

## ● Features

- 80A switching capability
- 1 Form A & 1 Form C contact arrangement
- Plastic Bracket & Metal Bracket Available
- Ambient temperature range: -40°C to 125°C
- Environmental friendly product (RoHS compliant)
- Available for PC board mounting & direct insert mounting
- Dimension: 26.0 x 26.0 x 23.7 mm



## ● Application

Rear Windows Defogger / Battery Disconnection Device / Air-Conditioning System / Fog Lamp & Headlight Control / Fuel Pump Control / ABS Control system / Cooling Fan Control / Power Management, etc.

## ● Contact Data

Contact Arrangement	1A	1C
Contact Material	Ag Alloy	
Contact Rating	80A 14VDC	NO: 80A 14VDC NC: 60A 14VDC
Max. Switching Power	1120W	
Max. Switching Current	80A	
Min. Contact Load	1A 6VDC	
Voltage Drop (initial)	Typ.: 30mV (at 10A) Max.: 250mV (at 10A)	
Contact Resistance	≤100mΩ	
Electrical Endurance	1x10 <sup>5</sup>	
Mechanical Endurance	1x10 <sup>7</sup>	

- Coil Parameter (at 23°C)

Coil Voltage (VDC)		Coil Resistance ( $\Omega \pm 10\%$ )	Pickup Voltage(max) (VDC)	Release Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
12	15.6	90	7.8	1.2	1.6
24	31.2	320	15.6	2.4	1.8

- Operation Condition

Insulation Resistance		100M $\Omega$ min (at 500VDC)
Dielectric Strength	Between Contacts	500V, 50/60Hz 1 min.
	Between Contact and Coil	500V, 50/60Hz 1 min.
Shock Resistance	Operating Extremes	10G
	Damage Limits	100G
Vibration Resistance	Operating Extremes	10~500Hz, 5.0G
	Damage Limits	10~500Hz, 5.0G
Ambient Temperature	Standard Type	-40~85°C (no freezing)
	Heat Resistant Type	-40~125°C (no freezing)
Operate Time		$\leq 15$ ms
Release Time		$\leq 15$ ms
Relative Humidity		5%~85%
Weight		38g



## ● Ordering Information

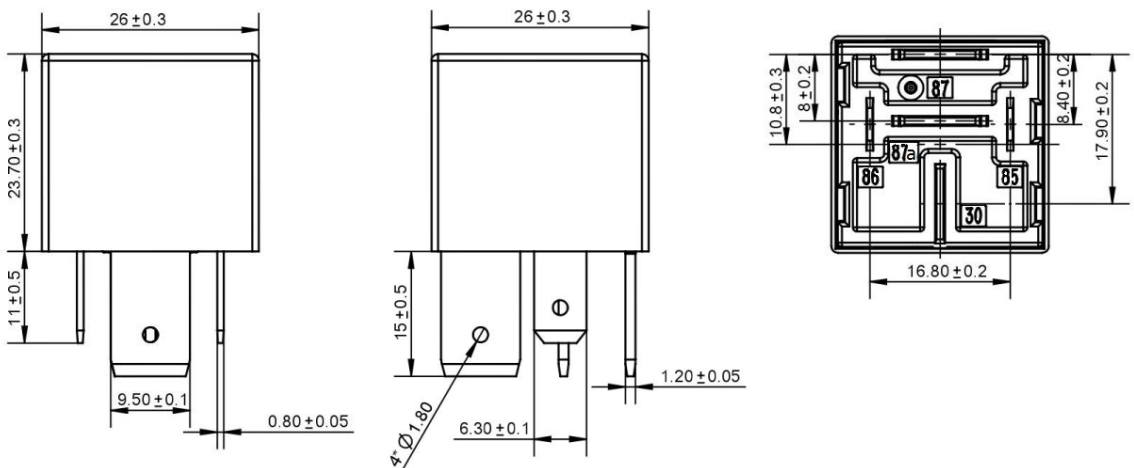
	AL6	-12D	R	T	-C	80	F	-S	(XXX)
<b>Model</b>	AL6: Standard AL6P: PCB AL6M: Metal Bracket AL6B: Plastic Bracket								
<b>Coil Voltage</b>	12: 12VDC 24: 24VDC								
<b>Paralleled Component</b>	Nil: Standard R: with resistor (680Ω 12V) (2700Ω 24V) D1: with diode (the diode anode on #85 terminal) D2: with diode (the diode anode on #86 terminal)								
<b>Heat Resistant</b>	Nil: Standard type T: Heat resistant type								
<b>Contact Form</b>	A: 1 Form A C: 1 Form C								
<b>Contact Rating</b>	80: 80A								
<b>Contact material</b>	Nil: AgSnO <sub>2</sub> F: AgNi								
<b>Construction</b>	Nil: Flux tight S: Sealed								
<b>Special Code</b>	Nil: Standard XXX: Customer special requirement								

