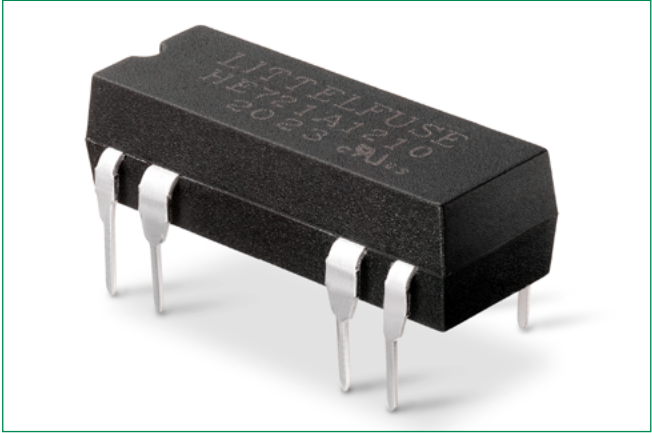


# HE700

## Miniture Dual In-line Reed Relay



### Additional Information



Resources



Accessories



Samples

### Agency Approvals

Agency	Agency File Number
	E47258

**Note:** Not all parts are UL Recognized. Contact Littelfuse for specific parts and agency approval ratings.

### Description

The HE700 is a miniature reed relay in a DIP package with a choice of normally open, normally open high voltage, normally closed or changeover contacts capable of switching up to 300Vdc at 10W. It is available with 5V, 12V, and 24V coils and diode suppression and also available with magnetic shield option.

### Features

- Miniature dual in-line package
- Optional coil suppression diode to protect coil drive circuits
- External magnetic shield option
- Diode suppression option
- RoHS Compliant
- UL Recognized to UL 508 as an Industrial Control Switch

### 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 molded package gives maximum component protection

### Applications

- Security Systems
- Telecom Equipments
- Process Control Systems
- Industrial Equipments
- Instrumentation

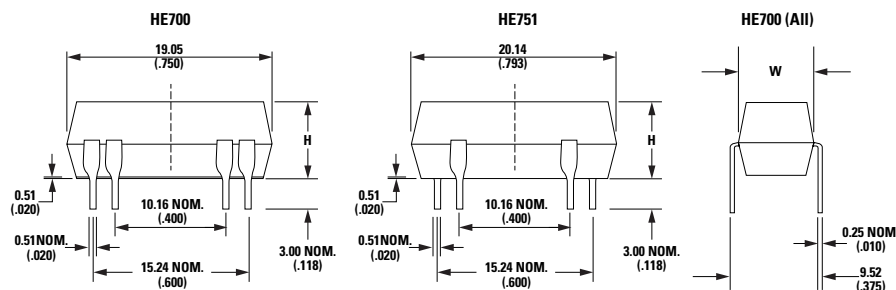
# HE700

## Miniature Dual In-line Reed Relay

### Dimensions

Dimensions in mm (inch)

Relay Type	Body Type	L	W	H
HE700	Transfer Molded	19.05 (.750)	7.22 (.284)	5.50 (.217)
	External Shield	20.14 (.793)	7.62 (.300)	5.82 (.229)

**Table 2: Electrical and Operating Characteristics @ 25°C**

Characteristics			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 Rating <sup>1</sup>	Power, Switching	Watt - max.	10	5	10	10
	Voltage, Switching <sup>2</sup>	Vdc - max.	200	175	300	200
		Vac - max.	140	120	265	140
	Current, Switching <sup>3</sup>	Adc - max.	0.5	0.25	0.5	0.5
		Aac - max.	0.35	0.18	0.35	0.35
Voltage Hold-off <sup>4</sup>	Current, Carry	Adc - max.	1.2	1.5	1.2	1.5
	Across Open Contacts	Vdc/Vac Peak - min.	250	200	450	250
	Contacts to Coil		500	500	4000	500
	Coil to E. Shield		150	150	N/A	N/A
	Between Isolated Terminals		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 <sup>10</sup>	10 <sup>10</sup>	10 <sup>10</sup>	10 <sup>10</sup>
	Insulation Between Isolated Terminals	Ω min.	10 <sup>10</sup>	10 <sup>10</sup>	10 <sup>10</sup>	10 <sup>10</sup>
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 <sup>5</sup>	°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 ½ sine	50	50	50	50

