

### »» Features

- ☐ High power 40A automotive relay.
- ☐ USA & European footprint are both available.
- ☐ Open frame, dust cover, flux-free type, and sealed washable type are available.
- ☐ Offering SPNC, SPNO, SPDT of contact configurations.

### »» Type List

#### ◆ Standard type

| Terminal style                                         | Contact form | Designation (enclosure) |            |             |                      |
|--------------------------------------------------------|--------------|-------------------------|------------|-------------|----------------------|
|                                                        |              | Open type               | Flux tight | Sealed type | Sealed type washable |
| PCB terminal<br>(Footprint for European)               | 1A (SPNO)    | 822E-1A                 | 822E-1A-C  | 822E-1A-V   | 822E-1A-S            |
|                                                        | 1B (SPNC)    | 822E-1B                 | 822E-1B-C  | 822E-1B-V   | 822E-1B-S            |
|                                                        | 1C (SPDT)    | 822E-1C                 | 822E-1C-C  | 822E-1C-V   | 822E-1C-S            |
| PCB terminal<br>(Footprint for USA)                    | 1A (SPNO)    | 822U-1A                 | 822U-1A-C  | 822U-1A-V   | 822U-1A-S            |
|                                                        | 1B (SPNC)    | 822U-1B                 | 822U-1B-C  | 822U-1B-V   | 822U-1B-S            |
|                                                        | 1C (SPDT)    | 822U-1C                 | 822U-1C-C  | 822U-1C-V   | 822U-1C-S            |
| PCB terminal<br>(Footprint for USA different terminal) | 1A (SPNO)    | -----                   | 822UA-1A-C | 822UA-1A-V  | 822UA-1A-S           |
|                                                        | 1B (SPNC)    |                         | 822UA-1B-C | 822UA-1B-V  | 822UA-1B-S           |
|                                                        | 1C (SPDT)    |                         | 822UA-1C-C | 822UA-1C-V  | 822UA-1C-S           |

#### ◆ High sensitivity type

|                                                        |           |          |             |             |             |
|--------------------------------------------------------|-----------|----------|-------------|-------------|-------------|
| PCB terminal<br>(Footprint for European)               | 1A (SPNO) | 822EN-1A | 822EN-1A-C  | 822EN-1A-V  | 822EN-1A-S  |
|                                                        | 1B (SPNC) | 822EN-1B | 822EN-1B-C  | 822EN-1B-V  | 822EN-1B-S  |
|                                                        | 1C (SPDT) | 822EN-1C | 822EN-1C-C  | 822EN-1C-V  | 822EN-1C-S  |
| PCB terminal<br>(Footprint for USA)                    | 1A (SPNO) | 822UN-1A | 822UN-1A-C  | 822UN-1A-V  | 822UN-1A-S  |
|                                                        | 1B (SPNC) | 822UN-1B | 822UN-1B-C  | 822UN-1B-V  | 822UN-1B-S  |
|                                                        | 1C (SPDT) | 822UN-1C | 822UN-1C-C  | 822UN-1C-V  | 822UN-1C-S  |
| PCB terminal<br>(Footprint for USA different terminal) | 1A (SPNO) | -----    | 822UAN-1A-C | 822UAN-1A-V | 822UAN-1A-S |
|                                                        | 1B (SPNC) |          | 822UAN-1B-C | 822UAN-1B-V | 822UAN-1B-S |
|                                                        | 1C (SPDT) |          | 822UAN-1C-C | 822UAN-1C-V | 822UAN-1C-S |

### »» Ordering Information

822      E      N      -      1C      -      C  
1      2      3      4      5

1. 822 -- Basic series designation

2. E -- Europe footprint  
U -- USA footprint  
UA -- USA different terminal

3. Blank -- standard type  
N -- High sensitivity type

4. 1A -- Single pole normally open  
1B -- Single pole normally close  
1C -- Single pole double throw

