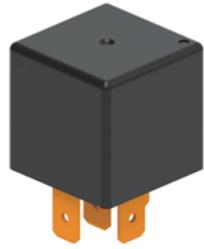


MAH3

汽车应用

Automotive Applications

- 40A, 60A 触点切换能力
- 具有四种触点形式
- 40A, 60A Switching capability
- 4 kinds of Contact Form available
- 防尘罩和塑封型可供选择
- 外形尺寸 L×W×H: 26×26×25mm
- Dust protected Type And Wash tight Type Available
- Profile Dimension L×W×H: 26×26×25mm



MAH3 - S - 1 12 - C - 1 - R

产品型号 Model	产品结构 Structure	触点组数 Number of Poles	线圈电压 Coil Voltage	触点形式 Contact Form	结构形式 Version	线圈并联元件 Parallel Coil Components
	S: 塑封型 无: 防尘罩型 S: Wash tight Nil:Dust Protected	1: 1 组 1 Pole	12: 12VDC 24: 24VDC	A: 常开 NO C: 转换 NO/NC 2A: 双常开 2NO	1: 光背快速接引出端 Cover Without Bracket 2: PCB 引出端 PCB layout 3: 铁背快速接引出端 Cover With Metal Bracket 4: 塑背快速接引出端 Cover With Plastic Bracket	R: 并联电阻 With Resistor 无: 无并联元件 Nil: No Components D1: 并联二极管 (阳极接 86# 脚) With Parallel Diode (anode connection pin # 86) D2: 并联二极管 (阳极接 85# 脚) With Parallel Diode (anode connection pin # 85)

触点参数 CONTACT PARAMETERS

触点形式 Contact Form	1a, 1c	2a
触点材料 Contact Material	银合金 Silver Alloy	
接触压降 Voltage Drop(初始 Initial)	NO: 典型值 Type.20mV, 最大值 Max.250mV	
最大连续电流 Max.Continuous Current	NO/NC:40A/30A NO/NC:60A/45A	
电气寿命 Electrical Life	见附表 1 See attached list 1	
机械寿命 Mechanical Life	1×10 ⁶ 次 OPS	

性能参数 CHARACTERISTICS

绝缘电阻 Insulation Resistance	100MΩ(500VDC)	
介质耐压 Dielectric Strength	触点与线圈间 Between Coil, Contacts: 500VAC 1min 断开触点间 Between Open Contacts: 500VAC 1min	
动作时间 Operate Time	≤ 10ms	
释放时间 Release Time	≤ 10ms	
环境温度 Ambient Temperature	-40°C ~+125°C	
振动 Vibration	10Hz-500Hz, 49m/s ² (5G)	
冲击 Shock	功能性的 Functional	98m/s ² (10G)
	破坏性的 Destructive	196m/s ² (20G)
引出端形式 Termination	快连接式引出端 QC, 印刷电路板引出端 PCB	
封装形式 Construction	防尘罩型 Dust Protected, 塑封型 Wash tight	
重量 Unit Weight	约 Approx.: 33g	
机械性能 Mechanical Data	外壳保持力:(拉和压)200N Cover Retention:(Pull, Push)200N	
	引出脚保持力:(拉和压)100N Terminal Retention:(Pull, Push)100N	
	引出脚抗弯曲力:(各方向)10N Terminal Resistance To Bending(Front, Side)10N	

MAH3

线圈规格表 COIL DATA(23°C)

额定电压 Rated Voltage VDC	动作电压 Operate Voltage VDC	释放电压 Release Voltage VDC	线圈电阻 Coil Resistance $\Omega \pm 10\%$	线圈功率 Coil Power W	并联电阻 Parallel Resistance $\Omega \pm 10\%$	等效电阻 Equivalent Resistance $\Omega \pm 10\%$	允许最大线圈电压 (1) Max.Allowable Overdrive Voltage VDC	
							20°C	85°C
12	≤ 8.4	≥ 1.2	85	约 Approx.1.7	-	-	20.2	15.7
12	≤ 8.4	≥ 1.2	85	约 Approx.1.9	680	75.5	20.2	15.7
24	≤ 16.8	≥ 2.4	340	约 Approx.1.7	-	-	39.5	31.5
24	≤ 16.8	≥ 2.4	340	约 Approx.1.9	2700	302	39.5	31.5
24	≤ 16.8	≥ 2.4	255	约 Approx.2.3	-	-	39.5	31.5

