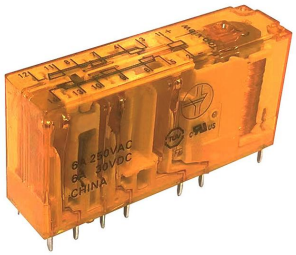
HLR-A6-5

Safety relay
(Relay with forced guide contact)



Features

- A variety of contact combinations: five groups of normally open + one group of normally closed, four groups of normally open + two groups of normally closed, three groups of normal and + three groups of normally closed
- Forced guided contact structure (according to IEC 61810-3)
- Strong load capacity: 6A contact switching capability
- Low input power consumption: 500mW
- Strong insulation ability: input-output withstand 10kV surge voltage
- UL Insulation class: F insulation class is available

RoHS compliant

Contact parameter

Contact form	5H1D, 4H2D, 3H3D
Structural classification (according to IEC61810-3)	Class A mandatory orientation
Contact resistance(1)	100mΩ (1A 6VDC)
Contact material	$AgSnO_2$
Contact load(resistive)	6A 250VAC / 30VDC
Maximum switching voltage	400VAC / 30VDC
Maximum switching current	6A
Maximum switching power	1500VA /180W
Electrical durability	1 x 10^5time(1NO: 6A 30VDC, Resistive load, room temperature, 1s on 9s off) 1x 10^5time(1NO: 6A 250VAC, Resistive load, room temperature, 1s on 9s off)
Mechanical durability	1 x 10^7time

Note: (1) The above values are initial values.

Coil parameter

Rated coil power	About 500mW

Coil specification sheet 23℃

Rated voltage VDC	Operating voltage VDC(1)	Release voltage VDC(1)	Maximum voltage(2) VDC	Coil resistance Ω
6	≤4.5	≥0.6	6.6	72 x (1±10%)
9	≤6.8	≥0.9	9.9	162 x (1±10%)
12	≤9.0	≥1.2	13.2	288 x (1±10%)
18	≤13.5	≥1.8	21.78	648 x (1±10%)
24	≤18.0	≥2.4	26.4	1152 x (1±10%)
36	≤27.0	≥3.6	39.6	2592 x (1±10%)
48	≤36.0	≥4.8	52.8	4608 x (1±10%)

Note: (1) The above values are initial values;
(2) The maximum voltage refers to the maximum voltage value that the relay coil can withstand in a short period of time

Performance parameter

Insulation resistance		1000MΩ (500VDC)
Dielectric withstand voltage	Between coil and contact	4000VAC 1 min
	Disconnect between contacts	1500VAC 1 min
	Between contact groups	2500VAC 1 min (11-12 / 13-14) 4000VAC 1 min (other)
Surge voltage	Between coil and contact	10kV (1.2 / 50μs)
	Between contact groups	5kV (1.2 / 50μs)
Operating time (at rated voltage)		≤20ms
Release time (at rated voltage)		≤20ms
Coil temperature rise (at rated voltage)		≤70K (coil drive voltage is 1.1 times Un, contact current carrying is rated current, ambient temperature ℃)
Vibration		NO/NC: 10Hz ~ 55Hz 1.5mm Double amplitude NO: 55Hz ~ 200Hz, 98m/s^2 NC: 55Hz ~ 200Hz, 49m/s^2
strike	stability	100m/s^2
	intensity	980m/s^2
Creepage distance	Between coil and contact	8mm
	Between contact groups	5.5mm
Air gap	Between coil and contact	8mm
	Between contact groups	5.5mm
humidness		5% ~ 85% RH
Temperature range		-40℃ ~ 85℃
Outlet form		Printed plate
weight		About 23g
Encapsulation mode		Anti-flux type

Note: (1) UL insulation grade: F class, B class;
(2) The above values are initial values.

Safety certification

UL/CUL	6A 277VAC / 250VAC / 125VAC 85℃ 6A 30VDC 85℃ Pilot duty: 1.5A 240VAC 3A 120VAC
TÜV	6A 277VAC / 30VDC 85℃ 1.5A / 2A 240VA(AC-15) 55℃

Note: (1) For loads whose temperature is not indicated in the table, the ambient temperature is room temperature;
(2) The above only lists some typical loads of the product certification, the detailed test conditions of each load are different, so the electrical durability life times are not the same, if you need to know more information, please contact our company.