## ● Dimensions (UNIT: mm)

Outline Dimensions

Mounting (Bottom views)

AL6 type:

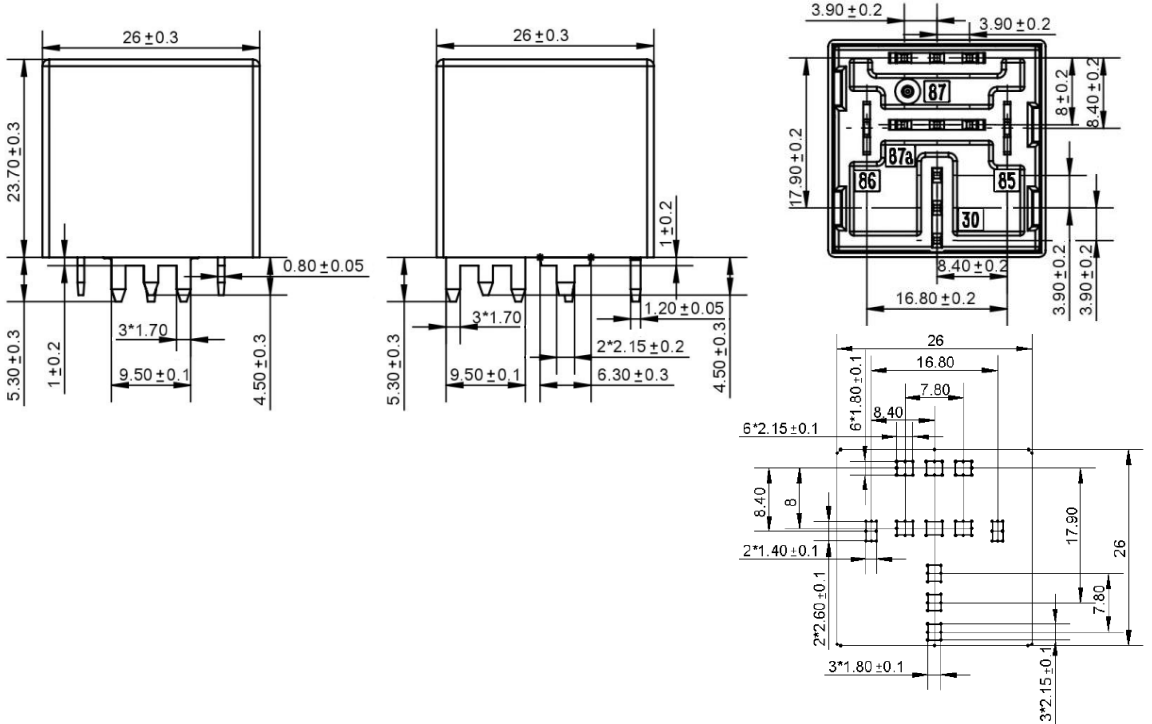


● Dimensions (UNIT: mm)

