



~ 1 LOAD 2 ~
480VAC 40A

GEYA

SOLID STATE
RELAY 

GSR8-40DA48Z

INPUT 3-32VDC

4 3
- +





~ 1 LOAD 2
~ 480VAC 40A

GEYA

SOLID STATE
RELAY 

GSR8-40DA8Z

INPUT 3-32VDC

3 +
4 -





~ 1 LOAD 2 ~
480VAC 40A

GEYA
SOLID STATE
RELAY **CE**

GSR8-40DA48Z

INPUT 3-32VDC

4 3
- +



Features

- Rating of 15A, 25A, 40A, 60A
- Output voltage of 24-480VAC and 24-600VAC
- Control voltage of 4-32VDC and 90-280VAC.
- Zero Crossing or Random-on Switching.
- Integrated IP20 touch-safe removable covers.
- LED input status indicator.
- Integrated Heatsink
- DIN Rail and Panel Mount

Ordering Options

GSR8	25	D	A60	Z
GSR8 Series	Load Current	Control Voltage	Output Voltage	Switching Type
Single Phase Solid State Relay	15: 15Amps 25: 25Amps 40: 40Amps 60: 60Amps	D: 4-32VDC A: 90-280VAC	A48: 24-480VAC A60: 24-600VAC	Z: Zero Cross Turn-on R: Random Turn-on

Product Selection

Control Voltage	Output Voltage	Rated operational current			
		15Amps	25Amps	40Amps	60Amps
4 to 32VDC	480VAC "Z"	GDR8-15DA48Z	GDR8-25DA48Z	GDR8-40DA48Z	GDR8-60DA48Z
4 to 32VDC	480VAC "R"	GDR8-15DA48R	GDR8-25DA48R	GDR8-40DA48R	GDR8-60DA48R
90 to 280VAC	480VAC "Z"	GDR8-15AA48Z	GDR8-25AA48Z	GDR8-40AA48Z	GDR8-60AA48Z
90 to 280VAC	480VAC "R"	GDR8-15AA48R	GDR8-25AA48R	GDR8-40AA48R	GDR8-60AA48R
4 to 32VDC	600VAC "Z"	GDR8-15DA60Z	GDR8-25DA60Z	GDR8-40DA60Z	GDR8-60DA60Z
4 to 32VDC	600VAC "R"	GDR8-15DA60R	GDR8-25DA60R	GDR8-40DA60R	GDR8-60DA60R
90 to 280VAC	600VAC "Z"	GDR8-15AA60Z	GDR8-25AA60Z	GDR8-40AA60Z	GDR8-60AA60Z
90 to 280VAC	600VAC "R"	GDR8-15AA60R	GDR8-25AA60R	GDR8-40AA60R	GDR8-60AA60R

Input Specifications

Description	Specification Limits	
Control Voltage Range	4-32VDC	90-280VAC
Maximum Reverse Voltage	-6VDC	/
Minimum Turn-On Voltage	4VDC	90VAC
Must Turn-Off Voltage	1V	10VAC
Minimum Input Current [for on-state]	10mA	6.5mA
Maximum Input Current [mA]	20mA	18mA
Maximum Turn-On Time [msec]	1/2 Cycle	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle

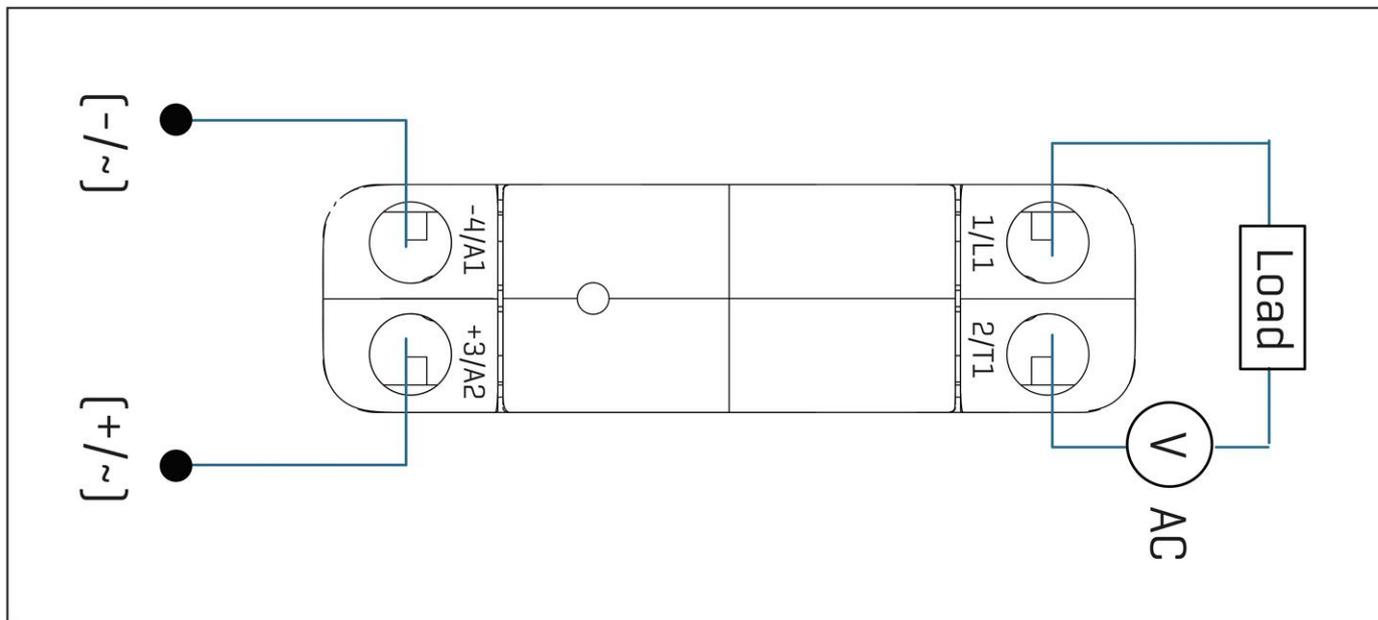
Output Specifications

Description	Units	Specification Limits			
		15	25	40	60
Model No.GSR	Amp	15	25	40	60
Load Current Range	Arms	0.05-15	0.05-25	0.05-40	0.1-60
Surge Current 10mSec(Max.)	Arms	150	250	400	600
Load Voltage Range [480V]	Vrms	24-480			
Transient Overvoltage [480V]	Vpk	800			
Load Voltage Range [600V]	Vrms	24-600			
Transient Overvoltage [600V]	Vpk	1200			
Operating Frequency Range	Hz	47~63			
Off State dv/dt [min.]	V/μs	200	200	200	500
Off State Leakage Current [Max.]	mA	≤8			
On State Voltage Drop [Max.]	Vrms	1.5	1.5	1.5	1.6
Turn On Time [Max.] "Zero-crossing"	Cycle	1/2			
Turn On Time [Max.] "Random-on"	mSec	1			
Turn-off Time [DC input]	Cycle	1/2			
Turn-off Time [AC input]	mSec	10			

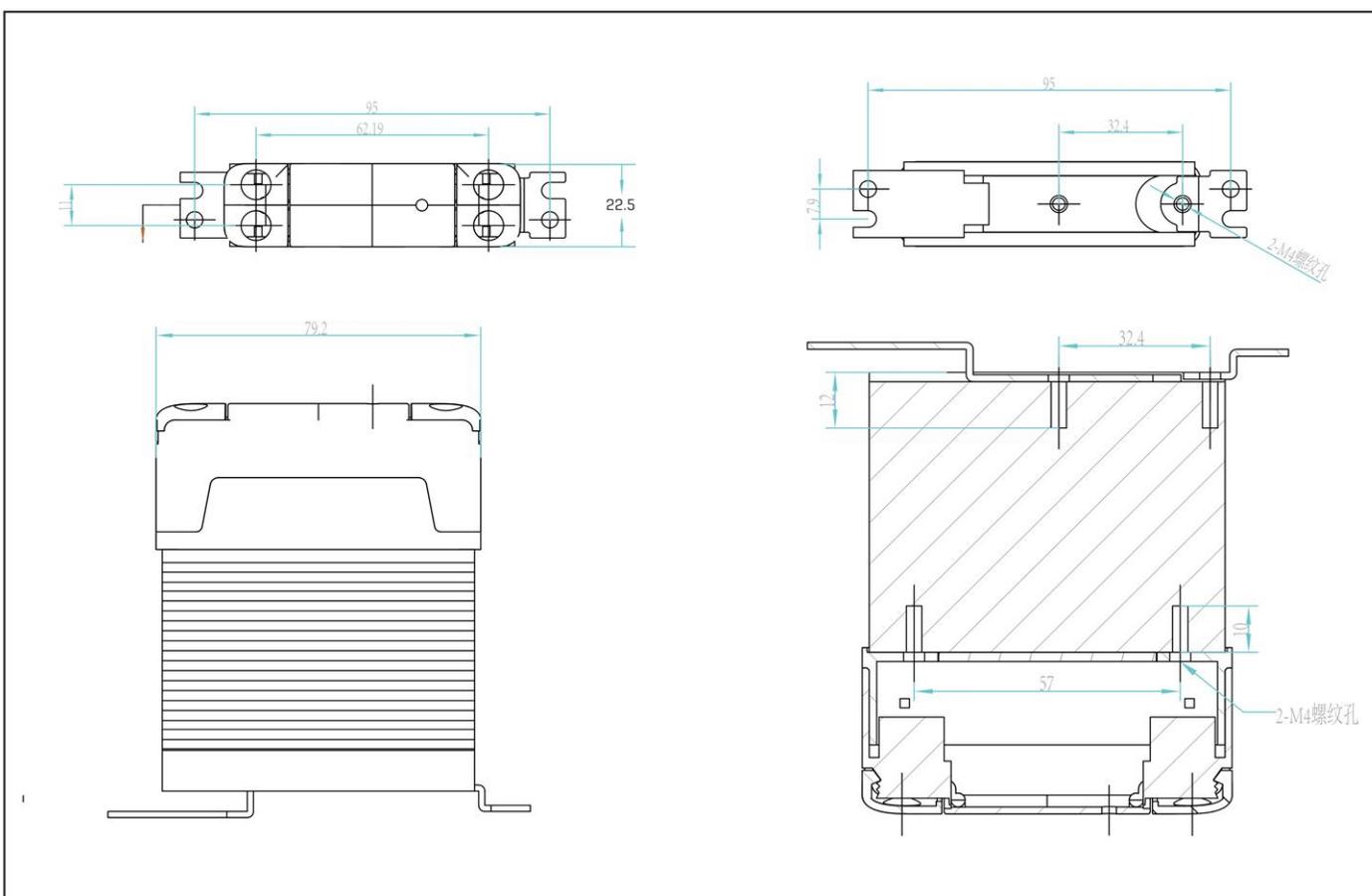
General Specifications [Ta=25°C]

Description	15A	25A	40A	60A
Dielectric Strength, Input to Output (50/60 Hz)	2500 Vrms			
Dielectric Strength, Input/Output to Base (50/60 Hz)	2500 Vrms			
Minimum Insulation Resistance [@ 500 VDC]	10 ⁹ Ω			
Maximum Capacitance, Input/Output	0.8 pF			
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			
Housing Material	PBT+30%GF			
Baseplate Material	Pure copper/Alumina			
Weight	280			

