

GL Series panel mount DC output Solid State Relays



Features

- Optical isolation between input and output circuits.
- Control signal and TTL logic interface.
- Transistor output, small on-state voltage drop, fast switching speed.
- LEDs indicate the working status.
- Epoxy resin encapsulation integrated, anti-corrosion and shock-proof, reliable work.
- The products are mainly used in industrial automation, isolated control of weak current and strong current and various high-power DC electrical equipment. Such as DC motors, solenoid valves, electromagnetic vibrators, batteries Charge and discharge switch, etc.

Product Selection

Model	Rated Current	Control voltage	Output Voltage	Termination
GL100L20	20A	L:5(4-8)VDC	100VDC	Standard quick connect
GL100M20	20A	M:12(10-14)VDC	100VDC	Standard quick connect
GL100D20	20A	D:24(21-27)VDC	100VDC	Standard quick connect
GL100L20N	20A	L:5(4-8)VDC	100VDC	90° bent quick connect
GL100M20N	20A	M:12(10-14)VDC	100VDC	90° bent quick connect
GL100D20N	20A	D:24(21-27)VDC	100VDC	90° bent quick connect
GL100L10	10A	L:5(4-8)VDC	100VDC	Standard quick connect
GL100M10	10A	M:12(10-14)VDC	100VDC	Standard quick connect
GL100D10	10A	D:24(21-27)VDC	100VDC	Standard quick connect
GL100L10N	10A	L:5(4-8)VDC	100VDC	90° bent quick connect
GL100M10N	10A	M:12(10-14)VDC	100VDC	90° bent quick connect
GL100D10N	10A	D:24(21-27)VDC	100VDC	90° bent quick connect
GL250L10	10A	L:5(4-8)VDC	250VDC	Standard quick connect
GL250M10	10A	M:12(10-14)VDC	250VDC	Standard quick connect
GL250D10	10A	D:24(21-27)VDC	250VDC	Standard quick connect
GL250L10N	10A	L:5(4-8)VDC	250VDC	90° bent quick connect
GL250M10N	10A	M:12(10-14)VDC	250VDC	90° bent quick connect
GL250D10N	10A	D:24(21-27)VDC	250VDC	90° bent quick connect
GL400L10	10A	L:5(4-8)VDC	400VDC	Standard quick connect
GL400M10	10A	M:12(10-14)VDC	400VDC	Standard quick connect
GL400D10	10A	D:24(21-27)VDC	400VDC	Standard quick connect
GL400L10N	10A	L:5(4-8)VDC	400VDC	90° bent quick connect
GL400M10N	10A	M:12(10-14)VDC	400VDC	90° bent quick connect
GL400D10N	10A	D:24(21-27)VDC	400VDC	90° bent quick connect
GL600L10	10A	L:5(4-8)VDC	600VDC	Standard quick connect
GL600M10	10A	M:12(10-14)VDC	600VDC	Standard quick connect
GL600D10	10A	D:24(21-27)VDC	600VDC	Standard quick connect
GL600L10N	10A	L:5(4-8)VDC	600VDC	90° bent quick connect
GL600M10N	10A	M:12(10-14)VDC	600VDC	90° bent quick connect
GL600D10N	10A	D:24(21-27)VDC	600VDC	90° bent quick connect
GL100L05	5A	L:5(4-8)VDC	100VDC	Standard quick connect
GL100M05	5A	M:12(10-14)VDC	100VDC	Standard quick connect
GL100D05	5A	D:24(21-27)VDC	100VDC	Standard quick connect
GL100L05N	5A	L:5(4-8)VDC	100VDC	90° bent quick connect
GL100M05N	5A	M:12(10-14)VDC	100VDC	90° bent quick connect
GL100D05N	5A	D:24(21-27)VDC	100VDC	90° bent quick connect
GL250L05	5A	L:5(4-8)VDC	250VDC	Standard quick connect
GL250M05	5A	M:12(10-14)VDC	250VDC	Standard quick connect
GL250D05	5A	D:24(21-27)VDC	250VDC	Standard quick connect
GL250L05N	5A	L:5(4-8)VDC	250VDC	90° bent quick connect
GL250M05N	5A	M:12(10-14)VDC	250VDC	90° bent quick connect
GL250D05N	5A	D:24(21-27)VDC	250VDC	90° bent quick connect
GL400L05	5A	L:5(4-8)VDC	400VDC	Standard quick connect
GL400M05	5A	M:12(10-14)VDC	400VDC	Standard quick connect
GL400D05	5A	D:24(21-27)VDC	400VDC	Standard quick connect
GL400L05N	5A	L:5(4-8)VDC	400VDC	90° bent quick connect
GL400M05N	5A	M:12(10-14)VDC	400VDC	90° bent quick connect
GL400D05N	5A	D:24(21-27)VDC	400VDC	90° bent quick connect
GL600L05	5A	L:5(4-8)VDC	600VDC	Standard quick connect
GL600M05	5A	M:12(10-14)VDC	600VDC	Standard quick connect
GL600D05	5A	D:24(21-27)VDC	600VDC	Standard quick connect
GL600L05N	5A	L:5(4-8)VDC	600VDC	90° bent quick connect
GL600M05N	5A	M:12(10-14)VDC	600VDC	90° bent quick connect
GL600D05N	5A	D:24(21-27)VDC	600VDC	90° bent quick connect