注意: (1) 触点无负载电流, 线圈电阻为最小值情况下, 继电器线圈允许施加的最大连续工作电压。

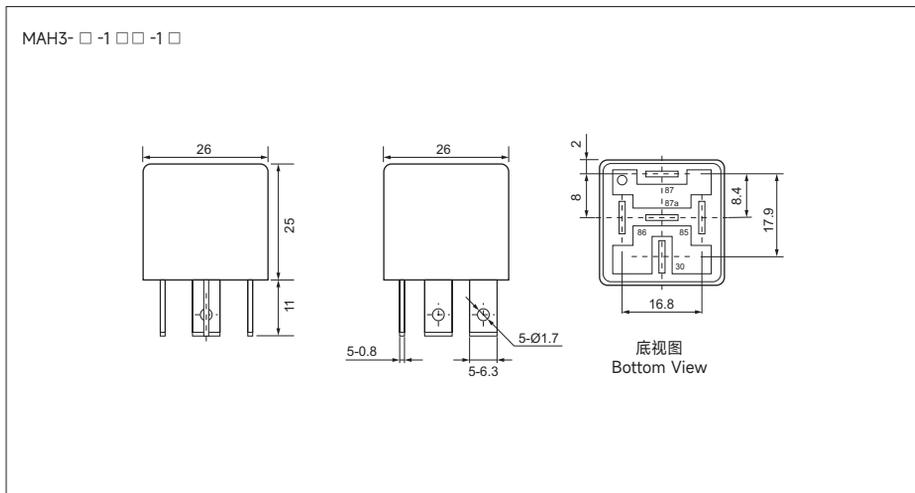
Be careful:(1)Max.Allowable overdrive voltage is stated with no load applied minimum coil resistance.

附表 1 ATTACHED LIST 1

负载电压 Load Voltage	负载类型 Load Type		负载电流 A Load Current			通断比 s On/Off Ratio		电耐久性 (次 OPS) Electrical Endurance	试验环境 温度 Ambient Temp.	
			1C		1A	接通 On	断开 Off			
			常开 NO	常闭 NC	常开 NO					
14VDC	阻性 Resistive	接通 Make	40	30	40	2	2	1×10 ⁵	详见电耐久性 试验环境 温度曲线 See Ambient Temp.Curve	
		断开 Break	40	30	40	2	2			
	感性 Inductive	接通 Make	150	-	150	2	2			
		断开 Break	30	-	30	2	2			
	灯 Lamp	接通 Make	80	-	80	2	2			
断开 Break		30	-	30	2	2				
28VDC	阻性 Resistive	接通 Make	30	20	30	2	2			At 23°C
		断开 Break	30	20	30	2	2			

