MS-1DA/MS-1AA Series

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

Features:

- **DC to AC, AC to AC Single Phase Solid State Relay**
- **3.2-32Vdc input for DC to AC, 90~280Vac input for AC to AC**
- **load amps,10~120 amps**
- **Load 24~480Vac**
- **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 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

1	Single phase solid state relay

2:Input configuration

DA	DC input, range 3.2-32Vdc
AA	AC input, range 90~280Vac

3:Load voltage

48	24~480Vac 50/60HZ

4:Load current

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

eg: MS-1DA4840, for DC to AC 40 amps 480Vac relay
MS-1AA48100, for AC to AC 100 amps 480Vac 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 480Vac load type,this is suitable for multiple line voltage system including 110V/220V/380V to maximum 480Vac
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)

Load Voltage	24~480Vac
Control Voltage	3.2-32Vdc
Minimum turn-on voltage	3.2Vdc
Minimum turn-off voltage	1Vdc
Maximum input current	25mA
Maximum turn-on time	10ms
Maximum turn-off time	10ms
Maximum Off-state Leakage Current [@ Rated Voltage]	5mA
Maximum On-state Voltage Drop [@ Rated Current]	1.6Vrms
Minimum Off-state dv/dt [@ Maximum Rated Voltage]	500V/μs
Dielectric Strength[50/60Hz]	input/output≥3500Vrms
Dielectric Strength[50/60Hz]	input,output/base≥2500Vrms
Transient Overvoltage	1200Vpk

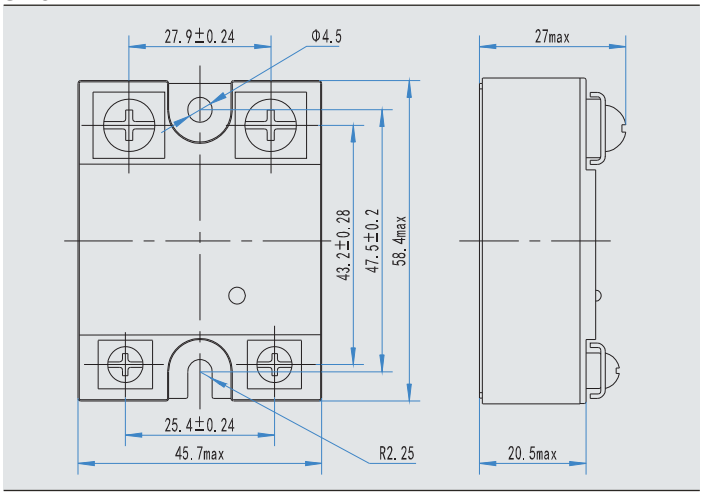
Electrical Technical Features(For AC to AC type)

Load Voltage	24~480Vac
Control Voltage	90~280Vac
Minimum turn-on voltage	90Vac
Minimum turn-off voltage	10Vac
Maximum input current	10mA
Maximum turn-on time	40ms
Maximum turn-off time	40ms
Maximum Off-state Leakage Current [@ Rated Voltage]	5mA
Maximum On-state Voltage Drop [@ Rated Current]	1.6Vrms
Minimum Off-state dv/dt [@ Maximum Rated Voltage]	500V/μs
Dielectric Strength[50/60Hz]	input/output≥3500Vrms
Dielectric Strength[50/60Hz]	input,output/base≥2500Vrms
Transient Overvoltage	1200Vpk

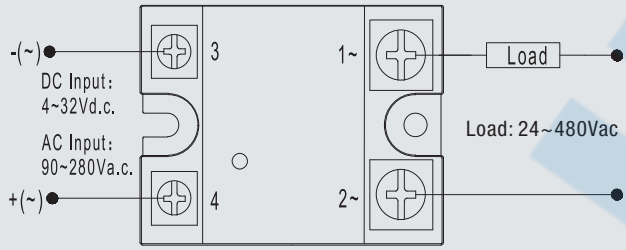
Mechanical and storage

Operating condition	-30°C~+75°C 35~85% RH
Storage condition	-30°C~+95°C
Weight	0.1kg
Housing material	Fire retardant ABS

Size



Connection



Certificates

CE cULus

Packing information

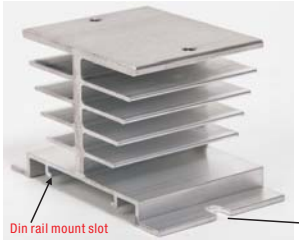
Individual box for each pcs
10 pcs in a secondary box
200 pcs per master carton

Accessories

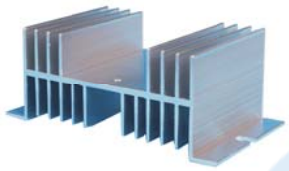
The primariy supporting unit for solid state relay is heatsinks, heatsinks has a lot of options in terms of mounting method, size and shape, below is a reference table to help you select the suitable heatsink for your application, here we only discuss the heatsink for single phase SSR both DC to AC and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

ITEM NO	SIZE(mm)	Compatible SSR	Mouting method
MW-I-50	60x50x50	10A/25A	Panel mount or direct Din rail mount
MW-W-70	70x100x50	40A	Panel mount only
MW-W-100	100x100x50	60A	Panel mount only
MW-H-55	55x80x80	40A	Panel mount or Din rail mount
MW-T-80	80x80x70	80A/100A/120A	Panel mount or Din rail mount
MW-DE-50	50x94x80	80A/100A/120A	Panel mount or Din rail mount
MW-E-52	52x74x40	40A	Panel mount or Din rail mount
MW-DT-50	50x100x96	60A	Panel mount or direct Din rail mount

Images and size



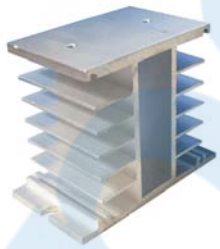
Model: MW-I-50
Size: 60mm*50mm*50mm
For 10 amps/25 amps SSR
Mounting method: Panel mount or din rail mount directly



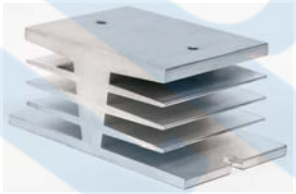
Model: MW-W-70
Size: 70mm*100mm*50mm
For 40 amps SSR
Mounting method: Panel mount

Model: MW-W-100
Size: 100mm*100mm*50mm
For 60 amps SSR
Mounting method: Panel mount

MW-W-70 and MW-W-100 looks like the same only difference is the length



Model: MW-H-55
Size: 55mm*80mm*80mm
For 40 amps SSR
Mounting method: Panel mount or din rail mount with din rail adaptor

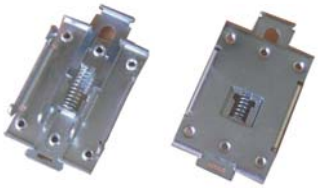


Model: MW-E-52
Size: 52mm*74mm*40mm
For 40 amps SSR
Mounting method: Panel mount or din rail mount with din rail adaptor

Model: MW-DT-50
Size: 50mm*100mm*96mm
For 60 amps SSR
Mounting method: Panel mount or din rail mount directly

Model: MW-T-80
Size: 80mm*80mm*70mm
For 80amps,100amps,120amps
Mounting method: Panel mount or din rail mount with din rail adaptor

Model: MW-DE-50
Size: 50mm*94mm*80mm
For 80amps,100amps,120amps
Mounting method: Panel mount or din rail mount with din rail adaptor



Model: CLM-1
Din rail clamp
Can be attached to below model and convert the unit to din rail mount type
MW-H-55
MW-T-80
MW-DE-50
MW-E-52