

4 Form C Flat type



2 Form C Flat type





4 Form C Slim type (PC board)

2 Form C Slim type (PC board)

RoHS Directive compatibility information http://www.mew.co.jp/ac/e/environment/

FLAT/VERTICAL TYPE HIGH POWER BIFURCATED CONTACT

FEATURES

1. Compact, slim design

mounting on PC boards.

high contact reliability.

Material Control Law.

standards

2. High reliability

Use of high-performance flat electromagnetic design achieves

package. Slim type, with width of

10.9 mm .429 inch profile, flat type thin

11.2 mm .441 inch, enables high-density

Provides stable contact pressure needed

for card lift-off contact driver method. The

use of Ac clad twin contacts provides

stable contact resistance and ensures

3. 2-coil latching types available

Japanese Electrical Appliance and

4. Compatible with all major safety

UL and CSA certified, and complies with

NC RELAYS

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TYPICAL APPLICATIONS

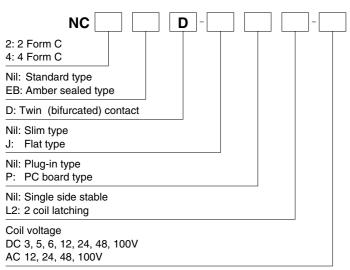
1. Information processing and telecom equipment such as computers and terminal devices.

2. Gas hot air heating equipment and air conditioners.

3. Timer, temperature controller and other equipment that requires form factor reduction.

4. Transmission and measuring devices such as facsimile machines and electronic counting devices.
5. Control panels for industrial equipment such as machine tools, factory automation devices, and NC machines.





Notes: 1. UL/CSA approved type is standard.

2. Amber sealed types are sealed and filled with inert gas (nitrogen gas).

Sealed construction with terminals, case and base sealed shut with sealing resin.

TYPES <Standard type>

1. Flat type (PC board terminal)

	Naminal asily salar as	Single side stable	2 coil latching
contact arrangement	Nominal coil voltage	Part No.	Part No.
	12V AC	NC2D-JP-AC12V	_
	24V AC	NC2D-JP-AC24V	_
	48V AC	NC2D-JP-AC48V	_
	100V AC	NC2D-JP-AC100V	_
	3V DC	NC2D-JP-DC3V	NC2D-JPL2-DC3V
2 Form C	5V DC	NC2D-JP-DC5V	NC2D-JPL2-DC5V
	6V DC	NC2D-JP-DC6V	NC2D-JPL2-DC6V
	12V DC	NC2D-JP-DC12V	NC2D-JPL2-DC12V
	24V DC	NC2D-JP-DC24V	NC2D-JPL2-DC24V
	48V DC	NC2D-JP-DC48V	NC2D-JPL2-DC48V
	100V DC	NC2D-JP-DC100V	NC2D-JPL2-DC100V
	12V AC	NC4D-JP-AC12V	_
	24V AC	NC4D-JP-AC24V	_
	48V AC	NC4D-JP-AC48V	_
	100V AC	NC4D-JP-AC100V	_
	3V DC	NC4D-JP-DC3V	NC4D-JPL2-DC3V
4 Form C	5V DC	NC4D-JP-DC5V	NC4D-JPL2-DC5V
	6V DC	NC4D-JP-DC6V	NC4D-JPL2-DC6V
	12V DC	NC4D-JP-DC12V	NC4D-JPL2-DC12V
	24V DC	NC4D-JP-DC24V	NC4D-JPL2-DC24V
	48V DC	NC4D-JP-DC48V	NC4D-JPL2-DC48V
	100V DC	NC4D-JP-DC100V	NC4D-JPL2-DC100V

Standard packing: Carton: 20 pcs.; Case: 200 pcs.

2. Slim type 1) Plug-in type

Contact arrangement	Neminal acity altage	Single side stable	2 coil latching
Contact arrangement	Nominal coil voltage	Part No.	Part No.
	12V AC	NC2D-AC12V	_
	24V AC	NC2D-AC24V	_
	48V AC	NC2D-AC48V	_
	100V AC	NC2D-AC100V	_
	3V DC	NC2D-DC3V	NC2D-L2-DC3V
2 Form C	5V DC	NC2D-DC5V	NC2D-L2-DC5V
	6V DC	NC2D-DC6V	NC2D-L2-DC6V
	12V DC	NC2D-DC12V	NC2D-L2-DC12V
	24V DC	NC2D-DC24V	NC2D-L2-DC24V
	48V DC	NC2D-DC48V	NC2D-L2-DC48V
	100V DC	NC2D-DC100V	NC2D-L2-DC100V
	12V AC	NC4D-AC12V	_
	24V AC	NC4D-AC24V	_
	48V AC	NC4D-AC48V	_
	100V AC	NC4D-AC100V	_
	3V DC	NC4D-DC3V	NC4D-L2-DC3V
4 Form C	5V DC	NC4D-DC5V	NC4D-L2-DC5V
	6V DC	NC4D-DC6V	NC4D-L2-DC6V
	12V DC	NC4D-DC12V	NC4D-L2-DC12V
	24V DC	NC4D-DC24V	NC4D-L2-DC24V
	48V DC	NC4D-DC48V	NC4D-L2-DC48V
	100V DC	NC4D-DC100V	NC4D-L2-DC100V

Standard packing: Carton: 20 pcs.; Case: 200 pcs.

