

汽车继电器 Automotive Relay

20A/35A

特性 / FEATURES

- 35A触点切换能力
35A switching capability
- 工作温度高达125°C
Extended temp. range upto 125°C
- 防尘型和密封型
Dustproof type and sealed type


RoHS
Compliant

订购信息 / ORDERING INFORMATION

SLMA-12-S-1-R-C

| | |
|---------------------------------------------------------------------------|---------------------------------|
| A/B/C | 触点形式 Contact Arrangement |
| R:电阻/Resistor D:二极管/Diode 无:无并联元件/Without: without parallel components | 线圈并联元件 Parallel Coil Components |
| 1.PCB 端子/PCB terminal 无:快连接端子/Without: QC terminal | 结构形式 Version |
| S:密封/Sealed 无:防尘/Dustproof | 封装形式 Construction |
| 12VDC/24VDC | 线圈电压 Coil Voltage |
| | 型 号 Model |

触点参数 / CONTACT PARAMETERS

| | | |
|-------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 触点形式 | Contact arrangement | A/B/C |
| 接触压降(10A下测量) | Voltage drop (at 10A) | ≤200mV |
| 触点材质 | Contact material | 银合金/Silver alloy: AgSnO ₂ In ₂ O ₃ 、AgSnO ₂ 、AgNi |
| 触点负载 | Contact rating | 20A/35A 14VDC |
| 最大切换电压 | Max switching voltage | 50VDC |
| 最大切换电流 | Max switching current | 35A (阻性/Resistive 14VDC) |
| 最小负载 | Min contact load | 1A 6VDC |
| 电耐久性 (频率:每小时900次) | Electrical endurance (Frequency:900 ops/h) | 1x10 ⁶ ops |
| 机械耐久性 (频率:每小时18000次) | Mechanical endurance (Frequency:18000 ops/h) | 1x10 ⁷ ops |

特性参数 / CHARACTERISTICS PARAMETERS

| | | | |
|-------------------|--------------------------------------------------|-------------------------------------------------------------|-------------------|
| 绝缘等级 | Insulation level | Class B / Class F | |
| 绝缘电阻 | Insulation resistance | 100MΩ (500VDC) | |
| 介质耐压 (漏电流 1mA) | Dielectric strength (Leakage current 1mA) | 线圈与触点间耐压 Dielectric strength (Between coil and contacts) | 500VAC 1分钟/minute |
| | | 断开触点间耐压 Dielectric strength (Between open contacts) | 500VAC 1分钟/minute |
| 吸合时间(额定电压下) | Operate time(at nominal voltage) | ≤10ms | |
| 释放时间(额定电压下) | Release time (without diode)(at nominal voltage) | ≤10ms | |
| 湿度 | Humidity | 5% ~ 85% RH | |
| 环境温度 | Ambient temperature | -40°C ~ +125°C | |
| 抗振动 | Vibration resistance | 10Hz~60Hz 0.35mm 双振幅/Double amplitude | |
| | | 60Hz~500Hz 49m/s ² | |
| 抗冲击 | Shock resistance | 196m/s ² | |
| 重量 | Weight | 约/Approx 16g | |
| 封装形式 | Construction | 防尘型/Dustproof type 密封型/Sealed type | |

备注: 以上数据均为初始值

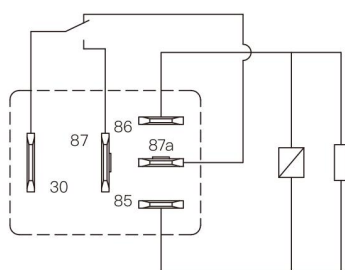
Remark: All above data is initial value

线圈参数 / COIL PARAMETERS

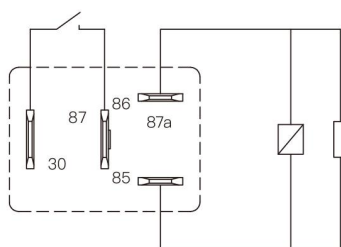
常温/At 23°C

| | | | | | |
|-------------|--------------------------------------|---------------------------|------|------|------|
| 功耗(W) | Power consumption(W) | 1.5W | 1.7W | 1.5W | 1.7W |
| 额定电压(VDC) | Nominal voltage(VDC) | 12 | 12 | 24 | 24 |
| 线圈电阻(Ω±10%) | Coil resistance(Ω±10%) | 96 | 96 | 384 | 384 |
| 并联电阻(Ω) | Parallel resistance(Ω) | | 680 | | 2700 |
| 吸合电压(Max) | Pick-up voltage(Max) | 65%额定电压(Nominal voltage) | | | |
| 释放电压(Min) | Drop-out voltage(Min) | 10%额定电压(Nominal voltage) | | | |
| 允许最大电压(VDC) | Max allowable overdrive voltage(VDC) | 150%额定电压(Nominal voltage) | | | |

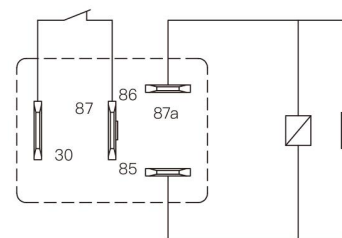
线路图(底视图) / WIRING DIAGRAM (BOTTOM VIEW)



