

## VSC Series Single Phase Solid State Relays



### Features

- Rating of 10A, 15A and 25A@24-280VAC.
- Zero voltage or instantaneous turn-on outputs.
- Easy-to-use: Fast-on connection.
- LED input status indicator.

### Ordering Options

**VSC**

#### VSC Series

Single Phase  
Solid State Relay

**25**

#### Load Current

10: 10Amps  
15: 15Amps  
25: 25Amps

**D05**

#### Control Voltage

D05: 4-8VDC  
D12: 10-14VDC  
D24: 21-27VDC

**A**

#### Output Voltage

A: 24-280VAC

**Z**

#### Switching Type

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

### Product Selection

Control voltage	Output voltage	Rated operational current		
		10Amps	15Amps	25Amps
4-8VDC	280VAC"Z"	VSC10D05AZ	VSC15D05AZ	VSC25D05AZ
4-8VDC	280VAC"R"	VSC10D05AR	VSC15D05AR	VSC25D05AR
10-14VDC	280VAC"Z"	VSC10D12AZ	VSC15D12AZ	VSC25D12AZ
10-14VDC	280VAC"R"	VSC10D12AR	VSC15D12AR	VSC25D12AR
21-27VDC	280VAC"Z"	VSC10D24AZ	VSC15D24AZ	VSC25D24AZ
21-27VDC	280VAC"R"	VSC10D24AR	VSC15D24AR	VSC25D24AR

### Input Specifications

Description	D05	D12	D24
Control Voltage Range	4-8VDC	10-14VDC	21-27VDC
Minimum Turn-On Voltage	4VDC	10DC	21VDC
Must Turn-Off Voltage	1VDC	1VDC	1VDC
Minimum Input Current	6mA	10mA	8mA
Maximum Input Current	21mA	17.5mA	19mA
Maximum Turn-On Time [msec]	1/2Cycle	1/2Cycle	1/2Cycle
Maximum Turn-Off Time [msec]	1/2Cycle	1/2Cycle	1/2Cycle

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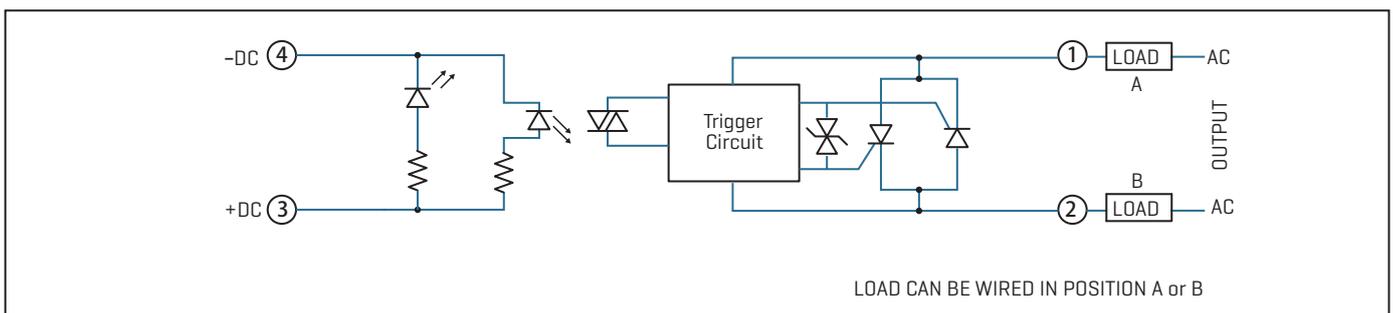
### Output Specifications

Description	10Amps	15Amps	25Amps
Operating voltage [47-63Hz][Vrms]	24-280	24-280	24-280
Maximum load current [Adc]	10A	15A	25A
Minimum load current [mArms]	150	150	250
Transient overvoltage [Vpk]	600	600	600
Maximum surge current [50/60Hz,1Cycle] [Apk]	145/150	185/220	260/280
Maximum I <sup>2</sup> t for fusing [50/60Hz,1/2Cycle] [A <sup>2</sup> sce]	100/95	165/160	338/326
Minimum off-state dv/dt @Maximum rated voltage [V/μsec]	500	500	500
Maximum off-state leakage current @rated voltage[mArms]	0.1	0.1	0.1
Thermal resistance junction to case [Rjc][°C/W]	3.0	2.2	0.9
Maximum on-state voltage drop @rated current [Volts]	1.3	1.3	1.3
Minimum power factor [at maximum load]	0.7	0.7	0.7

