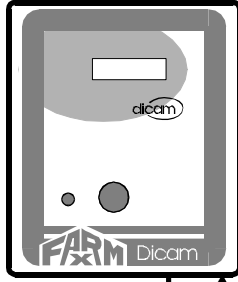
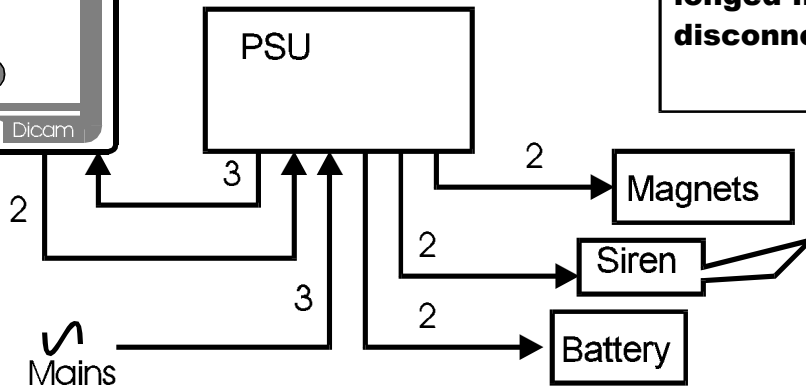


Dicam Power Supply PSU-A



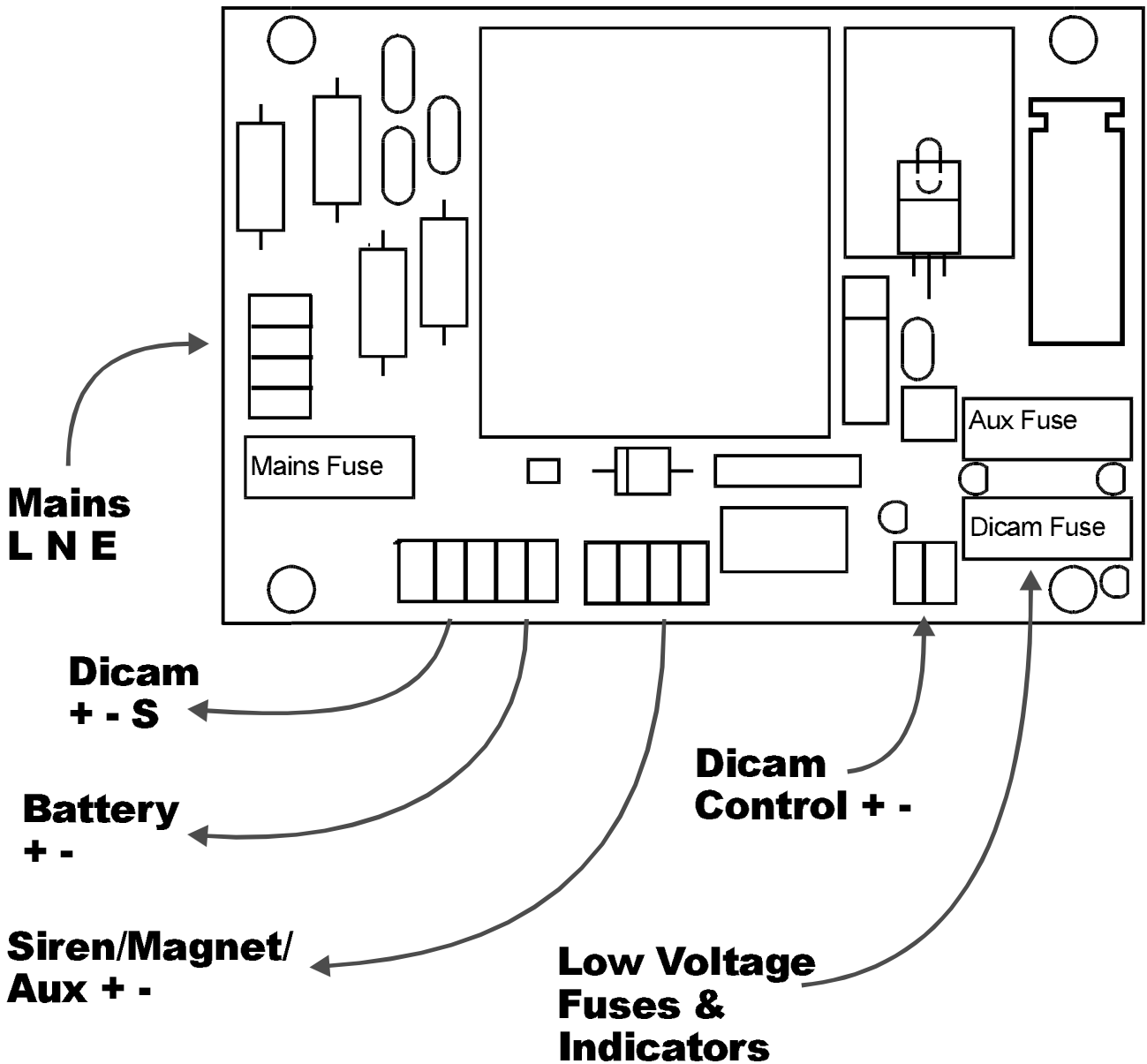
PSU Schematic

numbers indicate no of conductors



Warning

In the event of prolonged mains failure, disconnect battery.



Warning

Before use refer to **DICAM CONTROL COMPONENTS ESSENTIAL INFORMATION**

Information

The PSU-A converts mains voltage to low voltage to operate the Dicam master unit unit.

It can also charge a backup battery which will provide processor, sensor and warning device operation during brief periods of mains failure.

Operating Instructions

MAKE SURE mains is switched on at all times to power the Dicam unit and maintain battery charge.

If the mains is switched off or disconnected for more than two hours (such as during a prolonged mains failure), follow instructions provided by your supplier to disconnect the battery to prevent deep discharge. The battery is normally in a separate enclosure. DO NOT attempt this unless you have specific instructions from your supplier on how to do it safely. If unsure, call your service personnel immediately.

The component contains NO USER SERVICEABLE PARTS. In the event of failure, please contact your supplier or regular service personnel.

To prevent risk of electric shock UNDER NO CIRCUMSTANCES enclosures containing mains voltages MUST NOT BE OPENED except by experienced service personnel.

Warnings