Order mark example

Relay type	HLRA6 /	24	-5H1D	T	G	F	(XXX)
Coil voltage	6, 9, 12, 18, 24, 36, 48VDC						
Contact form	**5H1D:** 5 groups normally open +1 group normally closed **3H3D:** 3 groups normally open +3 groups normally closed **4H2D:** 4 groups normally open +2 groups normally closed						
Contact material	**T:** $AgSnO_2$						
Contact coating	**G:** gild						
Insulation class	**F:** Grade F	None: Level B					
Property number(4)	**XXX:** Customer special requirements	None: Standard type					

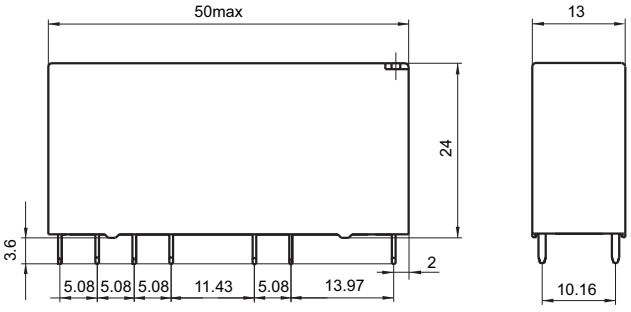
Note: (1) This product is a flux-proof product and cannot be used in polluted environment (containing -quantitative H_2S、SO_2、NO_2, dust and other pollutants);
(2) Anti-flux products can not be cleaned or surface treated as a whole after being welded into the PCB board;
(3) For gold-plated contacts, the minimum load is 10mA 5VDC, if the customer has a special load, please contact us for evaluation, provide suitable product specifications;
(4) For the shell using PC material, avoid being contaminated by organic solvents, otherwise there may be chemical reactions leading to swelling or cracking of the shell.
(5) The special requirements of customers shall be identified by the form of the feature number after review by our company.

Outline drawing, wiring diagram, mounting hole dimensions

Unit: mm

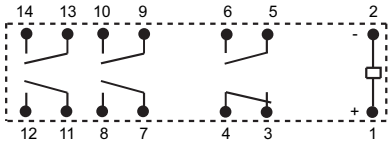
HLRA6/□□-5H1DT□(□□□)

External drawing



Wiring diagram

(Bottom view)



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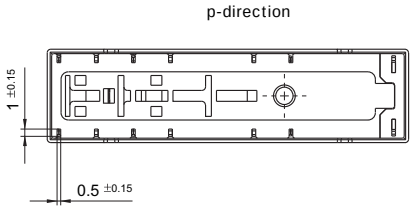
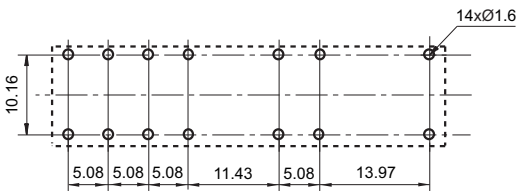


Mounting hole size

(Bottom view)

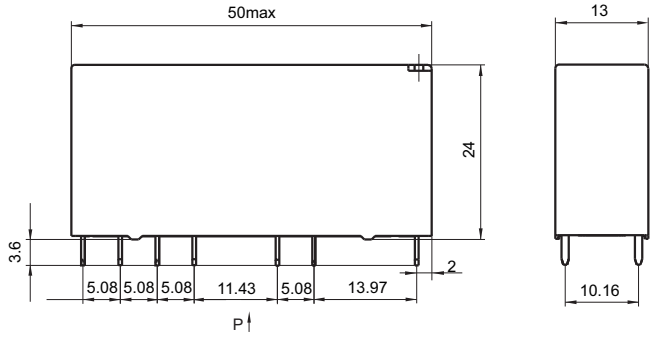


Outline drawing, wiring diagram, mounting hole dimensions

Unit: mm

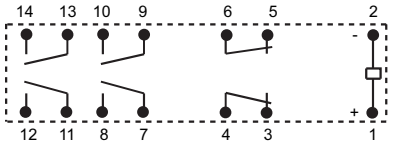
HLRA6/□□-4H2DT□(□□□)

