FHS10

Solid State Relay

Features

- Non-contact switch has long life, high reliability, fast switching speed and low control power;
- Load current 5A 75VAC~264VAC
- Photoelectric isolation, dielectric strength 2500VAC
- TTL compatible
- PCB mounting,
- Environment-friendly product(RoHS compliant)
- Outline Dimensions:(44.5×10.5×26)mm
- Main uses: electromagnetic valves, electric motors, incandescent lamps, communication and network equipment, computer terminal products, digital audio, video equipment, control systems, and instruments, medical devices, entertainment facilities, etc.;
- GB/T 36640-2018;IEC 62314:2006

■ CHARACTERISTICS

INPUT SPECIFICATIONS (Ta=25℃)		
Control voltage range	D	（4~32）VDC
	1D	（9.6~14.4）VDC
	2D	（19.2~28.8）VDC
	24A	19.2VAC～28.8VAC
	110A	85VAC～132VAC
	220A	175VAC～264VAC
Must turn-on voltage	D	4VDC
	1D	9.6VDC
	2D	19.2VDC
	24A	19.2VAC
	110A	85VAC
	220A	175VAC
Must turn-off voltage		1VDC
Max. input current		10mA
OUTPUT SPECIFICATIONS (Ta=25℃)		
Load voltage range	24A	24VAC～280VAC
	38A	24VAC～440VAC
	48A	24VAC～530VAC
Load current range		0.1~5A
Max. surge current (10ms)		320A（10ms）
Max. I^2t for fusing（10ms A^2S）		512
Max. off-state leakage current		≤5mA
Max. on-state voltage drop		1.5Vr.m.s

Max. turn-on time		Zerocross	≤1/2 Cycle+1ms
		Random	≤1ms
Max. turn-off time		≤1/2 Cycle+1ms	
Max. transient voltage		$800V_{pK}$	
Min. off-state(dv/dt)		1000V/uS	
Max. zero-cross over voltage		±15V	
Min. power factor		0.5	
GENERAL SPECIFICATIONS (Ta=25℃)			
Dielectric strength(input to output)		4000VAC 50HZ/60HZ 1min	
Insulation resistance		1000MΩ（500VDC）	
Overvoltage (1.2/50uS)		4KV	
Mechanical performance	Shock resistance	Functional	$98m/s^2$
		Destructive	$980m/s^2$
	Vibration resistance		10Hz~55Hz 1.5mm DA
Operating temperature		-30℃~80℃	
Storage temperature		-40℃~100℃	
Ambient humidity		45%~85%	
Unit weight		Approx.20g	

■ORDERING INFORMATION

FHS10- 2D 38A 5 p Y N -XXX

① Type

② Control voltage

D= Control voltag 4VDC to 32VDC

1D=Control voltag 4VDC～15VDC

2D=Control voltag 15VDC～32VDC

24A=Control voltag 19.2VAC～28.8VAC

110A=Control voltag 85VAC～132VAC

220A=Control voltag 175VAC～264VAC

③ Load voltage

24A= The rated load voltage is 240VAC(voltage range 24VAC～280VAC)

38A= The rated load voltage is 380VAC(voltage range 24VAC～440VAC)

48A= The rated load voltage is 380VAC(voltage range 24VAC～530VAC)

④ Rated load current 5= Load current 0.1A～5A

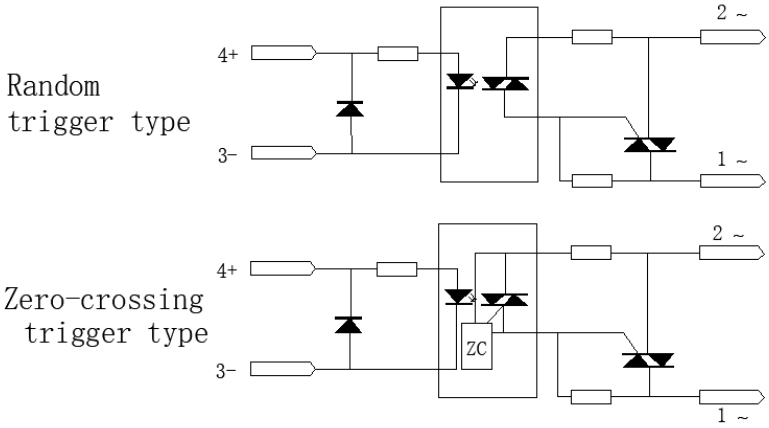
⑤ Switching mode : Z= Zero- cross P= Random

