

HAT905 SERIES

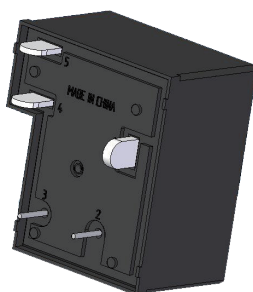
POWER RELAY



File No.:E75887



File No.:R 50290157



FEATURES

- 4000VAC high dielectric strength between contacts and coil is available
- Max. switch capacity up to 60A

CONTACT RATINGS

Contact Arrangement	1A, 1B, 1C
Contact Resistance	≤50mΩ (1A 24VDC)
Contact Material	AgCdO, AgSnO
Contact Rating(Resistive)	50A/277VAC, 30A/28VDC 60A/277VAC(P/N with the code 5451)
Max. Switching Voltage	277VAC/28VDC
Max. Switching Current	60A
Max. Switching Power	16620VA/840W
Mechanical Life	1×10 ⁷ operations
Electrical Life	See more details at "safety approval ratings"

CHARACTERISTICS

Insulation Resistance		100MΩ (at 500VDC)
Dielectric Strength	Between coil & contacts	2000VAC 1min
	Between open contacts	1500VAC 1min
Operate time (at nomi. volt.)		≤15ms
Release time (at nomi. volt.)		≤10ms
Humidity		98% RH
Operation temperature		-40°C~+85°C
UL Class B/F/H		Insulation System Class B/F/H
Shock Resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance		10Hz ~ 55Hz 1.5mm DA
Unit weight		Approx. 36g
Construction		Sealed Type, Dust Cover Type, Open type, Flux Tight Type

Notes: The data shown above are initial values.

ORDERING INFORMATION

HAT	F	905	C	S	DC12	- 2	- 4K	- ISN	- XXXX
Model									
F:Class F									
H:Class H									
Blank:Class B									
905:PCB Pins Only									
A:SPST-NO B:SPST-NC									
C:SPDT									
C:Dust Cover Type									
S:Sealed Type E:Flux Tight Type									
Blank:Open Type									
Coil Voltage									
Contact Gap:2=2mm Blank:Standard(0.5mm)									
1.5=1.5mm 3=2.6mm									
4K:4KV breakdown voltage									
Blank:Cd ISN:Non-Cd									
Customer Code									

Notes:

1. PC board assembled with dust cover type and flux tight type relays can not be washed and/or coated.
2. Dust cover type and flux tight type relays can not be used in the environment with dust, or H₂S, SO₂, NO₂ or similar gaseous environment etc.

This datasheet is for customers' reference. All the specifications are subject to change without notice.



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RELAYS

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COIL DATA

at 25°C

Nominal Voltage VDC	Operate Voltage (Max.) VDC	Release Voltage (Min.) VDC	*Max. Allowable Voltage VDC	Coil Resistance $\Omega \pm 10\%$
5	3.75	0.50	6.50	21
6	4.50	0.60	7.80	30
9	6.75	0.90	11.70	67.5
12	9.00	1.20	15.60	120
15	11.25	1.50	19.50	187.5
18	13.50	1.80	23.40	270
22	16.50	2.20	28.60	400
24	18.00	2.40	31.20	480
48	36.00	4.80	62.40	1920
110	82.50	11.00	143.00	10800

Note: "Max Allowable Voltage": The relay coil can endure max allowable voltage for a short period time only.

COIL

Coil Power	1200mW
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SAFETY APPROVAL RATINGS

UL&CUL	Cd Contact	N.O.	50A 277VAC, 6×10 ³ OPS 40A 277VAC, 50°C, 6×10 ³ OPS 45A 277VAC, 65°C, 6×10 ³ OPS 30A 28VDC, 6×10 ³ OPS 5A 277VAC, Electronic Ballast, 6×10 ³ OPS
		N.C.	30A 28VDC, 6×10 ³ OPS
	Non-Cd Contact	N.O.	50A 277VAC, G.P., 65°C, 6×10 ³ OPS 20A 277VAC, Ballast, 6×10 ³ OPS 30A 28VDC, G.P., 6×10 ³ OPS 60A 277VAC(P/N with the code 5451), 40°C 6×10 ³ OPS
		N.C.	20A 277VAC, G.P., 6×10 ³ OPS 30A 28VDC, G.P., 6×10 ³ OPS

TüV	Non-Cd Contact	N.O.:35A 250VAC, 85°C, 1×10 ⁴ OPS
		N.O.:40A 230VAC, 70°C, 1×10 ⁴ OPS
		N.O.:50A 277VAC, 85°C, 6×10 ³ OPS
		N.O.:30A 277VAC, 85°C, 1×10 ⁴ OPS
		N.O.:50A 28VDC, 85°C, 1×10 ⁴ OPS
		N.O.:40A 28VDC, 70°C, 1×10 ⁴ OPS
		N.C.:15A 250VAC, 85°C, 1×10 ⁴ OPS
		N.C.:30A 277VAC, 85°C, 1×10 ⁴ OPS
		N.C.:30A 28VDC, 85°C, 1×10 ⁴ OPS
		N.C.:20A 28VDC, 70°C, 1×10 ⁴ OPS
		N.O./N.C.:20A/15A 250VAC, 85°C, 1×10 ⁴ OPS
		N.O./N.C.:40A/20A 277VAC, 25°C, 6×10 ³ OPS
		N.O./N.C.:50A/30A 28VDC, 85°C, 1×10 ⁴ OPS

NOTES:

1. All values without specified temperature are at 25°C.
2. The above lists the typical loads only. Other loads may be available upon request.

