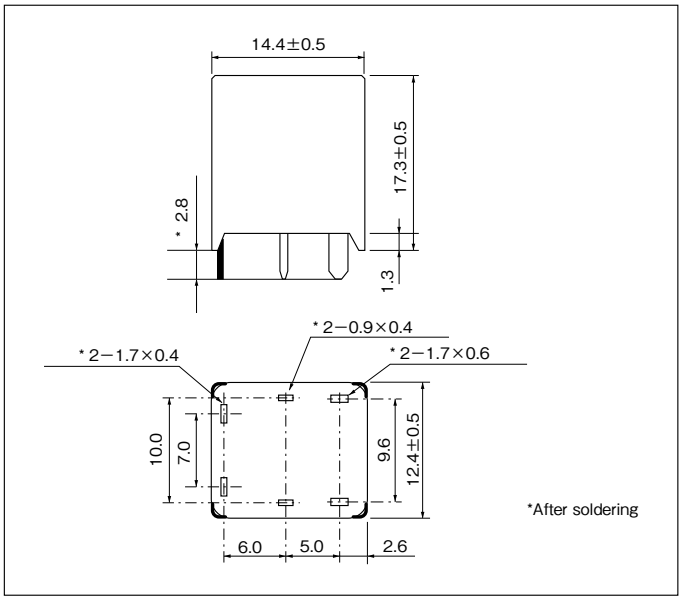
EL1 Series

The NEXEM EL1 series is PC-board mount automotive relay suitable for control of various motor, solenoidal coil and power supply etc. The EL1 series has higher switching and carrying current performance than existing relays, EP1,ET1 and EX1 series.

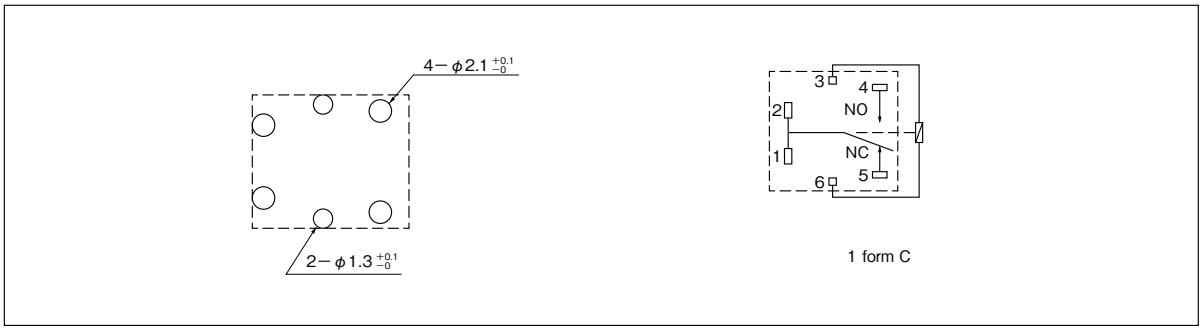
■ FEATURES

- Suitable for inductive load and large current interruption
- Changing-over circuit available by Form C contacts
- Large current capacity (54A 1hour at 20℃)
- High heat resistance
- Flux tight housing
- Through-hole reflow soldering available

■ DIMENSIONS mm



■ RECOMMENDED PCB PAD LAYOUT and SCHEMATICS (bottom view) mm



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■ SPECIFICATIONS

Items		Specifications
Contact Form		1 Form C
Contact Ratings	Contact Rating Power	NO：40A 14VDC, NC：20A 14VDC (Resistive load)
	Maximum Switching Current	100A ON/60A OFF, 14VDC (Resistive load, 10 operations)
	Maximum Carrying Current	54A at 14VDC for 1hour at 20℃ *1
	Minimum Switching Current	5VDC, 1A
	Contact Resistance	NO：3mΩ typical, NC：5mΩ typical (measured at 7A) initial
Contact Material		Silver oxide complex alloy
Operate Time (Excluding bounce)		4ms typical at Nominal voltage
Release Time (Excluding bounce)		1ms typical (at Nominal voltage, without diode)
Nominal Operating Power		640mW
Insulation Resistance		100MΩ at 500VDC
Withstand Voltage	Between open contacts	500VAC min. (for 1 minute)
	Between coil and contacts	500VAC min. (for 1 minute)
Shock Resistance	Misoperation	98m/s^2 (10G)
	Destructive Failure	980m/s^2 (100G)
Vibration Resistance	Misoperation	10 to 300Hz, 43m/s^2 (4.4G)
	Destructive Failure	10 to 500Hz, 43m/s^2 (4.4G), for 200 hours
Ambient Temperature		－40 to ＋125℃
Running Specifications	Non-load	1×10^6 operations
	Load	100×10^3 operations (NO: 14VDC, Resistive load, 40A) 100×10^3 operations (NO: 14VDC, Inductive load (0.5mH), 30A)
Weight		Approx. 7.5g

*1 Mounted on PC-board: FR-4 (Thickness: 1.6mm), Copper (Thickness: 105μm, Width: 15mm)
This value is allowable value at abnormal case such as fuse blow. And cyclical current is not guaranteed.

■ COIL RATING

at 20℃

Part Numbers	Nominal Voltage (VDC)	Coil Resistance (Ω)	Must Operate Voltage*2 (VDC)	Must Release Voltage*2 (VDC)
EL1-2U1C	12	225±10%	6.5	0.9

*2 Test by pulse voltage

■ PART NUMBER SYSTEM