SANYOU RELAYS
Relays for advanced technology

Miniature PCB Automotive Relay

SARA-Series

Feature

- ●25A motor rating。
- ●Microminiature
- ●Change Over Contact Type
- ●Both single and dual relays available。
- ●H (180℃)insulation Class

Contact Capacity

Model	SARA
Nominal switching capacity(res,load)	20A 14VDC
Max.switching current	30A
Max.switching voltage	16VDC
Max.switching power	350W

Contact rating voltage	Rating type		contact rating current(A) 1C、2C NO	NC	duty factor on S	off S	endurance (cycles)	contact material	test ambient temperature
14VDC	motor rating	on	25	—	0.3	19.7	$1X10^5$	$AgSnO_2$	23℃
		off	25	—					
	imitate window up-down	on	25	—	0.2	4	$1X10^5$	$AgSnO_2$	
		steady	10	—	2.3				
		off	25	—	0.5				
	imitate motor freely turn round	on	27	—	0.02	1.8	$1X10^5$	$AgSnO_2$	
		transient	17	—	0.03				
		off	8	—	0.15				
	resistance	on	20	—	1	3	$2X10^5$	$AgSnO_2$	
		off	20	—					

notes:(1) making current is segmented and imitates electromechanical peak current ;

(2) In the table the rating refers to a flash light rating , When wiring , ensure public terminal (spring) positive;

(3) When your rating is inconsistent with us,please tell SANYOU about your operating conditions for more support.

Characteristic Data

contact material	silver alloy	
Dropping Voltage of Contacts	200mv/at 10A (max)	
Operate time(at nominal volt.)	5msec. Max.	
Release time(at nominal volt.)	5msec. Max.	
Insulation Resistance	100MΩ Min.(DC500V)	
Initial dielectric strength	Between open contact： AC500 , 50/60Hz 1min.	
	Between coil and contact： AC500 , 50/60Hz 1min.	
Vibration resistance	10～500Hz , $49m/s^2$	
Shock resistance	NO 10G / NC 5G	
Endurance (operate)	Mechanical (at 10,800ops./h)	$1X10^7$ cycles
	Electrical	See the contact parameters
Ambient temperature	-40℃～+105℃(no condensation)	
Unit weight	Approx.5.0g (single relay) ; Approx.10.0g (dual relay)	

Coil Data (at 23℃)

Nominal voltage (VDC)	Nominal operating current ±10% (mA)	Coil resistance ±10% (Ω)	Pick-up voltage (Max.)	Drop-out voltage (Min.)	Max. allowable voltage		Nominal operating power
					23℃	85℃	
12	53.33	225	7.2	1.0	20	16	0.64W
12	66.67	180	6.5	1.0	18	14	0.8W

Ordering Information

Nomenclature

SARA - S - 1 12 D X X - XX

Special Parameter : Nil-Standard type, Letter or number-Special requirement

Contact material : Nil-$AgSnO_2$

Contact Form : Nil-FormC,M-FormA

Coil Power : D-0.64W, H-0.8W

Coil Voltage (VDC) : 12

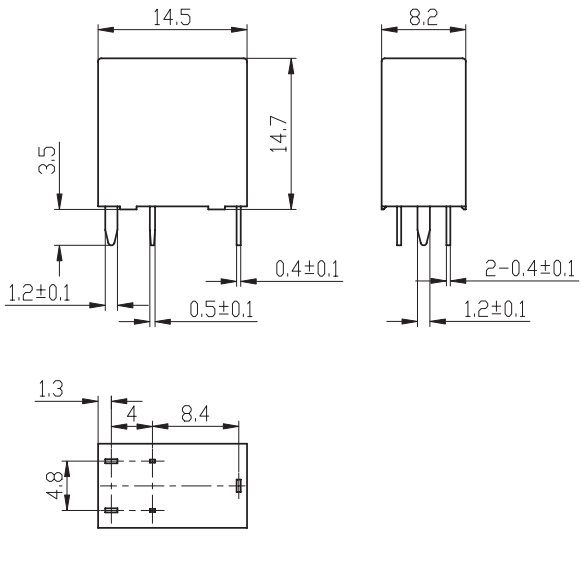
Number of Poles : 1-single relay 2-dual relay

