

High Power Automotive Relay SARB



Features

- Miniature relay with high power: max. switching capability 40A.
- Low coil power consumption with excellent performance.
- Both sealed and open types available.
- Class H coil available.

Typical Applications

- Automotive control switching box, automation, etc.

Contact Capacity

Model	SARB -DM	SARB-D
Nominal switching capacity (res. load)	40A 14VDC	NO: 40A 14VDC NC: 30A 14VDC
Max. switching current	40A	40A
Max. switching voltage	14VDC	14VDC
Max. switching power	560W	560W

Parameters Data

Contact material	Silver alloy	
Initial contact resistance (at 6VDC 1A)	100mΩ Max.	
Operate time (at nominal volt.)	10msec. Max.	
Release time (at nominal volt.)	10msec. Max.	
Initial insulation resistance	100MΩ Min.(500VDC).	
Initial dielectric strength	Between open contacts: 500VAC, 50/60Hz 1min.	
	Between coil and contact: 500VAC, 50/60Hz 1min.	
Vibration resistance	Functional	10 ~ 55Hz at double amplitude of 1.5 mm
	Destructive	10 ~ 55Hz at double amplitude of 1.5 mm
Shock resistance	Functional	20G Min.
	Destructive	100G Min.
Endurance(operations)	Mechanical (at 10,800 ops./h)	1×10 ⁷
	Electrical (at 600 ops./h)	1×10 ⁵
Ambient temperature	-40°C ~ +125°C(no condensation)	
Unit weight	Open type: Approx.16.0 g; Sealed type: Approx. 20.5 g	

Coil Data (at 20°C)

Nominal voltage (VDC)	Nominal operating current ±10% (mA)	Coil resistance ±10(Ω)	Max. allowable voltage (VDC)	Operate voltage Max.(VDC)	Release voltage Min.(VDC)	Nominal operating power (W)
5	320.00	15.6	150 % of nominal voltage	58 % of nominal voltage	10% of nominal voltage	Approx. 1.60W
6	266.67	22.5				
9	180.00	50				
12	133.33	90				
18	89.11	202				
36	44.44	810				
24	66.67	360				
48	33.33	1,440				

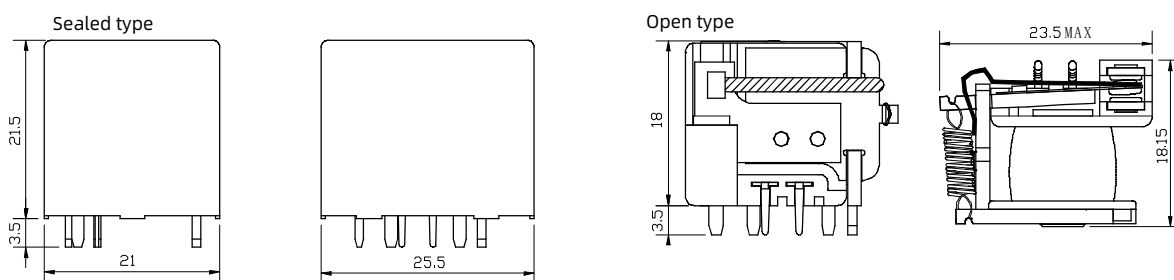
Nomenclature

SARB	-S	-1	12	D	M	4	U	1	XX	Special Parameter: Nil-Standard type, Letter or number-Special requirement
Yoke Terminal Arrangement: Nil-3 yoke terminal, 1-2 yoke terminal										
Terminal Arrangement: U-USA, E-European										
Contact Material: Nil-Standard, 4-3 compounds ⁽¹⁾										
Contact Form: Nil-Form C, B-Form B, M-Form A										
Coil Power: D-1.6W										
Coil Voltage (VDC): 05, 06, 09, 12, 18, 24, 36, 48										
Number of Poles: 1-1 Pole										
Protective Construction: Nil-Open type, S-Flux proofed, SH-Sealed type washable										
Type Designation: SARB										

