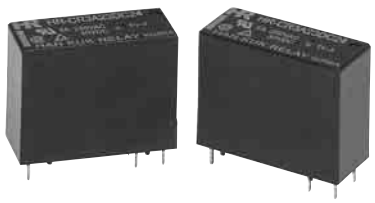
HR-CR3A

RoHS 대응품

5A to 16A low-profile power relay

Features

- 5mm lower in height than HR-CR3 series
- Wide contact arrangements
  1 Form A to 2 Form C
- 16A contact capacity
- Sealed construction standard



Approvals

UL
CUL
TUV

Applications

- Home appliance, Industrial control

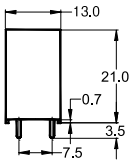
1 Pole type

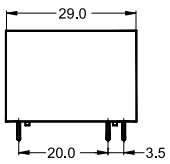
Dimensions (mm)

To convert into inches, multiply by 0.03937

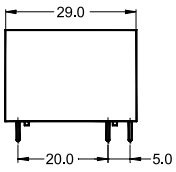
1 form A

standard type



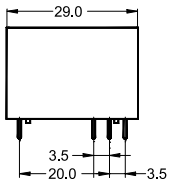


K type

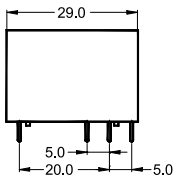


1 form C

standard type

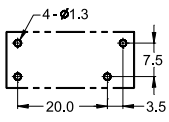


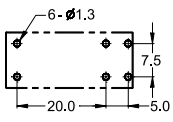
K type

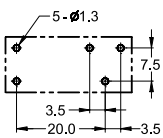


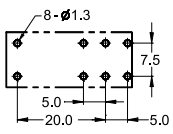
PC Board Layout

Copper-side view



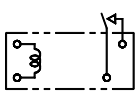


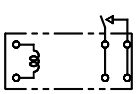


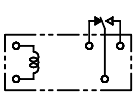


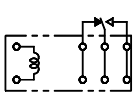
Schematic

Copper-side view





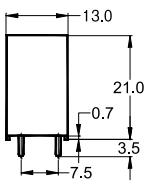




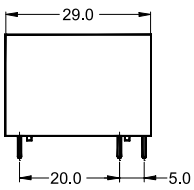
2 Pole type

Dimensions (mm)

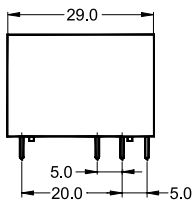
To convert into inches, multiply by 0.03937



2 Form A

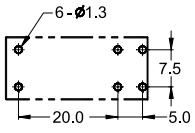


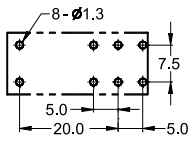
2 Form C



PC Board Layout

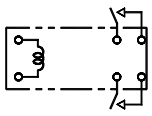
Copper-side view

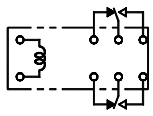




Schematic

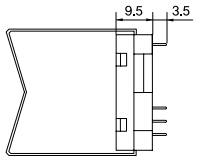
Copper-side view

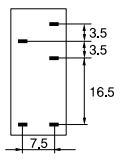




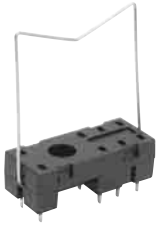
Socket

KPX14

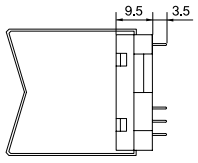


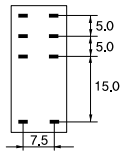


(TOP VIEW)



KPX24





(TOP VIEW)

HR-CR3A

RoHS 대응품

Contact data

Arrangement		1 Form A (SPST) to 2 Form C (DPDT)			
Contact material		Ag Alloy			
Initial contact resistance		100mΩ max.			
Type		2 Pole type 2 Form A, C	1 Pole typ		
			Standard 1 Form A, C	K type	
				1 Form C	1 Form A
Rated load, resistive		5A 30VDC 5A 250VAC TV-5	10A 30VDC 10A 250VAC TV-5	10A 30VDC 10A 250VAC TV-8	16A 30VDC 16A 250VAC
Maximum carry current		5A	10A	16A	16A
Maximum switching capacity	with DC voltage: with AC voltage:	150W 1,250VA	300W 2,500VA	300W 2,500VA	480W 3,840VA
Maximum switching voltage		250VAC			
Minimum switching rating[1)]		100mA 5VDC			

[1)] Min. Switching Load mentioned above are reference values. Therefore it is recommended to perform the confirmation test with the actual load before production since reference values may vary according to switching frequencies, environmental conditions and expected reliability levels.

Coil data

Nominal voltage	5VDC to 48VDC
Nominal power consumption[2)]	530mW, 720mW
Operate voltage[3)]	80% of nominal voltage
Release voltage[4)]	10% of nominal voltage

[2), 3), 4)] The values depend on coil voltage, see Part selection chart

General data

Operate time		15ms max. at nominal voltage
Release time		8ms 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 5,000VAC$_{rms}$ for 1 minute
Surge strength	Between contacts and coil:	10,000V
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˚C to + 70˚C (with no icing)
Humidity		45% to 85% RH
Weight		13g approx.

Note: The above figures are initial values

HR-CR3A

RoHS 대응품

Part number description

HR-CR3A □ □ □ □ □ □

No. of poles
1: Single pole
2: Double poles

Contact arrangement
1: Form C contact
3: Form A contact

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

Contact rating
None: Standard
5A 30VDC
5A 250VAC (2 Form A, C)
10A 30VDC
10A 30VDC (1 Form A, C)
K: 16A 30VDC
16A 250VAC (1 Form A,C type only)

Enclosure
None: Sealed type, black
C: Flux free type, clear

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

Part number description is provided for reference, part number cannot 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

☐ Fill in the codes to the part number by selecting them from the part number description

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)
Sensitive coil 1 Form C, 1 Form A, 2 Form C, 2 Form A							
HR-CR3A□□DC05□□	5	35	144	4.0	0.5	6.5	720
HR-CR3A□□DC06□□	6	50	120	4.8	0.6	7.8	
HR-CR3A□□DC09□□	9	112	80	7.2	0.9	11.7	
HR-CR3A□□DC12□□	12	200	60	9.6	1.2	15.6	
HR-CR3A□□DC18□□	18	450	40	14.4	1.8	23.4	
HR-CR3A□□DC24□□	24	800	30	19.2	2.4	31.2	
HR-CR3A□□DC48□□	48	3,200	15	38.4	4.8	62.4	
Sensitive coil 1 Form C, 1 Form A, 2 Form C, 2 Form A							
HR-CR3A□□DC05□□H	5	47	106	4.0	0.5	6.5	530
HR-CR3A□□DC06□□H	6	68	88	4.8	0.6	7.8	
HR-CR3A□□DC09□□H	9	153	59	7.2	0.9	11.7	
HR-CR3A□□DC12□□H	12	273	44	9.6	1.2	15.6	
HR-CR3A□□DC18□□H	18	620	29	14.4	1.8	23.4	
HR-CR3A□□DC24□□H	24	1,085	22.1	19.2	2.4	31.2	
HR-CR3A□□DC48□□H	48	4,350	11.0	38.4	4.8	62.4	

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