SANYOU RELAYS
Relays for advanced technology

Miniature PCB Automotive Relay SARDN-Series

Feature

- Max.Switching Capability:35A , Low Power 0.6W/0.8W
- Microminiature, Standard PCB Type
- High Vibration and Shock Resistance

Contact Capacity

Model	SARDN
Nominal Load(Res.)	20A 14VDC
Max.Switching Current	35A (14VDC)
Max.Switching Voltage	30VDC

Characteristic Data

Contact Material	Silver Alloy	
Dropping Voltage of Contacts	200mV/at 10A (max)	
Operate Time	10msec. Max.	
Release Time	5msec. Max.	
Initial Insulation Resistance	100MΩ Min.(DC500V)	
Initial Dielectric Strength	OP/OP : AC500V , 50/60Hz 1min.	
	IP/OP : AC500V , 50/60Hz 1min.	
Vibration Resistance	10~55Hz at double amplitude of 1.5 mm	
Shock Resistance	NO 10G/NC 5G	
Endurance(operations)	Mechanical (10,800ops./h)	$1x10^7$ cycles
	Electrical(720ops./h)	See the contact parameters table
Ambient Temperature	-40℃~+125℃ (no condensation)	
Unit Weight	Approx. 6.0g	

Contact Data

Contact Voltage	Load Type		Contact Current(A)		Duty Factor		Electrical Endurance (cycles)
			NO	NC	on (S)	off (S)	
14VDC	Res.	on	20	10	2	2	$2x10^5$
		off	20	10			
	Res.(1)	on	30	—	2	2	$1x10^5$
		off	30	—			
	Motor(1)	on	40(2)	—	0.2	2	$2x10^5$
		off	15(2)	—			

Note: the above parameters for the standard.

Contact Voltage	Load Type		Contact Current(A)		Duty Factor		Electrical Endurance (cycles)
			NO	NC	on (S)	off (S)	
14VDC	Lamp[1]	on	90[3]	—	1	9	$2x10^5$
		off	8.8				
	Lamp[1]	on	6x21W	—	1	6	$1x10^5$
		off					
	Flashlight[1]	on	3x21W	—	0.365	0.365	$2x10^6$
		off					

Note: (1) Material of spring is high conductive
(2) It means the surge current of motor LRA
(3) Initial peak current of filament

Coil Data (at 20℃)

Nominal Voltage (VDC)	Nominal Current (VDC)	Coil Resistance ±10% (Ω)	Max continuous Voltage	Pick-up Voltage (Max.)	Drop-out Voltage (Min.)	Nominal Operating Power
6	100.00	60	130% of nominal voltage	60% of nominal voltage	10% of nominal voltage	Approx. 0.60W
9	66.67	135				
12	50.00	240				
18	33.33	540				
24	25.00	960				
6	133.33	45	130% of nominal voltage	57.5% of nominal voltage	10% of nominal voltage	Approx. 0.80W
9	89.00	101				
12	66.67	180				
18	44.44	405				
24	33.33	720				

Ordering Information

Nomenclature

SARDN -S -1 12 D M 1 -XX

Special Parameter : Nil-Standard Type,
01- The material of Moveable Spring is Phosphor bronze
Letter or Number-Special requirement

Contact Material : Nil-$AgSnO_2$, 5-Cu plated with La

Contact Form : Nil-Form C , B-Form B , M-Form A

Coil Power : D-0.6W , H-0.8W

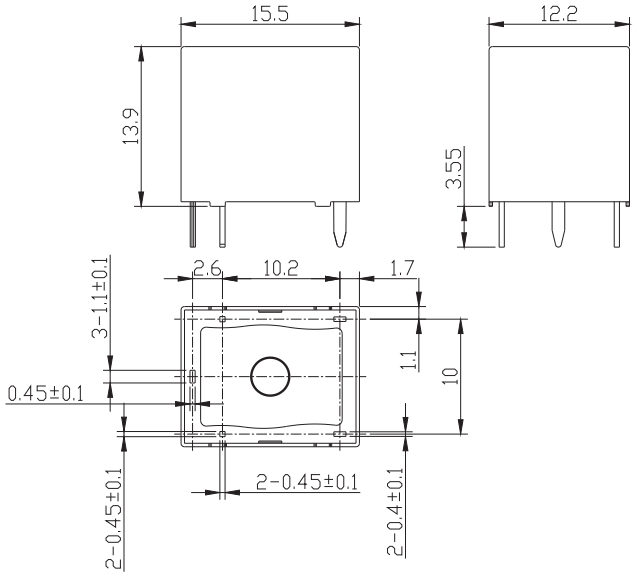
Coil Voltage(VDC) : 06 , 09 , 12 , 18 , 24