外形尺寸 PROFILE DIMENSION

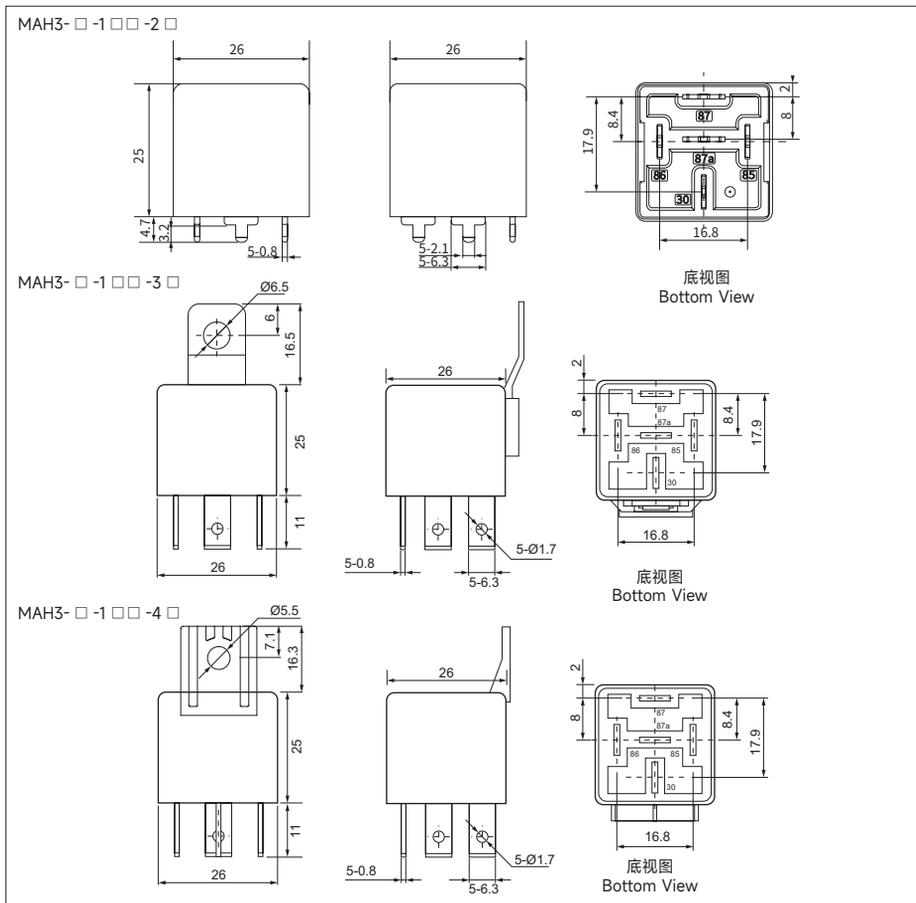
单位 Unit: mm



MAH3

外形尺寸 PROFILE DIMENSION

单位 Unit: mm



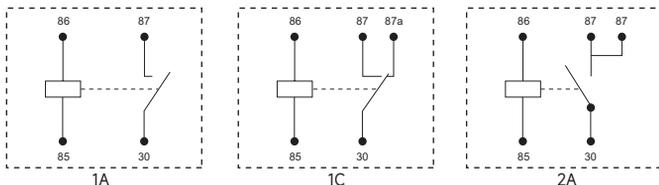
备注: (1) 产品部分外形尺寸未注尺寸公差, 当外形尺寸 $\leq 1\text{mm}$, 公差为 $\pm 0.2\text{mm}$;
当外形尺寸在 $1\text{-}5\text{mm}$ 之间时, 公差为 $\pm 0.3\text{mm}$; 当外形尺寸 $> 5\text{mm}$ 时, 公差为 $\pm 0.4\text{mm}$;
(2) 安装孔尺寸中未注尺寸公差均为 $\pm 0.1\text{mm}$ 。

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 $\pm 0.1\text{mm}$.

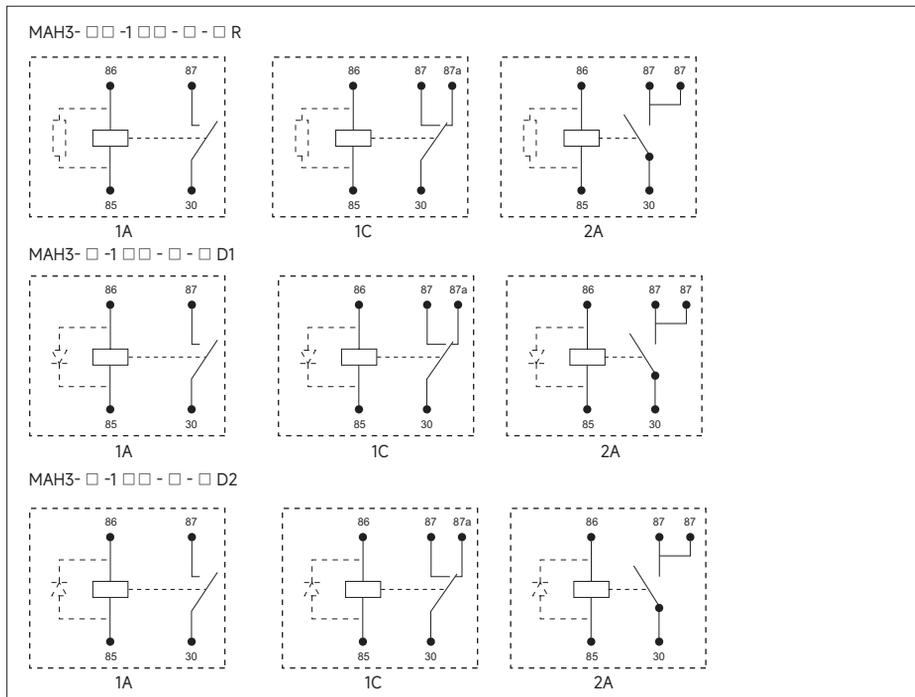
接线图 (底视图) WIRING DIAGRAM (BOTTOM VIEW)

