

General Purpose Relays

Reliable and Safe

Superb Technology of Industrial Control



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Manufacturing Products for QA Customers



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Manufacturing Products for QA Customers



>>> Mibbo

Mibbo is committed to researching and developing, manufacturing and selling industrial control products. To serve the midrange and high end equipment manufactures and system integrators. It pursues "Manufacturing products for QA Customers" to provide customers with high quality products and personalized solutions, and finally to achieve corporate value and customer value growth.

General Purpose Relay is one of the major products in Mibbo. To provide our customers more efficient, reliable and qualified solutions in many fields, such as Industrial Automatic Control, Intelligent Control System, Setting and Equipment of Electronic Instrument, Household Appliances etc.

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RG Series Medium Power Relay



● Features

- Built-in LED
- 2 to 4 pole configurations
- Silver plated contact, Gold plated contact available
- Smoke cover type available
- Sockets available
- Environmental friendly products (RoHS compliant)
- Outline Dimensions: 27.6×21.3×35.9mm

● Ordering Information

RG	-	2	D	024	L	G
Medium power relay		Contact arrangement 2: 2 Form C 4: 4 Form C	Coil Power D: DC A: AC	Coil Voltage DC:12VDC to 110VDC AC:12VAC to 230 VAC	L:with LED	G:Gold plated contact Non:Silver plated contact

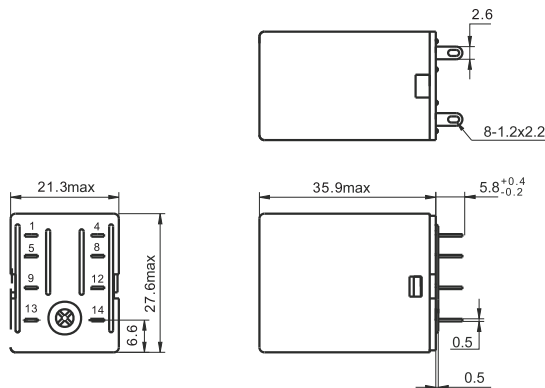
Contact Data	
Contact Arrangement	2D、2A 4D、4A
Contact Resistance	≤100mΩ (1A 6VDC)
Contact Material	Silver Plated (Gold Plated Available)
Contact Ratings	7A 250VAC/30VDC 5A 250VAC/30VDC
Max Switching Voltage	250VAC/30VDC
Max Switching Current	7A 5A
Max Switching Power	1750VA/210W 1250VA/150W
Mechanical Endurance	2×10 ⁷ ops
Electrical Endurance	2D/2A:1×10 ⁵ ops(7A 250VAC/30VDC, Resistive load, Room temp, 1s on 9s off) 4D/4A:1×10 ⁵ ops(5A 250VAC/30VDC, Resistive load, Room temp, 1s on 9s off)
Characteristics	
Insulation Resistance	1000mΩ (500VDC)
Dielectric Strength	Between Coil & Contact
	Between Open Contacts
	Between Contacts Sets
Operation Time(At nomi. volt.)	25ms max.
Release Time(At nomi. volt.)	25ms max.
Temperature Rise (No-Load, At nomi. volt.)	≤60K
Shock Resistance	Functional
	Destructive
Vibration Resistance	10Hz to 55Hz 1mm DA
Humidity	5%~85%RH
Ambient Temperature	-40℃~70℃
Terminal	Plug-in
Unit Weight	Approx. 35g
Construction	Dust protected
COIL	
Coil Power	DC type: approx.0.9W to 1.1W; AC type: approx.1.2VA to 1.8VA

Coil Data 25℃				
Nominal Voltage VDC	Pick-up Voltage ⁽¹⁾ VDC	Drop-out Voltage VDC	Max. Voltage ⁽²⁾ VDC	Coil Resistance Ω
12	≤9.6	≥1.2	13.2	160× (1±10%)
24	≤19.2	≥2.4	26.4	650× (1±10%)
48	≤38.4	≥4.8	52.8	2600× (1±15%)
110	≤88.0	≥11.0	121	11000× (1±15%)
Coil Data 25℃				
Nominal Voltage VAC	Pick-up Voltage ⁽¹⁾ VAC	Drop-out Voltage VAC	Max. Voltage ⁽²⁾ VAC	Coil Resistance Ω
12	≤9.6	≥3.6	13.2	46× (1±10%)
24	≤19.2	≥7.2	26.4	184× (1±10%)
48	≤38.4	≥14.4	52.8	735× (1±10%)
110	≤96.0	≥36.0	132	4550× (1±15%)
230	≤176.0	≥72.0	264	14400× (1±15%)

