SOLID STATE RELAYS

G SERIES POWER RELAYS

- Back-to-back (dual) SCR output for severe inductive loads.
- Superior False turn-on immunity and positive turn-off at high dv/dt.

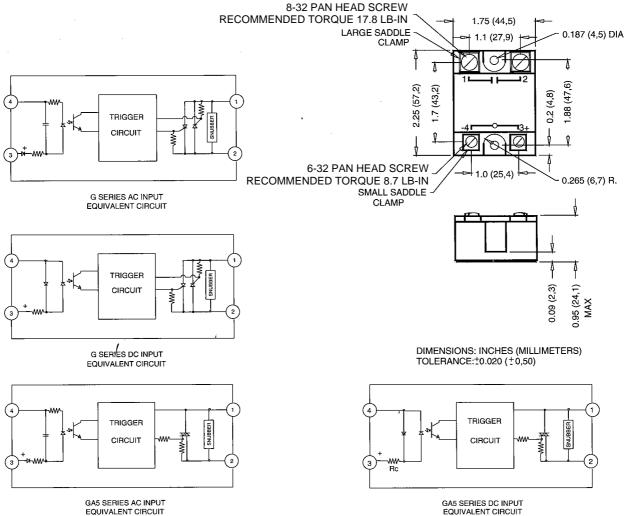
GA5 SERIES POWER RELAYS

 Economical triac output for general purpose applications

FEATURES

- Current ratings to 90A
- Output voltage rating to 660 VAC with 24 VAC minimum
- AC or DC inputs
- 4KV optical isolation
- Zero AC or random turn-on models
- RC snubber network for inductive loads
- UL recognized (E46203, E79183),
 CSA certified (38595)
- VDE approval on many models (37421)





SOLID STATE RELAYS

G, GA5 SERIES POWER RELAYS

G SERIES (1)	MODEL I	NUMBER				Output Rating	Control Voltage	
OUTPUT SPECIFICATIONS	G120A10 G120A25 G120A45	G240A10 G240A25 G240A45	G280A10 G280A25 G280A45 G280A75 G280A90	G480A10 G480A25 G480A50 G480A75 G480A90	G575A10 G575A25 G575A50 G575A75 G575A90	10A 25A 45A 50A 75A 90A	90-280 VAC 90-280 VAC 90-280 VAC 90-280 VAC 90-280 VAC 90-280 VAC	
	G120D10* G120D25* G120D45*	G240D10* G240D25* G240D45*	G280D10* G280D25* G280D45* G280D75 G280D90	G480D10 G480D25 G480D50 G480D75 G480D90	G575D10 G575D25 G575D50 G575D75 G575D90	10A 25A 45A 50A 75A 90A	3-32 VDC 3-32 VDC 3-32 VDC 3-32 VDC 3-32 VDC 3-32 VDC	(5)
	G120E10 G120E25 G120E45	G240E10 G240E25 G240E45	G280E10 G280E25 G280E45 G280E75 G280E90	G480E10 G480E25 G480E50 G480E75 G480E90	G575E10 G575E25 G575E50 G575E75 G575E90	10A 25A 45A 50A 75A 90A	18-36 VAC 18-36 VAC 18-36 VAC 18-36 VAC 18-36 VAC 18-36 VAC	
Maximum Line Voltage (VRMS Minimum line voltage (Vrms) Max. off-state voltage (Vpeak)² Max. off-state leakage (mArms Static (off-state) dv/dt (V/μs)⁴	24 ±250	250 24 ±500 15.0 200	280 24 ±600 15.0 200	480 36 ±1200 15.0 200	660 48 ±1200 20.0 200			_

Specify suffix "R" for random turn-on models.

GA5 SERIES (1)	MODEL N	ODEL NUMBER			Control Voltage
OUTPUT	GA5-2A10	GA5-4A10	GA5-6A10	10A	90-280 VAC
SPECIFICATIONS	GA5-2A25	GA5-4A25	GA5-6A25	25A	90-280 VAC
	GA5-2D10*	GA5-4D10*	GA5-6D10*	10A	3-32 VDC
	GA5-2D25*	GA5-4D25*	GA5-6D25*	25A	3-32 VDC
	GA5-2E10	GA5-4E10	GA5-6E10	10A	18-36 VAC
	GA5-2E25	GA5-4E25	GA5-6E25	25A	18-36 VAC
Maximum Line Voltage (VRMS) Minimum line voltage (Vrms) Max. off-state voltage (Vpeak) ⁽²⁾ Max. off-state leakage (mArms) ⁽³⁾ Static (off-state) dv/dt (V/μs) ⁽⁴⁾	140 24 ±250 7.5 200	250 24 ±400 15.0 200	280 24 ±600 15.0 200		

Specify suffix "R" for random turn-on models.

