

# 汽车继电器


**TRS**

- 30A 13.5VDC switching rating
- 40A inrush at 13.5VDC
- Smallest power relay
- 1 Form A and 1 FormC arrangements in single and dual relay packages
- For Automotive Applications
- Conform to RoHS,ELV directive



13.2×12×9.8

## ORDERING CODE 订购代码

| TRS                            | D | S | H | / 12VDC |
|--------------------------------|---|---|---|---------|
| 1                              | 2 | 3 | 4 | 5       |
| 1. Relay Model 继电器型号           |   |   |   |         |
| 2. Coil Power 线圈功耗             |   |   |   |         |
| L: 0.57W                       |   |   |   |         |
| D:0.8W                         |   |   |   |         |
| 3. S: Sealed 密封                |   |   |   |         |
| Nil: Vented(Flux-tight) 防焊剂型   |   |   |   |         |
| 4. 触点转换形式                      |   |   |   |         |
| H: Form A                      |   |   |   |         |
| Z: Form C                      |   |   |   |         |
| 5. Coil Nominal Voltage 线圈额定电压 |   |   |   |         |
| 6,12,24VDC                     |   |   |   |         |

## COIL DATA 线圈参数 (at 20°C)

| Nominal Voltage 额定电压(VDC)                 | 6                             | 12   | 24   |       |
|---|-------------------------------|------|------|-------|
| Coil Resistance 线圈阻值( $\Omega \pm 10\%$ ) | 63                            | 254  | 1010 | 0.57W |
| Rated Current 额定电流(mA)                    | 95                            | 47.5 | 23.7 |       |
| Max Operate Voltage 最大吸合电压(VDC)           | 3.45                          | 6.9  | 13.8 |       |
| Min Release Voltage 最小释放电压(VDC)           | 0.6                           | 1.2  | 2.4  |       |
| Coil Resistance 线圈阻值( $\Omega \pm 10\%$ ) | 45                            | 180  | 720  | 0.8W  |
| Rated Current 额定电流(mA)                    | 133.3                         | 66.7 | 33.3 |       |
| Max Operate Voltage 最大吸合电压(VDC)           | 3.45                          | 6.9  | 13.8 |       |
| Min Release Voltage 最小释放电压(VDC)           | 0.6                           | 1.2  | 2.4  |       |
| Max Applicable Voltage 最大过载电压             | 70°C时额定电压的130%，23°C时额定电压的170% |      |      |       |

## CONTACT DATA 触点参数

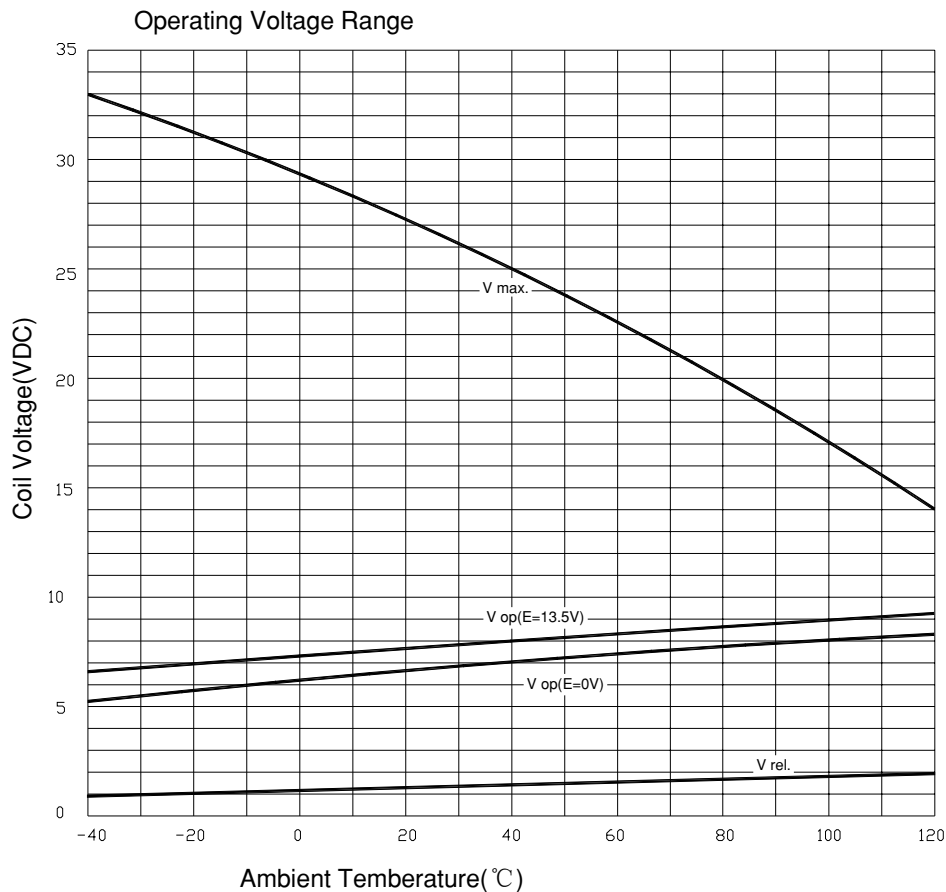
| Contact Ratings<br>触点负载 | 负载类型<br>Load Type                   | 触点负载电流(A) |                | Frequency<br>频率<br>ops/min | Duty Cycle<br>占空比 | 电气寿命<br>(次)<br>Life<br>Expectancy |                 |
|-------------------------|-------------------------------------|-----------|----------------|----------------------------|-------------------|-----------------------------------|-----------------|
|                         |                                     | NO<br>常开  | NC<br>常闭       |                            |                   |                                   |                 |
|                         | Resistive Load 阻性负载                 | 20        | ---            | 15                         | 0.5               | $3 \times 10^5$                   |                 |
|                         | Wiper reserve 雨刷电机<br>L=1.0mH       | Make 接通   | 25             | 25                         | 15                | 0.5                               | $3 \times 10^5$ |
|                         |                                     | Break 断开  | 5              | 5                          |                   |                                   |                 |
|                         | Motor reserve blocked 电机锁定 L=0.77mH |           | 20A Inrush     |                            | 15                | 0.5                               | $1 \times 10^5$ |
|                         | Flasher Load 闪光灯                    |           | $3 \times 21W$ | ---                        | 80                | 0.5                               | $2 \times 10^6$ |
|                         | Lamp 灯                              | Inrush 突入 | 100            | ---                        | 6                 | 1/6                               | $1 \times 10^5$ |
| Steady state 稳态         |                                     | 10        | ---            |                            |                   |                                   |                 |