0	Newsia et a cit conta a c	Single side stable	2 coil latching
Contact arrangement	Nominal coil voltage	Part No.	Part No.
	12V AC	NC2D-P-AC12V	_
	24V AC	NC2D-P-AC24V	_
	48V AC	NC2D-P-AC48V	_
	100V AC	NC2D-P-AC100V	_
	3V DC	NC2D-P-DC3V	NC2D-PL2-DC3V
2 Form C	5V DC	NC2D-P-DC5V	NC2D-PL2-DC5V
	6V DC	NC2D-P-DC6V	NC2D-PL2-DC6V
	12V DC	NC2D-P-DC12V	NC2D-PL2-DC12V
	24V DC	NC2D-P-DC24V	NC2D-PL2-DC24V
	48V DC	NC2D-P-DC48V	NC2D-PL2-DC48V
	100V DC	NC2D-P-DC100V	NC2D-PL2-DC100V
	12V AC	NC4D-P-AC12V	-
	24V AC	NC4D-P-AC24V	_
	48V AC	NC4D-P-AC48V	_
	100V AC	NC4D-P-AC100V	-
	3V DC	NC4D-P-DC3V	NC4D-PL2-DC3V
4 Form C	5V DC	NC4D-P-DC5V	NC4D-PL2-DC5V
	6V DC	NC4D-P-DC6V	NC4D-PL2-DC6V
	12V DC	NC4D-P-DC12V	NC4D-PL2-DC12V
	24V DC	NC4D-P-DC24V	NC4D-PL2-DC24V
	48V DC	NC4D-P-DC48V	NC4D-PL2-DC48V
	100V DC	NC4D-P-DC100V	NC4D-PL2-DC100V

Standard packing: Carton: 20 pcs.; Case: 200 pcs.

<Amber type> 1. Flat type (PC board terminal)

0		Single side stable	2 coil latching
Contact arrangement	Nominal coil voltage	Part No.	Part No.
	3V DC	NC2EBD-JP-DC3V	NC2EBD-JPL2-DC3V
	5V DC	NC2EBD-JP-DC5V	NC2EBD-JPL2-DC5V
	6V DC	NC2EBD-JP-DC6V	NC2EBD-JPL2-DC6V
2 Form C	12V DC	NC2EBD-JP-DC12V	NC2EBD-JPL2-DC12V
	24V DC	NC2EBD-JP-DC24V	NC2EBD-JPL2-DC24V
	48V DC	NC2EBD-JP-DC48V	NC2EBD-JPL2-DC48V
	100V DC	NC2EBD-JP-DC100V	NC2EBD-JPL2-DC100V
	3V DC	NC4EBD-JP-DC3V	NC4EBD-JPL2-DC3V
	5V DC	NC4EBD-JP-DC5V	NC4EBD-JPL2-DC5V
	6V DC	NC4EBD-JP-DC6V	NC4EBD-JPL2-DC6V
4 Form C	12V DC	NC4EBD-JP-DC12V	NC4EBD-JPL2-DC12V
-	24V DC	NC4EBD-JP-DC24V	NC4EBD-JPL2-DC24V
	48V DC	NC4EBD-JP-DC48V	NC4EBD-JPL2-DC48V
	100V DC	NC4EBD-JP-DC100V	NC4EBD-JPL2-DC100V

Standard packing: Carton: 20 pcs.; Case: 200 pcs.

2. Slim type

1) Plug-in type

O		Single side stable	2 coil latching
Contact arrangement	Nominal coil voltage	Part No.	Part No.
	3V DC	NC2EBD-DC3V	NC2EBD-L2-DC3V
	5V DC	NC2EBD-DC5V	NC2EBD-L2-DC5V
	6V DC	NC2EBD-DC6V	NC2EBD-L2-DC6V
2 Form C	12V DC	NC2EBD-DC12V	NC2EBD-L2-DC12V
	24V DC	NC2EBD-DC24V	NC2EBD-L2-DC24V
	48V DC	NC2EBD-DC48V	NC2EBD-L2-DC48V
	100V DC	NC2EBD-DC100V	NC2EBD-L2-DC100V
	3V DC	NC4EBD-DC3V	NC4EBD-L2-DC3V
	5V DC	NC4EBD-DC5V	NC4EBD-L2-DC5V
	6V DC	NC4EBD-DC6V	NC4EBD-L2-DC6V
4 Form C	12V DC	NC4EBD-DC12V	NC4EBD-L2-DC12V
	24V DC	NC4EBD-DC24V	NC4EBD-L2-DC24V
-	48V DC	NC4EBD-DC48V	NC4EBD-L2-DC48V
	100V DC	NC4EBD-DC100V	NC4EBD-L2-DC100V

Standard packing: Carton: 20 pcs.; Case: 200 pcs.

2) PC board type

	Mansing Lagil calls as	Single side stable	2 coil latching
Contact arrangement	Nominal coil voltage	Part No.	Part No.
	3V DC	NC2EBD-P-DC3V	NC2EBD-PL2-DC3V
	5V DC	NC2EBD-P-DC5V	NC2EBD-PL2-DC5V
	6V DC	NC2EBD-P-DC6V	NC2EBD-PL2-DC6V
2 Form C	12V DC	NC2EBD-P-DC12V	NC2EBD-PL2-DC12V
	24V DC	NC2EBD-P-DC24V	NC2EBD-PL2-DC24V
	48V DC	NC2EBD-P-DC48V	NC2EBD-PL2-DC48V
	100V DC	NC2EBD-P-DC100V	NC2EBD-PL2-DC100V
	3V DC	NC4EBD-P-DC3V	NC4EBD-PL2-DC3V
	5V DC	NC4EBD-P-DC5V	NC4EBD-PL2-DC5V
	6V DC	NC4EBD-P-DC6V	NC4EBD-PL2-DC6V
4 Form C	12V DC	NC4EBD-P-DC12V	NC4EBD-PL2-DC12V
-	24V DC	NC4EBD-P-DC24V	NC4EBD-PL2-DC24V
	48V DC	NC4EBD-P-DC48V	NC4EBD-PL2-DC48V
	100V DC	NC4EBD-P-DC100V	NC4EBD-PL2-DC100V

Standard packing: Carton: 20 pcs.; Case: 200 pcs.