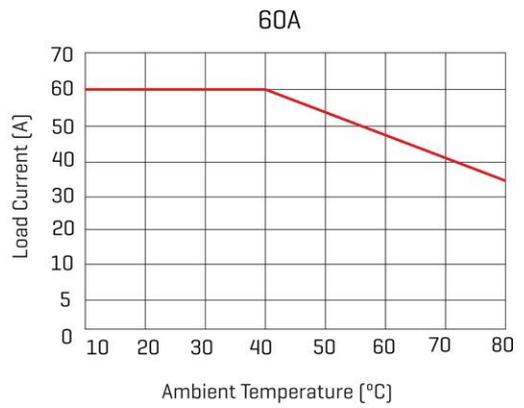
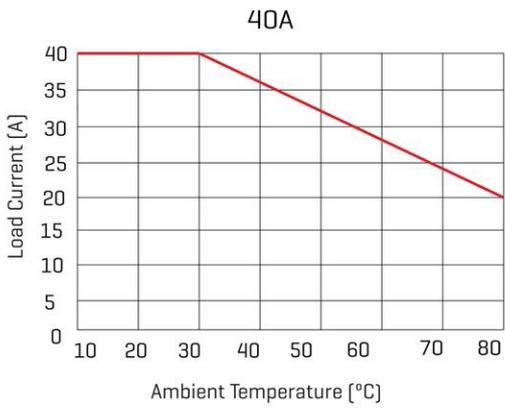
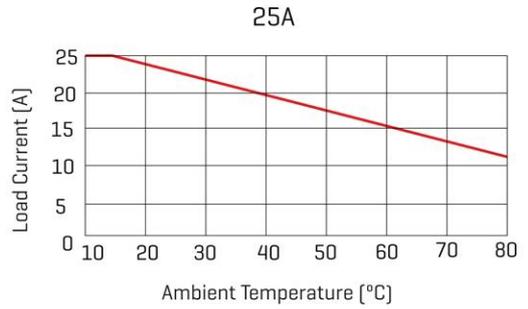
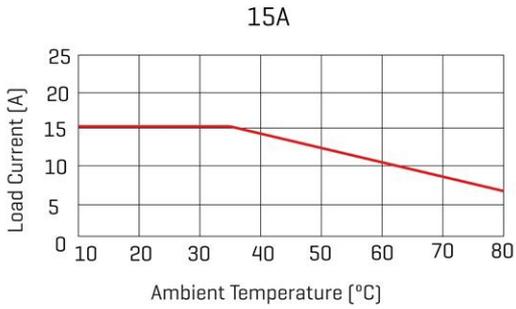
Wiring Diagram



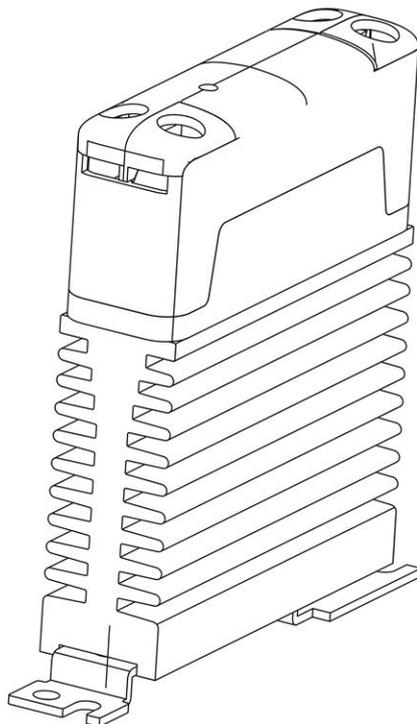
Dimensions [mm]



Thermal Derating Curve



1. The product's side panels may be hot, allow the product to cool before touching.
2. Disconnect all power before installing or working with this equipment.
3. Verify all connections and replace all covers before turning on power.



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

VSC Series Single Phase Solid State Relays

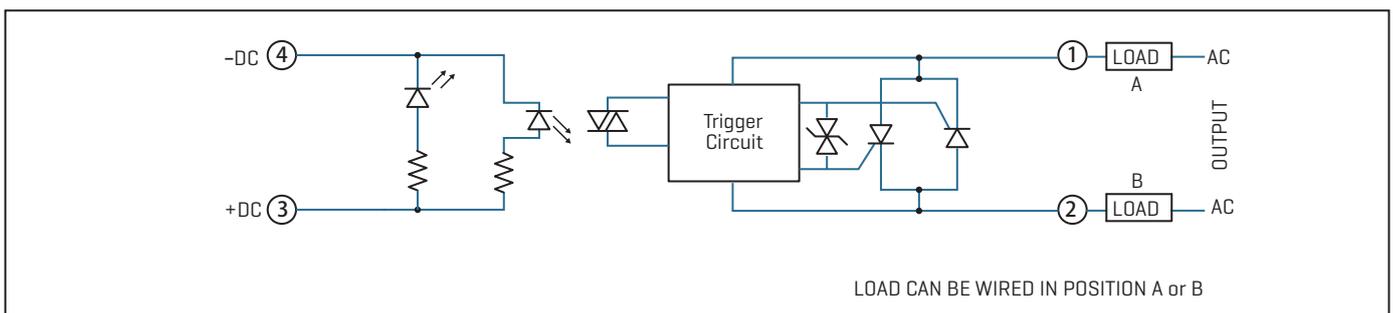
Output Specifications

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 ² t for fusing [50/60Hz,1/2Cycle] [A ² 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

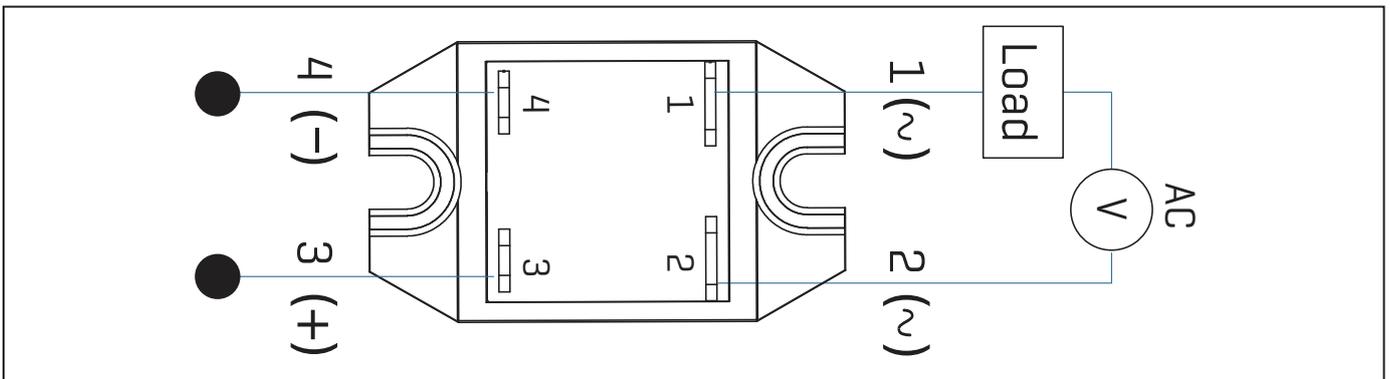
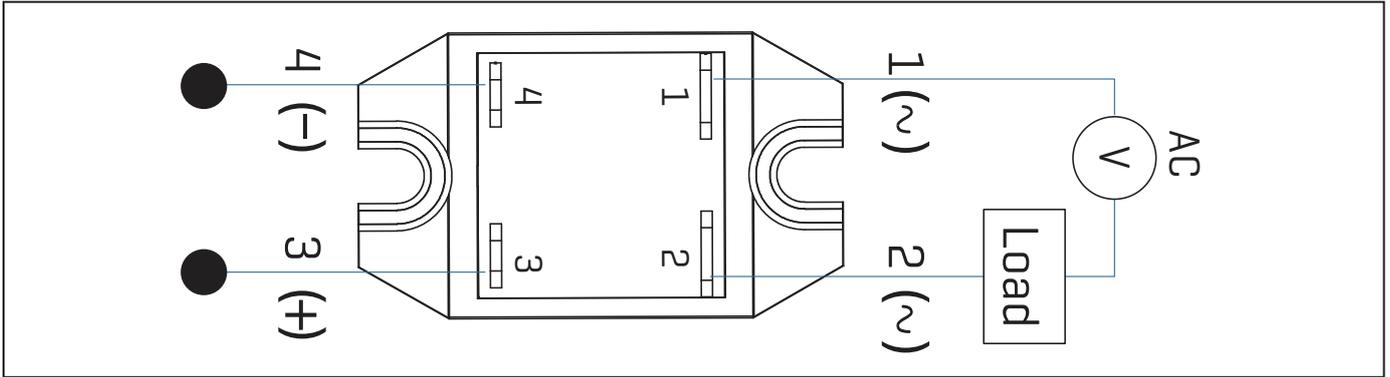
Description	Parameters
Dielectric Strength, Input to Output [50/60Hz]	2500 Vrms
Dielectric Strength, Output to Baseplate [50/60Hz]	2500 Vrms
Maximum Capacitance, Input/Output	8 pF
Ambient Operating Temperature Range	-30 to 80°C
Ambient Storage Temperature Range	-30 to 125 °C
Weight [typical]	16g
Terminals	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

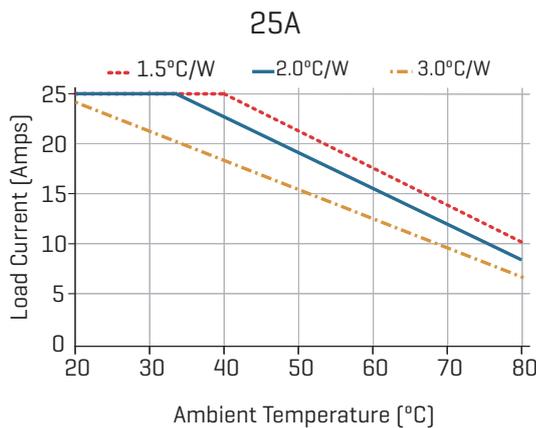
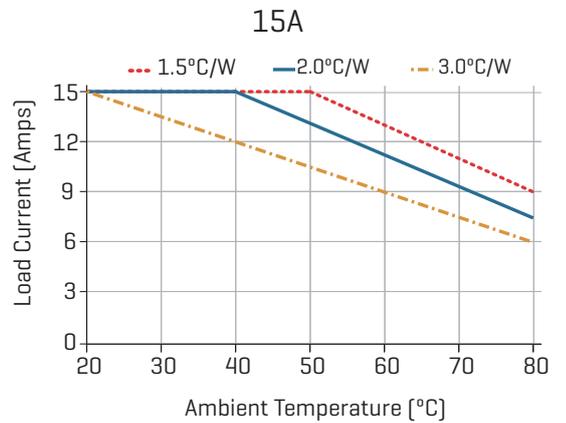
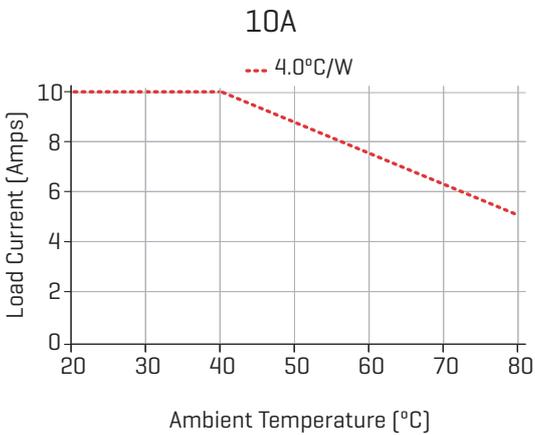


VSC Series Single Phase Solid State Relays

Wiring Diagrams



Thermal Derate information

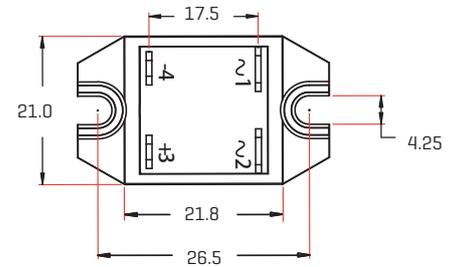
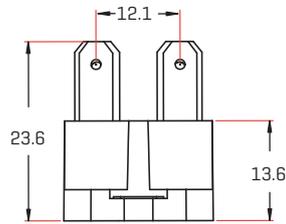
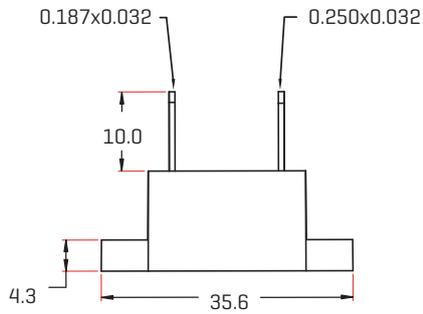


VSC Series Single Phase Solid State Relays

Mechanical specifications

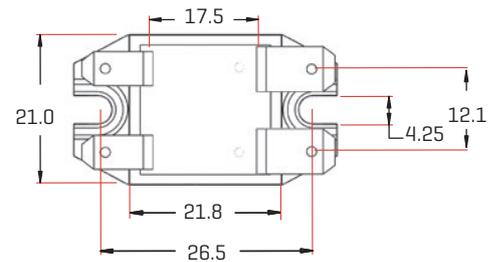
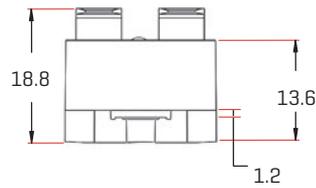
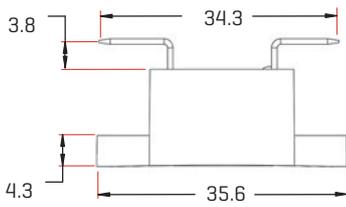
All dimensions are in: inches [millimeters]

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



VSR Series Single Phase Solid State Relays



Features

- Rating of 15A, 25A, 40A, 60A, 80A, 100A and 120A.
- Output voltage of 24-280VAC, 24-480VAC and 24-660VAC
- Control voltage of 4-32VDC, 18-36VAC/DC, 20-265VAC/10-48VDC and 90-280VAC.
- Zero Crossing or Random-on Switching.
- Integrated IP20 touch-safe removable covers.
- Dielectric Strength 4000VACrms.
- LED input status indicator.

