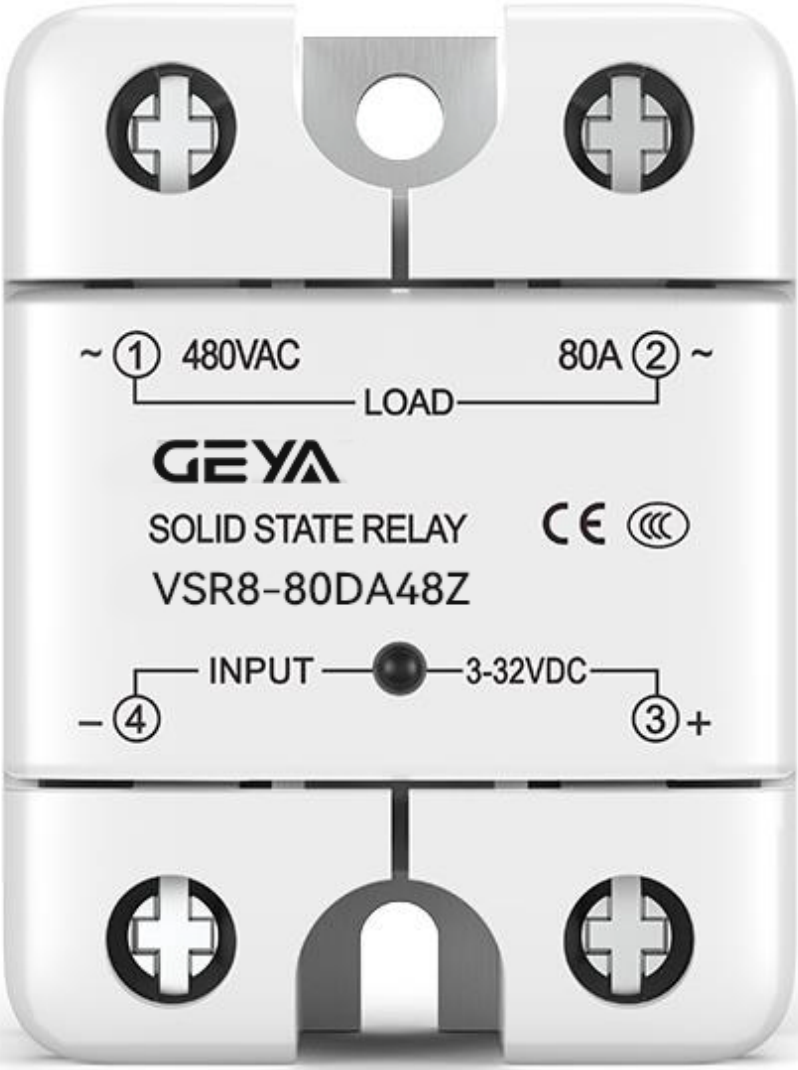

~ ① 480VAC
80A ② ~
LOAD
GEYA
SOLID STATE RELAY
VSR8-80DA48Z
INPUT
3-32VDC
– ④
③ +


~ ① 480VAC
80A ② ~
LOAD
GEYA
SOLID STATE RELAY
VSR8-80DA48Z
INPUT
3-32VDC
– ④
③ +


~ ① 480VAC
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SOLID STATE RELAY
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③ +


~ ① 480VAC
80A ② ~
LOAD
GEYA
SOLID STATE RELAY
VSR8-80DA48Z
INPUT
3-32VDC
③ +
– ④

SOLID STATE RELAYS

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

Cortrol 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

VSR8 Series Single Phase Solid State Relays

Input Specifications

Description	Specification Limits	
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						
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

