

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)
Rated voltage	250VAC
Max.switching voltage	277VAC
Rated current	25A
Min. recommended contact load	1A, 6VDC
Breaking capacity max.	6925VA
Contact material	AgNi, AgSnO 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°C	1X10 ⁵
SFKG	A(NO)	20A,250VAC,cos φ=1,85°C	1X10 ⁵
SFKG	A(NO)	2HP,240VAC,85°C	1X10 ⁵
GB/T 21711.1-2023			
SFKG	A(NO)	25A,277VAC,85°C	1X10 ⁵
SFKG	A(NO)	20A,277VAC,85°C	1X10 ⁵
EN 60730-1			
SFKG	A(NO)	25A,250VAC,85°C	1X10 ⁵
SFKG	A(NO)	20A,250VAC,85°C	1X10 ⁵
SFKG	A(NO)	Making:80A for 300ms,85°C	2X10 ⁵
Mechanical endurance			≥2x10 ⁶

Coil Data

Coil voltage range:	5 to 24VDC
Operative range, IEC 61810	2
Coil insulation system according UL	ClassB, 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 figures are given for coil without pre-energization, at ambient temperature 20°C

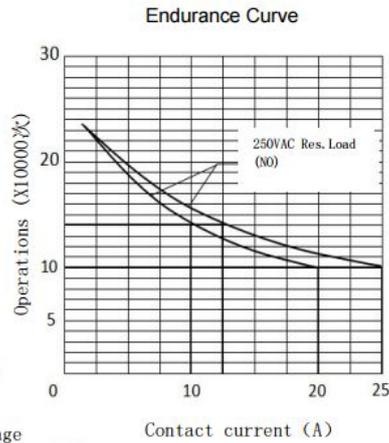
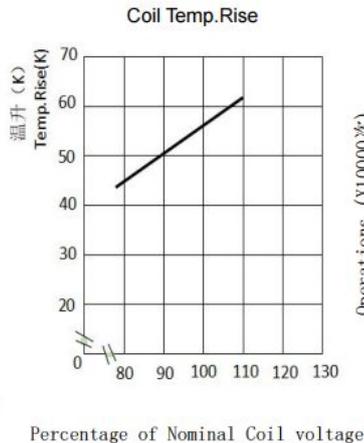
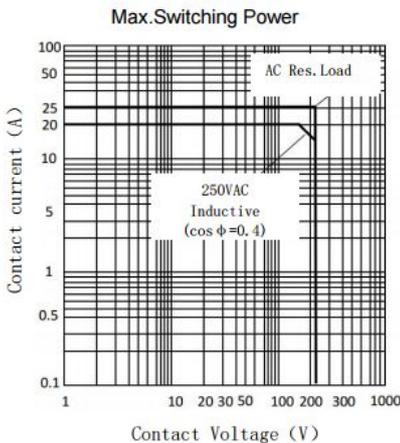
Insulation Data

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 base	PTI 175V/PTI 250V

Other Data

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

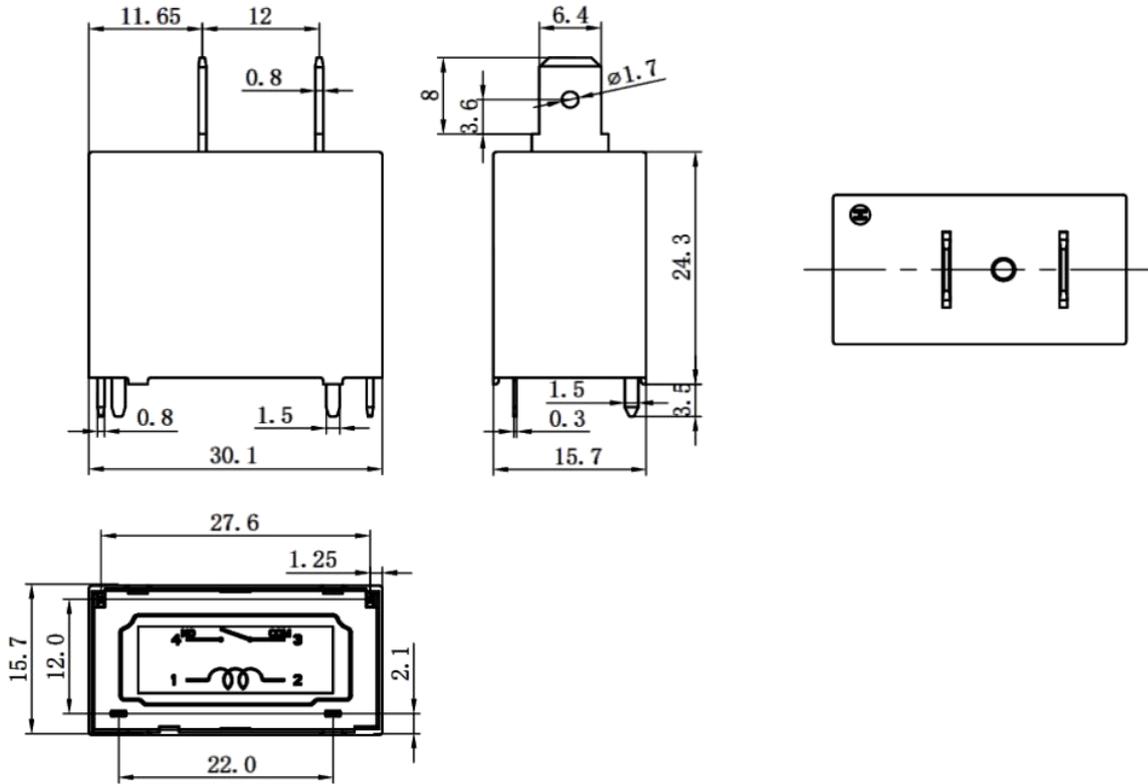
Ambient temperature	-40°C to +85°C
Category of environmental protection	RTII - flux proof
IEC 61810	RTIII - Sealed type washable
Weight	Approx. 23.0g
Resistance to soldering heat THT (IEC 60068-2-20)	260°C/5s
Packaging/unit	tube, tray



