

## DC HIGH VOLTAGE EV RELAY

## EVR250



◎ **Application (응용분야)** : Electric Vehicle, Charging System, Battery Energy Storage System  
Solar System, Golf Car, Fuel Cell Vehicle, etc.

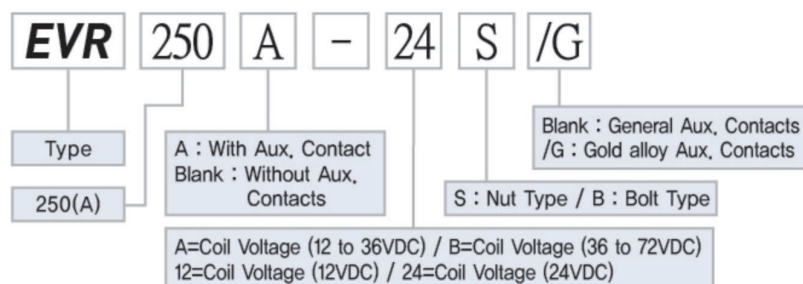
◎ **Magnet coil ratings (코일정격)**

| Nominal voltage(V) | Item | Inrush Coil current 100ms (Max.) | Holding Coil current | Pick-up voltage (V) max. | Drop-out voltage (V) min. | Holding voltage (V) min. | Max. voltage (V) |
|--------------------|------|----------------------------------|----------------------|--------------------------|---------------------------|--------------------------|------------------|
| B                  | 72   | 1.3A                             | 0.04A                | 32VDC                    | 18VDC                     | 22VDC                    | 95VDC            |
|                    | 60   | 1.3A                             | 0.05A                |                          |                           |                          |                  |
|                    | 36   | 1.1A                             | 0.1A                 |                          |                           |                          |                  |
| A                  | 36   | 2.4A                             | 0.09A                | 9VDC                     | 6VDC                      | 7.5VDC                   | 36VDC            |
|                    | 24   | 2.4A                             | 0.14A                |                          |                           |                          |                  |
|                    | 12   | 2.4A                             | 0.29A                |                          |                           |                          |                  |
| 12                 |      | 2.4A                             | 0.29A                | 9VDC                     | 6VDC                      | 7.5VDC                   | 18VDC            |
| 24                 |      | 1.3A                             | 0.17A                | 18VDC                    | 12VDC                     | 13.5VDC                  | 32VDC            |

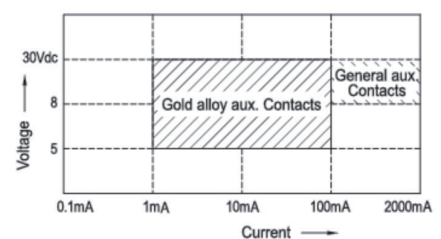
Notes : 1. Nominal current and coil resistance are measured at  $\pm 20^{\circ}\text{C}$ . 2. Differences of coil resistance are  $\pm 10\%$ .  
3. Performance characteristic coil temperature is measured at  $\pm 20^{\circ}\text{C}$ .

◎ **Contact ratings (접점정격)**

| Item                                                    | Type | 1 Pole Resistor load                        |
|---------------------------------------------------------|------|---------------------------------------------|
|                                                         |      | EVR250                                      |
| Max. Continuous current (wire size 300mm <sup>2</sup> ) |      | 500A                                        |
| Max. switching current                                  |      | 250A                                        |
| Max. switching capacity at max. voltages                |      | 900VDC 200A                                 |
| Contact rating switching voltages                       |      | 12 to 1200VDC                               |
| Max. cut-off current                                    |      | 600VDC 1000A 3 Ops / 400VDC 1500A 2 Ops     |
| C-R load (charging)                                     |      | 500V 1500A 4,000 Ops / 500V 500A 30,000 Ops |
| Voltage drop across contacts per 100A                   |      | 30mV Max. (At 5VDC)                         |
| Min. permissible load                                   |      | 12VDC 0.5A                                  |
| Description                                             |      | S.P On/Off (a)                              |
| Contact Arrangement, auxiliary contacts                 |      | 1Form A (SPST-NO.)                          |
| General Aux, Contact Current, Max.                      |      | 2A 30VDC / 3A 125VAC                        |
| General Aux, Contact Current, Min.                      |      | 100mA 8VDC                                  |
| Gold alloy Aux, Contacts Max.                           |      | 0.1A 30VDC / 0.1A 30VAC                     |
| Gold alloy Aux, Contacts Min.                           |      | 1mA 5VDC / 1mA 5VAC                         |