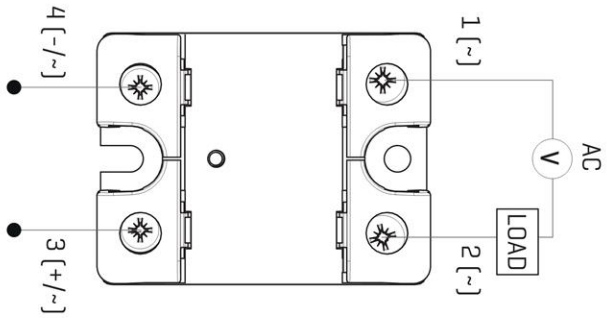
GEYA SOLID STATE RELAYS

VSR8 Series Single Phase Solid State Relays

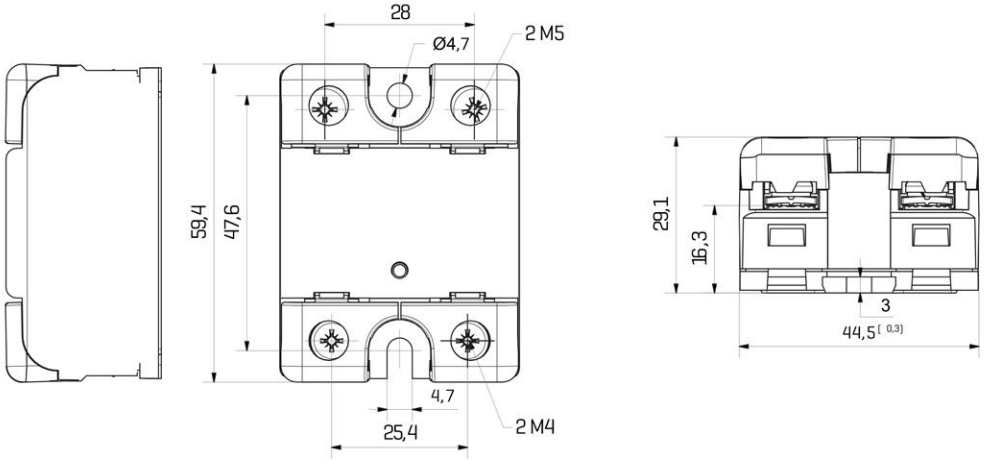
General Specifications (Ta=25°C)

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)	$10^9\Omega$						
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



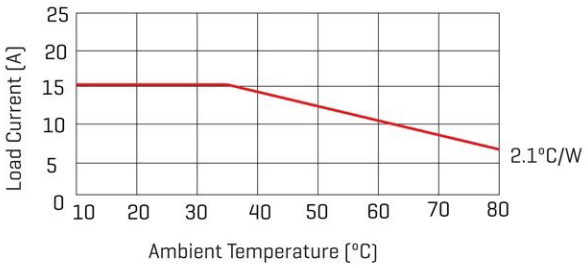
Dimensions (mm)



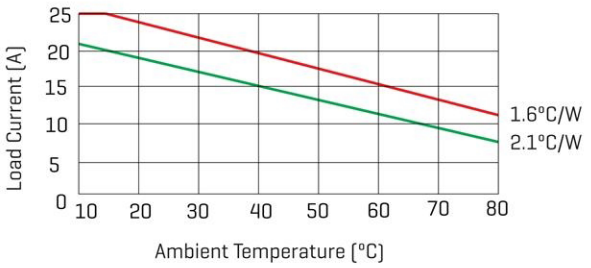
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Thermal Derating Curve

