

# Automotive Relay

## TRS

- 30A 16VDC switching rating
- 40A inrush at 16VDC
- Smallest power relay
- 1 Form A and 1 Form C arrangements in single and dual relay packages
- For Automotive Applications
- Conform to ROHS,ELV directive



13.2×12×9.8

### ORDERING CODE

<u>TRS</u>	<u>D</u>	<u>12VDC</u>	<u>S</u>	<u>H</u>
1	2	3	4	5
1. Relay Model			4. S: Sealed Nil: snap-on (Flux-tight)	
2. Coil Power L: 0.57W D: 0.8W			5. Contact Form H: Form A Z: Form C	
3. Coil Nominal Voltage 6,12,24VDC				

### COIL DATA at 20°C Rated Current(mA)

Nominal Voltage (VDC)	Coil Resistance ( $\Omega \pm 10\%$ )	Max Operate Voltage (VDC)	Min Release Voltage (VDC)	Coil Power CW)	Max Applicable Voltage	
					At 23°C	At 105°C
6	63	3.5	0.6	0.57W	13	8
12	253	6.9	1.2	0.57W	26	16
24	1016	13.8	2.4	0.57W	52	32
6	45	3.5	0.6	0.8W	11	7
12	180	6.9	1.2	0.8W	22	13.5
24	720	13.8	2.4	0.8W	44	27

### CONTACT DATA

**Contact Form** 1H(From 1A)/1Z(From 1C)

**Contact Material:** Silver Alloy

**Max Load Current (@14VDC Voltage)**

Load	From A (NO)	FROM C	
		NO	NC
Max Continuous Current	30A	30A	25A
Max Break Current	30A	30A	25A
Max Make Current AgSnO	100A	100A	15A

**Over Load Current:** 50A 5sec; 87.5A 0.5sec; 150A 0.1sec

**Max Switching Power:** 420W

**Minimum load:** 0.5A 12VDC

**Contact Resistance:** 100m $\Omega$  Max at 6VDC 1A

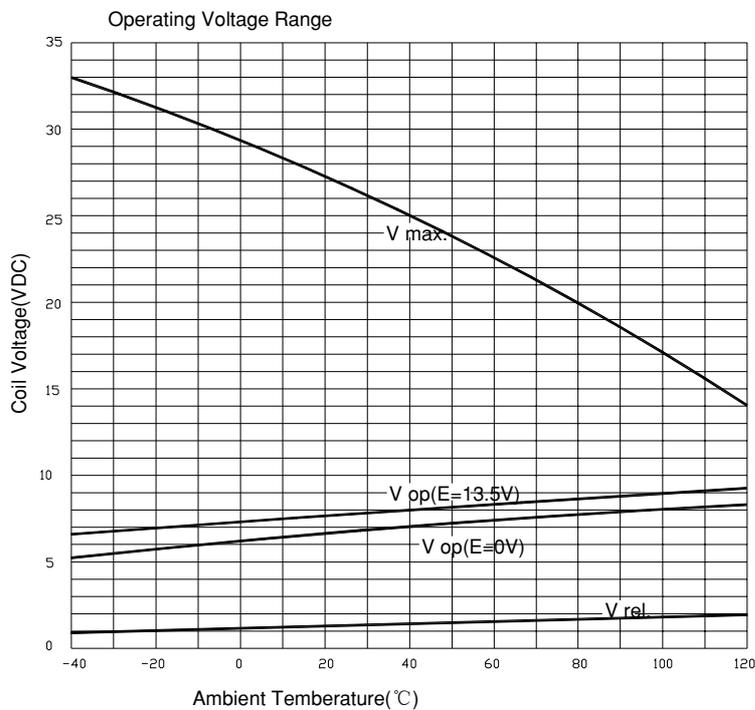
**Expected Electrical life:** 100,000 Operations at 20Amps 14VDC resistive load on normally open contact

**Expected Mechanical life:** 10,000,000 Operations

## ■ GENERAL DATA

Insulation Resistance	100M $\Omega$ Min at 500VDC
Between Contacts and coil	500VAC(for one minute)
Operate Time	4ms
Release Time	2ms
Temperature Range	-40°C to +105°C
Shock Resistance	6 msec up to 30g (No change in the switching state > 10 $\mu$ sec)
Vibration Resistance	10-500Hz, 6g (No change in the switching state > 10 $\mu$ sec)
Max. switching frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr
Humidity	20-50%
Weight	Approx 4g

## ■ ENGINEERING DATA



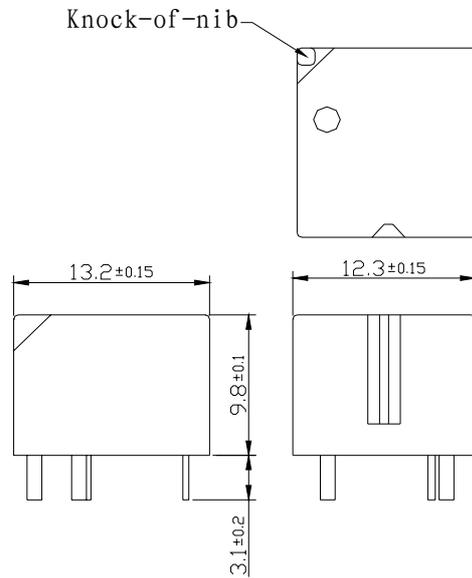
Does not take into account the temperature rise due to the contact current

V op=Operation voltage

E=Pre-Generation

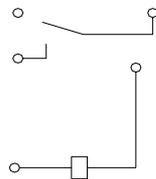
## OVERALL AND MOUNTING DIMENSIONS

### Outline Dimensions-Single Relay

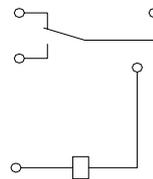


### Wiring Diagrams-Single Relay(Bottom Views)

1 Form A



1 Form C



### Suggested PC Board Layout-Single Relay(Bottom View)