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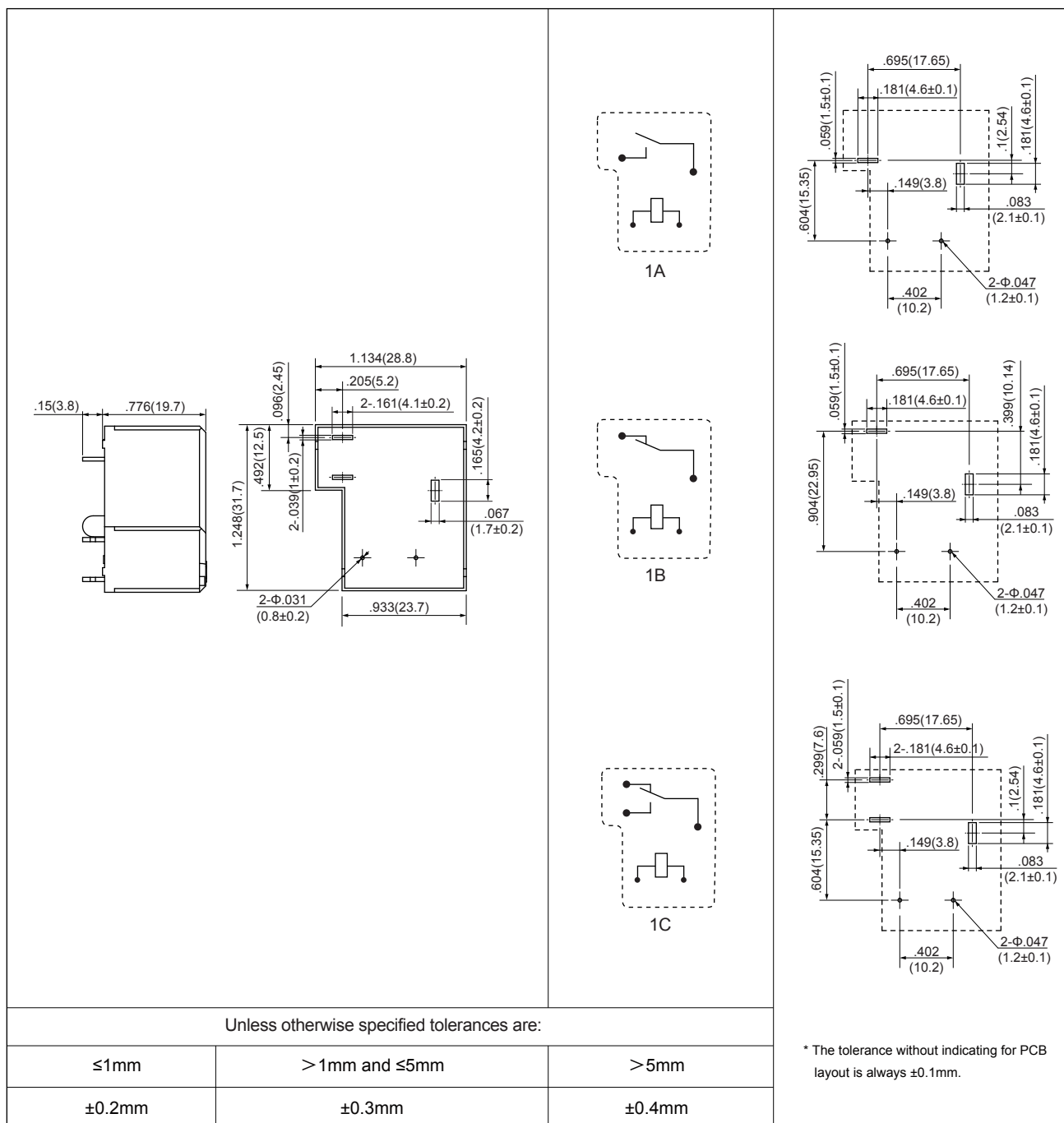
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT.

Unit: inch(mm)

Outline Dimensions

Wiring Diagram (Bottom view)

PCB Layout (Bottom view)



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PACKAGING SPECIFICATION

TUBE	OUTER CARTON	OUTER CARTON SIZE
19PCS	475PCS	L590mm*W205mm*H175mm

APPLICATION GUIDELINES

Automatic Wave Soldering

- * Wave solder is the optimum method for soldering.
- * Adjust the level of solder so that it does not overflow onto the top of the PC board.
- * Unless otherwise specified, solder under the following conditions depending on the type of relay.

Preheat time 20°C-100°C	Rising slope 20°C-120°C	Decreasing slope Peak-150°C	Soldering temperature 255°C-265°C
90±5 seconds	<3°C/s	<4°C/s	3~5s

Hand Soldering

- * Keep the tip of the soldering iron clean.

Solder Iron	30W or 60W
Iron Tip Temperature	Approx. 350°C 662°F
Solder Time	Within approx. 3 seconds

- * Immediate air cooling is recommended to prevent deterioration of the relay and surrounding parts due to soldering heat.
- * Although the sealed type relay can be cleaned, avoid immersing the relay into cold liquid (such as washing solvent) immediately after soldering. Doing so may deteriorate the sealing performance.

Discard the dropped product

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