Features

- 50A Contact switching capability
- 125℃ High Operating Temperature
- 1 Form A 、1 Form C and 2 Form A contactavailable
- Dustproof and Fluxproof type available
- Resistance or diode paralleled type available



Typical Applications

- Rear window defogger , Battery breaking device
  Automotive AC , Foglight control
- Electric power distributor , ABS Traction control system.

Contact Data

Contact form	1 Form A or1 Form C
Contact Material	$AgSnO_2$
Contact voltage drop	200mV Max（at 10A）
Pull in time (rated voltage)	10msec.Max.
Release time (rated voltage)	Ordinary type:10 msec.Max
	Parallel resistor or diode type:15 msec.Max
Rated load (resistive)	Normal: NO:50A 14VDC /NC: 30A 14VDC (at 23C) NO:40A 14VDC/NC: 20A 14VDC (at 85℃)
	Special: 2A:NO:30A 14VDC
Maximum switching current (normal type)	On(NO): 150A (Surge current of lamp load,14VDC)
	Off(NO):50A (resistive load,14VDC)

Other parameters

Shock Resistance	NO 30G
Vibration Resistance	5 ~ 22.3Hz at double amplitude of 10 mm 22.3~500Hz,98m/s^2
Mechanical (10,800 ops./h)	1×10^7ops
Electrical (900 ops./h)	See the contact parameters table
Ambient Temperature	-40℃ to +125℃ (No condensation)
Humidity	5% to 85%RH
Weight	Approx. 36.0g

Note: The above parameters are initial values

Contact rating voltage	Load type		contact rating current(A)			endurance (cycles)
				Form C	Form A	
14VDC	Resistive load	Making	50	30	50	$1x10^5$
		Breaking	50	30	50	
	The motor load	Making	80[a]	——	80[a]	$1x10^5$
		Breaking	30	——	30	
27VDC	Light load	Making	150[a]	——	150[a]	$1x10^5$
		Breaking	30	——	30	
	Resistive load	Making	30	10	20	$1x10^5$
		Breaking	30	10	20	

Note: a. Peak current time/steady-state current time: 1/10

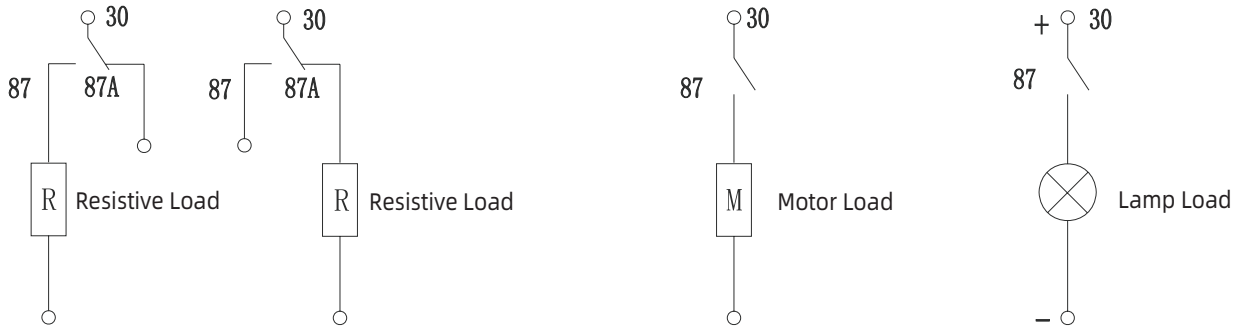
Coil parameters

Rated voltage (VDC)	12	12	24	24
Working current ±10(mA)	133.33	150	66.7	75
coil resistance ±10(Ω)	90	90	360	360
Parallel resistor (Ω)	---	680	---	2700
Equivalent resistance (Ω)	---	80	---	320
coil power (W)	1.6	1.8	1.6	1.8
Maximum allowable voltage (VDC)	150% Rated Voltage			
Maximum suction voltage (VDC)	60% Rated Voltage			
Maximum release voltage (VDC)	10% Rated Voltage			

Voltage resistant insulation parameters

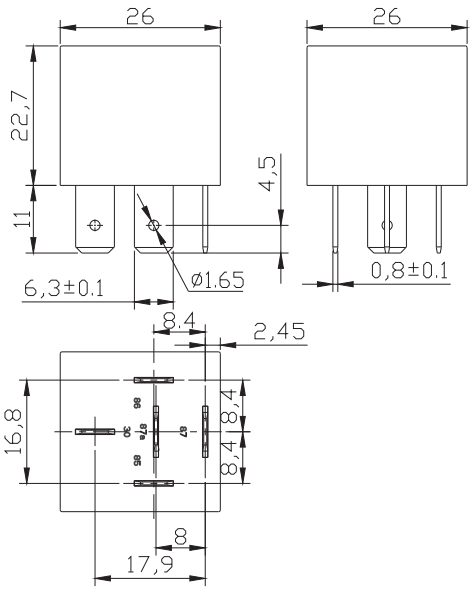
insulation resistance	100MΩ Min.(500VDC)
Initial Dielectric Strength	Between open contacts:500VAC, 50/60Hz 1min.
	Between contacts and coil:500VAC, 50/60Hz 1min.

