

# Product Leaflet

## STARTsafe II

### Ensuring Engine Start When You Need It Most

With the increasing requirement for additional equipment to be fitted, vehicles in today's modern fleets are continually having their electrical systems supply more than they were originally designed for, often draining batteries in the process. Operational requirements quite often involve vehicles being left stationary with their engines off or running at idle for long periods of time, whilst still operating onboard electrical systems critical to the mission (anti IED systems, radios etc). This can cause the battery system to be under a great deal of drain if not upgraded and balanced with suitable high output alternators and idle upgrades.

STARTsafe II is an automatic battery control system designed to isolate a secondary (or emergency) battery in situations where the battery power is being drained of energy through a fault, or system requirement outside the normal electrical specifications of the vehicle itself. The purpose of this is to ensure that the secondary battery always has enough energy to start the vehicle should the primary battery be drained of energy. The system has an automatic isolation feature but allows the operator to override the system should the current drain be required for other important features i.e. emergency radio operation etc.

It is designed for engine bay or in cockpit mounting and is enclosed in an IP65 metallic housing and incorporates limited EMC filtration as standard, full Defence Standard EMC filtration is available on request. The solenoid is still external to the electronics for ease of mounting close to the battery cables. The ECU has a local reset button in addition to the cockpit based control for resetting the system from the engine bay. All LEDs are low current drain for long term operation and the system been operational in conflict zones around the world since 2010.

Available in 12 and 24 VDC variants

- Confidence in engine start every time
- Isolates a secondary battery
- Operator override
- Automatic re-engagement available
- Cockpit and under bonnet control
- Over 200 systems operating world-wide

When installed, STARTsafe II constantly monitors battery voltage. Once its protection threshold voltage has been reached, it starts an internal timer and driver warning light. If voltage does not recover during this timed period, a solenoid is operated that isolates the secondary battery preventing further power drain. Power is reconnected via a simple reset switch (installed on the vehicles dash and on the ECU itself). Additional options include a reset via an engine cranking signal, for fully automatic operation.

STARTsafe II ensures that your engine starts in situations where power drain would normally reduce the capability of the vehicle to start in extremely dangerous and challenging environments



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## Specifications

System Part Number	10051
ECU	10030(12 VDC System)
Harness	10053-xxxx (Vehicle Specific)
Contactor	10050
Bracket	14087
Cut Out Voltage	12.1 VDC
Nominal Current Draw	0.1 mA
Normal Operating Voltage	10 to 17 VDC
Nominal Time Out Period	300 seconds
Rest Switch	ECU and in Cockpit
Solenoid Activation Current	≤3 A
Solenoid Rating	100 A Continuous 300 A Instantaneous
Protection	IP65 and Fused at 5 A
Weight	ECU 0.395 Kg Solenoid 0.350 Kg
Harness	Typical 2 Kg
ECU Dimensions (L×H×D)	153×46×82 mm
Solenoid Dimensions (L×H×D)	60×120×50 mm

This system is designed to work in conjunction with suitably charged and serviceable batteries and a rated alternator capable of keeping the system charged at all engine speeds (Load Balance). Ask about our range of upgraded alternators and high idle kits suitable for your vehicles.

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