

● Features

- Up to 40A switching capability
- 1 Form A & 1 Form C contact arrangement
- Plastic Bracket & Metal Bracket Available
- Ambient temperature range: -40°C to 85°C
- Environmental friendly product (RoHS compliant)
- Available for PC board mounting & direct insert mounting
- Dimension: 27.4 x 28.4 x 25.0 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	40A 14VDC	NO: 40A 14VDC NC: 30A 14VDC
Max. Switching Power	560W	
Max. Switching Current	40A	
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 ⁶

- Coil Parameter (at 23°C)

Coil Voltage (VDC)		Coil Resistance ($\Omega \pm 10\%$) at 23°C		Pickup Voltage (max) (VDC)	Release Voltage (min) (VDC)	Coil Power Consumption (W)
Rated	Max.	without Resistor	with R1 Resistor			
12	18	96	-	9	1.2	approx. 1.6
12	18	96	680	9	1.2	approx. 1.8
24	36	320	-	18	2.4	approx. 1.6
24	36	320	2700	18	2.4	approx. 1.8

- Operation Condition

Insulation Resistance		100M Ω 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		≤ 10 ms
Release Time		≤ 10 ms
Relative Humidity		5%~85%
Weight		Approx. 28g

● Ordering Information

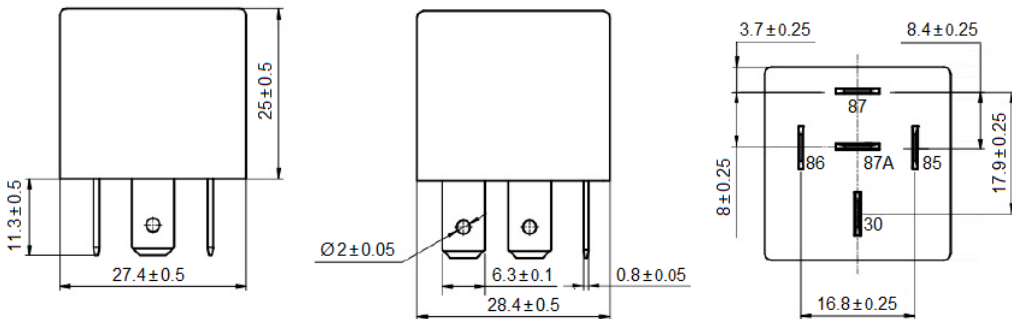
	AL	-12D	R	-C	40	-S	(XXX)
Model	AL: Standard ALB: Plastic Bracket ALM: Metal Bracket						
Coil Voltage	12: 12VDC 24: 24VDC						
Paralleled Component	Nil: Standard R: with resistor (680Ω 12V) (2700Ω 24V)						
Contact Form	A: 1 Form A C: 1 Form C						
Contact Rating	40: 40A						
Construction	Nil: Flux tight S: Sealed						
Special Code	Nil: Standard XXX: Customer special requirement						

● Dimensions (UNIT: mm)

Outline Dimensions

Mounting (Bottom views)

AL type:

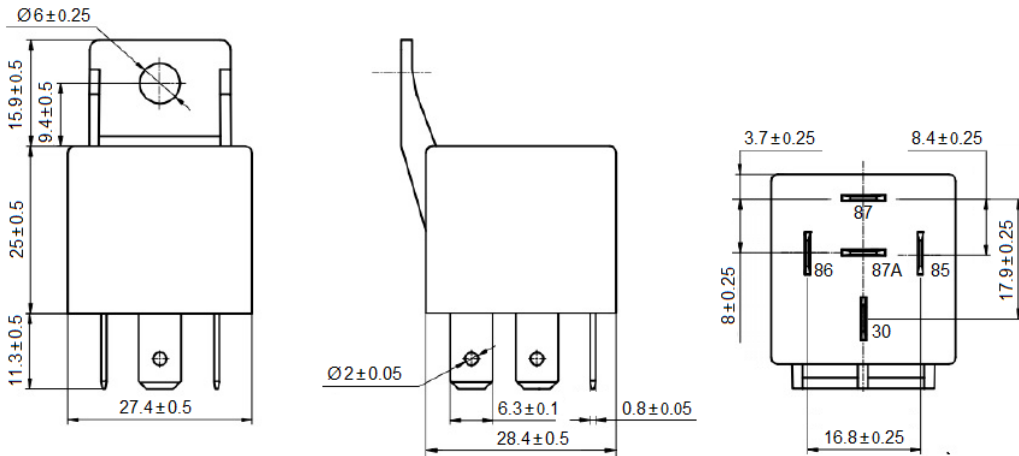


● Dimensions (UNIT: mm)

