

POWER SUPPLY SOURCES

SERIES SSG

SSG 1,5 SSG2,5 & SSG5



Instruction Manual

July 12, 2006
SSG-0101



IMPORTANT SAFETY INSTRUCTIONS

Electric Safety Measures

- No one should work alone in potentially hazardous situations.
- A high short-circuit current from conductive materials can cause serious burns.
- A licensed electrician must be present for permanent installation of equipment with hardwiring.
- Check that the power supply cables, plugs and sockets are in good condition.
- Do not use any kind of metal component without first unplugging the equipment.

Batteries



Batteries should be recycled. Leave the battery in a suitable recycling bin or return it to the supplier in the original packaging of the new batteries. Consult the new battery instructions to obtain more information on this.

- Do not dispose of batteries by throwing them in fire, as they could explode.
- Do not open or cut batteries; they contain an electrolyte that is toxic and harmful to the skin and eyes.
- In order to prevent personal injury caused by hazardous currents, avoid wearing wristwatches and jewelry such as rings when replacing batteries. Use tools equipped with insulated handles.
- When replacing batteries, use the same number and type of batteries installed in the equipment.
- Consult your distributor to obtain information on battery equipment replacement and recycling batteries.

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1. INSTALLATION OF SERIES SSG POWER SUPPLY SOURCES

It is easy to install and start operating the Series **SSG** power supply source if you follow the procedures described in this manual.

Read the instructions in this manual carefully to prevent anomalies in the power supply source.

Checking the power supply source.

Before installing the Series **SSG** power supply source, you should make some checks.

The following procedure indicates what should be done in the event that the equipment has been damaged after leaving the factory, or if the user has any doubts about the quality of any ordered element.

1. If, after unpacking the Series SSG power supply source and making a visual inspection, you find that it has been damaged in any way, **YOU SHOULD NOT** carry on with installation, but rather you should contact the supplier for instructions on how to return and replace the product.

Likewise, if during installation the product does not respond properly, immediately contact your supplier.

2. It is important that you note the relevant details in your complaint, the date on which you received the product, the conditions of the package, and the name of the contact person of the supplier firm.

. When the product has to be returned to the supplier, it is recommended that the original packaging be used whenever possible.

WARNING!!!

TAKE THE NECESSARY PRECAUTIONS WHEN HANDLING EQUIPMENT SENSITIVE TO ELECTRICAL DISCHARGES

Checks Prior to Installation

Before selecting a place to install the power supply source, YOU SHOULD make sure that:

- a) The ambient temperature stays between:
-5 °C and 40 °C

- b) The relative humidity is less than:
93% (not condensed)

- c) YOU SHOULD NOT locate the equipment in a place exposed to high levels of humidity.

- d) YOU SHOULD NOT locate the equipment in places exposed to vibrations or blows.

- e) YOU SHOULD NOT locate the equipment in places where it is hard to access internal equipment and hardwiring connections.

Protection against transient interferences.

Just like all electronic equipment, this system may function irregularly when subject to electrical discharges. Although no system is completely immune from electrical discharges, a proper Earth connection will make the equipment less susceptible.

The use of exterior hardwiring without anything to anchor it is not recommended, as this would increase the system's susceptibility to electrical discharges.

The power supply system should be wall mounted so that the front panel with the LEDs is clearly visible. The height with respect to the floor should be chosen so that the front panel is at eye level (approximately 1.5 m).

Cleaning

The power supply source box should be periodically cleaned with a soft, moist rag that does not shed fluff.

Do not use solvents.

