

# DC HIGH VOLTAGE EV RELAY

## EVR400

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

### Magnet coil ratings (코일정격)

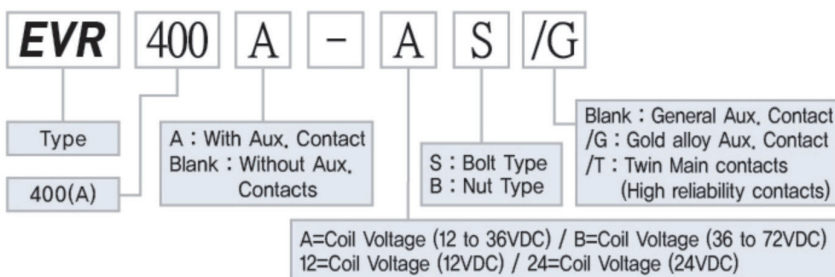
Nominal voltage(V)	Item	Inrush Coil current 100ms (Max.)	Holding Coil current	Pick-up voltage (V) max.	Drop-out voltage (V) min.	Holding voltage (V) min.	Max. voltage (V)
B	72	1.1A	0.06A	32VDC	18VDC	22VDC	95VDC
	60	1.0A	0.06A				
	36	0.95A	0.1A				
A	36	2.0A	0.09A	9VDC	6VDC	7.5VDC	36VDC
	24	1.8A	0.13A				
	12	1.4A	0.27A				
12		1.2A	0.32A	9VDC	6VDC	7.5VDC	18VDC
24		0.6A	0.16A	18VDC	12VDC	13.5VDC	32VDC

Notes : 1. Nominal current and coil resistance are measured at +20°C. 2. Differences of coil resistance are ±10%.  
3. Performance characteristic coil temperature is measured at +20°C.

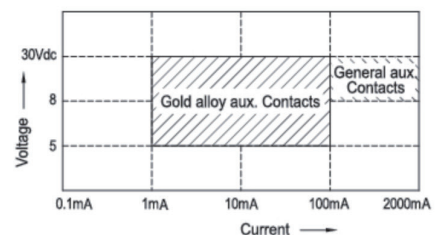
### Contact ratings (접점정격)

Item	Type	1 Pole Resistor load	
		EVR400	
Max. Continuous current (wire size 150mm <sup>2</sup> ×2)		500A	
Max. switching current		450VDC 400A	UL Certification <b>CE</b>
		1200VDC 80A	
		1000VDC 200A	
		1000VDC 100A	
Contact rating switching voltages		12 to 1500VDC	
Max. cut-off current		300VDC 2500A 3 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





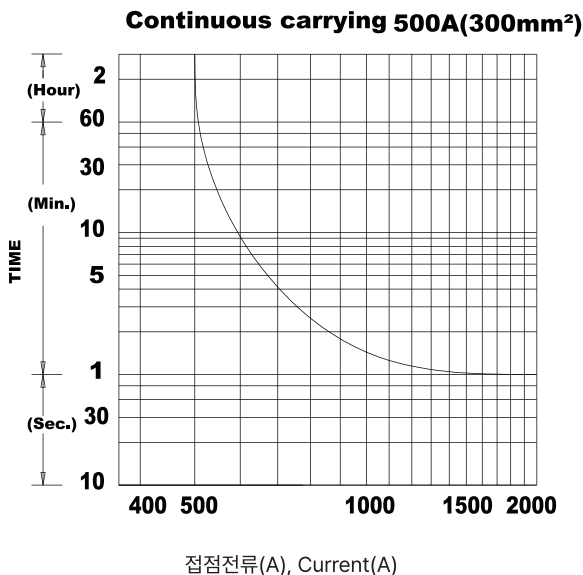
## Characteristics (성능)

Expected life	Mechanical (Min.)		5×10 <sup>5</sup>
	Electric (Min.) (Resistor)	450VDC 400A	3×10 <sup>3</sup>
		250VDC 400A	1×10 <sup>5</sup>
		1000VDC 100A	1×10 <sup>4</sup>
		1000VDC 200A	1×10 <sup>3</sup>
Initial insulation resistance			Min. 100MΩ 500VDC
Initial breakdown voltage	Between open contacts		3500VAC 60 Sec. 5mA
	Between contacts & coil		3500VAC 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 transport and storage	Ambient temperature		-40°C to +85°C
	Humidity		5 to 85% R.H.
Unit weight			660g