RATING

1. Coil data

1) Single side stable type (AC)

No. of	No. of poles Nominal coil voltage (at 20°C 68°F)		Drop-out voltage	Nominal operating	Coil ind	uctance	Nominal operating	Max. allowable	
			(at 20°C 68°F)	current [±10%] (at 20°C 68°F)	N.C. condition	N.O. condition	power	voltage (at 50°C 122°F)	
	12V AC			41.5mA	—	—	0.50VA		
2 Form C	24V AC	80%V or less of nominal voltage	10%V or more of nominal voltage	22.5mA	—	—	0.54VA	110%V of	
2 FOIIII C	48V AC	(Initial)	(Initial)	14.0mA	—	—	0.67VA	nominal voltage	
	100V AC	(,		10.5mA	—	—	1.05VA		
	12V AC			92mA	—	—	1.10VA		
4 Form C	24V AC	80%V or less of nominal voltage	10%V or more of nominal voltage	45mA	—	—	1.08VA	110%V of	
4 Form C	48V AC	(Initial)	(Initial)	22.5mA	—	—	1.08VA	nominal voltage	
	100V AC			13.0mA	—	—	1.30VA		

2) Single side stable (DC)

No. of	Nominal	Diele un veltere	Dran out valtage	Nominal operating	Coil resistance	Nominal an exeting	Coil ind	uctance	Max. allowable
No. of poles	coil voltage	Pick-up voltage (at 20°C 68°F)	Drop-out voltage (at 20°C 68°F)	current [±10%] [±10%] (at 20°C 68°F) (at 20°C 68°F)		Nominal operating power	N.C. condition	N.O. condition	voltage (at 50°C 122°F)*
	3V DC			120mA	25Ω	360mW	24.2mH	30.0mH	
	5V DC			72mA	69.4Ω	360mW	69.5mH	86.0mH	
	6V DC	00001	10001	60mA	100Ω	360mW	99.4mH	123mH	135%V of
2 Form C	12V DC	80%V or less of nominal voltage	10%V or more of nominal voltage	30mA	400Ω	360mW	388mH	480mH	nominal voltage
2101110	24V DC	(Initial)	(Initial)	15mA	1,600Ω	360mW	1,590mH	1,970mH	
	48V DC			7.5mA	6,400Ω	360mW	6,270mH	7,680mH	
	100V DC			7.4mA	13,500Ω	740mW	9,470mH	11,700mH	110%V of nominal voltage
	3V DC			240mA	12.5Ω	720mW	12.8mH	15.8mH	
	5V DC			144mA	34.7Ω	720mW	34.3mH	42.4mH	
	6V DC	80%V or less of	10%V or more of	120mA	50Ω	720mW	50.7mH	62.7mH	1100/11 5
4 Form C	12V DC	nominal voltage	nominal voltage	60mA	200Ω	720mW	203mH	252mH	110%V of nominal voltage
	24V DC	(Initial)	(Initial)	30mA	800Ω	720mW	812mH	1,000mH	nominal voltage
	48V DC			15mA	3,200Ω	720mW	2,820mH	3,480mH	
	100V DC			7.4mA	13,500Ω	740mW	14,100mH	17,400mH	

* At 20°C 68°F (Amber type)

3) 2 coil latching type

				Nominal	operating	0.1					Coil ind	uctance		Max.		
of poles		Set voltage	voltage voltage at 20°C (at 20°C	et current ge [+10%] (at 20°C 68°F		Coil resistance [±10%] (at 20°C 68°F)		Nominal operating power		Set coil		Reset coil		allowable		
No. o	voltage	(at 20°C 68°F)		Set coil	Reset coil	Set coil	Reset coil	Set coil	Reset coil	N.C. condition	N.O. condition	N.C. condition	N.O. condition	(at 50°C 122°F)		
	3V DC			265.5mA	265.5mA	11.3Ω	11.3Ω	800mW	800mW	10.8mH	12.4mH	3.85mH	4.01mH			
	5V DC	80%V or	80%V or	159.7mA	159.7mA	31.3Ω	31.3Ω	800mW	800mW	29.1mH	38.4mH	11.0mH	11.5mH			
ပ	6V DC	less of	less of	133.3mA	133.3mA	45.0Ω	45.0Ω	800mW	800mW	42.9mH	49.3mH	17.4mH	18.1mH	110%V of		
orm	12V DC	nominal	nominal	66.7mA	66.7mA	180Ω	180Ω	800mW	800mW	173mH	198mH	62.1mH	64.8mH	nominal		
Ц М	24V DC	voltage			voltage	33.3mA	33.3mA	720Ω	720Ω	800mW	800mW	688mH	790mH	278mH	290mH	voltage
	48V DC	(Initial)	(Initial)	16.7mA	16.7mA	2,880Ω	2,880Ω	800mW	800mW	2,370mH	2,730mH	1,230mH	1,280mH			
	100V DC			8.0mA	8.0mA	12,500Ω	12,500Ω	800mW	800mW	10,800mH	12,400mH	5,740mH	5,980mH			
	3V DC					535.7mA	535.7mA	5.6Ω	5.6Ω	1,600mW	1,600mW	5.25mH	6.03mH	1.42mH	1.48mH	
	5V DC	80%V or	80%V or	320.5mA	320.5mA	15.6Ω	15.6Ω	1,600mW	1,600mW	13.5mH	15.5mH	3.76mH	3.92mH	110%V of		
ပ	6V DC	less of	less of	266.7mA	266.7mA	22.5Ω	22.5Ω	1,600mW	1,600mW	20.5mH	23.5mH	4.67mH	4.87mH	nominal		
orm	12V DC	C nominal nominal C voltage voltage (Initial) (Initial)	133.3mA	133.3mA	90Ω	90Ω	1,600mW	1,600mW	87.6mH	101mH	16.3mH	17.0mH	voltage			
4 T	24V DC			66.7mA	66.7mA	360Ω	360Ω	1,600mW	1,600mW	328mH	376mH	74.9mH	78.1mH	(Within		
	48V DC		(mitial)	33.3mA	33.3mA	1,440Ω	1,440Ω	1,600mW	1,600mW	1,350mH	1,550mH	289mH	302mH	2 min.)		
	100V DC			16.0mA	16.0mA	6,250Ω	6,250Ω	1,600mW	1,600mW	5,990mH	6,880mH	1,340mH	1,400mH			

