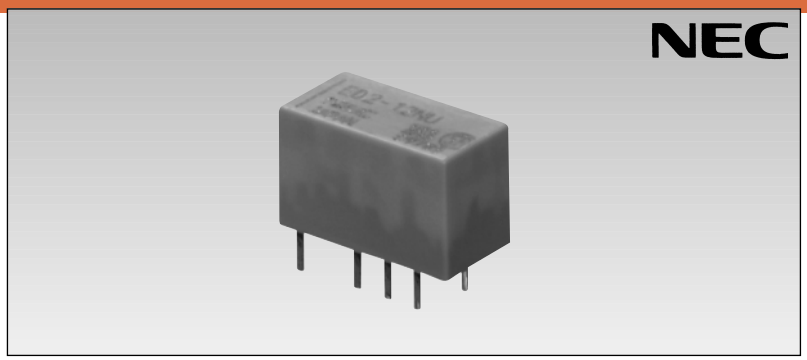
IMO New Generation DPDT Signal Relay

ED2

- Compact and Light Weight
- 2 Form C Contact Arrangement
- Low Power Consumption (50mW)
- Reduced Mounting Space: 15mm x 7.5mm
- High-breakdown Voltage of Coil to Contacts: 1500 VAC, 2500 V (2 x 10 µs*)
- UL Recognised, CSA Certified
- Tube Packaging



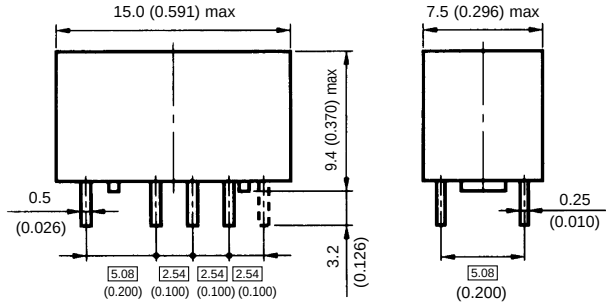
Specifications

Contact form		2 Form C
Contact material		Silver alloy with gold alloy overlay
Contact rating	**Maximum switching power**	30W 62.5 VA (resistive)
	Maximum switching voltage	220VDC 250 VAC
	Maximum switching current	1A
	Maximum carrying current	1A
Minimum contact ratings		100 mVDC, 100 µA
Initial contact resistance		50 mΩ typ.
Nominal operating power	**Nonlatch type**	50 to 70 mW
	Single coil latch type	30 to 60 mW
	Double coil latch type	50 to 80 mW
Operate time (excluding bounce)		Approximately 3 mS without diode
Release time (excluding bounce)		Approximately 2 mS without diode
Insulation resistance		1000 MΩ at 500 VDC
Breakdown voltage	**Between open contacts**	1000 VAC for one minute (1500 V surge, 10 x 16µs*1)
	Between adjacent contacts	1000 V surge for one minute (1500 V surge, 10 x 160µs*1)
	Between coil to contacts	1500 VAC (for one minute) 2500V surge (2 x 10 µs*2)
Shock resistance		735 m/s² (75G) (misoperating) 980 m/s² (100G) (destructive failure)
Vibration resistance		10-55Hz, double amplitude 3 mm (20G) (misoperating) 10-55Hz, double amplitude 5 mm (30G) (destructive failure)
Ambient temperature		-40˚C to+ 70˚C
Coil temperature rise		7 degrees at nominal coil voltage (50 mW)
Running specifications	**Nonload**	1 x 10^7 operations
	Load	50 VDC, 0.1A (resistive) 1 x 10^6 operations at 85˚C 10 VDC, 10 mA (resistive) 1 x 10^6 operations at 85˚C
Weight		Approximately 2.2 g

*1 rise time: 10 µs, fall time: 160 µs *2 rise time: 2 µs, fall time: 10 µs

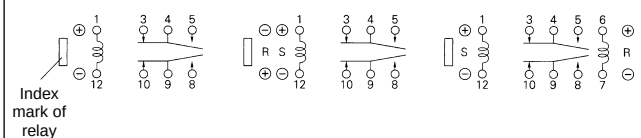
Dimensions mm(inch)