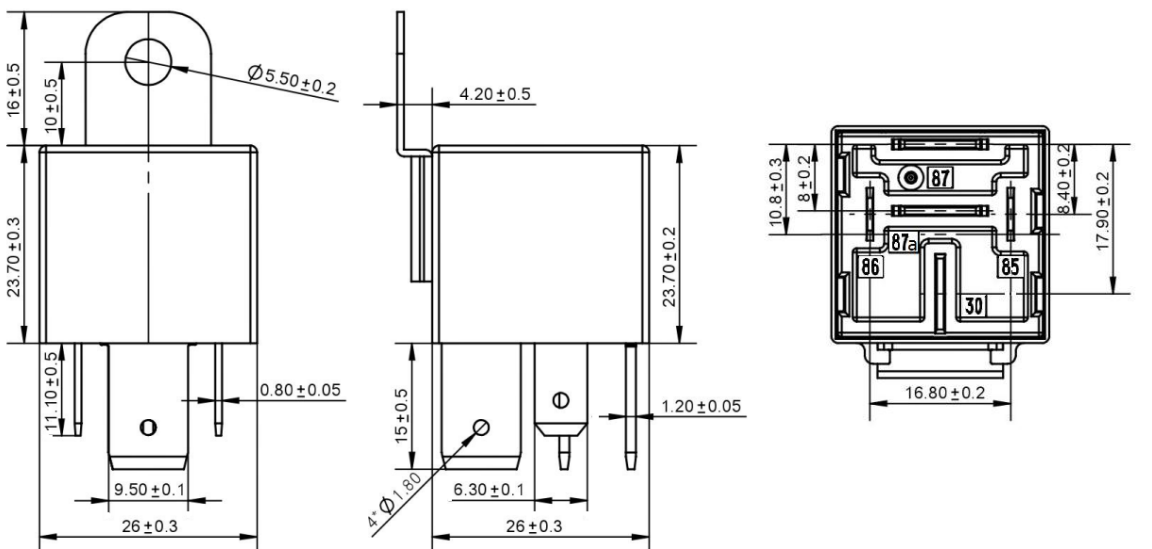
Outline Dimensions

Mounting (Bottom views)

AL6P type:



AL6M type:

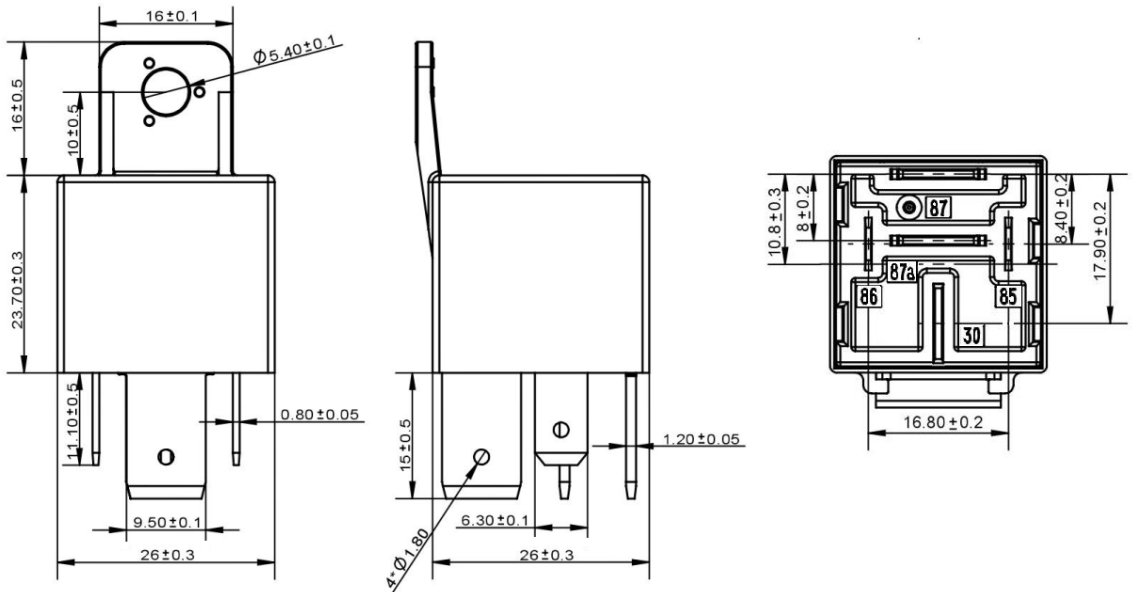


● Dimensions (UNIT: mm)