Notes: 1. Two coil latching relay 4 Form C series are for intermittent operation only. Power should be applied to coil continuously for no more than two minutes. 2. Coil resistance is the measured value at a coil temperature of 20°C 68°F. Compensate coil resistance by ±0.4% for each degree (°C °F) of coil temperature change. 3. "Maximum allowable voltage" is that value at maximum contact rating and maximum ambient temperature.

The graph shown in the data describes the inter-relationship; care should be taken to prevent the total of ambient temperature and the coil temperature rise from exceeding 120°C 248°F.

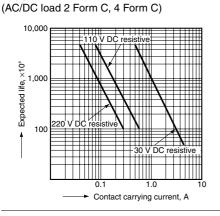
2. Specifications

					· ·	cations			
Characteristics		Item		C	AC		C	AC	
			Single side stable	2 Coil latching	Single side stable	Single side stable	2 Coil latching	Single side stable	
	Arrangement		2 Form C			4 Form C			
Contact	Initial contac	t resistance, max.	Max. 50 m Ω (By vo	ltage drop 6 V DC 1	A)	Max. 50 mΩ (By vo	oltage drop 6 V DC	1A)	
	Contact mat	erial	Au-clad AgNi type			Au-clad AgNi type			
	Nominal swi (resistive loa	tching capacity Id)	Standard: 5A 250V Amber: 3A 250V A			Standard: 4A 250V Amber: 2A 250V A			
	Max. switchi (resistive loa		Standard: 1,250VA Amber: 750VA, 150			Standard: 1,000VA Amber: 500VA, 150			
	Max. switchi	ng voltage	250 V AC						
Rating	Max. switchi	ng current	Standard: 5A Amber: 3A (AC), 5/	A (DC)		Standard: 4A Amber: 2A (AC), 5/	A (DC)		
	Nominal ope	erating power	360mW (740mW: 100V DC)	800mW	0.50VA to 1.05VA	720mW*2	1,600mW	1.08VA to 1.30VA	
	Min. switchin (Reference v		100µA 1V DC			100µA 1VDC			
	Insulation re	sistance (Initial)	Measurement at sa	Min. 100MΩ (at 500V DC) Measurement at same location as "Initial breakdown voltage" section.			Min. 100MΩ (at 500V DC) Measurement at same location as "Initial breakdown voltage" section.		
		Between open contacts	1,000 Vrms for 1mi	n. (Detection curren	t: 10mA.)	1,000 Vrms for 1min. (Detection current: 10mA.)			
Electrical	Breakdown voltage (Initial)	Between contact sets	1,000 Vrms for 1mi	n. (Detection curren	t: 10mA.)	1,000 Vrms for 1min. (Detection current: 10mA.)			
characteristics	(IIIIiiai)	Between contact and coil	2,000 Vrms for 1mi	n. (Detection curren	t: 10mA.)	2,000 Vrms for 1min. (Detection current: 10mA.)			
	Temperature	rise	Max. 65°C [Max. 8	5°C (100V AC)] (By	resistive method, nor	ninal voltage)			
	Operate time	e (at 20°C 68°F)	Max. 20ms	Set time: Max. 20ms	Max. 30ms*3	Max. 20ms	Set time: Max. 20ms	Max. 30ms*3	
	Release time	e (at 20°C 68°F)	Max. 10ms	Reset time: Max. 20ms	Max. 40ms*3	Max. 10ms	Reset time: Max. 20ms	Max. 40ms*3	
	Shock	Functional	Min. 98 m/s2 (Half-	wave pulse of sine w	ave: 11 ms; detectio	n time: 10µs.)			
Mechanical	resistance	Destructive	Min. 980 m/s2 (Half	-wave pulse of sine	wave: 6 ms.)				
characteristics	Vibration	Functional	10 to 55 Hz at doul	ble amplitude of 1 m	m (Detection time: 1	Dμs.)			
	resistance	Destructive	10 to 55 Hz at doul	ble amplitude of 2 m	m				
	Mechanical		Min. 5×107	Min. 5×107	Min. 107	Min. 5×107	Min. 5×107	Min. 107	
Expected life	Electrical (resistive load)		Standard: Min. 10 ⁵ (5A 250V AC), Min. 5×10 ⁵ (5A 30V DC) Amber: Min. 10 ⁵ (3A 250V AC), Min. 5×10 ⁵ (5A 30V DC)			Standard: Min. 10 ⁵ (4A 250V AC), Min. 5×10 ⁵ (5A 30V DC Amber: Min. 10 ⁵ (2A 250V AC), Min. 5×10 ⁵ (5A 30V DC)			
Conditions	Conditions for transport and (Not freezing at low tempe	d storage*4 g and condensing	-40°C to +70°C -40°F to +158°F (Max.48V DC), -40°C to +55°C -40°F to +131°F (100V DC)	-40°C to +55°C -40°F to +131°F	-40°C to +60°C -40°F to +140°F*5	-40°C to +55°C -4	0°F to +131°F	-40°C to +40°C -40°F to +104°F	
	Max. Operat	ing speed	50 cps		•	50 cps			
Unit weight			16 g .56 oz			18 g .63 oz			

