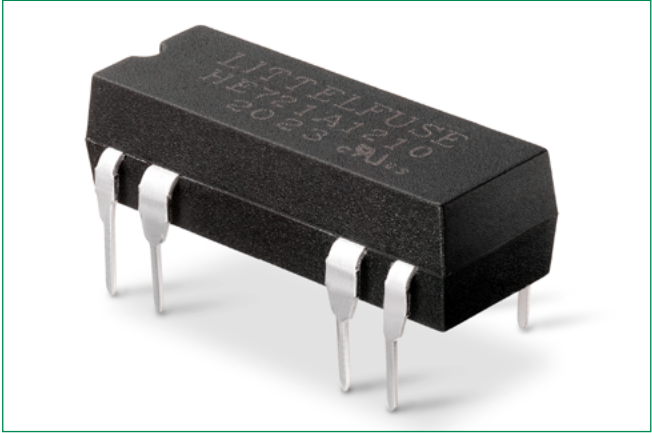


HE700

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

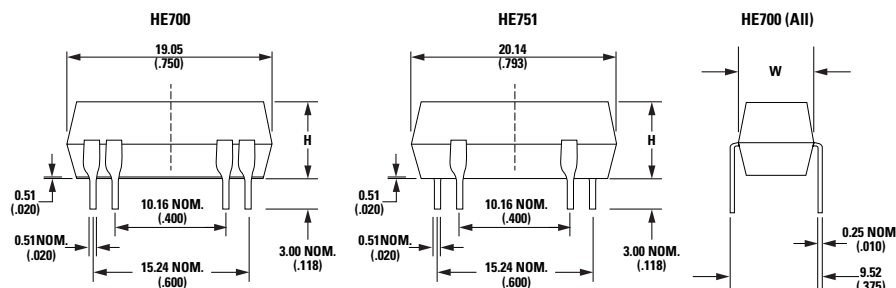
HE700

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 ¹	Power, Switching	Watt - max.	10	5	10	10
	Voltage, Switching ²	Vdc - max.	200	175	300	200
		Vac - max.	140	120	265	140
	Current, Switching ³	Adc - max.	0.5	0.25	0.5	0.5
Voltage Hold-off ⁴		Aac - max.	0.35	0.18	0.35	0.35
	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
Resistance	Coil to E. Shield		150	150	N/A	N/A
	Between Isolated Terminals		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 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 ⁵	°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

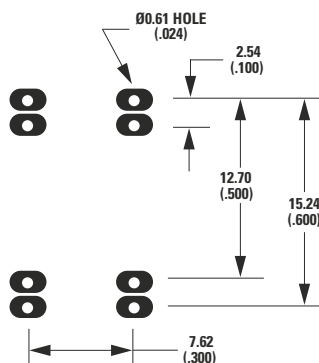
Miniture Dual In-line Reed Relay

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 ^{1,2} 14 ^{1,2} 28 ^{1,2}	
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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Mouser Electronics

Authorized Distributor

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Littelfuse:

HE721A1240	HE721R1200	HE721A0520	HE721A1230	HE721A2420	HE721A1250	HE721R1210	HE722A2440
HE722A2450	HE721C1240	HE721C0550	HE722A1220	HE721R2400	HE722A2420	HE721C0530	HE722A1240
HE721A2440	HE721C0520	HE721A2430	HE721C1220	HE722A1230	HE751A2400	HE721C1250	HE722A0530
HE721C2440	HE721A0530	HE721C0540	HE722A1250	HE751A1200	HE722A0540	HE722A2430	HE721A1220
HE721R2410	HE722A0550	HE751A0500	HE721C1230	HE722A0520	HE721A0550	HE721A2450	HE721C2430
HE721C2420	HE721R0500	HE721A0540	HE721C2450	HE751A0510	HE721A0500	HE722A1200	HE722A2400
HE721A0510	HE722A0510	HE721A2410	HE722A2410	HE751A1210	HE721C1210	HE721C0500	HE722A1210
HE722A0500	HE721C0510	HE721C1200	HE721C2410	HE721C2400	HE721A1210	HE721R0510	HE721A2400
HE751A2410	HE721A1200	HE722A0600	HE722A0610	HE721B0510	HE721E0510	HE721E2400	