



### 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  
(module type)

200

#### Load Current

200: 200Amps  
250: 250Amps  
300: 300Amps  
350: 350Amps  
400: 400Amps

D

#### Control Voltage

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

A28

#### Output Voltage

A28: 24-280VAC  
A48: 48-480VAC  
A53: 53-530VAC  
A66: 66-660VAC

R

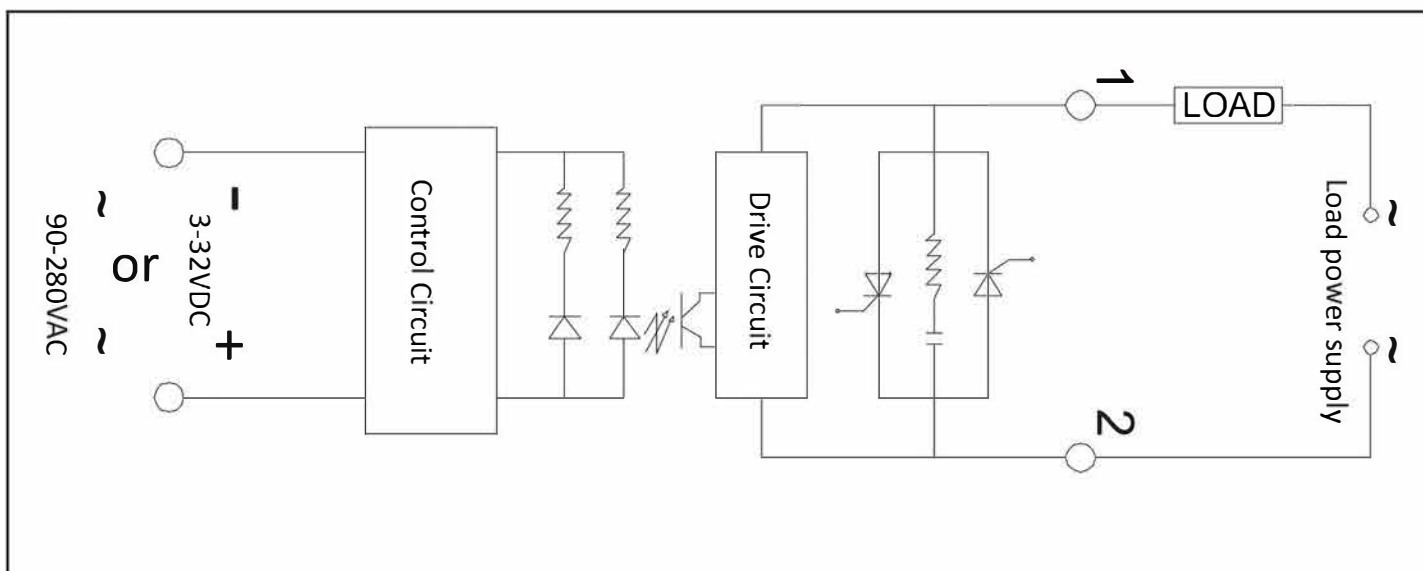
#### Switching Type

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

### Product Selection

| Control voltage | Rated Voltage | Rated operational current |             |             |             |             |
|-----------------|---------------|---------------------------|-------------|-------------|-------------|-------------|
|                 |               | 200Amp                    | 250Amp      | 300Amp      | 350 Amp     | 400Amp      |
| 3 to 32 Vdc     | 280 VAC "Z"   | VSM200DA28Z               | VSM250DA28Z | VSM300DA28Z | VSM350DA28Z | VSM400DA28Z |
| 3 to 32 Vdc     | 280 VAC "R"   | VSM200DA28R               | VSM250DA28R | VSM300DA28R | VSM350DA28R | VSM400DA28R |
| 90 to 280Vac    | 280 VAC "Z"   | VSM200AA28Z               | VSM250AA28Z | VSM300AA28Z | VSM350AA28Z | VSM400AA28Z |
| 90 to 280Vac    | 280 VAC "R"   | VSM200AA28R               | VSM250AA28R | VSM300AA28R | VSM350AA28R | VSM400AA28R |
| 3 to 32 Vdc     | 480 VAC "Z"   | VSM200DA48Z               | VSM250DA48Z | VSM300DA48Z | VSM350DA48Z | VSM400DA48Z |
| 3 to 32 Vdc     | 480 VAC "R"   | VSM200DA48R               | VSM250DA48R | VSM300DA48R | VSM350DA48R | VSM400DA48R |
| 90 to 280Vac    | 480 VAC "Z"   | VSM200AA48Z               | VSM250AA48Z | VSM300AA48Z | VSM350AA48Z | VSM400AA48Z |
| 90 to 280Vac    | 480 VAC "R"   | VSM200AA48R               | VSM250AA48R | VSM300AA48R | VSM350AA48R | VSM400AA48R |

### 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/24V   | 29mAac @=220V |
| Must Turn On Voltage   | 3Vdc                 | 90Vac         |
| Must Turn Off Voltage  | 1Vdc                 | 10Vac         |
| Reverse Voltage (Max.) | 32Vdc                | /             |

### Output Specifications

| Output Parameter                | Units                               | Specification Limits |             |             |             |             |
|---------------------------------|-------------------------------------|----------------------|-------------|-------------|-------------|-------------|
| Model No.:VSM                   | Amp                                 | 200                  | 250         | 300         | 350         | 400         |
| Load Current Range              | Arms                                | 0.05 to 200          | 0.05 to 250 | 0.05 to 300 | 0.05 to 350 | 0.05 to 400 |
| Surge Current 20mSec(Max.)      | Arms                                | 2500                 | 3400        | 4500        | 5000        | 6000        |
| Load Voltage Range(280V)        | Vrms                                | 24 to 280            |             |             |             |             |
| SCR Over voltage(280V)          | Vpk                                 | ≥800                 |             |             |             |             |
| Load Voltage Range(480V)        | Vrms                                | 48 to 480            |             |             |             |             |
| SCR Over voltage(480V)          | Vpk                                 | ≥1200                |             |             |             |             |
| Thermal Resistance,(Rthjc)      | °C/w                                | 0.22                 | 0.15        | 0.14        | 0.13        | 0.12        |
| Frequency Range                 | Hz                                  | 47 to 63             |             |             |             |             |
| Off State dv/dt (Min.)          | V/μsec                              | 500                  |             |             |             |             |
| Off State Leakage Current(Max.) | mArms                               | ≤10                  |             |             |             |             |
| On State Voltage Drop(Max.)     | Vrms                                | 1.8                  |             |             |             |             |
| Turn On Time (Max.)"Z"          | Cycle                               | 1/2                  |             |             |             |             |
| Turn On Time (Max.)"R"          | mSec                                | 1                    |             |             |             |             |
| Turn Off Time (Max.)            | Cycle                               | 1/2                  |             |             |             |             |
| Turn Off Time (Max.)"A2"        | mSec                                | 40                   |             |             |             |             |
| Dielectric (Input/Output)       | Vrms                                | 2500                 |             |             |             |             |
| Dielectric (Input-Output/Base)  | Vrms                                | 2500                 |             |             |             |             |
| Capacitance                     | pf                                  | 10                   |             |             |             |             |
| Ambient Temperature Range       | Operating or Storage -30°C to +80°C |                      |             |             |             |             |
| Weight (Typical)                | 280g                                |                      |             |             |             |             |
| Base Plate                      | Copper, nikel-plated                |                      |             |             |             |             |
| Case Color                      | Black                               |                      |             |             |             |             |
| Led Display                     | Yes                                 |                      |             |             |             |             |

### ***Dimensions***