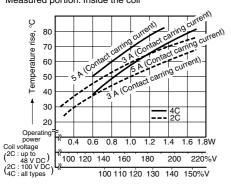
Notes: *1 This value can change due to the switching frequency, environmental conditions, and desired reliability level, therefore it is recommended to check this with the *2. 100V DC: 740mW
*3. For the AC type, the operate and release time differs depending on the phase of the input and cutoff times.
*4. Refer to 6. Conditions for operation, transport and storage mentioned in AMBIENT ENVIRONMENT.
*5. 100V DC: -40°C to +40°C -40°F to +104°F

REFERENCE DATA (Standard type) 1.-(2) Life curve (AC/DC load 2 Form C)

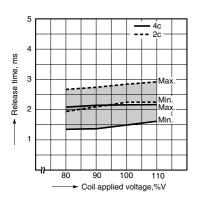
1.-(1) Life curve



2.-(1) Temperature rise characteristics (single side stable) Measured portion: Inside the coil

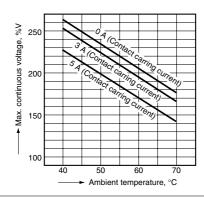


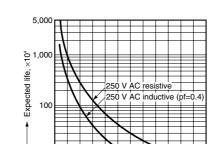
4. Release time (single side stable)



6.-(1) Ambient temperature vs Max. continuous voltage

Tested sample: NC2D-P-DC24 V (2 Form C slim single side stable)





Contact carrying current, A

2.-(2) Temperature rise characteristics (2 coil latching) Measured portion: Inside the coil

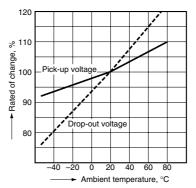
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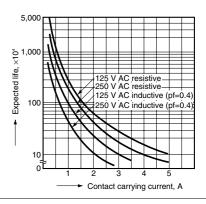
5 A (Max. contact carring current) 70 Ö 60 (No ng curre Temperature rise, 50 A (Max 40 30 A (No contact carring current 20 40 20 10 С 5 15 20 25 Energizing time, min.

5.-(1) Rate of change of pick-up and drop-out voltage

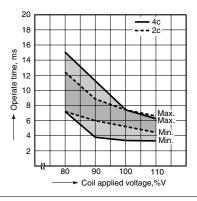
(2 Form C single side stable)





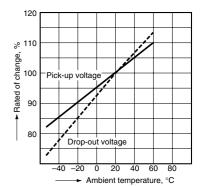


3. Operate time (single side stable)



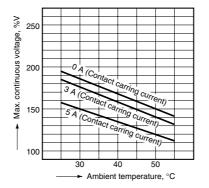
5.-(2) Rate of change of pick-up and drop-out voltage

(4 Form C single side stable)



6.-(2) Ambient temperature vs Max. continuous voltage

Tested sample: NC2D-P-DC110 V (2 Form C slim single side stable), NC4D-P-DC24 V (4 Form C slim single side stable)



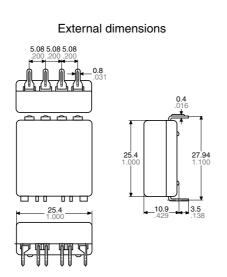
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DIMENSIONS (Unit: mm inch)

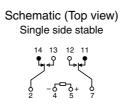
<Standard type>

Flat type 2 Form C





Note: Single side stable types do not have terminals 3 and 6.



(Deenergized position)

2 coil latching



(Reset position)

Schematic (Top view)

Single side stable

16 15 14 13 12 11 10 9

(Deenergized position)

2 coil latching

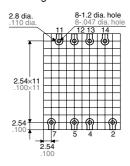
(Reset position)

15

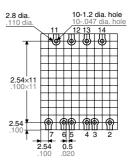
14 13 12 11 10

ç

PC board pattern (Bottom view) Single side stable

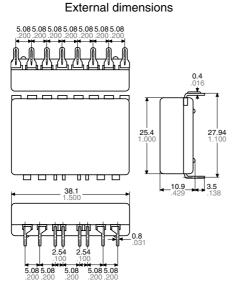


2 coil latching



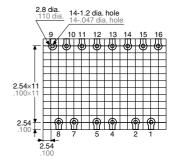
Flat type 4 Form C



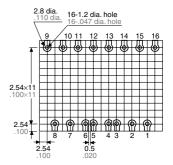


Note: Single side stable types do not have terminals 3 and 6.

PC board pattern (Bottom view) Single side stable



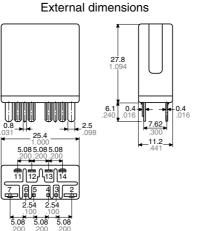
2 coil latching

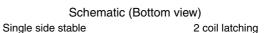


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Slim type Plug-in type 2 Form C





