

HAP01 SERIES

LATCHING RELAY

Agency Approval
Pending



File No.:R 50492934



FEATURES

- Dielectric strength(between contact and coil):
5000V
- 16A switching capacity

CONTACT RATINGS

Contact Arrangement	1A
Contact Resistance	≤100mΩ (1A 6VDC)
Contact Material	AgSnO
Contact Rating(Resistive)	16A 277VAC, 2×10 ⁴ (Resistive, 85°C) 600W 120VAC, 2.5×10 ⁴ (Incandescent lamp, 50°C) 8A 277VAC, 6×10 ³ (Standard ballast, 50°C) 5A 120VAC, 6×10 ³ (Electronic ballast, 40°C) 5A 240VAC, 2.5×10 ⁴ (TV-5, 40°C)
Max. Switching Voltage	277VAC
Max. Switching Current	16A
Max. Switching Power	4432VA
Mechanical Life	1×10 ⁶ operations
Electrical Life	See more details at "safety approval ratings"

ORDERING INFORMATION

	HAP01	F	1A	16	DC12	- 2	L	- E	- XXXX
Model									
F:Class F									
1A=1 Form A									
16:16A									
Coil Voltage									
2:2 coils Blank:1 coil									
L:Latching LR:Reverse Polarity									
E:Flux Tight Type S:Sealed Type Blank:Cover Type									
Customer Code									

CHARACTERISTICS

Insulation Resistance		1000MΩ (at 500VDC)
Dielectric Strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)		≤15ms
Release time (at nomi. volt.)		≤15ms
Humidity		5 to 85% R.H.
Operation temperature		-40°C~+85°C
UL Class F		Insulation System Class F
Shock Resistance	Functional	100m/s ² (half-wave pulse of sine wave:10ms, Detection time:10μs)
	Destructive	1000m/s ² (half-wave pulse of sine wave:6ms)
Vibration Resistance	Functional	10Hz to 55Hz 1.5mm DA(Detection time:10μs)
	Destructive	10Hz to 55Hz 3mm DA
Unit weight		Approx. 7.7g
Construction		Flux Tight Type, Sealed Type,

Notes: The data shown above are initial values.

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	Set/Reset Voltage (Max.) VDC	*Impulse Width (Min.) ms	Coil Resistance $\Omega \pm 10\%$		
			1 Coil	2 Coils	
				Set coil	Reset coil
3	2.4	30	45	22.5	22.5
5	4.0	30	125	62.5	62.5
6	4.8	30	180	90.0	90.0
9	7.2	30	405	202.5	202.5
12	9.6	30	720	360.0	360.0
24	19.2	30	2880	1440.0	1440.0

* For the Set time/Reset time it is recommended to use a minimum 30 ms pulse duration for the nominal coil voltage to compensate for varying ambient temperature and relay aging.

COIL

Coil Power	1 Coil: 200mW 2 Coils: 400mW
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SAFETY APPROVAL RATINGS

Other agency approval (Pending)	Resistive:16A 277VAC, 85°C Resistive:5A 30VDC, 85°C Incandescent lamp:600W 120VAC, 50°C Standard ballast:8A 277VAC, 50°C Electronic ballast:5A 120VAC, 40°C TV-5:5A 240VAC, 40°C
TüV	N.O.:16A 277VAC, 85°C, 2×10^4 OPS N.O.:16A 277VAC, 60°C, 5×10^4 OPS N.O.:8A 125VAC, 85°C, 5×10^4 OPS N.O.:5A 347VAC, 85°C, 5×10^4 OPS N.O.:5A 30VDC, 85°C, 5×10^4 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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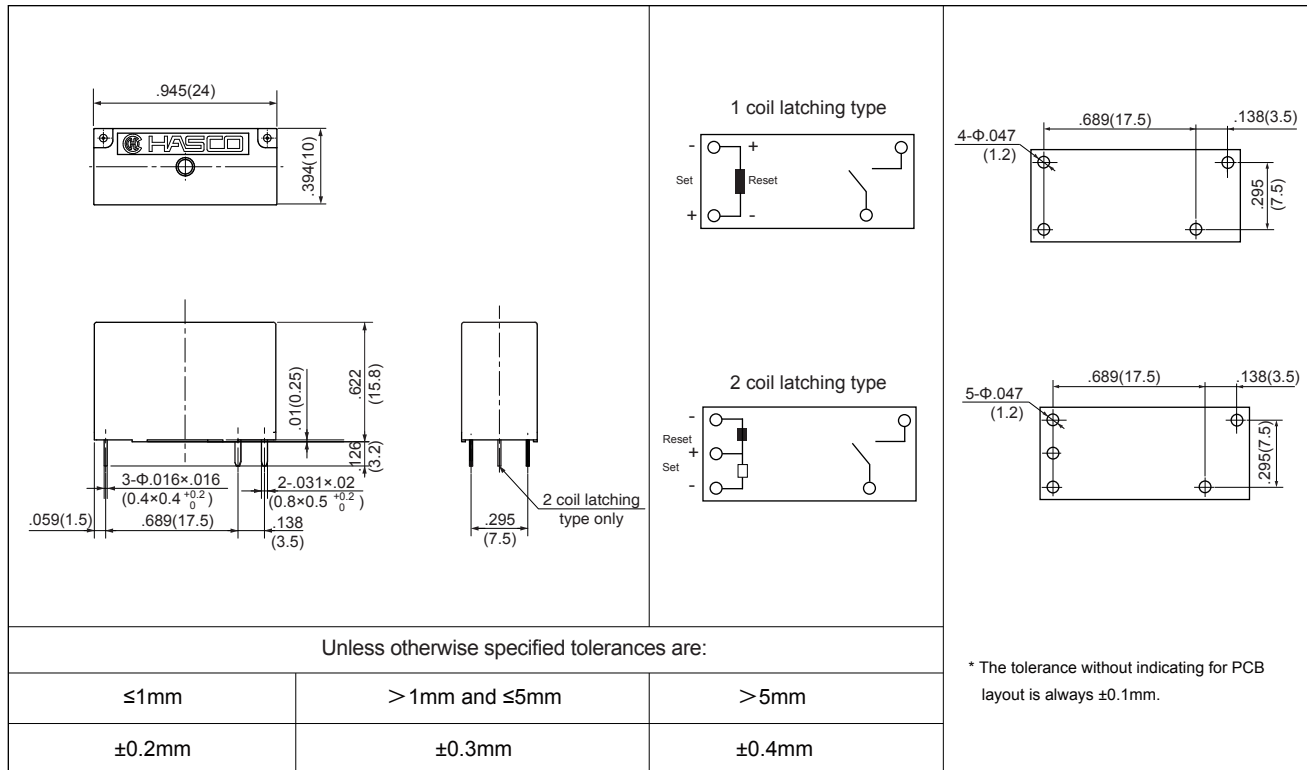
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT.

Unit: inch(mm)

Outline Dimensions

Wiring Diagram (Bottom view)

PCB Layout (Bottom view)



Notice

- Relay is on the "reset" or "set" status when being released from stock, with the consideration of shock arisen from transit and relay mounting, relay would be changed to "set" or "reset" status, therefore, when application (connecting the power supply), please reset the relay to "set" or "reset" status on request.
- Do not energize voltage to "set" coil and "reset" coil simultaneously. And also long energized time (more than 1 min) should be avoided.

PACKAGING SPECIFICATION

BLISTER BOX	OUTER CARTON	OUTER CARTON SIZE
100PCS	1000PCS	L390mm*W270mm*H140mm

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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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