Features:

- Miniature relay with high switching capability (25A), ideal for motor and compressor control.
- IEC60335-1/IEC60079-15 compliant product is available.

Typical applications:

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

Approvals

UL、c-UL (File No.)：E179745
TUV (File No.)：R50557700
CQC (File No.)：CQC22002353181

Contact Data

Contact arrangement	1form A(NO)
Contact resistance	100mΩ Max.(at 1A 6VDC)
Rated voltage	250VAC
Max.switching voltage	277VAC
Rated current	25A
Min. recommended contact load	1A, 6VDC
Breaking capacity max.	6925VA
Contact material	AgNi,AgSn0$_2$
Frequency of operation	360 ops./h
Operate/release time max.	20ms/10ms
Electrical endurance	See electrical endurance graph

Contact ratings

Type	Contact	Load	Cycles
UL 60947-4-1			
SFKG	A(NO)	25A,250VAC,cos ϕ=1,85℃	1X10^5
SFKG	A(NO)	20A,250VAC,cos ϕ=1,85℃	1X10^5
SFKG	A(NO)	2HP,240VAC,85℃	1X10^5
GB/T 21711.1-2023			
SFKG	A(NO)	25A,250VAC,85℃	1X10^5
SFKG	A(NO)	20A,250VAC,85℃	1X10^5
IEC 61810			
SFKG	A(NO)	25A,250VAC,cos ϕ=1,85℃	1X10^5
SFKG	A(NO)	20A,250VAC,cos ϕ=1,85℃	1X10^5
SFKG	A(NO)	Making:80Afor300ms,Breaking20A 250VAC,85℃	2X10^5
Mechanical endurance			≥2x10^6

Coil Data

Coil voltage range:	5 to 24VDC
Operative range, IEC 61810	2
Coil insulation system according UL	Class F

Coil Data（continued）

Coil versions, DC coil

Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω（1±10%）	Rated coil powers mW
5	≤3.75	≥0.25	27.8	900
6	≤4.5	≥0.3	40	900
9	≤6.75	≥0.45	90	900
12	≤9	≥0.6	160	900
18	≤13.5	≥0.9	360	900
24	≤18	≥1.2	640	900

All fgures are given for coil without pre-energization, at ambient temperature 20°C

Insulation Data

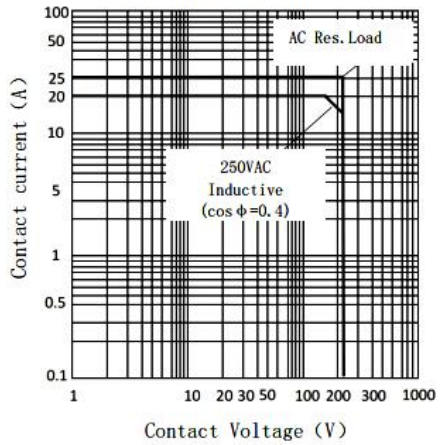
Initial dielectric strength	
between open contacts	1000VAC
between contact and coil	4500VAC
Clearance/Creepage	
between contact and coil（Clearance）	≥4.0mm(actual)
between contact and coil（Creepage）	≥5.0mm(actual)
Material group of insulation parts	IIIa
Tracking index of relay	PTI 175V/PTI 250V

Other Data

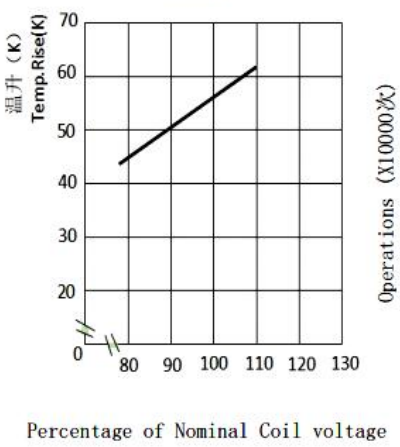
Material compliance: EU RoHS/ELV, China RoHS, REACH

Ambient temperature	-40℃ to +85℃
Category of environmental protection IEC 61810	RTII - flux proof RTIII - Sealed type washable
Weight	Approx. 23.0g
Resistance to soldering heat THT (IEC 60068-2-20)	260°C/5s
Packaging/unit	tube, tray

