# QLRELAY®

www.qlrelay.com

## Power Relay Series 功率继电器系列-- GRF - T

### FEATURES特点

- Up to 80A contact switching capability
  高达80A触点切换能力
- Plastic and flux proof are available
  塑封型和防焊剂型可供选择
- Magnetic arc blowing technology
  磁吹弧技术
- Outline dimensions ( 26.0x26.0x24.8 ) mm.
  外形尺寸 (26.0x26.0x24.8) mm。



### CONTACT PARAMETERS触点参数(at23℃)

| | |
|---|---|
| Relay Type 产品型号 | GRF-S-1XXDMPHT |
| Contact Form触点形式 | A-1组常开 |
| Rating Load(Resistive)额定负载（阻性） | 80A/150VDC |
| Max. Switching Current最大切换电流 | 100A |
| Max.Switching Voltage最大切换电压 | 150VDC |
| Max.Switching Power最大切换功率 | 12000W |

### CHARACTERISTICS性能参数

| | | |
|---|---|---|
| Contact Materials触点材料 | Ag Alloy银合金 | |
| Contact Resistance接触电阻 | 100mΩ Max. | |
| Operate Time吸合时间 | 10msec.Max. | |
| Release Time释放时间 | 10msec.Max. | |
| Insulation Resistance绝缘电阻 | 100MΩ Min.(DC500V) | |
| Initial Dielectric Strength介质耐压 | Between open contacts:<br>触点与触点间： | AC750V, 50/60Hz 1Min. |
| | Between contacts and coil:<br>触点与线圈间： | AC750V, 50/60Hz 1Min. |
| Vibration Resistance抗振动 | Damage limits:<br>耐久： | 10～55Hz Double Amplitude双振幅3.0mm |
| | Malfunction:<br>误动作： | 10～55Hz Double Amplitude双振幅3.0mm |
| Shock Resistance抗冲击 | Damage limits:<br>耐久： | 100G Min. |
| | Malfunction:<br>误动作： | 18G Min. |
| Life寿命 | Mechanical Life (18000per hour)<br>机械寿命（每小时18000次） | $1\times10^7$ |
| | Electrical Life 电气寿命<br>(阻性负载 Resistive Load)<br>( ON:OFF 1S:9S 23℃ 不封气孔 ) | 80A / 150VDC $1x10^4$<br>80A / 30VDC $1x10^5$ |
| Ambient Temperature环境温度 | -40℃～+105℃ (No condensation) (不冷凝) | |
| Unit Weight单位重量 | 约Approx28.6g | |

## COIL RATINGS (at23℃) 线圈参数 （在23℃)

| 额定电压 | 动作电压 | 释放电压 | 最大线圈电压 | 额定电流 | 线圈电阻 | 线圈功耗 |
|---|---|---|---|---|---|---|
| VDC | VDC | VDC | VDC | 1±10% mA | 1±10%Ω | 1±10%W |
| 12 | ≤8.4 | ≥1.2 | 15.6 | 133.3 | 90 | 1.6W |
| 24 | ≤16.8 | ≥2.4 | 31.2 | 66.7 | 360 | |
| 12 | ≤8.4 | ≥1.2 | 15.6 | 166.7 | 72 | 2.0W |
| 24 | ≤16.8 | ≥2.4 | 31.2 | 83.4 | 288 | |

备注：其它表格中未列出的线圈参数，请联络我司业务获取，最大线圈电压是指线圈在短时间内能承受的最大电压值。

## ORDERING INFORMATION订货标记

GRF - S - 1 12 DM P H T (XXX)
1 2 3 4 5 6 7 8 9

1.Model Number基本型号 GRF

2.Encapsulation form: S -Plastic Sealed
封装形式：S -塑封型

3.Number of Pole: 1 : Single pole
开关型式： 1 — 一组开关

4.Coil Voltage线圈规格 （VDC）：DC5V ~ DC72V

5.Coil Power: DM - 2.0W ， LM-1.6W
线圈功耗： DM - 2.0W ， LM-1.6W

6.Induces foot position: P - PCB Board Terminal
Nil - Solder Lug Terminal
引出脚形式： PCB—PCB引脚 无—快捷端子引脚

7.load type 负载类型： H - 高负载

8.Feature Encoding: T - Magnetic Arc Extinguishing Type
特性编码：T - 磁灭弧型

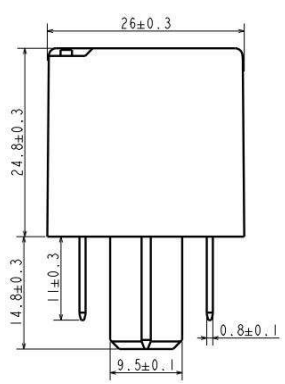
9.Customer Special Code :XXX- Customer Special Requirements
No - Standard Type
客户特性号：XXX-客户特殊要求， 无-标准型

