

AUTOMOTIVE RELAY

ETR GRL SERIES

■ FEATURES

- New 54A version with Class F insulation
- 40A switching use relay at ambient temperature of 80°C.
- Compatible plug-in terminal available.
- Metal or plastic bracket selection.
- Standard type contact form SPDT and DPST available for customer's selection.
- Operating ambient temperature range covers from -40°C to +125°C.
- Comply with RoHS, REACH and ELV regulations.

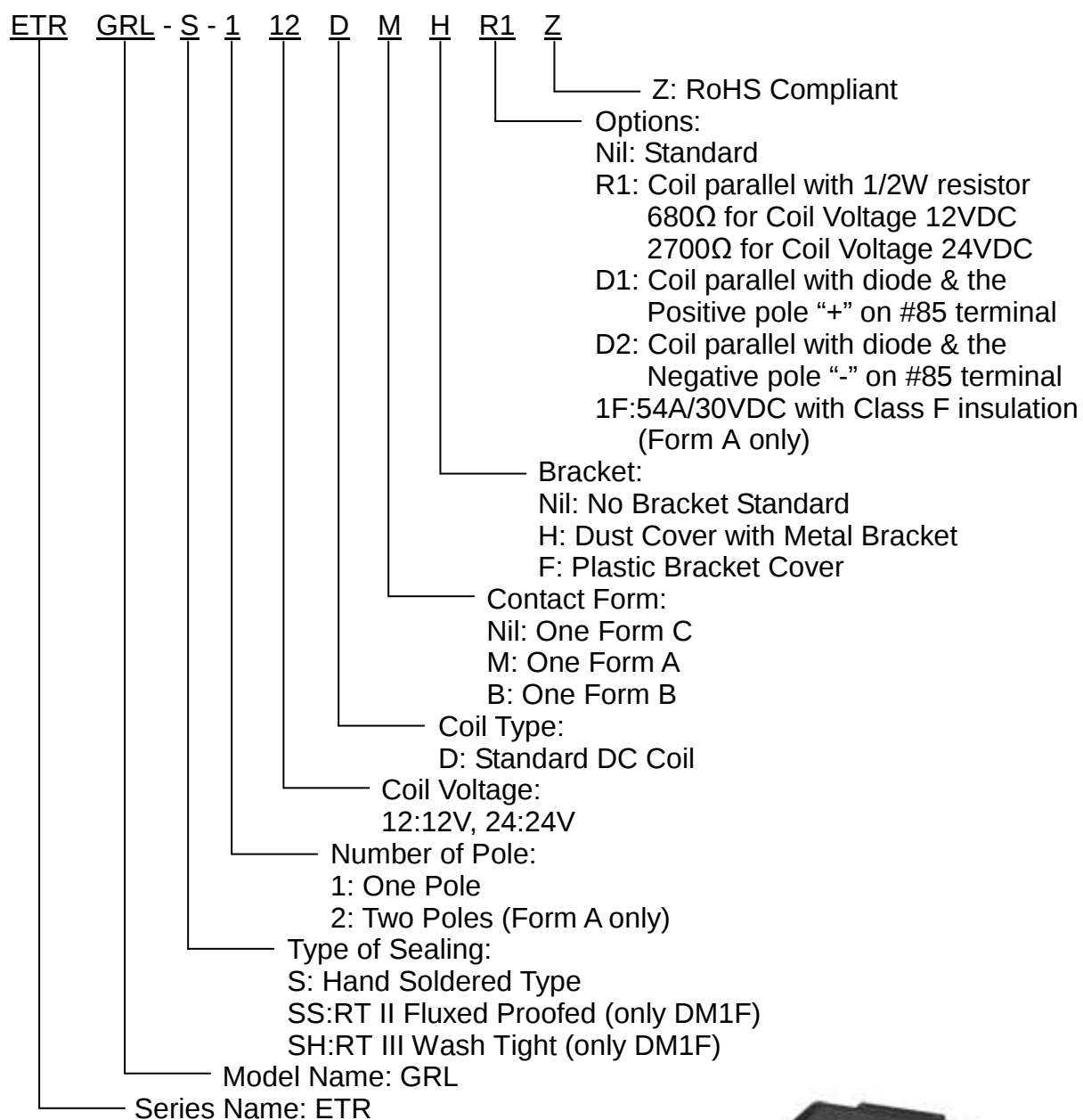
■ SPECIFICATIONS

Contact Resistance	Max. 100mΩ at initial value. @1A,6VDC
Contact Capacity	GRL D/DM/DB: N.O. Contact: 40 Amps at 12VDC L/R=0 N.C. Contact: 30 Amps at 12VDC L/R=0 GRL-2P(DM): 40 Amps (20 Ampsx2) at 12VDC L/R=0 GRL (DM1F): 54A at 30VDC L/R=0
Operate Time	10m Sec. Max. 20m Sec. Max. (DM1F)
Release Time	10m Sec. Max.
Dielectric Strength	Between coil & Contact: 1000VAC at 50/60Hz for one minute 1600VAC at 50/60Hz for one minute (DM1F) Between Contacts: 500VAC at 50/60Hz for one minute 2000VAC at 50/60Hz for one minute (DM1F)
Insulation Resistance	100MΩ Min. at 500VDC

