

SSR300A Solid State Relay

The Cosworth SSR300A is a ruggedized high power solid state relay designed to replace the master mechanical relay in performance electrical systems.

Solid state MOSFET technology enables the SSR300A to operate under extreme shock and vibration conditions well in excess of the capabilities of a mechanical relay. This reduces the likelihood of electrical system failure due to high G impacts.

The unit has an inbuilt diode which clamps the alternator voltage to the battery, avoiding the 'load dump' situation for other electrical components on the vehicle. The external controlling switch should also signal to the ECU to stop the engine.

The Solid state relay is available in two versions the SSR300A with a 16mm stud, and the SSR300A-SRT with a shorter 10mm stud.



Specifications

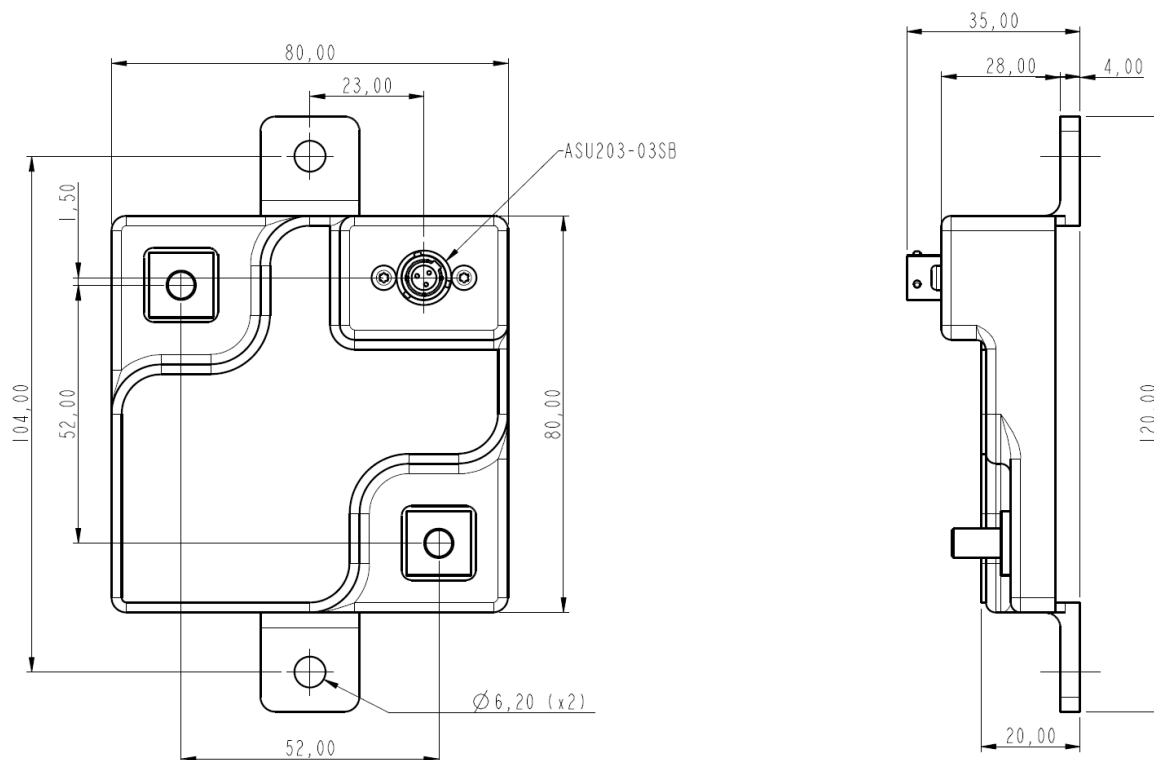
| Electrical Data | |
|----------------------|--|
| Operating voltage | 7 to 35V |
| Current rating | 300A (Continuous) 1000A (≤ 5seconds) |
| Load dump protection | Diode |

| Mechanical Data | |
|-------------------------|-----------------|
| Size without connectors | 80 x 80 x 28 mm |
| Weight | 245 grams |
| Environmental | IP65 |
| Operating temperature | -40°C to +80°C |
| Storage temperature | -40°C to +80°C |

Ordering Information

| Part Number | |
|----------------------|----------------|
| Cosworth SSR300A | 01I-610034 |
| Cosworth SSR300A-SRT | 01I-610034-SRT |

Dimensions



All dimensions shown in mm

Installation

The Cosworth SSR300A is designed to be hard mounted to any flat surface using 2 x M5 fixings, use the above drawings to help with mounting the unit.

- Ensure unit is not subjected to excessive vibration. While designed to withstand harsh shock and vibration levels, prolonged exposure is not recommended.
- Ensure unit is positioned so that it will not be exposed to water.
- Ensure that the unit can be cooled adequately to below its maximum case temperature. Some air flow over the unit is essential.
- Ensure that master switch cables have adequate strain relief.
- Ensure that Batt+ and Car+ connections use appropriate battery terminal connectors and are securely fastened without fouling any metal parts of the vehicle and the ring terminals have sufficient electrical insulation to protect against accidental contact. **Max torque 2.5Nm** (material is CuZn 39 Pb 3).
- If the unit cannot be mounted onto a cool surface or is subjected to shock or vibration, anti vibration mounts should be used.

Connector Information

J1 – Battery

| Connector | Mating Connector |
|----------------------|-------------------------|
| M6 STUD | Ring / battery terminal |
| Maximum torque 2.5Nm | |

| Pin | Function | Signal Description |
|-----|----------|----------------------------------|
| 1 | Batt+ | Main +VE feed input from battery |

J2 – Car

| Connector | Mating Connector |
|----------------------|-------------------------|
| M6 STUD | Ring / battery terminal |
| Maximum torque 2.5Nm | |

| Pin | Function | Signal Description |
|-----|----------|--|
| 1 | Car+ | Main +VE feed output to vehicle electrical systems |

J3 – Control

| Connector | Mating Connector |
|-------------|------------------|
| ASU103-03SB | ASU603-03PB |

| Pin | Function | Signal Description |
|-----|---------------|--|
| 1 | Master Switch | Wire to master switch. Switch to GND to activate Solid state relay |
| 2 | Unused | Not Connected |
| 3 | Unused | Not Connected |

Recycling and Environmental Protection

Cosworth Electronics is committed to conducting its business in an environmentally responsible manner and to strive for high environmental standards.

Manufacture

Cosworth products comply with the appropriate requirements of the Restriction of Hazardous Substances (RoHS) directive (where applicable).

Disposal

Electronic equipment should be disposed of in accordance with regulations in force and in particular in accordance with the Waste in Electrical and Electronic Equipment directive (WEEE).