Ordering Options

VSR	25	D	A66	Z
VSR Series	Load Current	Control Voltage	Output Voltage	Switching Type
Single Phase Solid State Relay	15: 15Amps 25: 25Amps 40: 40Amps 60: 60Amps 80: 80Amps 100: 100Amps 120: 120Amps	D: 4-32VDC A: 90-280VAC U: 18-36VAC/DC G: 20-265VAC/10-48VDC	A28: 24-280VAC A48: 24-480VAC A66: 24-660VAC	Z: Zero Cross Turn-on R: Random Turn-on

Product Selection

Control Voltage	Output Voltage	Rated operational current						
		15Amps	25Amps	40Amps	60Amps	80Amps	100Amps	120Amps
4-32VDC	280VAC"Z"	VSR15DA28Z	VSR25DA28Z	VSR40DA28Z	VSR60DA28Z	VSR80DA28Z	VSR100DA28Z	VSR120DA28Z
4-32VDC	280VAC"R"	VSR15DA28R	VSR25DA28R	VSR40DA28R	VSR60DA28R	VSR80DA28R	VSR100DA28R	VSR120DA28R
90-280VAC	280VAC"Z"	VSR15AA28Z	VSR25AA28Z	VSR40AA28Z	VSR60AA28Z	VSR80AA28Z	VSR100AA28Z	VSR120AA28Z
90-280VAC	280VAC"R"	VSR15AA28R	VSR25AA28R	VSR40AA28R	VSR60AA28R	VSR80AA28R	VSR100AA28R	VSR120AA28R
18-36VAC/DC	280VAC"Z"	VSR15UA28Z	VSR25UA28Z	VSR40UA28Z	VSR60UA28Z	VSR80UA28Z	VSR100UA28Z	VSR120UA28Z
18-36VAC/DC	280VAC"R"	VSR15UA28R	VSR25UA28R	VSR40UA28R	VSR60UA28R	VSR80UA28R	VSR100UA28R	VSR120UA28R
20-265VAC/10-48VDC	280VAC"Z"	VSR15GA28Z	VSR25GA28Z	VSR40GA28Z	VSR60GA28Z	VSR80GA28Z	VSR100GA28Z	VSR120GA28Z
20-265VAC/10-48VDC	280VAC"R"	VSR15GA28R	VSR25GA28R	VSR40GA28R	VSR60GA28R	VSR80GA28R	VSR100GA28R	VSR120GA28R
4-32VDC	480VAC"Z"	VSR15DA48Z	VSR25DA48Z	VSR40DA48Z	VSR60DA48Z	VSR80DA48Z	VSR100DA48Z	VSR120DA48Z
4-32VDC	480VAC"R"	VSR15DA48R	VSR25DA48R	VSR40DA48R	VSR60DA48R	VSR80DA48R	VSR100DA48R	VSR120DA48R
90-280VAC	480VAC"Z"	VSR15AA48Z	VSR25AA48Z	VSR40AA48Z	VSR60AA48Z	VSR80AA48Z	VSR100AA48Z	VSR120AA48Z
90-280VAC	480VAC"R"	VSR15AA48R	VSR25AA48R	VSR40AA48R	VSR60AA48R	VSR80AA48R	VSR100AA48R	VSR120AA48R
18-36VAC/DC	480VAC"Z"	VSR15UA48Z	VSR25UA48Z	VSR40UA48Z	VSR60UA48Z	VSR80UA48Z	VSR100UA48Z	VSR120UA48Z
18-36VAC/DC	480VAC"R"	VSR15UA48R	VSR25UA48R	VSR40UA48R	VSR60UA48R	VSR80UA48R	VSR100UA48R	VSR120UA48R
20-265VAC/10-48VDC	480VAC"Z"	VSR15GA48Z	VSR25GA48Z	VSR40GA48Z	VSR60GA48Z	VSR80GA48Z	VSR100GA48Z	VSR120GA48Z
20-265VAC/10-48VDC	480VAC"R"	VSR15GA48R	VSR25GA48R	VSR40GA48R	VSR60GA48R	VSR80GA48R	VSR100GA48R	VSR120GA48R
4-32VDC	660VAC"Z"	VSR15DA66Z	VSR25DA66Z	VSR40DA66Z	VSR60DA66Z	VSR80DA66Z	VSR100DA66Z	VSR120DA66Z
4-32VDC	660VAC"R"	VSR15DA66R	VSR25DA66R	VSR40DA66R	VSR60DA66R	VSR80DA66R	VSR100DA66R	VSR120DA66R
90-280VAC	660VAC"Z"	VSR15AA66Z	VSR25AA66Z	VSR40AA66Z	VSR60AA66Z	VSR80AA66Z	VSR100AA66Z	VSR120AA66Z
90-280VAC	660VAC"R"	VSR15AA66R	VSR25AA66R	VSR40AA66R	VSR60AA66R	VSR80AA66R	VSR100AA66R	VSR120AA66R
18-36VAC/DC	660VAC"Z"	VSR15UA66Z	VSR25UA66Z	VSR40UA66Z	VSR60UA66Z	VSR80UA66Z	VSR100UA66Z	VSR120UA66Z
18-36VAC/DC	660VAC"R"	VSR15UA66R	VSR25UA66R	VSR40UA66R	VSR60UA66R	VSR80UA66R	VSR100UA66R	VSR120UA66R
20-265VAC/10-48VDC	660VAC"Z"	VSR15GA66Z	VSR25GA66Z	VSR40GA66Z	VSR60GA66Z	VSR80GA66Z	VSR100GA66Z	VSR120GA66Z
20-265VAC/10-48VDC	660VAC"R"	VSR15GA66R	VSR25GA66R	VSR40GA66R	VSR60GA66R	VSR80GA66R	VSR100GA66R	VSR120GA66R

VSR Series Single Phase Solid State Relays

Input Specifications

Description	Specification Limits			
	4-32VDC	90-280VAC	18-36VAC/DC	20-265VAC/10-48DC
Control Voltage Range	4-32VDC	90-280VAC	18-36VAC/DC	20-265VAC/10-48DC
Maximum Reverse Voltage	-6VDC	/	/	/
Minimum Turn-On Voltage	4VDC	90VAC	18VAC/DC	20VAC/10VDC
Must Turn-Off Voltage	1V	10VAC	5VAC/DC	5VAC
Minimum Input Current [for on-state]	10mA	6.5mA	5mA AC/4mA DC	5mA AC/4mA DC
Maximum Input Current [mA]	20mA	18mA	10mA	10mA
Maximum Turn-On Time [msec]	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle	1/2 Cycle	1/2 Cycle

Output Specifications

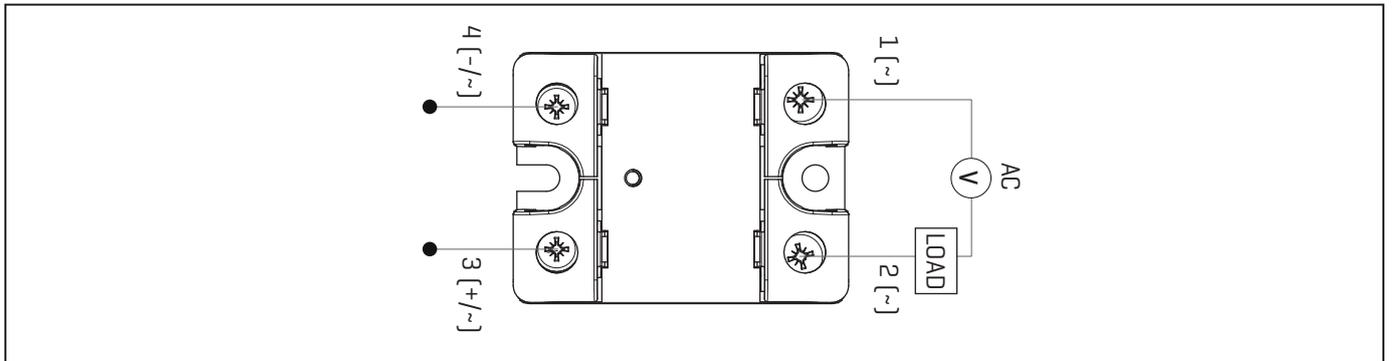
Description	Units	Specification Limits						
		15	25	40	60	80	100	120
Model No.:VSR	Amp	15	25	40	60	80	100	120
Load Current Range	Arms	0.05-15	0.05-25	0.05-40	0.1-60	0.1-80	0.1-100	0.1-125
Surge Current 10mSec(Max.)	Arms	150	250	400	600	800	1000	1200
Load Voltage Range [280V]	Vrms	24-280						
Transient Overvoltage [280V]	Vpk	800						
Load Voltage Range [480V]	Vrms	24-480						
Transient Overvoltage [480V]	Vpk	1200						
Load Voltage Range [660V]	Vrms	24-660						
Transient Overvoltage [660V]	Vpk	1600						
Operating Frequency Range	Hz	47-63						
Off State dv/dt [min.]	V/μs	200	200	200	500	500	500	500
Off State Leakage Current [Max.]	mA	≤8						
On State Voltage Drop [Max.]	Vrms	1.5	1.5	1.5	1.6	1.6	1.8	1.8
Turn On Time [Max.] "Zero-crossing"	Cycle	1/2						
Turn On Time [Max.] "Random-on"	mSec	1						
Turn-off Time [DC input]	Cycle	1/2						
Turn-off Time [AC input]	mSec	10						
Thermal Resistance,[Rthjc]	°C/W	2.5	2.5	1.3	0.65	0.5	0.3	0.3