5. Blank -- Open type  
C -- Flux tight  
V -- Sealed type  
S -- Sealed type washable

### »» Contact Rating

| Resistive load | 1A        | 1B        | 1C                            |
|----------------|-----------|-----------|-------------------------------|
|                | 40A 14VDC | 30A 14VDC | NC: 20A 14VDC ; NO: 40A 14VDC |

## »» Coil Rating (DC)

## ◆ Standard type

| Rated voltage (V) | Rated current $\pm 10\%$ at 23 °C (mA) | Coil resistance $\pm 10\%$ at 23 °C ( $\Omega$ ) | Max. continuous voltage at 85 °C <sup>(1)</sup> | Pick up voltage(Max) at 23 °C | Drop out voltage(Min) at 23 °C | Power consumption at rated voltage |
|-------------------|----------------------------------------|--------------------------------------------------|-------------------------------------------------|-------------------------------|--------------------------------|------------------------------------|
| 6                 | 315                                    | 19                                               | 130 % of rated Voltage                          | 3.3                           | 0.6                            | approx. 1.6W                       |
| 9                 | 180                                    | 50                                               |                                                 | 5.0                           | 0.9                            |                                    |
| 12                | 133                                    | 90                                               |                                                 | 6.8                           | 1.2                            |                                    |
| 24                | 66                                     | 362                                              |                                                 | 13.9                          | 2.4                            |                                    |

Note:(1)Continuous contact current at 20A.

## ◆ High sensitivity type

| Rated voltage (V) | Rated current $\pm 10\%$ at 23 °C (mA) | Coil resistance $\pm 10\%$ at 23 °C ( $\Omega$ ) | Max. continuous voltage at 85 °C <sup>(1)</sup> | Pick up voltage(Max) at 23 °C | Drop out voltage(Min) at 23 °C | Power consumption at rated voltage |
|-------------------|----------------------------------------|--------------------------------------------------|-------------------------------------------------|-------------------------------|--------------------------------|------------------------------------|
| 6                 | 200                                    | 30                                               | 130 % of rated Voltage                          | 75 % of rated Voltage         | 10 % of rated Voltage          | approx. 1.2W                       |
| 9                 | 133                                    | 67.5                                             |                                                 |                               |                                |                                    |
| 12                | 100                                    | 120                                              |                                                 |                               |                                |                                    |
| 24                | 50                                     | 480                                              |                                                 |                               |                                |                                    |

Note:(1)Continuous contact current at 20A.

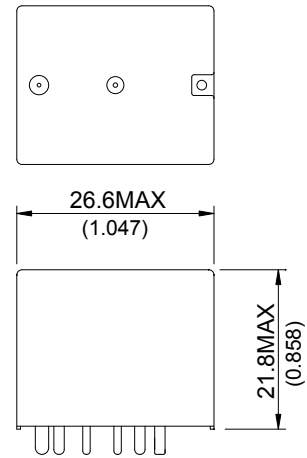
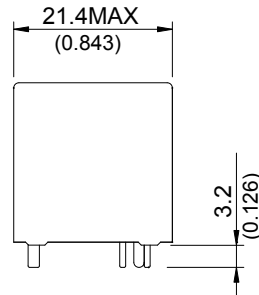
## »» Specification

|                                      |                                   |                                                           |
|--------------------------------------|-----------------------------------|-----------------------------------------------------------|
| Contact material                     | AgSnO alloy                       |                                                           |
| Contact voltage drop <sup>(1)</sup>  | Typ. 40mV at 10A                  |                                                           |
| Insulation resistance <sup>(1)</sup> | 50M $\Omega$ Min. (DC 500V)       |                                                           |
| Operate time <sup>(1)</sup>          | 5ms Max.                          |                                                           |
| Release time <sup>(1)</sup>          | 4ms Max.                          |                                                           |
| Dielectric strength <sup>(1)</sup>   | Between open contact              | : AC 500V , 50/60Hz 1 min.                                |
|                                      | Between contact and coil          | : AC 500V , 50/60Hz 1 min.                                |
| Vibration resistance                 | 10~55Hz , amplitude 1.5 mm        |                                                           |
| Shock resistance                     | 20G , 11ms , half sine wave pulse |                                                           |
| Life expectancy                      | Mechanical                        | 10,000,000 operations<br>(frequency 18,000 operations/hr) |
|                                      | Electrical                        | 100,000 operations<br>(frequency 1,200 operations/hr)     |
| Operating ambient temperature        | -40~+85 °C (no freezing)          |                                                           |
| Storage temperature                  | -40~+130 °C                       |                                                           |
| Weight                               | Approx. 17.5g                     |                                                           |

