

● Features

- Up to 60A 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 22.7 mm



● Application

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

● Contact Data

Contact Arrangement		1A	1C
Contact Material		Ag Alloy	
Contact Rating	AL6 40A	40A 14VDC	NO: 40A 14VDC NC: 30A 14VDC
	AL6 60A	60A 14VDC	NO: 60A 14VDC NC: 30A 14VDC
Max. Switching Power	AL6 40A	560W	
	AL6 60A	840W	
Max. Switching Current	AL6 40A	40A	
	AL6 60A	60A	
Min. Contact Load		1A 6VDC	
Voltage Drop (initial)		Typ.: 20mV (at 10A) Max.: 250mV (at 10A)	
Contact Resistance		≤100mΩ	

● Contact Data

Electrical Endurance	1x10 ⁵
Mechanical Endurance	1x10 ⁷

● Coil Parameter (at 23°C)

Coil Voltage (VDC)		Coil Resistance (Ω±10%)	Pickup Voltage(max) (VDC)	Release Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
12	18	90	9	1.2	1.6
24	36	320	18	2.4	1.8

● Operation Condition

Insulation Resistance		100MΩ 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	20G
	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		≤10ms
Release Time		≤10ms
Relative Humidity		5%~85%
Weight		Approx. 28g

● Ordering Information

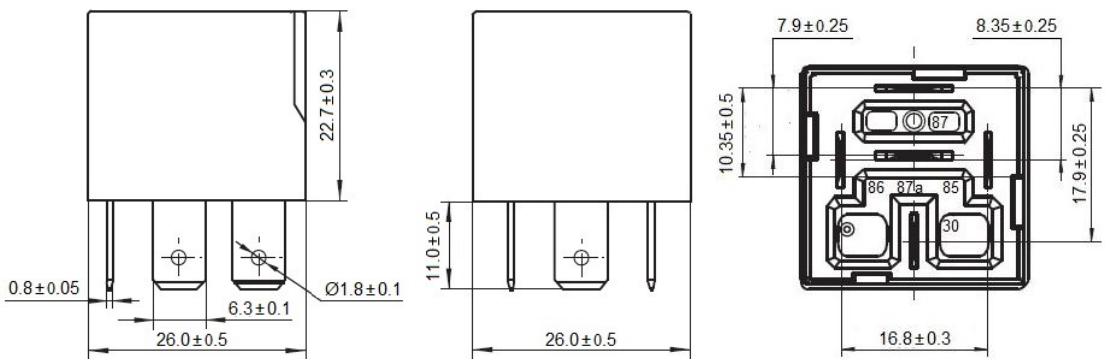
	AL6	-12D	R	T	-C	40	F	-S	(XXX)
Model	AL6: Standard AL6P: PCB AL6M: Metal Bracket AL6B: Plastic Bracket								
Coil Voltage	12: 12VDC 24: 24VDC								
Paralleled Component	Nil: Standard R: with resistor (680Ω 12V) (2700Ω 24V) D1: with diode (the diode anode on #85 terminal) D2: with diode (the diode anode on #86 terminal)								
Heat Resistant	Nil: Standard type T: Heat resistant type								
Contact Form	A: 1 Form A C: 1 Form C								
Contact Rating	40: 40A 60: 60A								
Contact Material	Nil: AgSnO ₂ F: AgNi								
Construction	Nil: Flux tight S: Sealed								
Special Code	Nil: Standard XXX: Customer special requirement								

● Dimensions (UNIT: mm)

Outline Dimensions

Mounting (Bottom views)

AL6 type:

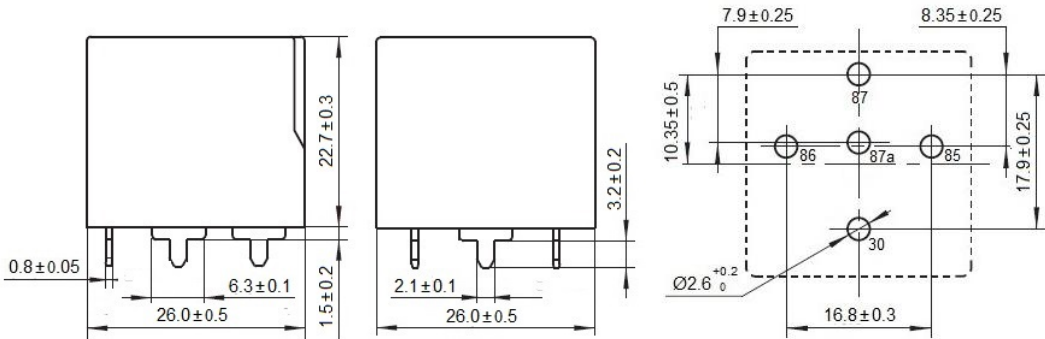


● Dimensions (UNIT: mm)