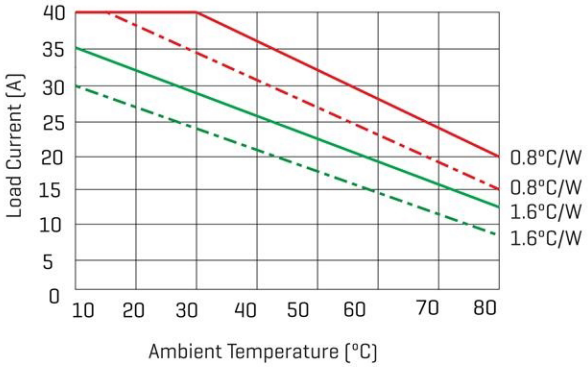
15A



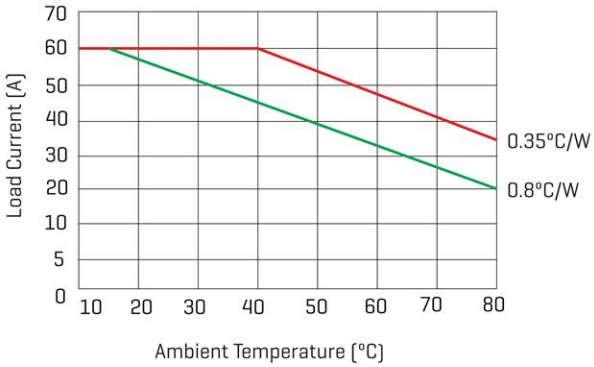
25A



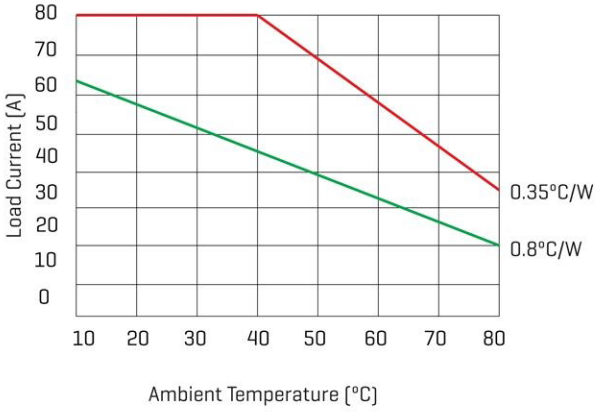
40A



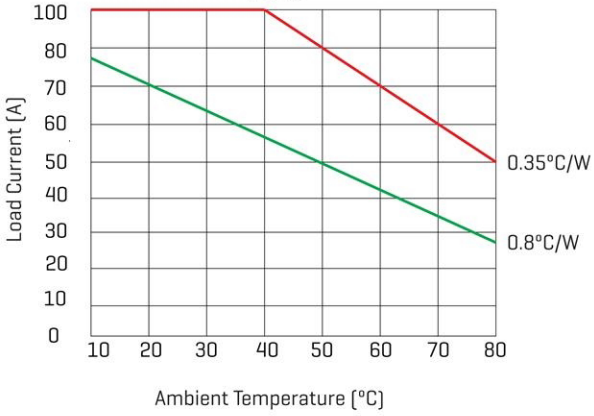
60A



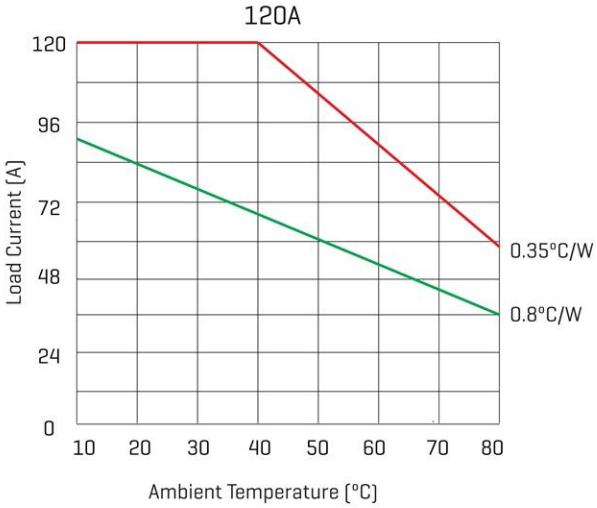
80A



100A



120A



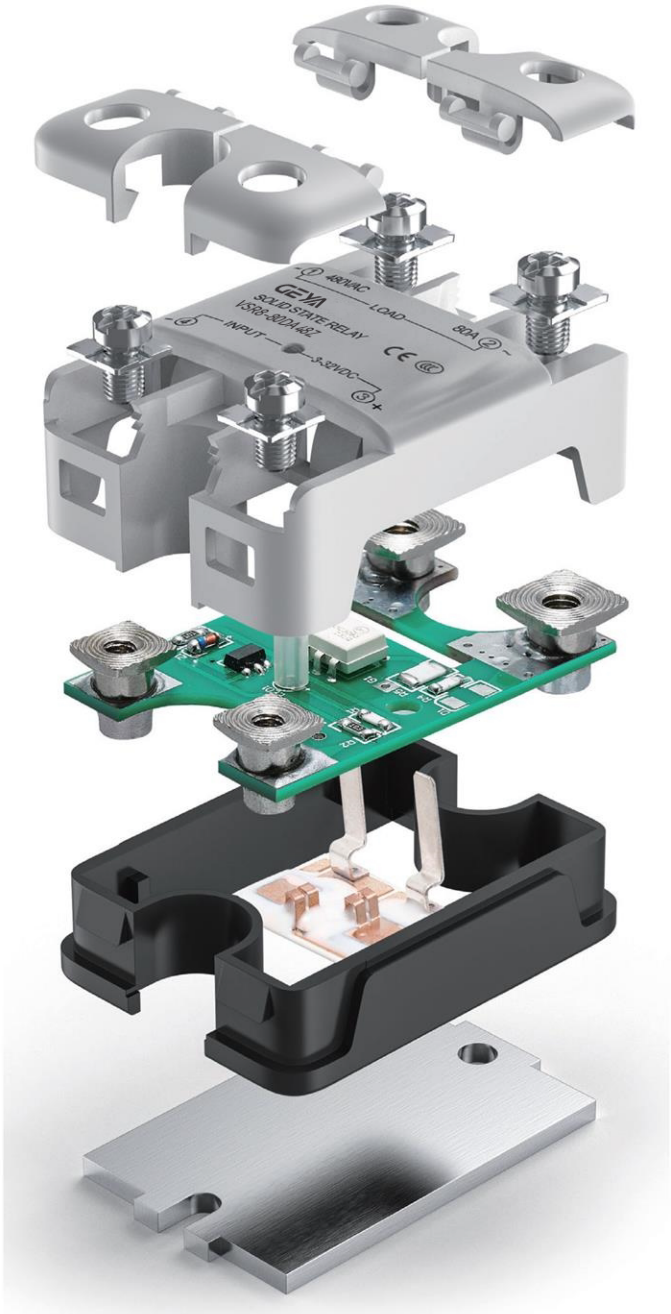
VSR8 Series Single Phase Solid State Relays

