

Applications

1-Phase, 15A and 25A, 230VAC with LED status indicator, FASTON terminals connection, easy to use, compact design, miniature package for space-demanding applications.

Gregoo's GF1 series solid state relay provides a compact solid state switching solution suited for confined spaces. Long life time is ensured by the use of assembly technology that reduces stresses on the power semiconductors. A green LED indicates presence of the control voltage. FASTON terminals enable fast installation.



Features

- AC switching Solid State Relay
- Switching through back to back thyristors
- Long lifetime through reduced stress on output chip
- Operational ratings: up to 280 VAC, 25A
- Control voltage: 5 VDC, 12VDC, 24VDC
- LED for control status indication
- Opto isolation input to output 3750 VAC
- Pre-attached thermal interface to SSR backplate

Product Selection

Model	Rated load current	Control voltage	Output Voltage	Switching type	Termination
GF1Z28L25	25A	L:5(4-8)VDC	24-280VAC	Zero cross	Standard quick connect
GF1Z28M25	25A	M:12(10-14)VDC	24-280VAC	Zero cross	Standard quick connect
GF1Z28D25	25A	D:24(21-27)VDC	24-280VAC	Zero cross	Standard quick connect
GF1R28L25	25A	L:5(4-8)VDC	24-280VAC	Random	Standard quick connect
GF1R28M25	25A	M:12(10-14)VDC	24-280VAC	Random	Standard quick connect
GF1R28D25	25A	D:24(21-27)VDC	24-280VAC	Random	Standard quick connect
GF1Z28L15	15A	L:5(4-8)VDC	24-280VAC	Zero cross	Standard quick connect
GF1Z28M15	15A	M:12(10-14)VDC	24-280VAC	Zero cross	Standard quick connect
GF1Z28D15	15A	D:24(21-27)VDC	24-280VAC	Zero cross	Standard quick connect
GF1R28L15	15A	L:5(4-8)VDC	24-280VAC	Random	Standard quick connect
GF1R28M15	15A	M:12(10-14)VDC	24-280VAC	Random	Standard quick connect
GF1R28D15	15A	D:24(21-27)VDC	24-280VAC	Random	Standard quick connect
GF1Z28L25N	25A	L:5(4-8)VDC	24-280VAC	Zero cross	90°bent quick connect
GF1Z28M25N	25A	M:12(10-14)VDC	24-280VAC	Zero cross	90°bent quick connect
GF1Z28D25N	25A	D:24(21-27)VDC	24-280VAC	Zero cross	90°bent quick connect
GF1R28L25N	25A	L:5(4-8)VDC	24-280VAC	Random	90°bent quick connect
GF1R28M25N	25A	M:12(10-14)VDC	24-280VAC	Random	90°bent quick connect
GF1R28D25N	25A	D:24(21-27)VDC	24-280VAC	Random	90°bent quick connect
GF1Z28L15N	15A	L:5(4-8)VDC	24-280VAC	Zero cross	90°bent quick connect
GF1Z28M15N	15A	M:12(10-14)VDC	24-280VAC	Zero cross	90°bent quick connect
GF1Z28D15N	15A	D:24(21-27)VDC	24-280VAC	Zero cross	90°bent quick connect
GF1R28L15N	15A	L:5(4-8)VDC	24-280VAC	Random	90°bent quick connect
GF1R28M15N	15A	M:12(10-14)VDC	24-280VAC	Random	90°bent quick connect
GF1R28D15N	15A	D:24(21-27)VDC	24-280VAC	Random	90°bent quick connect

Input Specifications

Description	5V	12V	24V
Control Voltage Range	4-8VDC	10-14VDC	21-27VDC
Minimum Turn-On Voltage	4VDC	10DC	21VDC
Must Turn-Off Voltage	1VDC	7VDC	18VDC
Minimum Input Current	6mA	10mA	8mA
Maximum Input Current	21mA	17.5mA	19mA
Maximum Turn-On Time [msec]	1/2Cycle	1/2Cycle	1/2Cycle
Maximum Turn-Off Time [msec]	1/2Cycle	1/2Cycle	1/2Cycle