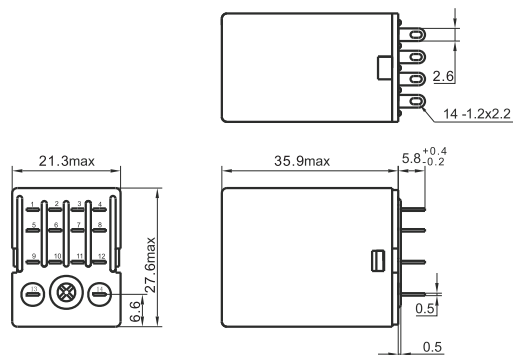
- Notes: 1) Under ambient temperature, applying more than 80% of rating voltage to coil, relays will take action accordingly. But in order to meet the stated product performance, please apply rated voltage to coil.
2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.
3) The above values are all initial value.

Outline Dimensions, Wiring Diagram and PC Board Layout

Unit:mm



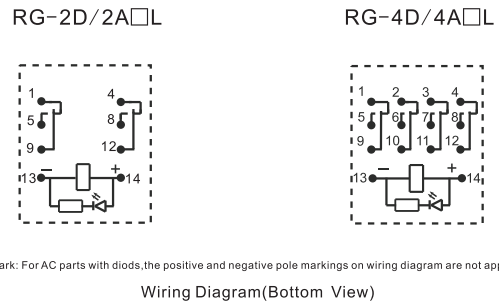
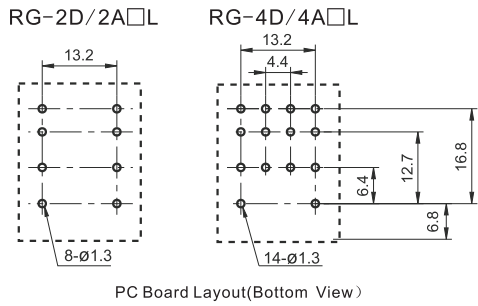
RG-2D/2A □ L Outline Dimensions



RG-4D/4A □ L Outline Dimensions

● Wiring Diagram and PC Board Layout

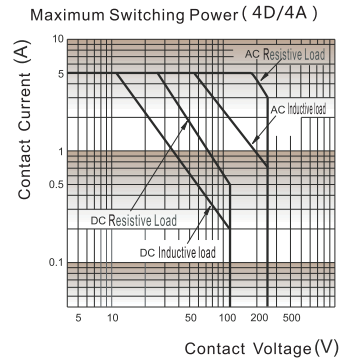
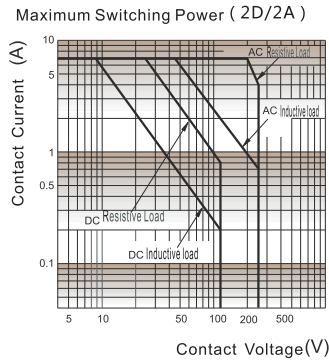
Unit: mm



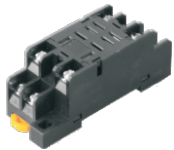
Remark: For AC parts with diods, the positive and negative pole markings on wiring diagram are not applicable.

Remarks: (1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$, outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$, outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.
 (2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

Characteristic Curves



Relay Socket



● Features

- The dielectric strength can reach 2000VAC and the insulation resistance is 1000mΩ
- Screw mounting and DIN rail mounting
- With finger protection device
- Components available: Retainer, marker, plug-in modules
- Environmental friendly products (RoHS compliant)

● Ordering Information


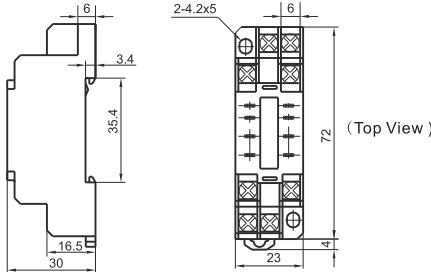
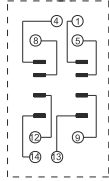
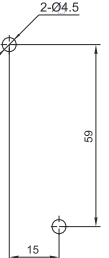

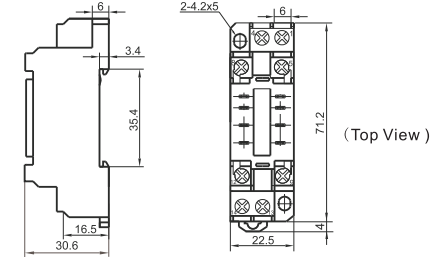
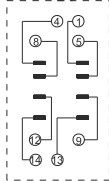
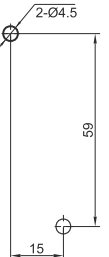