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, output18-26 / 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.



VDR8 Series DC Solid State Relays



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

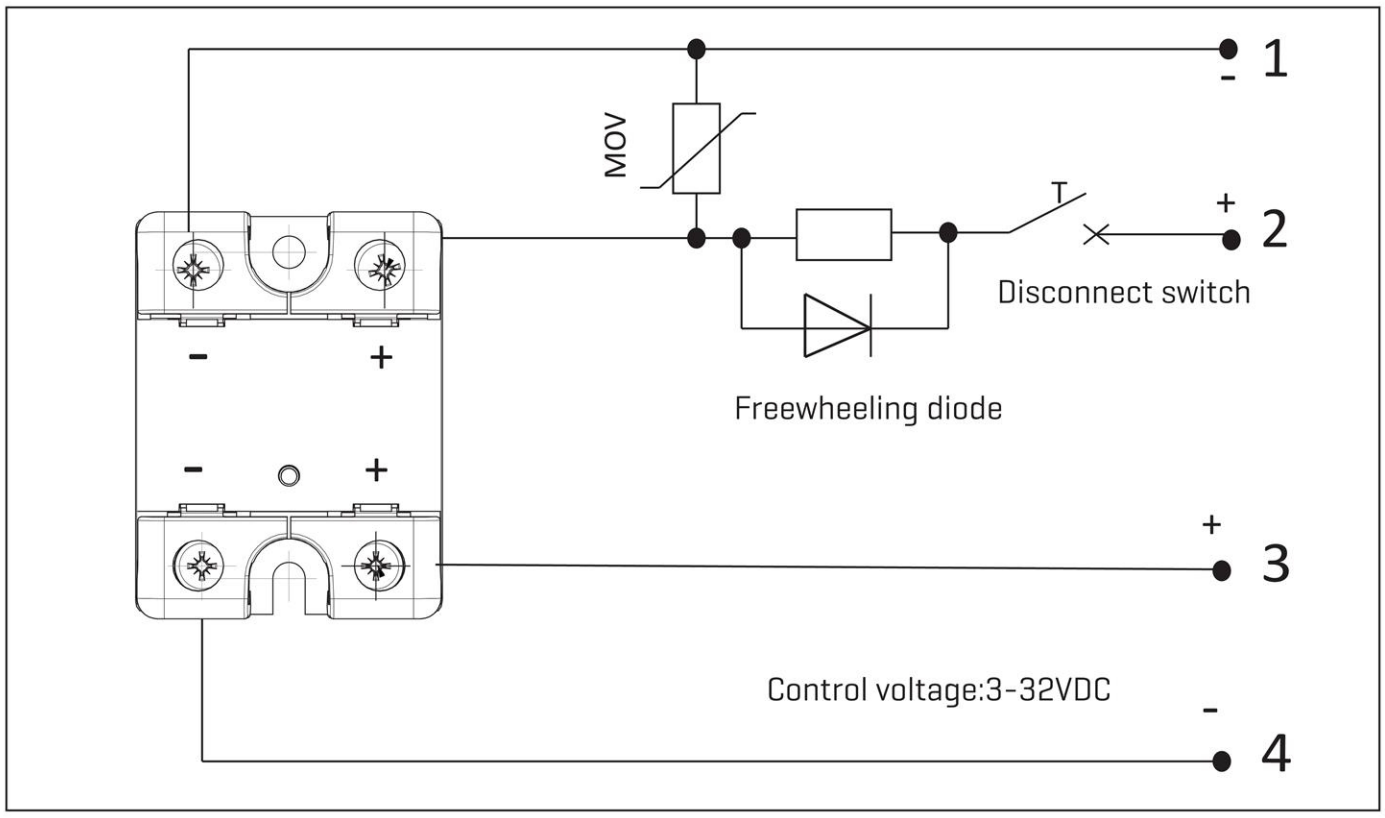
Output Specifications

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							

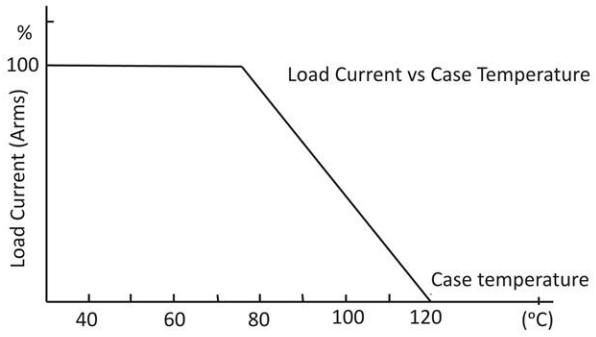
General Specifications (Ta=25°C)

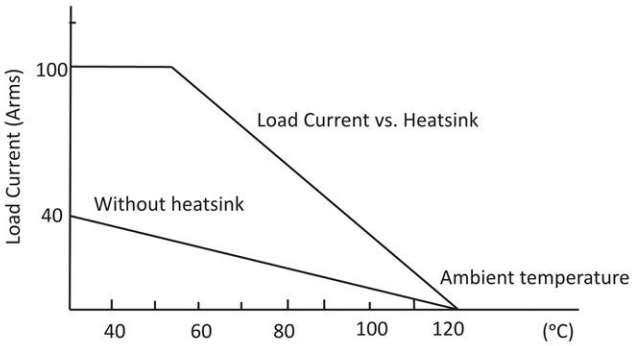
Description	10A	25A	40A	60A	80A	100A	120A
Dielectric Strength, Input to Output (50/60 Hz)	2500Vrms						
Dielectric Strength, Input/Output to Base (50/60 Hz)	2500Vrms						