ED2 Series



Note: General tolerance: ±0.2 (±0.008)
Dimensions in ☐ show basic size.
NJ type: Leads-2.8mm (0.110)

Schematics



S: Coil polarity of set (operate)
R: Coil polarity of reset (release)

Part Number System

ED2-9 S NU

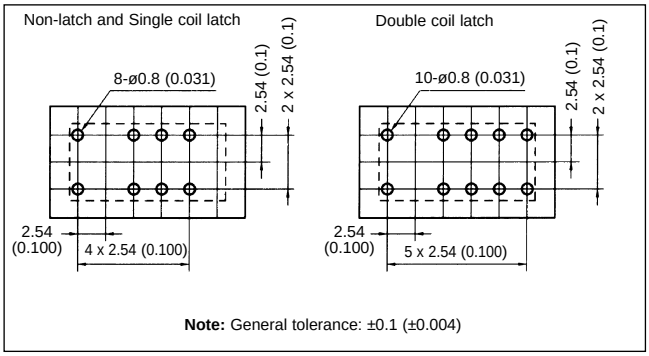
- Nil : Standard type
- NU : UL recognised CSA certified type
- NJ : Trimmed leads (UL recognised, CSA certified type)

Latch type
- Nil : Non latch type
- S : Single coil latch type
- T : Double coil latch type

Nominal coil voltage
1.5, 3, 4.5, 5, 6, 9, 12, 24 volts

ED2 series

Pad layout (bottom view) mm(inch)



Note: General tolerance: ±0.1 (±0.004)

Part numbers

Nonlatch type

at 20˚C

Part Number	Nominal Coil Voltage VDC	Coil Resistance Ω ±10%	Must Operate Voltage VDC	Must Release Voltage VDC	Nominal operate power (mW)
ED2-1.5NU	1.5	45	1.20	0.15	50
ED2-3NU	3	180	2.40	0.3	50
ED2-4.5NU	4.5	405	3.60	0.45	50
ED2-5NU	5	500	4.00	0.5	50
ED2-6NU	6	720	4.80	0.6	50
ED2-9NU	9	1473	7.20	0.9	55
ED2-12NU	12	2400	9.60	1.2	60
ED2-24NU	24	8229	19.20	2.4	70

Single coil latch type

at 20˚C

Part Number	Nominal Coil Voltage VDC	Coil Resistance Ω ±10%	Must Operate Voltage VDC	Must Release Voltage VDC	Nominal operate power (mW)
ED2-1.5SNU	1.5	75	1.20	0.13	30
ED2-3SNU	3	300	2.40	2.25	30
ED2-4.5SNU	4.5	675	3.60	3.38	30
ED2-5SNU	5	833	4.00	3.75	30
ED2-6SNU	6	1200	4.80	4.5	30
ED2-9SNU	9	2700	7.20	6.75	30
ED2-12SNU	12	4800	9.60	9	30
ED2-24SNU	24	9600	19.20	18	60

Double coil latch type

at 20˚C

Part Number	Nominal Coil Voltage VDC	Coil Resistance Ω ±10%		Must Operate Voltage VDC	Must Release Voltage VDC	Nominal operate power (mW)
ED2-1.5TNU	1.5	S	45	1.20	–	50
		R	45	–	1.3	
ED2-3TNU	3	S	180	2.40	–	50
		R	180	–	2.25	
ED2-4.5TNU	4.5	S	405	3.60	–	50
		R	405	–	3.38	
ED2-5TNU	5	S	500	4.00	–	50
		R	500	–	3.75	
ED2-6TNU	6	S	720	4.80	–	50
		R	720	–	4.5	
ED2-9TNU	9	S	1620	7.20	–	50
		R	1620	–	6.75	
ED2-12TNU	12	S	2880	9.60	–	50
		R	2880	–	9	
ED2-24TNU	24	S	7200	19.20	–	80
		R	7200	–	18	

Note S: Set Coil (pin No. 1 and 12) R: Reset Coil (pin No. 6 and 7)