Number of Poles : 1-1Pole

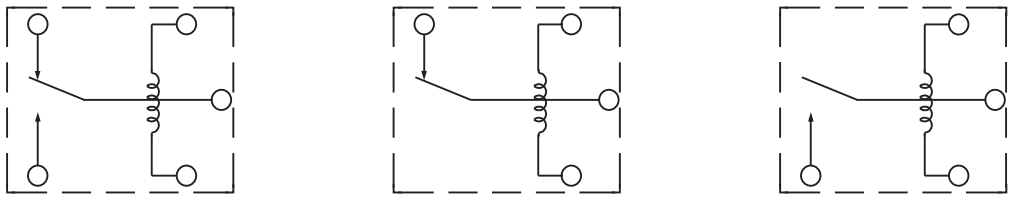
Protective Construction:S-Fluxproof,SH-sealed type washable

Type Designation : SARDN

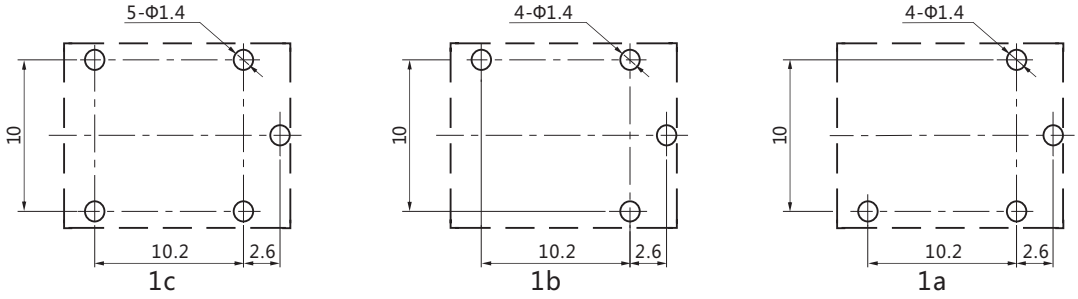
Outline Dimensions, Wiring Diagram, PCB Layout (Unit:mm)



Unle ss othe rwis e spec ifie d:
If dime nsio n < 1 mm, tole ranc e:±0.2 mm;
If dime nsio n 1~5 mm, tole ranc e:±0.3 mm;
If dime nsio n >5 mm, tole ranc e:±0.4 mm;
Note :1, Extend ed termin al dimens ion is dimens ion before solder ing.
2, Tolera nce of mounti ng holes: ±0.1mm



Wiring Diagram(Bottom View)



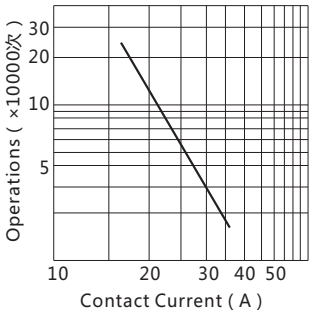
PCB Layout(Bottom View)

Typical Applications

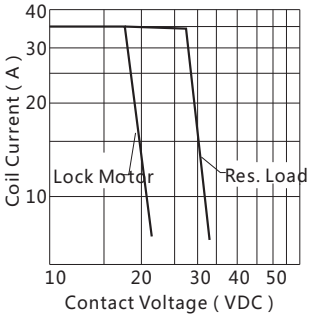
●Auto door lock motor control, home appliances, office equipments, anti-thief system, etc.

Characteristic Curves

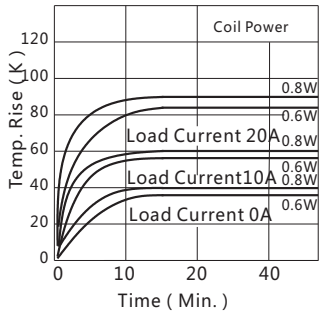
Endurance Curves



Max. Switching Power



Coil Temp. Rise(at 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 parameters for every possible application. Thus the users should be in a right position to choose the suitable product for their own application. If there is any query, please contact Sanyou for technical service. However it is the users' responsibility to determine which product should be used only.