MS-3DA/MS-3AA Series

Three Phase DC to AC, AC to AC solid state relay

Features:

- **DC to AC, AC to AC three phase solid state relay**
- **5-32Vdc input for DC to AC, 90~280Vac input for AC to AC**
- **load amps,10~200 amps**
- **Load 24~680Vac**
- **LED process indication**
- **Panel mount**
- **Zero-crossing trigger**
- **All models with the same physical size**
- **Fast response and no noise**

-Black housing
-Terminal type
-Compact size
-Built-in RC Snubber circuit for all amps
-10,25,40 use TRIAC, 60 and above use back to back SCR
-Using top quality TRIAC and back to back SCR
-Units completely sealed with resin to have maximum isolation

Ordering Information

MS-[1]-[2]-[3]-[4]

1: Type of solid state relay

3	Three phase solid state relay

2:Input configuration

DA	DC input, range 5-32Vdc
AA	AC input, range 90~280Vac

3:Load voltage

48	24~680Vac 50/60HZ

4:Load amps

10	10 amps
25	25 amps
40	40 amps
60	60 amps
80	80 amps
100	100 amps
120	120 amps
150	150 amps
200	200 amps

eg: MS-3DA4825, for DC to AC 25 amps 680Vac relay
MS-3AA48150, for AC to AC 150 amps 680Vac relay

Guidelines on the selection and usage of a solid state relay

1)Current rating, as a general rule consider using the relay at no more than 50% of its rated current for resistive load such as a heater, considering using the relay at no more than 10% of its rated current for inductive load, such as a motor, in this application, the relay only can be used to control the start and stop of the motor, not reverse of the motor.
2)Heatsinks must always be installed together with the SSR regardless of the load amps, natural convection cooling might be sufficient in some cases depends on the site situation, force air cooling must be taken into consideration under harsh conditions(contact our sales team for more info)
3)Fast fuse must be installed in the system to protect overload on the SSR
4)Silicon rubber pad or silicon compound must be applied to the bottom of the SSR to help the heat radiation
5)Our SSR is 680Vac load type,this is suitable for multiple line voltage system including 110V/220V/380V to maximum 680Vac
6)This is a normally open SSR, with no control input, the relay output is non-conducting, some specific types of SSR have a normally closed output, this needs to be specificed before order
7)Our relay can only be used for resistive load or inductive load, capacitive load is not suitable

Application

High-low temperature chamber, heaters, plastic machinery, incubation machine, Oiling machine, HVAC, Elevator control Lighting, Fountain controller

Technical Specifications

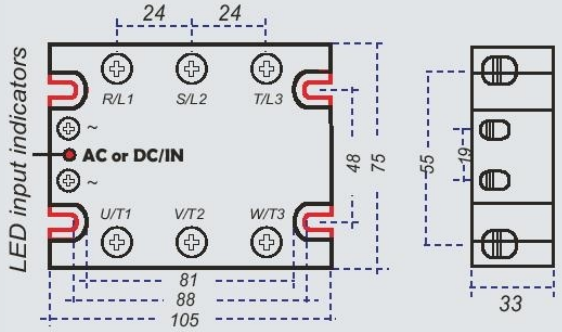
Electrical Technical Features(For DC to AC type)

OUTPUT SPECIFICATIONS	
Operating Voltage [VAC]	24-680Vac
Maximum Transient Overvoltage [Vpk]	1200
Maximum Off-State Leakage Current @Rated Voltage [mA]	Less 10m Ams
Maximum Surge Current [Adc] (10ms)	7*rated current
Maximum On-State Voltage Drop @ Rated Current [Vdc]	1.5
Maximum Off-State dv/dt [V/uSec]	1000
INPUT SPECIFICATIONS	
Control Voltage Range	5-32VDC
Minimum Turn-on Voltage	5.2 VDC
Minimum Turn-off Voltage	1VDC
Leakage Current	15mA
Maximum Turn-on Time [msec]	Less 8.3m Sec
Maximum Turn-off Time [msec]	Less 1/2AC cycle
GENERAL SPECIFICATIONS	
Dielectric Strength , Input-Output Base (50/60Hz)	3500
Dielectric Strength , Input-Output (50/60Hz)	3500
Minimum Insulation Resistance	10^9 ohm
Ambient Operating Temerature Range	-20^0 C~$+80^0$C
Ambient Storage Temperature Range	-40^0 C~$+100^0$C
Switch ing Type	Zero-Crossing
Weight (g) +/- 50g	380g

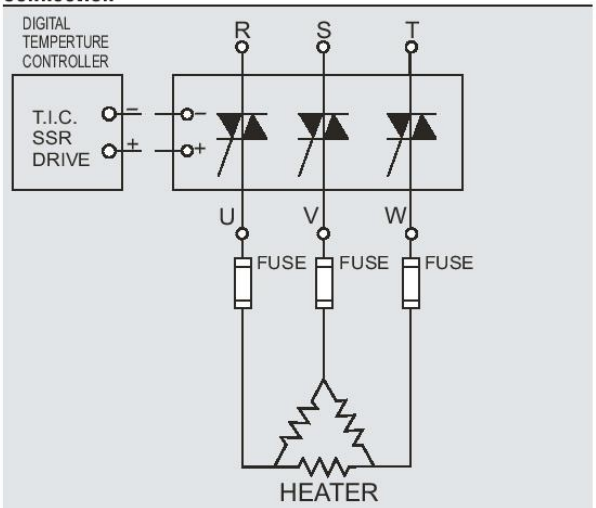
Electrical Technical Features(For AC to AC type)

