

HR705

Multi contact arrangement general purpose relay

Features

- Sequence control to power applications
- A wide range of variations and options available
- Arc suppression barrier, 3 and 4 pole types
- Conforms to various safety standard



Applications

- Process controls, Sequence controls data processing

Dimensions (mm) and schematic

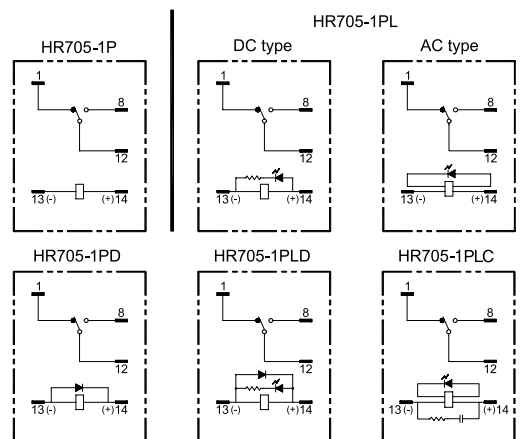
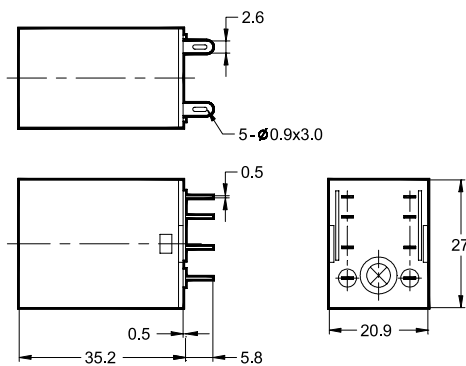
To convert into inches, multiply by 0.03937

Approvals



HR705-1P and variations

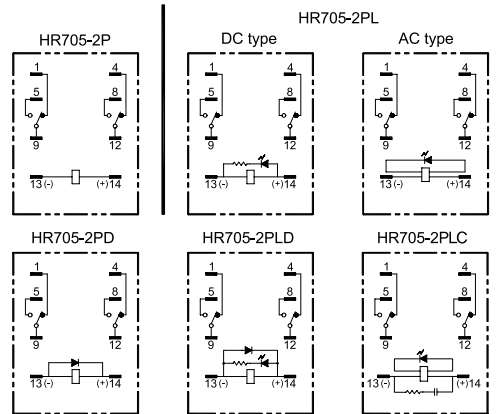
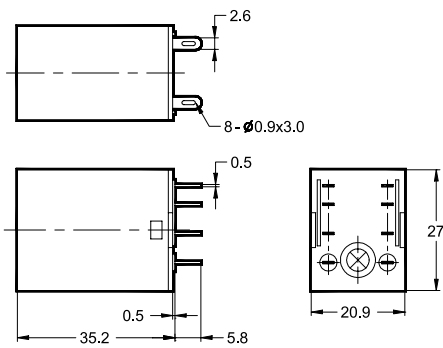
Base view



HR705

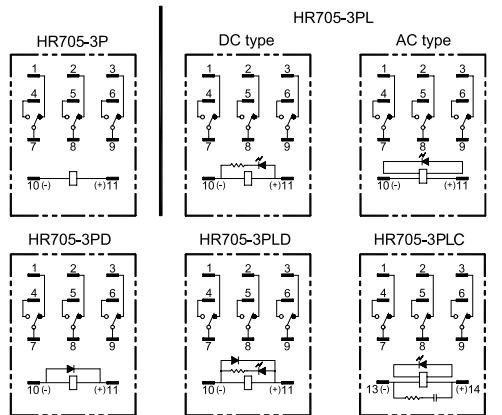
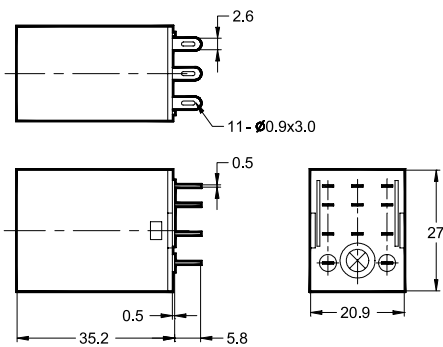
HR705-2P and variations

