

# HE700 Miniature Dual In-line Reed Relay



## Description

The HE700 is a miniature reed relay in a DIL 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

## 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

## Agency Approvals

Agency	Agency File Number
	E47258

Note: Contact Littelfuse for specific agency approval ratings.

## Applications

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

## Dimensions

Dimensions in mm (inch)

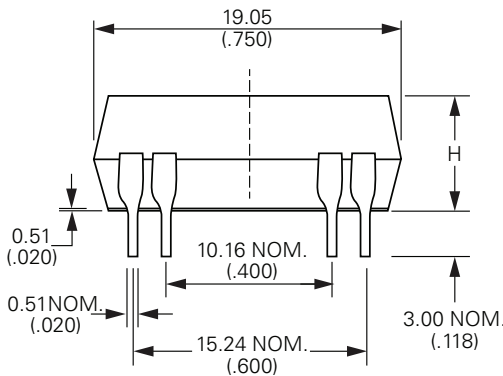


Fig. 1: HE700

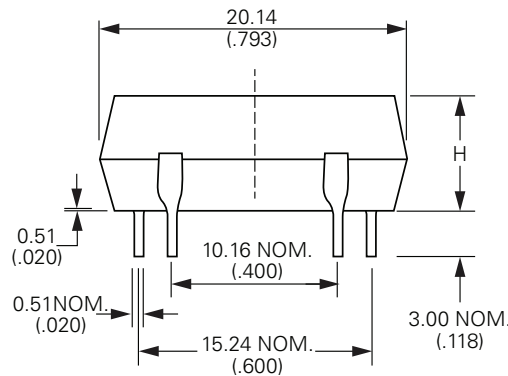


Fig. 2: HE751

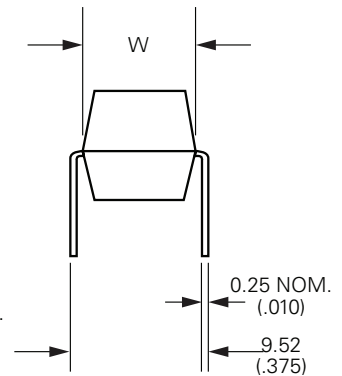


Fig. 3: HE700 (All)

Table 1: Dimension

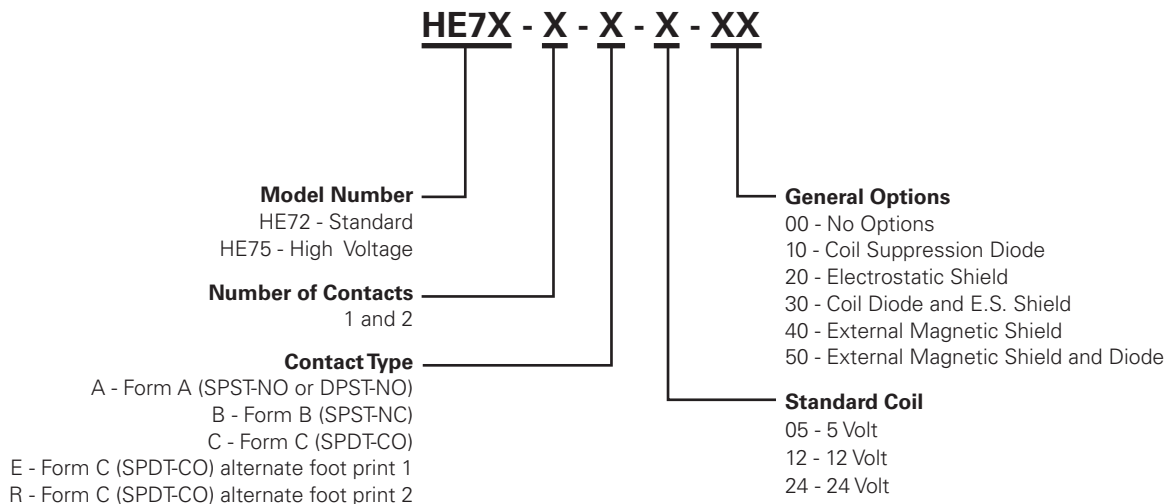
Relay Type	Body Type	L	W	H
HE700	Transfer Molded	19.05 (.750)	7.22 (.284)	5.50 (.217)
	External Shield	20.14 (.793)	7.62 (.300)	5.82 (.229)

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

Column Number			1	2	3	4
Contact Type			<b>Form A SPST, DPST Standard</b>	<b>Form C SPDT-CO Standard</b>	<b>Form A SPST High Voltage</b>	<b>Form B SPST-NC Standard</b>
Relay Types			<b>HE721, HE722</b>	<b>HE721C/E/R</b>	<b>HE751</b>	<b>HE721</b>
Contact Rating <sup>1</sup>	Power, Switching	Watt - max.	10	5	10	10
	Voltage, Switching	Vdc - max.	200	175	300	200
	Current, Switching	A - max.	0.5	0.25	0.5	0.5
Voltage Hold-off <sup>4</sup>	Current, Carry	A - max.	1.2	1.5	1.2	1.5
	Across Open Contacts	Vdc - min.	250	200	450	250
	Contacts to Coil	Vac - min.	500	500	4000	500
	Coil to E. Shield	Vac - min.	150	150	N/A	N/A
Resistance <sup>5</sup>	Between Isolated Terminals	Vac - min.	500	N/A	N/A	N/A
	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>
Timing	Insulation Between Isolated Terminals	Ω min.	10 <sup>10</sup>	10 <sup>10</sup>	10 <sup>10</sup>	10 <sup>10</sup>
	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 ½ sine	50	50	50	50

## Part Numbering System



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

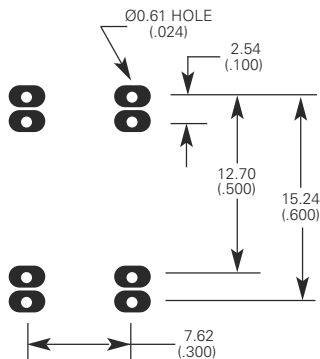
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**Table 3: Coil Characteristics @ 25°C**

Contact Form	Electrical and 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 2.54mm (0.1") Grid Dot on Case: Pin 1 Numbers not printed on case.
1A SPST-NO	See Table 2 Column 1	Figure 1	HE721A0500	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	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. HE721B - Exceeding recommended voltage may cause contact reclosure.  
2. 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