Wiring Diagram for different Loads

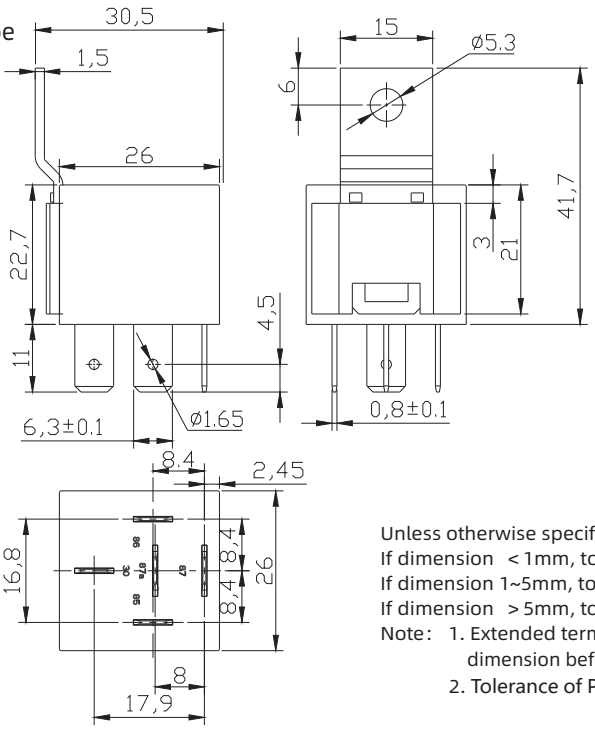


Outline Dimensions, Wiring Diagram (unit:mm)

Standard Type

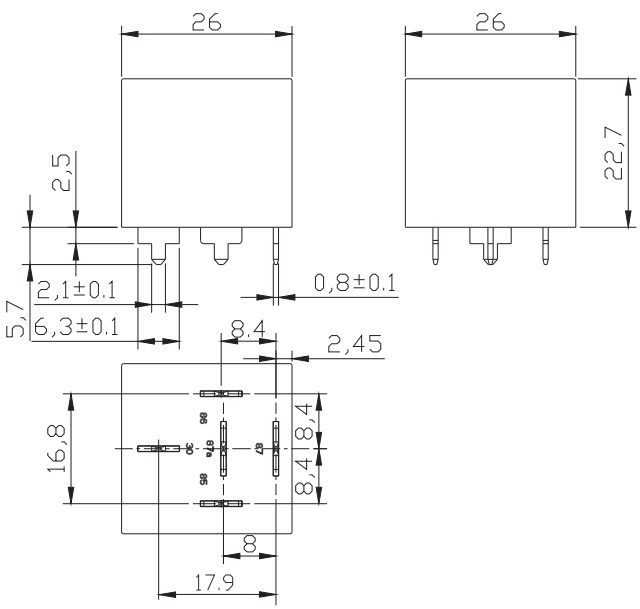


With Bracket Type

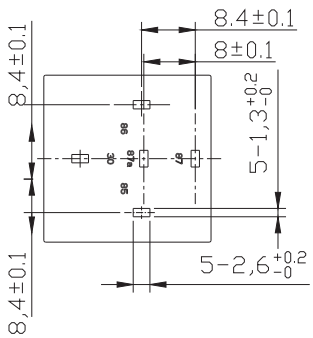


Unless otherwise specified:
If dimension < 1mm, tolerance: ±0.2mm;
If dimension 1~5mm, tolerance: ±0.3mm;
If dimension > 5mm, tolerance: ±0.4mm.
Note: 1. Extended terminal dimension is dimension before soldering.
2. Tolerance of P.C.B. layout: ±0.1mm.

PCB type

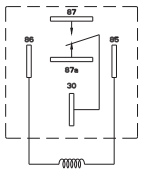


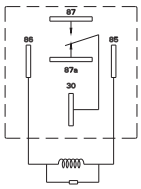
P.C.B. Layout

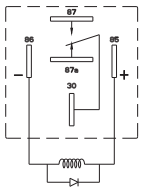


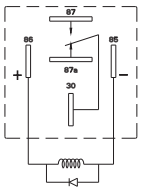
Electrical schematic diagram

1C

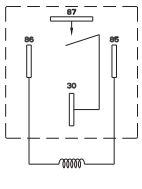

Standard type

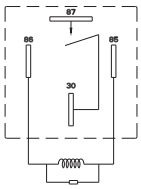

Parallel resistance

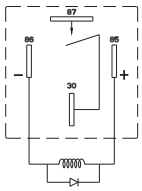

Parallel diode(D Type)