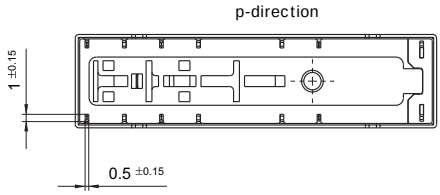
External drawing



Wiring diagram

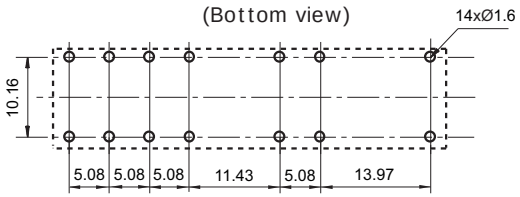
(Bottom view)





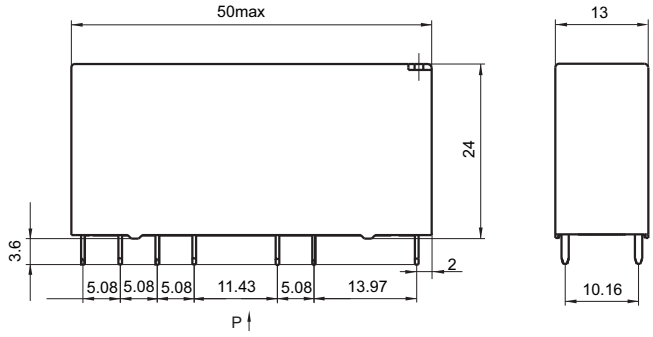
Mounting hole size

(Bottom view)



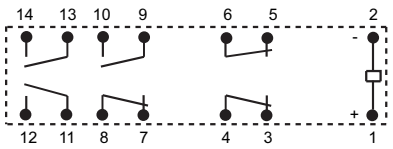
HLRA6/□□-3H3DT□(□□□)

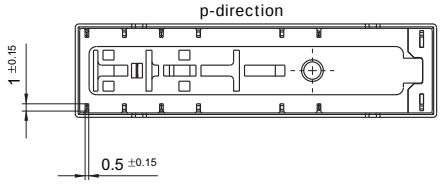
External drawing



Wiring diagram

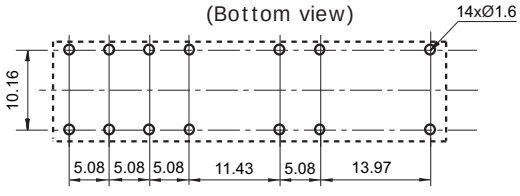
(Bottom view)





Mounting hole size

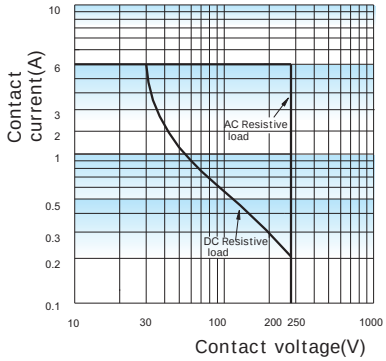
(Bottom view)



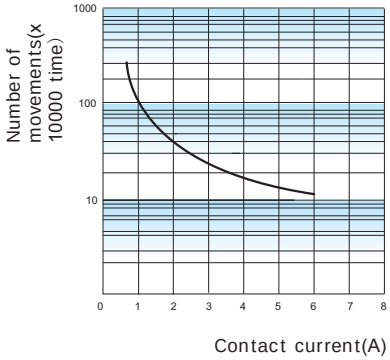
Note: (1) No dimensional tolerance is noted in the overall dimension of the product part. When the overall dimension is less than 1mm, the tolerance is ±0.2mm; When the overall size is between (1 to 5)mm, the tolerance is ±0.3mm; when the overall size is > 5mm, the tolerance is ±0.4mm;
(2) The dimension tolerance of the mounting hole is ±0.1mm.

