Automotive Relay	HY

Features

- 40A continuous rating at 85℃
- Various configurations (1A, 1B, 1C, 1U)
- Plug-in or PC board terminals
- Optional mounting bracket

1. COIL DATA (at 20°C)

1) Coil Power "L" type

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (W)
6	3.90	0.6	7.80	267	23 x (1±10%)	1.6
12	7.80	1.2	15.6	133	90 x (1±10%)	
24	15.6	2.4	31.2	67	360 x (1±10%)	

2) Coil Power "D" type

Nominal Voltage (VDC)	Pick-up Voltage (VDC)	Drop-out Voltage (VDC)	Max Allowable Voltage (VDC)	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (mW)
6	3.90	0.6	7.80	317	19 x (1±10%)	1.9
12	7.80	1.2	15.6	158	76 x (1±10%)	
24	15.6	2.4	31.2	79	300 x (1±10%)	

2. CONTACT DATA

Contact Arrangement		1 Form A, 1 Form B, 1 Form C, 1 Form U
Contact Resistance		100mΩ max. (at 1A 6VDC)
Contact Material		$AgSnO_2$
Load		Resistive load (COSΦ=1)
Contact Ratings		NO: 40A 14VDC NC: 30A 14VDC 1U: 2x20A 14VDC
Max. Switching Voltage		30VDC
Max. Switching Current		40A
Max. Switching Power		560W
Life Expectancy	Electrical	100,000 operations (at 30 operations/minute)
	Mechanical	10,000,000 operations (at 300 operations/minute)

3. CHARACTERISTICS

Insulation Resistance		100MΩ Min. (at 500VDC)
Dielectric Strength	Open Contacts	500VAC 1min
	Coil and Contacts	750VAC 1min
Operate Time		10ms
Release Time		10ms
Temperature Range		-40℃ ~ 85℃
Shock Resistance	Operating Extremes	10G
	Damage Limits	20G
Vibration Resistance		10 ~ 40Hz, 1.5mm
Max. switching frequency	Mechanical	18,000 operations/hr
	Electrical	1,800 operations/hr
Humidity		40 ~ 85%
Termination		PCB, Plug-in
Weight		Approx. 40g
Outline Dimension (L x W x H)		28 x 28 x 25mm

