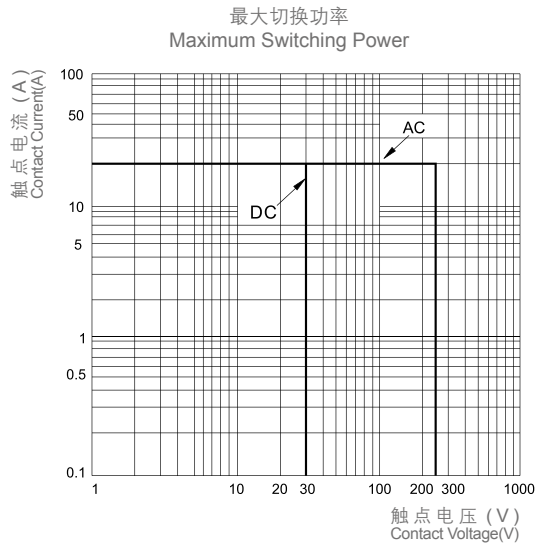
备注:

- (1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差均为 $\pm 0.1\text{mm}$ 。

REMARK:

- (1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$;
outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

性能曲线图 PERFORMANCE CURVE



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特性 FEATURES



- 50A 触点切换能力
- 灯负载控制能力高达 5000W
- 马达负载控制能力达 5HP
- 抗浪涌电流能力达 500A/2ms
- 触点线圈间介质耐压 4kV 以上
- 具备手动开关调试功能
- 环保产品 (符合 RoHS)
- 外形尺寸: 39.0 × 15.0 × 29.3mm
- 50A switching capability
- Lamp load up to 5000W
- Motor load up to 5HP
- Max. inrush current 500A/2ms
- Dielectric strength: more than 4kV (Between coil and contacts)
- Manual switch function available
- Environmental friendly product(RoHS Compliant)
- Outline dimensions: 39.0 × 15.0 × 29.3mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A, 1B, 1C
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤50mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	50A 277VAC
最大切换电流	Max. Switching Current	50A
最大切换电压	Max. Switching Voltage	440VAC
电气寿命	Electrical Life	1A, 1B: 50A 277VAC, 1 × 10 ⁵ 次 OPS (阻性负载 Resistive) 5000W 240VAC, 3 × 10 ⁴ 次 OPS (白炽灯 Incandescent Lamp) 16A 277VAC, 6 × 10 ³ 次 OPS (电子镇流器 Electronic ballast) 5HP 277 VAC, 3 × 10 ⁴ 次 OPS (马达负载 Motor) 1C: 40A 277 VAC, 3 × 10 ⁴ 次 OPS (阻性负载 Resistive)
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介电耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 4000VAC 1min 断开触点间 Between Open Contacts: 1500VAC 1min
动作时间	Set Time	≤15ms
复归时间	Reset Time	≤15ms
环境温度	Ambient Temperature	-40℃ ~ +85℃
振动	Vibration	10Hz~500Hz, 49m/s ² (5G)
冲击	Shock	稳定性 Functional : 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印刷电路板引出端 PCB
封装形式	Construction	防尘罩型 Dust Protected, 塑封型 Sealed
重量	Unit Weight	约 Approx. 32g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作 / 复归电压 Set/Reset Voltage VDC	脉冲宽度 Pulse Duration ms	线圈电阻 Coil Resistance Ω ± 10%	线圈功率 Coil Power W
6	≤4.8	≥50	单线圈 Single Coil Latching	24
9	≤7.2			54
12	≤9.6			96
24	≤19.2			384
48	≤38.4			1536
6	≤4.8	≥50	双线圈 Double Coils Latching	12+12
9	≤7.2			27+27
12	≤9.6			48+48
24	≤19.2			192+192
48	≤38.4			768+768

