

HR703H

12A, 1-Pole cubic relay

Features

- Universal size and foot print
- Highest carry current capability of its kind, 15A
- Design conforms to various safety standard
- Sealed construction standard

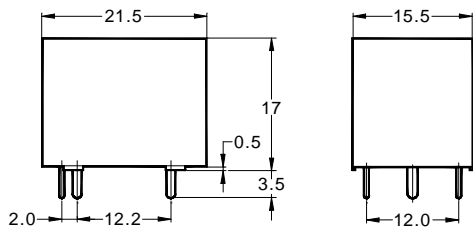


Applications

- Home appliance, Office equipment,
Vending machine, Industrial control

Dimensions (mm)

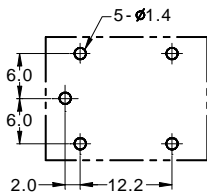
To convert into inches, multiply by 0.03937



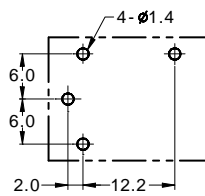
PC Board Layout

Copper-side view

1 Form C



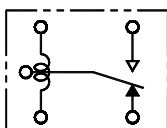
1 Form A



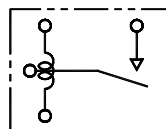
Schematic

Copper-side view

1 Form C



1 Form A



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Contact data

Arrangement	1 Form A (SPST) to 1 Form C (SPDT)	
Contact material	AgCdO	
Initial contact resistance	100m Ω max.	
Rated load, resistive	12A 24VDC 12A 120VAC 10A 250VAC	
Maximum carry current	15A	
Maximum switching capacity	with DC voltage:	240W
	with AC voltage:	2,500VA
Maximum switching voltage	110VDC 250VAC	

Coil data

Nominal voltage	3VDC to 48VDC
Nominal power consumption ¹⁾	360mW
Operate voltage ²⁾	75% of nominal voltage
Release voltage ³⁾	10% of nominal voltage

^{1), 2), 3)}The values depend on coil voltage, see Part selection chart

General data

Operate time	10ms max. at nominal voltage	
Release time	5ms max. at nominal voltage	
Initial insulation resistance	100 M Ω min. (500VDC)	
Dielectric strength	Between open contacts:	1,000VAC _{rms} for 1 minute
	Between contacts and coil:	2,500VAC _{rms} for 1 minute
Expected life	Mechanical:	More than 10,000,000 operations
	Electrical:	More than 100,000 operations at rated load
Vibration resistance	Functional:	10~55Hz dual amplitude: 1.5mm
	Destructive:	10~55Hz dual amplitude: 1.5mm
Shock resistance	Functional:	10G min.
	Destructive:	100G min.
Heating	+80 \pm 2 $^{\circ}$ C 1000hrs	
Cold	-40 \pm 2 $^{\circ}$ C 1000hrs	
Humidity	35% to 85% RH	
Weight	9.5g approx.	

Note: The above figures are initial values

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Part number description



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Contact arrangement

None: 1 Form C
A: 1 Form A

Coil voltage

DC03V: 3VDC DC09V: 9VDC
DC05V: 5VDC DC12V: 12VDC
DC06V: 6VDC DC24V: 24VDC
DC48V: 48VDC

Part number description is provided for reference, part number can not be arbitrarily composed. Refer to the part numbers shown in the table below. Special designs to customer specifications are possible; please contact HR.

Part selection *Distributor stock item

Part number	Nominal voltage (VDC)	Coil resistance ($\Omega \pm 10\%$)	Nominal current (mA)	Must operate voltage (VDC)	Must release voltage (VDC)	Max voltage (VDC)	Nominal power (mW)
1 Form A							
HR703HA DC03V	3	25	120	2.25	0.3	3.9	360
HR703HA DC05V	5	70	72	3.75	0.5	6.5	
HR703HA DC06V	6	100	60	4.50	0.6	7.8	
HR703HA DC09V	9	225	40	6.75	0.9	11.7	
HR703HA DC12V	12	400	30	9.00	1.2	15.6	
HR703HA DC24V	24	1,600	15	18.00	2.4	31.2	
HR703HA DC48V	48	6,400	7.5	36.00	4.8	62.4	
1 Form C							
HR703H DC03V	3	25	120	2.25	0.3	3.9	360
HR703H DC05V	5	70	72	3.75	0.5	6.5	
HR703H DC06V	6	100	60	4.50	0.6	7.8	
HR703H DC09V	9	225	40	6.75	0.9	11.7	
HR703H DC12V*	12	400	30	9.00	1.2	15.6	
HR703H DC24V*	24	1,600	15	18.00	2.4	31.2	
HR703H DC48V	48	6,400	7.5	36.00	4.8	62.4	

Note: All values in the chart are measured at 23°C