



Features

- Miniature relay with high switching capability, especially suitable for Motor and compressor control.
- Both quick connect and PCB terminal types available.

Contact Capacity

Model	R609
Nominal switching capacity (res. load)	20A 250VAC
Max. switching current	20A
Max. switching voltage	250VAC
Max. switching power	5,000VA

Charateristic Data

Contact material	Silver alloy	
Initial contact resistance (at 6VDC 1A)	50m Ω Max.	
Operate time (at nominal volt.)	20msec. Max.	
Release time (at nominal volt.)	10msec. Max.	
Initial insulation resistance	1,000M Ω Min.(DC500V)	
Initial dielectric strength	Between open contacts: AC1,000V, 50/60Hz 1Min.	
	Between coil and contact: AC4,500V, 50/60Hz 1Min.	
Vibration resistance	Functional	10 ~ 55Hz at double amplitude of 1.5 mm
	Destructive	10 ~ 55Hz at double amplitude of 1.5 mm
Shock resistance	Functional	10G Min.
	Destructive	100G Min.
Endurance (operations)	Mechanical (at 7,200 ops./h)	10,000,000
	Electrical (at 900 ops./h)	100,000
Ambient temperature	-40 $^{\circ}$ C ~ +105 $^{\circ}$ C (no condensation)	
Unit weight	Approx. 22.0 g	

Coil Data (at 20°C)

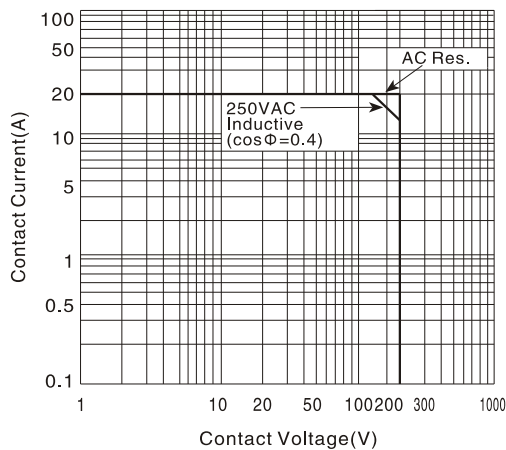
Nominal voltage (VDC)	Nominal operating current $\pm 10\%$ (mA)	Coil resistance $\pm 10\%$ (Ω)	Max. allowable voltage	Pick-up voltage (Max.)	Drop-out voltage (Min.)	Nominal operating power
5	180.00	27.80	110 % of nominal voltage	75 % of nominal voltage	5 % of nominal voltage	Approx. 0.90W
6	150.00	40.00				
9	100.00	90.00				
12	75.00	160.00				
18	50.00	360.00				
24	37.50	640.00				
48	18.75	2,560.00				

Typical Applications

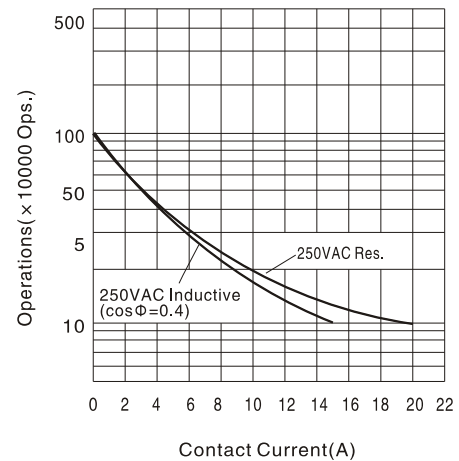
- Motor, compressor control, e.g.: air conditioner.
- Home appliances and industrial electrical equipment.