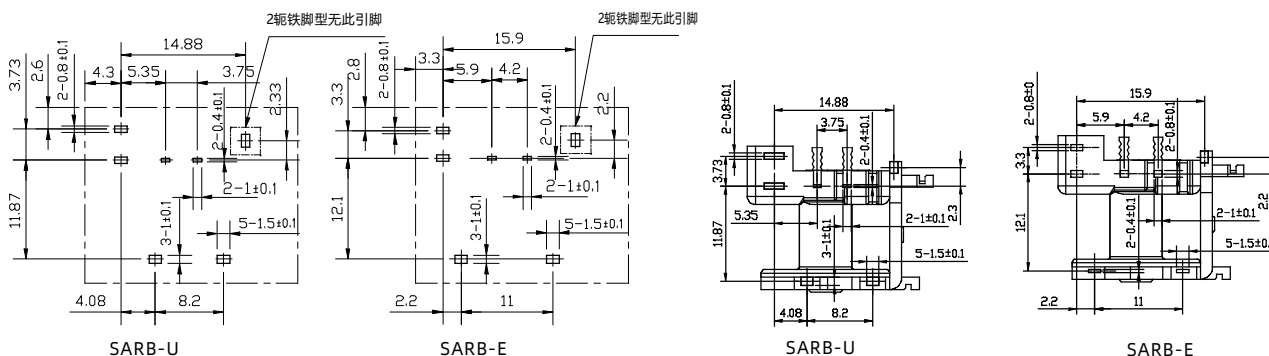
note: (1)3compounds only for CO type (Form C)

Outline Dimensions, Wiring Diagram, P.C. Board Layout (unit: mm)

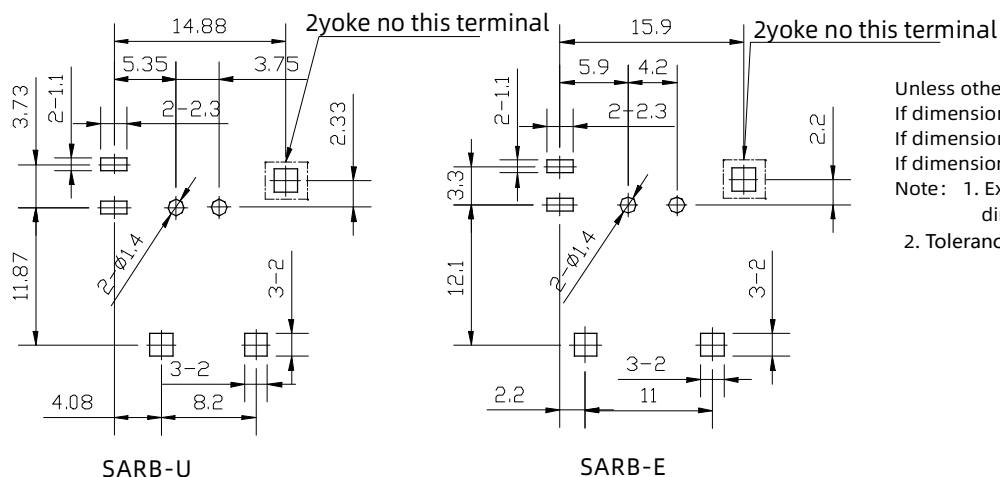
Outline Dimensions



bottom view

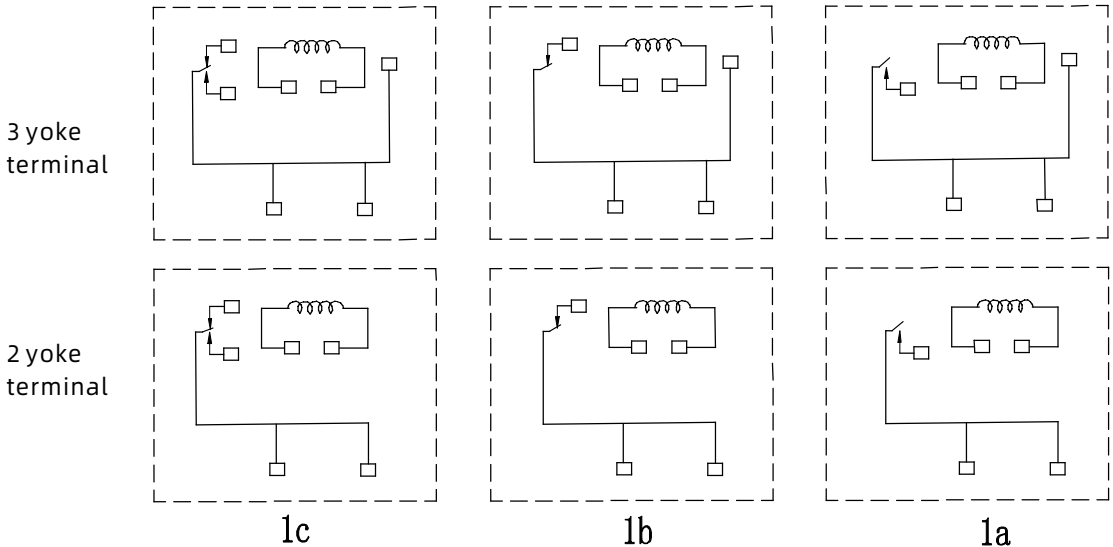


P.C.B. Layout (bottom view)

