HR83

2-pole 30A power relay

Features

- 2 Form A (DPST) and 2 form C (DPDT) contact arrangement
- Clearances and creepage distances 8mm
- Conforms to UL 508 and UL 873 sparing requirements
- Class F type available
- PC Board or Flange types mounting

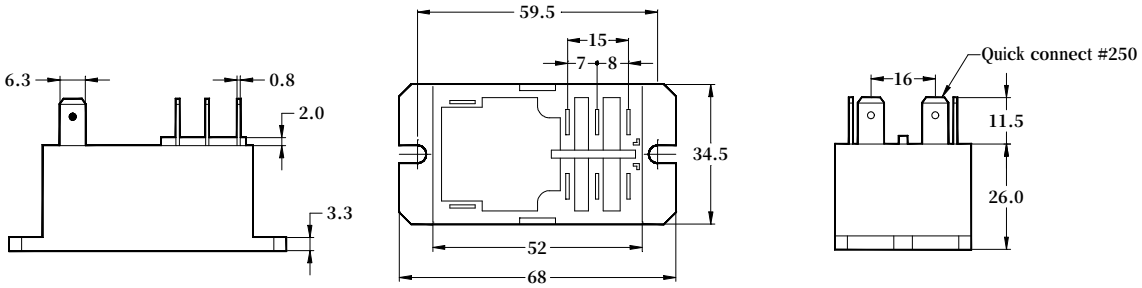
Applications

- Motor load, Heater, Generater

Dimensions (mm)

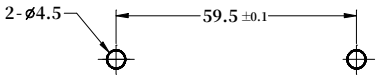
To convert into inches, multiply by 0.03937

Quick-connect type



Mounting Layout

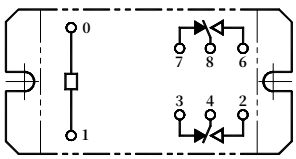
Top view



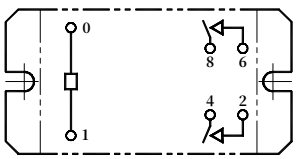
Schematic

Top view

2 Form C (DPDT)



2 Form A (DPST)

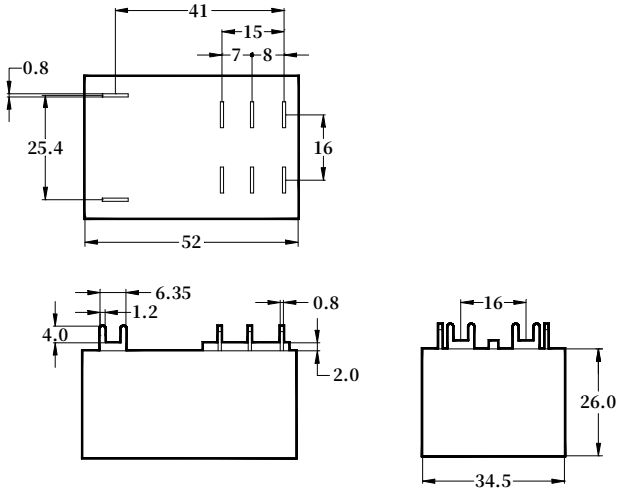


HR83

Dimensions (mm)

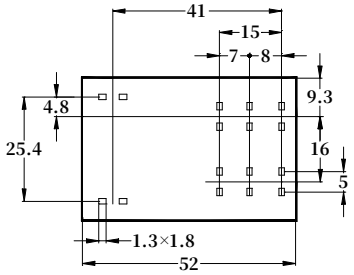
To convert into inches, multiply by 0.03937

PC Board type



PC Board Layout

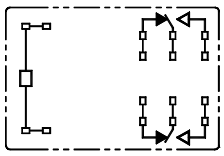
Copper-side view



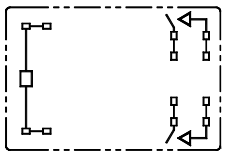
Schematic

Copper-side view

2 Form C (DPDT)



2 Form A (DPST)



Note: Use of the rectangular holes is recommended for improved solder ability

HR83

Contact data

Arrangement		2 Form A to 2 Form C
Contact material		Ag alloy
Initial contact resistance max		50mΩ
Rated load, resistive		NO: 20A 28VDC, 30A 120/277VAC 1HP 120VAC, 2.5HP 250VAC, TV-10 NC: 3A 28VDC, 3A 277VAC
Maximum carry current		30A
Maximum switching capacity	with DC voltage: with AC voltage:	840W 8,310VA
Maximum switching voltage		277VAC

Coil data

Nominal voltage		6VDC to 48VDC 24VAC to 277VAC
Nominal power consumption[1)]	DC Coil: AC Coil:	1.7W 3.4VA
Operate voltage[2)]	DC Coil: AC Coil:	75% of nominal voltage 80% of nominal voltage
Release voltage[3)]	DC Coil: AC Coil:	10% of nominal voltage 20% of nominal voltage

[1), 2), 3)]The values depend on coil voltage, see Part selection chart

General data

Operate time		15ms max. at nominal voltage
Release time		10ms max. at nominal voltage
Initial insulation resistance		1,000MΩ min. (500VDC)
Dielectric strength	Between open contacts: Between contacts and coil:	1,500V_{rms} for 1 minute 4,000V_{rms} for 1 minute
Surge resistance	Between contacts and coil:	10,000V
Expected life	Mechanical: Electrical:	More than 5,000,000 operations More than 100,000 operations at rated load
Vibration resistance	Functional: Destructive:	10～55Hz dual amplitude: 1.65mm 10～55Fz dual amplitde: 1.65mm
Shock resistance	Functional: Destructive:	10G min. 100G min.
Ambient temperature	DC coil: AC coil:	−55℃ to +85℃ (with no icing) −40℃ to +65℃ (with no icing)
Humidity		35% to 85% RH
Weight		86g approx.

Note: The above figures are initial values

HR83

Part number description

HR83 □ □ □

Contact arrangement
A: 2 Form A
C: 2 Form C

Mounting & Terminal
None: Flange (screw) / Quick-connect(#250)
P: PC Board / Pin

Coil ratings

DC006: 6VDC	AC024: 24VAC
DC012: 12VDC	AC120: 120VAC
DC024: 24VDC	AC240: 240VAC
DC048: 48VDC	AC277: 277VAC

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 contact code to the part number by selecting it from the contact arrangement in part number description

Part number	Nominal voltage (V)	Coil resistance (Ω ±10%)	Nominal current (mA)	Must operate voltage (V)	Must release voltage (V)	Max voltage (V)	Nominal power (W,VA)
AC coil							
HR83□□AC024	24	—	139	19.2	4.8	26.4	3.4 approx.
HR83□□AC120	120	—	28	96	24	132	
HR83□□AC240	240	—	13.9	192	48	264	
HR83□□AC277	277	—	12	221.6	55.4	304.7	
DC coil							
HR83□□DC006	6	22	273	4.5	0.6	6.6	1.7 approx.
HR83□□DC012	12	86	136	9	1.2	13.2	
HR83□□DC024	24	350	69	18	2.4	26.4	
HR83□□DC048	48	1,390	34.5	36	4.8	52.8	

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