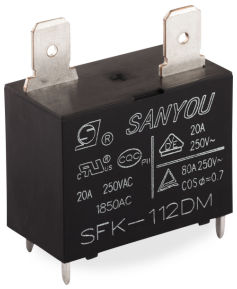
SANYOU RELAYS
Relays for advanced technology

Miniature High Power Relay

SFK-Series



Features

- Miniature relay with high switching capability(25A VDE Certified), especialy suitable for motor and compressor control
- Both quick connect and PCB terminal types available
- especiallysuitable for Motor and compressor control
- Satisfy IEC60335-1 product is available
- Satisfy IEC60079-15 product is available

Safety Approval

UL , C-UL File No. : E190598
VDE File No. : 40007481
TUV File No. : R50138321
CQC File No. : CQC02001002131

Contact Capacity

Model	SFK
Nominal switching capacity (res. load)	20A/25A 250VAC
Max. switching current	25A
Max. switching voltage	277VAC
Max. switching power	6,250VA

Characteristic Data

Contact material	Silver alloy	
Initial contact resistance (at 6 VDC 1 A)	100mΩ Max.(1A 6VDC)	
Operate time (at nominal volt .)	20msec. Max. (no diode)	
Release time (at nominal volt .)	10msec. Max. (no diode)	
Initial insulation resistance	1,000MΩ Min.(DC500V)	
Initial dielectric strength	Between open contacts : AC1,000 V , 50/60 Hz 1min .	
	Between coil and contact : AC4,500 V , 50/60 Hz 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	100G Min.
	Destructive	10G Min.
Endurance (operations)	Mechanical (at 7,200 ops./h)	10,000,000 cycles (at room temperature)
	Electrical (at 360 ops./h)	100,000 cycles (at room temperature)
Ambient temperature	-40℃ ~ +85℃ (no condensation)	
Unit weight	Approx. 22.0 g	

Standard Coil Data (at 20℃)

Nominal voltage (VDC)	Nominal operating current 10% (mA)	Coil resistance 10% (Ω)	.Max allowable voltage	Pick-up voltage (Max.)	Drop-out voltage (Min.)	Nominal operating power
5	180.00	27.80	130 % of nominal voltage	75 % of nominal voltage	5 % of nominal voltage	0.90W
6	150.00	40.00				
9	100.00	90.00				
12	75.00	160.00				
18	50.00	360.00				
24	37.50	640.00				

Safety Approval Ratings

(Note:More detail of approval ratings,please refer to the safety certification)

Approval	CQC	TUV	VDE	UL/CUL
File No.	CQC02001002131	R50138321	40007481	E190598
Approved ratings	25A 250VAC 22A 250VAC 20A 250VAC 16A 277VAC	Making 80A For 300ms Breaking: 20A 250VAC 22A 250VAC	25A 250VAC 22A 250VAC 20A 250VAC	25A 277VAC, Resistive&General use 25A 250VAC, Resistive&General use 25A 120VAC, Resistive&General use 22A 250VAC, Resistive&General use 20A 250VAC, Resistive&General use 20A 120VAC, Resistive&General use 1HP 120VAC;2HP 240VAC TV-10 120VAC

(1) The above-mentioned unspecified temperature ratings, means that the ambient temperature is room temperature.

(2) Only some typical ratings are listed above. Each rating's test condition is different, so the electrical endurance will be different. If more details are required, please contact us.

(3) For sealed type testing, please open the ventilation hole of case before test.

Ordering Information

Nomenclature

SFK - 1 12 D M P 1 - F - -XX

Special Parameter: Nil- Standard type,
E- step type contact letters or Numbers Special reqirements

Insulation System: Nil- Standard, B- Class B, F- Class F

Contact material:
Nil-AgSnO2 1-AgNi, 2-$AgSnO_2$ and AgNi,3-AgNi and $AgSnO_2$

Terminal Type: Nil- Standard, P- PCB

Contact Form: M- Form A

Coil Power : D-0.90W

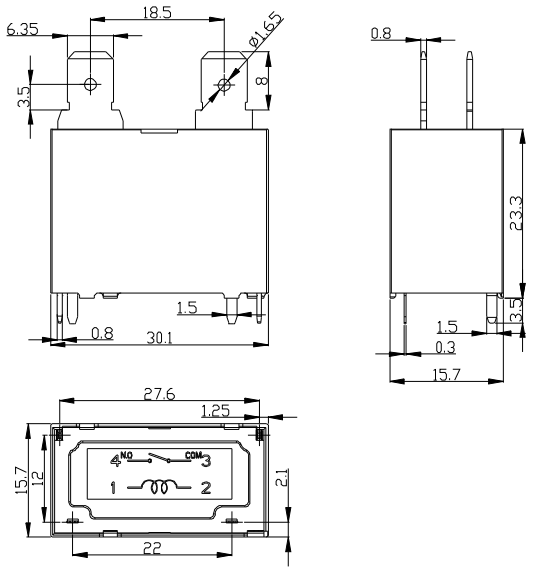
Coil Voltage (VDC) : 05, 06, 09, 12, 18, 24