订货标记示例 ORDERING INFORMATION

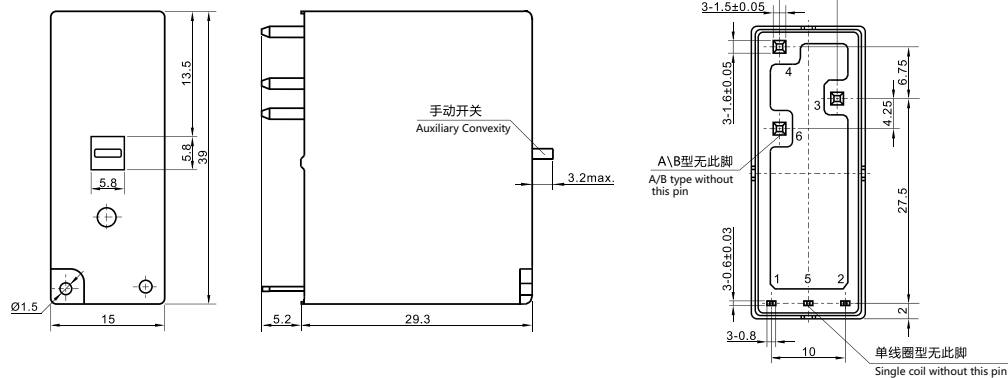
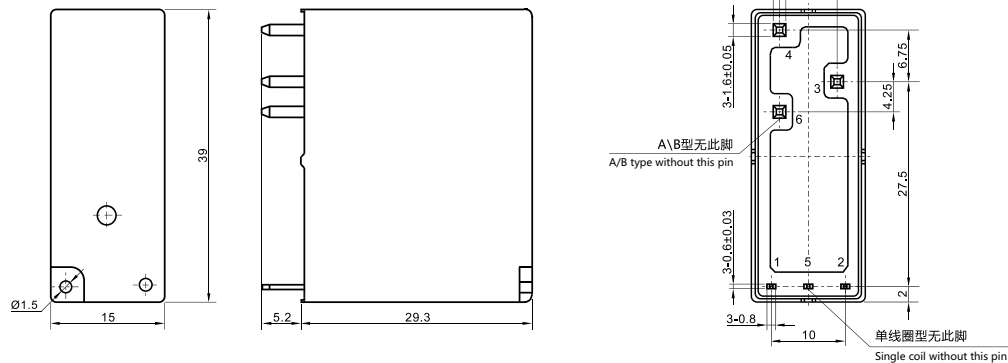
			MALC	-S	-1	12	-A	-L1	-R	1
产品型号	Model:	MALC								
产品结构	Structure:	无 nil: 防焊剂型 Flux Proofed S: 塑封型 Sealed								
触点组数	Contact Group:	1: 1 组 Group								
线圈电压	Coil Voltage:	6、9、12、24、48VDC								
触点形式	Contact Form: ⁽¹⁾	A: 常开 NO B: 常闭 NC C: 转换 NO/NC								
线圈类型	Sort:	L1: 单线圈磁保持 Single Coil Latching L2: 双线圈磁保持 Double Coils Latching								
极性特点:		R: 反极性 Negative Polarity 无 nil: 标准极性 Positive Polarity								
系列代号	Version:	1: 有手动开关 With Auxiliary Convexity 无 nil: 无手动开关 No Auxiliary Convexity								

注意: (1) A 表示继电器出厂时触点处于断开状态; B 表示继电器出厂时触点处于闭合状态。

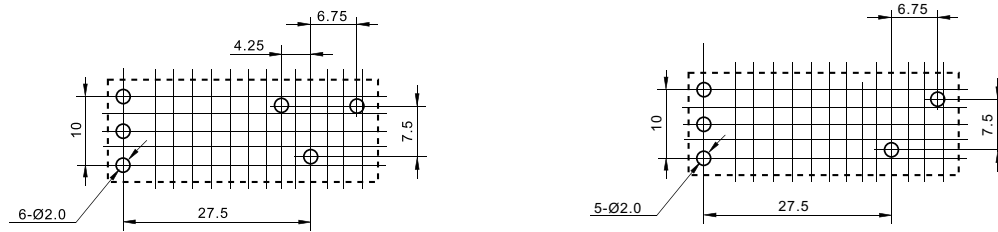
Note: (1) A means that relay is on the “reset” status when delivery; B means that relay is on the “set” status when delivery.

