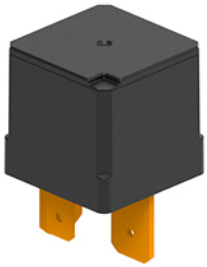
MAB

汽车及新能源类
Automotive and New Energy



- 70A 触点切换能力
- 工作温度高达 125℃
- 一组常开触点形式
- 防尘罩和塑封型可供选择
- 可带瞬态抑制电阻
- 外形尺寸 L × W × H: 26 × 26 × 25mm

- 70A Switching capability
- Ambient temp.can up to 125℃
- 1 Form A contact arrangement
- Dust protected type And sealed type available
- With transient suppression resistor
- Outline dimensions L × W × H: 26 × 26 × 25mm

MAB - **S** - **1** **12** - **A** - **1** **Y** **R**

产品型号 Model	产品结构 Structure	触点组数 Contact Group	线圈电压 Coil Voltage	触点形式 Contact Form	结构形式 Version	引出脚形式 Terminal	线圈并联元件 Parallel Coil Components
	S: 塑封型 无 : 防尘罩型 S: Sealed Nil:Dust Protected	1: 1 组 1: 1Group	06: 6VDC 12: 12VDC 24: 24VDC	A: 常开 A: NO	1: 光背快连接引出端 2: PCB 引出端 3: 金属安装架，快连接引出端 4: 塑料安装架，快连接引出端 1: QC Terminal 2: PCB layout 3: Plastic Bracket QC Terminal 4: Metal Bracket QC terminal	Y: QC 引出脚不带闭锁孔，30 和 87 引出脚长度为 14.5mm 无 : QC 引出脚带闭锁孔，30 和 87 引出脚长度为 14.5mm 或 PCB 型 Y: QC Terminal without hole and 30 & 87 terminal length is 14.5mm Nil: QC Terminal with hole and 30 & 87 terminal length is 14.5mm，or PCB Type	无 : 不带瞬态抑制电阻 R: 并联电阻 D1: 并联二极管 (阳极接 #86) D2: 并联二极管 (阳极接 #85) Nil:Without Resistor R:With Resistor D1:With Parallel Diode(Anode on 86) D2:With Parallel Diode(Anode on 85)

触点参数 Contact Parameters

触点形式 Contact Arrangement	1A
触点材料 Contact Material	银合金 Silver Alloy
接触压降 Voltage Drop(初始 Initial)	典型值 Typ.20mV，最大值 Max.300mV
最大连续电流 Max.Continuous Current	70A(23℃)
	50A(85℃)
	30A(125℃)
最大切换电压 Max.Switching Voltage	50VDC
电气寿命 Electrical Life	见附表 1 See schedule 1
机械寿命 Mechanical Life	1 × 10^5 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℃ ~+125℃
振动 Vibration	10Hz~500Hz，49m/s^2(5G)
冲击 Shock	294m/s^2 (30G)
引出端方式 Terminal Form	快速接式引出端 QC，印刷电路板引出端 PCB
封装形式 Construction	防尘罩型 Dust Protected，塑封型 Sealed
重量 Unit Weight	约 Approx.: 35g
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

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	线圈电阻 Coil Resistance Ω ± 10%	线圈功率 Coil Power W	并联电阻 Parallel Resistance Ω ± 10%	等效电阻 Equivalent Resistance Ω ± 10%	允许最大线圈电压 (1) Max.Allowable Overdrive Voltage VDC	
							20℃	85℃
6	≤4.2	≥0.6	22.5	1.6	-	-	10.1	7.8
6	≤4.2	≥0.6	22.5	1.8	180	20	10.1	7.8
12	≤8.4	≥1.2	90	1.6	-	-	20.2	15.7
12	≤8.4	≥1.2	90	1.8	680	79.5	20.2	15.7
24	≤16.8	≥2.4	360	1.6	-	-	40.5	31.5
24	≤16.8	≥2.4	360	1.8	2700	317.6	40.5	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.

