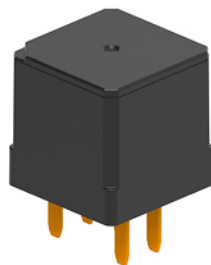


MAR

汽车及新能源类

Automotive and New Energy

- 具有一组常开，一组转换触点形式
- 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 × 25.4mm
- 1 Form A 和 1 Form C configurations
- Dust protected Type And Sealed Type Available
- With transient suppression resistor
- Outline dimensions L × W × H: 26 × 26 × 25.4mm



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	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: 1 Group	12: 12VDC 24: 24VDC	A: 常开 C: 转换 A: NO C: NO/NC	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) 无: 不带瞬态抑制电阻 R: With Resistor D1: With Parallel Diode(Anode on 86) D2: With Parallel Diode(Anode on 85) Nil: Without Resistor

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
接触压降 Voltage Drop(初始 Initial)	典型值 Typ.50mV, 最大值 Max.250mV
最大连续电流 Max.Continuous Current	NO:35A, NC:20A
最大切换电压 Max.Switching Voltage	28VDC
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 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, 19.8m/s ²
冲击 Shock	1000m/s ²
引出端方式 Terminal Form	2.8mm 快速接式引出端 2.8mm QC
封装形式 Construction	防尘罩型 Dust Protected, 塑封型 Sealed
重量 Unit Weight	约 Approx.30g
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 $\Omega \pm 10\%$	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℃	85℃
12	≤ 8.4	≥ 1.2	90	约 Approx. 1.6	-	-	18	14
12	≤ 8.4	≥ 1.2	90	约 Approx. 1.8	680	79.5	18	14
24	≤ 16.8	≥ 2.4	360	约 Approx. 1.6	-	-	36	28
24	≤ 16.8	≥ 2.4	360	约 Approx. 1.8	2700	317.6	36	28

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。

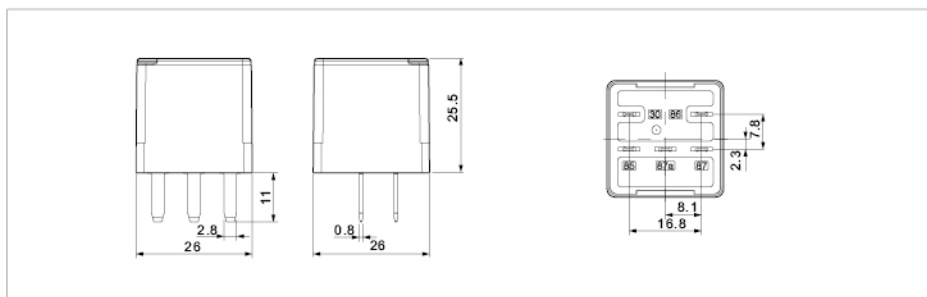
Be careful: (1) Max. Allowable overdrive voltage is stated with no load applied minimum coil resistance.

附表 1 Schedule 1

负载电压 Load Voltage	负载类型 Load Type		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	35	20	35	2	2	1 × 10 ⁵	详见电耐久性 实验环境 温度曲线 See Ambient Temp. Curve
		断开 Break	35	20	35	2	2	1 × 10 ⁵	

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

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 $\pm 0.4\text{mm}$ ；

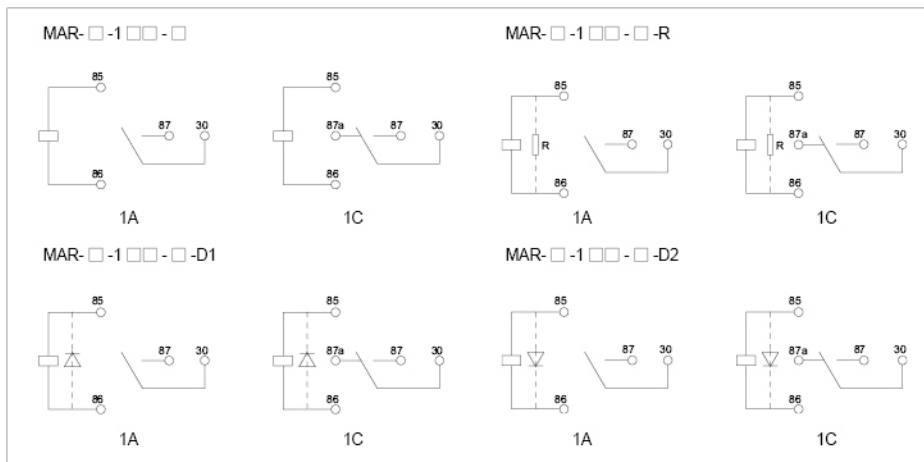
(2) 安装孔尺寸中未注尺寸公差的均为 $\pm 0.1\text{mm}$ 。

REMARK:

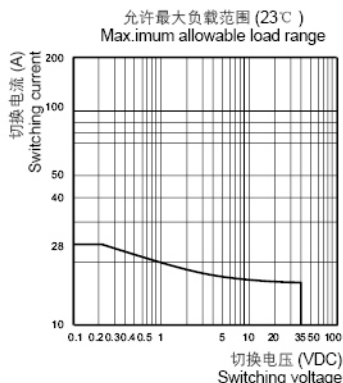
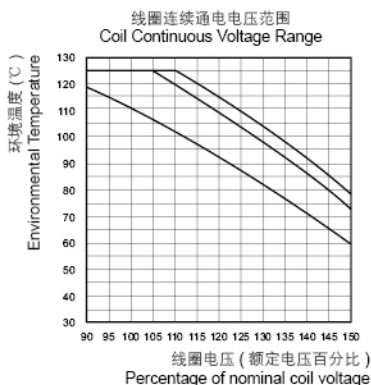
(1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$;

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

接线图 Wiring Diagram



性能曲线图 Performance Curve



说明:

- (1) 动作电压与线圈预通电电压有关, 预通电后检查动作电压, 其值会变大。
- (2) 线圈最大允许温度为 180°C, 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°C。
- (3) 当线圈实际工作电压超出曲线规定范围时, 请联系美硕并提供相应详细使用条件。

- (1) When the relay applies the Maximum continuous voltage, the contact shall be no load
- (2) The Maximum allowable temperature of the coil is 180 degrees. Considering the temperature rise of the coil measured by the resistance method, it is recommended that the coil temperature should be less than 170 degrees under different environmental conditions, different coil voltages and different load conditions
- (3) When the actual working voltage of the coil exceeds the specified range of the curve, please contact the master and provide the appropriate conditions for use

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。

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.