VSR Series Single Phase Solid State Relays

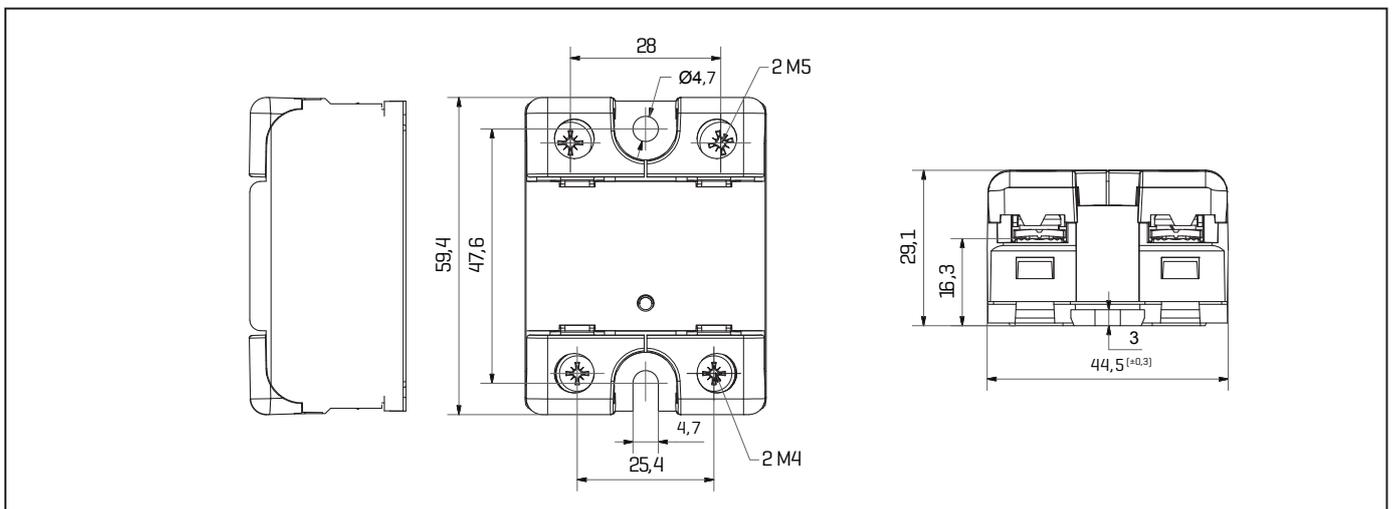
General Specifications (Ta=25 °C)

Description	15A	25A	40A	60A	80A	100A	120A
Dielectric Strength, Input to Output (50/60 Hz)	4000 Vrms						
Dielectric Strength, Input/Output to Base (50/60 Hz)	2500 Vrms						
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ω						
Maximum Capacitance, Input/Output	0.8 pF						
Ambient Operating Temperature Range	-30 to 80 °C						
Ambient Storage Temperature Range	-30 to 100 °C						
Input Terminal Screw Torque Range (in-lb/Nm)	11-18 / 1.2-2.0						
Load Terminal Screw Torque Range (in-lb/Nm)	18-26 / 2-3						
SSR Mounting Screw Torque Range (in-lb/Nm)	11-16 / 1.2-1.8						
Humidity per IEC60068-2-78	95 %						
LED Input Status Indicator	Red						
Housing Material	PBT+30%GF						
Baseplate Material	Pure copper						
Weight	120g						

Wiring Diagram

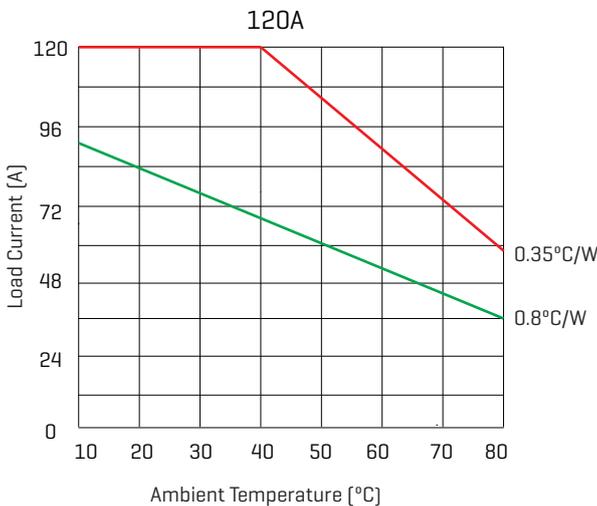
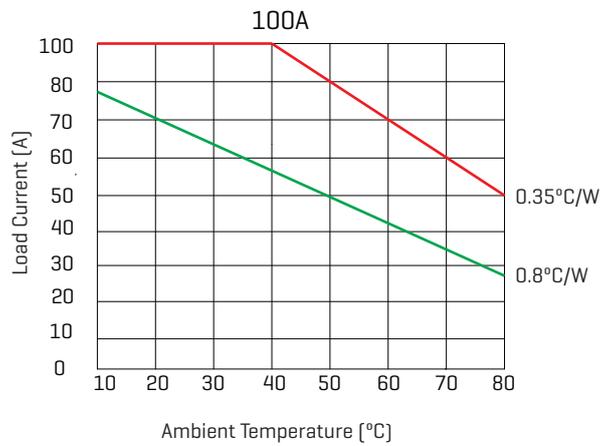
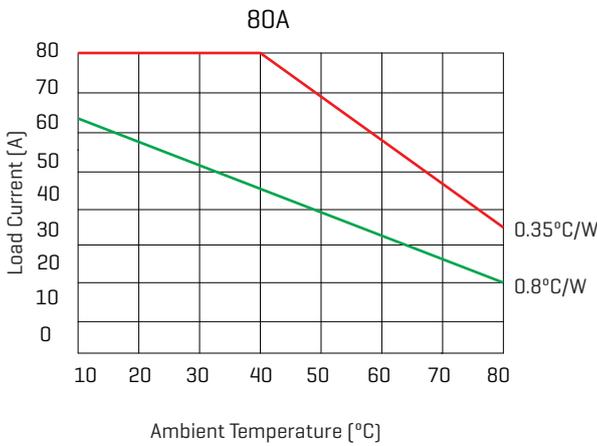
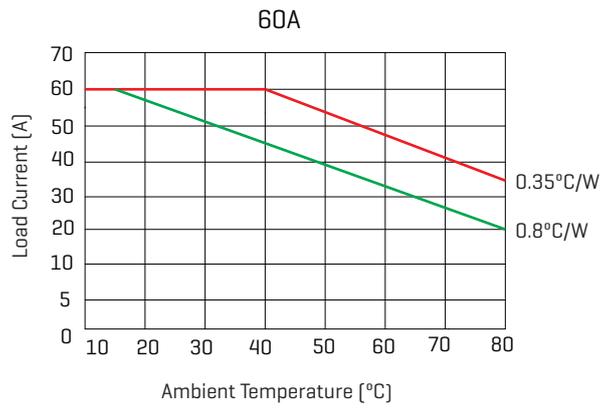
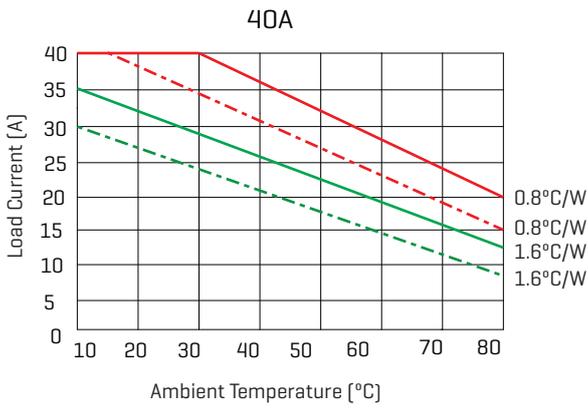
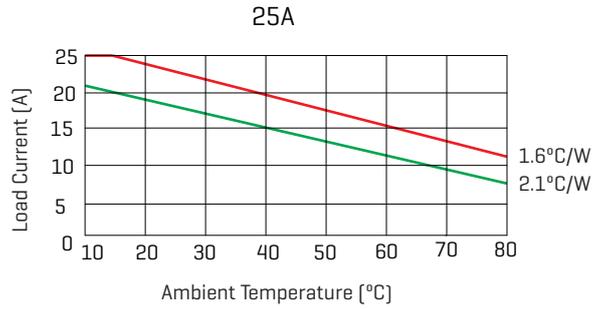
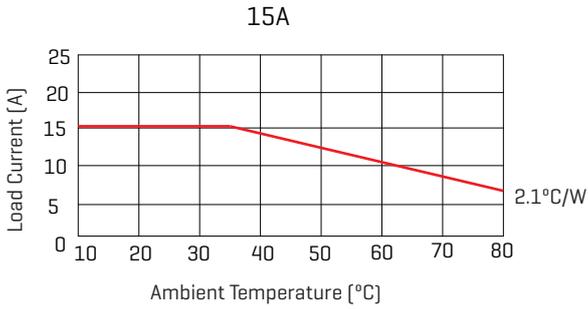


Dimensions [mm]



VSR Series Single Phase Solid State Relays

Thermal Derating Curve



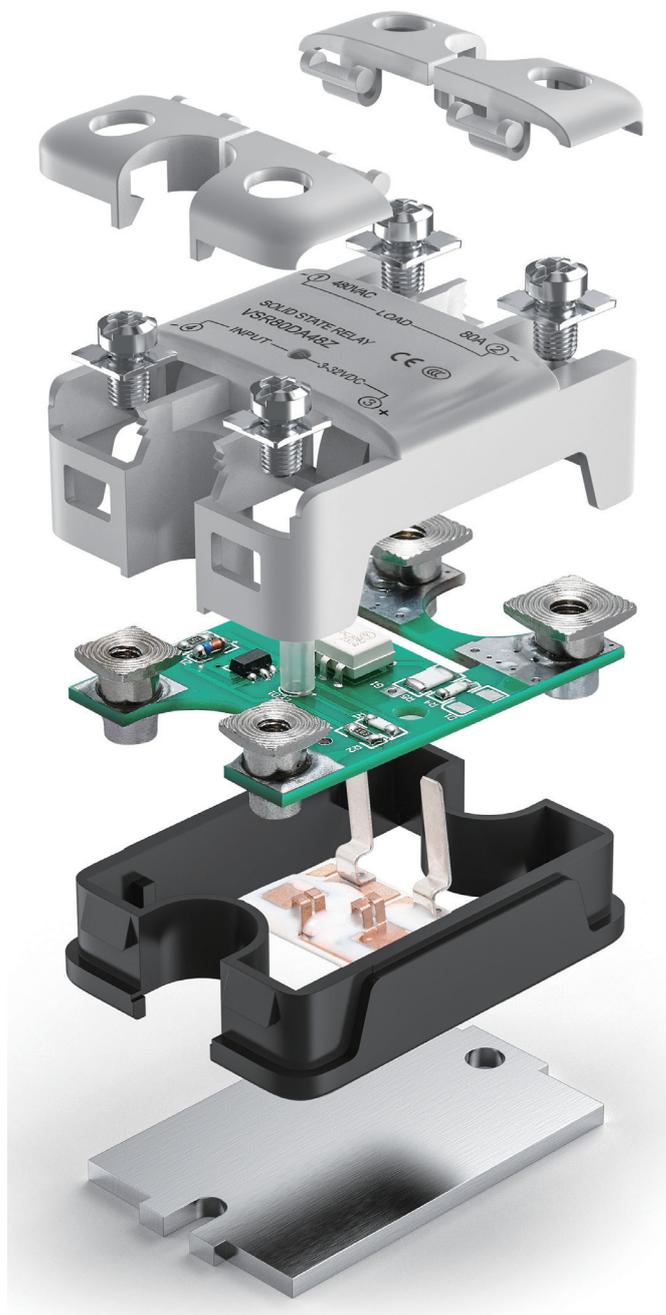
VSR Series Single Phase Solid State Relays

