

## Main Feature

1. Miniature size (23.2 mm length x 17.2 width x 16 height) on SAM-1P for smaller occupying space.
2. Large Switching current (DC15V 20A/DC 24V 15A) available by employing high conductivity movable spring material and smaller internal resistance is reached by distributing stationery contact terminal near to external connection part, and also with connection of common terminal to other place, the heat radiation is suppressed to the minimum.
3. Wide operating temperature as follows; Coil Voltage : 1.2 times against rated coil voltage 80°C....14A, 70°C...16A, 60°C....18A. If terminal-resistance polyurethan magnet wire is used on coil, 20A switching current will be available on coil voltage of 1.2 times against rated coil voltage at 80°C.
4. Easy PC Board design available as the location of contact terminal is separated from each contact.
5. SAM-2P is consisted of 2 pieces of SAM-1P and capsulated by one cover and the location of terminals are distributed for easy pattern design on N.O. and N.C. contact terminal.

## Application

Car Control Switching Box (Alarm System, Automatic Door Locking System.... etc.)

## Contact Rating

- Nominal Load(Resistive Load  $\cos \phi = 1$ )  
Contact Capacity SAM 1 Pole :  
..... N.O.: 10A at 24VDC  
..... N.C.: 7A at 24VDC  
SAM 2 Poles :  
..... N.O.: 15A at 15VDC.  
..... N.C.: 10A at 15VDC.
- Rated Carrying Current ..... 15A.  
Max. Allowable Current ..... 20A.  
Max. Allowable Voltage ..... DC 30V.  
Max. Allowable Power Force 240 W.  
Min. Switching Load ..... DC 10V ,10mA.
- Contact Material ..... Ag Alloy.
- Contact Form..... SPDT, SPST, DPDT, DPST.

## Performance (at Initial Value)

- Contact Resistance ..... 100 mΩ Max.@1A,6VDC
- Operate Time..... 10 mSec. Max.
- Release Time ..... 5 mSec. Max.
- Dielectric Strength :  
Between Coil & Contact ..... 500VAC at 50/60 Hz  
for one minute.  
Between Contacts ..... 1000VAC at 50/60 Hz  
for one minute.
- Surge Resistance ..... 2000V (between coil & contact 1.2x50μSec.)

- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :  
Electrical ..... 30 Ops per Minute.  
Mechanical ..... 300 Ops per Minute.
- Temperature Range..... -30~80°C
- Humidity Range ..... 45~85% RH.
- Coil Temperature Rise ..... 60°C Max.
- Vibration :  
Endurance ..... 10 to 55 Hz dual  
amplitude width 1.5mm.  
Error Operation..... 10 to 55 Hz dual  
amplitude width 1.5mm.
- Shock :  
Endurance ..... 1,000 m/S<sup>2</sup> Min.  
Error Operation..... 100 m/S<sup>2</sup> Min.
- Life Expectancy :  
Mechanical ..... 10<sup>7</sup> Operations at No  
load condition.  
Electrical ..... 10<sup>5</sup> Operations at Rated  
Resistive Load.
- Weight ..... SAM-1P : 8 g.  
SAM-2P : 15.2 g.

## Safety Standard & Its File Number

- NIL.

## Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega \pm 10\%$ )	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
SAM-1P SAM-2P	5	91	55	Abt. 0.45	75% Maximum	5% Minimum	150% but for short time carrying current
	6	75	80				
	9	50	180				
	12	38	320				
	18	25	720				
	24	19	1,280				

## Ordering Information

SAM - SS - 1 12 D M

**Contact Form:**

**Nil:** One Form C

**M:** One Form A

**B:** One Form B

**D:** Standard DC Coil

**Coil Type:**

**Coil Voltage:**

**05:** 5V, **06:** 6V, **09:** 9V, **12:** 12V, **18:** 18V, **24:** 24V

**Number of Pole:**

**1:** One Pole

**2:** Two Poles

**Type of Sealing:**

**SS:** Flow Solder Type

**SH:** Plastic Sealed Type

**Type:**

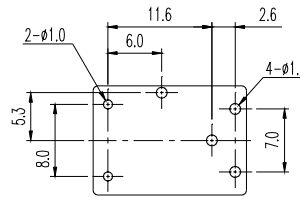
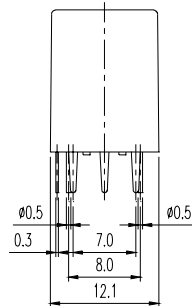
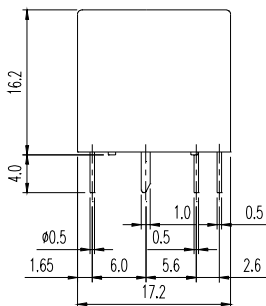
**SAM**

## Classification

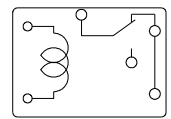
Model	SAM						
	1 Pole			2 Poles			
Number Of Pole	1C		1A	1B	2A		2B
Contact Form	1C		1A	1B	2A		2B
Flow Solder Type	SAM-SS-1□□D	SAM-SS-1□□DM	SAM-SS-1□□DB	SAM-SS-2□□D	SAM-SS-2□□DM	SAM-SS-2□□DB	
Plastic Sealed Type	SAM-SH-1□□D	SAM-SH-1□□DM	SAM-SH-1□□DB	SAM-SH-2□□D	SAM-SH-2□□DM	SAM-SH-2□□DB	

## Dimension

SAM-SS/SH(1P)

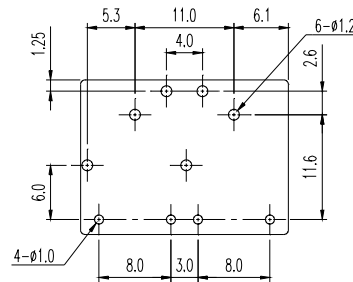
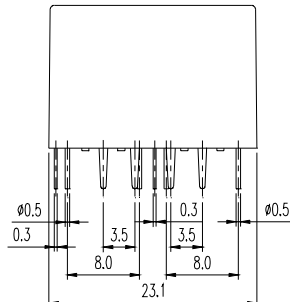
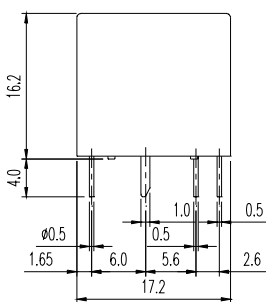


BOTTOM VIEW

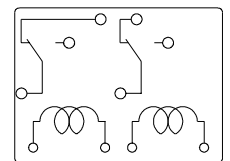


BOTTOM VIEW

SAM-SS/SH(2P)



BOTTOM VIEW



BOTTOM VIEW