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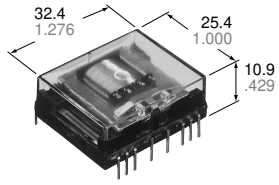
NAiS

6PDT FLATPACK 2AMP DIL RELAY

NL-RELAYS



NLE Amber Relays

mm inch

FEATURES

- **Space saving dimensions — 25.4 mm × 32.4 mm × 10.9 mm**
  1.000 inch× 1.276 inch× 0.429 inch
- **Latching types available**
- **Low operating power — 400 mW (single side stable)**
  Transistor compatible
- **High breakdown voltage for transient protection — 1,000 Vrms between open contacts, contact sets, and 1,500 V FCC surge between open contacts**
- **Soldering flux inflow completely prevented**

SPECIFICATIONS

Contacts

Arrangement**[1]			6 Form C
Contact material			gold-clad silver**[2]
Initial contact resistance, max. (By voltage drop 6 V DC 1 A)			100 mΩ
Rating (resistive)	Nominal switching capacity		2 A 30 V DC
	Max. switching power		60 VA, 60 W
	Max. switching voltage		125 V AC, 30 V DC
	Max. switching current		2 A
Expected life (min. operations)	Mechanical		5×10^7
	Electrical (resistive)	2 A 30 V DC	5×10^5
		0.6 A 100 V DC	10^6

**[1] MBB contact types also available: 2 MBB, 4 MBB & 6 MBB
**[2] Gold capped silver-palladium contact also available

Coil (polarized) (at 25°C 77°F)

Minimum operating power	Approx. 460 mW
Nominal operating power	up to 60 V DC: Approx. 720 mW 110 V DC: Approx. 900 mW
Minimum set and reset power	Approx. 1,000 mW
Nominal set and reset power	Approx. 1,600 mW

Remarks

* Specifications will vary with foreign standards certification ratings.
*[1] Measurement at same location as "Initial breakdown voltage" section
*[2] Detection current: 10 mA
*[3] Excluding contact bounce time
*[4] Half-wave pulse of sine wave: 11ms; detection time: 10μs
*[5] Half-wave pulse of sine wave: 6ms
*[6] Detection time: 10μs
*[7] Refer to 5. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT (Page 61).

Characteristics

Maximum operating speed			50 cps
Initial insulation resistance*[1]			Min. 100 MΩ at 500 V DC
Breakdown voltage*[2]	Between open contacts, contact sets		1,000 Vrms
	Between contacts and coil		2,000 Vrms
Operate time*[3] (at nominal voltage)			Max. 15 ms (Approx. 10 ms)
Release time (without diode)*[3] (at nominal voltage)			Max. 10 ms (Approx. 5 ms)
Temperature rise			Max. 65°C with nominal coil voltage and at switching current 2 A
Shock resistance	Functional*[4]		Min. 147 m/s² {15 G}
	Destructive*[5]		Min. 980 m/s² {100 G}
Vibration resistance	Functional*[6]		58.8 m/s² {6 G}, 10 to 55 Hz at double amplitude of 1 mm
	Destructive		117.6 m/ s² {12 G}, 10 to 55 Hz at double amplitude of 2 mm
Conditions for operation, transport and storage*[7] (Not freezing and condensing at low temperature)	Ambient temp.		–40°C to +55°C –40°F to +131°F
	Humidity		5 to 85% R.H.
Unit weight			Approx. 17 g.60 oz

TYPICAL APPLICATIONS

Telecommunications, security equipment, detection systems.

ORDERING INFORMATION

Ex. NL | 6 | EB | X | 6M | L2 | DC48V | 1

Contact arrangement	Classification of type	MBB function	Operating function	Coil voltage	Contact material
6: 6 Form C	EB: Amber sealed type	Nil: 6 Form C	Nil: Single side stable L2: 2 coil latching	DC: 5, 6, 12, 24, 48, 60, 110 V	Nil: Gold-clad silver 1: Gold-cap over silver palladium

(Notes) 1. For UL/CSA or VDE recognized types, add suffix UL/CSA or VDE.
2. Standard packing Carton: 20 pcs. Case: 200 pcs.

TYPES AND COIL DATA (at 20°C 68°F)

Single side stable

Part No.	Coil voltage, V DC			Coil resistance, Ω (±10%)	Nominal operating power, mW
	Pick-up (max.)	Drop-out (min.)	Maximum allowable		
NL6EBX-DC5V	4.0	0.5	6.0	34.7	720
NL6EBX-DC6V	4.8	0.6	7.2	50	
NL6EBX-DC12V	9.6	1.2	14.4	200	
NL6EBX-DC24V	19.2	2.4	28.8	800	
NL6EBX-DC48V	38.4	4.8	57.6	3,200	
NL6EBX-DC60V	48	6.0	72	5,000	
NL6EBX-DC110V	88	11.0	132	13,467	898