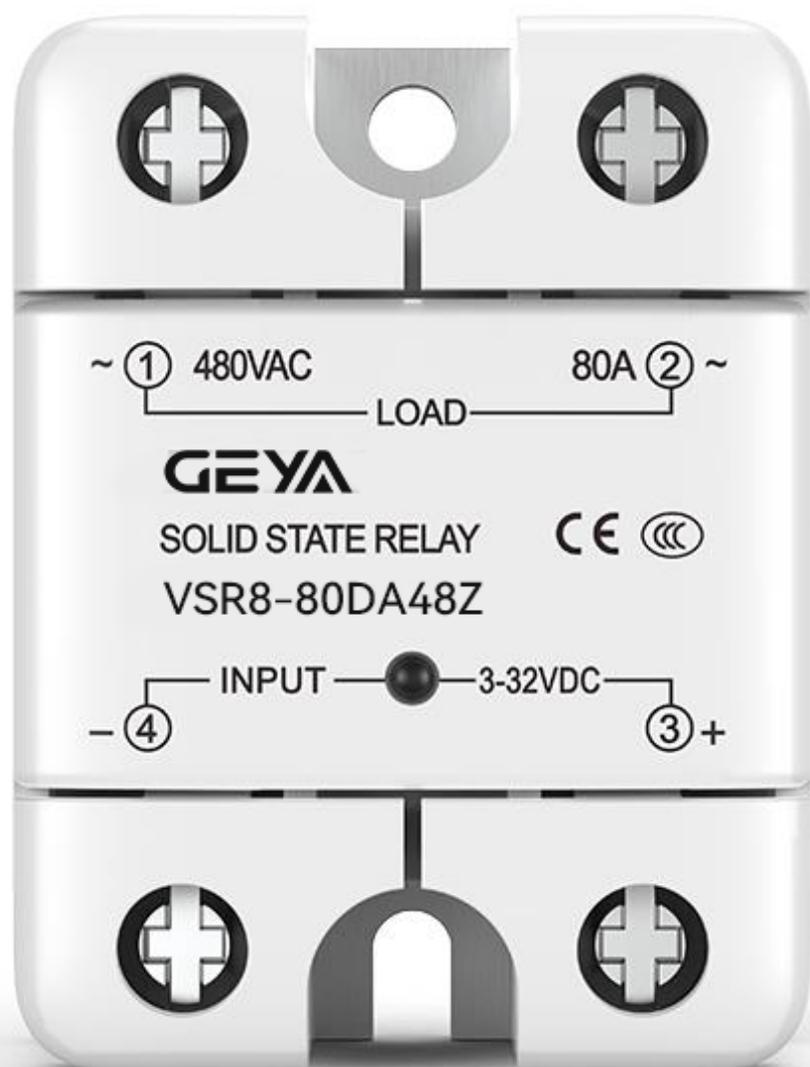
General Notes

1. Relay must be mounted to proper sized heat sink based on thermal curves. Thermal grease or a thermal pad must be used between relay and heat sink and be torqued down to 11-16 /1.2-1.8in-lb/Nm.
2. When connection wiring to SSR, please ensure screws are torqued down properly (input 11-18 /1.2-2.0in-lb/Nm, output 18-26 / 2-3 in-lb/Nm).
3. SSR's carrying load capacity is related to the operation ambient temperature and heat dissipation condition, please refer to the Thermal Derating Curve for derating.

Warnings !

1. The product's side panels may be hot, allow the product to cool before touching.
2. Disconnect all power before installing or working with this equipment.
3. Verify all connections and replace all covers before turning on power.







~ ① 480VAC — LOAD — 80A ② ~

GEYA

SOLID STATE RELAY
VSR8-80DA48Z

CE (CCC)

— INPUT — 3-32VDC — ③ +
- ④ -



~ ① 480VAC — LO

GEYA
SOLID STATE RELAY
VSR8-80DA48Z

CE

— ④ — INPUT — 3-32VDC — ③ +





~ ① 480VAC — LOAD — 80A ② ~

GEYA
SOLID STATE RELAY
VSR8-80DA48Z

CE CCC

- ④ INPUT — ● — 3-32VDC — ③ +

VSR8 Series Single Phase Solid State Relays



Features

- Rating of 15A, 25A, 40A, 60A, 80A, 100A and 120A.
- Output voltage of 24-280VAC, 24-480VAC and 48-660VAC
- Control voltage of 3-32VDC and 90-280VAC.
- Zero Crossing or Random-on Switching.
- Integrated IP20 touch-safe removable covers.
- Dielectric Strength 4000VACrms.
- LED input status indicator.

Ordering Options

VSR8	25	D	A66	Z
VSR8 Series	Load Current	Control Voltage	Output Voltage	Switching Type
Single Phase Solid State Relay	15: 15Amps 25: 25Amps 40: 40Amps 60: 60Amps 80: 80Amps 100: 100Amps 120: 120Amps	D: 3-32VDC A: 90-280VAC	A28: 24-280VAC A48: 24-480VAC A66: 48-660VAC	Z: Zero Cross Turn-on R: Random Turn-on

Product Selection

Control Voltage	Output Voltage	Rated operational current						
		15Amps	25Amps	40Amps	60Amps	80Amps	100Amps	120Amps
3-32VDC	280VAC"Z"	VSR815DA28Z	VSR825DA28Z	VSR840DA28Z	VSR860DA28Z	VSR880DA28Z	VSR8100DA28Z	VSR8120DA28Z
3-32VDC	280VAC"R"	VSR815DA28R	VSR825DA28R	VSR840DA28R	VSR860DA28R	VSR880DA28R	VSR8100DA28R	VSR8120DA28R
90-280VAC	280VAC"Z"	VSR815AA28Z	VSR825AA28Z	VSR840AA28Z	VSR860AA28Z	VSR880AA28Z	VSR8100AA28Z	VSR8120AA28Z
90-280VAC	280VAC"R"	VSR815AA28R	VSR825AA28R	VSR840AA28R	VSR860AA28R	VSR880AA28R	VSR8100AA28R	VSR8120AA28R
3-32VDC	480VAC"Z"	VSR815DA48Z	VSR825DA48Z	VSR840DA48Z	VSR860DA48Z	VSR880DA48Z	VSR8100DA48Z	VSR8120DA48Z
3-32VDC	480VAC"R"	VSR815DA48R	VSR825DA48R	VSR840DA48R	VSR860DA48R	VSR880DA48R	VSR8100DA48R	VSR8120DA48R
90-280VAC	480VAC"Z"	VSR815AA48Z	VSR825AA48Z	VSR840AA48Z	VSR860AA48Z	VSR880AA48Z	VSR8100AA48Z	VSR8120AA48Z
90-280VAC	480VAC"R"	VSR815AA48R	VSR825AA48R	VSR840AA48R	VSR860AA48R	VSR880AA48R	VSR8100AA48R	VSR8120AA48R
3-32VDC	660VAC"Z"	VSR815DA66Z	VSR825DA66Z	VSR840DA66Z	VSR860DA66Z	VSR880DA66Z	VSR8100DA66Z	VSR8120DA66Z
3-32VDC	660VAC"R"	VSR815DA66R	VSR825DA66R	VSR840DA66R	VSR860DA66R	VSR880DA66R	VSR8100DA66R	VSR8120DA66R
90-280VAC	660VAC"Z"	VSR815AA66Z	VSR825AA66Z	VSR840AA66Z	VSR860AA66Z	VSR880AA66Z	VSR8100AA66Z	VSR8120AA66Z
90-280VAC	660VAC"R"	VSR815AA66R	VSR825AA66R	VSR840AA66R	VSR860AA66R	VSR880AA66R	VSR8100AA66R	VSR8120AA66R

Input Specifications

Description	Specification Limits	
	3-32VDC	90-280VAC
Control Voltage Range	3-32VDC	90-280VAC
Maximum Reverse Voltage	-6VDC	/
Minimum Turn-On Voltage	3VDC	90VAC
Must Turn-Off Voltage	1V	10VAC
Minimum Input Current [for on-state]	10mA	6.5mA
Maximum Input Current [mA]	20mA	18mA
Maximum Turn-On Time [msec]	1/2 Cycle	1/2 Cycle
Maximum Turn-Off Time [msec]	1/2 Cycle	1/2 Cycle

Output Specifications

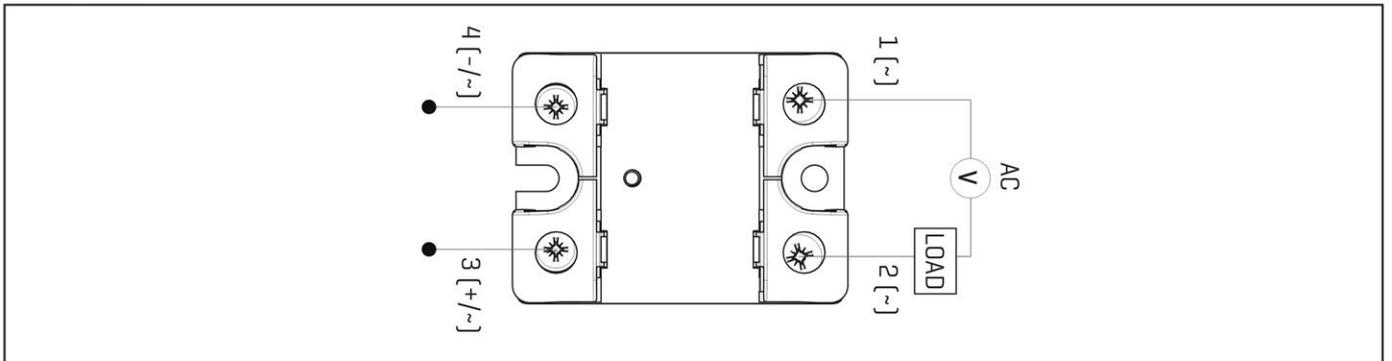
Description	Units	Specification Limits						
		15	25	40	60	80	100	120
Model No.:VSR	Amp	15	25	40	60	80	100	120
Load Current Range	Arms	0.05-15	0.05-25	0.05-40	0.1-60	0.1-80	0.1-100	0.1-125
Surge Current 10mSec(Max.)	Arms	150	250	400	600	800	1000	1200
Load Voltage Range [280V]	Vrms	24-280						
Transient Overvoltage [280V]	Vpk	800						
Load Voltage Range [480V]	Vrms	24-480						
Transient Overvoltage [480V]	Vpk	1200						
Load Voltage Range [660V]	Vrms	48-660						
Transient Overvoltage [660V]	Vpk	1600						
Operating Frequency Range	Hz	47-63						
Off State dv/dt [min.]	V/μs	200	200	200	500	500	500	500
Off State Leakage Current [Max.]	mA	≤8						
On State Voltage Drop [Max.]	Vrms	1.5	1.5	1.5	1.6	1.6	1.8	1.8
Turn On Time [Max.] "Zero-crossing"	Cycle	1/2						
Turn On Time [Max.] "Random-on"	mSec	1						
Turn-off Time [DC input]	Cycle	1/2						
Turn-off Time [AC input]	mSec	10						
Thermal Resistance,[Rthjc]	°C/W	2.5	2.5	1.3	0.65	0.5	0.3	0.3

VSR8 Series Single Phase Solid State Relays

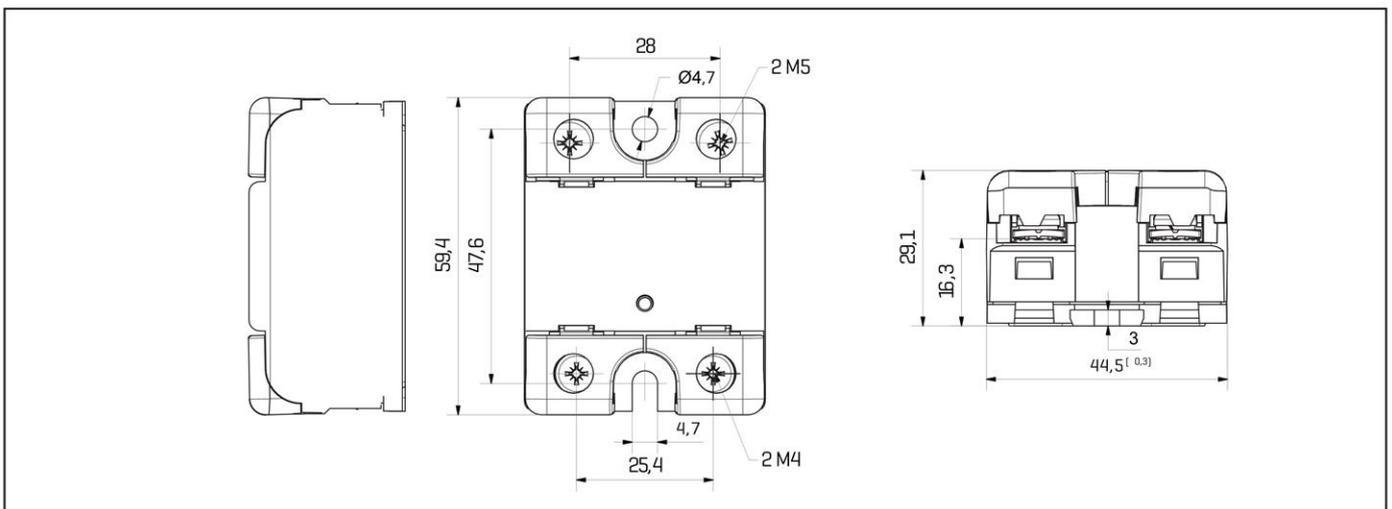
General Specifications (Ta=25 °C)