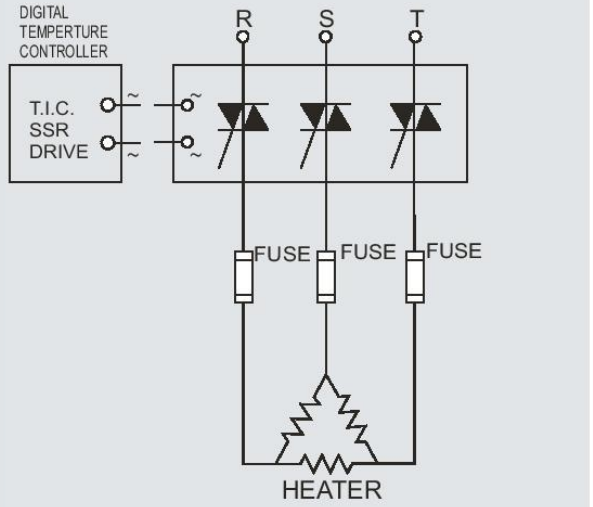
OUTPUT SPECIFICATIONS	
Operating Voltage [VAC]	24-680Vac
Maximum Transient Overvoltage [Vpk]	1200
Maximum Off-State Leakage Current @Rated Voltage [mA]	Less 10m Ams
Maximum Surge Current [Adc] (10ms)	7*rated current
Maximum On-State Voltage Drop @ Rated Current [Vdc]	1.5
Maximum Off-State dv/dt [V/uSec]	1000
INPUT SPECIFICATIONS	
Control Voltage Range	90~280Vac
Minimum Turn-on Voltage	80Vac
Minimum Turn-off Voltage	10Vac
Leakage Current	15mA
Maximum Turn-on Time [msec]	Less 8.3m Sec
Maximum Turn-off Time [msec]	Less 1/2AC cycle
GENERAL SPECIFICATIONS	
Dielectric Strength , Input-Output Base (50/60Hz)	3500
Dielectric Strength , Input-Output (50/60Hz)	3500
Minimum Insulation Resistance	10^9 ohm
Ambient Operating Temerature Range	-20^0 C~$+80^0$C
Ambient Storage Temperature Range	-40^0 C~$+100^0$C
Switch ing Type	Zero-Crossing
Weight (g) +/- 50g	380g

Size(same for DC and AC input)



Connection





Certificates

CE cULus

Packing information

Individual box for each pcs
50 pcs per master carton

Accessories(heatsink and cooling fans)

The primariy supporting unit for solid state relay is heatsinks, heatsinks has a lot of options in terms of mounting method, size and shape, below is a reference table to help you select the suitable heatsink for your application, here we only discussion the heatsink for three phase SSR both DC to AC and AC to AC.

ITEM NO	SIZE(mm)	Compatible SSR	Mouting method
MW-L-150	150x88x35	10A/25A	Panel mount only
MW-E-105	105x74x40	10A/25A	Panel mount or din rail mount
MW-H-110	110x80x80	40A	Panel mount or din rail mount
MW-H-150	150x80x80	60A	Panel mount or din rail mount
MW-Y-110	110x125x135	80A	Panel mount only
MW-Y-150	150x125x135	100A/120A	Panel mount only
MW-Y-170	170x125x135	150A/200A	Panel mount only
MW-DT-120	120x100x96	60A/80A/100A	Panel mount or direct Din rail mount
MW-F-120	120x130x93	80A	Panel mount only

Images and size

Model: MW-L-150
Size: 150mm*88mm*35mm
For 10 amps/25 amps SSR
Mounting method: Panel mount only

Model: MW-E-105
Size: 105mm*74mm*40mm
For 10 amps/25 amps SSR
Mounting method: Panel mount and din rail mount

Model: MW-H-110
Size: 110mm*80mm*80mm
For 40 amps SSR
Mounting method: Panel mount and din rail mount
Compatible with 8cm*8cm fans

Model: MW-H-150
Size: 150mm*80mm*80mm
For 60 amps SSR
Mounting method: Panel mount and din rail mount
Compatible with 8cm*8cm fans

Model: MW-Y-110
Size: 110mm*125mm*135mm
For 80 amps SSR
Mounting method: Panel mount only

Compatible with 12cm*12cm fans

Images and size

Model: MW-Y-150
Size: 150mm*125mm*135mm
For 100 /120 amps SSR
Mounting method: Panel mount only

Compatible with 12cm*12cm fans

Model: MW-Y-170
Size: 170mm*125mm*135mm
For 150/200 amps SSR
Mounting method: Panel mount only

Compatible with 12cm*12cm fans

Model: MW-DT-120
Size: 120mm*100mm*96mm
For 60/80/100 amps SSR
Mounting method: Panel mount and din rail mount directly with din rail mount slot,check image to the left

Model: MW-F-120
Size: 120mm*130mm*93mm
For 80 amps SSR
Mounting method: Panel mount only

Compatible with 8cm*8cm fans

Model: CLM-1
Din rail clamp
Can be attached to below model and convert the unit to din rail mount type
MW-E-105
MW-H-110
MW-H-150

Cooling fans

110VAC

Model: MF-1-S-8-110
8cm*8cm
sleeve bearing fans
source:110Vac

220VAC

Model: MF-1-S-8-220
8cm*8cm
sleeve bearing fans
source:220Vac

110VAC

Model: MF-1-S-12-110
12cm*12cm
sleeve bearing fans
source:110Vac

220VAC

Model: MF-1-S-12-220
12cm*12cm
sleeve bearing fans
source:220Vac