Characteristic Curves

Max. Switching Power



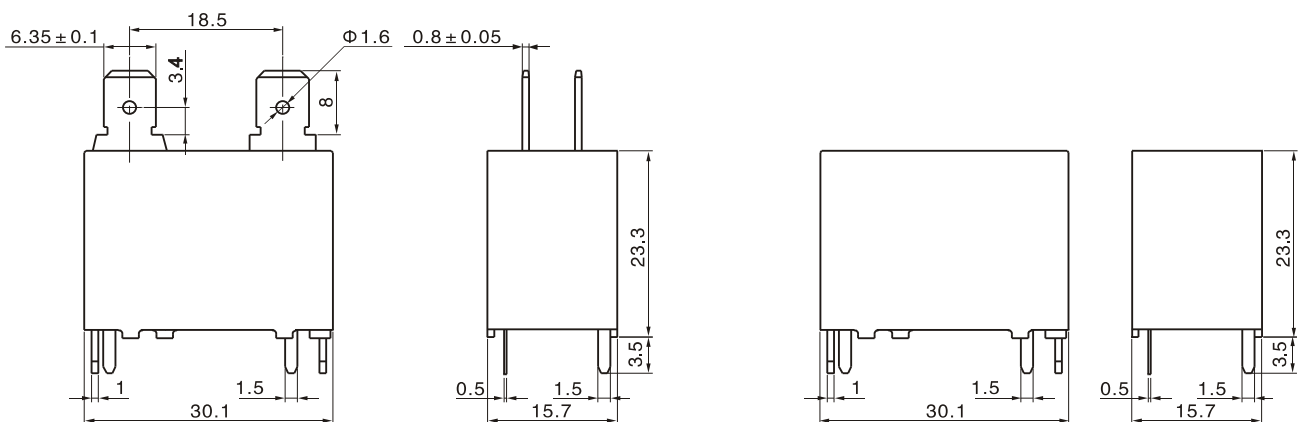
Endurance Curve



Outline Dimensions, Wiring Diagram, P.C. Board Layout (unit: mm)

Standard type

PCB type



Unless otherwise specified:

If dimension < 1mm, tolerance: $\pm 0.2\text{mm}$;

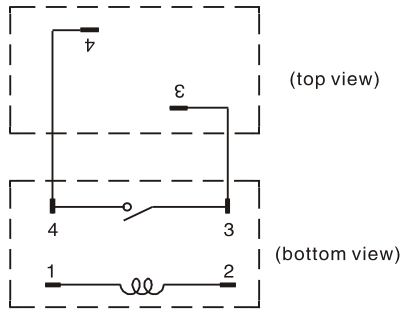
If dimension 1-5mm, tolerance: $\pm 0.3\text{mm}$;

If dimension > 5mm, tolerance: $\pm 0.4\text{mm}$.

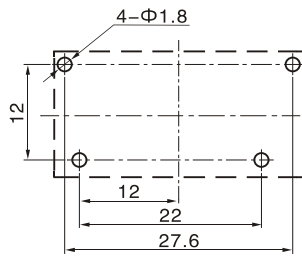
Note: 1. Extended terminal dimension is dimension before soldering.

2. Tolerance of P.C.B. layout: $\pm 0.1\text{mm}$.

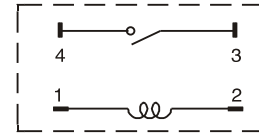
Standard type



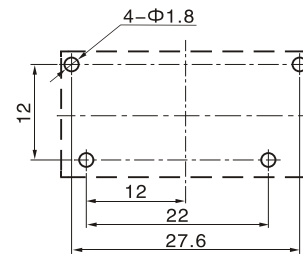
Wiring Diagram



PCB type



Wiring Diagram (bottom view)



P.C.B. Layout (bottom view)

ORDERING DESIGNATION

Example: R609D-1/012H1R4

R609	D	1	/	012	H	1	R	4
Model	Coil type	Add Feature		Coil Voltage	Contact Form	Version	Contact rating	Special features
R609=POWER	D=DC	1=1 Pole		005=5.0V 012=12V 024=24V	H=1A	1=SEALED	Silver alloy	3=PCB+QC 4=PCB