The PSU-A is an OPEN FRAME COMPONENT PART intended for use in a control or wiring panel to be designed by others. Parts selection and wiring panel design must be made and supervised by a competent electrical engineer, taking proper steps to ensure safety.

LIVE TERMINALS are exposed and some parts may become HOT. The component must be fully enclosed to ensure safety. Design and construction of the wiring panel must ensure that users are not exposed to hazardous voltages or temperatures. Service personnel must be properly informed of the hazards in order to take suitable precautions.

Fault diagnosis, if required, must only be carried out by properly qualified service personnel.

Other than fuses, the component contains NO SERVICEABLE PARTS. No Third Party repair is permissible. In the event of failure or damage to the component, it must be returned to the factory for examination and repair.

Enclosure

The PSU must be mounted in a suitably rated environmental enclosure according to the conditions of use. E.g. If used on a livestock farm, the enclosure must fully protect the component from dust, water, condensation and noxious gases.

MAKE SURE heat dissipation from enclosure is adequate to keep component with design temperature rating

When mounting PSU, a minimum clearance of 15mm must be maintained all around the component.

Wiring

Mains and Low Voltage wiring must be segregated to prevent risk of electric shock.

Alliwires must be insulated to 250Vac or higher

All loose wiring within enclosures must be secured with cable ties or equivalent.