### General Specifications

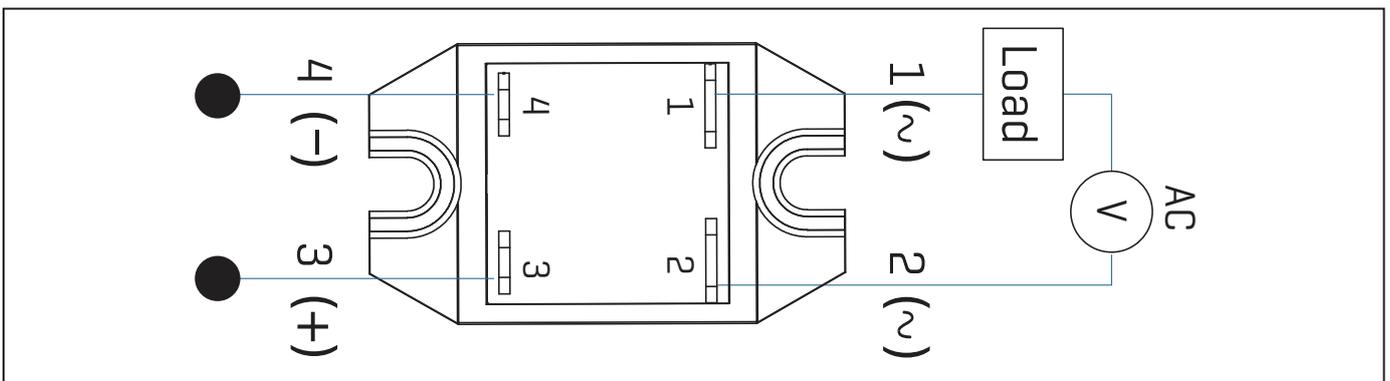
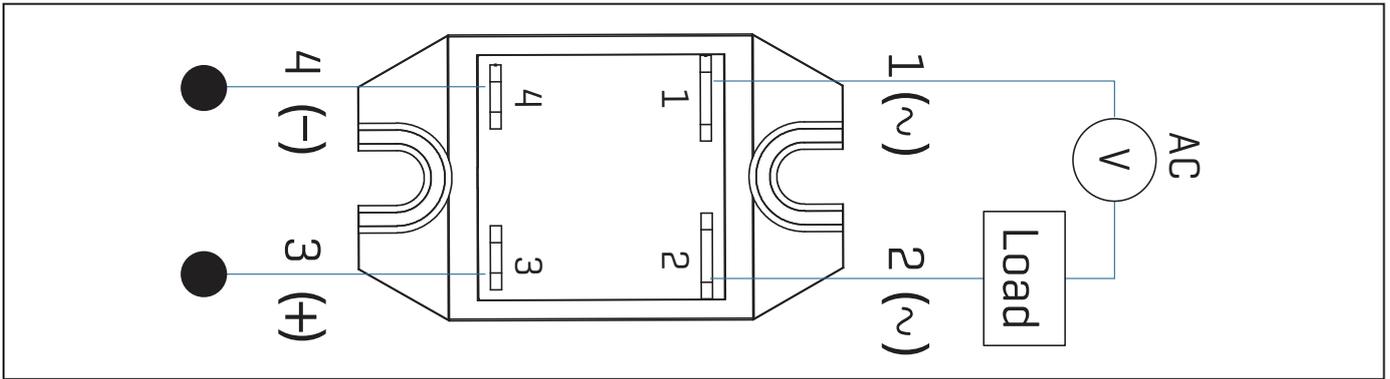
Description	Parameters
Dielectric Strength, Input to Output [50/60Hz]	2500 Vrms
Dielectric Strength, Output to Baseplate [50/60Hz]	2500 Vrms
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125 °C
Weight [typical]	16g
Terminals	3/16" x 0.032" input, 1/4" x 0.032" output QC
SSR Mounting Screw Torque Range	9.0-10.0 in-lb [1.0-1.13 Nm]
LED Input Status Indicator	Red
Humidity per IEC60068-2-78	93% non-condensing

