



Miniature Power Relay

SFD

Features

- Normally Open (SPST) contact form.
- Miniature power relay, high capability of 30A.
- High impulse current of 65A and high surge voltage of 10000V withstand.
- Miniature relay for high density mounting requirement.

Safety certificate

UL、c-UL File No: E190598

VDE File No: 40007793

CQC File No: CQC02001002130、CQC12002080736

Contact Data

Type	SFD
Rated load (Resistive load)	30A 250VAC
Max. Switching Current	30A
Max. Switching voltage	277VAC
Max. Switching power	8310VA
Min. Switching load	6V 1A

Characteristic Data

Contact material	Silver alloy	
Contact resistance	100mΩ Max. (at 1A 6VDC)	
Operate time (at rated coil voltage)	20ms Max. (No diode)	
Release time	5ms Max. (No diode)	
Insulation resistance	1,000MΩ Min. (DC500V)	
Dielectric strength	Between open contacts: 1,200VAC, 50/60Hz for 1min.	
	Between coil and contact: 4,000VAC, 50/60Hz for 1min.	
Vibration Resistance	Destructive	10 ~ 55Hz, at double amplitude of 1.5mm
	Functional	10 ~ 55Hz, at double amplitude of 1.5mm
Shock Resistance	Destructive	100G Min.
	Functional	10G Min.
Endurance	Mechanical endurance 7,200ops/h	10,000,000 (at room temperature)
	Electrical endurance (360ops/h)	100,000 (at room temperature)
Ambient Temperature	-40°C ~ +85°C (No condensation)	
Weight	Approx. 55g	



- (1) . The Data shown above are initial values.
 (2) . Only typical loads are listed above. Other load specifications can be available upon request.
 (3) . The electrical endurance test has been carried out on flux proofed version.

Coil Data (at 20°C)

Nominal voltage (VDC)	Nominal operating current $\pm 10\%$ (mA)	Coil resistance $\pm 10\%$ (Ω)	Max allowable voltage (VDC)	Operate voltage (Max.)	Release voltage (Min.)	Nominal operating power (W)
3	400.00	7.5	130% of Nominal Voltage	70% of Nominal Voltage	10% of Nominal Voltage	1.2W
5	240.00	20.8				
6	200.00	30				
9	134.00	67				
12	100.00	120				
18	66.67	270				
24	50.00	480				
48	25.00	1,920				
60	20.00	3,000				

The data shown above are initial values. Do not apply maximum allowable voltage on coil for more than 10 minutes to avoid overheating of the coil.

Safety Certificate Ratings (Note: More details of approved ratings, please refer to the safety certificates)

Certificates	CQC	VDE	UL/c-UL
File No.	CQC02001002130 CQC12002080736	40007793	E190598
Approved Ratings	30A 250VAC	27A 250VAC 30A 250VAC (T 型)	30A 120/250/277VAC, Resistive/G.P. 3HP 240VAC 2HP 125/240/250VAC TV-15 120VAC

- (1) All values unspecified are at room temperature.
 (2) Only typical ratings are listed above and the endurance differ in each load. Other specific load information are available upon request.
 (3) For sealed type testing, please open the ventilation hole in the case before test.