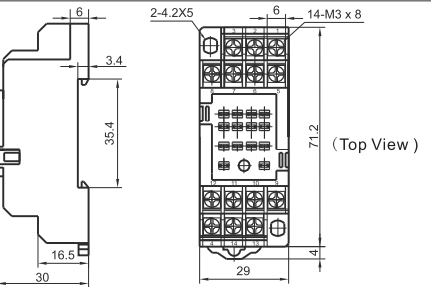
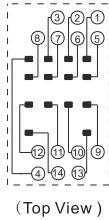

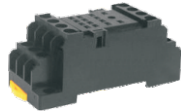
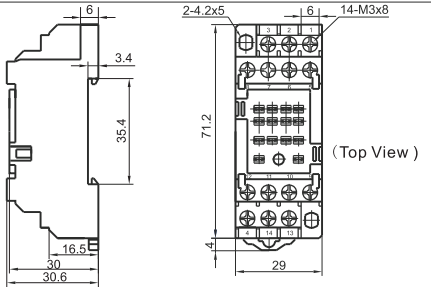
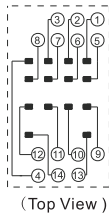



● Characteristics

Type	Nominal Voltage	Nominal Current	Ambient Temperature	Dielectric Strength Min.	Screw Torque	Wire Strip Length
RL-G08E	300VAC	10A	-40 °C ~ 70°C	2000VAC	0.8N · m	7mm
RL-G08F	300VAC	10A	-40 °C ~ 70°C	2000VAC	0.8N · m	7mm
RL-G14E	300VAC	10A	-40 °C ~ 70°C	2000VAC	0.8N · m	7mm
RL-G14F	300VAC	10A	-40 °C ~ 70°C	2000VAC	0.8N · m	7mm

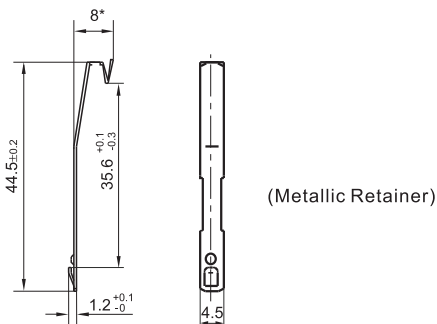
● Outline Dimensions, Wiring Diagram and PC Board Layout

Unit:mm

Socket	Outline Dimensions	Wiring Diagram	PC Board Layout	Accessory Available
RL-G08E  Screw Terminal DIN rail or Screw mounting Without finger protection device Applicable for 2 points	 (Top View)	 (Top View)	 2-Ø4.5 59 15	Metallic Retainer (be used in sets)
RL-G08F  Screw Terminal DIN rail or Screw mounting With finger protection device Applicable for 2 points	 (Top View)	 (Top View)	 2-Ø4.5 59 15	Metallic Retainer (be used in sets)
RL-G14E  Screw Terminal DIN rail or Screw mounting Without finger protection device Applicable for 4 points	 (Top View)	 (Top View)	 2-Ø4.5 59 22	Metallic Retainer (be used in sets)
RL-G14F  Screw Terminal DIN rail or Screw mounting With finger protection device Applicable for 4 points	 (Top View)	 (Top View)	 2-Ø4.5 59 22	Metallic Retainer (be used in sets)

● Dimension of Related Accessory (Available)

Unit:mm



Remark: Retainer has to be used in sets, please pay special attention while placing the order.

● Things to be Noticed When Selecting Sockets:

1. Please choose suitable relay sockets according to the actual mounting environment, relay contact poles and terminal layout. If there is any query on selection, please contact Mibbo for the technical service.
2. Sockets which can be mounted with markets is furnished with a market. As for other related component, they should be selected separately. Please do give clear indication of the types of relay sockets and related component you choose while packing order.
3. The above is only an example of typical socket and related component type which is suitable to RG relay. If you have any special requirements, please contact us.
4. Main outline dimension (L.W.H) $\geq 50\text{mm}$, tolerance should be $\pm 1\text{mm}$, outline dimension $> 20\text{mm}$ and $< 50\text{mm}$, tolerance should be $\pm 0.5\text{mm}$, outline dimension $\leq 20\text{mm}$, tolerance should be $\pm 0.3\text{mm}$.