Minimum Insulation Resistance (@ 500 VDC)	$10^9\Omega$						
Safety Factor of Load Current	2.5-3 time for resistive load, 3-6 times 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

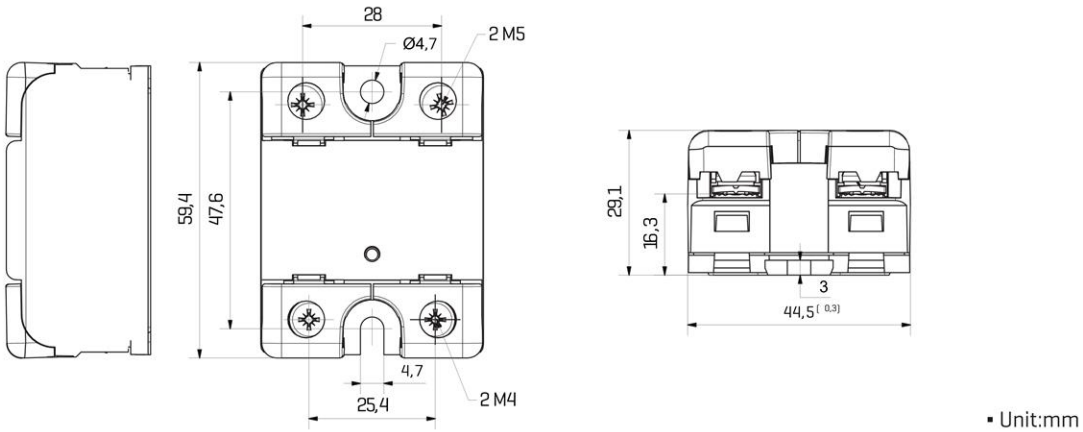


Thermal Derating Curve





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 andSpring washersare tightened symmetrically to fix.


480VAC
LOAD
80A
GEYA
SOLID STATE RELAY
VSR8-80DA48Z
INPUT
3-32VDC


480VAC
LOAD
80A
GEYA
SOLID STATE RELAY
VSR8-80DA48Z
INPUT
3-32VDC


480VAC
LOAD
80A
GEYA
SOLID STATE RELAY
VSR8-80DA48Z
3-32VDC
INPUT