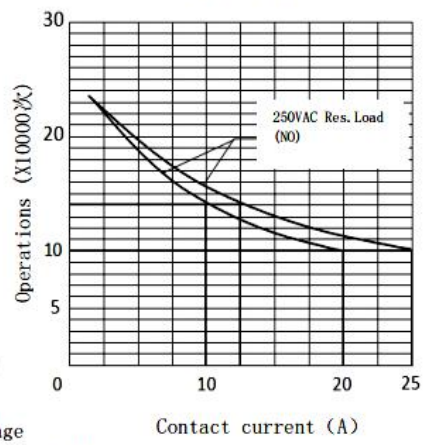
Max.Switching Power



Coil Temp.Rise



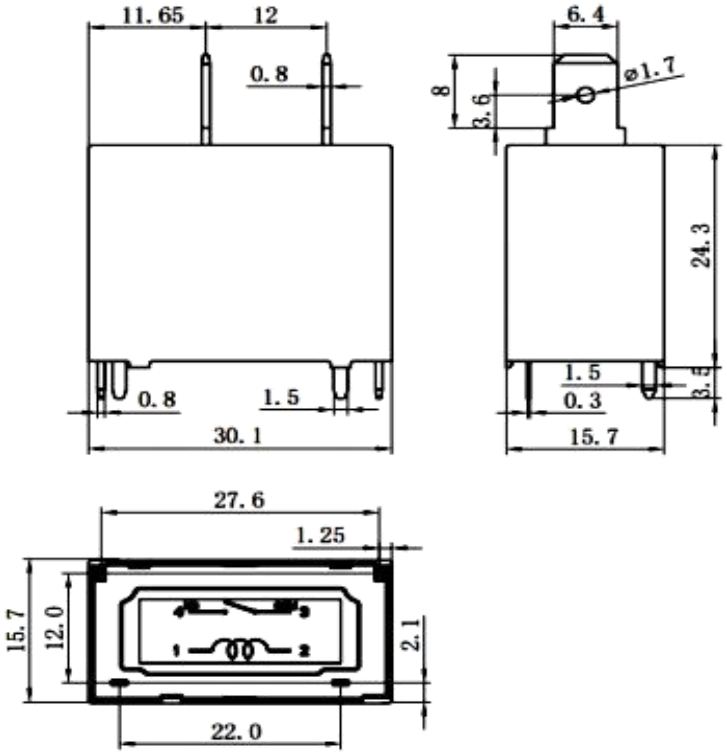
Endurance Curve



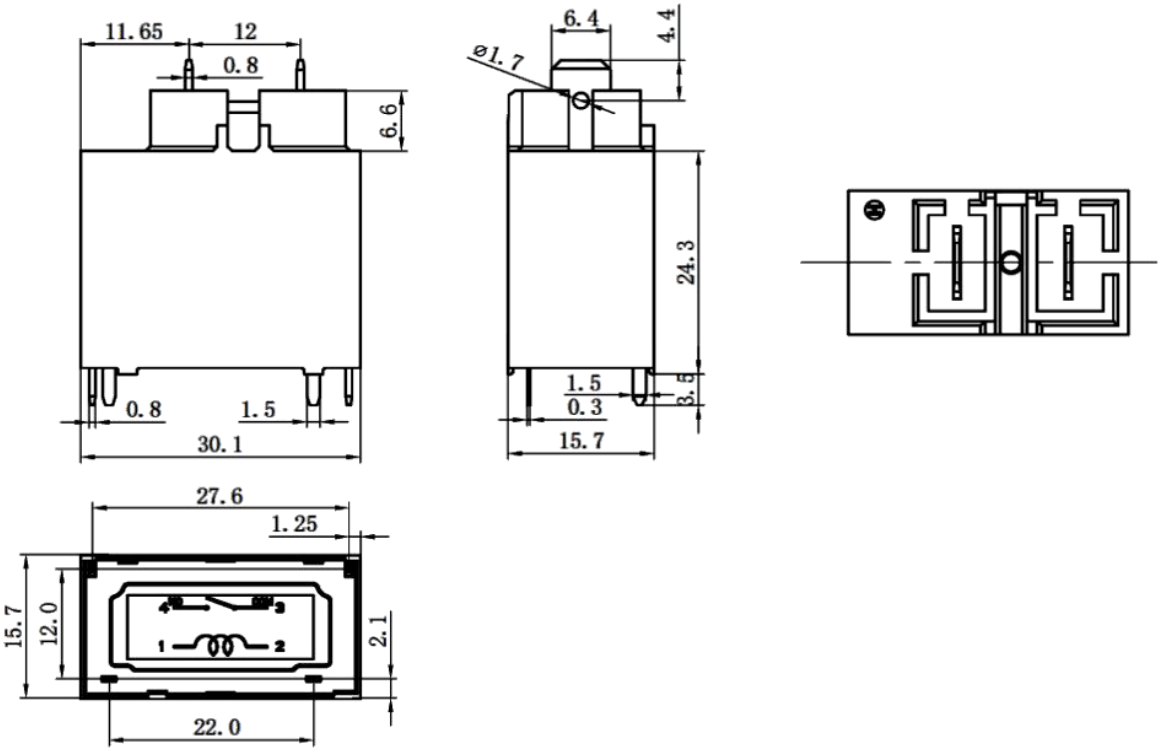
Note:
(1)Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.
(2)The above curves are for reference only, and the final result is subject to theexperiment.

