

Features

- 70A high switching capability.
- High operating temperature : 125°C.
- 1Form A contact configuration.
- Dustproof and sealed type available.
- Transient suppression resistance or diode paralleled type available.

Contact Capacity

Model	SARF
Nominal switching capacity (res. load)	70A 14VDC (at 23°C) 50A 14VDC (at 85°C)
Max. switching current	70A
Max. switching voltage	50VDC
Max. switching power	980W

Characteristic Data

Contact material	Silver alloy	
Initial contact resistance (at 6VDC 1A)	20mΩ Max.	
Operate time (at nominal volt.)	10msec. Max.	
Release time (at nominal volt.)	ordinary type:7msec.Max. with resistor or diode type :15 msec. Max.	
Initial insulation resistance	500MΩ Min.(DC500V)	
Initial dielectric strength	Between open contacts : AC500V , 50/60Hz 1Min.	
	Between coil and contact :AC500V , 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	18G Min.
	Destructive	30G Min.
Endurance (operations)	Mechanical (at 10,800 ops./h)	10,000,000
	Electrical (at 600 ops./h)	100,000
Ambient temperature	-40°C ~ +125°C (no condensation)	
Unit weight	Standard type : Approx. 36.0 g ; PCB type : Approx. 30.0g	

Coil Data(at 20°C)

Standard (D)

Nominal voltage (VDC)	Nominal operating current ±10% (mA)	Coil resistance ±10% (Ω)	Parallel resistance (Ω)	Equivalent resistance (Ω)	Max. Allowable voltage	Pick-up voltage (Max.)	Drop-out voltage (Min.)	Nominal operating power
6	266.67	22.5	---	---	150 % of nominal voltage	60 % of nominal voltage	10% of nominal voltage	.Approx 1.6W
12	133.33	90	---	---				
24	66.67	360	---	---				
6	266.67	22.5	180	20				.Approx 1.8W
12	133.33	90	680	80				
24	66.67	360	2,700	320				

Coil Data (at 20°C)

Sensitivity (L)

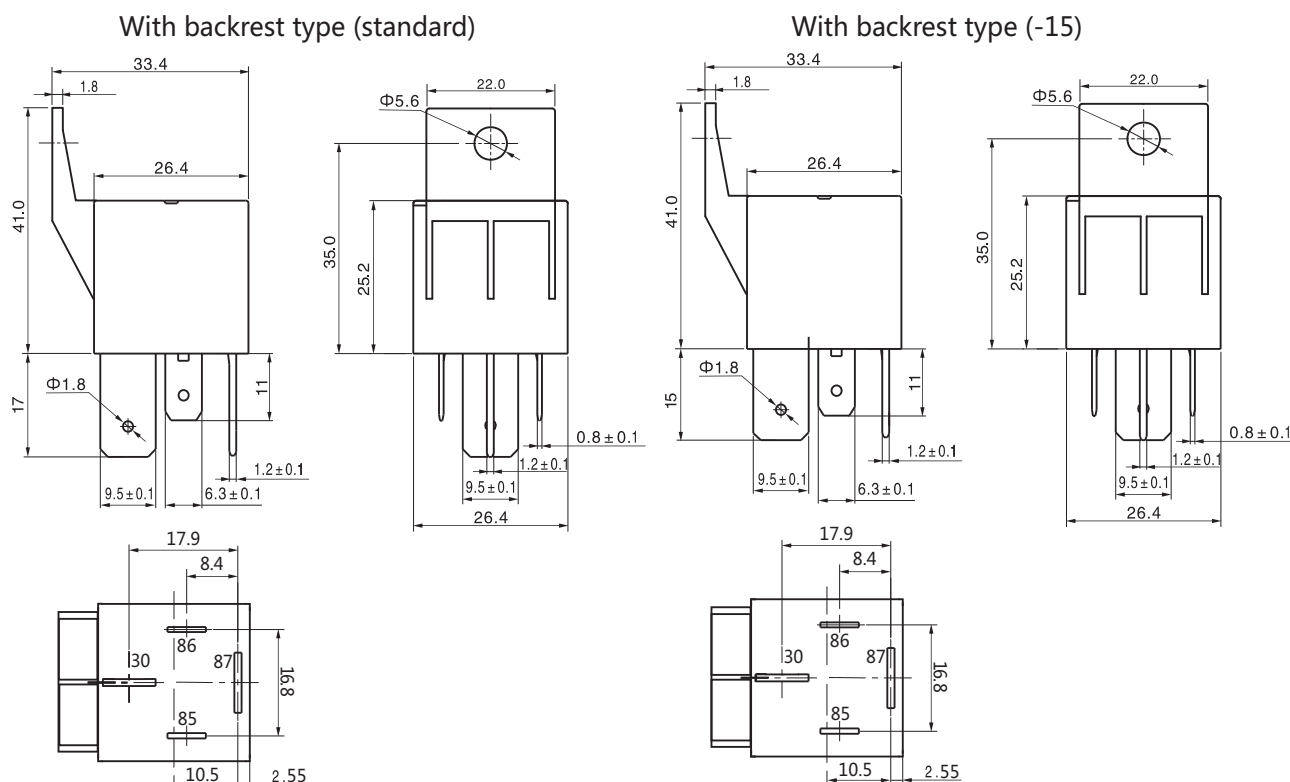
Nominal voltage (VDC)	Nominal operating current ±10% (mA)	Coil resistance ±10% (Ω)	Parallel resistance (Ω)	Equivalent resistance (Ω)	Max. Allowable voltage	Pick-up voltage (Max.)	Drop-out voltage (Min.)	Nominal operating power
6	333.33	18	---	---	115 % of nominal voltage	60 % of nominal voltage	10% of nominal voltage	.Approx 2.0W
12	166.67	72	---	---				
24	83.33	288	---	---				
6	333.33	18	180	16				.Approx 2.2W
12	166.67	72	680	65				
24	83.33	288	2,700	260				