Protective Construction : S-Flux proofed, SH-Sealed type washable,

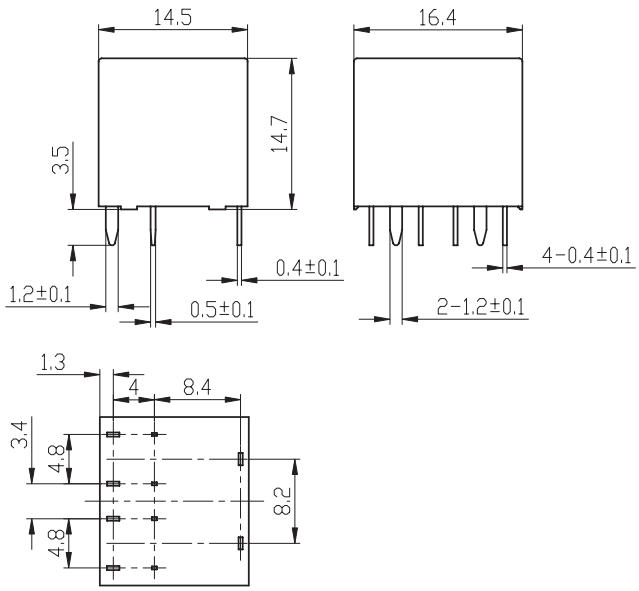
Type Designation : SARA

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

single relay

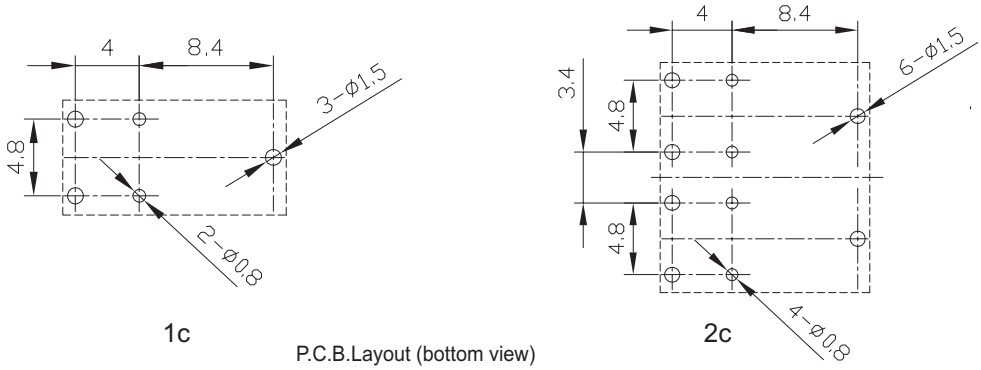


dual relay



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

Wiring Diagram (bottom view)



P.C.B.Layout (bottom view)

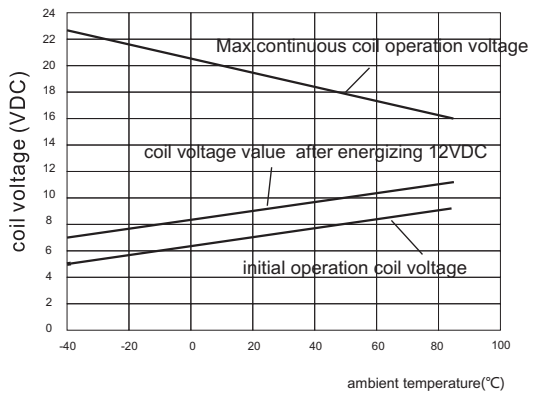
Typical Applications

- ●Automatic door window
- ●central door locking、sunroof control
- ●car mirror adjustment、 seat adjustment
- ●pilot light control、 wiper control

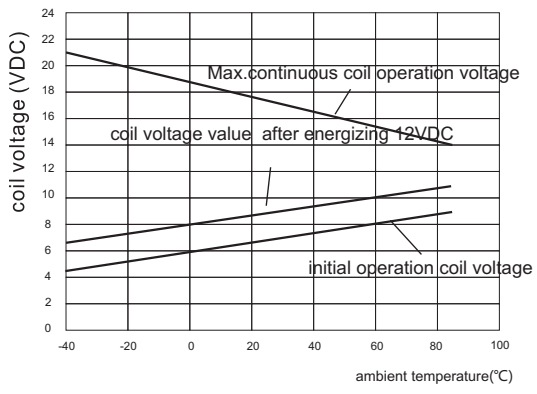
Characteristic Curves

1.coil continuous energizing voltage range

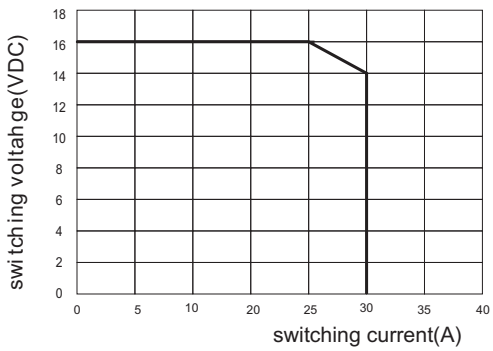
225Ωcoil continuous energizing voltage range



180Ωcoil continuous energizing voltage range



2.Max.allowable rating （23℃)



Disclaimer:
This datasheet is the customers' reference. All the specification are subject to change without notice.
We could not evaluate all the performance and all the parameters for every possible application.Thus the user should in a right position to choose the suitable product for their own application.If there is any query, please contact Sanyou for the technical service.However it is the user's responsibility to determine which product should be used only.