Description	15A	25A	40A	60A	80A	100A	120A
Dielectric Strength, Input to Output (50/60 Hz)	4000 Vrms						
Dielectric Strength, Input/Output to Base (50/60 Hz)	2500 Vrms						
Minimum Insulation Resistance (@ 500 VDC)	10 ⁹ Ω						
Maximum Capacitance, Input/Output	0.8 pF						
Ambient Operating Temperature Range	-30 to 80 °C						
Ambient Storage Temperature Range	-30 to 100 °C						
Input Terminal Screw Torque Range [in-lb/Nm]	11-18 / 1.2-2.0						
Load Terminal Screw Torque Range [in-lb/Nm]	18-26 / 2-3						
SSR Mounting Screw Torque Range [in-lb/Nm]	11-16 / 1.2-1.8						
Humidity per IEC60068-2-78	95 %						
LED Input Status Indicator	Red						
Housing Material	PBT+30%GF						
Baseplate Material	Pure copper						
Weight	145g						

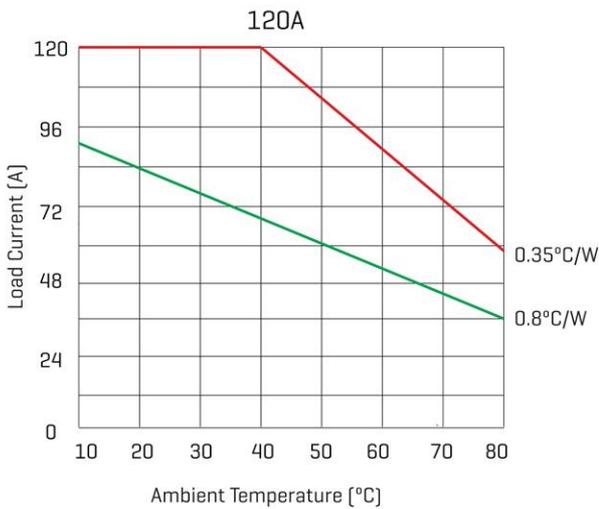
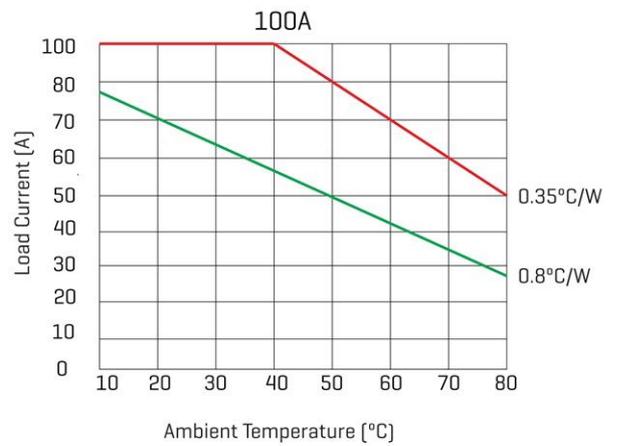
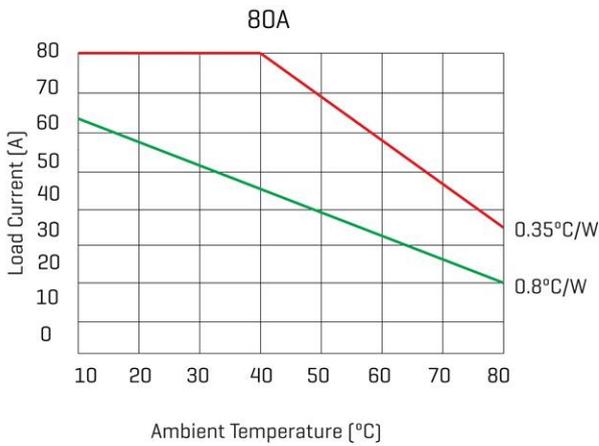
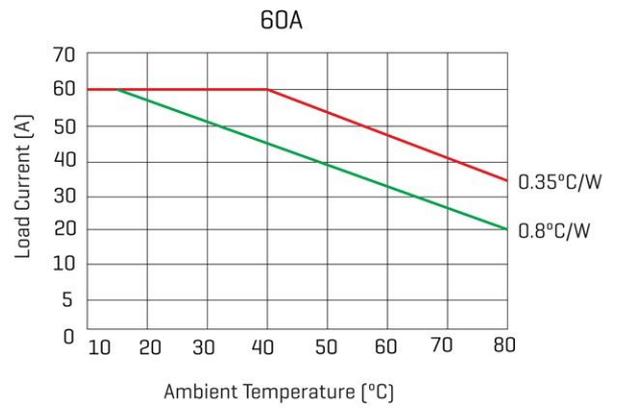
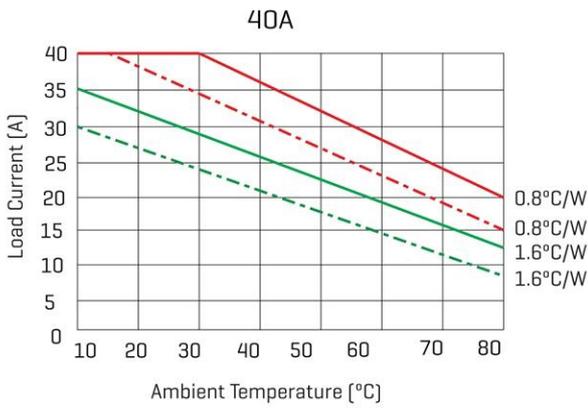
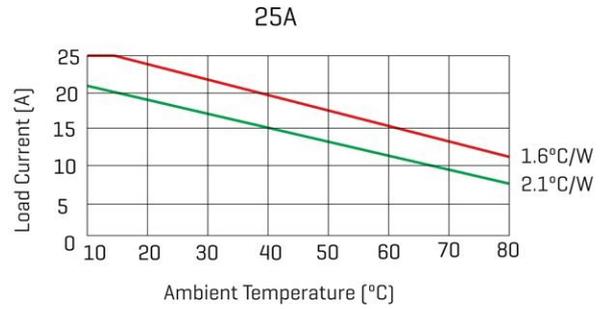
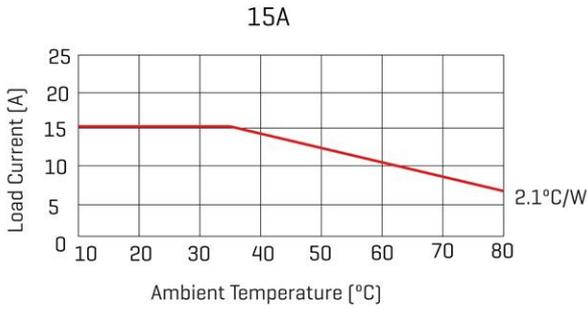
Wiring Diagram



Dimensions [mm]



Thermal Derating Curve



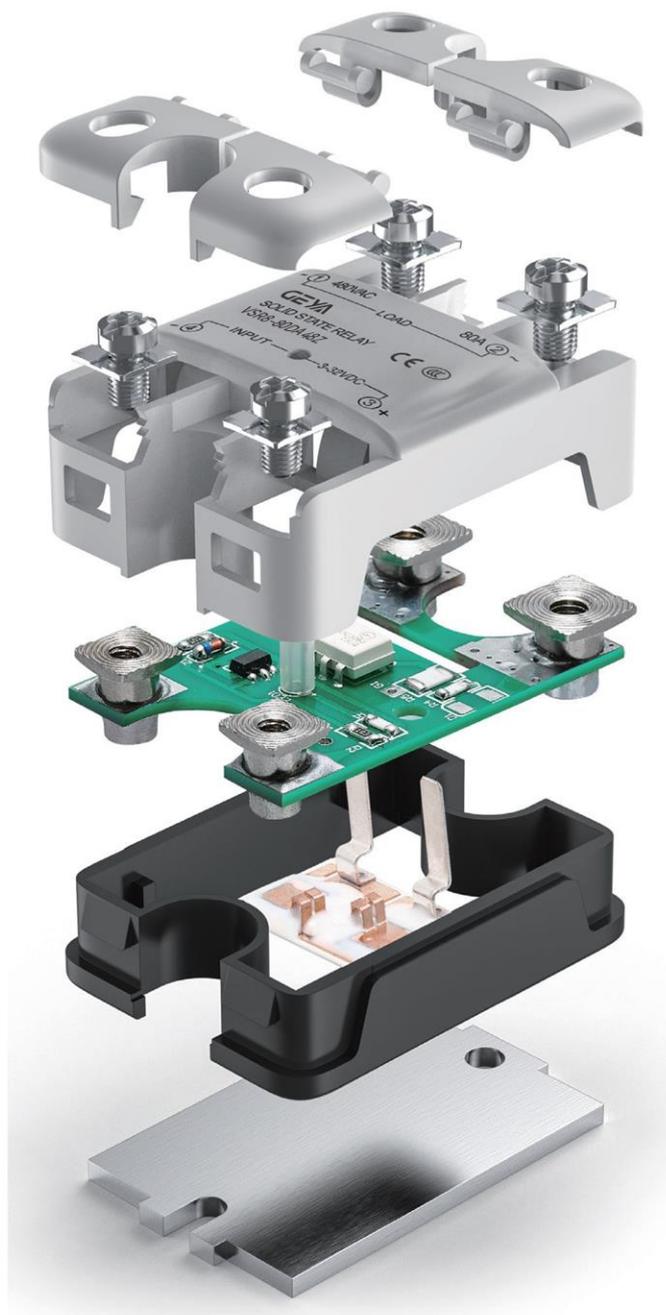
VSR8 Series Single Phase Solid State Relays

General Notes

1. Relay must be mounted to proper sized heat sink based on thermal curves. Thermal grease or a thermal pad must be used between relay and heat sink and be torqued down to 11-16 /1.2-1.8in-lb/Nm.
2. When connection wiring to SSR, please ensure screws are torqued down properly (input 11-18 /1.2-2.0in-lb/Nm, output 18-26 / 2-3 in-lb/Nm).
3. SSR's carrying load capacity is related to the operation ambient temperature and heat dissipation condition, please refer to the Thermal Derating Curve for derating.

Warnings !

1. The product's side panels may be hot, allow the product to cool before touching.
2. Disconnect all power before installing or working with this equipment.
3. Verify all connections and replace all covers before turning on power.





Features

- Optical isolation between input and output circuits.
- Control signal and TTL logic interface.
- Transistor output, small on-state voltage drop, fast switching speed.
- LEDs indicate the working status.
- Epoxy resin encapsulation integrated, anti-corrosion and shock-proof, reliable work.
- The products are mainly used in industrial automation, isolated control of weak current and strong current and various high-power DC electrical equipment. Such as DC motors, solenoid valves, electromagnetic vibrators, batteries Charge and discharge switch, etc.

