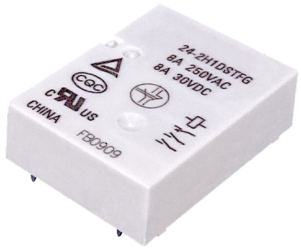
HLR-A3B-10 Forced guide relay



Features

- Forced guide contact structure, according to IEC61810-3(equivalent to EN50205 standard)
- Load switching capacity: 8A
- Mechanical durability:4×10^7 times
- Medium voltage: 4kV(between coil and contact; Intergroup)
- UL Insulation class: F class
- Overall dimensions: (34.2×25×10.2) mm

RoHS compliant

Contact parameters

Contact form	2NO+1NC
Mandatory orientation type (According to IEC 61810-3)	Class A mandatory orientation
Contact resistance(1)	≤100mΩ (6VDC 100mA)
Contact material	$AgSnO_2$+gild
Rated load (resistance)	8A 250VAC/ 30VDC
Maximum switching voltage	400VAC(3.5A Resistive load)
Maximum switching current	8A
Maximum switching power	2000VA / 240W
Switch capacity DC-13	1NO:4A 24VDC(1s on 9s off)
Switch capacity AC-15	1NO:3A 250VAC(1s on 9s off)
Mechanical durability	4×10^7 times
Electrical durability	5×10^4times(1NO:85℃，1s on 9s off，8A 250VAC，Resistive load)

Note: The preceding values are initial values.

Performance parameters

Insulation resistance		1000MΩ(500VDC)
Dielectric withstand voltage	Disconnect between contacts	1500VAC 1min
	Between contact groups	4000VAC 1min
	Between coil and contact	4000VAC 1min
Surge voltage	Between contact groups	6kV(1.2/50μs)
	Between coil and contact	6kV(1.2/50μs)
Operating time (at rated voltage)		≤20ms
Release time (at rated voltage)		≤10ms
Coil temperature rise		≤70K(all normally open contact load 8A, rated voltage excitation, ambient temperature 85°C)
strike	stability	10g(NO)
	intensity	100g
Vibration		10Hz ~ 200Hz 5g(NO)
Humidity		5% ~ 85%RH
Temperature range		-40℃ ~ 85℃
Outlet form		Printed plate
Weight		About 13.5g
Encapsulation mode		Plastic seal

Note: The preceding values are initial values.

Coil parameters

Rated coil power	About 0.5W
Holding voltage(1)	50%~100%UN(Ambient temperature 23℃) 60%~100%UN(Ambient temperature 85℃)

Note: (1) Coil holding voltage is the coil voltage applied after th e rated voltage is applied to the coil 100ms.

Coil parameters 23℃

Rated voltage VDC	Operating voltage VDC(1)	Release voltage VDC	Maximum voltage VDC(2)	Coil resistance Ω
5	≤3.5	≥0.5	6.5	50 ×(1±10%)
6	≤4.2	≥0.6	7.8	70 ×(1±10%)
9	≤6.3	≥0.9	11.7	160 ×(1±10%)
12	≤8.4	≥1.2	15.6	290 ×(1±10%)
15	≤10.5	≥1.5	19.5	450 ×(1±10%)
18	≤12.6	≥1.8	23.4	650 ×(1±10%)
21	≤14.7	≥2.1	27.3	840 ×(1±10%)
24	≤16.8	≥2.4	31.2	1150 ×(1±10%)
36	≤25.2	≥3.6	46.8	2590 ×(1±10%)
48(3)	≤33.6	≥4.8	62.4	4600 ×(1±10%)
60(3)	≤42	≥6	78	7100 ×(1±10%)
110(3)	≤77	≥11	143	24000 ×(1±10%)

Note: (1) The above values are initial values;
(2) The maximum voltage refers to the maximum voltage value t hat the relay can withstand in a short time;
(3) For products with rated voltage ≥48V, in order to protect the coil from damage, in the test and application, there must be me asures to inhibit the coil from generating overvoltage (such as: t wo-way voltage regulator in parallel with the coil).

Safety certification

UL/CUL	8A 250/277VAC cos(phi)=1 85℃ 8A 30VDC L/R=0 85℃ NO: B300 Q300 85℃ NC: Q300 85℃ NO: 3.5A 400VAC cos(phi)=1 85℃
TUV	8A 250/277VAC cos(phi)=1 85℃ 8A 30VDC L/R=0 85℃ NO: 3A 250VAC(AC-15) 85℃ 4A 24VDC(DC-13) 85℃

Note: The above only lists the typical load of the certification part of the product, if you need more details, please contact us.