Base view



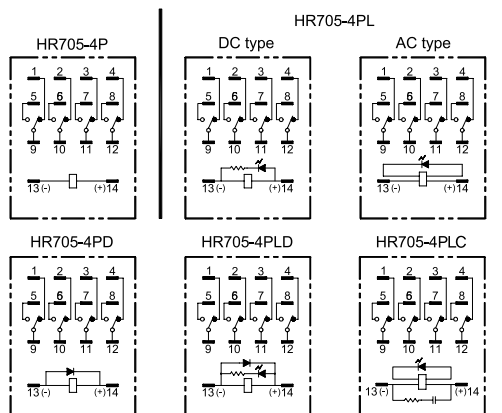
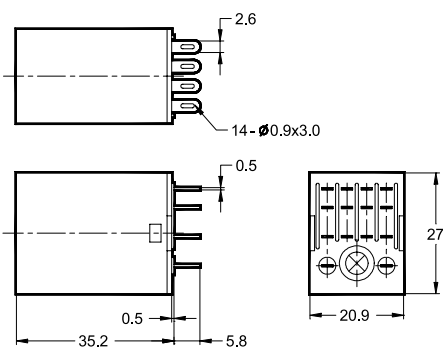
HR705-3P and variations

Base view



HR705-4P and variations

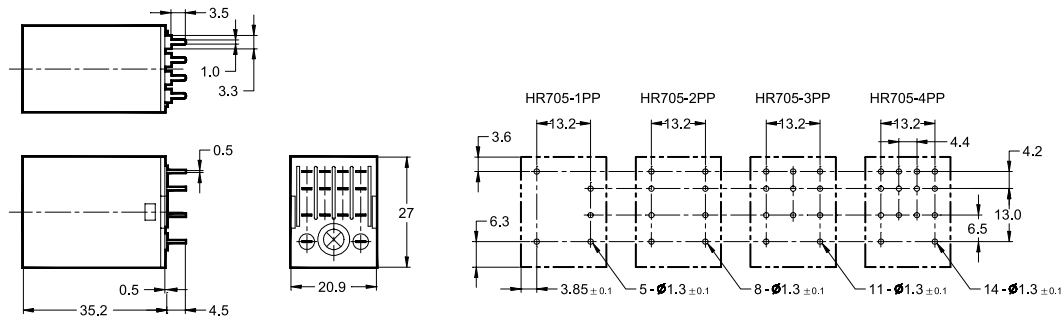
Base view



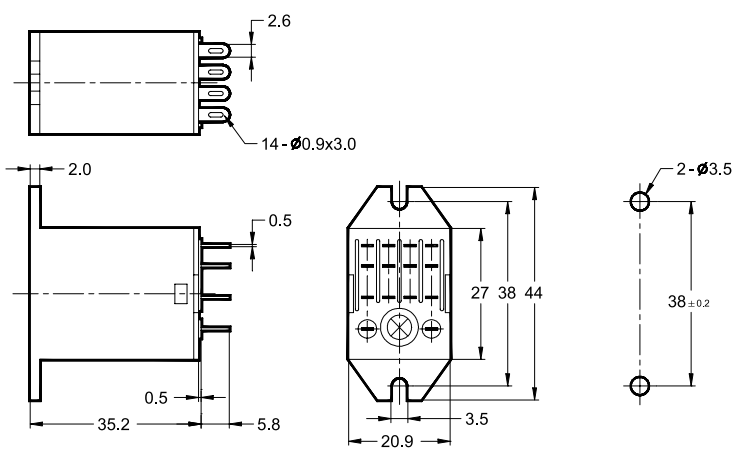
GENERAL PURPOSE RELAY

HR705

HR705-1PP, HR705-2PP, HR705-3PP, HR705-4PP



HR705-1PB, HR705-2PB, HR705-3PB, HR705-4PB



HR705

Contact data

Arrangement	1 Form C (SPDT) to 4 Form C (4PDT)		
Contact material	AgCdO		
Initial contact resistance	50mΩ max.		
Rated load, resistive	1,2,3 Form C	4 Form C	
	5A 24VDC 5A 240VAC	3A 24VDC 3A 240VAC	
Maximum carry current	15A	3A	
Maximum switching capacity	with DC voltage: with AC voltage:	120W 1,200VA	72W 720VA
Maximum switching voltage	125VDC 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 110VDC 6VAC to 240VAC	
Nominal power consumption ²⁾	DC Coil: AC Coil:	0.9W approx. 0.9VA to 1.2VA (60Hz) approx.
Operate voltage ³⁾	80% of nominal voltage	
Release voltage ⁴⁾	DC Coil: AC Coil:	10% of nominal voltage 30% of nominal voltage

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

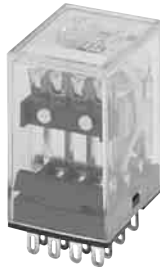
General data

Operate time	20ms max. at nominal voltage	
Release time	20ms max. at nominal voltage	
Initial insulation resistance	100 MΩ min. (500VDC)	
Dielectric strength	Between open contacts: Between contacts and coil:	1,000V _{rms} for 1 minute 1,500V _{rms} for 1 minute
Expected life	Mechanical: Electrical:	More than 1,000,000 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	- 35°C to + 55°C (with no icing)	
Humidity	35% to 80% RH	
Weight	33g approx.	