### Equivalent Circuit Block

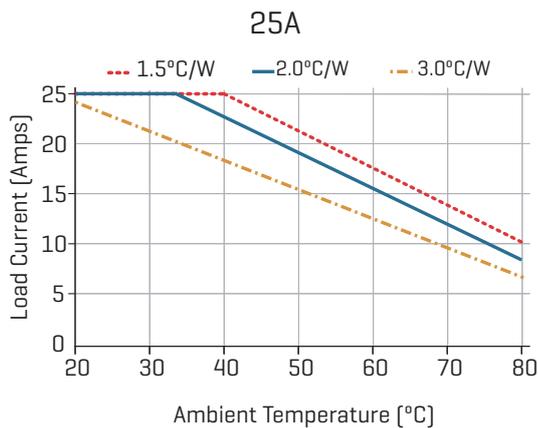
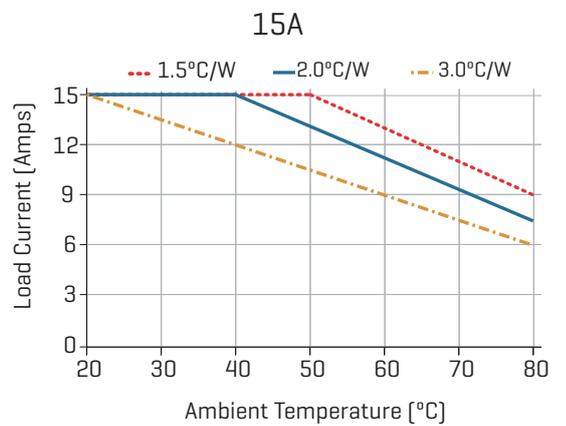
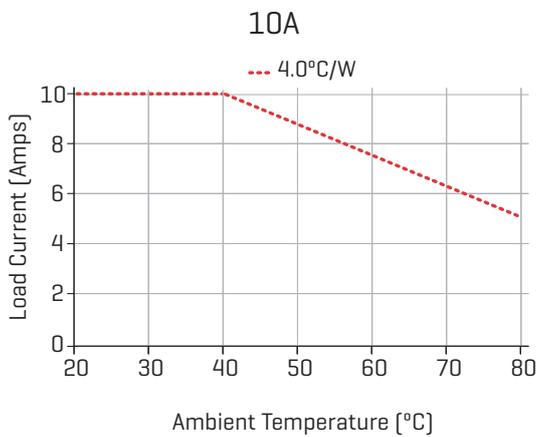


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Wiring Diagrams



Thermal Derate information

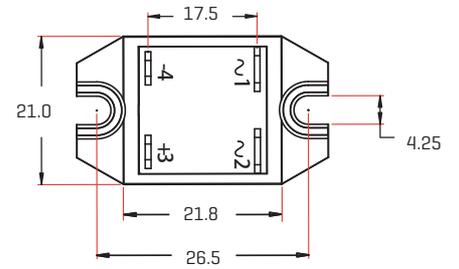
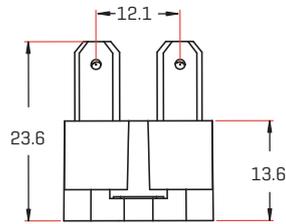
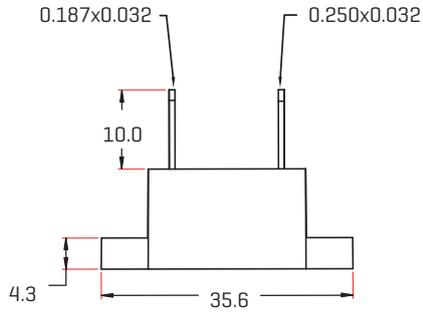


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**Mechanical specifications**

All dimensions are in: inches [millimeters]

Standard Quick Connect terminals



- Pinout  
 Terminal 1: AC load  
 Terminal 2: AC load  
 Terminal 3: +DC control  
 Terminal 4: -DC control

90° bent Quick Connect terminals