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Order mark example

HLR-A3B-10/ 12 -2H1D S T F G （XXX）

Relay type	
Coil voltage	5,6,9,12,15,18,21, 24,36,48,60,110 VDC
Contact form	**2H1D:** Two groups normally open + one group normally closed
Plastic seal form	**S:** Plastic seal
Contact material	**T:** $AgSnO_2$
Insulation class	**F:** Grade F
Contact coating	**G:** Contact gold plating
Special feature number	**XXX:** Customer special requirements; None: Standard type

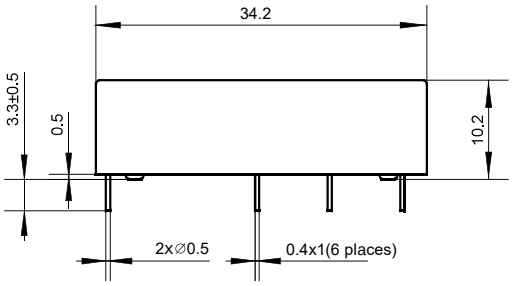
Note: (1) When the relay is loaded into the PCB board after welding, if the need for overall cleaning and surface treatment, please contact our company to confirm, in order to provide suitable products.
(2) The special requirements of customers shall be identified by the form of feature number after review by our company.

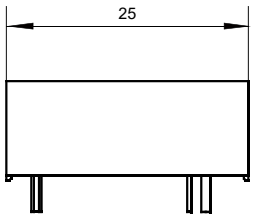
Outline drawing, wiring diagram, mounting hole dimensions

Unit：mm

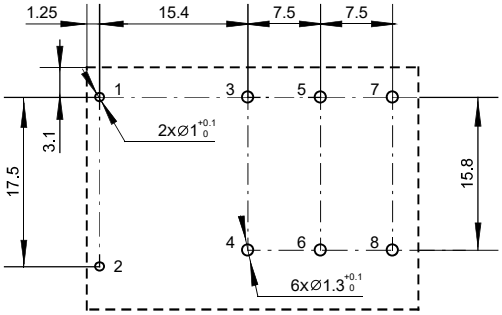
HLR-A3B-10/□□-2H1DSTFG

External drawing

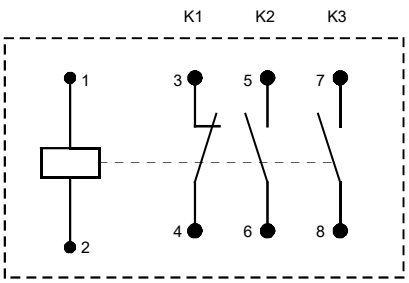




Mounting hole size
(Bottom view)



Wiring diagram
(Bottom view)



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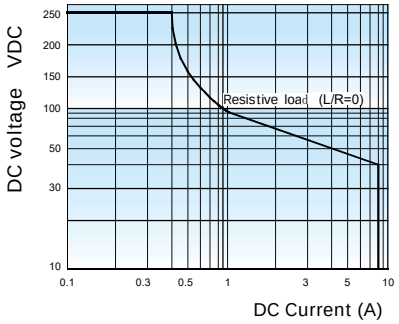
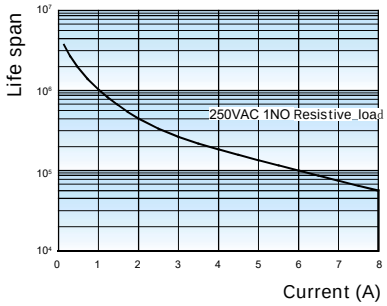
Note: (1) The pin size of the product outline drawing is the size before tin dipping (it will be larger after tin dipping), and the installation hole size is the recommended design size of the PCB hole. The specific design size of the PCB hole can be mapped and adjusted accordin g to the actual product;
(2) No dimensional tolerance is noted in the outline size of the product part, when the outline size is less than 1mm, the tolerance is ±0.2 mm; When the overall size is between (1 and 5)mm, the tolerance is ±0.3mm and the tolerance is ±0.4mm. (3) The dimension tolerance of the mounting hole is ±0.1mm.

Performance curve

Maximum DC load capacity

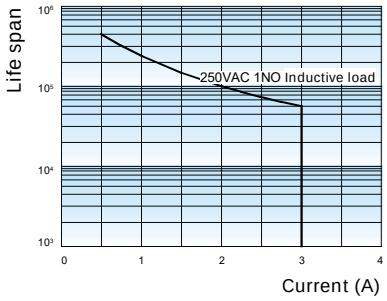


Electrical durability curve



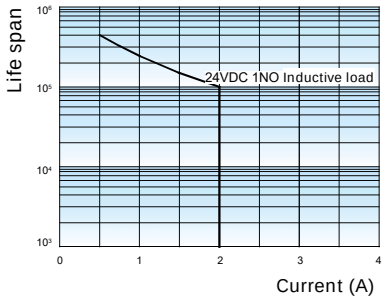
Test cond itions:
250VAC,85°C,1s on 9s off

AC-15Load curve



Note:
(1) AC-15 life is tested according to IEC 6094 7-5-1 standard.
(2) AC-15 test load: 250VAC, 85, 1s on 9s off

DC-13Load curve



Note:
(1) The life of DC-13 is tested according to IEC 60947-5-1 standard
(2) DC-13 test load: 24VDC, 85, 1s on 9s off

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