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT (单位 Unit: mm)

外形尺寸 OUTLINE DIMENSIONS

MALC-1 -C- - -1MALC-S-1 -C- - 

安装孔尺寸 PCB Layout(底视 Bottom View)



备注:

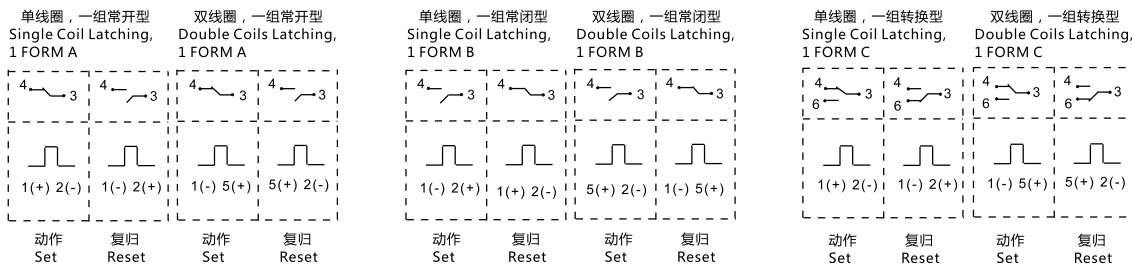
- (1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
- (2) 安装孔尺寸中未注尺寸公差均为 $\pm 0.1\text{mm}$ 。

REMARK:

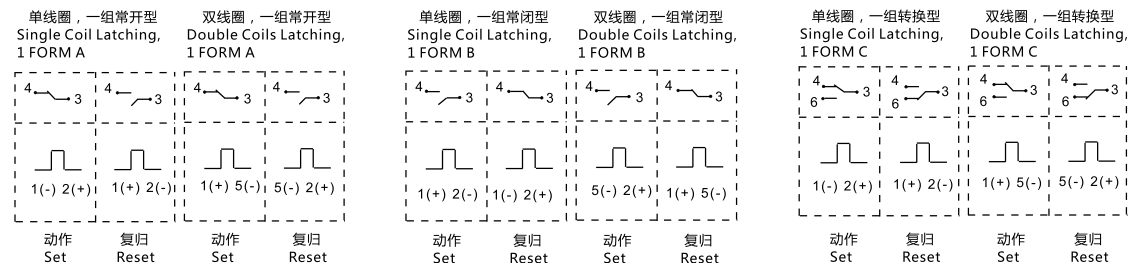
- 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;
- 2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

接线图 WIRING DIAGRAM (底视 BOTTOM VIEW)

标准极性 Positive Polarity



反极性 Negative Polarity



声明 STATEMENT:

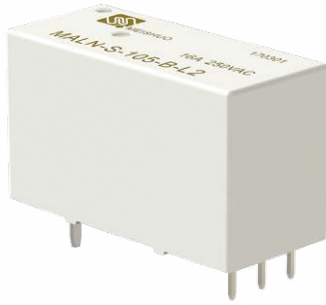
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特性 FEATURES



- 16A 触点切换能力
- 抗浪涌电流能力达 320A/2ms
500A/2ms (特殊触点)
- 触点线圈间介质耐压 4kV 以上
- 环保产品 (符合 RoHS)
- 外形尺寸: 29.0 × 12.8 × 16.8mm
- 16A switching capability
- Max. inrush current 320A/2ms
500A/2ms (Special contact)
- Dielectric strength: more than 4Kv
- Environmental friendly product(RoHS Compliant)
- Outline dimensions: 29.0 × 12.8 × 16.8mm

触点参数 CONTACT PARAMETERS

触点形式	Contact Arrangement	1A, 1B, 1C
触点材料	Contact Material	银合金 Silver Alloy
接触电阻 (初始)	Contact Resistance(Initial)	≤20mΩ (1A 6VDC)
额定负载 (阻性)	Rated Load(Res.)	16A 250VAC
最大切换电流	Max. Switching Current	16A
最大切换电压	Max. Switching Voltage	250VAC
电气寿命	Electrical Life	1A, 1B: 1 × 10 ⁵ 次 OPS (16A 250VAC, 阻性负载 Resistive)
机械寿命	Mechanical Life	1 × 10 ⁶ 次 OPS

性能参数 FUNCTION PARAMETERS

绝缘电阻	Insulation Resistance	1000MΩ (500VDC)
介质耐压	Dielectric Strength	触点与线圈间 Between Coil & Contacts: 4000VAC 1min 断开触点间 Between Open Contacts: 1000VAC 1min
动作时间	Set Time	≤15ms
复归时间	Reset Time	≤15ms
环境温度	Ambient Temperature	-40℃ ~+85℃
振动	Vibration	10Hz~55Hz 1.5 双振幅 (DA)
冲击	Shock	稳定性 Functional: 98m/s ² (10G) 强度 Destructive: 980m/s ² (100G)
引出端方式	Terminal Form	印刷电路板引出端 PCB
封装形式	Construction	塑封型 Sealed
重量	Unit Weight	约 Approx. 13g

