HR-CR3N23

2 Form A exclusive, 5A power relay

Features

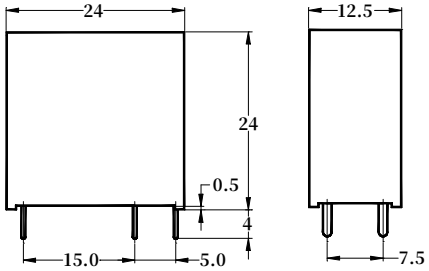
- Economical version of HR-CR323
- 5mm shorter in length than HR-CR323
- Conforms to various safety standard
- Coil sensitivity avaliable in 530mW and 720mW
- Sealed construction standard

Applications

- Home appliance, Industrial control

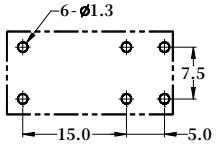
Dimensions (mm)

To convert into inches, multiply by 0.03937



PC Board Layout

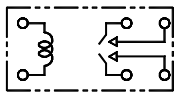
Copper-side view



Schematic

Copper-side view

2 Form A



HR-CR3N23

Contact data

Arrangement		2 Form A (DPST)
Contact material		Ag Alloy
Initial contact resistance		100mΩ max.
Rated load, resistive		5A 30VDC 5A 250VAC
Maximum carry current		5A
Maximum switching capacity	with DC voltage: with AC voltage:	150W 1,250VA
Maximum switching voltage		30VDC 250VAC

Coil data

Nominal voltage	5VDC to 48VDC
Nominal power consumption[1)]	530mW, 720mW
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		20ms max. at nominal voltage
Release time		10ms max. at nominal voltage
Initial insulation resistance		1,000 MΩ min. (500VDC)
Dielectric strength	Between open contacts: Between contacts and coil:	1,000VAC_{rms} for 1 minute 3,000VAC_{rms} for 1 minute
Surge strength	Between contacts and coil:	5,000V
Expected life	Mechanical: Electrical:	More than 10,000,000 operations More than 100,000 operations at rated load
Vibration resistance	Functional: Destructive:	10～55Hz dual amplitude: 1.5mm 10～55Hz dual amplitude: 1.5mm
Shock resistance	Functional: Destructive:	10G min. 100G min.
Ambient temperature		−40℃ to +70℃ (with no icing)
Humidity		45% to 85% RH
Weight		13g approx.

Note: The above figures are initial values

HR-CR3N23

Part number description

HR-CR3N23 □ □

Coil voltage

DC05: 5VDC
DC06: 6VDC
DC09: 9VDC
DC12: 12VDC
DC18: 18VDC
DC24: 24VDC
DC48: 48VDC

Coil sensitivity

None: Standard (720mW)
H: High sensitive (530mW)

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

Part number	Nominal voltage (VDC)	Coil resistance (Ω ±10%)	Nominal current (mA)	Must operate voltage (VDC)	Must release voltage (VDC)	Max voltage (VDC)	Nominal power (mW)
Standard coil							
HR-CR3N23DC05	5	35	144	3.75	0.5	6.5	720
HR-CR3N23DC06	6	50	120	4.5	0.6	7.8	
HR-CR3N23DC09	9	112	80	6.75	0.9	11.7	
HR-CR3N23DC12	12	200	60	9.0	1.2	15.6	
HR-CR3N23DC18	18	450	40	13.5	1.8	23.4	
HR-CR3N23DC24	24	800	30	18.0	2.4	31.2	
HR-CR3N23DC48	48	3,200	15	36.0	4.8	62.4	
Sensitive coil							
HR-CR3N23DC05H	5	47	106	3.75	0.5	6.5	530
HR-CR3N23DC06H	6	68	88	4.5	0.6	7.8	
HR-CR3N23DC09H	9	153	59	6.75	0.9	11.7	
HR-CR3N23DC12H	12	273	44	9.0	1.2	15.6	
HR-CR3N23DC18H	18	620	29	13.5	1.8	23.4	
HR-CR3N23DC24H	24	1,085	22.1	18.0	2.4	31.2	
HR-CR3N23DC48H	48	4,350	11.0	36.0	4.8	62.4	

Note: All values in the chart are measured at 23℃