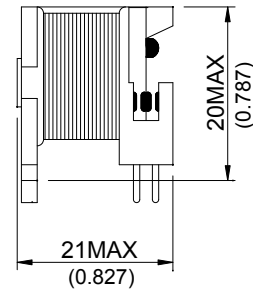
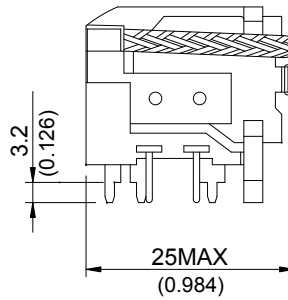
Note : (1) initial value

# >>> Outline Dimensions

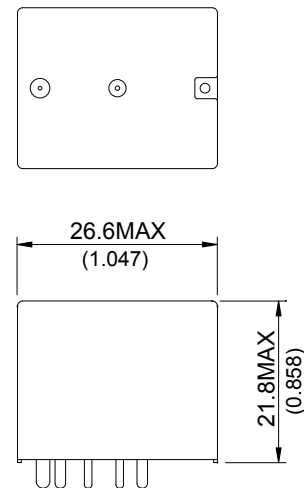
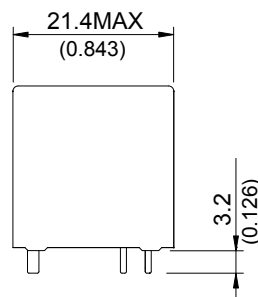
## ◆ 822E,UA



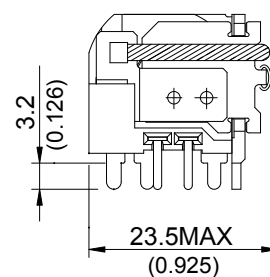
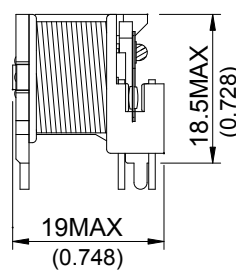
## ◆ 822E OPEN



## ◆ 822U



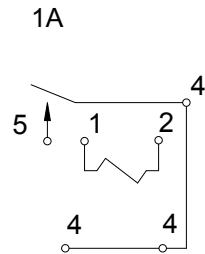
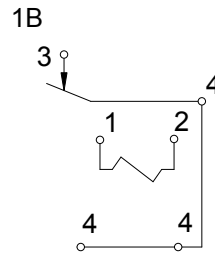
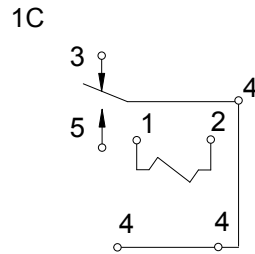
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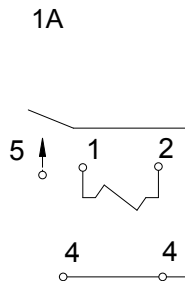
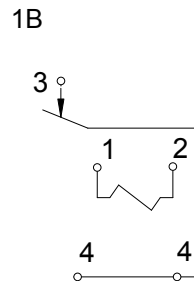
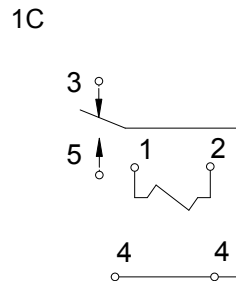
## »» Wiring Diagram

BOTTOM VIEW

◆ 822E, 822UA, 822U (OPEN)