线圈规格表 COIL DATA(23℃)

额定电压 Rated Voltage VDC	动作 / 复归电压 Set/Reset Voltage VDC	脉冲宽度 Pulse Duration ms	线圈电阻 Coil Resistance Ω ± 10%	线圈功率 Coil Power W
6	≤4.8	≥50	单线圈 Single Coil Latching	约 Approx. 0.3
9	≤7.2			
12	≤9.6			
24	≤19.2			
6	≤4.8	≥50	双线圈 Double Coils Latching	约 Approx. 0.6
9	≤7.2			
12	≤9.6			
24	≤19.2			

订货标记示例 ORDERING INFORMATION

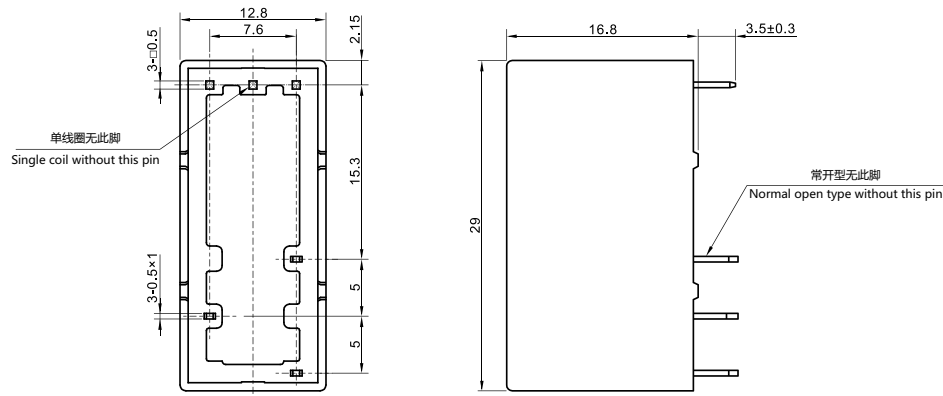
			MALN	-S	-1	12	-A	-L1	-R	-1
产品型号	Model:	MALN								
产品结构	Structure:	无：防焊剂型 Flux Proofed S: 塑封型 Sealed								
触点组数	Contact Group:	1: 1 组 1 Group								
线圈电压	Coil Voltage:	6, 9, 12, 24								
触点形式	Contact Form: ⁽¹⁾	A: 常开 NO B: 常闭 NC C: 转换 NO/NC								
线圈类型	Sort:	L1: 单线圈磁保持 Single Coil Latching L2: 双线圈磁保持 Double Coils Latching								
极性特点：		R: 反极性 Negative Polarity 无 nil: 标准极性 Positive Polarity								
系列代号	Version:	1: 有手动开关 With Auxiliary Convexity 无 nil: 无手动开关 No Auxiliary Convexity								

注意:(1) A 标识继电器出厂触点处于断开状态; B 标识继电器出场时触点处于闭合状态。

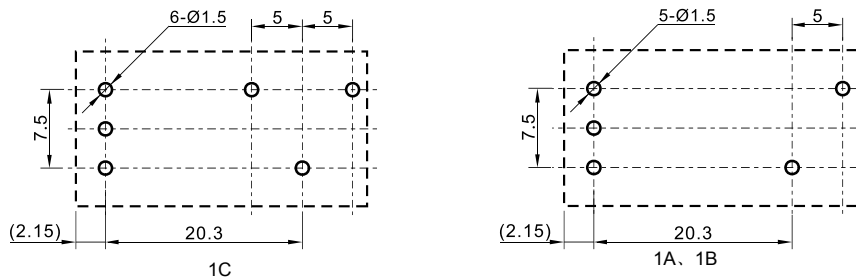
Note:(1) A means that relay is on the “reset” status when delivery: B means that relay is on the “set” status when delivery.

