DATA SHEET

AUTOMOTIVE RELAYS

EU2 SERIES

DESCRIPTION

The NEXEM EU2 series is PC-board mount type and suitable for various motor and solenoid controls application for automobiles which require high quality and high performance.

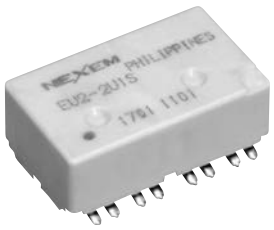
The EU2 series is an ultra low profile SMD relay. The EU2 series is succeeding for about 75% of low profiling compared with ET2 series which is low profile type. The basic characteristics of EU2 series are same as EX2 series which is miniature and high performance.

FEATURE

- Twin type (Two relays in one housing)
- SMD
- Low profile (Approx. 75% relay height of ET2, Approx. 57% relay height of EX2)
- Light weight (Approx. 80% relay weight of ET2, Approx. 94% relay weight of EX2)
- Pb free
- Tape & Reel packaging

APPLICATION

- Motor control
- Solenoid control



For Proper Use of Miniature Relays
DO NOT EXCEED MAXIMUM RATING

Do not use relay under excessive conditions such as over ambient temperature, over voltage and over current. Incorrect use could result in abnormal heating and damage to the relay or other parts.

READ CAUTIONS IN THE SELECTION GUIDE

Read the cautions described in EM Devices' "Miniature Relays" before dose designing your relay applications.

The information in this document is subject to change without notice.

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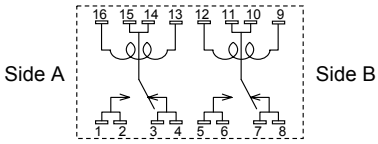
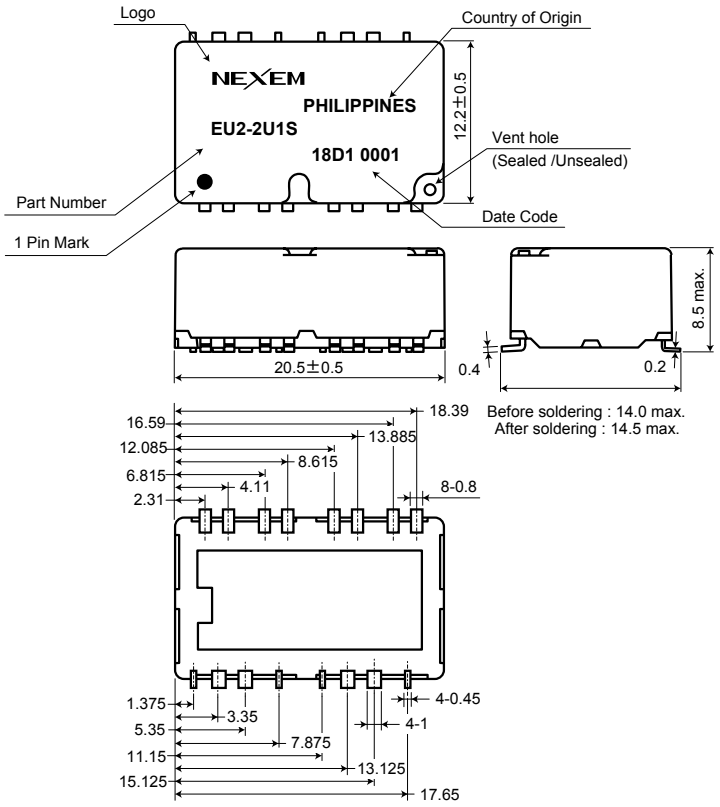
●All specifications in this catalog and production status of products are subject to change without notice. Prior to the purchase, please contact EM Devices for updated product data.
●Please request for a specification sheet for detailed product data prior to the purchase.
●Before using the product in this catalog, please read "NOTE ON CORRECT USE" in "Miniature Relays selection guide" catalog.

