

HE700 D.I.L. Relay Features and Benefits



Features

- Miniature dual in line package
- Choice of normally open, normally closed and change over contacts
- High voltage switching option
- Up to 2 normally open contacts
- Available with 5V, 12V or 24V coil options as standard
- Magnetic shield option
- Diode suppression option
- Diagonal coil option

Benefits

- One relay, various contacts choices reducing space and cost without compromising flexibility
- Lower power coil consumption than competing electromechanical devices.
- Hermetically sealed switching contact is immune to the effects of its environment
- Transfer moulded package gives maximum component protection

Applications

- Security
- Telecoms
- Instrumentation
- Process Control
- Industrial

DIMENSIONS (in) mm



Figure 1 HE700



Figure 2 HE751



Figure 3 HE700 (All)

Table 1

| Relay Type | Body Type | l | w | h |
|------------|-------------------------------------|------------------------------|----------------------------|----------------------------|
| HE700 | Transfer Moulded External Shield | (.750) 19,05 (.795) 20,19 | (.285) 7,24 (.300) 7,62 | (.295) 7,50 (.305) 7,75 |

HE700 PCB LAYOUT (Bottom View) ORDERING INFORMATION



PART NUMBER HE7X X X XX XX

Model Number

- HE72 - Standard
- HE75 - High Voltage

Number of Contacts

1,2

General Options

- 00 - No Options
- 10 - Coil Suppression Diode
- 20 - Electrostatic Shield
- 30 - Coil Diode and E.S. Shield
- 40 - External Magnetic Shield
- 50 - External Magnetic Shield and Diode

Contact Type

- A - Form A (SPST-NO)
- B - Form B (SPST-NC)
- C - Form C (SPDT-CO)
- E - Form C (SPDT-CO) alternate foot print 1
- R - Form C (SPDT-CO) alternate foot print 2

Standard Coil

- 05 - 5 Volt
- 12 - 12 Volt
- 24 - 24 Volt

EXAMPLE: The HE721A0540 is a I Form relay with a 5 Volt coil and external magnetic shield

Contact the Hamlin Applications Engineering Department for low profile and other option combinations available.

See next page for: **Electrical and Operating Characteristics Description and Coil Characteristics**

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Table 2 HE700 Series  **Recognised File #E47258** **Electrical and Operating Characteristics @ 25°C.**

| Column Number | | | 1 | 2 | 3 | 4 |
|--|----------------------------------|--------------------------|----------------------------------|-------------------------------|--------------------------------|-------------------------------|
| Contact Type | | | Form A SPST, DPST Standard | Form C SPDT-CO Standard | Form A SPST High Voltage | Form B SPST-NC Standard |
| Relay Types | | | HE721, HE722 | HE721C, E, R | HE751 | HE721 |
| CONTACT RATINGS | Power, Switching | Watt - max. | 10 | 5 | 10 | 10 |
| Contact Hamlin for specific load/life details | Voltage, Switching | Vdc - max. | 200 | 175 | 300 | 200 |
| | Current, Switching | A - max. | 0.5 | 0.25 | 0.5 | 0.5 |
| | Current, Carry | A - max. | 1.2 | 1.5 | 1.2 | 1.2 |
| VOLTAGE HOLD-OFF | Across Open Contacts | Vdc - min. | 250 | 200 | 450 | 250 |
| | Contacts to Coil | Vac - min. | 500 | 500 | 2500 | 500 |
| | Coil to E. Shield | Vac - min. | 150 | 150 | N/A | N/A |
| | Between Isolated Terminals | Vac - min. | 500 | N/A | N/A | N/A |
| RESISTANCE | Contact, Initial | Ω - max. | 0.150 | 0.200 | 0.150 | 0.150 |
| | Insulation: Across Open Contacts | Ω - min. | 10 ¹⁰ | 10 ⁹ | 10 ¹⁰ | 10 ¹⁰ |
| | Between Isolated Terminals | Ω - min. | 10 ¹⁰ | 10 ¹⁰ | 10 ¹⁰ | 10 ¹⁰ |
| TIMING | Operate Time | ms - max. | 1.0 | 3.0 | 1.0 | 1.0 |
| | Release Time | ms - max. | 1.0 | 3.0 | 1.0 | 1.0 |
| ENVIRONMENTAL | Temperature, Operating | °C | -40 to +85 | -40 to +85 | -20 to +85 | -40 to +85 |
| | Temperature, Storage | °C | -40 to +105 | -40 to +105 | -40 to +105 | -40 to +105 |
| | Vibration Resistance | G - max. 10-2000 Hz. | 20 | 20 | 20 | 20 |
| | Shock Resistance | G - max. 11 ms, 1/2 sine | 50 | 50 | 50 | 50 |