外形尺寸、接线图、安装孔尺寸 OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT(单位 Unit: mm)

外形尺寸 OUTLINE DIMENSIONS



安装孔尺寸 PCB Layout (底视 Bottom View)



备注:

(1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$; 当外形尺寸在 $1\sim 5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;

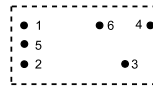
(2) 安装孔尺寸中未注尺寸公差均为 $\pm 0.1\text{mm}$ 。

REMARK:

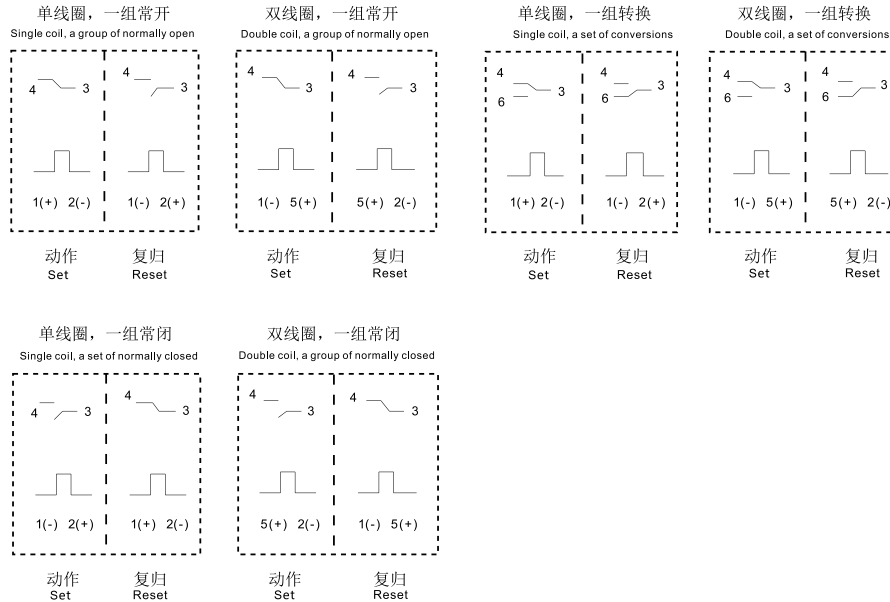
(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

(2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

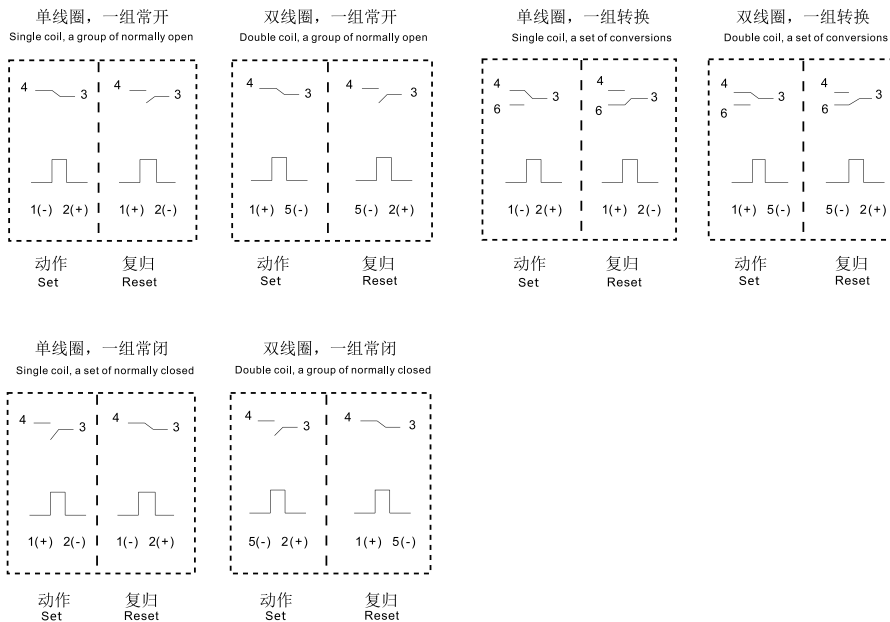
接线图 Wiring Diagram (底视 Bottom View)



标准极性 Positive Polarity



反极性 Negative Polarity



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本目录虽经多次校对以求正确，但仅供参考之用，一切以产品实物为准。

This product catalogue is checked by several times to be correct, but it is only for reference, all is according to products.



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