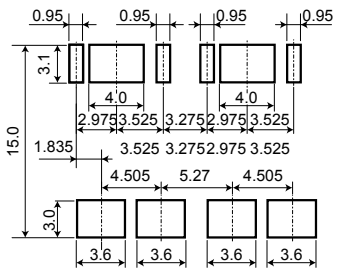
SCHEMATIC (TOP VIEW)



DIMNSIONS [mm]



PCB PAD LAYOUT [mm] (TOP VIEW)



Tolerance ±0.1mm

SPECIFICATIONS

(Ambient temperature:20°C)

Items		Specifications
Contact Form		1 Form C × 2 (separate)
Contact Ratings	Maximum Switching Voltage	16VDC
	Maximum Switching Current	30 A
	Minimum Switching Current	1A (5VDC)
	Maximum Carrying Current	25A (10minutes Max., Coil Voltage 14VDC)*1
	Contact Resistance	4mΩ typical (measured at 7A) initial
Contact Material		Silver oxide complex alloy
Operate Time (Excluding bounce)		2.5 ms typical (at Nominal Voltage)
Release Time (Excluding bounce)		3ms typical (at Nominal Voltage, with diode) initial
Nominal Operating Power		960mW
Insulation Resistance		100MΩ at 500 VDC
Withstand Voltage	Between open contacts	500 VAC min. (for 1 minute)
	Between coil and contacts	500 VAC min. (for 1 minute)
Shock Resistance	Misoperation	98 m/s^2
	Destructive Failure	980 m/s^2
Vibration Resistance	Misoperation	10 to 300Hz, 43m/s^2
	Destructive Failure	10 to 500Hz, 43m/s^2, 200hours
Ambient Temperature		−40 to +125°C
Running Specifications	Non-load	1×10^6 operations
	Load	100×10^3 operations (at 14VDC, Motor Load 25A) 100×10^3 operations (at 14VDC, Motor Load 25A/7A)
Weight		Approx. 6g

*1 Mounted on PC-board: FR-4 (thickness: 1.6mm); Copper (thickness: 105μm, width: 10mm, length: 40mm)

COIL RATING

(Ambient temperature:20°C)

Part Numbers	Nominal Voltage (VDC)	Coil Resistance (Ω) ± 10%	Must Operate Voltage*2 (VDC)	Must Release Voltage*2 (VDC)
EU2-2U1SN	12	150	6.5	0.6

*2 Test by pulse voltage

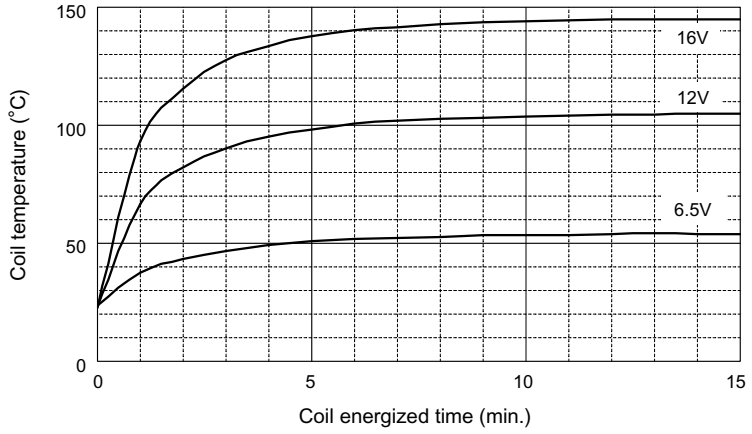
PART NUMBER SYSTEM

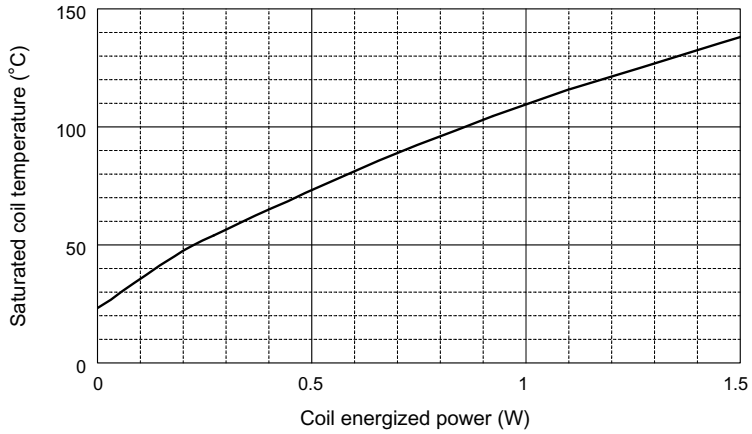
EU2 – 2 U 1 SN – T

Type		
	Packing	Nil : Tube T : Embossed carrying tape
	Enclosure	SN : Sealed
	Must Operate Voltage	1 : 6.5V
	Contact Material	U : Silver oxide complex alloy
	Coil Resistance	2 : 150Ω