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Input Specifications

Parameter-list	Specification Limits
Input Parameter	DC
Control Voltage Range	4 to 8VDC/10 to 14VDC/21 to 27VDC
Input Current (Max.)	4-30mA
Must Turn-on Voltage	3VDC/10VDC/21VDC
Must Turn-off Voltage	1VDC

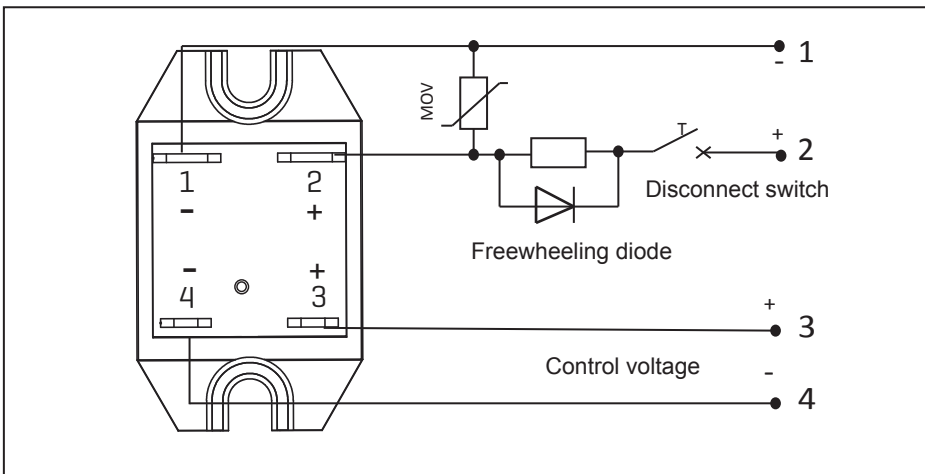
Output Specifications

Output Parameter	Units	Specification Limits		
Model No.: GL	Amps	5	10	20
Load Current Range	Arms	0.05 to 5	0.1 to 10	0.1 to 20
Surge Current 10mSec (Max.)	Arms	200%		
Load Voltage Range(47-63Hz)	Vrms	100VDC~600VDC		
On-state Voltage drop	Vrms	≤0.5~4.6		
Off-state Voltage	Vrms	100V,250V,400V,600V		
Response time	ms	2.0		
Off-State Leakage Current	mArms	1.0		
Overvoltage Protection	Transient protection voltage are :80V, 180V, 470V,650V			
Switching Characteristics	Mos or IGBT-solid-state non-contact switching characteristics			