Ordering Options

VDR8

VDR8 Series

DC Solid State Relay

40

Load Current

10: 10Amps
25: 25Amps
40: 40Amps
60: 60Amps
80: 80Amps
100: 100Amps
120: 120Amps

D

Control Voltage

D: 3-32VDC

D60

Output Voltage

D06: 12-60VDC
D08: 12-80VDC
D12: 12-120VDC
D25: 12-250VDC
D40: 12-400VDC
D60: 12-600VDC
D90: 12-900VDC
D120: 12-1200VDC

Product Selection

Control Voltage	Output Voltage	Rated Operational Current						
		10Amps	25Amps	40Amps	60Amps	80Amps	100Amps	120Amps
3 to 32VDC	60VDC	VDR8-10DD06	VDR8-25DD06	VDR8-40DD06	VDR8-60DD06	VDR8-80DD06	VDR8-100DD06	VDR8-120DD06
3 to 32VDC	80VDC	VDR8-10DD08	VDR8-25DD08	VDR8-40DD08	VDR8-60DD08	VDR8-80DD08	VDR8-100DD08	VDR8-120DD08
3 to 32VDC	120VDC	VDR8-10DD12	VDR8-25DD12	VDR8-40DD12	VDR8-60DD12	VDR8-80DD12	VDR8-100DD12	VDR8-120DD12
3 to 32VDC	250VDC	VDR8-10DD25	VDR8-25DD25	VDR8-40DD25	VDR8-60DD25	VDR8-80DD25	VDR8-100DD25	VDR8-120DD25
3 to 32VDC	400VDC	VDR8-10DD40	VDR8-25DD40	VDR8-40DD40	VDR8-60DD40	VDR8-80DD40	VDR8-100DD40	VDR8-120DD40
3 to 32VDC	600VDC	VDR8-10DD60	VDR8-25DD60	VDR8-40DD60	VDR8-60DD60	VDR8-80DD60	VDR8-100DD60	VDR8-120DD60
3 to 32VDC	900VDC	VDR8-10DD90	VDR8-25DD90	VDR8-40DD90	VDR8-60DD90	VDR8-80DD90	VDR8-100DD90	VDR8-120DD90
3 to 32VDC	1200VDC	VDR8-10DD120	VDR8-25DD120	VDR8-40DD120	VDR8-60DD120	VDR8-80DD120	VDR8-100DD120	VDR8-120DD120

Input Specifications

Parameter-list	Specification Limits
Input Parameter	D
Control Voltage Range	3 to 32VDC
Input Current [Max.]	4-30mA
Must Turn-on Voltage	3VDC
Must Turn-off Voltage	1VDC
Reverse Voltage [Max.]	-6VDC

VDR8 Series DC Solid State Relays

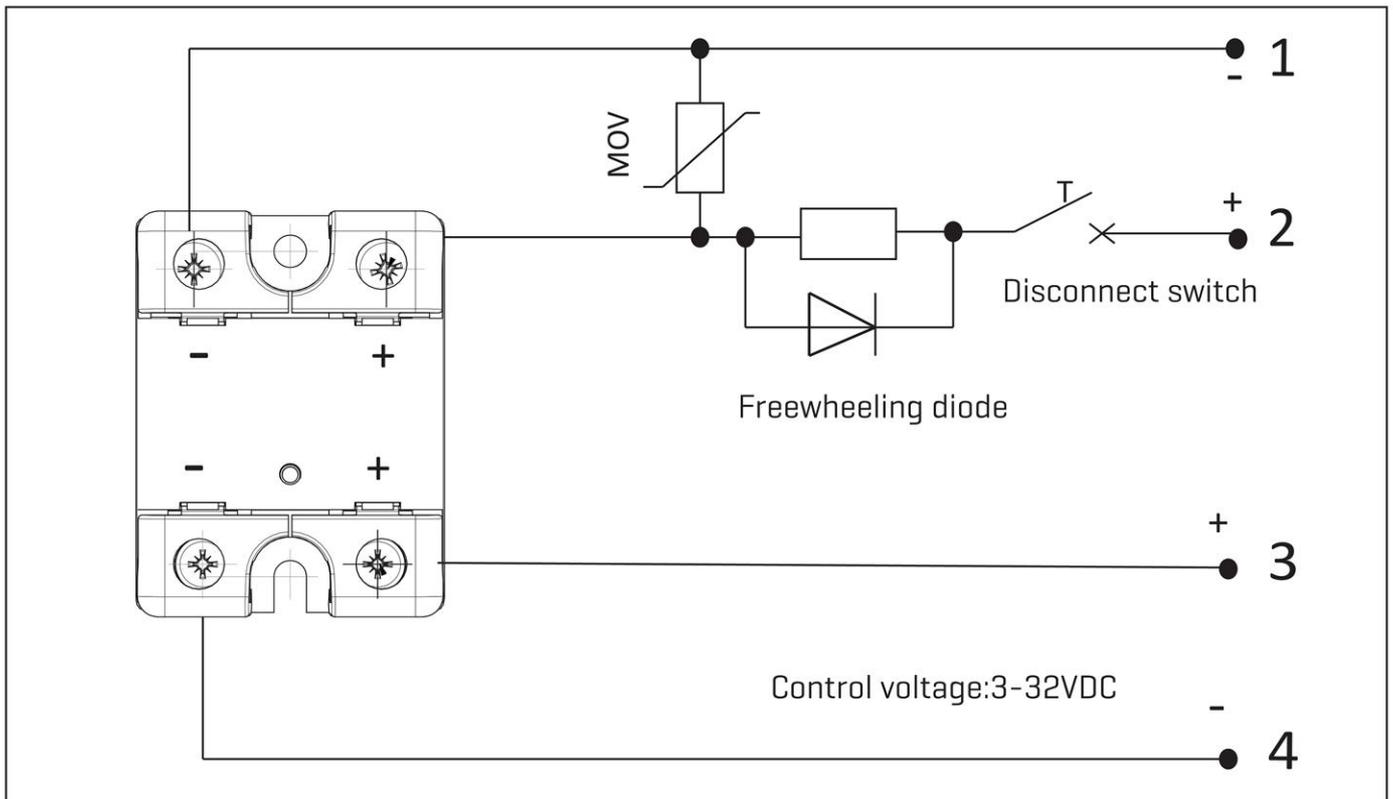
Output Specifications

Output Parameter	Units	Specification Limits							
Model No.: VDR	Amps	10	25	40	60	80	100	120	
Load Current Range	Arms	0.05 to 10	0.05 to 25	0.05 to 40	0.1 to 60	0.1 to 80	0.1 to 100	0.1 to 120	
Surge Current 10mSec [Max.]	Arms	200%							
Load Voltage Range	Vrms	60VDC~1200VDC							
On-state Voltage drop	Vrms	≤0.5~4.6							
Off-state Voltage	Vrms	60V,80V,250V,400V600V,≥900V,1200V							
Overvoltage Protection		Transient protection voltage are :80V, 180V, 470V,1000V							
Switching Characteristics		Mos or IGBT-solid-state non-contact switching characteristics							

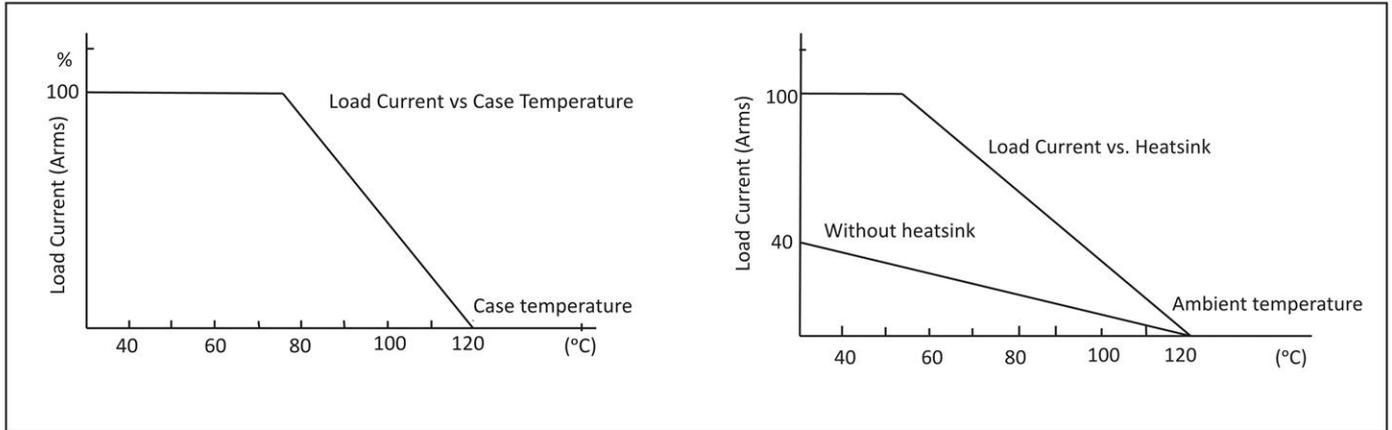
General Specifications [Ta=25°C]

Description	10A	25A	40A	60A	80A	100A	120A
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						
Safety Factor of Load Current	2.5-3 time for resistive load, 3-6 times for inductive load						
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	120g						

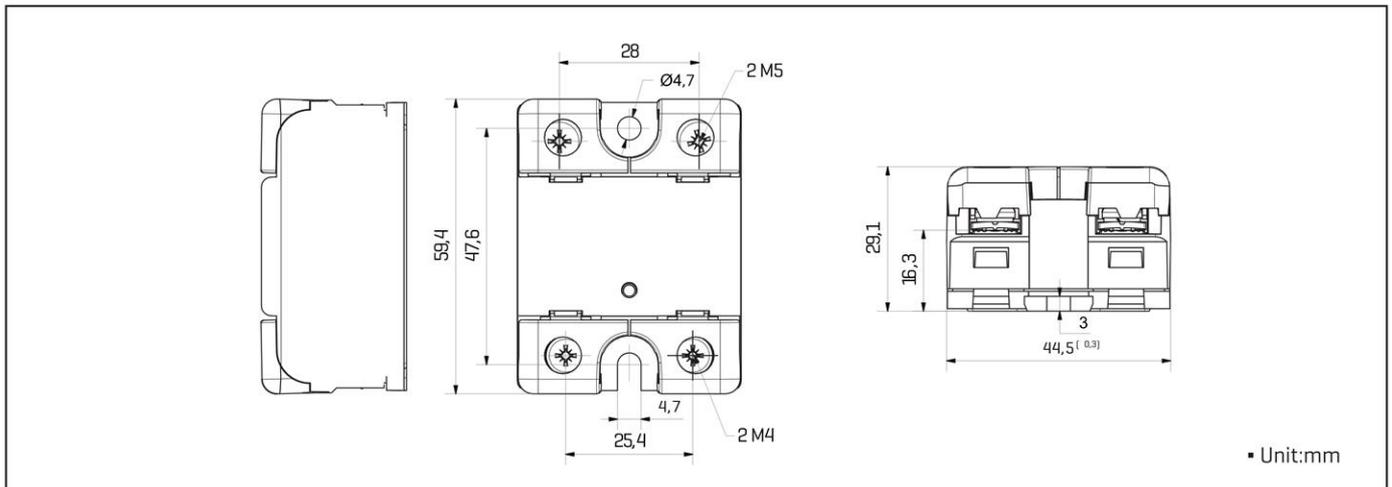
Connection Diagram



Thermal Derating Curve



Dimensions



Selection Guide:

A margin should be left when selecting the voltage and current of the product. For resistive load: the current is selected according to 2.5~4 times the load current, and the voltage is selected according to 2~2.5 times the load power. Inductive load: current is selected according to 3-7 times load current, voltage is selected according to 2.5-3 times load voltage.

According to the relationship between load current and ambient temperature, when the ambient temperature is high or heat dissipation conditions are not good, the current capacity of the solid state relay should be increased accordingly.

In order to prevent the product from short-circuiting during use, it is necessary to connect a fast circuit breaker or a fast fuse in series with the product in the load circuit.

For inductive loads, a freewheeling diode must be connected to both ends of the load, and a varistor must be connected to the output end [the varistor (MOV) is selected according to 1~1.5 times of the power supply voltage] to prevent the high voltage generated during switching from damaging the solid-state switch.

When the product is installed, it is required that the contact surface between the heatsink and the product must be flat and clean, and a layer of thermally conductive silicone grease is applied to its surface, and then finally the screws set with flat washers and Spring washers are tightened symmetrically to fix.