Ordering Information

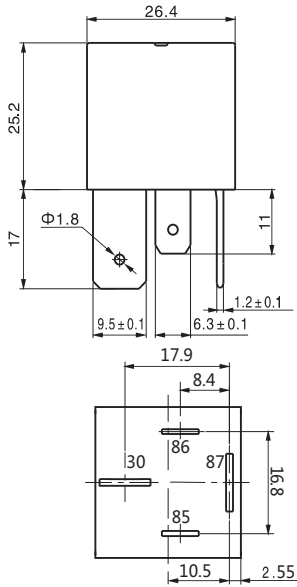
Nomenclature	
SARF -S -1 12 D M 1 F R -XX	Special Parameter : Nil-Standard type, Letter or number-Special requirement
	Accessory Form : Nil-Without accessory, R-With resistor, D-With diode DC-with diode
	MountingType : Nil-w/t backrest, F-w/ backrest, P-PCB type
	Contact Material : Nil-AgSnO ₂ , 1-AgCdO
	Contact Form : M-Form A
	Coil Power : D-1.6W/1.8W, L-2.0W/2.2W
	Coil Voltage (VDC) : 06, 12, 24, 36
	Number of Poles : 1-1 Pole
	Protective Construction : Nil-Dust protected, S-Flux proofed
	Type Designation : SARF

NOTES: 1) -15 means that the length of terminal outside of the case is 15 millimetre referring to outline dimensions .

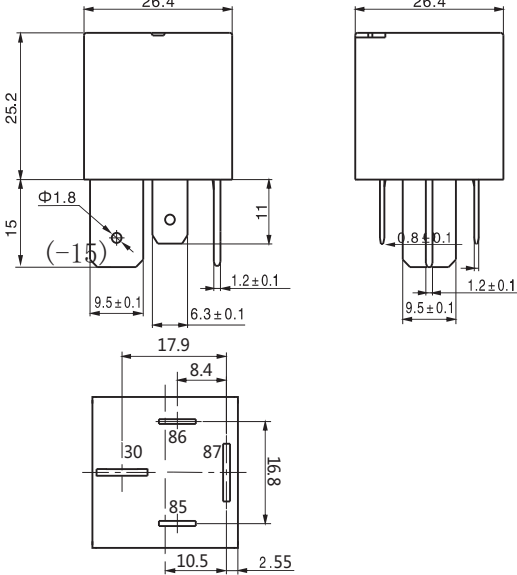
Outline Dimensions, Wiring Diagram, Mounting Holes (unit : mm)