RH Series High Power Relay



● Features

- Built-in LED
- 2 to 4 pole configurations
- Silver plated contact, Gold plated contact available
- Smoke cover type available
- Sockets available
- Environmental friendly products (RoHS compliant)
- Outline Dimensions: 27.6×21.3×35.9mm

● Ordering Information

RH	-	1	D	024	L	G
High power relay		Contact arrangement 2: 2 Form C 4: 4 Form C	Coil Power D: DC A: AC	Coil Voltage DC: 12VDC to 110VDC AC: 12VAC to 230 VAC	L: with LED	G: Gold plated contact Non-Silver plated contact

Specification

Contact Data		
Contact Arrangement	1D、1A 2D、2A	
Contact Resistance	≤100mΩ (1A 6VDC)	
Contact Material	Silver Plated (Gold Plated Available)	
Contact Ratings	15A 250VAC/30VDC 10A 250VAC/30VDC	
Max Switching Voltage	250VAC/30VDC	
Max Switching Current	15A 10A	
Max Switching Power	3750VA/450W 2500VA/300W	
Mechanical Endurance	1×10 ⁷ ops	
Electrical Endurance	1D/1A: 1×10 ⁸ ops (15A 250VAC/30VDC, Resistive load, Room temp, 1s on 9s off) 2D/2A: 1×10 ⁵ ops (10A 250VAC/30VDC, Resistive load, Room temp, 1s on 9s off)	
Characteristics		
Insulation Resistance	500mΩ (500VDC)	
Dielectric Strength	Between Coil & Contact	1500VAC 1min
	Between Open Contacts	1000VAC 1min
	Between Contacts Sets	1500VAC 1min
Operation Time(At nomi.volt.)	25ms max.	
Release Time(At nomi.volt.)	25ms max.	
Temperature Rise (No-Load, At nomi.volt.)	≤60K	
Shock Resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration Resistance	10Hz to 55Hz 1mm DA	
Humidity	5%~85%RH	
Ambient Temperature	-40°C~70°C	
Terminal	Plug-in	
Unit Weight	Approx. 37g	
Construction	Dust protected	
COIL		
Coil Power	DC type: approx.0.9W to 1.1W; AC type: approx. 1.2VA to 1.8VA	

Coil Data 25°C				
Nominal Voltage VDC	Pick-up Voltage ⁽¹⁾ VDC	Drop-out Voltage VDC	Max. Voltage ⁽²⁾ VDC	Coil Resistance Ω
12	≤9.6	≥1.2	13.2	160× (1±10%)
24	≤19.2	≥2.4	26.4	650× (1±10%)
48	≤38.4	≥4.8	52.8	2600× (1±15%)
110	≤88.0	≥11.0	121	11000× (1±15%)

Coil Data 25°C				
Nominal Voltage VAC	Pick-up Voltage ⁽¹⁾ VAC	Drop-out Voltage VAC	Max. Voltage ⁽²⁾ VAC	Coil Resistance Ω
12	≤9.6	≥3.6	13.2	46× (1±10%)
24	≤19.2	≥7.2	26.4	184× (1±10%)
48	≤38.4	≥14.4	52.8	735× (1±10%)
110	≤96.0	≥36.0	132	4550× (1±15%)
230	≤176.0	≥72.0	264	14400× (1±15%)

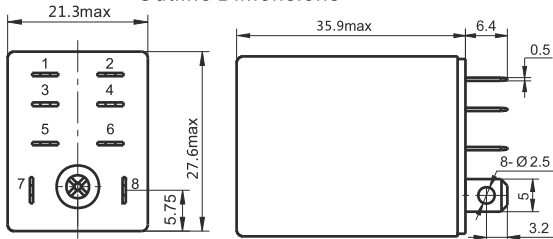
- Notes: 1) Under ambient temperature, applying more than 80% of rating voltage to coil, relays will take action accordingly. But in order to meet the stated product performance, please apply rated voltage to coil.
2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.
3) The above values are all initial value.

Outline Dimensions, Wiring Diagram and PC Board Layout

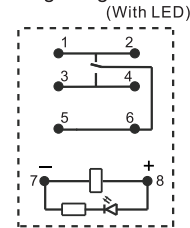
Unit:mm

●RH-1D/1A□L

Outline Dimensions



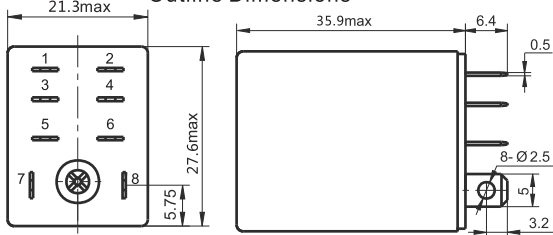
Wiring Diagram (Bottom View)



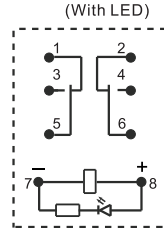
Remark: For AC parts with diodes, the positive and negative pole markings on wiring diagram are not applicable.