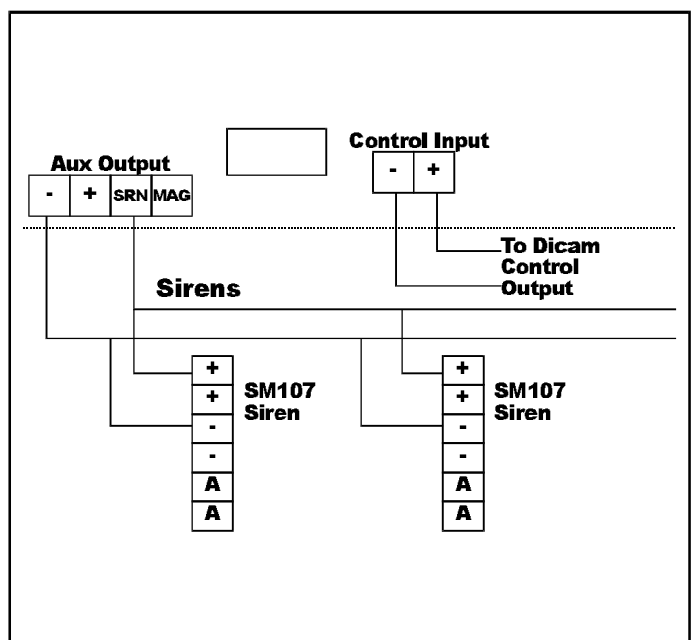
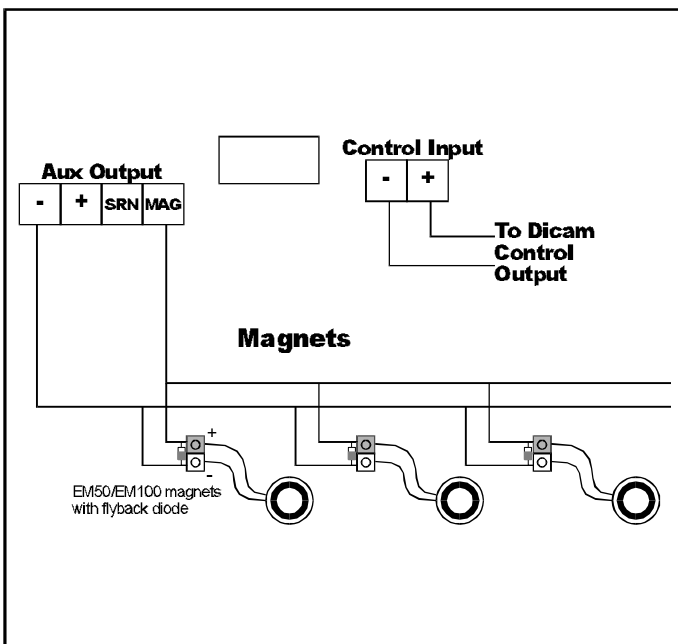
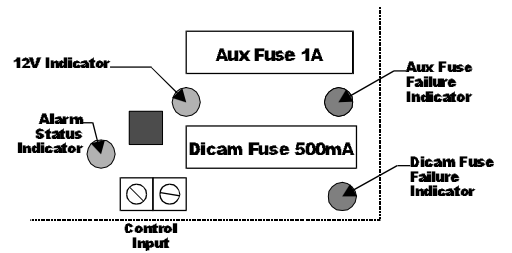
