

HR-CR6

20A, 1 Form A heavy duty inductive load specialist relay

Features

- Designed for heavy inductive load application
- Superb contact welding resistance due to forced-break mechanism
 - fast release time: 5msec
- High surge strength 10,000V
- Characteristics deformation caused during Quick-connect placement and removal prevented by a built-in absorber

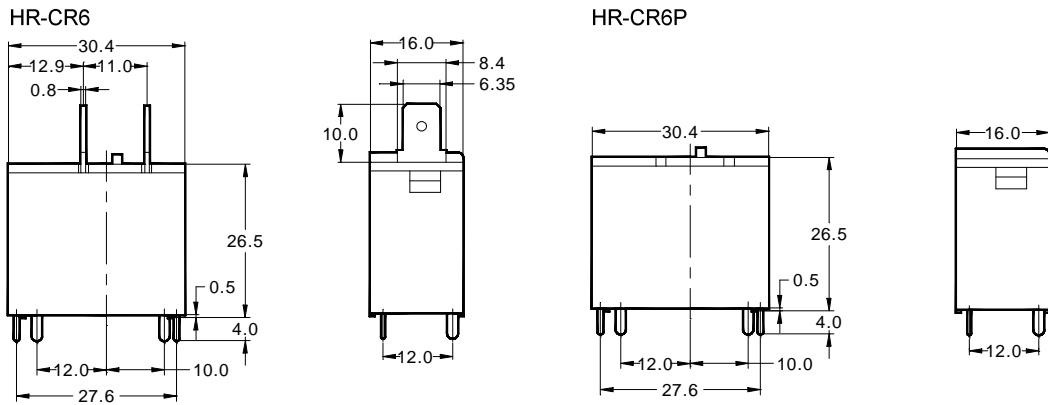


Applications

- Home appliance, Motor, Heater

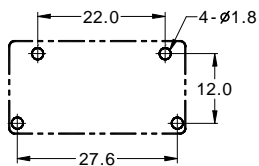
Dimensions (mm)

To convert into inches, multiply by 0.03937



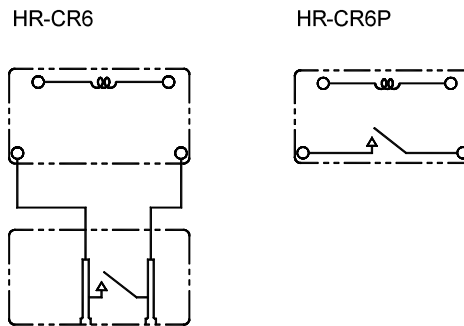
PC Board Layout

Copper-side view



Schematic

Copper-side view



(Top View)

HR-CR6

Contact data

Arrangement	1 Form A (SPST)
Contact material	Ag alloy
Initial contact resistance	30m Ω max.
Rated load, resistive	20A 250VAC
Maximum carry current	20A
Maximum switching capacity	with AC voltage: 5,000VA
Maximum switching voltage	250VAC

Coil data

Nominal voltage	5VDC to 48VDC
Nominal power consumption ¹⁾	900mW
Operate voltage ²⁾	80% 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	5ms max. at nominal voltage
Initial insulation resistance	1,000 M Ω min. (500VDC)
Dielectric strength	Between open contacts: 1,000VAC _{rms} for 1 minute Between contacts and coil: 4,500VAC _{rms} for 1 minute
Surge strength	Between contacts and coil: 10,000V
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.
Ambient temperature	-40 $^{\circ}$ C to +60 $^{\circ}$ C (with no icing)
Humidity	45% to 80% RH
Weight	28g approx.

Note: The above figures are initial values

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Part number description



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Terminal

None: quick-connect (#250) type
P: PC Board type

Coil voltage

DC05V: 5VDC DC12V: 12VDC
DC06V: 6VDC DC24V: 24VDC
DC09V: 9VDC 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

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)
Quick-connect (#250) type							
HR-CR6 DC05V	5	27.8	180	4.0	0.5	6.5	900
HR-CR6 DC06V	6	40	150	4.8	0.6	7.8	
HR-CR6 DC09V	9	90	100	7.2	0.9	11.7	
HR-CR6 DC12V	12	160	75	9.6	1.2	15.6	
HR-CR6 DC24V	24	640	37.5	19.2	2.4	31.2	
HR-CR6 DC48V	48	2,560	18.75	38.4	4.8	62.4	
PC Board type							
HR-CR6P DC05V	5	27.8	180	4.0	0.5	6.5	900
HR-CR6P DC06V	6	40	150	4.8	0.6	7.8	
HR-CR6P DC09V	9	90	100	7.2	0.9	11.7	
HR-CR6P DC12V	12	160	75	9.6	1.2	15.6	
HR-CR6P DC24V	24	640	37.5	19.2	2.4	31.2	
HR-CR6P DC48V	48	2,560	18.75	38.4	4.8	62.4	

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