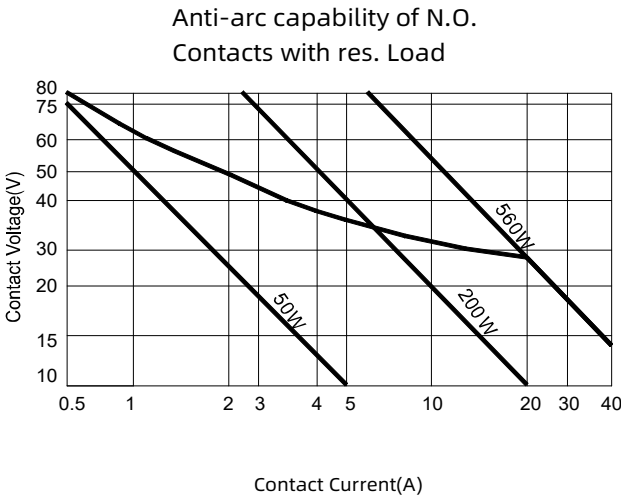
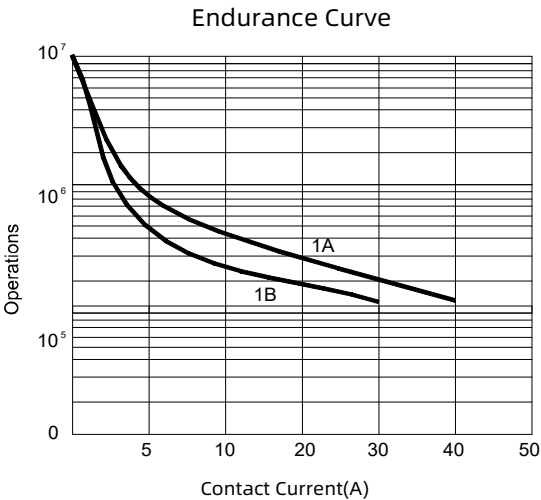
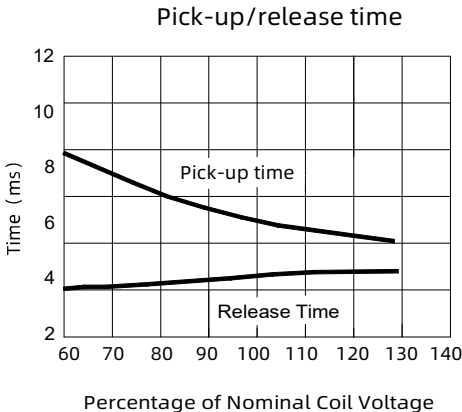
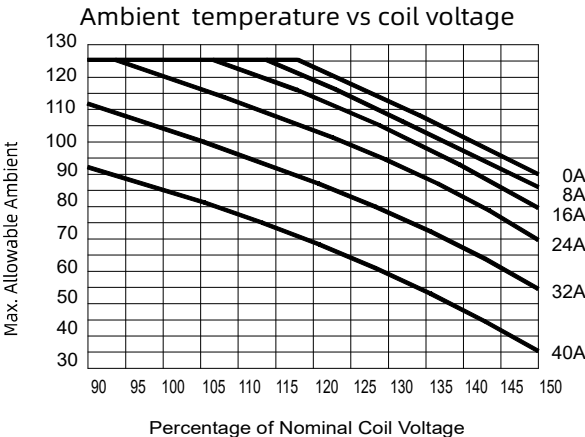


Unless otherwise specified:
 If dimension < 1mm, tolerance: $\pm 0.2\text{mm}$;
 If dimension 1~5mm, tolerance: $\pm 0.3\text{mm}$;
 If dimension > 5mm, tolerance: $\pm 0.4\text{mm}$.
 Note: 1. Extended terminal dimension is dimension before soldering.
 2. Tolerance of P.C.B. layout: $\pm 0.1\text{mm}$.

Wiring Diagram (bottom view)



Characteristic Curves



Statement:

This product specification is for reference only, subject to change without prior notice. We could not evaluate all test conditions for every possible application, thus customers should be in a right position to choose suitable products for their own application. If in doubt, please contact Sanyou for more technical support. However, it's the customer's responsibility to determine which product should be used.