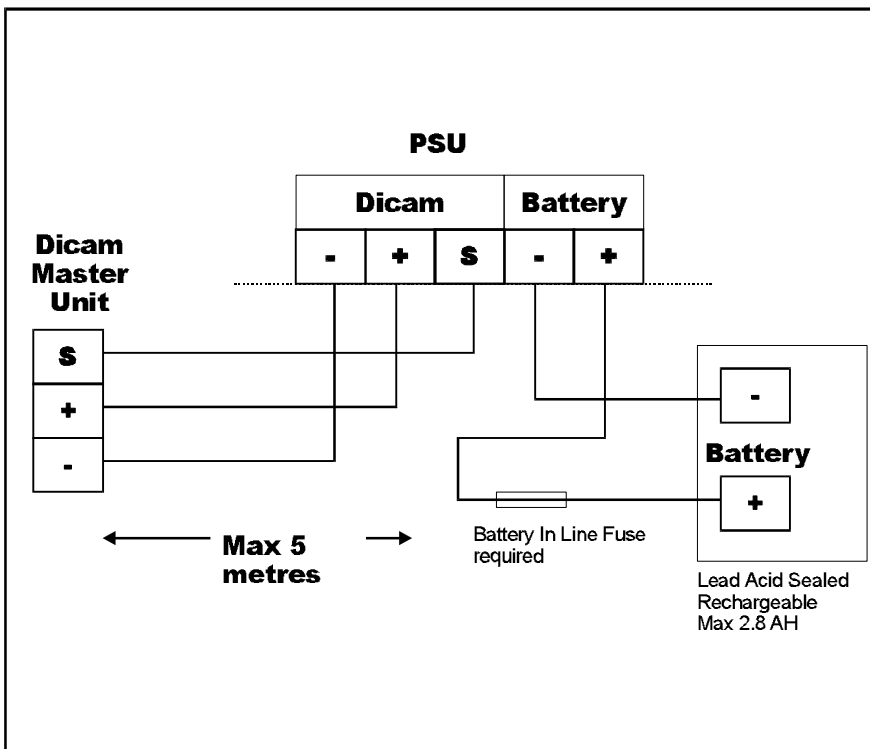
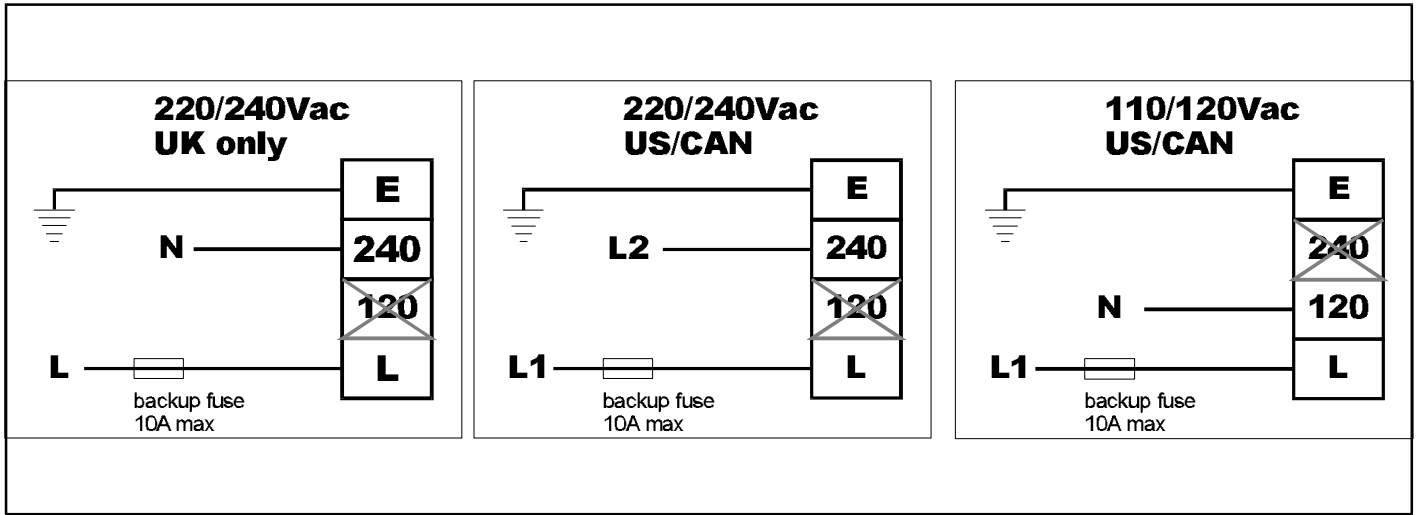
Battery