●RH-2D/2A□L

Outline Dimensions

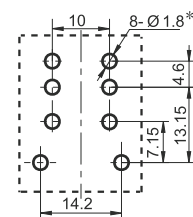


Wiring Diagram (Bottom View)



Remark: For AC parts with diodes, the positive and negative pole markings on wiring diagram are not applicable.

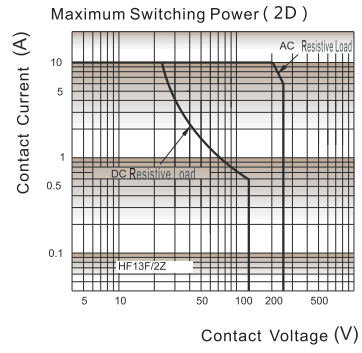
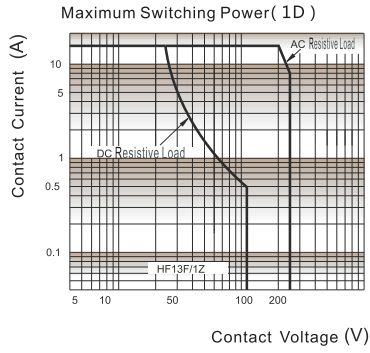
PC Board Layout (Bottom View)



*: Please adjust the site of this diameter according to the actual application.

- Remarks: (1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm, outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm, outline dimension >5mm, tolerance should be ±0.4mm.
(2) The tolerance without indicating for PCB layout is always ±0.1mm.

Characteristic Curves



Relay Socket



● Features

- The dielectric strength can reach 2000VAC and the insulation resistance is 1000mΩ
- Screw mounting and DIN rail mounting
- With finger protection device
- Components available: Metallic Retainer
- Environmental friendly products (RoHS compliant)

● Ordering Information


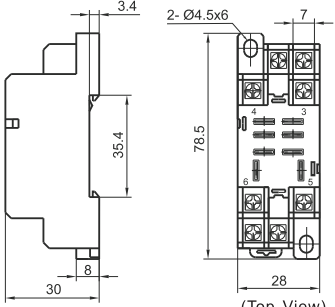
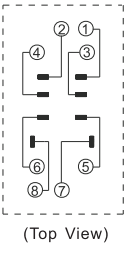
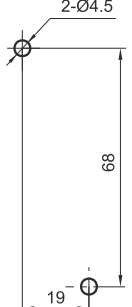
RL	-	H	08	E
Relay socket		RH Series socket	Socket Code 08: 2 Form C socket	Protection Device E: Without finger protection device

● Characteristics

Type	Nominal Voltage	Nominal Current	Ambient Temperature	Dielectric Strength Min.	Screw Torque	Wire Strip Length
RL-H08E	300VAC	10A	-40 °C ~ 70 °C	2000VAC	1.0N · m	7mm

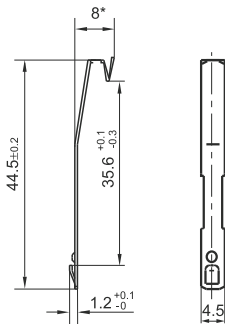
● Outline Dimensions, Wiring Diagram and PC Board Layout

Unit:mm

Socket	Outline Dimensions	Wiring Diagram	PC Board Layout	Accessory Available
RL-H08E  Screw Terminal DIN rail or Screw mounting	 <p>(Top View)</p>	 <p>(Top View)</p>		Metallic Retainer

● Dimension of Related Accessory (Available)

Unit:mm



Remark: Retainer has to be used in sets, please pay special attention while placing the order.

● Things to be Noticed When Selecting Sockets:

- Please choose suitable relay sockets according to the actual mounting environment, relay contact poles and terminal layout. If there is any query on selection, please contact Mibbo for the technical service.
- Sockets which can be mounted with markets is furnished with a market. As for other related component, they should be selected separately. Please do give clear indication of the types of relay sockets and related component you choose while packing order.
- The above is only an example of typical socket and related component type which is suitable to RG relay. If you have any special requirements, please contact us.
- Main outline dimension (L.W.H) ≥ 50mm, tolerance should be ±1mm, outline dimension > 20mm and < 50mm, tolerance should be ±0.5mm, outline dimension ≤ 20mm, tolerance should be ±0.3mm.