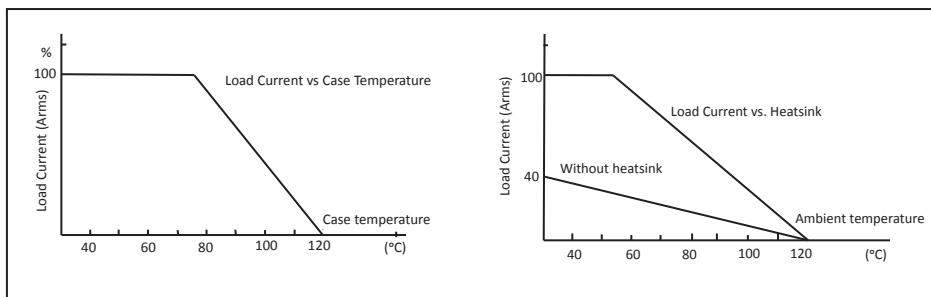
General Specifications (Ta=25°C)

Description	Specification Limits
Dielectric Strength, Input to Output (50/60 Hz)	2500Vrms
Dielectric Strength, Input/Output to Base (50/60 Hz)	2500Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ω
Safety Factor of Load Current	2.5-4 time for resistive load, 4-8 times for inductive load
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 100°C
Humidity per IEC60068-2-78	95%
LED Input Status Indicator	Red
Baseplate Material	Pure copper
Weight	15g

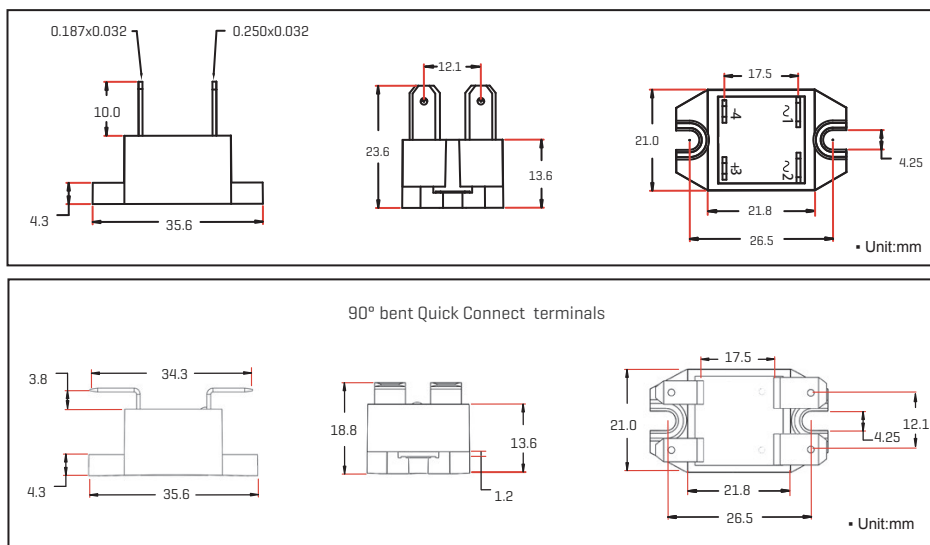
Wiring Diagram



Thermal Derating Curve



Dimensions



Selection Guide:

A margin should be left when selecting the voltage and current of the product. For resistive load: the current is selected according to 2.5~4 times the load current, and the voltage is selected according to 2~2.5 times the load power. Inductive load: current is selected according to 4-8 times load current, voltage is selected according to 2.5-4 times load voltage.

According to the relationship between load current and ambient temperature, when the ambient temperature is high or heat dissipation conditions are not good, the current capacity of the solid state relay should be increased accordingly.

In order to prevent the product from short-circuiting during use, it is necessary to connect a fast circuit breaker or a fast fuse in series with the product in the load circuit.

For inductive loads, a freewheeling diode must be connected to both ends of the load, and a varistor must be connected to the output end (the varistor (MOV) is selected according to 1~1.5 times of the power supply voltage) to prevent the high voltage generated during switching from damaging the solid-state switch.

When the product is installed, it is required that the contact surface between the heatsink and the product must be flat and clean, and a layer of thermally conductive silicone grease is applied to its surface, and then finally the screws set with flat washers and Spring washers are tightened symmetrically to fix.