■ 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)	Max. Allowable Voltage (VDC)
GRL	12	150	80	Abt. 1.8	75% Max.	5% Min.	150% (for short time carrying current)
	24	75	320				
GRL (DM1F)	12	100	120	Abt. 1.2	80% Max.	5% Min.	150% (for short time carrying current)
	24	50	480				

■ PART NUMBER SYSTEM

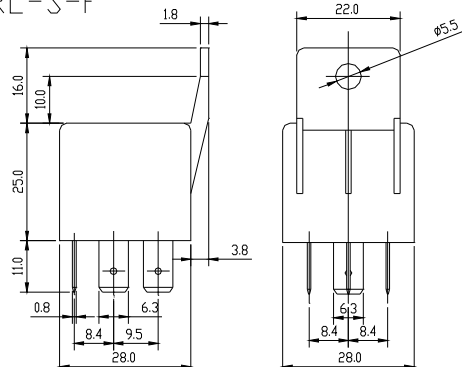


***Marking without: "ETR" & "Z".**

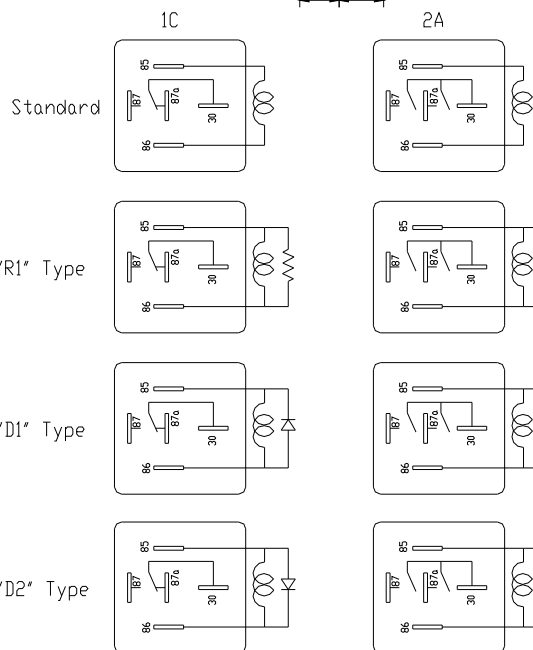
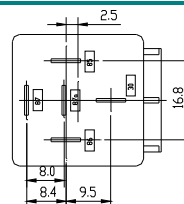


DIMENSIONS ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

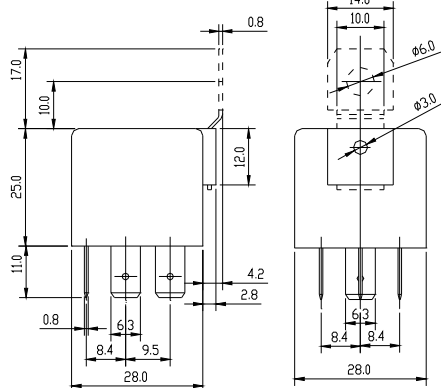
GRL-S-F



P.C.B LAYOUT
Bottom View



GRL-S / GRL-S-H

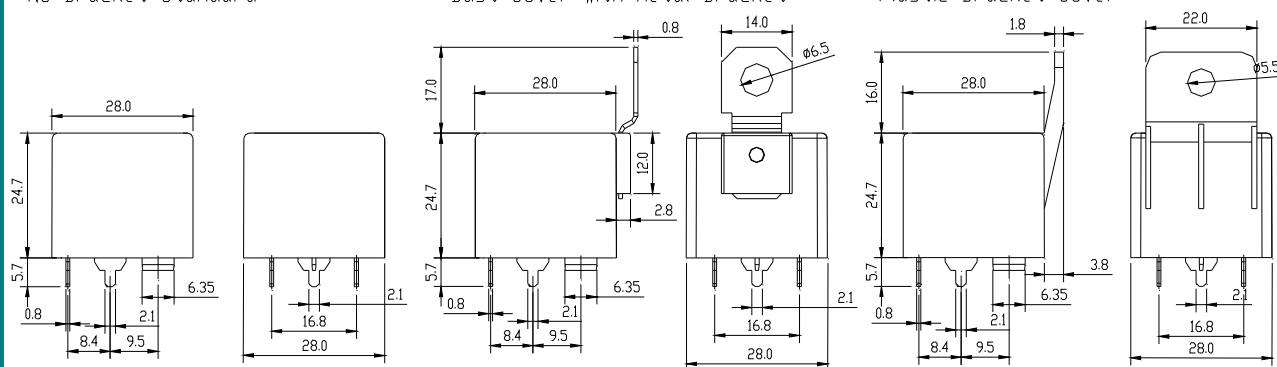


GRL-DM1F

No Bracket Standard

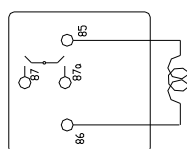
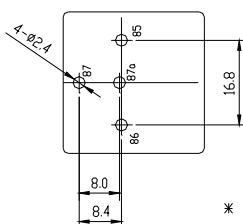
Dust Cover with Metal Bracket

Plastic Bracket Cover



P.C.B Layout (Bottom View)

Wiring Diagram (Bottom View)



* For RT III, There shall not be the slot holt of the plastic support on PCB layout