⑥ protection circuit Nil = Without varistor Y= Built-in varistor

⑦ absorption loop Nil = Built-in RC absorption circuit N= Without RC absorption circuit

⑧ Customer special code ： numbers or letters denote customer’s requirements,

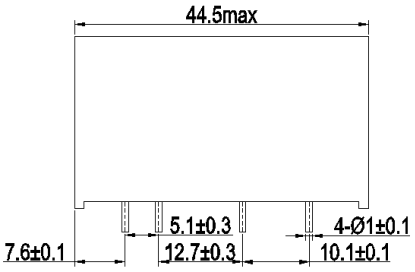
■ Circuit diagram

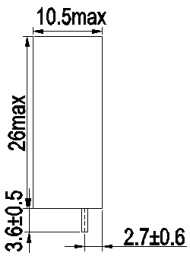


■ OUTLINE DIMENSIONS,WIRING DIAGRAMOUTLINE

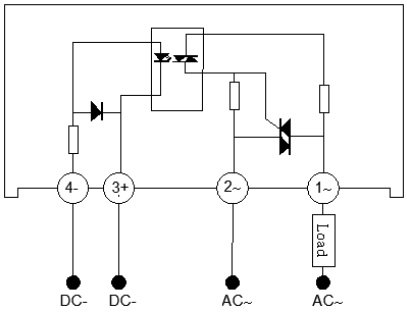
Unit: mm

Outline Dimensions

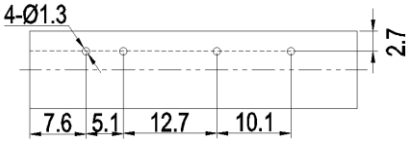




Wiring Diagram
(Bottom view)



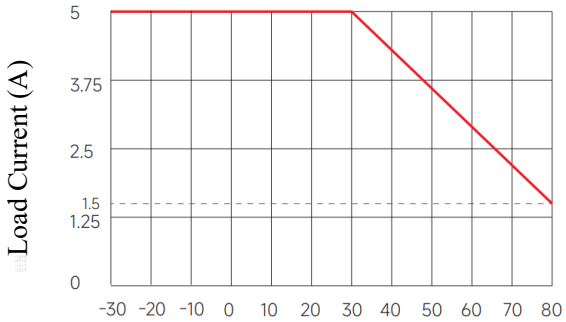
PCB Layout
(Bottom view)



Remark: （1）In case of no tolerance shown in outline dimension:outline dimension≤1mm,tolerance should be±0.2mm;outlinedimension>1mm and <5mm,tolerance should be ±0.3mm;outline dimension≥5mm,tolerance should be ±0.5mm.

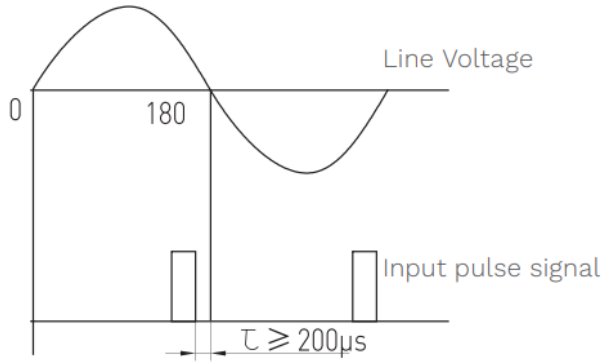
（2）The tolerance without indicating for PCB layout is always ±0.1mm.

■ CHARACTERISTIC CURVES



■ PRECAUTIONS

1. Soldering must be completed within 10s at 260°C or 5s at 350°C.
2. The SSR's case serves to dissipate the heat generated by the SSR itself. If poor ventilation is unavoidable, the load current must be derated. Please refer to the curve of Max. Load Current vs. Ambient Temperature for derating.
3. The internal input circuit of SSR does not have the reverse polarity protection, thus make sure the wiring of input and output and the input polarity is correct so as to avoid any damage to the SSR.
4. If the output transient voltage exceeds the nominal value, a varistor should be connected to the SSR's output terminal in parallel to prevent the SSR being broken down. The recommended varistor voltage is 470V.
5. When the SSR is used for phase modulation, the time interval between the negative edge of the input pulse signal and the line voltage zero crossing point must last over 200μs, or it may be out of control.



6. Please do not use the SSR exceeding the limitation which is specified on this datasheet.
7.The specification is for reference only.Specifications subject to change without notice.