◎ **Ordering information (주문방법)**

Permissible load of Aux, contact



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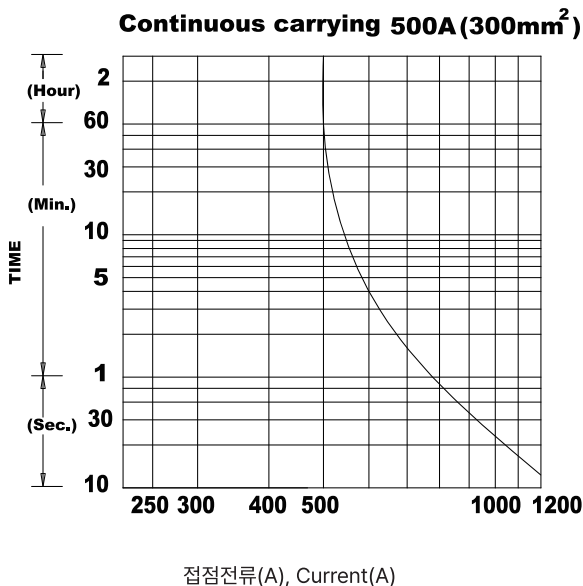
### Characteristics (성능)

|                                                   |                               |             |                                         |
|---------------------------------------------------|-------------------------------|-------------|-----------------------------------------|
| Expected life                                     | Mechanical (Min.)             |             | 5×10 <sup>5</sup>                       |
|                                                   | Electric (Min.)<br>(Resistor) | 450VDC 250A | 7×10 <sup>2</sup>                       |
|                                                   |                               | 750VDC 250A | 3×10 <sup>3</sup>                       |
| Initial insulation resistance                     |                               |             | Min. 100MΩ 500VDC                       |
| Initial breakdown voltage                         | Between open contacts         |             | 4000VAC 60 Sec. 5mA                     |
|                                                   | Between contacts & coil       |             | 4000VAC 60 Sec. 5mA                     |
| Operate time (at 20°C)                            |                               |             | Max. 30ms                               |
| Release time (at 20°C)                            |                               |             | Max. 10ms                               |
| Shock resistance                                  | Functional                    |             | Min. 196 m/s <sup>2</sup> {20G}         |
|                                                   | Destructive                   |             | Min. 490 m/s <sup>2</sup> {50G}         |
| Vibration resistance                              | Functional                    |             | 196 m/s <sup>2</sup> {20G} 80 to 2000Hz |
|                                                   | Destructive                   |             | 196 m/s <sup>2</sup> {20G} 80 to 2000Hz |
| Conditions for operation<br>transport and storage | Ambient temperature           |             | -40°C to +85°C                          |
|                                                   | Humidity                      |             | 5 to 85% R.H.                           |
| Unit weight                                       |                               |             | 460g                                    |

### Reference data (특성곡선)

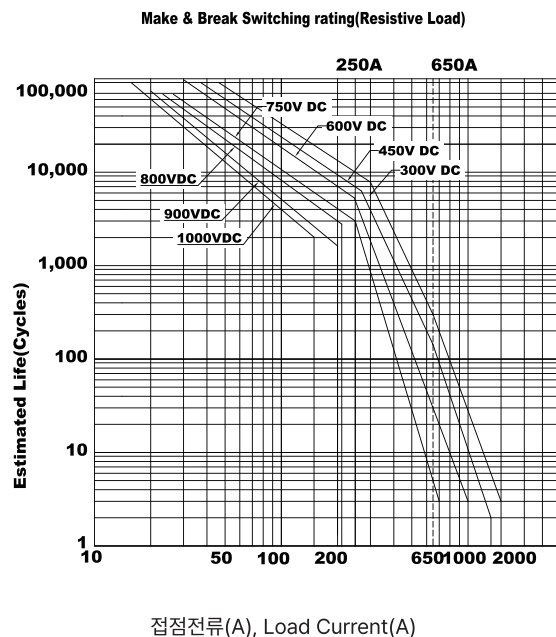
#### 온도상승곡선

- 통전시간의 최대치 Max. Current capacity
- Max. Continuous thermal current rating (amperes)