Number of Poles: 1-1 Pole

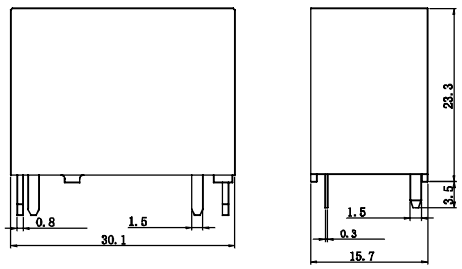
Type Designation: SFK

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

Standard type



PCB type



Unless otherwise specified :

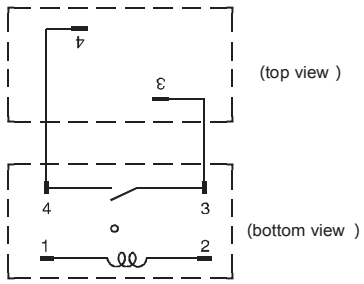
If dimension < 1mm, tolerance : ±0.2 mm;

If dimension 1~5mm , tolerance : ±0.3 mm ;

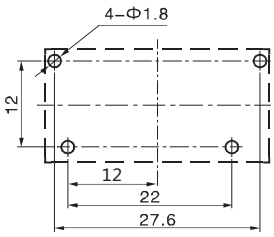
If dimension > 5mm, tolerance : ±0.4 mm.

Note : 1. Extended terminal dimension is dimension before soldering

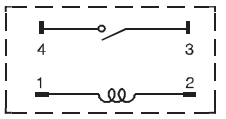
2. Tolerance o f P. C B layout 0.1 mm



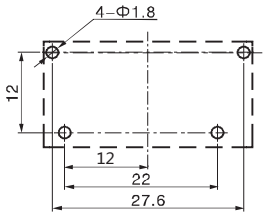
Wiring Diagram



P.C.B. Layout (bottom view)



Wiring Diagram (bottom view)

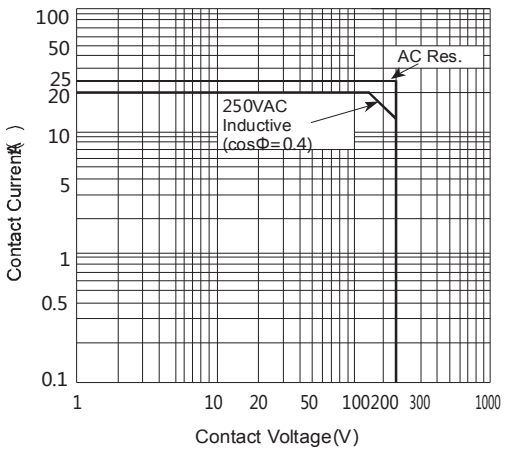


Typical Applications

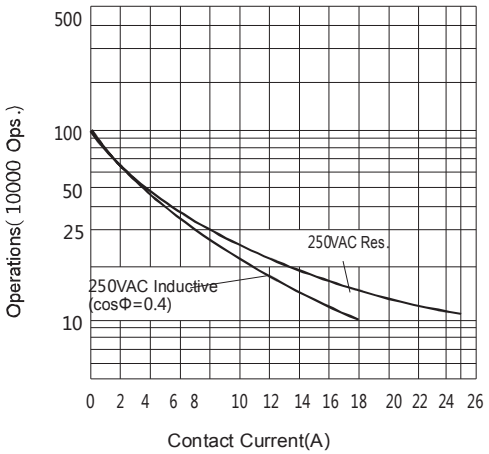
- Motor, compressor control, e. g.: air conditioner.
- Home appliances and industrial electrical equipment.

Characteristic Curves

Max. Switching Power



Endurance Curve



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.For sealed relays after installation and cleaning, please open the vent hole on the case before use.If there is any query,please contact Sanyou for the technica service. However it is the user's responsibility to determine which product should be used only.