|                                |   |
|--------------------------------|---|
| Contact Form触点形式               | 1H/1Z   |
| Contact Material触点材料           | Silver Alloy                                    |
| Load负载                         | Resistive load(COS $\Phi$ =1) Cut 13.5VDC       |
| Minimum load 最小负载              | 0.5A 12VDC                                      |
| Max Switching Current最大转换电流    | 40A   |
| Max Switching Power 最大转换功率     | 420W  |
| Contact Resistance接触电阻         | 100m $\Omega$ Max at 6VDC 1A                    |
| Electrical Life Expectancy电气寿命 | See "Contact Data" Table                        |
| Mechanical机械寿命                 | 10, 000, 000 Operations(at300Operations/minute) |

### ■ CHARACTERISTICS DATA 性能参数

|  |  |
|--|--|
| Insulation Resistance绝缘阻值                      | 100M $\Omega$ Min at 500VDC  |
| Dielectric Strength Between Open Contacts触点间耐压 | 500VAC(for one minute)   |
| Between Contacts and coil触点与线圈间耐压              | 500VAC(for one minute)   |
| Operate Time吸合时间                               | 4ms  |
| Release Time释放时间                               | 2ms  |
| Temperature Range环境温度                          | -40 $^{\circ}$ C to +105 $^{\circ}$ C                              |
| Shock Resistance冲击                             | 6 msec up to 30g (No change in the switching state > 10 $\mu$ sec) |
| Vibration Resistance振动                         | 10-500Hz, 6g (No change in the switching state > 10 $\mu$ sec)     |
| Max. switching frequency最大转换频率                 | Mechanical: 18,000operations/hr                                    |
| Humidity湿度                                     | 20-50%   |
| Weight重量                                       | Approx 4g  |

### ■ ENGINEERING DATA 设计参数



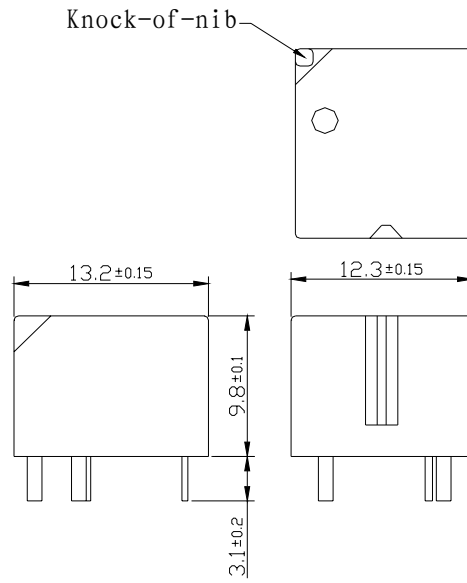
Does not take into account the temperature rise due to the contact current

V op=Operation voltage

E=Pre-Generation

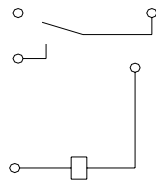
## ■ OVERALL AND MOUNTING DIMENSIONS 安装图

### Outline Dimensions-Single Relay

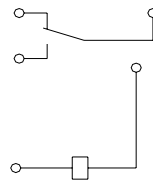


### Wiring Diagrams-Single Relay(Bottom Views)

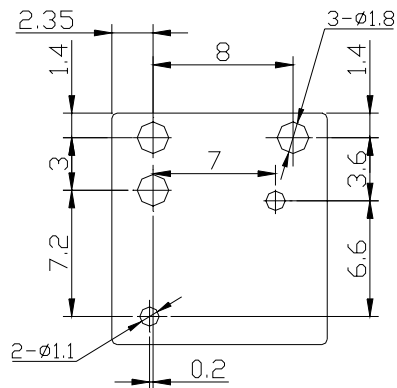
1 Form A



1 Form C



### Suggested PC Board Layout-Single Relay(Bottom View)



### 声明:

本产品规格书仅供客户使用时参考，如有更改，恕不另行通知。