

Features

- Miniature relay with high switching capability, especially suitable for Motor and compressor control.
- Both quick connect and PCB terminal types available.

Safety Approval

UL, C-UL File No.: E179745

VDE File No.: 40007481

TUV File No.: R50138321

CQC File No.: CQC02001002131

Contact Capacity

Model	SFK
Nominal switching capacity (res. load)	20A 250VAC
Max. switching current	20A
Max. switching voltage	250VAC
Max. switching power	5,000VA

Charateristic 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.	
	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)	100,000
Ambient temperature	-40°C ~ +105°C (no condensation)	
Unit weight	Approx. 22.0 g	

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	110 % 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				
48	18.75	2,560.00				

Safety Approval Ratings

Approval	CQC	TUV	VDE	UL/CUL
File No.	CQC02001002131	R50138321	40007481	E179745
Approved ratings	20A 250VAC	Making 80A For 300ms Cos ϕ = 0.7, Breaking 20A, Cos ϕ = 0.9, 250VAC	20A 250VAC	20A 250VAC 1HP 120VAC 2HP 240VAC

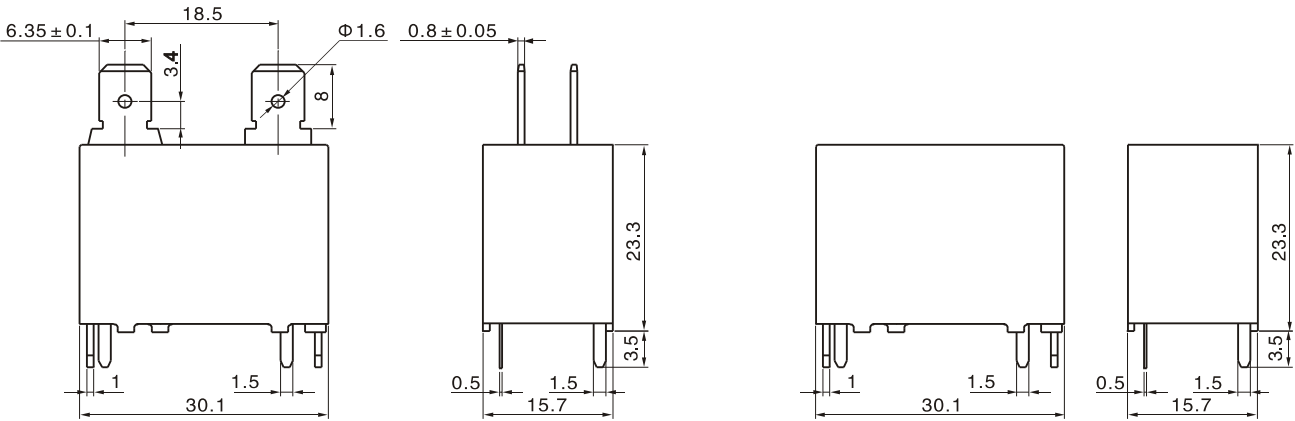
Ordering Information

Nomenclature							
SFK	-1	12	D	M	P	-F-XX	
							Special Parameter: Nil-Standard type, Letter or number-Special requirement
							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)

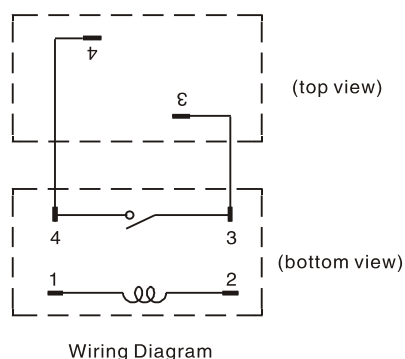
Standard type

PCB type

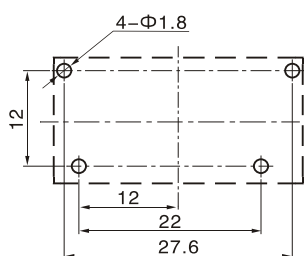


Unless otherwise specified:
If dimension < 1mm, tolerance: ± 0.2mm;
If dimension 1~5mm, tolerance: ± 0.3mm;
If dimension > 5mm, tolerance: ± 0.4mm.
Note: 1. Extended terminal dimension is dimension before soldering.
2. Tolerance of P.C.B. layout: ± 0.1mm.

Standard type

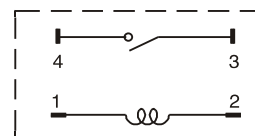


Wiring Diagram

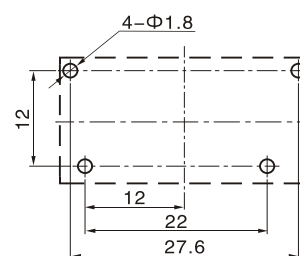


P.C.B. Layout (bottom view)

PCB type



Wiring Diagram (bottom view)

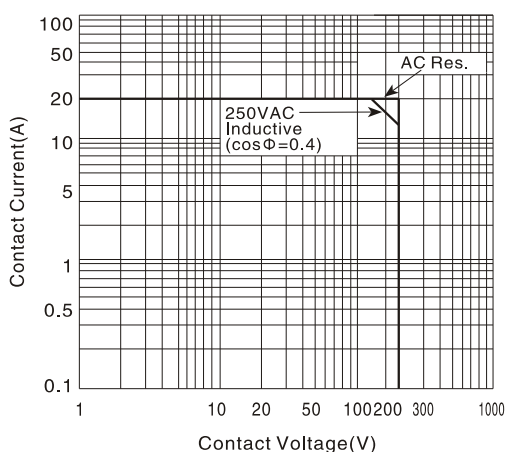


Typical Applications

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

Characteristic Curves

Max. Switching Power



Endurance Curve