2 coil latching

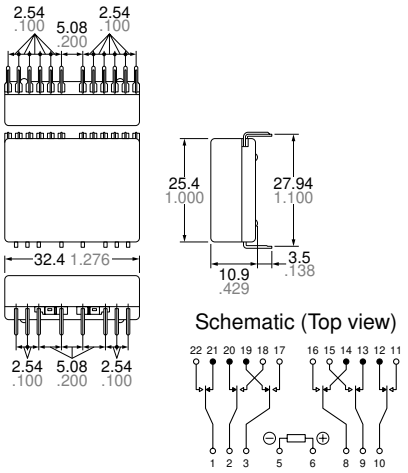
Part No.	Coil voltage,* V DC			Coil resistance, Ω (±10%)	Nominal operating power, mW
	Set (max.)	Reset (max.)	Maximum allowable		
NL6EBX-L2-DC5V	4.0	4.0	5.5	15.6	1,600**
NL6EBX-L2-DC6V	4.8	4.8	6.6	22.5	
NL6EBX-L2-DC12V	9.6	9.6	13.2	90	
NL6EBX-L2-DC24V	19.2	19.2	26.4	360	
NL6EBX-L2-DC48V	38.4	38.4	52.8	1,440	
NL6EBX-L2-DC60V	48	48	66	2,250	
NL6EBX-L2-DC110V	88	88	121	7,563	

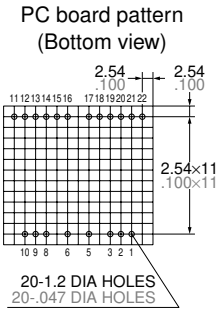
* See NOTE 2
** Two coil latching series are for intermittent operation only.
Power should be applied to coil continuously for no more than two minutes.

DIMENSIONS

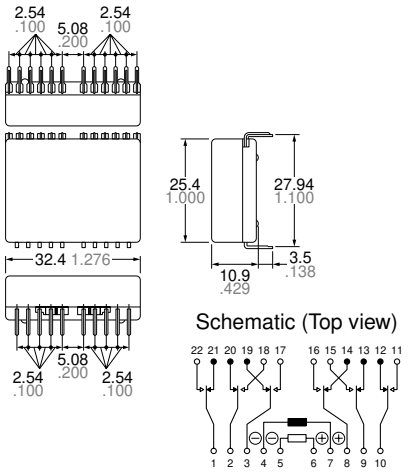
mm inch

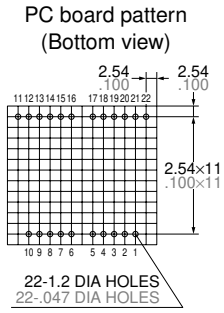
Single side stable





2 coil latching

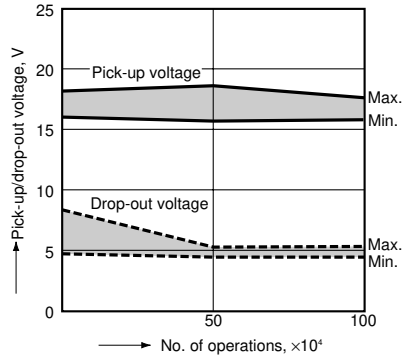


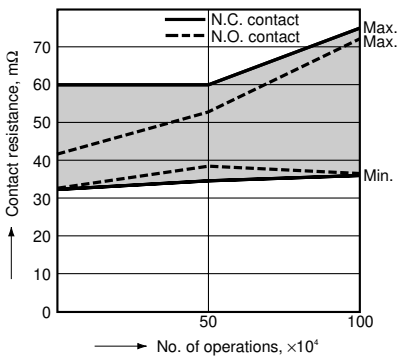


General tolerance: ±0.3 ±.012

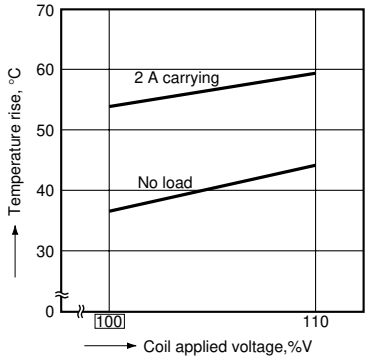
REFERENCE DATA

1. Electrical life (2 A 30 V DC resistive load)





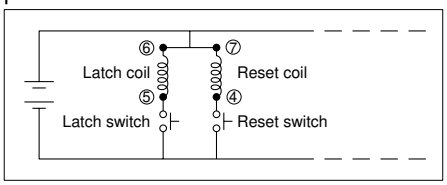
2. Coil temperature rise



NOTES

On two coil latching relays

1. To maintain insulation between coils, terminals 6 and 7 should be connected to provide common return.



2. Two coil latching relays are for intermittent operation only. Power should be applied to coils for no more than two minutes; continuous operation may burn out the coils.

3. Position of MBB contacts
2M (2 Form D 4 Form C):
1-21-22, 10-11-12
4M (4 Form D 2 Form C):
1-21-22, 2-20-18, 9-13-15, 10-11-12

For Cautions for Use, see Relay Technical Information