HC Series — 3.5 kV Relays

HC-1
No Load Switching

HC-3
Make & Break Load Switching

Product Facts for HC-1
- Widely used for RF applications
- Vacuum dielectric for low leakage current applications
- Copper contacts for high current capability
- Not designed for power switching
- Meets requirements of MIL-R-83725
- QPL version available, M83725/5-001

Product Facts for HC-3
- Tungsten contacts for long life when power switching
- Vacuum dielectric for power switching low current loads

HC-5
Make Only Load Switching

Product Facts for HC-5
- Gas-filled for “make only” power switching
- SF-6 gas-filled for capacitive discharge applications
- Tungsten contacts for long life when power switching

Product Specifications for HC-1, HC-3 and HC-5

Contact Arrangement — SPDT
Contact Form — C
Test Voltage, DC or 60 Hz (Peak) — 5 kV
Rated Operating Voltage (Peak) —
DC or 60 Hz — 3.5 kV
2.5 MHz — 2.5 kV
16 MHz — 2 kV
32 MHz — 1.5 kV
Continuous Carry Current, Max. —
DC or 60 Hz — HC-1 — 25 A
HC-3 — 18 A
HC-5 — 8 A
2.5 MHz — HC-1 — 14 A
16 MHz — HC-1 — 9 A
32 MHz — HC-1 — 7 A
Coil Hi-Pot (Volts, 60 Hz) — 500 A
Contact Capacitance —
Between Open Contacts — HC-1 — 2 pF
Open Contacts to Ground —
HC-1 — 2.5 pF
Contact Resistance, Max. —
HC-1 — 0.01 ohm
HC-3 — 0.02 ohm
HC-5 — 0.50 ohm
Operate Time, Max. — 6 ms
Release Time, Max. — 6 ms
Shock, 11ms, 1/2 Sine (Peak) —
50 g
Vibration —
Peak — 10 g (55 to 2000 Hz)
Operating Ambient Temperature Range — -55°C to +125°C
Mechanical Life —
HC-1, HC-3 — 2 million cycles
HC-5 — 1 million cycles
Weight, Nominal —
28.35 g (1.0 oz.)

Note:
*Contact resistance for gas-filled relays is measured at 28 Vdc, 1 Amp

Coil Data

<table>
<thead>
<tr>
<th>Nominal Volts DC</th>
<th>12 Vdc</th>
<th>26.5 Vdc</th>
<th>115 Vdc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pickup, Max.</td>
<td>8 Vdc</td>
<td>16 Vdc</td>
<td>80 Vdc</td>
</tr>
<tr>
<td>Dropout</td>
<td>5-5 Vdc</td>
<td>1-10 Vdc</td>
<td>5-50 Vdc</td>
</tr>
<tr>
<td>Coil Resistance (±10%)</td>
<td>80 Ω</td>
<td>335 Ω</td>
<td>6000 Ω</td>
</tr>
</tbody>
</table>

Ratings listed are for 25°C, sea level conditions

Ordering Information

Sample Part Number
HC- 1 /12Vdc

Series:
1
3
5

Coil Voltage: Blank = 26.5 Vdc
/12Vdc = 12 Vdc
/115Vdc = 115 Vdc

For factory-direct application assistance, dial 800-253-4660, ext. 2055, or 805-220-2055.