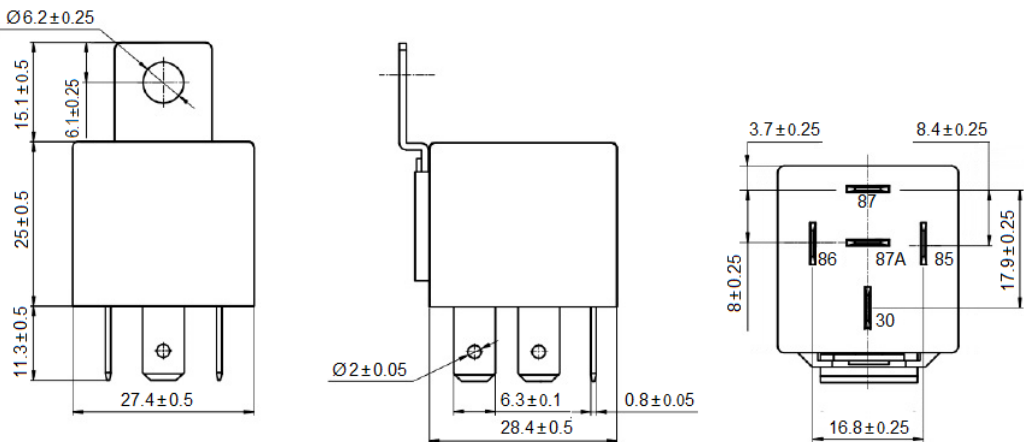
Outline Dimensions

Mounting (Bottom views)

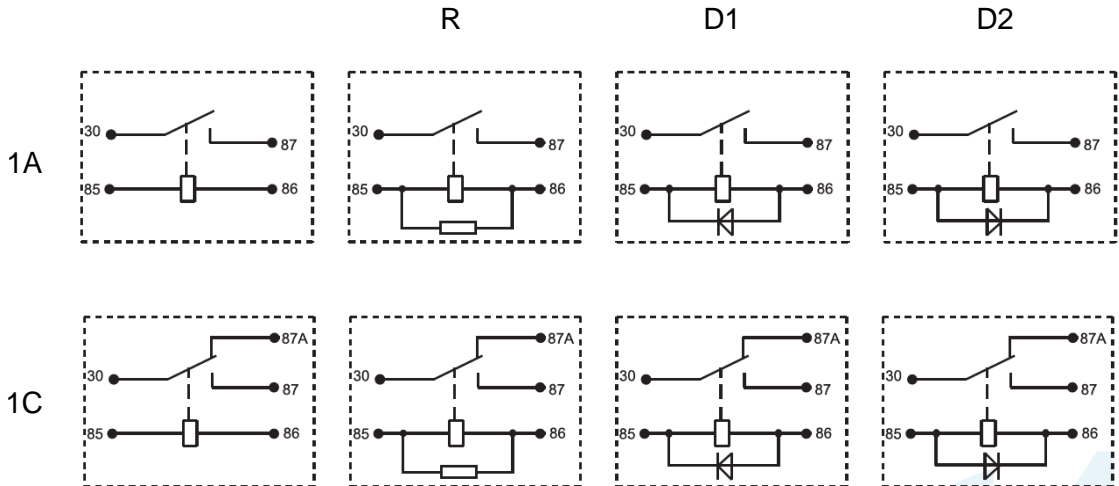
ALB type:



ALM type:



● Dimensions (UNIT: mm)
Wiring Diagram (Bottom views)



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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