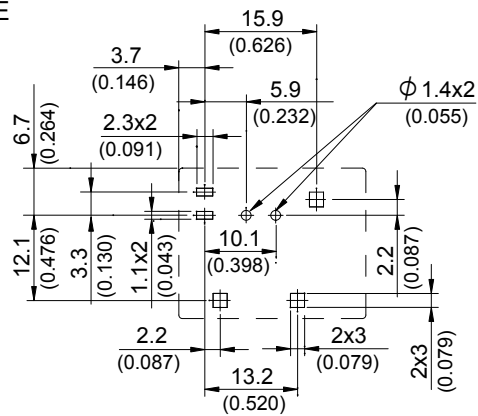
◆ 822U



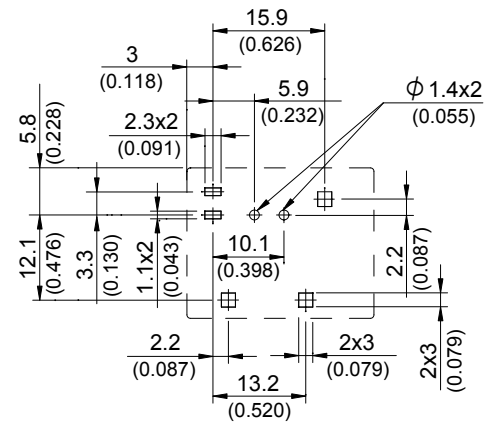
## »» PC Board Layout

BOTTOM VIEW

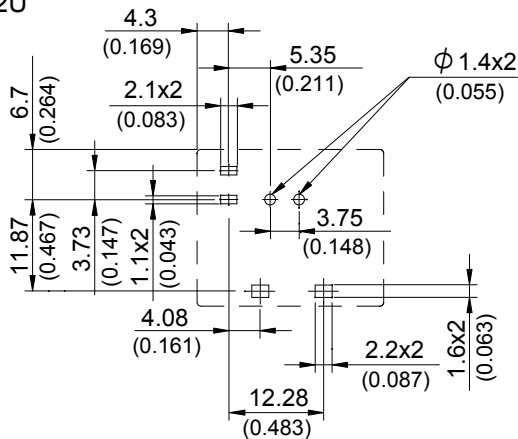
◆ 822E



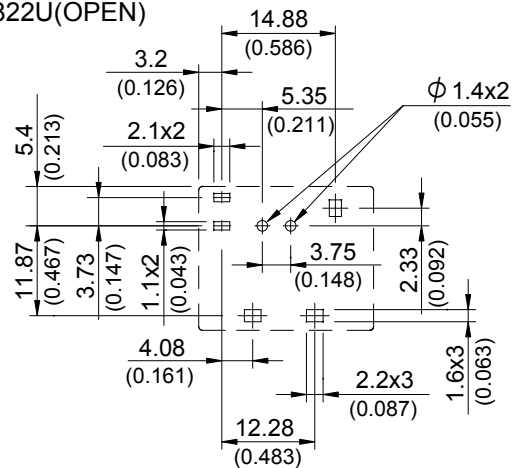
◆ 822E (OPEN)



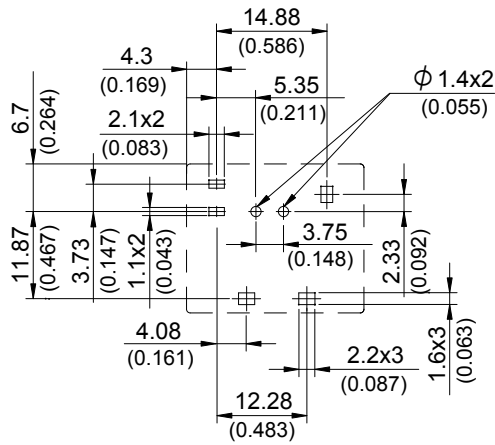
◆ 822U



◆ 822U (OPEN)