MAH3-□-1□□-□

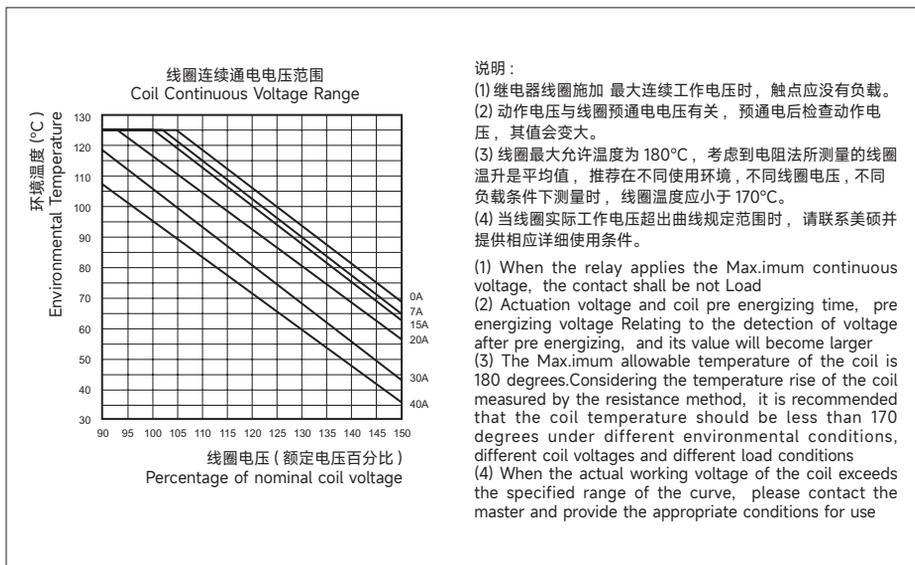


MAH3

接线图 (底视图) WIRING DIAGRAM (BOTTOM VIEW)

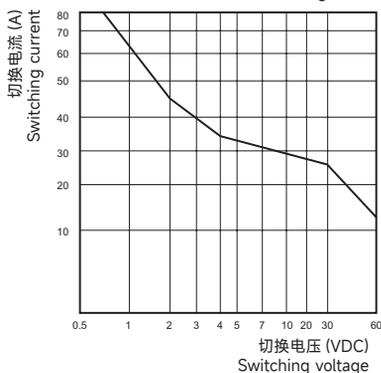


性能曲线图 PERFORMANCE CURVE



性能曲线图 PERFORMANCE CURVE

允许最大负载范围 (23°C)
Maximum allowable load range

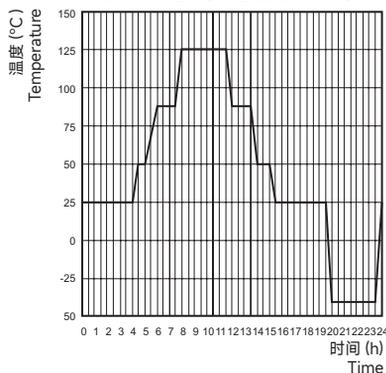


说明:

- (1) 本图以常开触点为例，本图电流为阻性。
- (2) 产品按触点参数表进行负载与耐久性试验，当实际使用的负载电压，电流，动作频率任一项与触点参数表不同时，请重新进行确认试验。

- (1) Take the normally open contact as an example, the current is resistive
- (2) Load and durability test shall be carried out according to the contact parameter list. When the actual load voltage, current and action frequency are not the same as the contact parameters, please confirm the test again.

电耐久试验环境温度曲线
Environmental Temperature
Curve Of Electric Endurance Test



说明:

- (1) 最低温度为 -40°C
 - (2) 最高温度为 125°C
- (1) The minimum temperature is -40°C.
(2) The Maximum temperature is 125°C

声明 STATEMENT:

1. 本产品规格书仅供客户使用时参考，若有更改，恕不另行通知。
This product specification for client's reference, if any change without notice.
2. 对美硕而言，不可能评定继电器在每个具体应用领域的所有性能参数要求，因而客户应该根据具体的使用条件选择与之相匹配的产品，若有疑问，请与美硕联系获取更多的技术支持。但产品选型责任仅由客户负责。
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继电器综合样本

RELAYS COMPONENTS



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