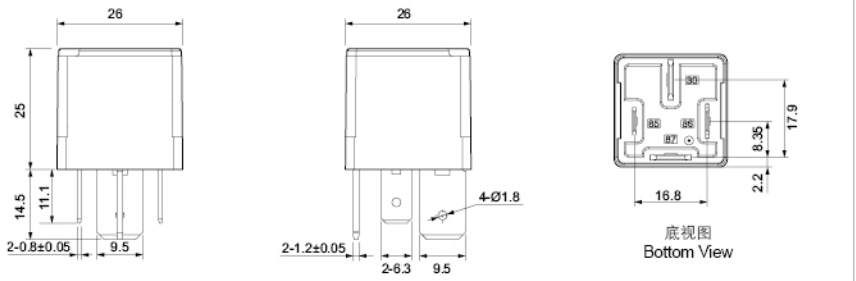
附表 1 Schedule 1

负载电压 Load Voltage	负载类型 Load Type		触点负载电流 A Load Current	通断比 s On/Off Ratio		电耐久性 Electrical Endurance (次 OPS)	试验环境温度 Ambient Temp
				接通 On	断开 Off		
14VDC	阻性 Resistive	接通 Make	70	2	2	1×10^5	At 23℃
		断开 Break	70				
	感性 Inductive	接通 Make	150	2	4		详见电耐久性实验环境温度曲线 See Ambient Temp.Curve
		断开 Break	50				
	灯 Lamp	接通 Make	200	0.5	10		
		断开 Break	40				
28VDC	阻性 Resistive	接通 Make	40	2	2		At 23℃
		断开 Break	40				

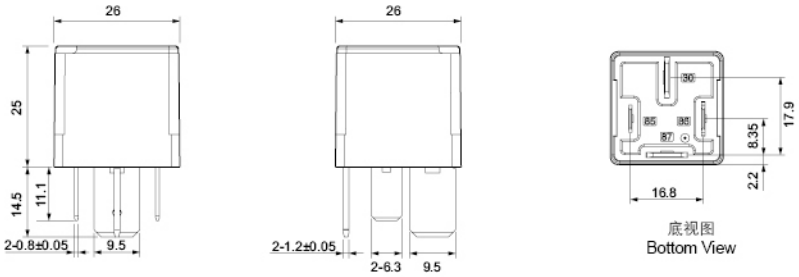
外形尺寸 Outline Dimensions/ 安装孔尺寸 (底视图)PCB Layout (Bottom View)

单位 Unit: mm

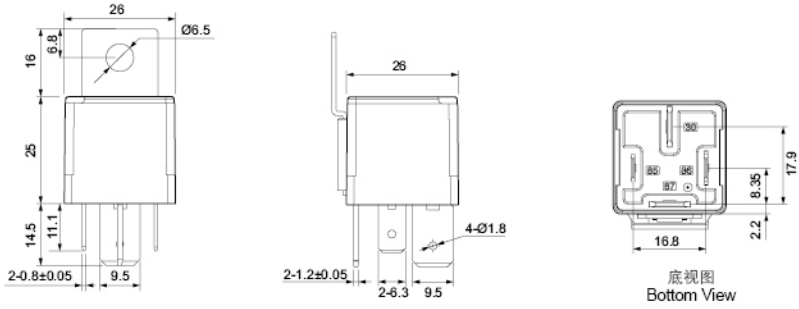
MAB- □ -1 □□ -A-1 □



MAB- □ -1 □□ -A-1Y □



MAB- □ -1 □□ -A-3- □



C

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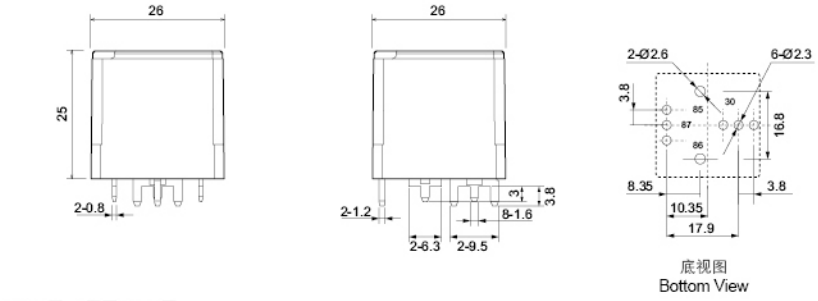
外形尺寸 Outline Dimensions