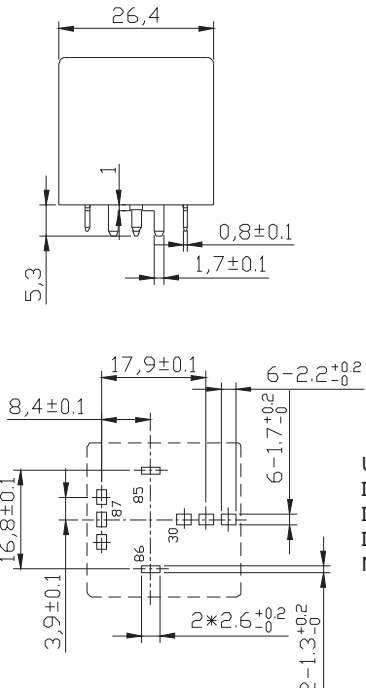
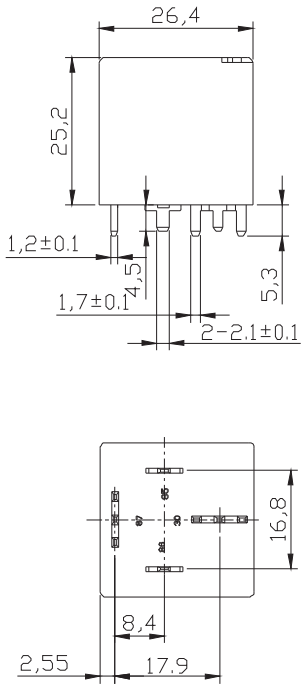
Normal type (standard)



Normal type (-15)



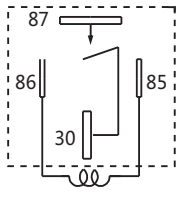
PCB type



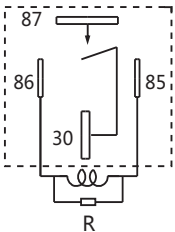
Unless otherwise specified :
 If dimension < 1mm, tolerance : ±0.2mm;
 If dimension 1~5mm, tolerance : ±0.3mm;
 If dimension > 5mm, tolerance : ±0.4mm.
 Note : 1. Extended terminal dimension is dimension before soldering.
 2. Tolerance of mounting holes : ±0.1mm.

P.C.B. Layout

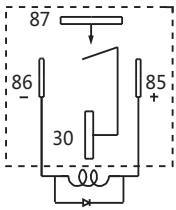
w/t accessory



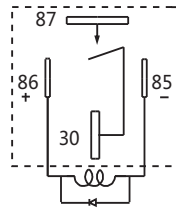
with resistor



with diode(D Type)



with diode(DC Type)

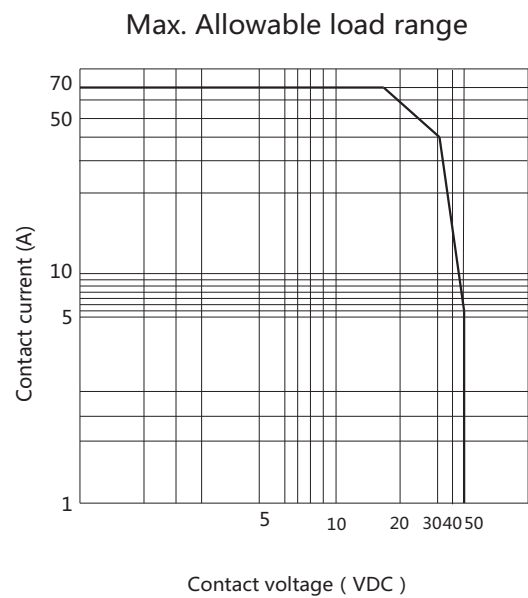
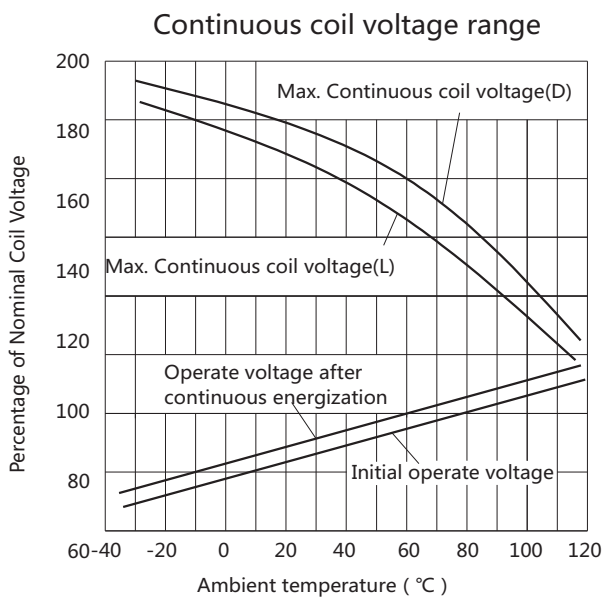


Wiring Diagram (bottom view)

Typical Applications

- Cooling fan control, fuel pump control, heating control, automotive air conditioner, rear window defogger, battery breaking device.
- Headlight or foglight control, electric power distribution, traction control system, ABS.

Characteristic Curves



Disclaimer:

This datasheet is for the customers' reference. All the specifications 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 be 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 products should be used only.