TECHINICAL DATA

Coil Temperature Rise **(Ambient temperature:20°C)**

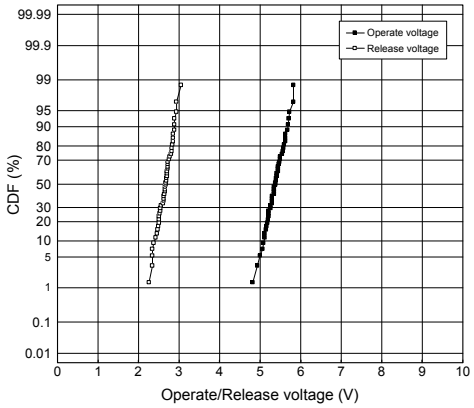




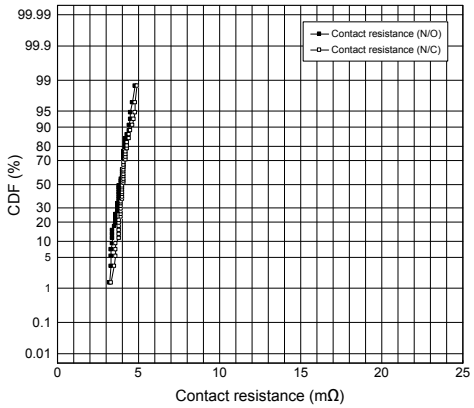
RELAY CHARACTERISTICS DISTRIBUTION (INITIAL)

Specimen : EU2-2U1SN
Ambient Temperature : 20°C
Quantity : 25pcs.