#### 전기적 수명 곡선

(Estimated Switching Ratings)

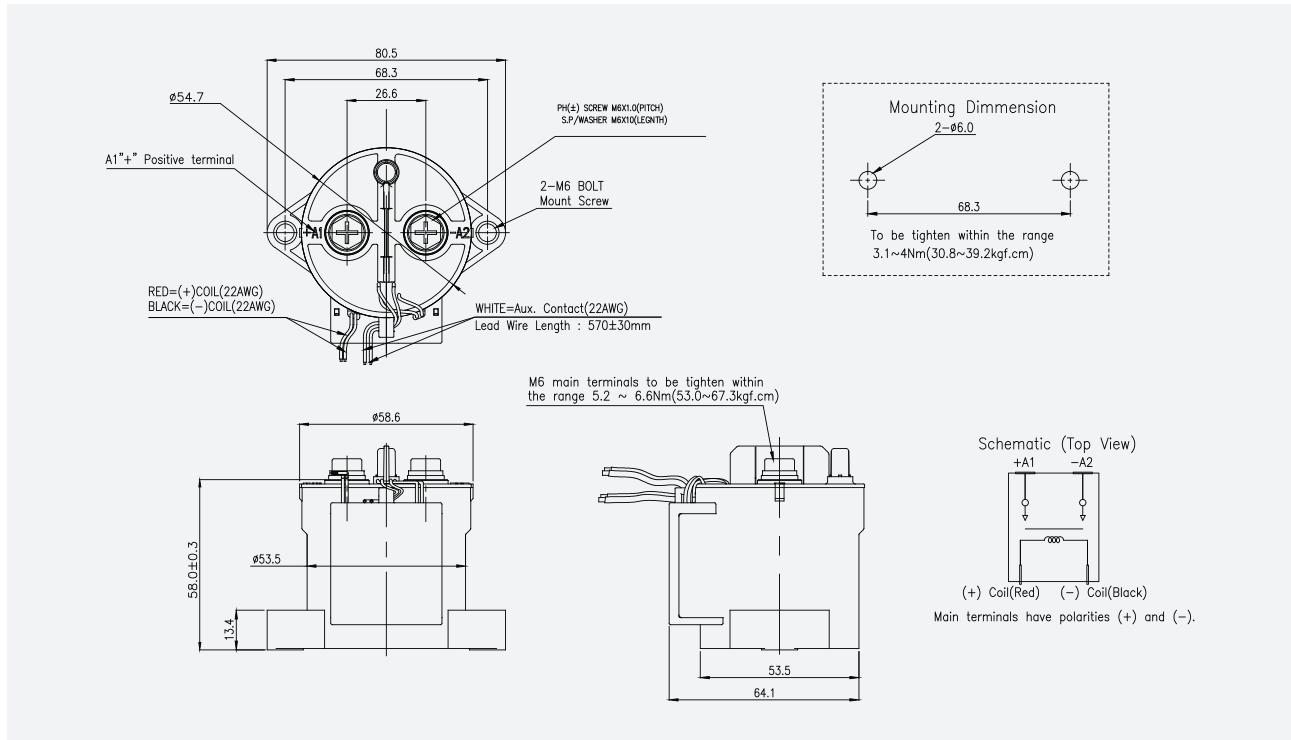




## Dimension in mm (외형치수도)

Tolerance(公差) : 10mm 이하 $\pm 0.3$ , 10~50mm  $\pm 0.6$ , 50mm 이상 $\pm 1.0$

(S: Nut on Type)



(B: Bolt Type)