**Notes:**

1. Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/lofe information.
2. When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A & AN107 for details.
3. Electrical Load Life Expectancy - Contact Littelfuse with voltage current values along with type of load.
4. Breakdown Voltage - Per MIL-STD-202, Method 301.
5. Storage Temperature - Long time exposure at elevated temperature may degrade solderability of the leads.

### Part Numbering System

**HE7X - X - X - X - XX****Model Number**

HE72 - Standard  
HE75 - High Voltage

**Number of Contacts**

1 and 2

**Contact Type**

A - Form A (SPST-NO or DPST-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

**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

**Standard Coil**

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

**Note:** Not all combinations of Part Number suffixes are available. Contact Littelfuse for details.

# HE700

## Miniture Dual In-line Reed Relay

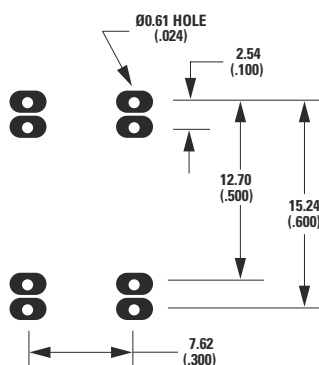
**Table 3: Coil Characteristics @ 25°C**

Contact Form	Electrical and Operating Characteristics	Dimensions	Part Number	Nominal Coil Voltage Vdc	Coil Resistance $\pm 10\%$ Ohms	Must Operate Vdc	Must Release Vdc	Maximum Coil Voltage Vdc	Top View 2.54mm (0.1") Grid Dot on Case: Pin 1 Numbers not printed on case.
1A SPST-NO	See Table 2 Column 1	Figure 1	HE721A0500 HE721A1200 HE721A2400	5 12 24	500 1000 2150	3.75 8.0 16.0	0.5 1.0 2.0	12 31 46	
1B SPST-NC	See Table 2 Column 4	Figure 1	HE721B0500 HE721B1200 HE721B2400	5 12 24	500 500 2150	3.75 9.0 18.0	0.5 1.0 2.0	6.5 <sup>1,2</sup> 14 <sup>1,2</sup> 28 <sup>1,2</sup>	
1C SPDT-CO	See Table 2 Column 2	Figure 1	HE721C0500 HE721C1200 HE721C2400	5 12 24	200 500 2000	3.75 8.0 16.0	0.5 1.0 2.0	14 22 44	
1C SPDT-CO	See Table 2 Column 2	Figure 1	HE721E0500 HE721E1200 HE721E2400	5 12 24	200 500 2000	3.75 8.0 16.0	0.5 1.0 2.0	14 22 44	
1C SPDT-CO	See Table 2 Column 2	Figure 1	HE721R0500 HE721R1200 HE721R2400	5 12 24	200 500 2000	3.75 8.0 16.0	0.5 1.0 2.0	14 22 44	
2A DPST-NO	See Table 2 Column 1	Figure 1	HE722A0500 HE722A1200 HE722A2400	5 12 24	200 500 2150	3.75 8.0 16.0	0.5 1.0 2.0	12 22 46	
1A SPST-NO High Voltage	See Table 2 Column 3	Figure 2	HE751A0500 HE751A1200 HE751A2400	5 12 24	500 1000 2150	3.75 8.0 16.0	0.5 1.0 2.0	12 31 46	

**Notes:**

- HE721B - Exceeding recommended voltage may cause contact reclosure.
- Optional external magnetic shield not available on Form B relays.

### HE700 PCB Layout (Bottom View)



### Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
Bulk	Bulk	1000/5000	N/A	N/A

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