Performance curve

Maximum switching power

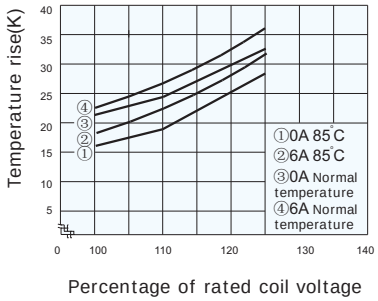


Electrical durability curve

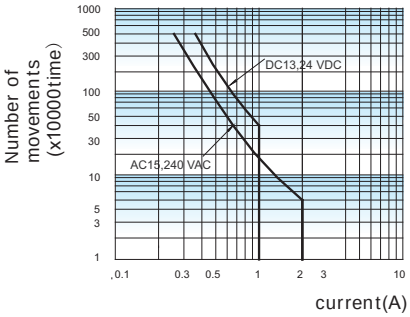


Note:
(1) Test conditions:
1NO end, resistive load, 250VAC, room temperature, 1s on 9s off.
(2) The above values are typical for test tests

Coil temperature rise



Inductive electrical durability curve



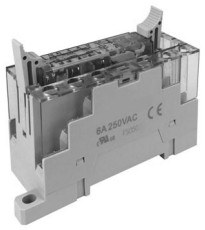
Note:
Test according to method B.3 in Appendix B of IEC 61810-1, normal temperature, 1NO, 1s on and 9s off.

Relay socket

c UL us

CE

Screw outlet,
Rail mounting,
With finger protection structure



Features

- Voltage between coil and contact 2500VAC, insulation resistance 1000MΩ
- It can be screw mounted or rail mounted
- The coil is protected by a diode to suppress reverse overvoltage
- With finger protector
- With relay hold and take out

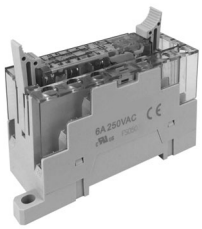
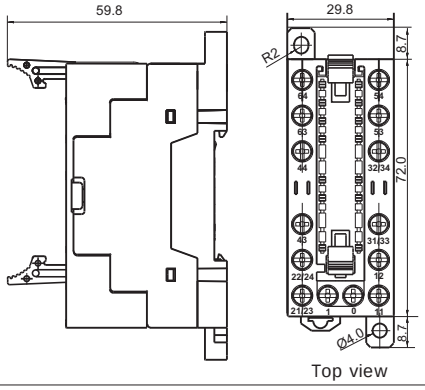
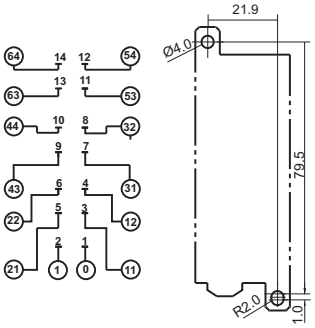
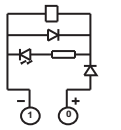
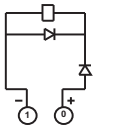
Performance parameter

Socket type	Rated voltage	Rated current	Relay coil applicable voltage	Ambient temperature	Torque *	Maximum traverse section size mm²	Bolo wire length	weight	remark
A6-6Z-C2-D24	250VAC	6A	(6~24)VDC	-25 ˚C ~ 55˚C	1.0N • m	2x1.5	7mm	About 63g	Tape indicator light
A6-6Z-C2-D60	250VAC	6A	(36~60)VDC	-25 ˚C ~ 55˚C	1.0N • m	2x1.5	7mm	About 63g	Tape indicator light
A6-62-C2-D110	250VAC	6A	(85~110)VDC	-25 ˚C ~ 55˚C	1.0N • m	2x1.5	7mm	About 63g	Tape indicator light
A6-6Z-C2	250VAC	6A	(6~110)VDC	-25 ˚C ~ 55˚C	1.0N • m	2x1.5	7mm	About 63g	No indicator

Note: (1)* refers to the torque after loading the wire.

Outline drawing, wiring diagram, mounting hole dimensions

Unit: mm

socket (If you need the parts in the picture, please order separately)	Overall dimension	Wiring diagram/mounting hole dimensions	Circuit diagram
A6-6Z-C2-X 	 Top view	 Top view	 Tape indicator light  No indicator

Note: The figure shows the socket and accessories. If you need accessories, please order by model or consult our sales staff.