

## SSR300A Solid State Relay (Draft)

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.



### Specifications

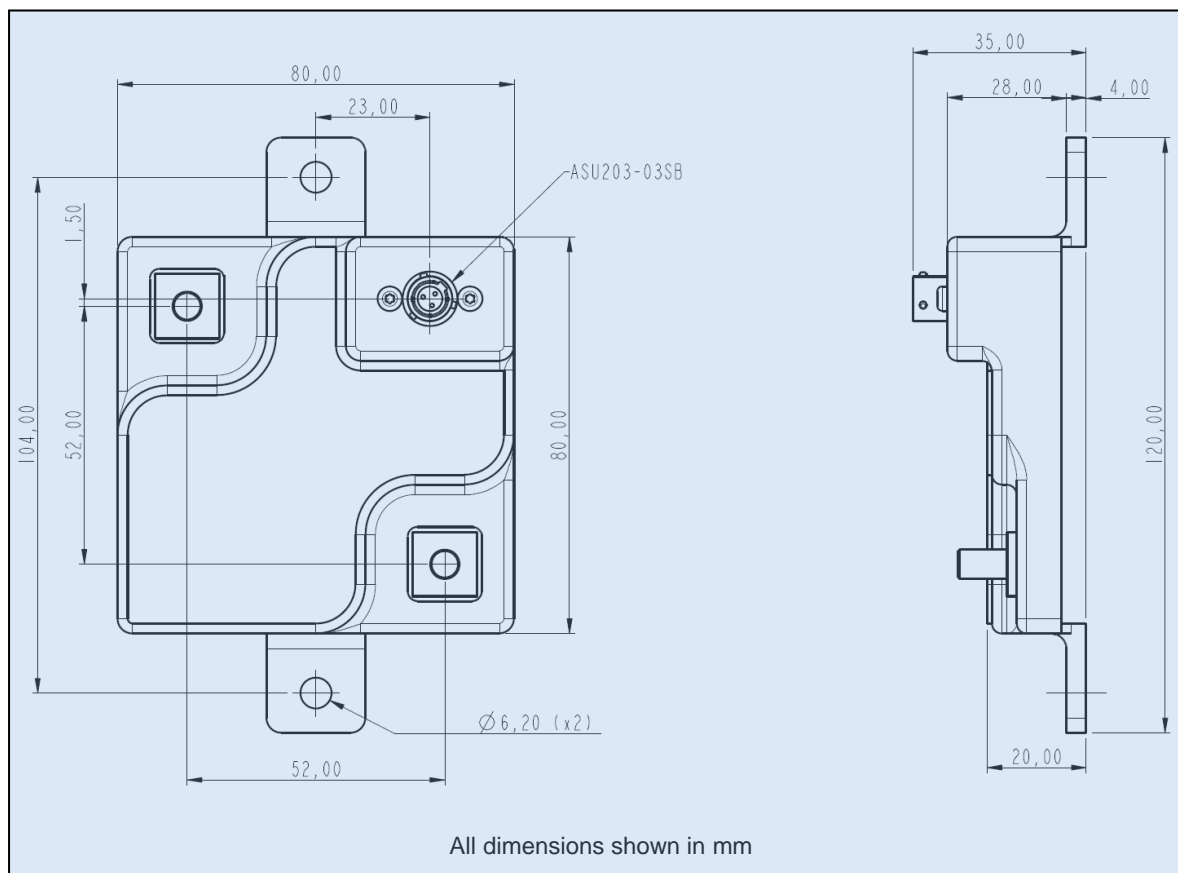
Electrical Data	
Operating voltage	7 to 35V
Current rating	300A (Continuous) 1000A ( ≤ 5seconds)
Load dump protection	Diode

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

### Ordering Information

Part Number	
Cosworth SSR300A	011-610034

## Dimensions



## 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).

