■Characteristics

●Low Noise Models: G5RL-1A(-E)-LN

Item	Classification	Standard	High-capacity
Contact resistance		100 mΩ max.	
Operate time		15 ms max.	
Release time		15 ms max.	
Insulation resistance		1,000 MΩ min.	
Dielectric strength	Between coil and contacts	6,000 VAC, 50/60 Hz for 1 min	
	Between contacts of the same polarity	1,000 VAC, 50/60 Hz for 1 min	
Impulse withstand voltage	Between coil and contacts	10 kV (1.2 × 50 μs)	
Insulation distance	Between coil and contacts	Clearance: 8 mm, Creepage: 8 mm	
Vibration resistance	Destruction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
	Malfunction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
Shock resistance	Destruction	1,000 m/s^2	
	Malfunction	100 m/s^2	
Durability	Mechanical	1,000,000 operation min. (at 18,000 operations/hr)	
	Electrical	100,000 operations min. (at 1,800 operations/hr)	50,000 operations min. (at 1,800 operations/hr)
Failure rate (P level) (reference)		100 mA at 5 VDC	
Ambient operating temperature		-40°C to 85°C (with no icing or condensation)	
Ambient operating humidity		5% to 85%	
Weight		Approx. 10 g	

Note 1. Values in the above table are initial values.
2. The contact resistance is measured with 1 A applied at 5 VDC using a fall-of-potential method.
3. The insulation resistance is measured between coil and contacts and between contacts of the same polarity at 500 VDC.
4. The release time is value with a diode attached.
5. Failure rate (P level) was measured at a switching frequency of 120 operations/min.

●High-Inrush Models: G5RL-1(A)-E-HR, G5RL-1A(-E)-TV8

Item	Classification	Standard	High-capacity
Contact resistance		100 mΩ max.	
Operate time		15 ms max.	
Release time		5 ms max.	
Insulation resistance		1,000 MΩ min. (at 500 VDC)	
Dielectric strength	Between coil and contacts	6,000 VAC, 50/60 Hz for 1 min	
	Between contacts of the same polarity	1,000 VAC, 50/60 Hz for 1 min	
Impulse withstand voltage	Between coil and contacts	10 kV (1.2 × 50 μs)	
Insulation distance	Between coil and contacts	Clearance: 8 mm, Creepage: 8 mm	
Vibration resistance	Destruction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
	Malfunction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
Shock resistance	Destruction	1,000 m/s^2	
	Malfunction	100 m/s^2	
Durability	Mechanical	10,000,000 operation min. (at 18,000 operations/hr)	
	Electrical	100,000 operations min. (at 1,800 operations/hr)	50,000 operations min. (at 1,800 operations/hr)
Failure rate (P level) (reference)		100 mA at 5 VDC	
Ambient operating temperature		-40°C to 85°C (with no icing or condensation)	
Ambient operating humidity		5% to 85%	
Weight		Approx. 10 g	

Note 1. Values in the above table are initial values.
2. The contact resistance is measured with 1 A applied at 5 VDC using voltage drop method.
3. The insulation resistance is measured between coil and contacts and between contacts of the same polarity at 500 VDC.
4. The resistive load ratings for NO contact apply when there is no load on NC contact.
5. Failure rate (P level) was measured at a switching frequency of 120 operations/min.

●Models with AC Coil: G5RL-1-E

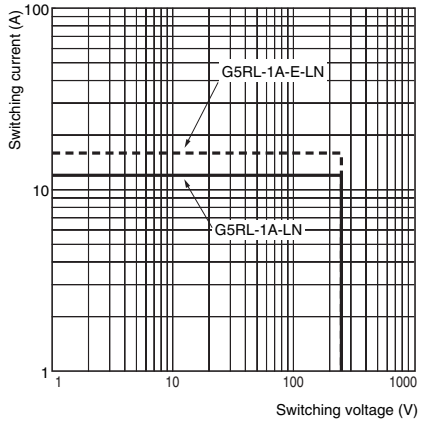
Item	Classification	High-capacity
Contact resistance		100 mΩ max.
Operate time		20 ms max.
Release time		20 ms max.
Insulation resistance		1,000 MΩ min. (at 500 VDC)
Dielectric strength	Between coil and contacts	6,000 VAC, 50/60 Hz for 1 min
	Between contacts of the same polarity	1,000 VAC, 50/60 Hz for 1 min
Impulse withstand voltage	Between coil and contacts	10 kV (1.2 × 50 μs)
Insulation distance	Between coil and contacts	Clearance: 8 mm, Creepage: 8 mm
Vibration resistance	Destruction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)
	Malfunction	10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)
Shock resistance	Destruction	1,000 m/s^2
	Malfunction	100 m/s^2
Durability	Mechanical	10,000,000 operation min. (at 18,000 operations/hr)
	Electrical	50,000 operations min. (at 720 operations/hr)
Failure rate (P level) (reference)		40 mA at 24 VDC
Ambient operating temperature		-40°C to 70°C (with no icing or condensation)
Ambient operating humidity		5% to 85%
Weight		Approx. 10 g

