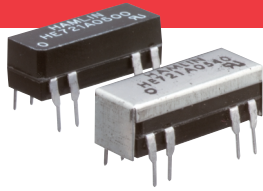


## HE700 D.I.L. Relay Features and Benefits



### 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

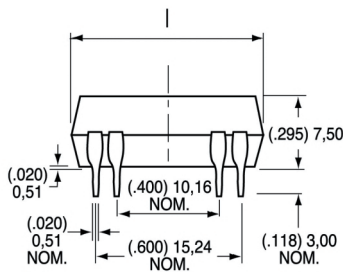


Figure 1 HE700

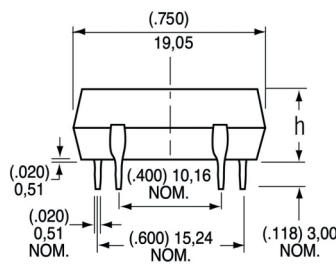


Figure 2 HE751

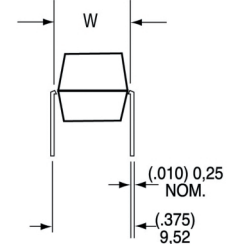
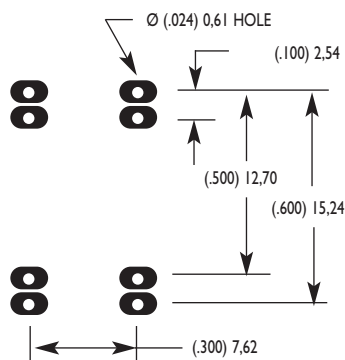


Figure 3 HE700 (All)

Table 1

| Relay Type | Body Type                          | l                            | w                          | h                          |
|------------|------------------------------------|------------------------------|----------------------------|----------------------------|
| HE700      | Transfer Molded<br>External Shield | (.750) 19,05<br>(.795) 20,19 | (.285) 7,24<br>(.300) 7,62 | (.295) 7,50<br>(.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**  **Electrical and Operating Characteristics @ 25°C.**

| Column Number   |   |  | 1   | 2  | 3   | 4   |
|---|---|--|---|--|---|---|
| Contact Type  |   |  | Form A<br>SPST, DPST<br>Standard              | Form C<br>SPDT-CO<br>Standard                | Form A<br>SPST<br>High Voltage                | Form B<br>SPST-NC<br>Standard                 |
| Relay Types   |   |  | HE721, HE722                                  | HE721C, E, R                                 | HE751   | HE721   |
| CONTACT RATINGS<br>Contact Hamlin for<br>specific load/life details | Power, Switching<br>Voltage, Switching<br>Current, Switching<br>Current, Carry              | Watt - max.<br>Vdc - max.<br>A - max.<br>A - max.            | 10<br>200<br>0.5<br>1.2                       | 5<br>175<br>0.25<br>1.5                      | 10<br>300<br>0.5<br>1.2                       | 10<br>200<br>0.5<br>1.2                       |
| VOLTAGE HOLD-OFF  | Across Open Contacts<br>Contacts to Coil<br>Coil to E. Shield<br>Between Isolated Terminals | Vdc - min.<br>Vac - min.<br>Vac - min.<br>Vac - min.         | 250<br>500<br>150<br>500                      | 200<br>500<br>150<br>N/A                     | 450<br>2500<br>N/A<br>N/A                     | 250<br>500<br>N/A<br>N/A                      |
| RESISTANCE  | Contact, Initial<br>Insulation: Across Open Contacts<br>Between Isolated Terminals          | Ω - max.<br>Ω - min.<br>Ω - min.                             | 0.150<br>10 <sup>10</sup><br>10 <sup>10</sup> | 0.200<br>10 <sup>9</sup><br>10 <sup>10</sup> | 0.150<br>10 <sup>10</sup><br>10 <sup>10</sup> | 0.150<br>10 <sup>10</sup><br>10 <sup>10</sup> |
| TIMING  | Operate Time<br>Release Time  | ms - max.<br>ms - max.                                       | 1.0<br>1.0                                    | 3.0<br>3.0                                   | 1.0<br>1.0                                    | 1.0<br>1.0                                    |
| ENVIRONMENTAL   | Temperature, Operating<br>Temperature, Storage<br>Vibration Resistance<br>Shock Resistance  | °C<br>°C<br>G - max. 10-2000 Hz.<br>G - max. 11 ms, 1/2 sine | -40 to +85<br>-40 to +105<br>20<br>50         | -40 to +85<br>-40 to +105<br>20<br>50        | -20 to +85<br>-40 to +105<br>20<br>50         | -40 to +85<br>-40 to +105<br>20<br>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<br>Dot on Case: Pin 1<br>Numbers not printed on case. |
|-------------------------------|--|------------|-------------|--------------------------|---------------------------|------------------|------------------|--------------------------|--|
| 1A<br>SPST-NO                 | See Table 2<br>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<br>SPST-NC                 | See Table 2<br>Column 4                | Figure 1   | HE721B0500  | 5                        | 500                       | 3.75             | 0.5              | See Note 2, 3<br>6.5     |  |
|                               |  |            | HE721B1200  | 12                       | 500                       | 9.0              | 1.0              | 14                       |  |
|                               |  |            | HE721B2400  | 24                       | 2150                      | 18.0             | 2.0              | 28                       |  |
| 1C<br>SPDT-CO                 | See Table 2<br>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<br>SPDT-CO                 | See Table 2<br>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<br>SPDT-CO                 | See Table 2<br>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<br>DPST-NO                 | See Table 2<br>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<br>SPST-NO<br>High Voltage | See Table 2<br>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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