## Features

● Non-contact switch has long life, high reliability, fast switching speed and low control power;

● Load current 2A 75VAC~264VAC

● (AC) Solid State Relay，Width only 15.7mm

● Photoelectric isolation, dielectric strength 2500VAC

● TTL compatible

● PCB mounting, also socket mounting (15 series)

● Environment-friendly product(RoHS compliant)

● Outline Dimensions:(29.0×12.7×15.7)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
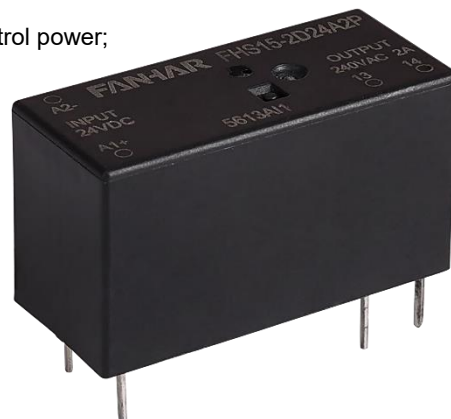
■ CHARACTERISTICS

INPUT SPECIFICATIONS (Ta=25℃)		
Control voltage range	5	（4~6）VDC
	12	（9.6~14.4）VDC
	24	（19.2~28.8）VDC
Must turn-on voltage	5	4VDC
	12	9.6VDC
	24	19.2VDC
Must turn-off voltage		1VDC
Max. input current		10mA
OUTPUT SPECIFICATIONS (Ta=25℃)		
Load voltage range		24VAC～280VAC
Load current range		0.1~2A
Max. surge current (10ms)		80A（10ms）
Max. I²t for fusing (10ms A²S)		32
Max. off-state leakage current		≤3mA （@220VAC）
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)			2500VAC 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.13g

■ORDERING INFORMATION

FHS15- 2D   **24A** **2** **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)

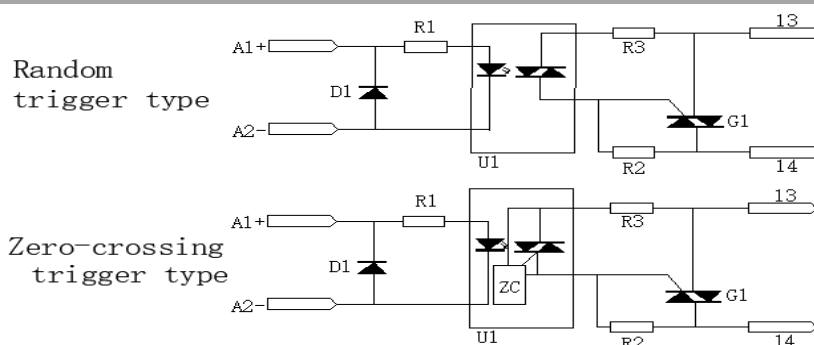38A= The rated load voltage is 380VAC(voltage range 24VAC～440VAC)

④ Rated load current   2= Load current 0.1A～2A

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

⑥ protection circuit   Nil = Without varistor   Y= Built-in varistor
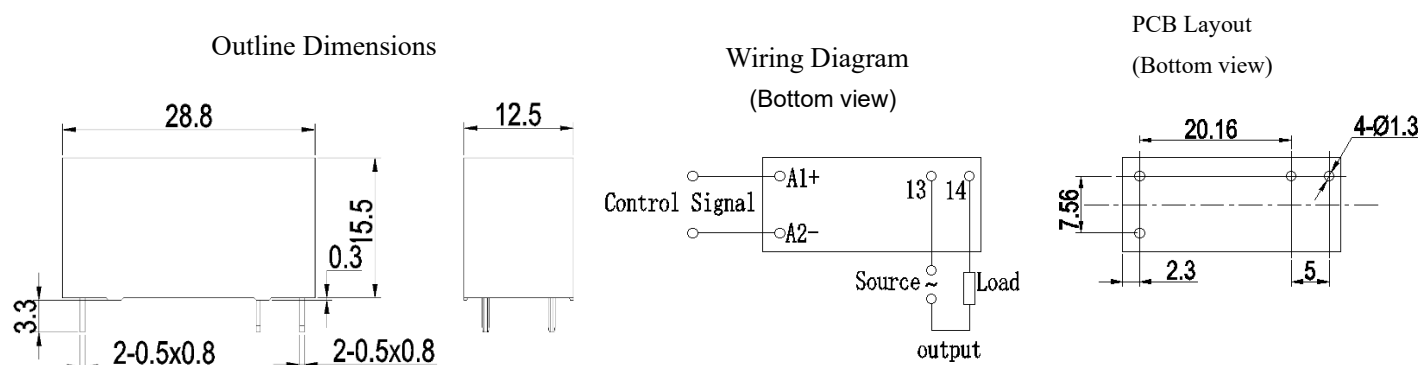
⑦ absorption loop   Nil = Built-in RC absorption circuit   N= Without RC absorption circuit

