Main Feature

1. 40A switching use relay at ambient temperature of 80°C.
2. Compatible fasten terminal arrangement with this kind of power relay.
3. Simple magnetic circuit to meet mass production for low cost offer.
4. Standard type contact form SPDT and DPST are available for customer's selection.
5. Operating ambient temperature range covers from -30°C to 80°C.

Contact Rating

Load Type	GRL (DM/DB)	GRL (D)	GRL-2P (DM)
Rated Load (Resistive)	N.O.: 40A 12VDC	N.O.: 40A 12VDC	40A(20A×2) 12VDC
	N.C.: 30A 12VDC	N.C.: 30A 12VDC	
Rated Carrying Current	40A	40A	40A(20A×2)
Max. Allowable Voltage	30VDC	30VDC	30VDC
Max. Allowable Current	40A	40A	40A(20A×2)
Max. Allowable Power Force	480W	480W	240W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	DPST

Application

For direct connection with Cell Motors, Transmission etc. and Anti-Locking Brake System.

Performance (at Initial Value)

- Contact Resistance ..... 100 mΩ Max.@1A,6VDC
- Operate Time..... 10 mSec. Max.
- Release Time ..... 10 mSec. Max.
- Dielectric Strength:
  Between Coil & Contact ..... 1,000VAC at 50/60 Hz for one minute.
  Between Contacts ..... 500VAC at 50/60 Hz for one minute.
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching:
  Electrical..... 6 Cycles per Minute.
  Mechanical ..... 300 Cycles per Minute.
- Temperature Range..... -30～85°C
- Humidity Range..... 45～80% RH.
- Coil Temperature Rise..... 60°C Max.
- Vibration :
  Endurance.....10 to 55 Hz dual amplitude width 2 mm.
  Error Operation .....10 to 55 Hz dual amplitude width 2 mm.
- Shock :
  Endurance .....1,000 m/S^2 .
  Error Operation .....50 m/S^2 .
- Life Expectancy :
  Mechanical .....10^7 Operations at No Load condition.
  Electrical .....10^5 Operations at Rated Resistive Load.
- Weight.....About 36.5 g.

Accessories & Sockets

- UC3003.....See Page 178
- CS3770.....See Page 178
- UC3001.....See Page 178

Safety Standard & Its File Number

- NIL.

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GRL	12	150	80	Abt. 1.8	75% Maximum	5% Minimum	150% but for short time carrying current
	24	75	320				

Ordering Information

GRL - S - 1 12 D M H R1

Options: **Nil**: Standard
R1: Coil parallel with 1/2W Resistor
680Ω for Coil Voltage 12VDC
2700Ω for Coil Voltage 24VDC
D1: Coil parallel with diode & the Positive pole "+" on #85 Terminal
D2: Coil parallel with diode & the Negative pole "-" on #85 Terminal

Bracket: **Nil**: No Bracket Standard
H: Dust Cover with Metal Bracket
F: Plastic Bracket Cover

Contact Form: **Nil**: One Form C
M: One Form A
B: One Form B

Coil Type: **D**: Standard DC Coil

Coil Voltage: **12**: 12V, **24**: 24V

Number of Pole: **1**: One Pole
2: Two Poles (Form A only)

Type of Sealing: **S**：RT Ⅰ Dust Protected Relays

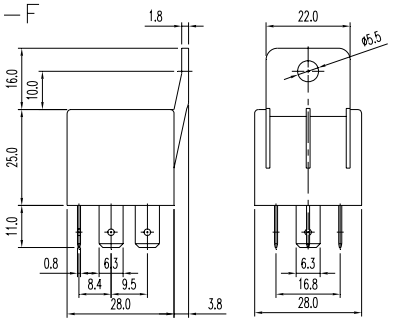
Type: **GRL**

Classification

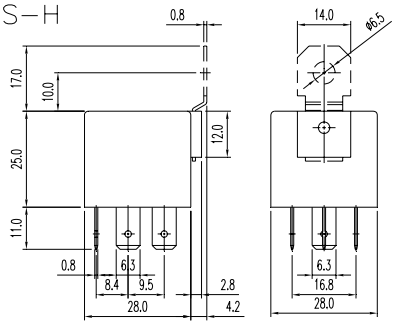
Model	GRL			
Number of Pole	1 Pole			2 Poles
Contact Form	1C	1A	1B	2A
No Bracket Standard	GRL-S-1□□D	GRL-S-1□□DM	GRL-S-1□□DB	GRL-S-2□□DM
Dust Cover Metal Bracket	GRL-S-1□□DH	GRL-S-1□□DMH	GRL-S-1□□DBH	GRL-S-2□□DMH
Plastic Bracket Cover	GRL-S-1□□DF	GRL-S-1□□DMF	GRL-S-1□□DBF	GRL-S-2□□DMF
Coil Additional Parts	Please add your choice Coil Parallel "R1" ," D1" ," D2" at the back of all above-mentioned part number .			

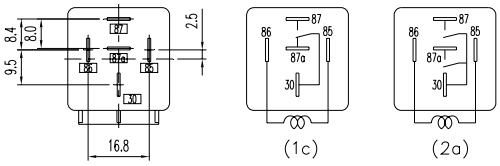
Dimension (≦ 5mm± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)

GRL－S－F

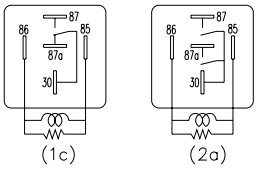


GRL－S
GRL－S－H

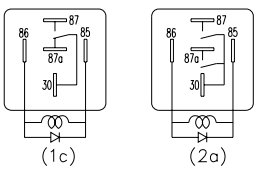




"R1" Type



"D1" Type



"D2" Type