



### Features

- Miniature relay with high switching capability(25A VDE Certified), especially suitable for Motor and compressor control.
- Both quick connect and PCB terminal types 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)	25A/20A 250VAC	H Mark: 22A 250VAC
Max. switching current	25A	
Max. switching voltage	277VAC	
Max. switching power	6.250VA	

### Characteristic Data

Contact material	Silver alloy	
Initial contact resistance (at 6VDC 1A)	50mΩ Max.	
Operate time (at nominal volt.)	20msec. Max.	
Release time (at nominal volt.)	10msec. Max.	
Initial insulation resistance	1,000MΩ Min.(DC500V)	
Initial dielectric strength	Between open contacts :	AC1,000V , 50/60Hz 1Min. H Mark:AC2,500V , 50/60Hz 1Min.
	Between coil and contact :	AC4,500V , 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	10G Min.
	Destructive	100G Min.
Endurance (operations)	Mechanical (at 7,200 ops./h)	10,000,000
	Electrical (at 900 ops./h)	standard type:100,000 cycles H Mark:30,000 cycles
Ambient temperature	-40°C ~ +85°C (no condensation)	
Unit weight	Approx. 22.0 g	

### Standard Coil Data(at 20°C)

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	.Approx 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				

Coil Data of Mark H (at 20°C)

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	280.00	18.00	130 % of nominal voltage	75 % of nominal voltage	5 % of nominal voltage	.Approx 1.40W
6	233.33	26.00				
9	155.56	58.00				
12	116.67	103.00				
18	77.78	232.00				
24	58.33	412.00				

Safety Approval Ratings

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 Cosφ=0.7 , Breaking 20A , Cosφ= 0.9 , 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

Ordering Information

Nomenclature								
SFK	-	1	12	D	M	P	- F - H - XX	Special Parameter : Nil-Standard type, E-Step structure contact
								Parameter Mark : Nil-Standard, H-GAP>1.8MM, Coil Power 1.40W, OP/OP :2500VAC
								Insulation System : Nil-Standard, B-Class B, F-Class F
								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)

Unless otherwise specified :

If dimension < 1mm, tolerance : 0.2 mm;

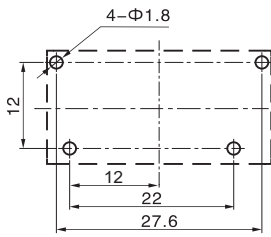
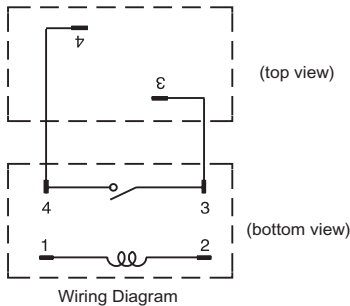
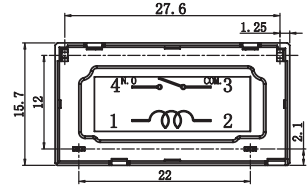
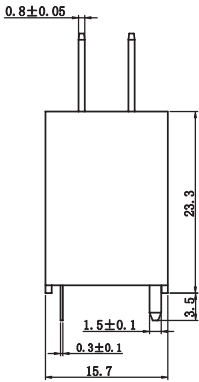
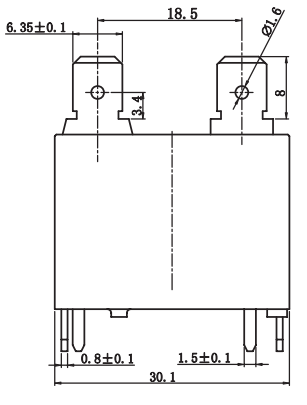
If dimension 1~5mm, tolerance : 0.3 mm;

If dimension > 5mm, tolerance : 0.4 mm.

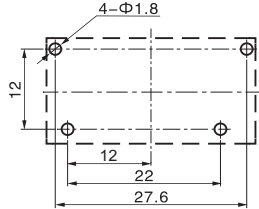
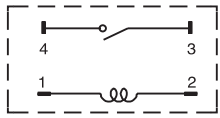
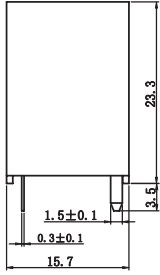
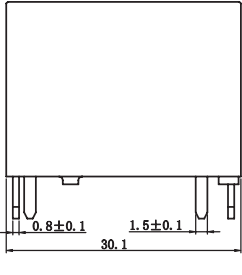
Note : 1. Extended terminal dimension is dimension before soldering.

2. Tolerance of P.C.B. layout : 0.1 mm.

Standard type



PCB type

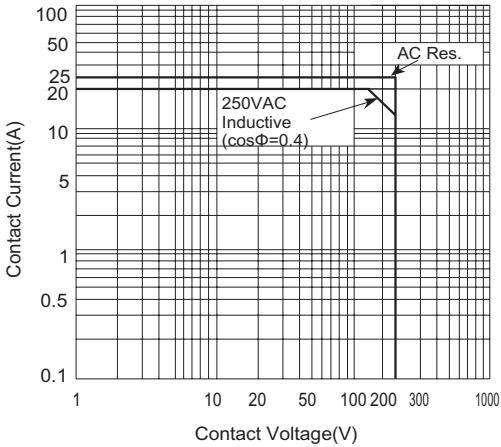


Typical Applications

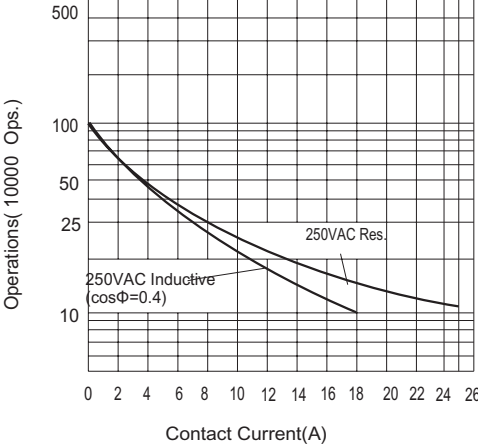
- Motor, compressor control, e.g. : air conditioner.
- Home appliances and industrial electrical equipment.

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. If there is any query, please contact Sanyou for the technical service. However it is the user's responsibility to determine which product should be used only.