Battery must be housed in ventilated enclosure.

Take Care to connect [+] and [-] terminals correctly. Reverse polarity connection may damage both battery and PSU.

Do Not connect a battery if the open circuit terminal voltage is less than 6V. This may cause the PSU to overheat and cause damage.

Disconnect battery during prolonged mains failure to prevent deep discharge.



Ratings/Fuses			
	Volts	Amps	Fuse
Mains	220-240Vac 50/60Hz 110-120Vac 50/60Hz**	130mA	20mm 500mA (T)
Dicam	12-13.8Vdc	200-350mA	20mm 500mA (T)
Aux (Siren/Magnets)	12-13.8Vdc	800mA max	20mm 1A (T)
Battery	12V lead acid rechargeable type NP	max 2.8AH typ 20 - 100mA charge rate	Resistor limited non replaceable

**Note : Universal version only. Aux output max 200mA if connected 110/120Vac

Conditions			
Location	Altitude/Pressure	Humidity	Temperature
Indoors. Environmentally protected IP55. Free from condensation and corrosive atmospheres.	<2000m 75 to 106kPa	≤ 31°C ≤ 80% ≤ 40°C ≤ 50%	≥ 5° ≤ 40°C
Insulation type	Installation Category	Pollution Degree	
Basic	Category 2	2	

Test Voltages
Testing must only be carried out by suitably qualified and experienced technicians. LIVE TERMINALS ARE EXPOSED. DO NOT apply Megger (high voltage) testing to cables while connected to PSU or any other semiconductor based circuits.

	Voltage DC	Voltage AC	Notes
Mains	<2V	220 - 240Vac 110 - 120Vac	- <i>Universal version only</i>
Dicam [-] to [+]	13.6 to 13.8V	<0.1V	Low DC and/or high AC reading indicates low mains/overloaded
Dicam [-] to [S]	14 - 17V	2V 8V	Not connected to Dicam Connected to Dicam
Battery (mains present)	12 - 13.8V	<0.5V	Voltage rises as battery charges up
Battery (no mains)	10.5 to 12.8V	0	Carry out battery discharge test using NP tester to determine battery condition.
Aux	13 to 13.8V	<0.1V	Low DC and/or high AC reading indicates low mains/overloaded PSU
Control Input	1.2 - 1.6V	0	Voltage present = Dicam alarm output OK No voltage = disconnection/alarm 12V = connection reversed

Mounting

The PSU produces heat during operation. To dissipate this heat safely, it must be mounted with the circuit board vertical, with terminals lowermost.

For full power rating, the enclosure should be at least 3 times the area of the circuit board.

Standard fixings supplied : 4 x no 8 self tapping screws and spacing pillars suitable for chassis plate mounting.