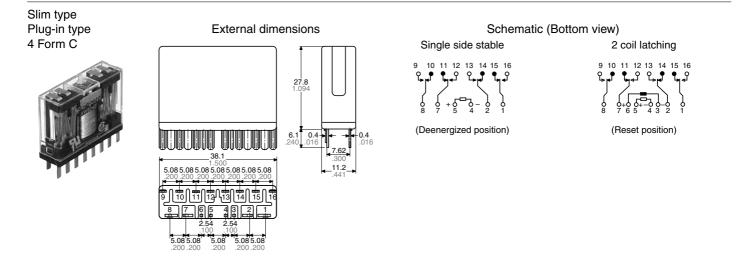




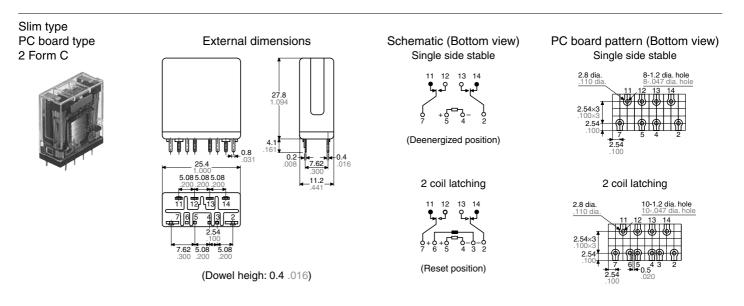
(Deenergized position)



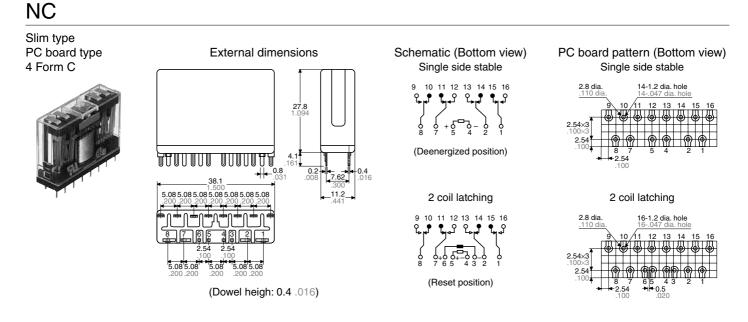
Note: Single side stable types do not have terminals 3 and 6.



Note: Single side stable types do not have terminals 3 and 6.



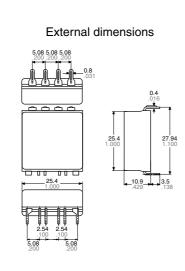
Note: Single side stable types do not have terminals 3 and 6.



Note: Single side stable types do not have terminals 3 and 6.

<**Amber sealed type**> Flat type 2 Form C

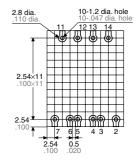




Schematic (Top view) P 14 13 12 11 2 - 34 - 56 - 7Single side stable: Deenergized position 2 coil latching: Reset position

Note: Single side stable types do not have terminals 3 and 6.

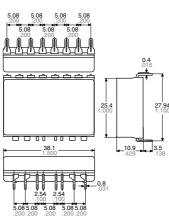
PC board pattern (Bottom view)



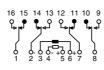
Flat type 4 Form C



External dimensions

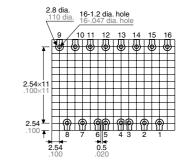


Schematic (Top view)

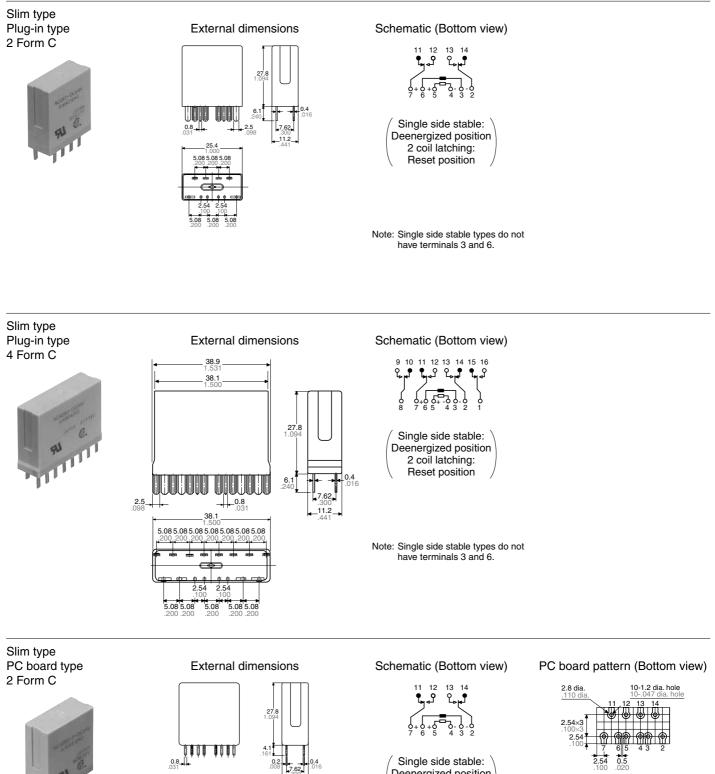


Single side stable: Deenergized position 2 coil latching: Reset position

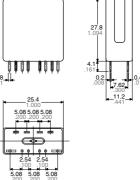
PC board pattern (Bottom view)



Note: Single side stable types do not have terminals 3 and 6.

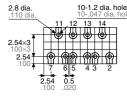






Deenergized position 2 coil latching: Reset position

Note: Single side stable types do not have terminals 3 and 6.



Slim type PC board type External dimensions Schematic (Bottom view) PC board pattern (Bottom view) 4 Form C 2.8 dia 16-1.2 dia. hole 38.9 12 13 38.1 2.54×3 27.8 Single side stable: Deenergized position 2 coil latching: Reset position 0.8 38. 5.08 5.08 5.08 5.08 5.08 5.08 5.08 5.08 Note: Single side stable types do not have terminals 3 and 6. φ 2.54 5.08 5.08 5.08 5.08 5.08

NOTES

1. Because the NC relay is polarized, the positive "+" and negative "-" connections to the coil should be done as indicated on the wiring diagram. If connected incorrectly, it may malfunction or fail to operate.