Ordering Information

Nomenclature

SFD -1 12 D M P -F -XX

Special Parameter: Nil-Standard, Letter or number-Special requirement

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

Terminal Type: Nil-Standard, P-PCB, T-Special type

Contact Arrangement: M-Form A

Coil Power: D-1.2W

Rated coil voltage(VDC):03,05,06,09,12,18,24,48,60

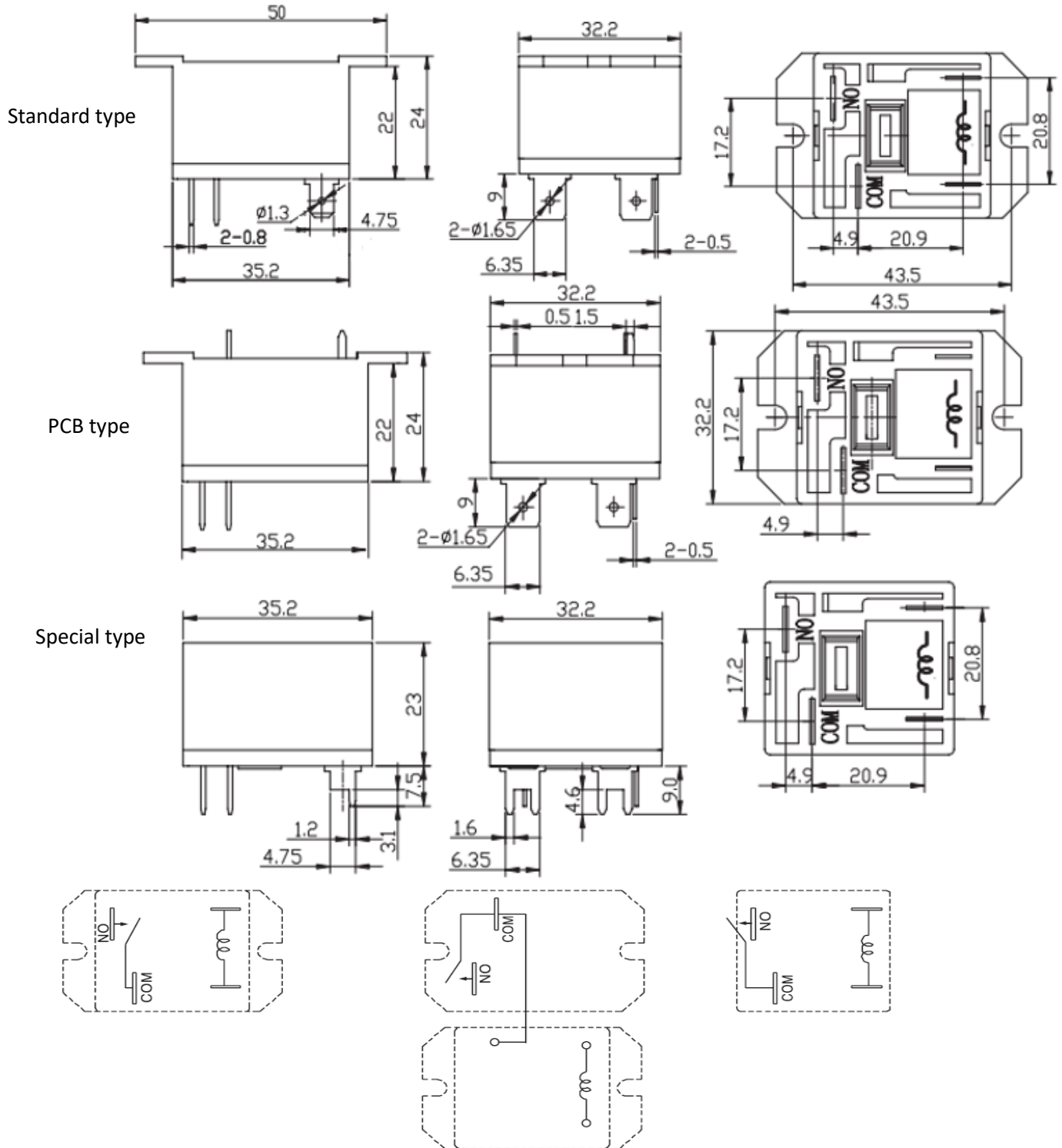
Number of poles : 1-1Pole

Type: SFD

- (1) . Flux-proofed 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-proofed relays are assembled on PCB.
- (3) . Special requirements of customers (XX) shall be evaluated by our company and marked by characteristic symbols.



Outline dimension, wiring diagram, PCB layout (Unit: mm)



Wiring Diagram (bottom view)

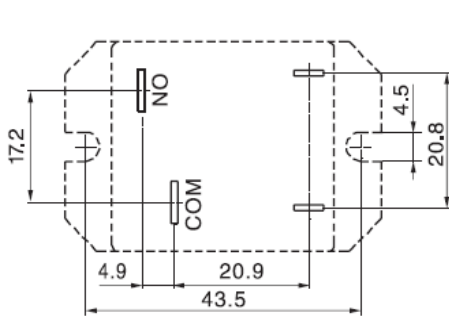
In case of no tolerance shown on outline dimension:

< 1mm: $\pm 0.2\text{mm}$ 1~5mm: $\pm 0.3\text{mm}$ > 5mm: $\pm 0.4\text{mm}$

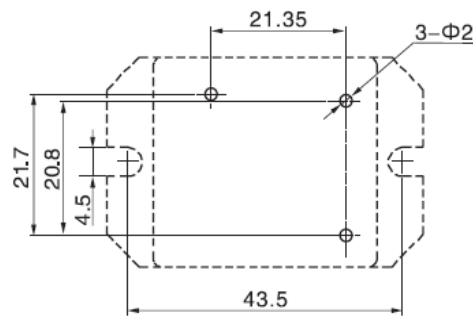
Note:1、 The dimension of pin is the size before tinning

2、 Tolerance of PCB layout: $\pm 0.1\text{ mm}$

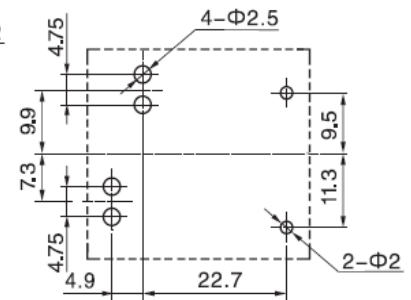




Standard type



PCB type

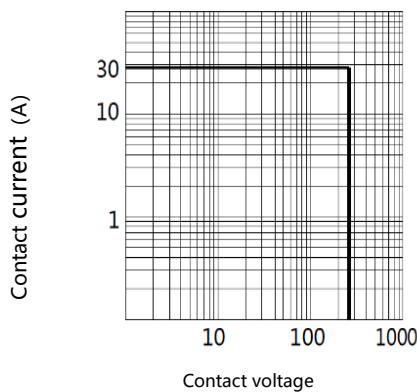


Special type

PCB Layout (bottom view)

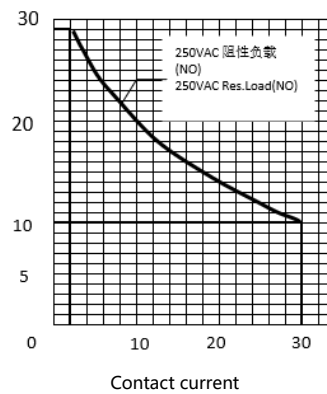
Characteristic Curves

Max. Switching Power

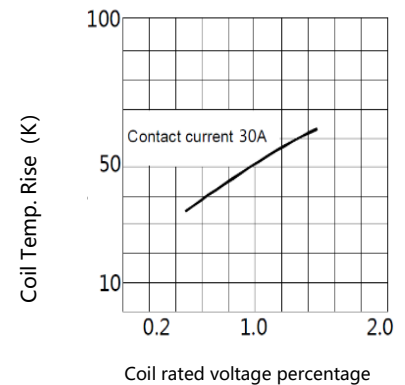


Operations (10000 Ops.)

Endurance Curve



Coil Temp. Rise



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.

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.