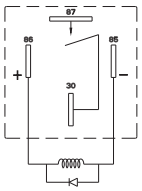

Parallel diode(DC Type)

1A

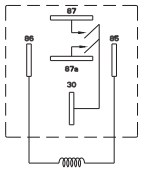

Standard type

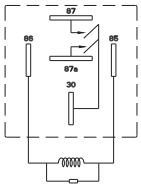

Parallel resistance

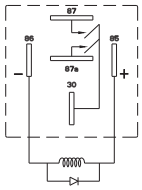

Parallel diode(D Type)

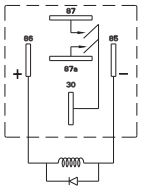

Parallel diode(DC Type)

2A


Standard type


Parallel resistance


Parallel diode(D Type)


Parallel diode(DC Type)

Ordering Information

SARN	-S	-1	12	D	M	F	R	-XX

Special Parameter: Nil-Standard type,01-terminal without hole

Accessory Form: Nil-without accessory, R-Parallel resistor
D-parallel diode(see wiring diagram)
DC-Parallel diode(see wiring diagram)

Mounting type : Nil-without bracket, F-with iron bracket,P-PCB type

Contact Form: M-Form A

Coil Power: D- 1.6W /1.8W

Coil Voltage(VDC): 12 , 24

Number of Poles:1-1 Pole

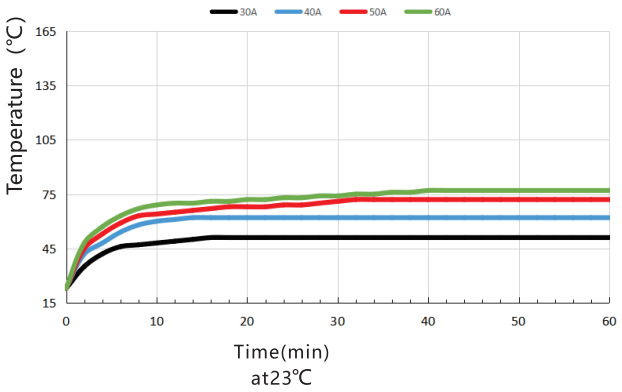
Protective Construction:Nil-Dustproof , S-Fluxproof

Type Designation:SARN

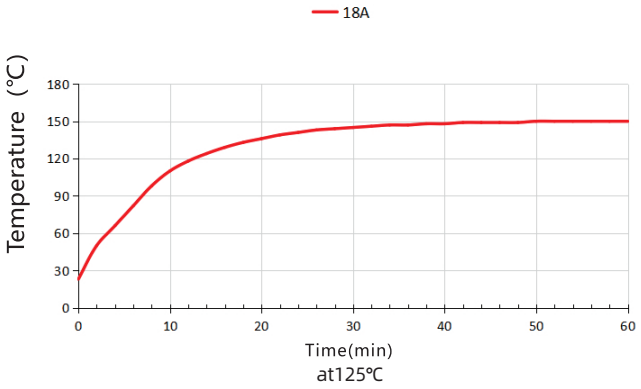
Note: (1) The customer's special requirements need to be formulated together with Sanyou.

Characteristic Curves

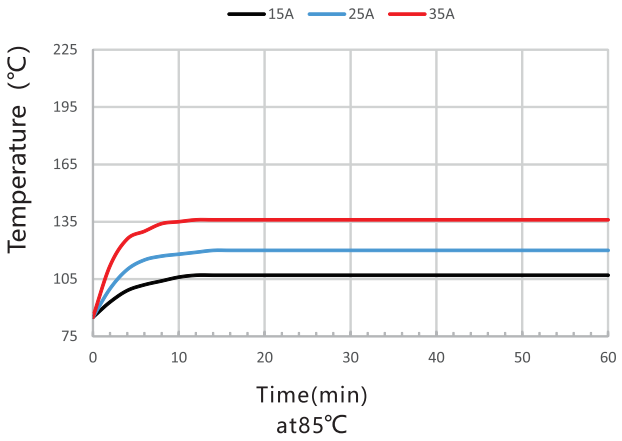
Coil Voltage：12VDC
Load Current： 30A,40A,50A,60A



Coil Voltage：12VDC
Load Current： 18A



Coil Voltage：12VDC
Load Current： 30A,40A,50A



Disclaimer

This product specification is for reference only, subject to change without prior notice.It is not possible for Sanyou to evaluate all the performance parameter requirements of relays in each specific application field, so customers should choose the suitable product according to the specific application conditions. If you have any questions, please contact us for more technical support, but the customer should be responsible for product selection.

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