转换C型/Conversion C type



常开A型/Normally open A type

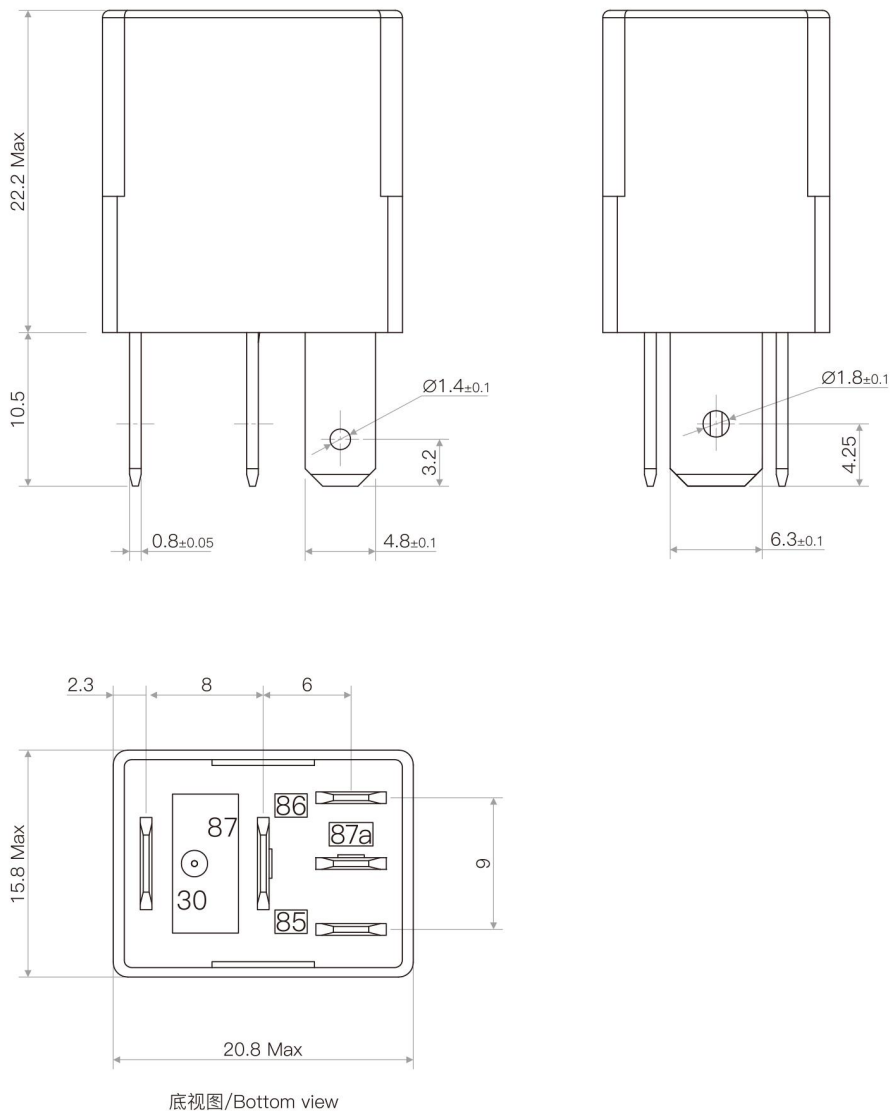


常闭B型/Normally closed B type

外形图 / OUTLINE DIMENSIONS

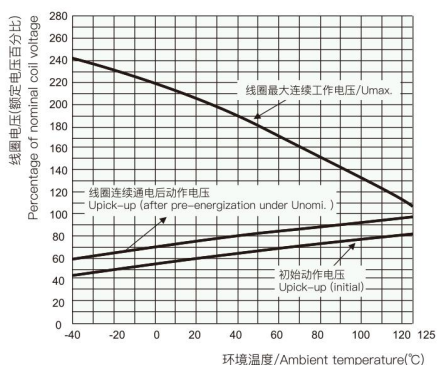
单位/Unit(mm)

SLMA-12(24)-(S)-R-C(A/B)



未注公差/Tolerance: ±0.3 端子垂直度/Terminal vertical deviation tolerance: 0.3mm

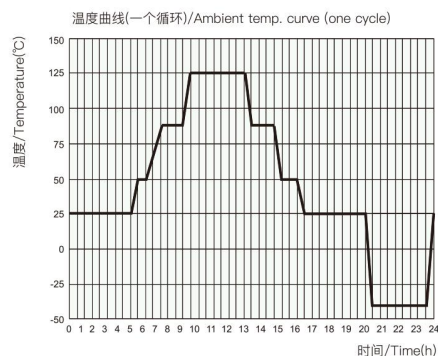
性能曲线图 / CHARACTERISTIC CURVES



线圈连续通电电压范围
Coil operating voltage range

- (1) 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。
- (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，请联系松乐并提供详细使用条件。

- (1) The operating voltage is connected with coil energized time and voltage. After energized, the operating voltage will increase.
- (2) The maximum allowable coil temperature is 180°C. Considering the coil temperature rise which is measured by resistance is average value, we recommend the coil temperature should be below 170°C under the different application ambient, different coil voltage and different load etc.
- (3) If the actual operating coil voltage is out of the specified range, please contact Songle for further details.



电耐久性试验环境温度曲线
Ambient temperature curve of the electrical endurance test

- (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.