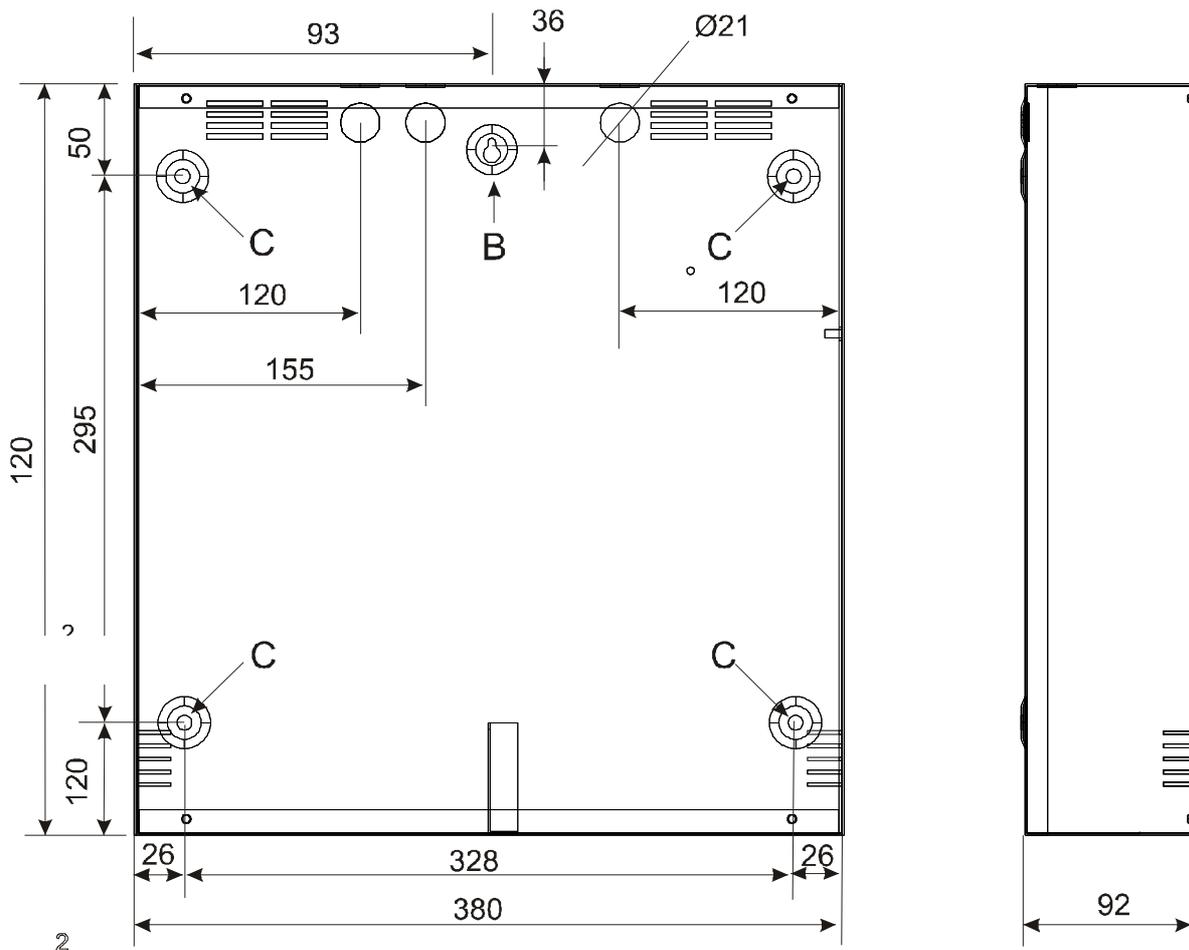
Mounting the Series SSG

When you have a suitable location for the Series **SSG** power supply source, follow the instructions indicated below:

1. Hold the rear box in the right position, supported on the wall, and mark the position of the screw holes, making sure that the center one is leveled.

The following illustration shows the box and the screw holes through the back.

Do not use the rear box as a guide when drilling the holes!



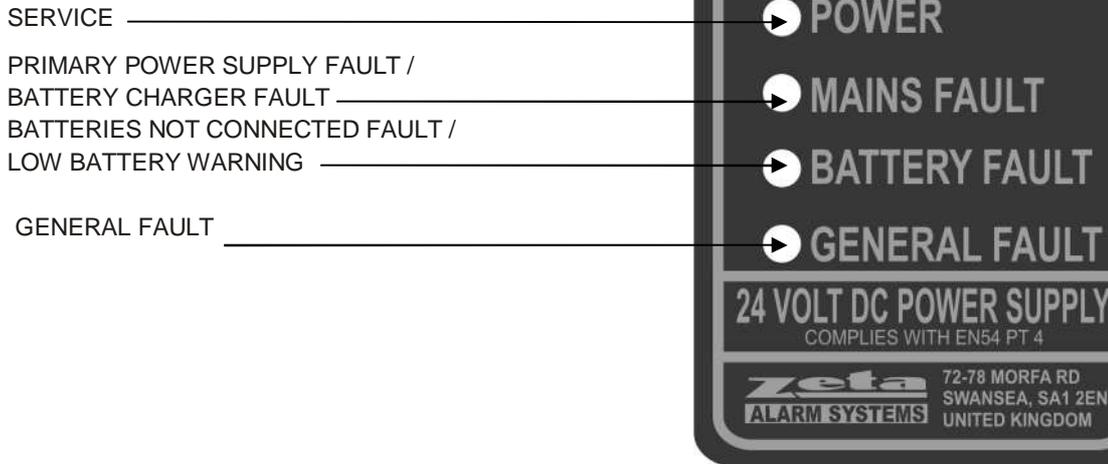
2. Drill the holes in the wall.