Outline Dimensions

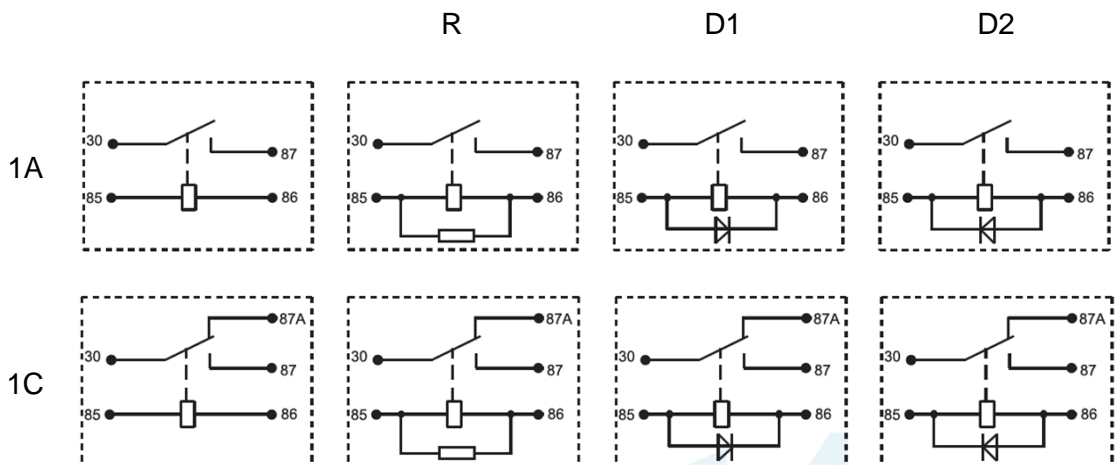
Mounting (Bottom views)

AL6B type:



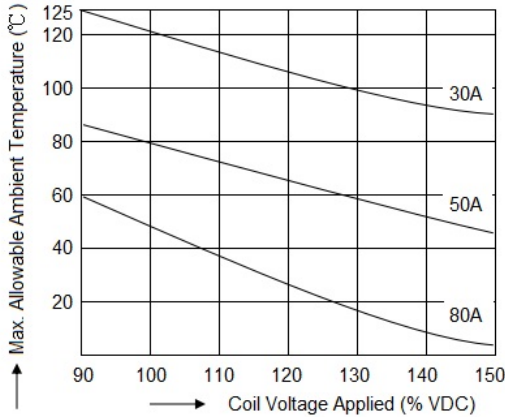
● Dimensions (UNIT: mm)

Wiring Diagram (Bottom views)

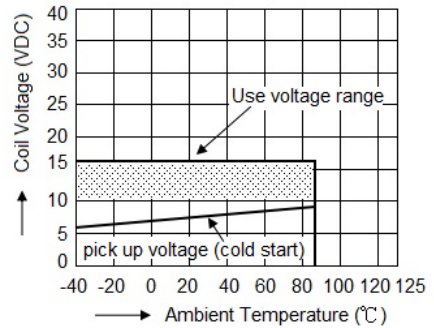


● **Engineering Data**

Allowable Ambient Temperature

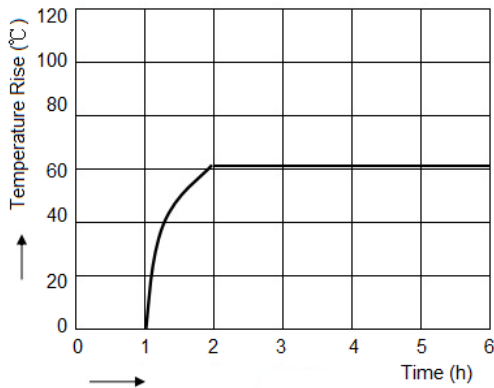


Ambient Temperature and Coil Voltage  
(Reference value of coil voltage 12VDC)



● **Engineering Data**

Coil Temperature Rise (Ambient temperature 23°C)



1. The maximum allowable coil temperature is 155°C. Considering the average coil temperature rise measured by resistance method, it is recommended that the coil temperature should be <math><155^{\circ}\text{C}</math> under different operating conditions, different coil voltage and different load conditions.
2. The curve is applicable in the condition of no load current
3. When the actual operating voltage of the coil exceeds the specified range of the curve, please contact IOEC and provide detailed operating conditions.

Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $>1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $>5\text{mm}$ , tolerance should be  $\pm 0.5\text{mm}$ .

2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

#### Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact IOEC for the technical service. However, it is the user's responsibility to determine which product should be used only.

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