Table 3 HE700 Series Miniature Relay **Coil Characteristics @ 25°C.**

| Contact Form | Electrical & Operating Characteristics | Dimensions | Part Number | Nominal Coil Voltage Vdc | Coil Resistance ±10% Ohms | Must Operate Vdc | Must Release Vdc | Maximum Coil Voltage Vdc | Top View 2,54 mm, 0.1 in. Grid Dot on Case: Pin 1 Numbers not printed on case. |
|-------------------------------|--|------------|-------------|--------------------------|---------------------------|------------------|------------------|--------------------------|---|
| 1A SPST-NO | See Table 2 Column 1 | Figure 1 | HE721A0500 | 5 | 500 | 3.75 | 0.5 | 12 |  |
| | | | HE721A1200 | 12 | 1000 | 8.0 | 1.0 | 31 | |
| | | | HE721A2400 | 24 | 2150 | 16.0 | 2.0 | 46 | |
| 1B SPST-NC | See Table 2 Column 4 | Figure 1 | HE721B0500 | 5 | 500 | 3.75 | 0.5 | See Note 2, 3 6.5 |  |
| | | | HE721B1200 | 12 | 500 | 9.0 | 1.0 | 14 | |
| | | | HE721B2400 | 24 | 2150 | 18.0 | 2.0 | 28 | |
| 1C SPDT-CO | See Table 2 Column 2 | Figure 1 | HE721C0500 | 5 | 200 | 3.75 | 0.5 | 14 |  |
| | | | HE721C1200 | 12 | 500 | 8.0 | 1.0 | 22 | |
| | | | HE721C2400 | 24 | 2000 | 16.0 | 2.0 | 44 | |
| 1C SPDT-CO | See Table 2 Column 2 | Figure 1 | HE721E0500 | 5 | 200 | 3.75 | 0.5 | 14 |  |
| | | | HE721E1200 | 12 | 500 | 8.0 | 1.0 | 22 | |
| | | | HE721E2400 | 24 | 2000 | 16.0 | 2.0 | 44 | |
| 1C SPDT-CO | See Table 2 Column 2 | Figure 1 | HE721R0500 | 5 | 200 | 3.75 | 0.5 | 14 |  |
| | | | HE721R1200 | 12 | 500 | 8.0 | 1.0 | 22 | |
| | | | HE721R2400 | 24 | 2000 | 16.0 | 2.0 | 44 | |
| 2A DPST-NO | See Table 2 Column 1 | Figure 1 | HE722A0500 | 5 | 200 | 3.75 | 0.5 | 12 |  |
| | | | HE722A1200 | 12 | 500 | 8.0 | 1.0 | 22 | |
| | | | HE722A2400 | 24 | 2150 | 16.0 | 2.0 | 46 | |
| 1A SPST-NO High Voltage | See Table 2 Column 3 | Figure 2 | HE751A0500 | 5 | 500 | 3.75 | 0.5 | 12 |  |
| | | | HE751A1200 | 12 | 1000 | 8.0 | 1.0 | 31 | |
| | | | HE751A2400 | 24 | 2150 | 16.0 | 2.0 | 46 | |

- Notes:
- 1) The HE 700 Series is also available in low profile with (.225) 5.72mm height. Contact Hamlin for details.
 - 2) HE721B - Exceeding recommended voltage may cause contact closure.
 - 3) Optional external magnetic shield not available on Form B relays.

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