4. ORDERING INFORMATION

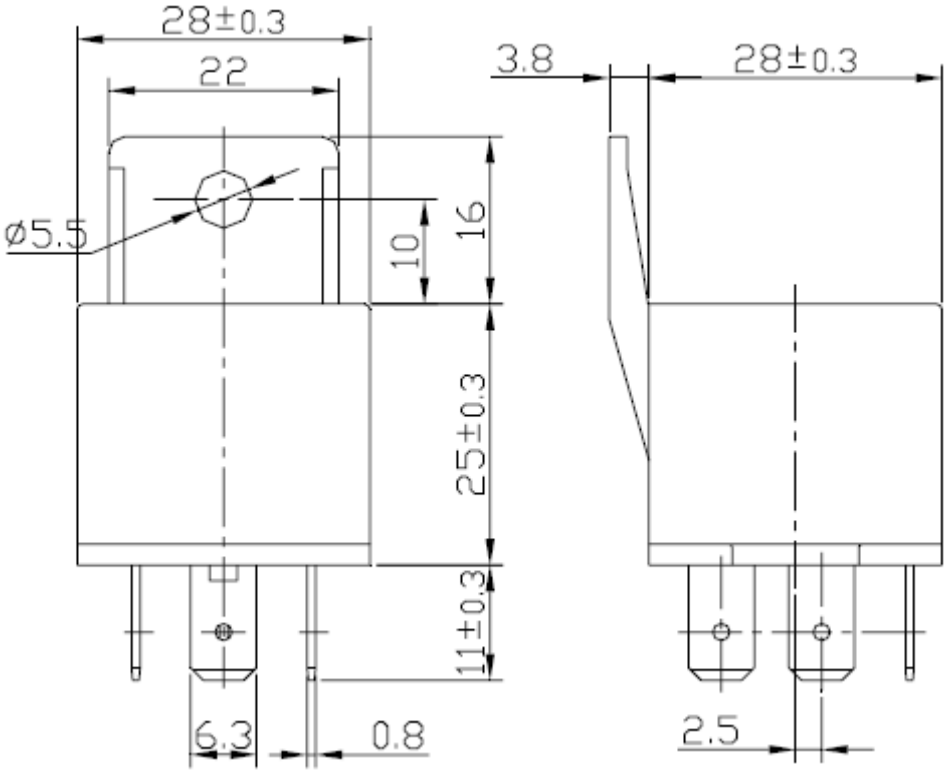
HY ①	1 ②	-	L ③	12 ④	R1 ⑤	P ⑥	B ⑦

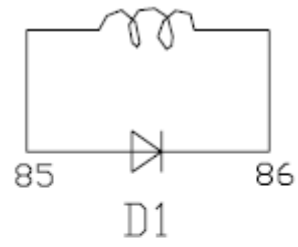
① Relay Model	HY
② Contact Arrangement	11: 1 Form A (SPST-NO) 1B: 1 Form B (SPST-NC) 1: 1 Form C (SPDT) 1U: 1 Form U
③ Coil Power	L : 1.6W D: 1.9W
④ Coil Voltage	6=6VDC, 12=12VDC, 24=24VDC
⑤ Division	Nil: Standard R1: Coil parallel with 1/2W resistor 680Ω for coil voltage 12VDC Coil parallel with 1/2W resistor 2700Ω for coil voltage 24VDC D1/D2: With diode
⑥ Construction	Nil: Plug-in type P: PCB type
⑦ Bracket	Nil: Without Bracket B: With Bracket

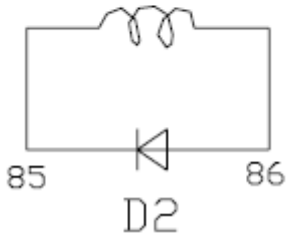
5. DIMENSIONS (Unit: mm)