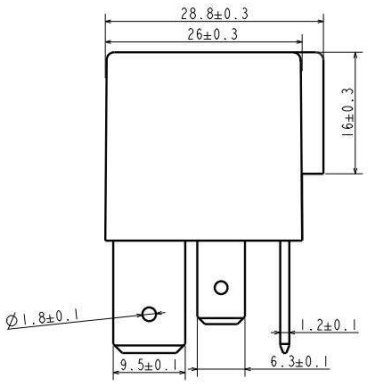
## SAFETY STANDARD安规认证

| AuthType Basic认证类别 | TUV | UL |
|---|---|---|
| Authentication Load 认证负载 | NO: 80A 150VDC | NO: 80A 30VDC |

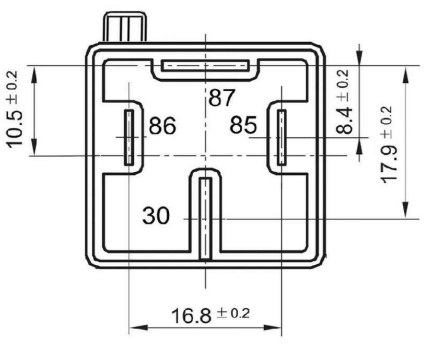
## OUTLINE DIMENSIONS (UNIT:mm)外形尺寸 （单位：mm）

QC Outline drawing
插座式外形图



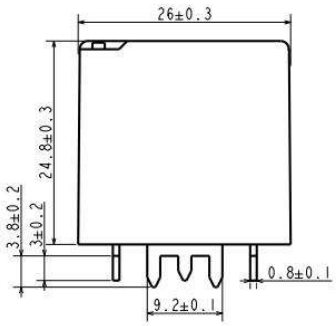



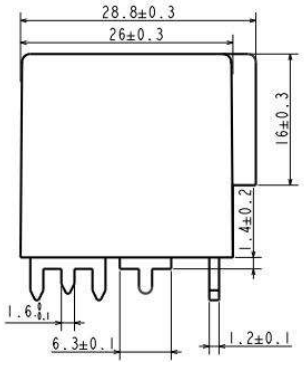

QC bottom view
插座式底视图



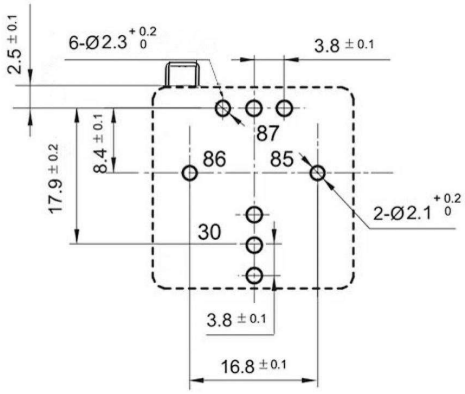
## OUTLINE DIMENSIONS (UNIT:mm)外形尺寸（单位：mm）

PCB Outline drawing
PCB式外形图




PCB bottom view
PCB式底视图



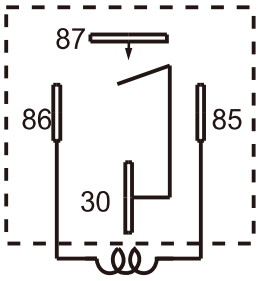

Undimensioned tolerance: ＜1mm：±0.2mm 1~5mm：±0.3mm ＞5mm：±0.4mm
未标注尺寸公差：＜1mm：±0.2mm 1~5mm：±0.3mm ＞5mm：±0.4mm

Note: 1.The size of the lead foot is pre welding dimension.
2.installation hole size tolerance: + 0.1mm

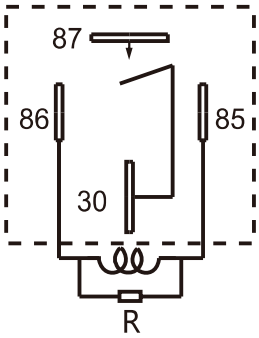
注：1、引出脚尺寸为预焊前尺寸
2、安装孔尺寸公差：±0. 1mm

Wiring diagram
接线图

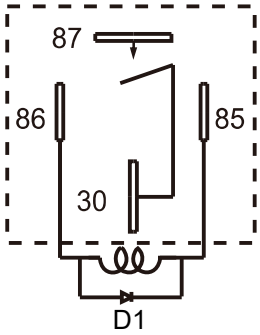
Routine
常规



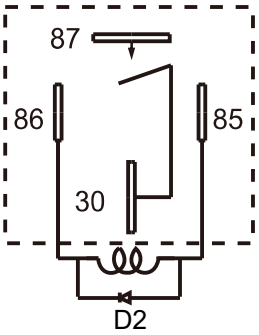

Add resistance
加电阻




Add diode+85
加二极管+85




Add diode+86
加二极管+86




备注：接负载时30脚接负极，87接正极。
Note: When connecting the load, pin 30 is connected to the negative pole, and pins 87are connected to the positive pole.