Note 1. Values in the above table are initial values.
2. The contact resistance is measured with 1 A applied at 5 VDC using voltage drop method.
3. The insulation resistance is measured between coil and contacts and between contacts of the same polarity at 500 VDC.
4. The resistive load ratings for NO contact apply when there is no load on NC contact.
5. Failure rate (P level) was measured at a switching frequency of 120 operations/min.

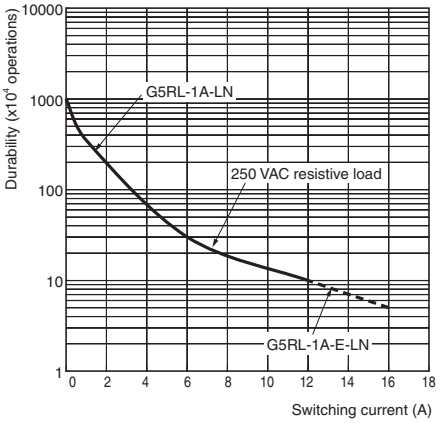
■Engineering Data

Low Noise Models: G5RL-1A(-E)-LN

●Maximum Switching Capacity

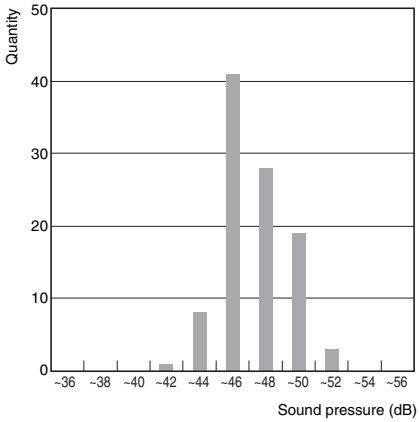


●Durability

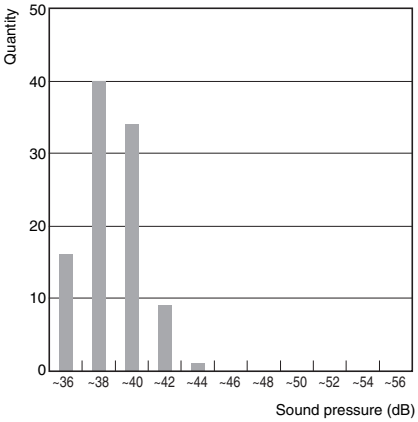


●Distribution of Sound Pressure

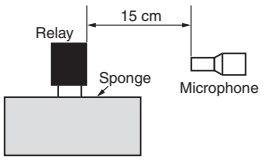
1. When Operating



2. When Releasing

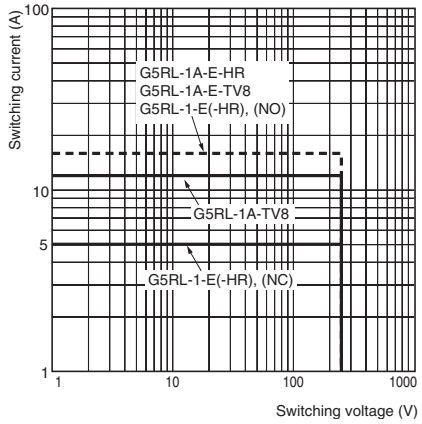


Sample: G5RL-1A-LN 12 VDC
Number of relays: 100 pcs
Range: A weighted sound pressure level, Fast, Max. hold
Device connected to coil: Diode
Testing environment: Room temperature and humidity
Background noise: Approx. 30 dB max.



High-Inrush Models : G5RL-1(A)-E-HR, G5RL-1A(-E)-TV8
Models with AC Coil : G5RL-1-E

●Maximum Switching Capacity



●Durability