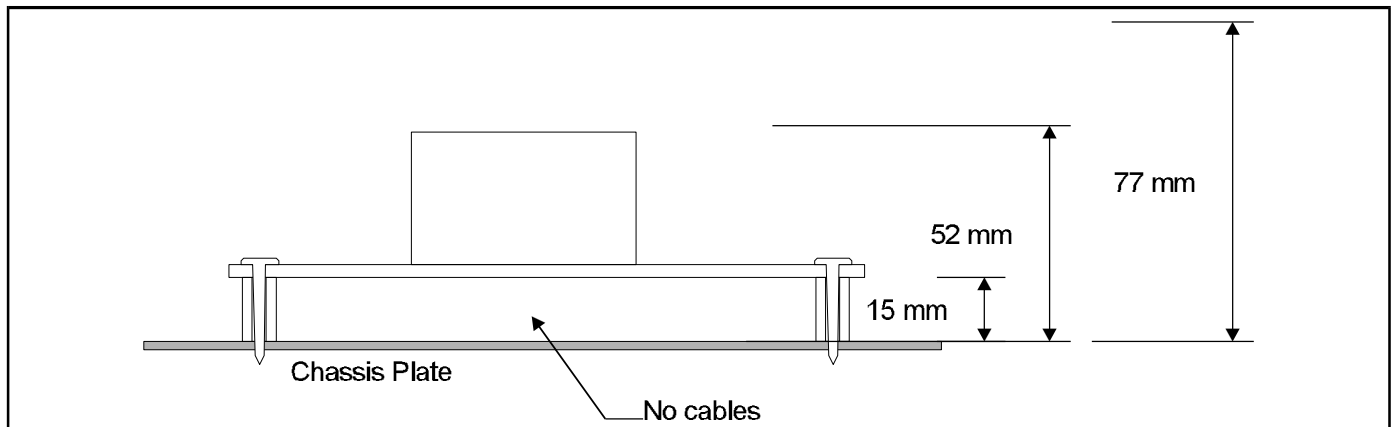
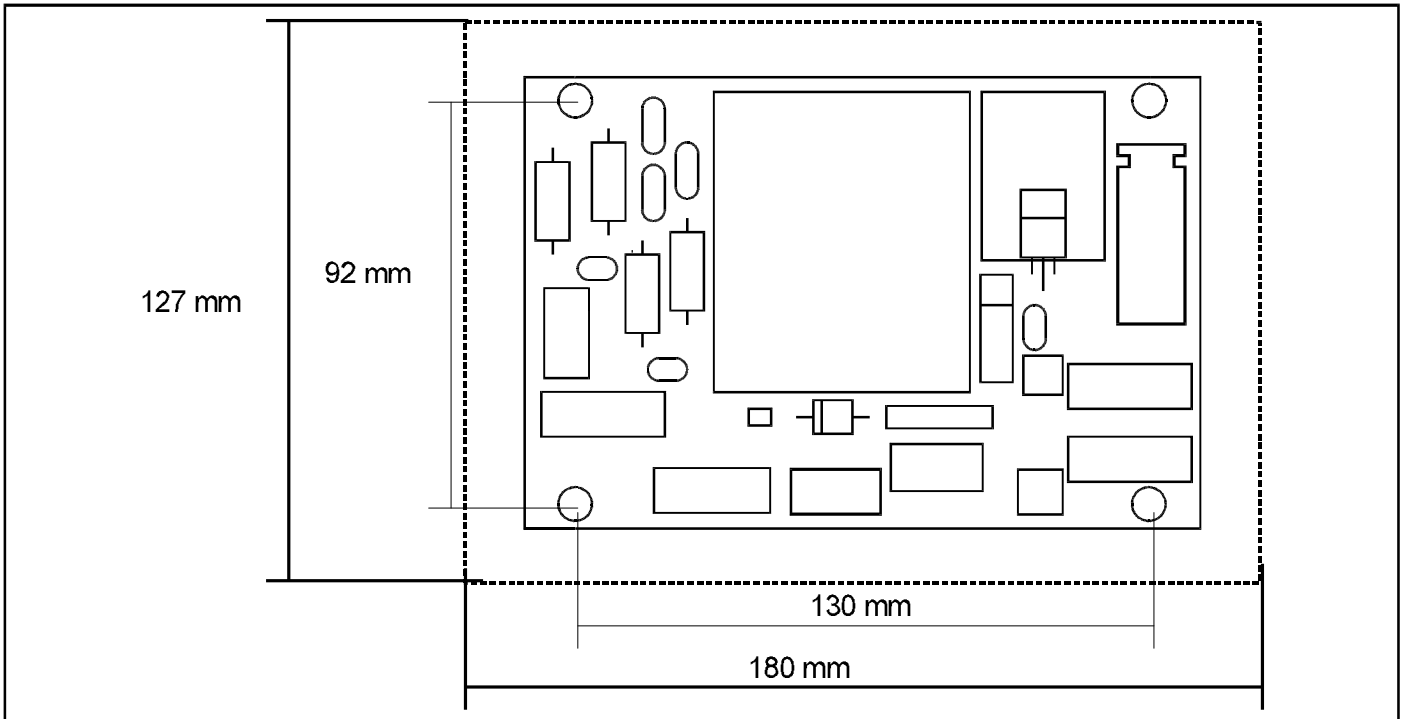
Warning : Spacings pillars **must** be used to ensure clearance.

Warning : Chassis plate must be earthed.

Warning : If mounting in 362 enclosure, Aux output must NOT be used except for SM107 siren.

Din Rail

To mount on standard symmetrical Din rail, use PSUDINKT mounting kit.



Diagnostic Indicators

Indicator	Colour	Normal Status	
12V present	Green	ON = 12V present	OFF = Mains fuse blown or deeply discharged battery
Alarm Status	Green	ON = status OK	OFF = system in alarm; no connection to Dicam unit; reverse connection
Dicam Fuse Failure	Red	OFF = no fuse failure detected	ON = Fuse failed; cable fault to Dicam unit; incorrect connection
Aux Fuse Failure	Red	OFF = no fuse failure detected	ON = Aux fuse failure; magnet/siren overload; cable fault to magnets/sirens