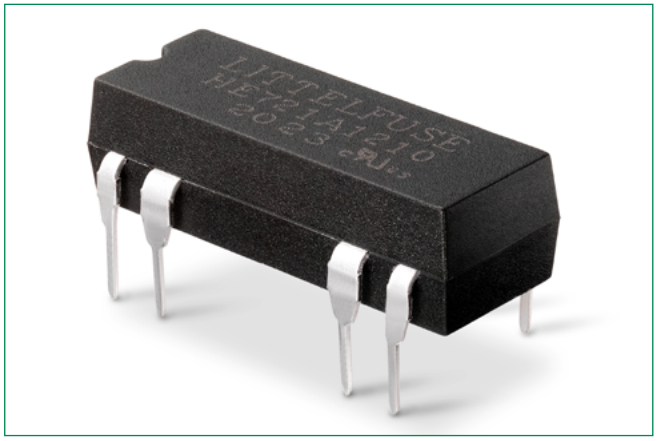
THE DATASHEET OF

HE721C2400

HE700

Miniture Dual In-line Reed Relay



Additional Information

Resources | Accessories | Samples

Agency Approvals

Agency	Agency File Number
c UL us	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 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
- 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

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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)

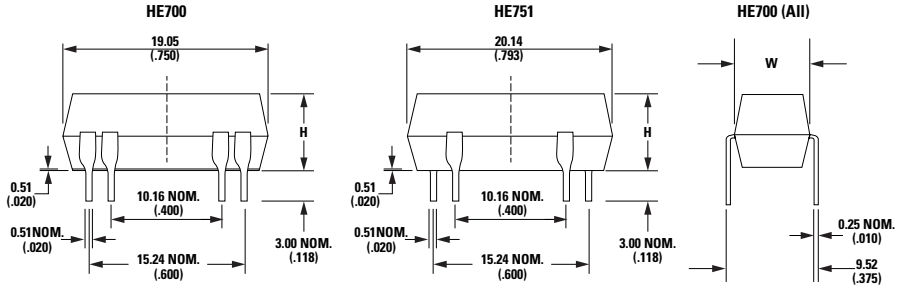

Table 2: Electrical and Operating Characteristics @ 25°C

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. Vac - max.	200 140	175 120	300 265	200 140
	Current, Switching[3]	Adc - max. Aac - max.	0.5 0.35	0.25 0.18	0.5 0.35	0.5 0.35
	Current, Carry	Adc - max.	1.2	1.5	1.2	1.5
Voltage Hold-off[4]	Across Open Contacts Contacts to Coil Coil to E. Shield Between Isolated Terminals	Vdc/Vac Peak - min.	250 500 150 500	200 500 150 N/A	450 4000 N/A N/A	250 500 N/A N/A
Resistance	Contact, Initial Insulation Across Open Contacts Insulation Between Isolated Terminals	Ω max. Ω min. Ω min.	0.150 10^{10} 10^{10}	0.200 10^{10} 10^{10}	0.150 10^{10} 10^{10}	0.150 10^{10} 10^{10}
Timing	Operate Time Release Time	ms - max. ms - max.	1.0 1.0	3.0 3.0	1.0 1.0	1.0 1.0
Environmental	Temperature, Operating Temperature, Storage[5] Vibration Resistance Shock Resistance	°C °C G - max. 10-2000 Hz. G - max. 11 ms ½ sine	-40 to +85 -40 to +105 20 50	-40 to +85 -40 to +105 20 50	-20 to +85 -40 to +105 20 50	-40 to +85 -40 to +105 20 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

Standard Coil
05 - 5 Volt
12 - 12 Volt
24 - 24 Volt

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

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

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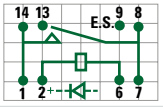
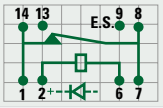
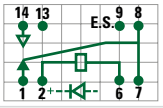
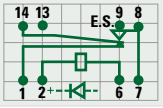
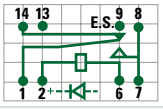
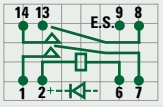
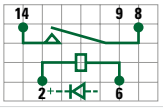
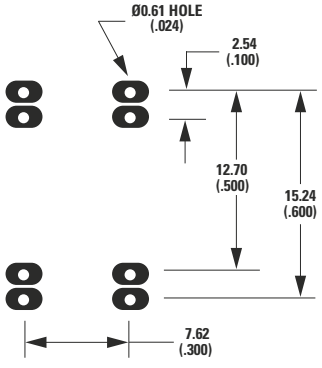
Table 3: Coil Characteristics @ 25°C

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 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:
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

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