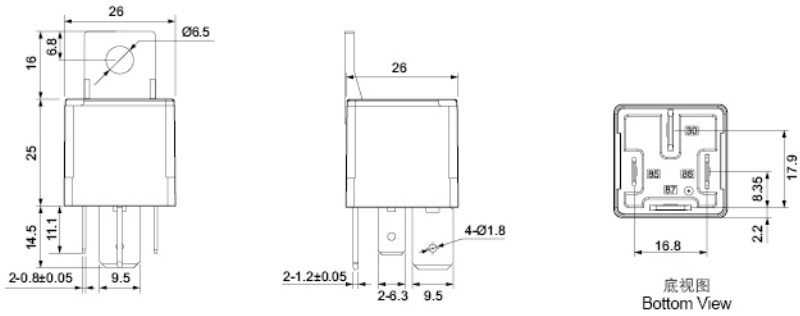
单位 Unit: mm

MAB- □ -1 □□ -A-3- □



底视图
Bottom View

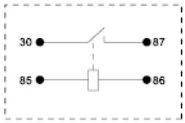
MAB- □ -1 □□ -A-4- □



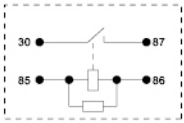
底视图
Bottom View

接线图 Wiring Diagram

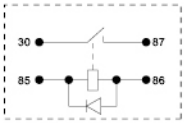
MAB- □ -1 □□ -A- □



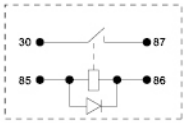
MAB- □ -1 □□ -A- □ -R



MAB- □ -1 □□ -A- □ D1



MAB- □ -1 □□ -A- □ D2

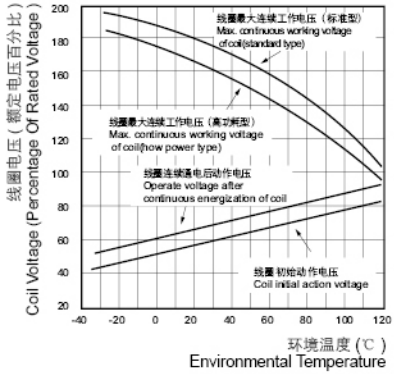


备注：(1) 产品部分外形尺寸未注尺寸公差，当外形尺寸 ≤1mm，公差为 ±0.2mm;
当外形尺寸在 1~5mm 之间时，公差为 ±0.3mm；当外形尺寸 > 5mm 时，公差为 ±0.4mm;
(2) 安装孔尺寸中未注尺寸公差的均为 ±0.1mm。

REMARK:
(1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension > 1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension > 5mm, tolerance should be ±0.4mm;
(2) The tolerance without indicating for PCB layout is always ±0.1mm.

性能曲线图 Performance Curve

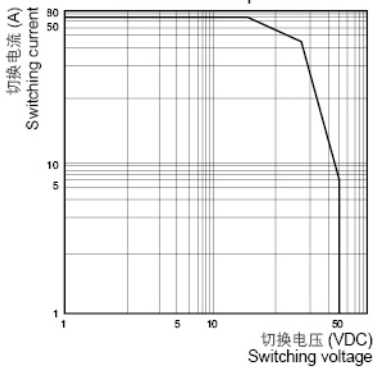
线圈连续通电电压范围
Coil Continuous Voltage Range



说明：
(1) 继电器线圈施加最大连续工作电压时，触点应没有负载。
(2) 动作电压与线圈预通电时间，预通电电压有关，在预通电后检测动作电压，其值会变大。
(3) 线圈最大允许温度为 180℃，考虑到电阻法所测量的线圈温升是平均值，推荐在不同使用环境，不同线圈电压，不同负载条件下测量时，线圈温度应小于 170℃。
(4) 当线圈实际工作电压超出曲线规定范围时，请联系美硕，并提供详细使用条件。

(1) There should be no contact load applied when Max. imum continuous operation voltage is applied on coil.
(2) The operating voltage is connected with coil energized time and voltage.After energized, the operating voltage will increase.
(3) The Max.imum allowable coil temperature is 180℃ .F or the coil temperature rise which is measured by resistance is average value, we recommend the coil temperature should be below 170 ℃ under the different application ambient, different coil voltage and different load etc.
(4) If the actual operating coil voltage is out of the specified range, please contact Meishuo for further details.

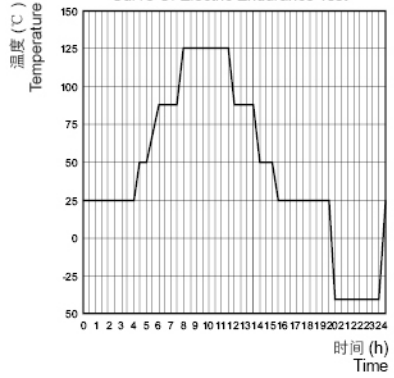
环境温度（℃）
Environmental Temperature



说明：
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。

The product shall be tested for load and durability according to the contact parameter table.
When any item of load voltage, current and action frequency actually used is different from the contact parameter table, please conduct 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℃
(2) 最高温度为 125℃

(1)The minimum temperature is -40℃ .
(2)The Max.imum temperature is 125℃