VTG Series Three Phase Solid State Relays



Features

- Three-pole, single-throw, one normally open, suitable for three-phase loads
- Rated off-state voltage: 480Vrms; 530Vrms
- The switch type is zero-crossing conduction type and random conduction type
- Input control voltage: 3-32Vdc, AC 90-280Vac
- Good thermal performance and long life
- Rated on-state current: 3x25-150A
- Input/output insulation voltage: 2500Vrms
- LED input display

Ordering Options

VTG

VTG Series

Three Phase
Solid State Relay

40

Load Current

25: 25Amps
40: 40Amps
60: 60Amps
80: 80Amps
100: 100Amps
120: 120Amps
150: 150Amps

D

Control Voltage

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

A48

Output Voltage

A48: 48-480VAC
A53: 53-530VAC

Z

Switching Type

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

Product Selection

Control Voltage	Output Voltage	Rated Operational Current						
		25Amps	40Amps	60Amps	80Amps	100Amps	120Amps	150Amps
3 to 32VDC	480VAC "Z"	VTG25DA48Z	VTG40DA48Z	VTG60DA48Z	VTG80DA48Z	VTG100DA48Z	VTG120DA48Z	VTG150DA48Z
3 to 32VDC	480VAC "R"	VTG25DA48R	VTG40DA48R	VTG60DA48R	VTG80DA48R	VTG100DA48R	VTG120DA48R	VTG150DA48R
90 to 280VAC	480VAC "Z"	VTG25AA48Z	VTG40AA48Z	VTG60AA48Z	VTG80AA48Z	VTG100AA48Z	VTG120AA48Z	VTG150AA48Z
90 to 280VAC	480VAC "R"	VTG25AA48R	VTG40AAT8R	VTG60AA48R	VTG80AA48R	VTG100AA48R	VTG120AA48R	VTG150AA48R
3 to 32VDC	530VAC "Z"	VTG25DA53Z	VTG40DA53Z	VTG60DA53Z	VTG80DA53Z	VTG100DA53Z	VTG120DA53Z	VTG150DA53Z
3 to 32VDC	530VAC "R"	VTG25DA53R	VTG40DA53R	VTG60DA53R	VTG80DA53R	VTG100DA53R	VTG120DA53R	VTG150DA53R
90 to 280VAC	530VAC "Z"	VTG25AA53Z	VTG40AA53Z	VTG60AA53Z	VTG80AA53Z	VTG100AA53Z	VTG120AA53Z	VTG150AA53Z
90 to 280VAC	530VAC "R"	VTG25AA53R	VTG40AA53R	VTG60AA53R	VTG80AA53R	VTG100AA53R	VTG120AA53R	VTG150AA53R

Input Specifications

Parameter-list	Specification Limits	
Input Parameter	D	A
Control Voltage Range	3 to 32VDC	90 to 280VAC
Input Current [Max.]	33/56mADC @=5V/12V	13mAAC @=220V
Must Turn-on Voltage	3VDC	90VAC
Must Turn-off Voltage	1VDC	10VAC
Reverse Voltage [Max.]	-6VDC	/

VTG Series Three Phase Solid State Relays

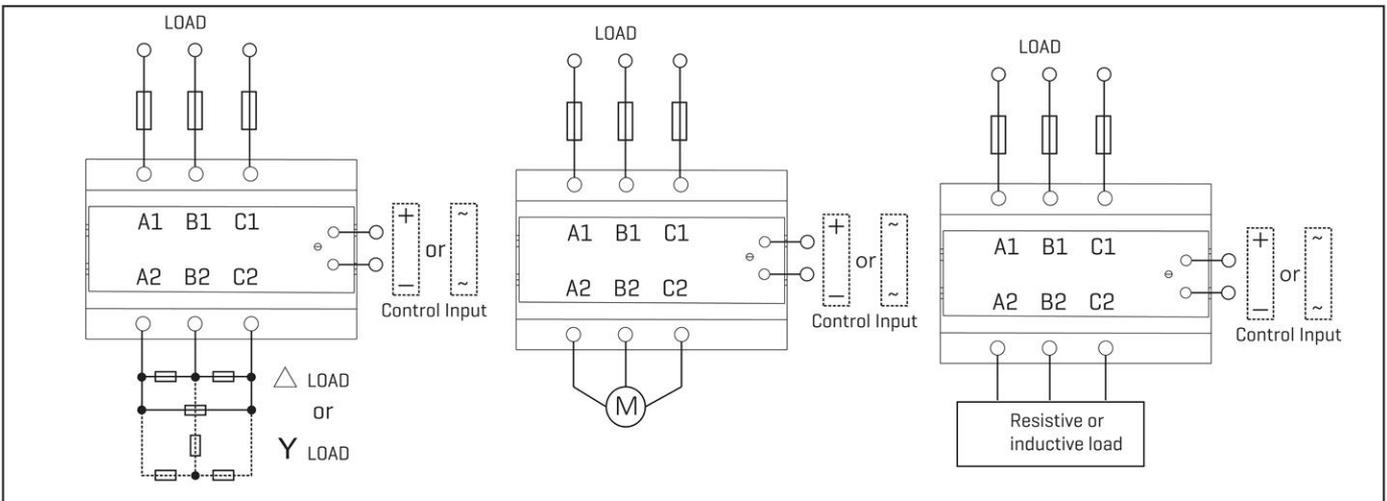
Output Specifications

Output Parameter	Units	Specification Limits						
		25	40	60	80	100	120	150
Model No.: VTG	Amps	25	40	60	80	100	120	150
Load Current Range	Arms	3x25	3x 40	3x60	3x80	3x100	3x120	3x150
Surge Current 20mSec [Max.]	Arms	300	400	600	800	1000	1200	1500
Load Voltage Range [480V]	Vrms	48 to 480						
Transient Overvoltage [480V]	Vpk	≥1200						
Load Voltage Range [530V]	Vrms	53 to 530						
Transient Overvoltage [530V]	Vpk	≥1400						
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	1.8						
Thermal Resistance, [Rthjc]	°C/W	0.75	0.55	0.46	0.38	0.34	0.23	0.23
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]

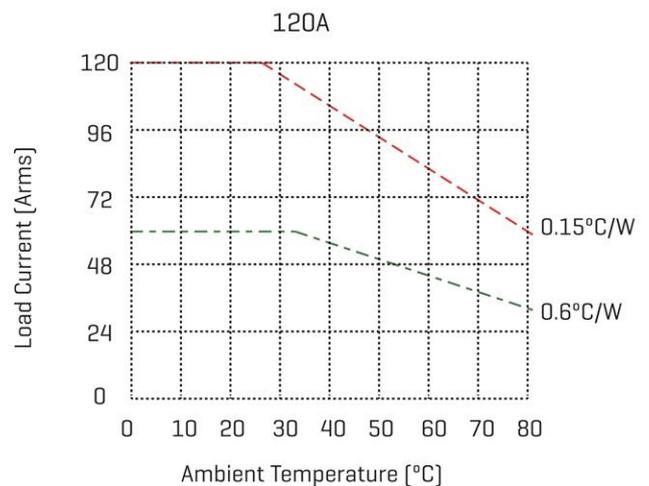
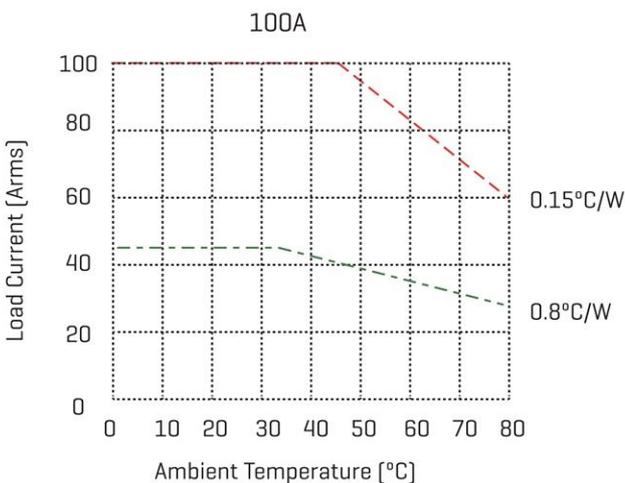
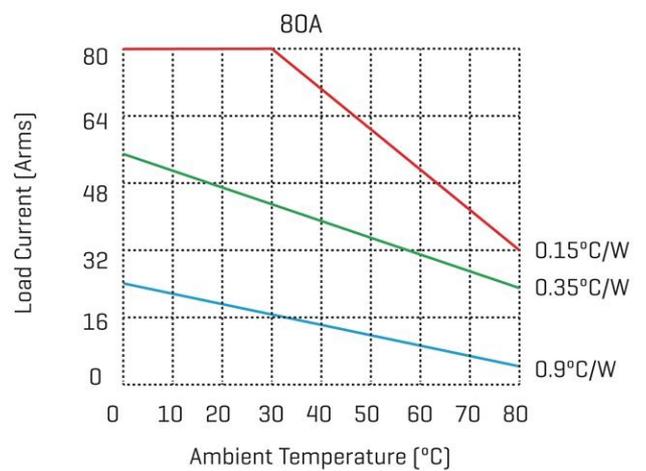
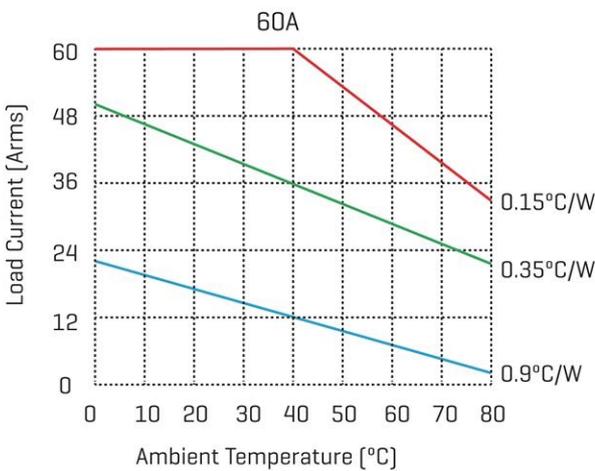
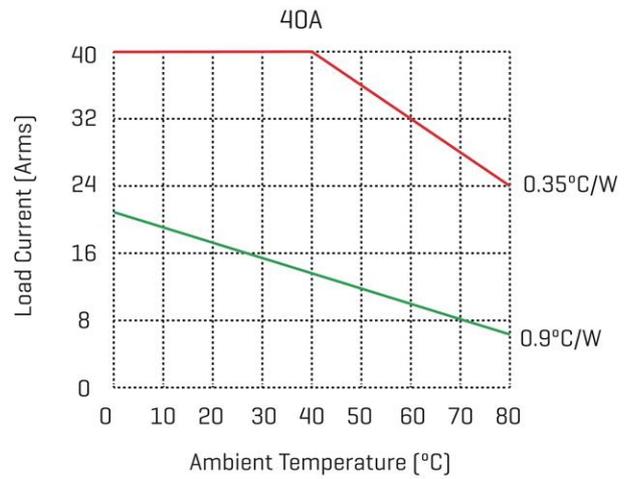
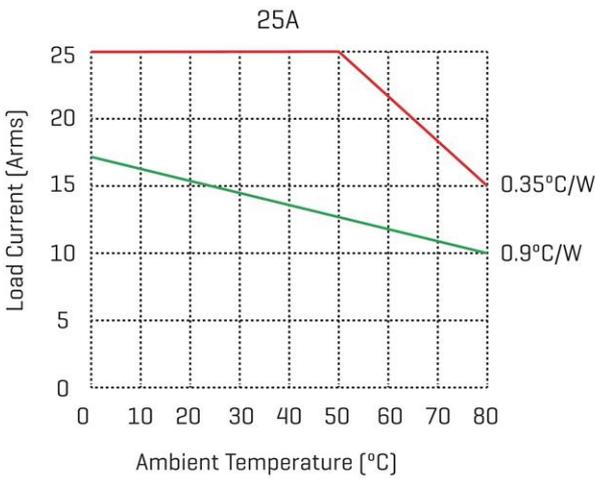
Description	25A	40A	60A	80A	100A	120A	150A
Dielectric Strength, Input to Output [50/60 Hz]	2500Vrms						
Dielectric Strength, Input/Output to Base [50/60 Hz]	2500Vrms						
Minimum Insulation Resistance [@ 500 VDC]	10 ⁹ Ω						
Maximum Capacitance, Input/Output	0.8pF						
Ambient Operating Temperature 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	500g						

Connection Diagram



VTG Series Three Phase Solid State Relays

Thermal Derating Curve



Important Notice

1. If the connection of the load will produce high surge current, please pay attention to the solid state relay is able to withstand surge current value.
2. If the connection of the load will produce high peak reverse voltage, please pay attention to the solid state relay is able to withstand the peak voltage.
3. When choosing SSR, please pay special attention to the working current of the load and working temperature, when the environment temperature is higher, the user should take load discount into account according to the thermal curve

Dimensions