2. As a 2 coil latching type, under the stipulations of the Japanese Electrical Appliance and Material Control Law, because the terminals of NC relay coils have an insulation distance of more than 1.5 mm, NC relays can be used in power supply operating circuits of up to 100 V. When used in contact circuits, 200 V is the maximum voltage.

3. To maintain insulation between coils of 2 coil latching series, terminals (5) and (6) for flat series, and terminals (3) and (4) for vertical series should be connected to provide common return.

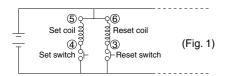
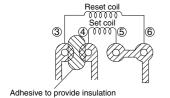


Figure 1 shows wiring that complies with Japanese Electrical Appliance and Material Control Law stipulations for power supply circuits. At the copper traces on PC boards, between terminals ③ and ④, as shown in Figure 2, apply epoxy resin (to thickness of more than 3 mm) or similarly adhesive to provide insulation.



4. 2 coil latching series 4 Form C are for intermittent operation only. Power should be applied to coils continuously for no more than two minutes.

See page 30 for general cautions to be observed regarding latching relays. 5. While NC relays can be used with any transmission-wave current to their operation, due to slight weakening of the force of magnetic attraction, decreased resistance to vibration and shock should be taken into account.

6. The current that energizes the coil in an NC relay is AC type. Because the AC sine waveform is distorted, when testing, it is essential to use a measuring device that can properly characterize the distorted waveform.

The operating power of the coil in the 100 V AC 4 Form C type is relatively higher than other NC types of AC relay and consequently, the total current applied through all the contacts should be kept below 10 A.

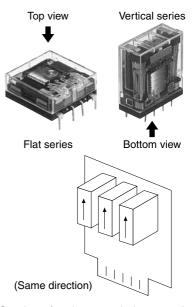
7. The AC type NC relay has a special magnetic design. As a result, once the aside contacts have switched, the b-side contacts may once again go into a temporary ON state depending on the coil inrush phase. To ensure that this phenomenon does not occur, it is necessary to carry out sufficient practical testing with relays installed in actual devices.

8. When designing top and bottom view schematic diagrams, note that:

12 13 14 \$ ₿

1) "Top view" wiring diagram is indicated for the flat series because terminals can be seen from above.

2) "Bottom view" schematic diagram is indicated for the vertical series because terminals cannot be seen from above.



9. Cautions for close proximity mounting When using slim series in close proximity, mount all relays facing the same direction. Different mounting directions may cause change in the relay characteristics because NC relays are polarized.

For Cautions for Use, see Relay Technical Information.

(Fig. 2)

Panasonic ideas for life



NC2 Flat type socket









NC2 Slim type socket

NC4 Slim type socket



NC2 DIN terminal socket

RoHS Directive compatibility information http://www.mew.co.jp/ac/e/environment/

TYPES

	Product name	Terminals	Part No.
	NC2-flat type PC board socket	P/C board	NC2-JPS
Eletture essivet	NC2-flat, 2 coil latching type PC board socket	P/C board	NC2-JPL2S
Flat type socket	NC4-flat type PC board socket	P/C board	NC4-JPS
	NC4-flat, 2 coil latching type PC board socket	P/C board	NC4-JPL2S
Slim type terminal socket	NC2-DIN terminal socket	DIN rail	NC2-SFD
	NC2-slim type socket	Solder	NC2-SS
	NC2-slim, 2 coil latching type socket	Solder	NC2-LS2
	NC2-slim type PC board socket	P/C board	NC2-PS
	NC2-slim, 2 coil latching type PC board socket	P/C board	NC2-L2P
	NC2-slim type wrapping socket	Lead wire	NC2-WS
Olim tuna apalvat	NC2-slim, 2 coil latching type wrapping socket	Lead wire	NC2-LSWS
Slim type socket	NC4-slim type socket	Solder	NC4-SS
	NC4-slim, 2 coil latching type socket	Solder	NC4-LS2
	NC4-slim type PC board socket	P/C board	NC4-PS
	NC4-slim, 2 coil latching type PC board socket	P/C board	NC4-L2P
	NC4-slim type wrapping socket	Lead wire	NC4-WS
	NC4-slim, 2 coil latching type wrapping socket	Lead wire	NC4-LSWS

SPECIFICATIONS (common)

Item	Specifications
Max. continuous current	Slim type: 5A 250V AC, Flat type: 5A 250V AC
Initial breakdown voltage	2,000 V AC (Except for coil to coil of L2 type: 1,500 V AC)
Initial insulation resistance	Min. 100MΩ (at 500V DC megger)
Heat resistance	150°C 302°F for 1 hour

Note: Do not insert or remove relays while in the energized condition.

ACCESSORIES

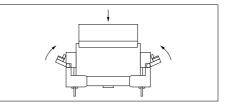
NC RELAYS (sockets and terminal sockets)

FEATURES 1) The vertical (slim) type with solder

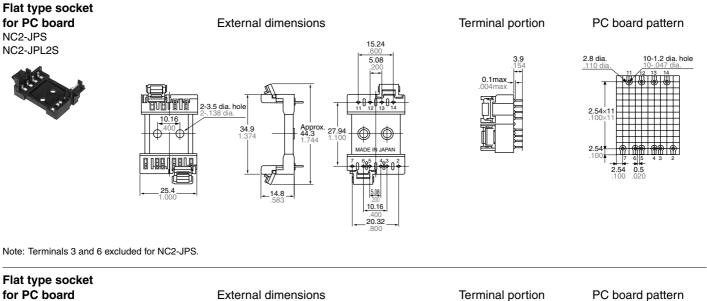
terminals has a retainer, which enables snap-in fixing on chassis, panels, and similar locations. Because the sockets for both solder terminals and PC boards firmly fix the relay at the time of insertion, once snapped in, spring clips are unnecessary.