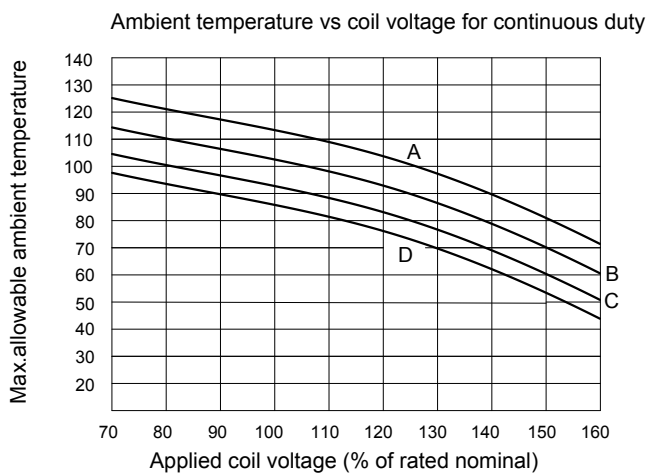
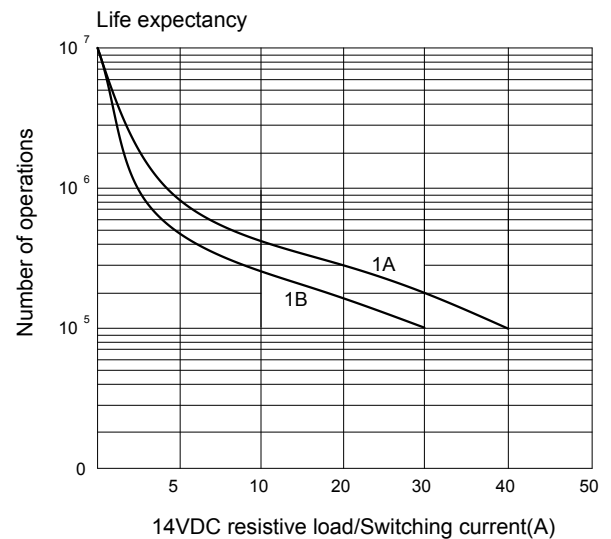
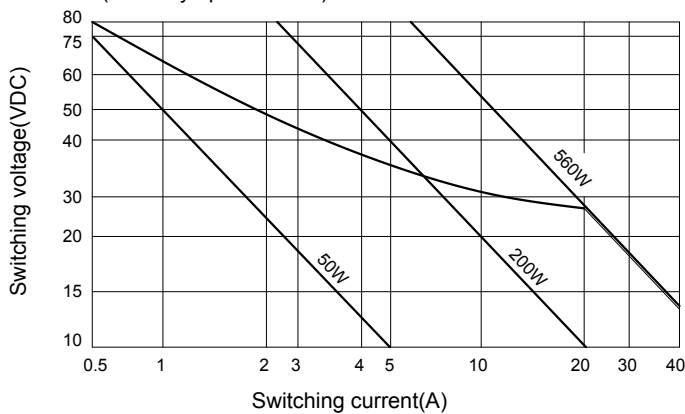


◆ 822UA



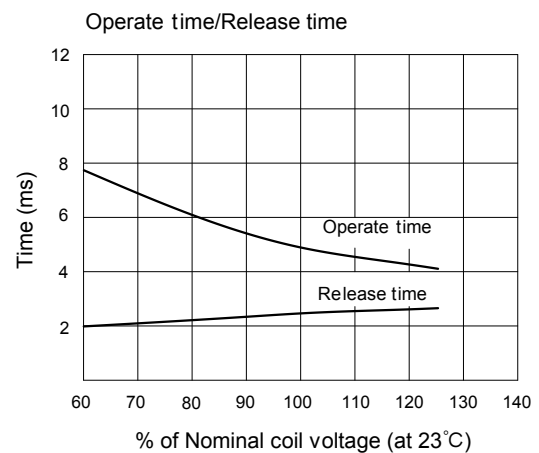
» Engineering Data

Safe breaking, arc extinguished  
(normally open contact) for resistive loads.



A:10A B:20A C:30A D:40A Contact load(resistive)

Maximum mean coil temperature=155°C



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

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- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
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