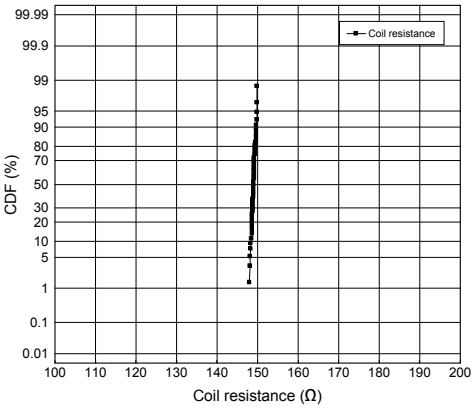
Operate/Release Voltage



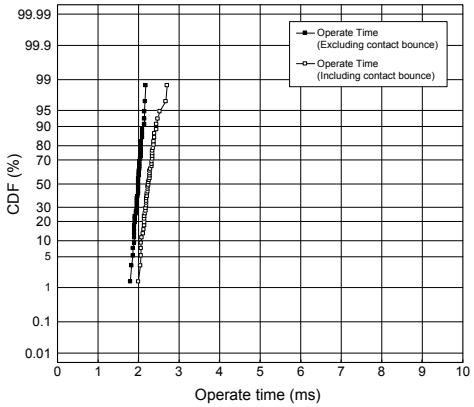
Contact Resistance



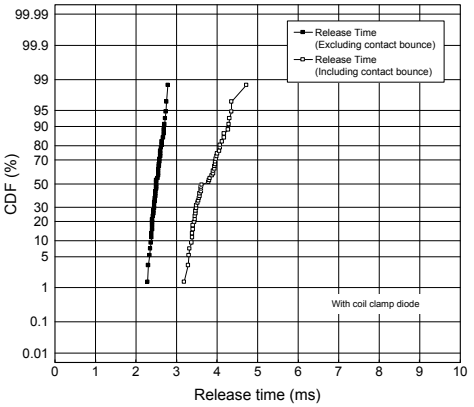
Coil Resistance



Operate time

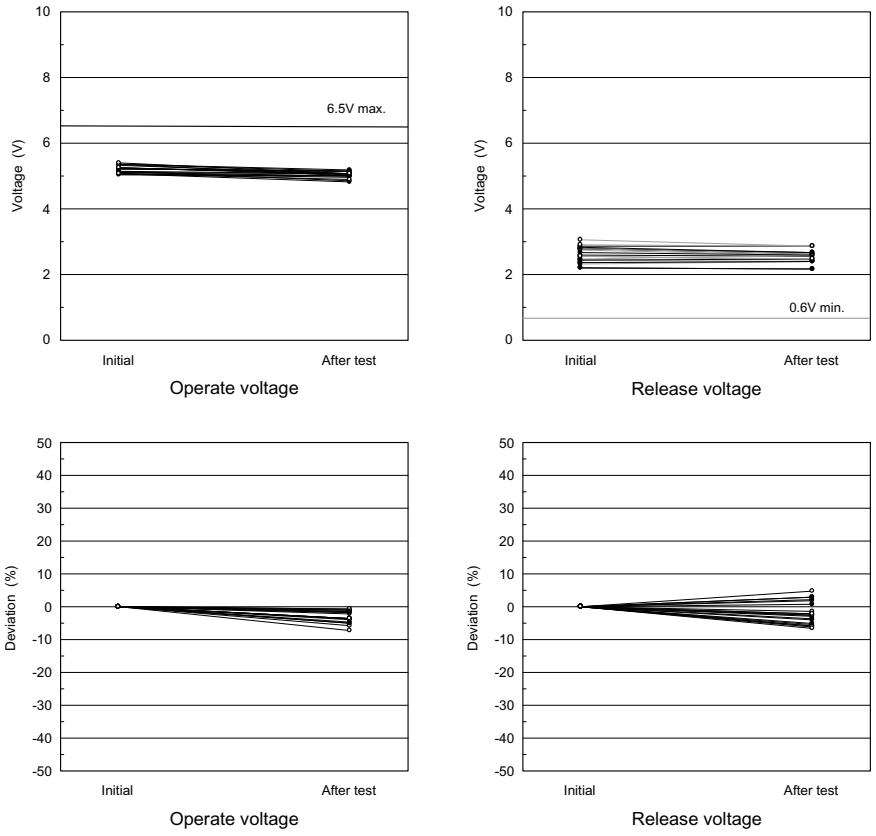


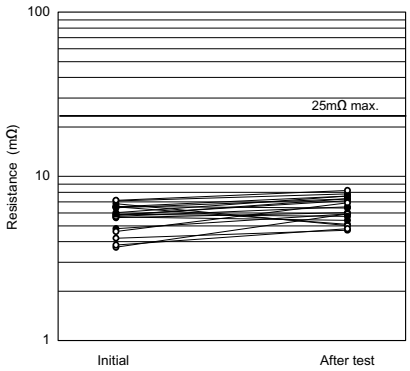
Release time



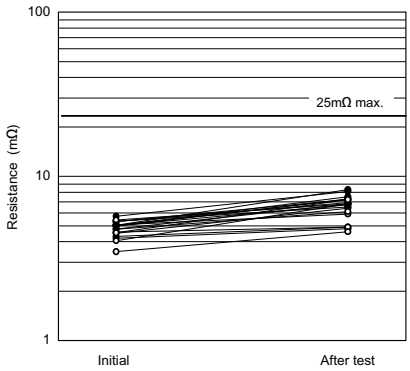
ELECTRICAL LIFE TEST (14VDC-25A, P/W motor, Lock)

Test items	Test conditions	Samples
1. Operate voltage 2. Release voltage 3. Contact resistance 4. Coil resistance 5. Operate time 6. Release time (with coil clamp diode)	Temperature : 23°C Frequency : 0.1Hz(0.2s ON, 9.8s OFF) Contact load : 14VDC-25A, P/W motor, Lock Number of operations : 100 x 10^3	EU2-2U1SN 10 pcs

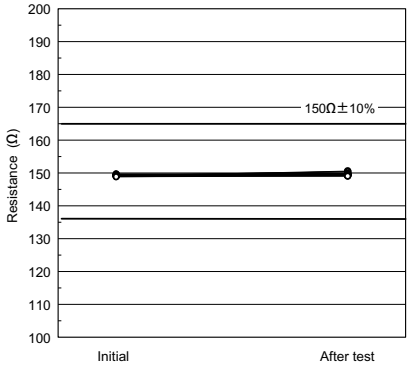




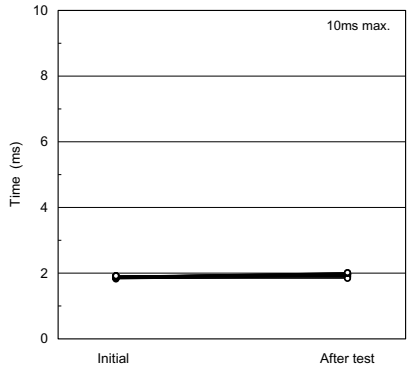
Contact resistance (N/O)



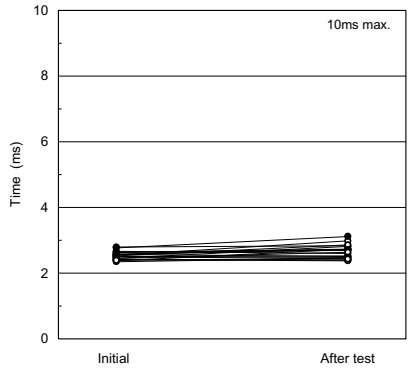
Contact resistance (N/C)



Coil resistance



Operate time



Release time