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

■ Circuit diagram
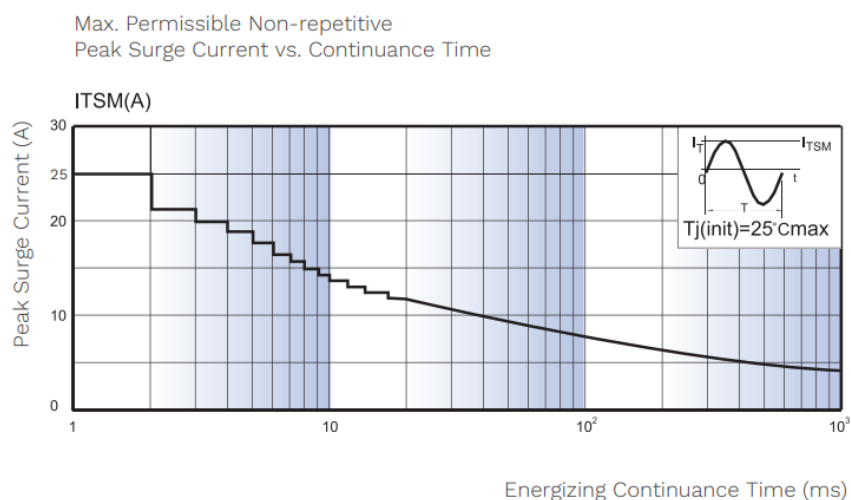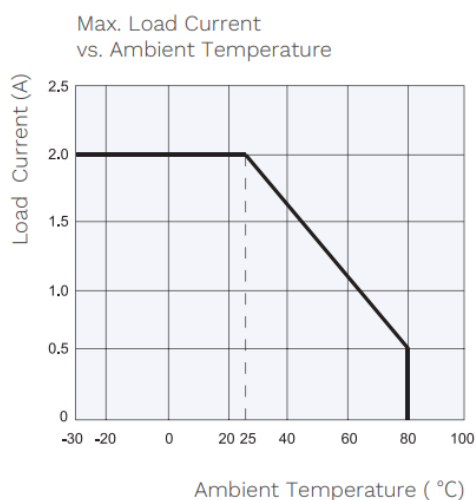
■ OUTLINE DIMENSIONS,WIRING DIAGRAMOUTLINE　　　Unit: mm

Outline Dimensions

28.8

12.5

15.5

0.3

3.3

2-0.5x0.8　　2-0.5x0.8

Wiring Diagram
(Bottom view)

Control Signal

A1+
A2-

13　14

Source ~　Load

output

PCB Layout
(Bottom view)

20.16

4-Ø1.3

7.56

2.3　　.5

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

Max. Load Current
vs. Ambient Temperature

Load Current (A)

Ambient Temperature (°C)

Max. Permissible Non-repetitive
Peak Surge Current vs. Continuance Time

ITSM(A)

Peak Surge Current (A)

I_T　I_{TSM}

Tj(init)=25°Cmax

Energizing Continuance Time (ms)

■ 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.

Line Voltage

0   180

Input pulse signal

$\tau \geq 200\mu s$
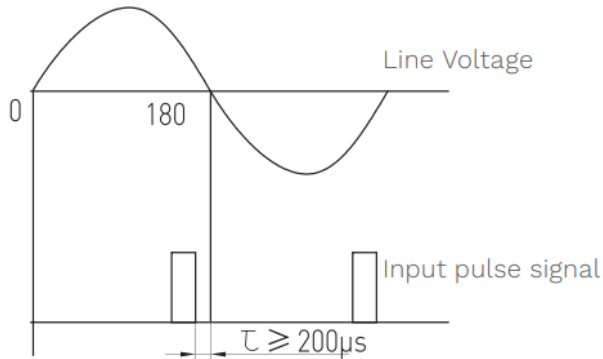
6. Please do not use the SSR exceeding the limitation which is specified on this datasheet.

7. The specification is for reference only. Specifications subject to change without notice.