

HR707N

An improved octal-plug general purpose relay

Features

- Replaces HR707 series
- 10A 2 Form C (DPDT) 3 Form C (3PDT) configurations
- Ruggedly constructed for long operating life
- Dielectric strength 2,500V enhanced from 1,500V of HR707 series

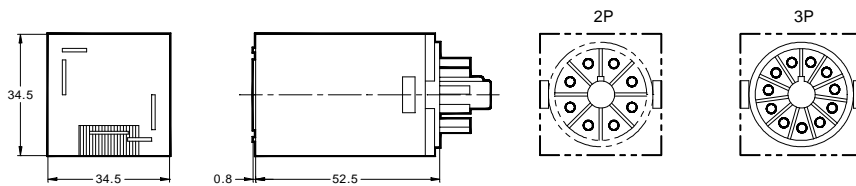


Applications

- Voltage or current monitoring

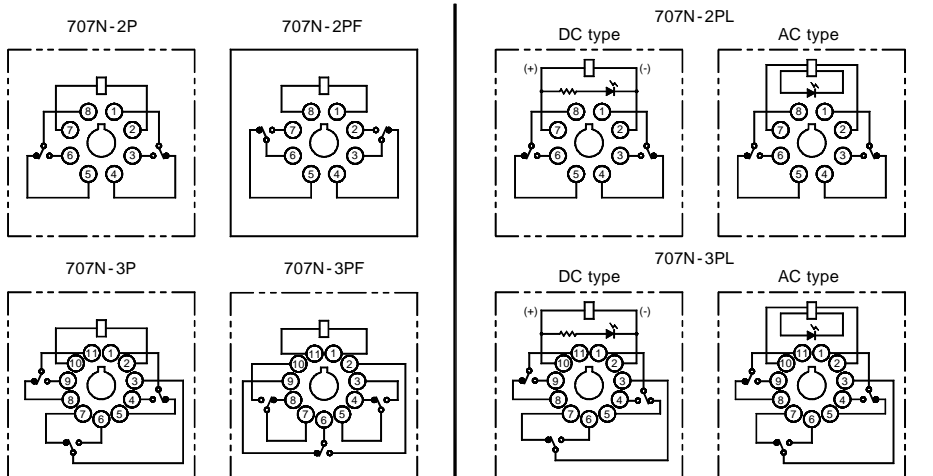
Dimensions (mm)

To convert into inches, multiply by 0.03937



Schematic

Base view



HR707N

Contact data

Arrangement	2 Form C, 3 Form C
Contact material	AgCdO
Initial contact resistance	50m Ω max.
Rated load, resistive	10A 28VDC 10A 250VAC
Maximum carry current	10A
Maximum switching capacity	with DC voltage: 280W with AC voltage: 2,500VA
Maximum switching voltage	250VDC 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	6VDC to 100VDC 6VAC to 240VAC
Nominal power consumption ²⁾	DC Coil: 1.3W to 1.6W approx. AC Coil: 2.1VA to 2.4VA (60Hz) approx.
Operate voltage ³⁾	80% of nominal voltage
Release voltage ⁴⁾	DC Coil: 10% of nominal voltage AC Coil: 30% of nominal voltage

^{2), 3), 4)} The values depend on coil voltage, see Part selection chart

General data

Operate time	DC Coil: 30ms max. at nominal voltage AC Coil: 20ms max. at nominal voltage
Release time	20ms max. at nominal voltage
Initial insulation resistance	100 M Ω min. (500VDC)
Dielectric strength	Between open contacts: 1,000VAC _{rms} of 1 minute Between contacts and coil: 2,500VAC _{rms} of 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: 1.0mm Destructive: 10~55Hz dual amplitude: 1.5mm
Shock resistance	Functional: 10G min. Destructive: 100G min.
Ambient temperature	-10°C to +40°C (with no icing)
Humidity	35% to 85% RH
Weight	75g approx.

Note: The above figures are initial values

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Part number description



HR707N-

Contact arrangement

2P: 2 Form C
3P: 3 Form C

Circuit

None: Standard
F: Special connection, see Schematic

Options

None: Standard (Mechanical indicator equipped)
L: LED indicator (DC coil: green, AC coil: red)
T: Test button
LT: LED indicator + Test button

Coil voltage

6VDC	6VAC
12VDC	12VAC
24VDC	24VAC
48VDC	50VAC
100VDC	100/110VAC
	200/220VAC
	220/240VAC

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

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

Part number	Nominal voltage (V)	Coil resistance ($\Omega \pm 10\%$)	Nominal current (mA)		Must operate voltage (V)	Must release voltage (V)	Max voltage (V)	Nominal power (W,VA)
			50Hz	60Hz				
DC Coil								
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 6VDC	6	23.5	225		4.8	0.6	6.6	1.3 to 1.6 approx.
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 12VDC	12	95	126		9.6	1.2	13.2	
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 24VDC	24	430	71		19.2	2.4	26.4	
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 48VDC	48	1,630	48		38.4	4.8	52.8	
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 100VDC	100	6,800	14.7		80.0	10	110	
AC Coil								
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 6VAC	6	5.3	400	360	4.8	1.8	6.6	2.1 approx. (60Hz)
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 12VAC	12	21.5	198	180	9.6	3.6	13.2	
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 24VAC	24	91.0	97	88	19.2	7.2	26.4	
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 48VAC	48	420	42.6	40	38.4	14.4	52.8	
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 100/110VAC	100/110	1,620	22.4/24.7	19/21	80/88	30/33	110/121	2.4 approx. (60Hz)
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 200/220VAC	200/220	7,100	11.7/12.9	9.7/10.7	160/176	60/66	220/242	
HR707N- <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 220/240VAC	220/240	7,600	8/10	7/9	176/192	66/72	242/264	

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