# Solid State Relay

# DC-AC




58 x 45mm

## Features :

- Output current of 90 and 125 Amps
- Output voltage of 48 - 480 and 48 - 660 VAC
- Control voltage of 4 - 32 VDC
- Integrated IP20 touch safe removable cover
- Input status indicator - LED
- Cost-effective solution

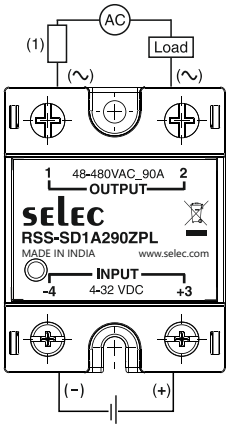
Certifications : CE

## Technical specifications

| | RSS-SD1A290ZPL | RSS-SD1A2125ZPL | RSS-SD1A390ZPL | RSS-SD1A3125ZPL |
|---|---|---|---|---|
| **Input specifications** | | | | |
| Control voltage range | 4 - 32 VDC | | | |
| Control current range | 4 -15mA | | | |
| Nominal input impedance | 2k Ω | | | |
| Pick up voltage | 3 VDC | | | |
| Drop out voltage | 1 VDC | | | |
| Maximum response time pick up | ½ cycle + 1 sec | | | |
| Maximum response time drop up | ½ cycle + 1 sec | | | |
| Max reverse voltage | 40 VDC | | | |
| Zero crossing turn on | Available | | | |
| Reverse voltage protection | Available | | | |
| LED indicator showing relay ON state | Available | | | |
| **Output specifications** | | | | |
| Minimum Load Current [mArms] | 90 | 125 | 90 | 125 |
| Maximum Load current (Arms) | 200 | | | |
| Min/Max Operating Voltage (Vrms) | 48-480 VAC | | 48-660 VAC | |
| Transient voltage (Vpk) | 1600 | | | |
| Maximum off state leakage current @ Rated voltage (mArms) | 20 | | | |
| On state voltage drop @ Rated current (Vrms) | 1.6 | | | |
| Minimum of f state dv/dt @ maximum rated voltage (V/usec) | 1000 | | | |
| Maximum 1 cycle surge current Typ @ 50Hz (Arms) | 1500 | 2000 | 1500 | 2000 |
| Thermal Resistance Junction to Case (Rjc) [°C/W] | 0.6 | 0.45 | 0.6 | 0.45 |
| Maximum 1/2 Cycle $I^2t$ for Fusing @ 50 Hz (min. / typical) [$A^2sec$] | 11250 | 20000 | 11250 | 20000 |
| Minimum Heat Sink for Rated Current @ 40°C [°C/W] | 0.1 | | | |
| **General specifications** | | | | |
| Dielectric Strength, Input/Output to Ground | 4000 Vrms | | | |
| Dielectric Strength, Input to Output | 4000 Vrms | | | |
| Minimum Insulation Resistance | 100 MΩ (at 500 VDC) | | | |
| Maximum Capacitance, Input/Output | 0.8pF | | | |
| Ambient temperature | Operating: - 30°C to 80°C , Storage: - 30°C to 100°C | | | |
| Ambient Humidity | 93% non-condensing | | | |

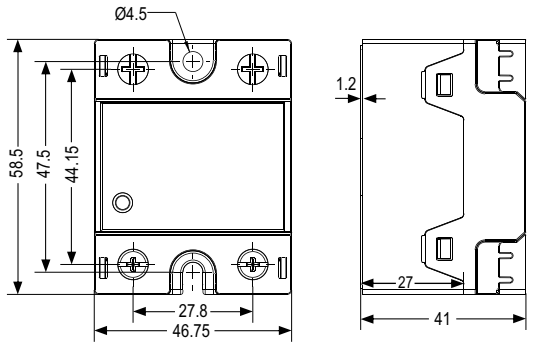
| Housing specifications | |
|---|---|
| Dimensions (Lx Wx H) (mm) | 58.5 x 46.75 x 41 |
| Weight | 145 g |
| Baseplate | Aluminum |
| Material | Glass filled polyester |
| Mounting Type | Panel mount |
| LED input Status Indicator | Red |

## Wiring diagram




4 - 32 VDC

## Dimensions (All are in mm)




## Compliance

| Applicable EMI / EMC Standards | | |
|---|---|---|
| **Product Standard :** IEC 61326-1 | | |
| **Category** | | **Standards Compliance** |
| ESD Immunity | IEC 61000-4-2 | Level III |
| Surge Immunity | IEC 61000-4-5 | +/- 2 kV common mode,<br>+/- 1 kV differential mode |
| Radiated Susceptibility | IEC 61000-4-3 | Level III, 80 to 1000MHz<br>Level II, 1.4GHz to 2GHz<br>Level I, 2GHz to 2.7GHz |
| Conducted Susceptibility | IEC 61000-4-6 | Level II |
| Voltage Dips and Interruptions | IEC 61000-4-11 | **Dips** : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C)70% residual voltage / 25 cycles50Hz / 30 cycles 60Hz (Criteria C)<br>**Interruptions** : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C) |
| Conducted Emission | CISPR-11 | |
| Radiated Emission | CISPR-11 | |
| Electrical Fast Transient | IEC 61000-4-4 | Level III |

## Ordering information

| Product code | Current ratings | Control input voltage | Load output voltage | Certification |
|---|---|---|---|---|
| RSS-SD1A290ZPL | 90 | 4 to 32 VDC | 48 to 480 VAC | CE |
| RSS-SD1A2125ZPL | 125 | 4 to 32 VDC | 48 to 480 VAC | CE |