Output Specifications

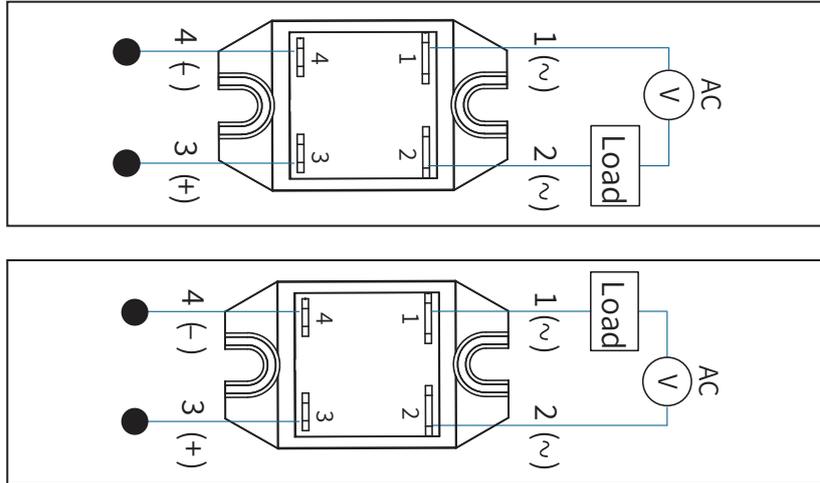
Description	15Amps	25Amps
Operating voltage (47-63Hz)(Vrms)	24-280	24-280
Maximum load current (Adc)	15A	25A
Minimum load current (mArms)	150	250
Transient overvoltage (Vpk)	600	600
Maximum surge current (50/60Hz,1Cycle) (Apk)	185/220	260/280
Maximum I ² t for fusing (50/60Hz,1/2Cycle) (A ² sce)	165/160	338/326
Minimum off-state dv/dt @Maximum rated voltage (µV/sec)	500	500
Maximum off-state leakage current @rated voltage(mArms)	0.1	0.1
Thermal resistance junction to case (Rjc)(°C/W)	2.2	0.9
Maximum on-state voltage drop @rated current (Volts)	1.3	1.3
Minimum power factor (at maximum load)	0.7	0.7

General Specifications

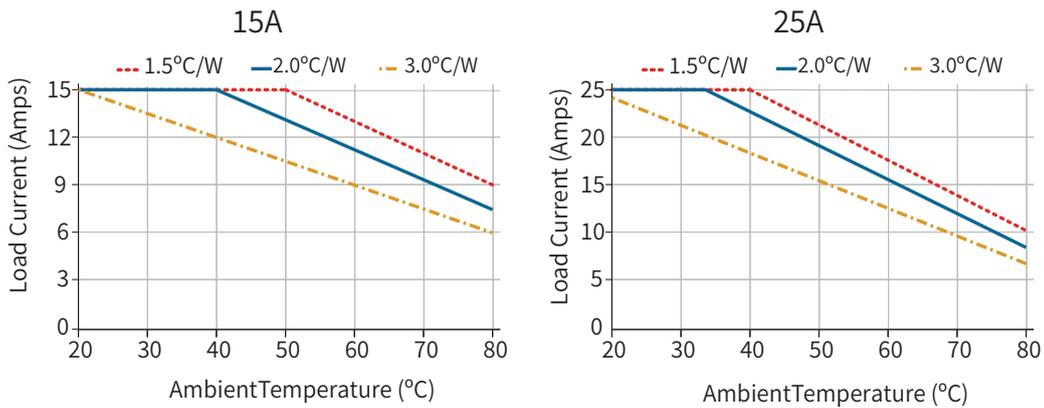
Description	Parameters
Dielectric Strength, Input to Output (50/60Hz)	2500 Vrms
Dielectric Strength, Output to Baseplate (50/60Hz)	2500 Vrms
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125 °C
Weight (typical)	16g
Terminals	3/16" x 0.032" input, 1/4" x 0.032" output QC
SSR Mounting Screw Torque Range	9.0-10.0 in-lb (1.0-1.13 Nm)
LED Input Status Indicator	Red
Humidity per IEC60068-2-78	93% non-condensing

Wiring Diagram

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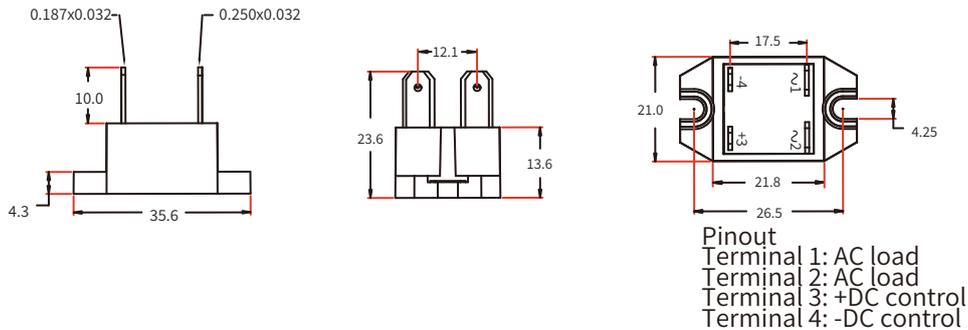
Thermal Derate information



Mechanical specifications

All dimensions are in: millimeters

Standard Quick Connect terminals



90° bent Quick Connect terminals