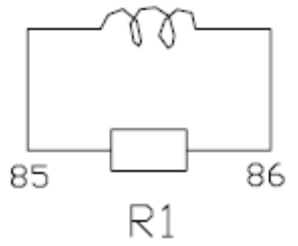
Outline Dimensions

1) Plug-in with bracket

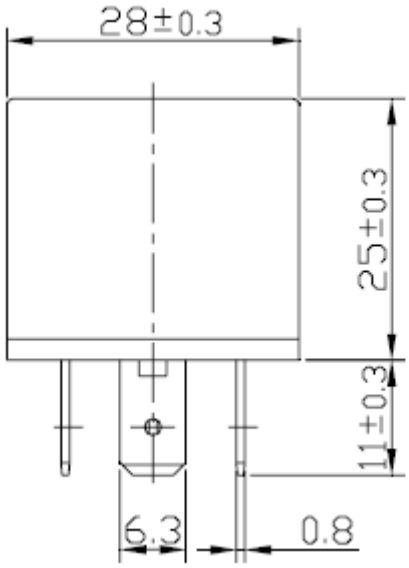


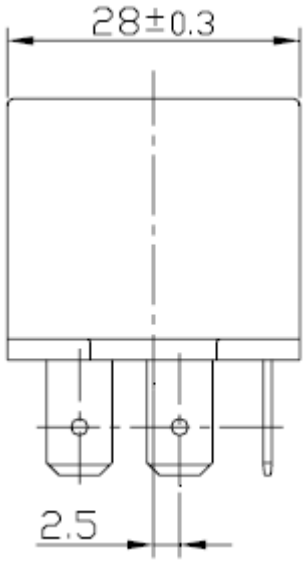


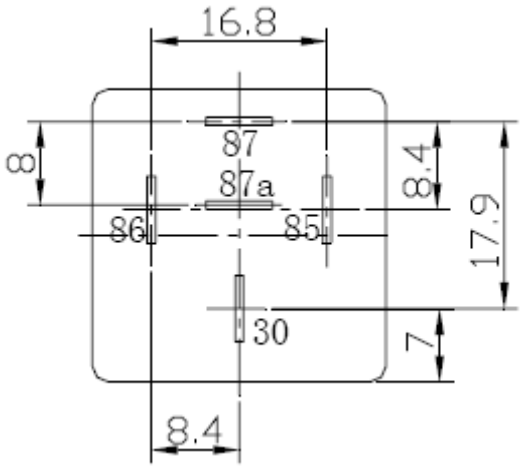




2) Plug-in without bracket

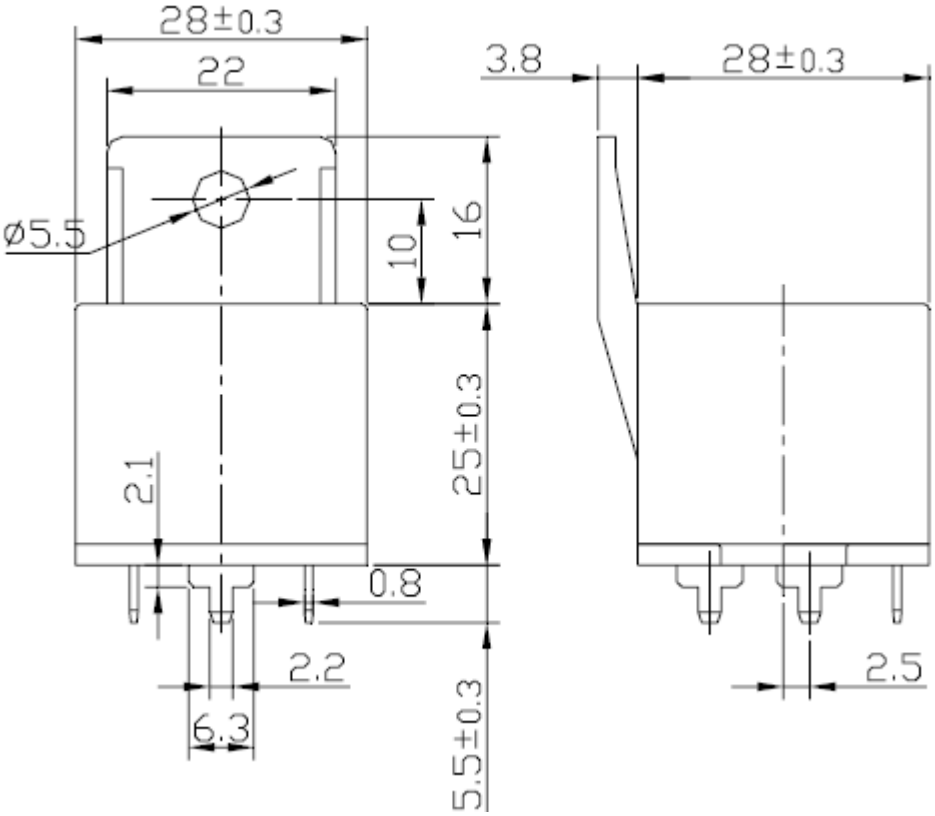


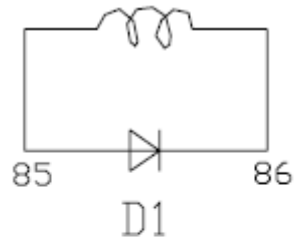


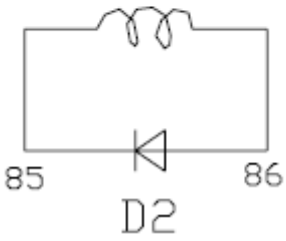


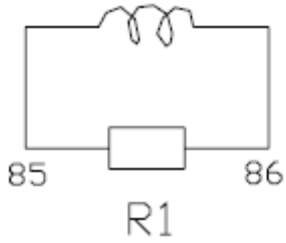
Plug-in Layout (Bottom view)

