

VSM Series Single Phase Solid State Relays [Module Type]



Features

- High power and high current.
- High performance/low cost circuit design.
- Logic compatible current regulated input.
- 4000 Vrms optical isolation.
- Both "Zero Voltage" & phase controllable "Random Switching" versions.
- High voltage [1200 Vpk] versions for 480 Vrms service.
- LED-indication for control input.
- Control voltage range: 3 to 32 Vdc or 90 to 280Vac
- Industry standard "SCR Modules" package.

Ordering Options

VSM

VSM Series

Single Phase
Solid State Relay

120

Load Current

60: 60Amps
80: 80Amps
100: 100Amps
120: 120Amps
150: 150Amps

D

Control Voltage

D: 3-32VDC
A: 90-280VAC

A48

Output Voltage

A28: 24-280VAC
A48: 48-480VAC
A66: 48-660VAC

Z

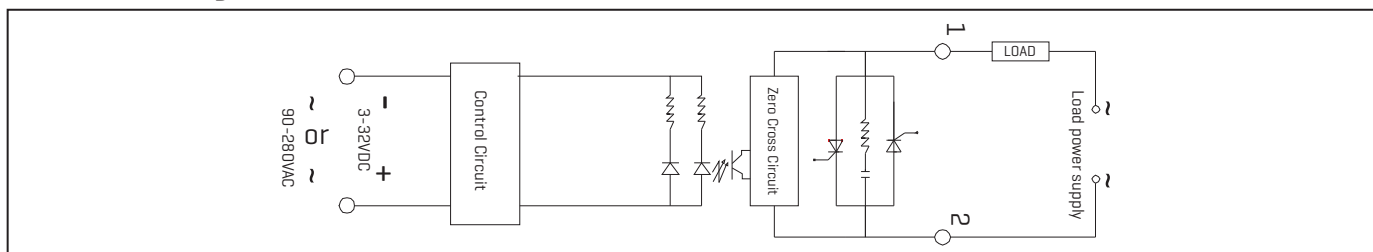
Switching Type

Z: Zero Cross Turn-on
R: Random Turn-on

Product Selection

Control Voltage	Output Voltage	Rated Operational Current				
		60Amps	80Amps	100Amps	120Amps	150Amps
3 to 32VDC	280VAC "Z"	VSM60DA28Z	VSM80DA28Z	VSM100DA28Z	VSM120DA28Z	VSM150DA28Z
3 to 32VDC	280VAC "R"	VSM60DA28R	VSM80DA28R	VSM100DA28R	VSM120DA28R	VSM150DA28R
90 to 280VAC	280VAC "Z"	VSM60AA28Z	VSM80AA28Z	VSM100AA28Z	VSM120AA28Z	VSM150AA28Z
90 to 280VAC	280VAC "R"	VSM60AA28R	VSM80AA28R	VSM100AA28R	VSM120AA28R	VSM150AA28R
3 to 32VDC	480VAC "Z"	VSM60DA48Z	VSM80DA48Z	VSM100DA48Z	VSM120DA48Z	VSM150DA48Z
3 to 32VDC	480VAC "R"	VSM60DA48R	VSM80DA48R	VSM100DA48R	VSM120DA48R	VSM150DA48R
90 to 280VAC	480VAC "Z"	VSM60AA48Z	VSM80AA48Z	VSM100AA48Z	VSM120AA48Z	VSM150AA48Z
90 to 280VAC	480VAC "R"	VSM60AA48R	VSM80AA48R	VSM100AA48R	VSM120AA48R	VSM150AA48R

Connection Diagram



Input Specifications

Parameter-list	Specification Limits	
Input Parameter	D	A
Control Voltage Range	3 to 32VDC	90 to 280VAC
Input Current [Max.]	13/16mADC @=5V/12V	29mAAC@=220V
Must Turn-on Voltage	3VDC	90VAC
Must Turn-off Voltage	1VDC	10VAC
Reverse Voltage [Max.]	-6VDC	/

Output Specifications

Output Parameter	Units	Specification Limits				
Model No.: VSM	Amps	60	80	100	120	150
Load Current Range	Arms	0.1 to 60	0.1 to 80	0.1 to 100	0.1 to 120	0.1 to 150
Surge Current 20mSec [Max.]	Arms	600	800	1000	1200	1500
Load Voltage Range [280V]	Vrms	24 to 280				
Transient Overvoltage [280V]	Vpk	≥800				
Load Voltage Range [480V]	Vrms	48 to 480				
Transient Overvoltage [480V]	Vpk	≥1200				
Frequency Range	Hz	47 to 63				
Off State dv/dt [Min.]	V/μsec	500				
Off State Leakage Current [Max.]	mArms	≤8				
On State Voltage Drop [Max.]	Vrms	1.6				
Thermal Resistance, [Rthjc]	°C/W	0.65	0.5	0.3	0.3	0.3
Turn on Time [Max.] "Z"	Cycle	1/2				
Turn off Time [Max.] "D"	Cycle	1/2				
Turn on Time [Max.] "R"	mSec	1				
Turn off Time [Max.] "A"	mSec	10				

General Specifications [Ta=25°C]

Description	60	80	100	120	150
Dielectric Strength, Input to Output [50/60 Hz]	2500Vrms				
Dielectric Strength, Input/Output to Base [50/60 Hz]	2500Vrms				
Minimum Insulation Resistance [@ 500 VDC]	10 ⁹ Ω				
Maximum Capacitance, Input/Output	0.8pF				
Ambient Operating Temperature Range	-30 to 80°C				
Ambient Storage Temperature Range	-30 to 100°C				
Humidity per IEC60068-2-78	95%				
LED Input Status Indicator	Red				
Baseplate Material	Pure copper				
Weight	145g				

Dimensions