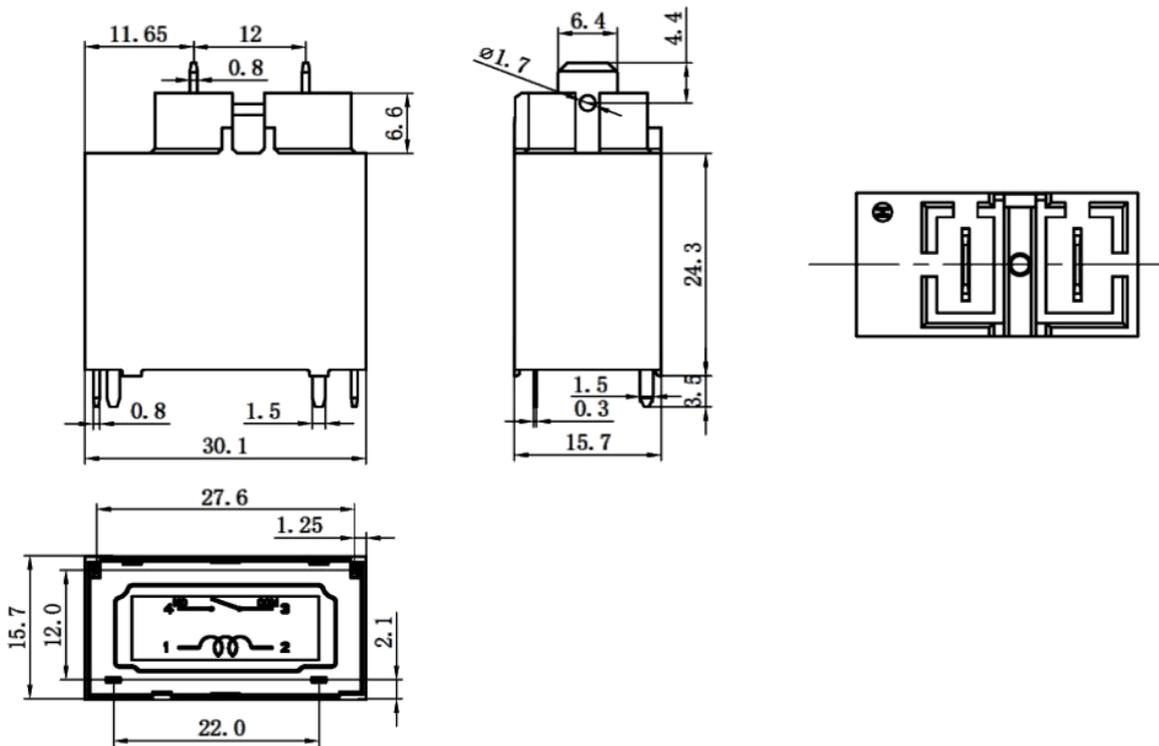
Note:
 (1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.
 (2) The above curves are for reference only, and the final result is subject to the experiment.

Dimensions

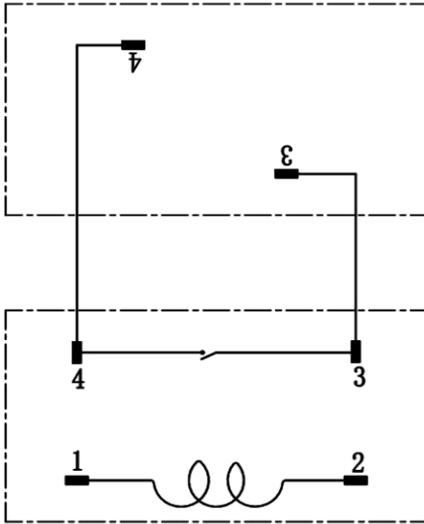
Standard type



Fit connector type



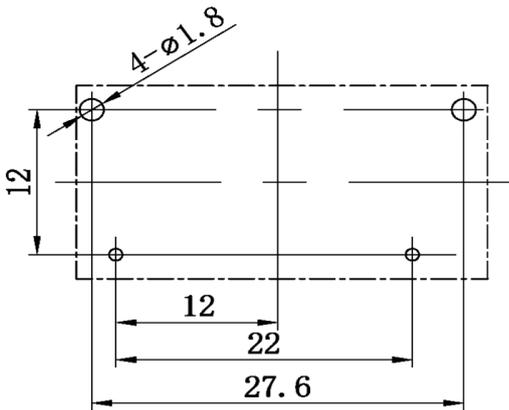
Wiring Diagrams (bottom view)



top view

bottom view

PCB Layouts (bottom view)



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

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
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- (1) Flux-proof relays can not be used in the environment with pollutants like H₂S, SO₂,NO₂, 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 compliant with IEC60335-1&CTI250V.
- (5) (Ex) 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 AgSnO₂.
 SFKG-S-112DM-C relay SFKG, Flux-proof, rated DC voltage 12V, coil power 0.90W, 1NO, 25A, and contact material AgSnO₂.

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.