3) PCB with bracket

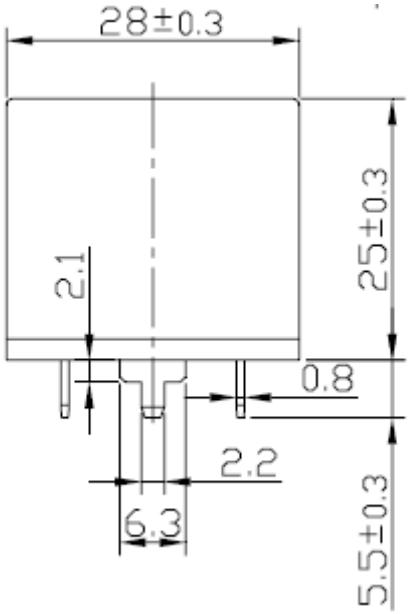


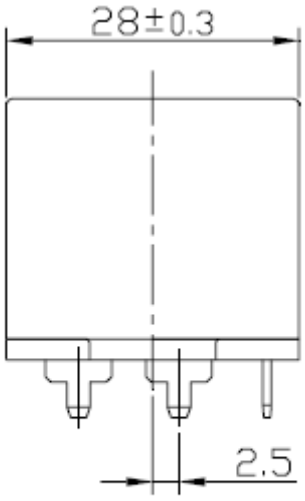


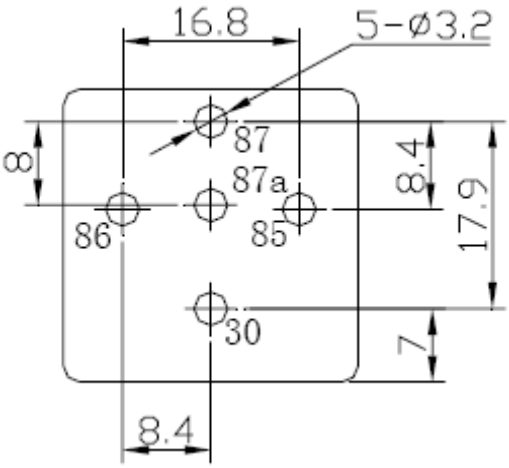




4) PCB without bracket





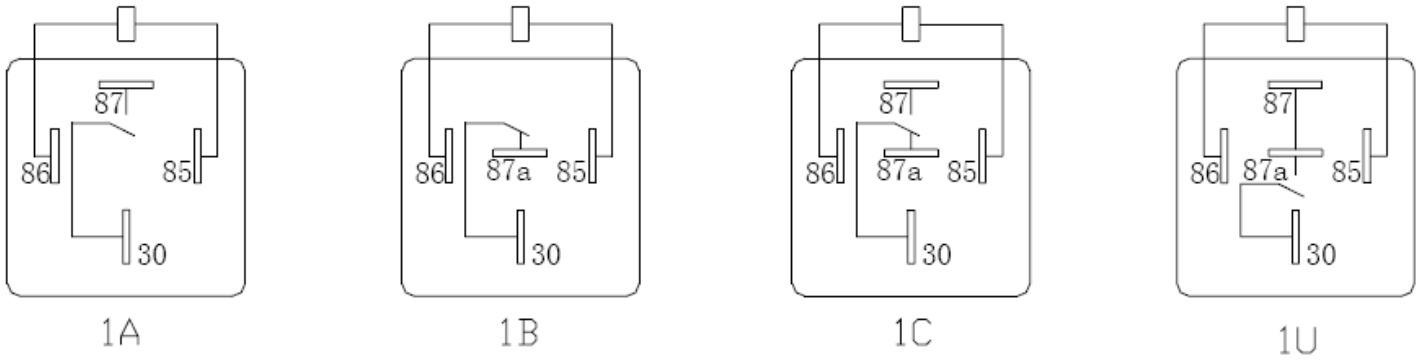


PCB Layout (Bottom view)

Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

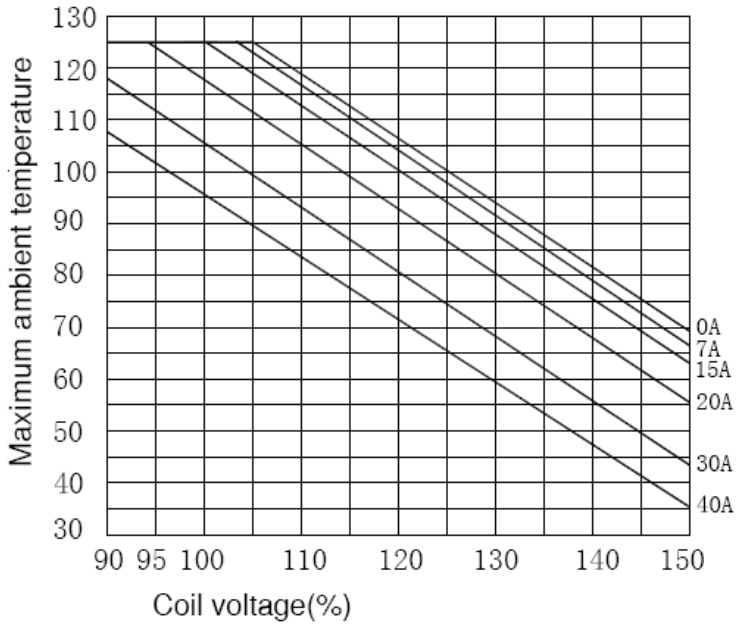
2) The tolerance without indicating for PCB layout is always ±0.1mm.

Wiring Diagram (Bottom View)



6. CHARACTERISTIC CURVES

Ambient Temperature



Contact Switching Capacity