Note: The above figures are initial values

HR705

Part number description



HR705-□□□□

Contact arrangement

1P: 1 Form C
2P: 2 Form C
3P: 3 Form C
4P: 4 Form C

Mounting & Terminal

None: Socket – plug-in, solder
P: PC Board – pin
B: Flange – plug-in, solder

Options

None: Standard
L: LED indicator (DC coil: green, AC coil: red)
T: Test button
LT: LED indicator + Test button
D: freewheeling diode
LD: LED indicator + freewheeling diode
LC: LED indicator + Built-in the Surge Absorbent Circuit

Coil voltage

6VDC	6VAC	100/110VAC
12VDC	12VAC	110/120VAC
24VDC	24VAC	200/220VAC
48VDC	50VAC	220/240VAC
100/110VDC		

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

□ Fill in the codes to the part number by selecting them from the in 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								
HR705-□□□□ 6VDC	6	40	150		4.8	0.6	6.6	0.9 approx.
HR705-□□□□ 12VDC	12	160	75		9.6	1.2	13.2	
HR705-□□□□ 24VDC	24	650	36.9		19.2	2.4	26.4	
HR705-□□□□ 48VDC	48	2,600	18.5		38.4	4.8	52.8	
HR705-□□□□ 100/110VDC	100/110	11,000	9.1/10		80/88	10/11	110/121	1.1 approx.
AC Coil								
HR705-□□□□ 6VAC	6	12.2	214.1	183	4.8	1.8	6.6	1.0 to 1.2 (60Hz) approx.
HR705-□□□□ 12VAC	12	46	106.5	91	9.6	3.6	13.2	
HR705-□□□□ 24VAC	24	180	53.8	46	19.2	7.2	26.4	
HR705-□□□□ 50VAC	50	788	25.7	22	40.0	15	55	
HR705-□□□□ 100/110VAC	100/110	3,750	11.7/12.9	10/11	80/88	30/33	110/121	0.9 to 1.2 (60Hz) approx.
HR705-□□□□ 110/120VAC	110/120	4,430	9.9/10.8	8.4/9.2	88/96	33/36	121/132	
HR705-□□□□ 200/220VAC	200/220	12,950	6.2/6.8	5.3/5.8	160/176	60/66	220/242	
HR705-□□□□ 220/240VAC	220/240	18,790	4.8/5.3	4.2/4.6	176/192	66/72	242/264	

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

HR705

Sockets

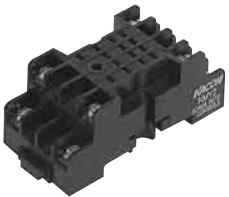
1,2-POLE



KYF08A



KYF08AE



KMY2

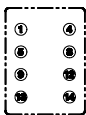
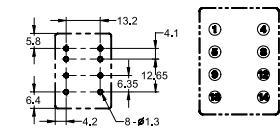
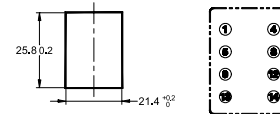
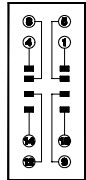
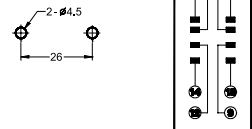
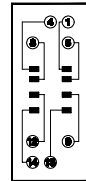
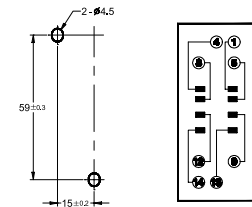
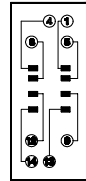
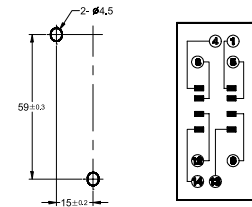
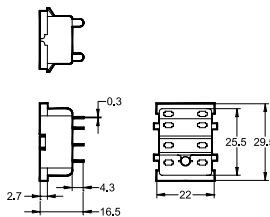
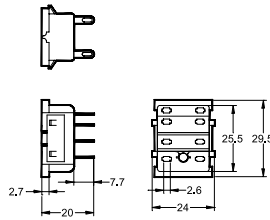
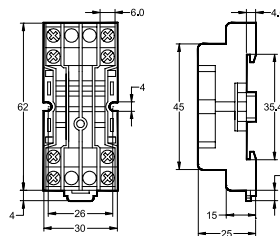
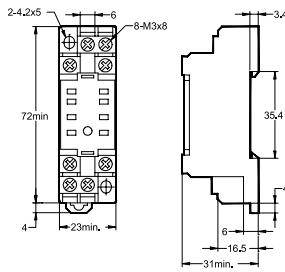
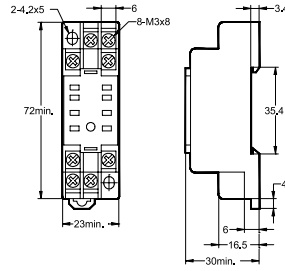