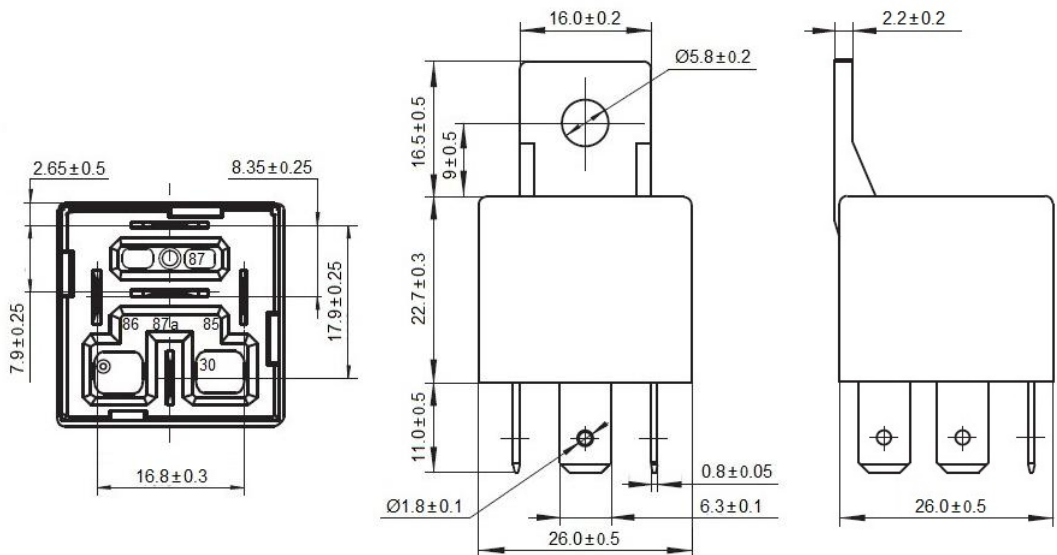
Outline Dimensions

Mounting (Bottom views)

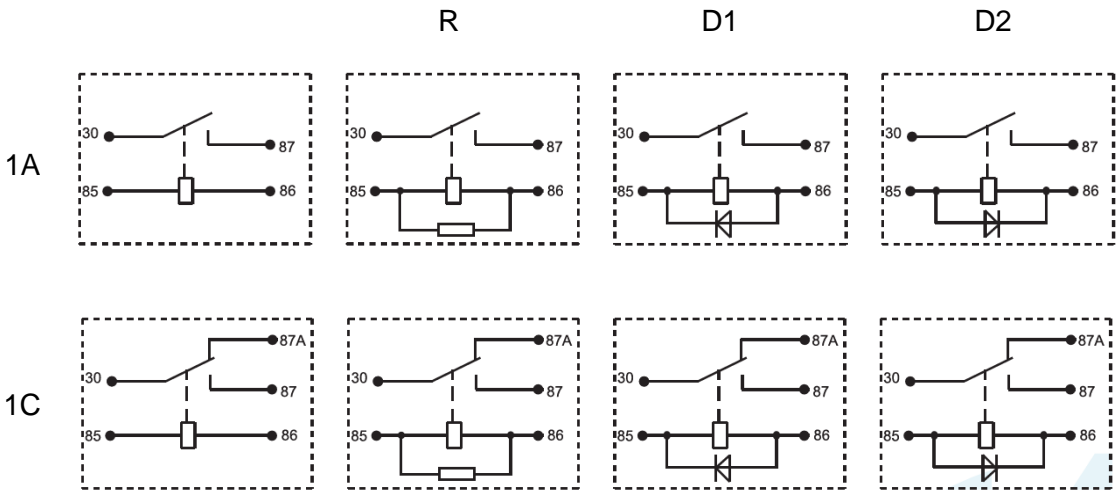
AL6P type:



AL6B type:

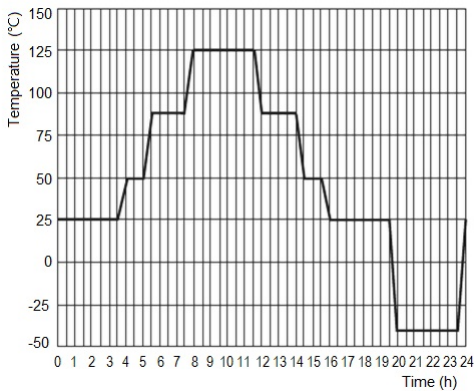


● **Wiring Diagram (Bottom views)**

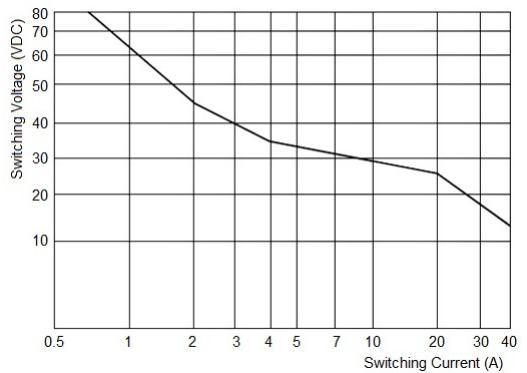


● **Engineering Data**

Ambient Temperature Curve (one cycle)



Load Limit Curve (at 23°C)



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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