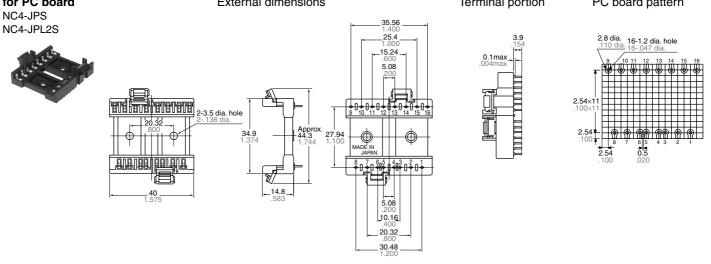
Socket

2) For the flat type, pull up the hinged clasps in the direction of the arrows shown in the drawing after inserting the relay. Spring clips are unnecessary.

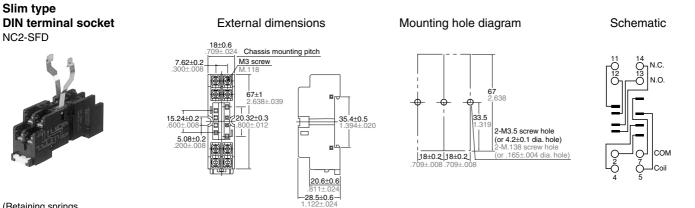


DIMENSIONS (Unit: mm inch)





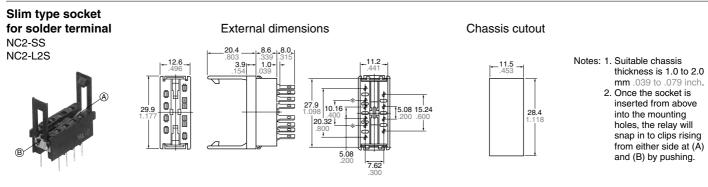
Note: Terminals 3 and 6 excluded for NC4-JPS.



(Retaining springs are included with the DIN terminal socket.)

NC2-SFD

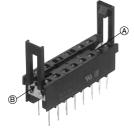
*To prevent damage or distortion, when tightening fixing screws, the optimum torque range should be 0.49 to 0.69 N·m, (5 to 7 kgf·cm).

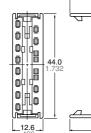


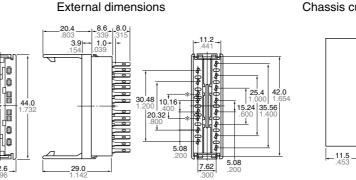
Note: NC2-SS is as shown in the diagram above except that terminals marked with " * " are not present.

Slim type socket for solder terminal

NC4-SS NC4-L2S



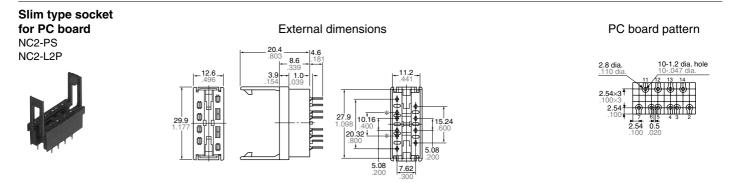




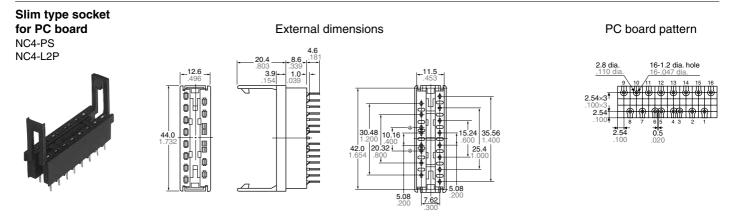
Chassis cutout

- 42.5
- Notes: 1. Suitable chassis thickness is 1.0 to 2.0 mm .039 to .079 inch. 2. Once the socket is inserted from above into the mounting holes, the relay will snap in to clips rising from either side at (A) and (B) by pushing.

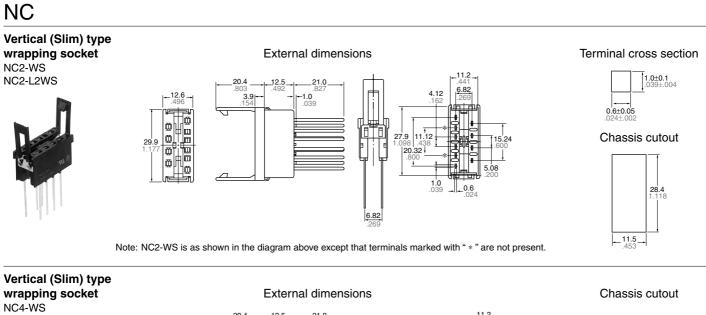
Note: NC4-SS is as shown in the diagram above except that terminals marked with " * " are not present.

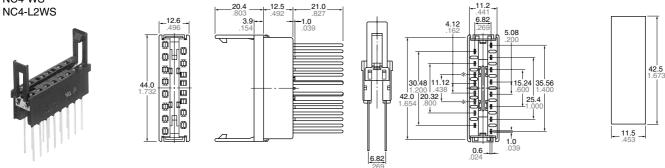


Note: NC2-PS is as shown in the diagram at left except that terminals marked with " * " are not present.



Note: NC4-PS is as shown in the diagram at left except that terminals marked with " * " are not present.





Note: NC4-WS is as shown in the diagram above except that terminals marked with " * " are not present.

NOTES

 Soldering should be done quickly to avoid damaging the thermoplastic body.
 For solder terminal types, connect terminals as shown in the diagram at right to maintain insulation distance.