KY08



KY08-02

Dimensions



GENERAL PURPOSE RELAY

*Finger-sate version of KYF08A (IP-2X)

HR705

Sockets

3-POLE



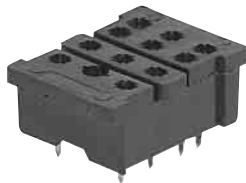
KYF11A



KYF11AE

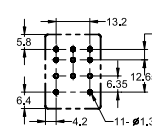
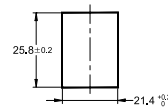
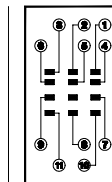
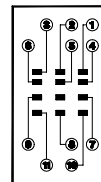
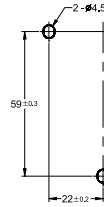
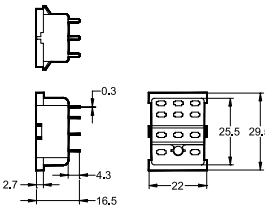
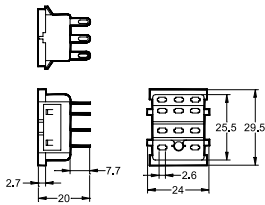
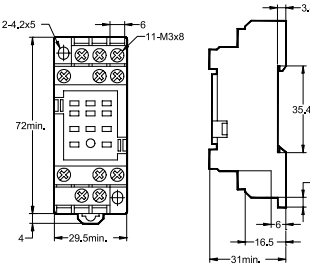
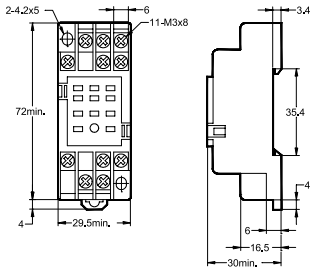


KY11



KY11-02

Dimensions



HR705

Sockets

4-POLE



KYF14A



KYF14AE



KMY4

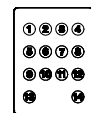
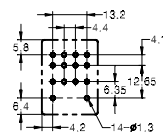
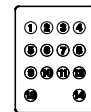
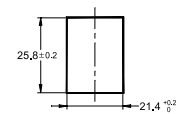
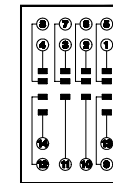
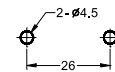
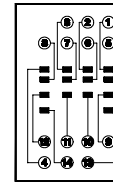
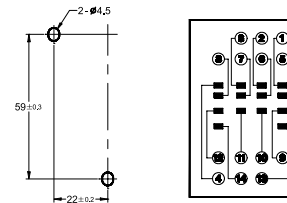
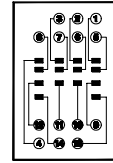
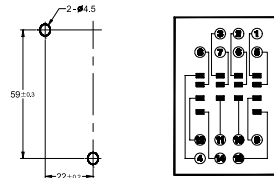
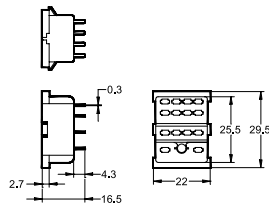
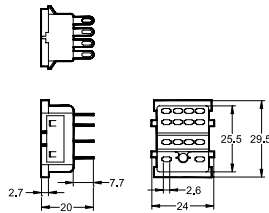
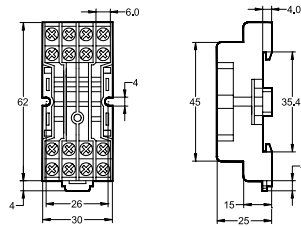
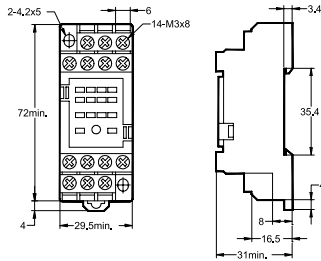
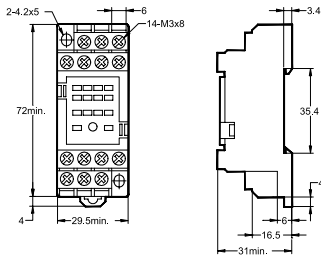


KY14



KY14-02

Dimensions (mm)



GENERAL PURPOSE RELAY