*Specify suffix "V" for VDE approved models. (120, 250, 280 "D" input versions only)

- Specifications apply to TA from -30 to +80° C unless otherwise noted. One minute maximum duration if applied as a DC voltage. At TA of 25° C and maximum line voltage. Minimum dv/dt per EIA/NARM RS443, method RS397, 25° C. G480D and G575D series DC input range is 4.0 to 32.0 VDC.

SOLID STATE RELAYS

G, GA5 SERIES POWER RELAYS

INPUT SPECIFICATIONS (1)

Parameter	Α	D	E
Control Voltage	90-280 VAC	3-32 VDC (10)	18-36 VAC
Drop Out Voltage	10 Vrms	1.0 DC	2.0 Vrms
Maximum Input Current (2)	10 mArms	34 mADC	7 mArms
Nominal Input Resistance (3)	40K Ω	1K Ω	8K Ω
Turn-On Time (4)	20 mS	0.5 Cycle Max (4)	20 mS
Turn-Off Time	30 mS	0.5 Cycle Max	30 mS

OUTPUT SPECIFICATIONS

Parameter			G Series				GA5 Series		Units	
Maximum On-State Current (5)	10	25	45	50	75	90	10	25	Arms	
Minimum On-State Current	100	100	100	100	100	100	50	50	mArms	
Maximum 1-Cycle Surge (6)	100	250	500	750	750	1000	100	250	Apeak	
Maximum 1-Second Surge (7)	30	75	135	145	200	280	30	75	Apeak	
On-State Voltage Drop (8)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	Vpeak	
l²t (60 Hz, Half Cycle)	200	260	1040	2345	2345	4165	40	260	A ² sec	
Rjb (140, 250, 280, V Models)	1.8	1.8	0.65	-	0.25	0.25	3.0	2.0	°C/W	
Rib (480, 660V Models)	0.8	0.8	-	0.60	0.25	0.25	-	-	°C/W	

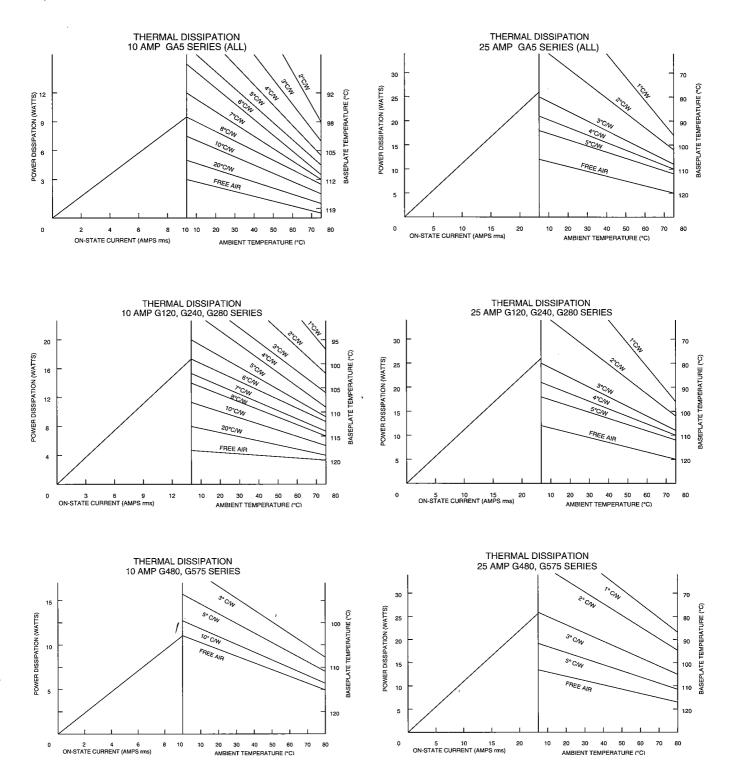
GENERAL SPECIFICATIONS (1)

Parameter	All Devices	Units
Operating Temperature Range	-20 to +80	°C
Storage Temperature Range	-40 to +100	°C
Input to Output Isolation Voltage (9)	4000	Vrms
Input/Output to Ground Isolation Voltage	2500	Vrms
Capacitance Input to Output (Typical)	8	рF
Line Frequency Range	47 to 80	Hz

- (1) Specifications apply to Ta -30 to +80° unless otherwise noted.
 (2) At maximum input voltage.
 (3) Does not include IRED impedance (drop).
 (4) At 60 Hz 100μs for random turn-on (suffix "R") models.
 (5) With relay properly mounted on an adequate heatsink. See thermal derating charts.
 (6) At Ta of 25° C, non-repetitive.
 (7) At Ta of 25° C and maximum on-state current.
 (8) At Ta of 25° C for one second, maximum leakage 1 MA.
 (10) Control voltage range for G480D and G575D series is 4.0 to 32.0 VDC.

SOLID STATE RELAYS

G, GA5 THERMAL DISSIPATION CURVES



SOLID STATE RELAYS

G, GA5 THERMAL DISSIPATION CURVES