Dimensions

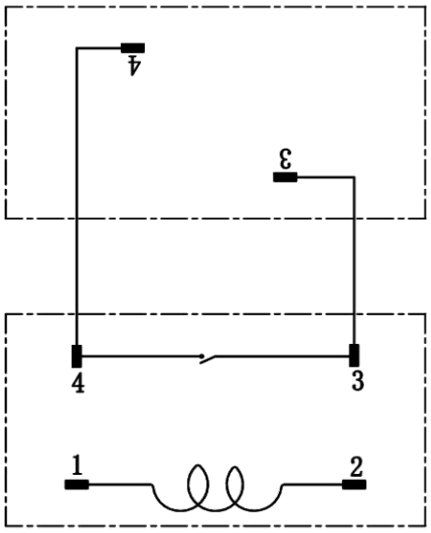
Standard type



Fit connector type



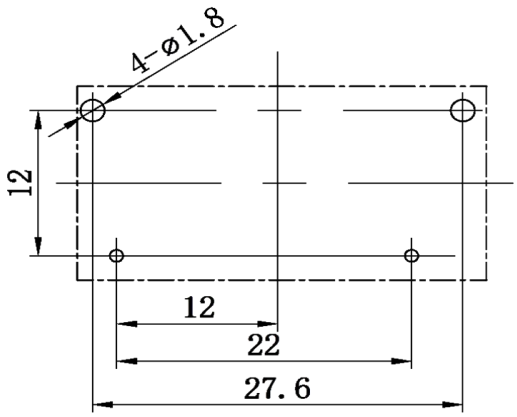
Wiring Diagrams（bottom view）



top view

bottom view

PCB Layouts（bottom view）



In case of no tolerance shown on outline dimension
If dimension < 1 mm, tolerance: ±0.2mm
If dimension 1~5mm, tolerance: ±0.3mm
If dimension > 5mm, tolerance: ±0.4mm

Notes:
1.The dimension of pin is the size before tinning
2.Tolerance of PCB layout: ±0.1 mm.

Product Code Structure

SFKG	-S	-1	12	D	M	1	-F	-XX

Special Parameter:
Nil-Standard type
Letters or Numbers-Special requirements
C-Fit connector type

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

Contact Material:
Nil-AgNi and $AgSnO_2$

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

Protective Construction:
S -Flux-proof
SS-waterproof splash
SH-Sealed type washable

Type: SFKG

(1) Flux-proof relays can not be used in the environment with pollutants like H_2S, SO_2,NO_2, dust, etc.

(2) Water cleaning or surface process is not suggested after the flux-proof relays are assembled on PCB.

(3) Customized special suffix is available after being evaluated by Sanyou.

(4) C1 suffix stands for product in accordance to IEC60335-1(GWT) & CTI250V.

(5) Ex suffix stands for product compliant with IEC60079-15.

Examples of Ordering Codes

SFKG-S-112DM relay SFKG, Flux-proof, rated DC voltage 12V, coil power 0.90W, 1NO, 25A, and contact material $AgSnO_2$.

SFKG-S-112DM-C relay SFKG, Flux-proof, rated DC voltage 12V, coil power 0.90W, 1NO, 25A, and contact material $AgSnO_2$.

Disclaimer

The specification is for reference only. Specifications are subject to change without prior notice.

We could not evaluate all the performance and all the parameters for every possible applications. Thus the users should in a right position to choose suitable product for their own application. For sealed relays, after installation and cleaning, please open the ventilation hole in the case before use. If there is any query, please contact Sanyou for technical services. However it is the user's responsibility to determine which product should be used.