

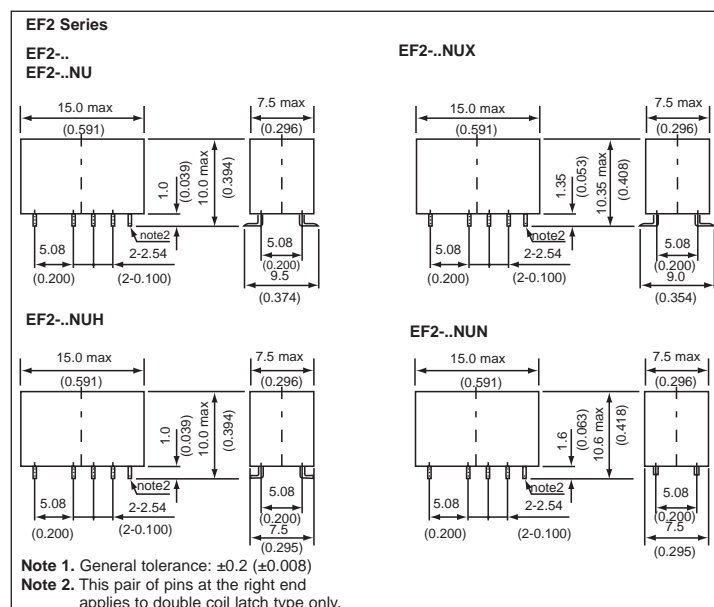
- Compact and Light Weight
- 2 Form C Contact Arrangement
- Low Power Consumption (50mW)
- Reduced Mounting Space: 15mm x 7.5mm
- High-breakdown Voltage of Coil to Contacts: 1500 Vac, 2500 V (2 x 10  $\mu$ s\*)
- UL Recognised, CSA Certified
- Tube or Taped Packaging

## Specifications

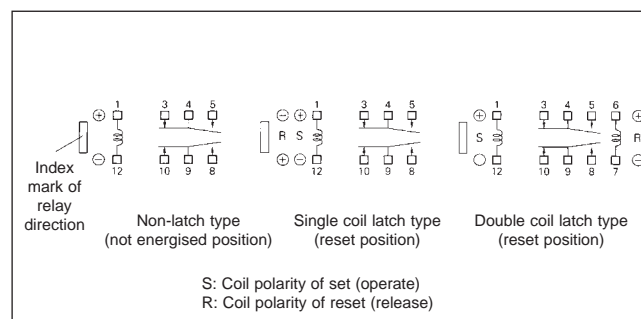
<b>Contact form</b>		2 Form C
<b>Contact material</b>		Silver alloy with gold alloy overlay
<b>Contact rating</b>	<b>Maximum switching power</b>	30W 62.5 VA (resistive)
	<b>Maximum switching voltage</b>	220Vdc 250 Vac
	<b>Maximum switching current</b>	1A
	<b>Maximum carrying current</b>	1A
<b>Minimum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

\*1 rise time: 10  $\mu$ s, fall time: 160  $\mu$ s \*2 rise time: 2  $\mu$ s, fall time: 10  $\mu$ s

## Dimensions mm(inch)



## Schematics



## Part Number System

EF2-5 S NUH

Feature

Nil : Standard type  
 NU : UL recognised CSA certified type  
 NUX : High solder joint reliability (20 years)  
 NUH : Minimum footprint (7.5 x 15)  
 NUN : High solder joint reliability with minimum footprint

Latch type

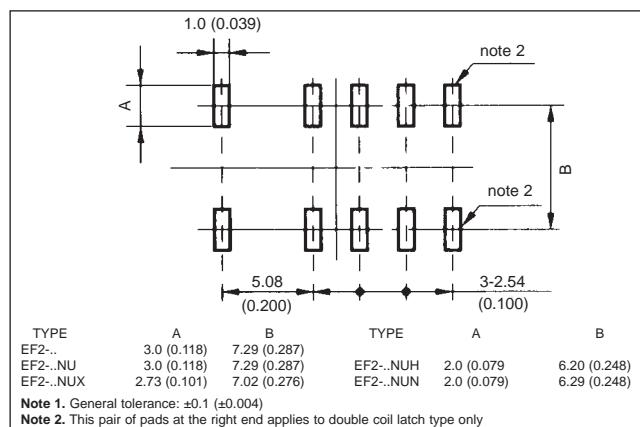
Nil : Non latch type  
 S : Single coil latch type  
 T : Double coil latch type

Nominal coil voltage

1.5, 3, 4.5, 5, 6, 9, 12, 24 volts

EF2 series

## Pad layout (bottom view) mm(inch)



## Part numbers

### Nonlatch type

at 20°C

Part Number	Nominal Coil Voltage VDC	Coil Resistance $\Omega \pm 10\%$	Must Operate Voltage VDC	Must Release Voltage VDC	Nominal operate power (mW)
EF2-1.5NU	1.5	45	1.20	0.15	50
EF2-3NU	3	180	2.40	0.3	50
EF2-4.5NU	4.5	405	3.60	0.45	50
EF2-5NU	5	500	4.00	0.5	50
EF2-6NU	6	720	4.80	0.6	50
EF2-9NU	9	1473	7.20	0.9	55
EF2-12NU	12	2400	9.60	1.2	60
EF2-24NU	24	8229	19.20	2.4	70

### Single coil latch type

at 20°C

Part Number	Nominal Coil Voltage VDC	Coil Resistance $\Omega \pm 10\%$	Must Operate Voltage VDC	Must Release Voltage VDC	Nominal operate power (mW)
EF2-1.5SNU	1.5	75	1.20	0.13	30
EF2-3SNU	3	300	2.40	2.25	30
EF2-4.5SNU	4.5	675	3.60	3.38	30
EF2-5SNU	5	833	4.00	3.75	30
EF2-6SNU	6	1200	4.80	4.5	30
EF2-9SNU	9	2700	7.20	6.75	30
EF2-12SNU	12	4800	9.60	9	30
EF2-24SNU	24	9600	19.20	18	60

### Double coil latch type

at 20°C

Part Number	Nominal Coil Voltage VDC	Coil Resistance $\Omega \pm 10\%$		Must Operate Voltage VDC	Must Release Voltage VDC	Nominal operate power (mW)
EF2-1.5TNU	1.5	S	45	1.20	—	50
		R	45	—	1.3	
EF2-3TNU	3	S	180	2.40	—	50
		R	180	—	2.25	
EF2-4.5TNU	4.5	S	405	3.60	—	50
		R	405	—	3.38	
EF2-5TNU	5	S	500	4.00	—	50
		R	500	—	3.75	
EF2-6TNU	6	S	720	4.80	—	50
		R	720	—	4.5	
EF2-9TNU	9	S	1620	7.20	—	50
		R	1620	—	6.75	
EF2-12TNU	12	S	2880	9.60	—	50
		R	2880	—	9	
EF2-24TNU	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)