## Reference data (특성곡선)

### 온도상승곡선

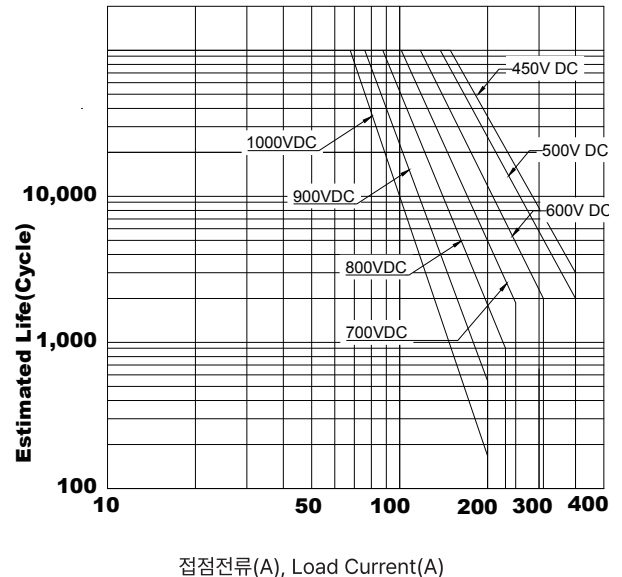
- 통전시간의 최대치 Max. Current capacity
- Max. Continuous thermal current rating (amperes)



### 전기적 수명 곡선

(Estimated Switching Ratings)

### Make & Break Switching rating(Resistive Load)



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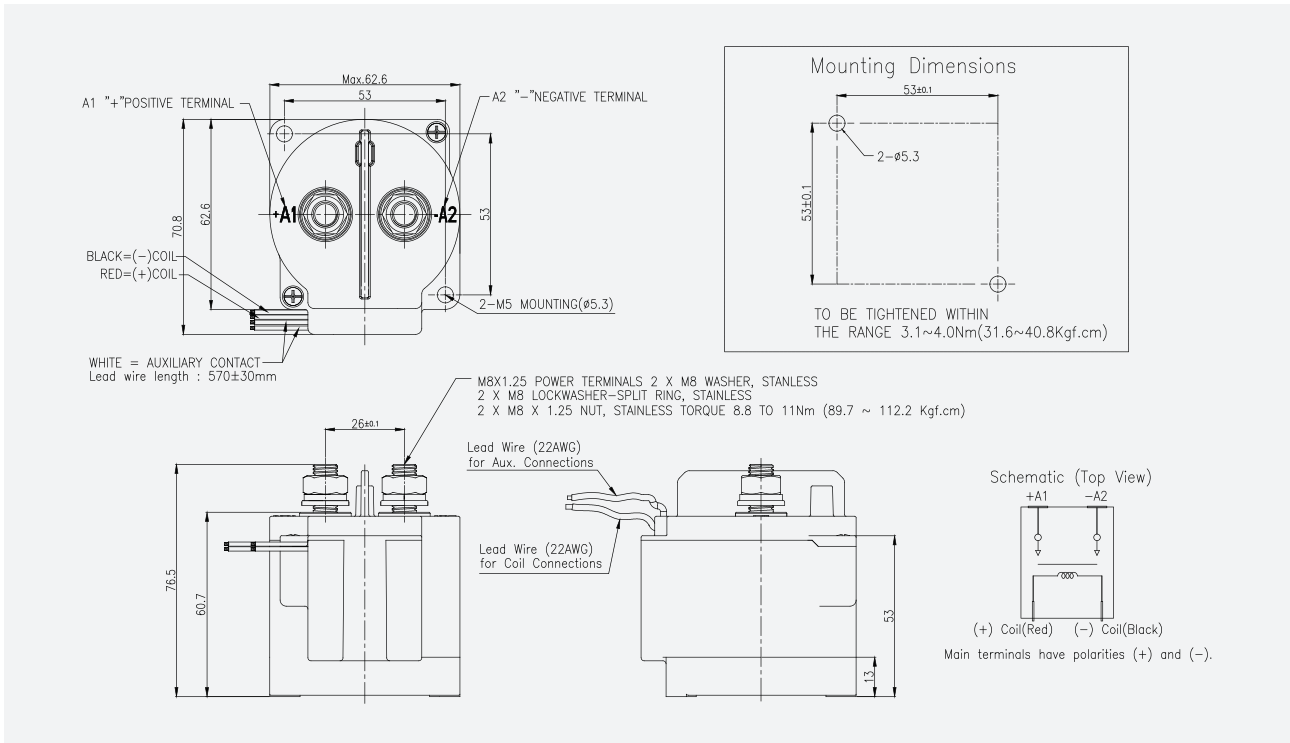
## EVR400



Tolerance(공차) : 10mm 이하±0.3, 10~50mm ±0.6, 50mm 이상±1.0

### Dimension in mm (외형치수도)

(S: Bolt Type)



(B: Nut Type)