3. Prepare the necessary openings to feed through the cable.

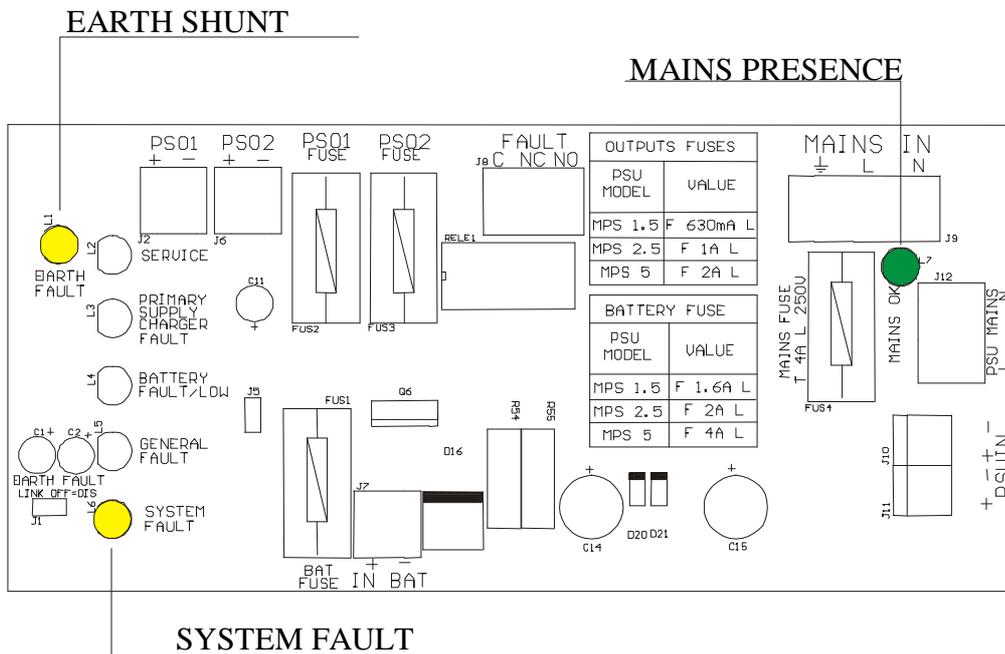
4. Screw the equipment's rear box to wall using the holes in the box and the proper screws.

2. LED DESCRIPTION AND OPERATION

FRONT PANEL:



INTERNAL LEADS:



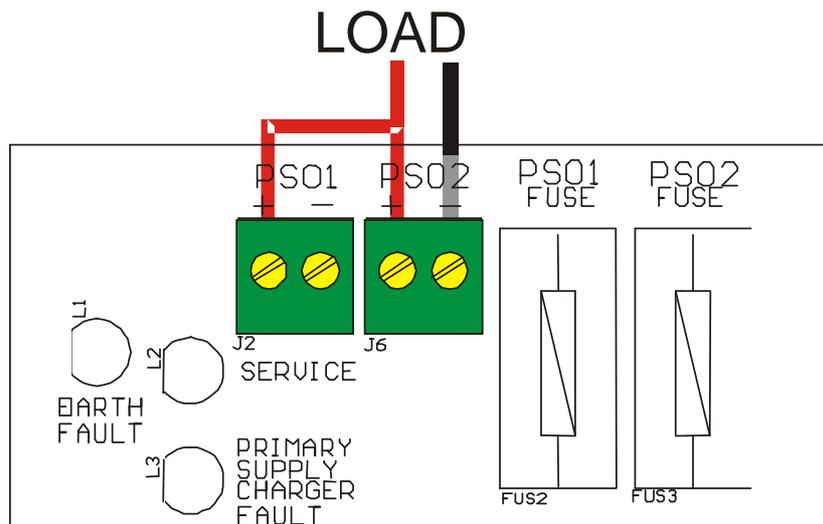
Features of the Power Supply Sources SSG series.

The SSG1,5 SSG2,5 and SSG5 power supply sources have been designed in accordance with standard EN54-4 to supply support power to fire control systems.

The Series **SSG** power supply source has been designed to operate with a universal input range of 90 to 264 VAC and frequencies between 47 and 440 Hz. There is no need to change the voltage; the source self-adjusts to the primary power supply conditions.

The two source models are similar; they are composed of a power supply module of 45W , 65W and 2 x 65W for supply sources SSG1,5 SSG2,5 and SSG5, respectively, and an electronic control module that provides all primary and secondary (batteries) power supply source supervision.

The power supply sources can supply up to 630 mA (SSG1,5), 1 A (SSG2,5) or 2 A (SSG5) of current in each of their two outputs PS01 and PS02. If the sum of currents is needed to supply a single load, the positive of both outputs should be connected in parallel:



The negative is common in the control board and thus does not need to be bridged.

Fault Relay

The power supply source is provided with a fault relay to indicate any anomaly to a remote control unit. On idle, this relay is energized to indicate normal operation; if any fault occurs, it is immediately triggered except in the event of a 220 Vac mains power supply loss, which is indicated after a delay of some 8 minutes in order to prevent failures due to intermittent blackouts.

Fault Relay Operation

Connector J4 (FAULT) with three terminals

Terminal 1 (Left) C common

Terminal 2 (Center) NO or normally open

Terminal 3 (Right) NC or normally closed

The fault relay functions as follows:

Stop control (no power) or indicating fault

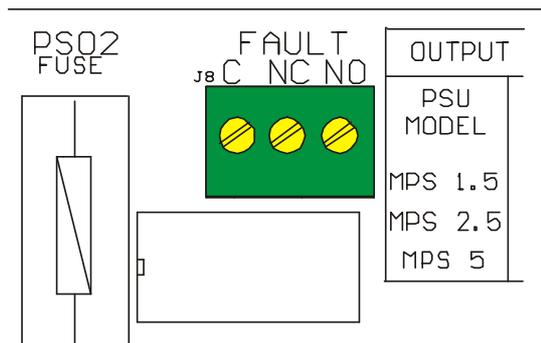
Between C and NC → continuity

Between C and NO → circuit open

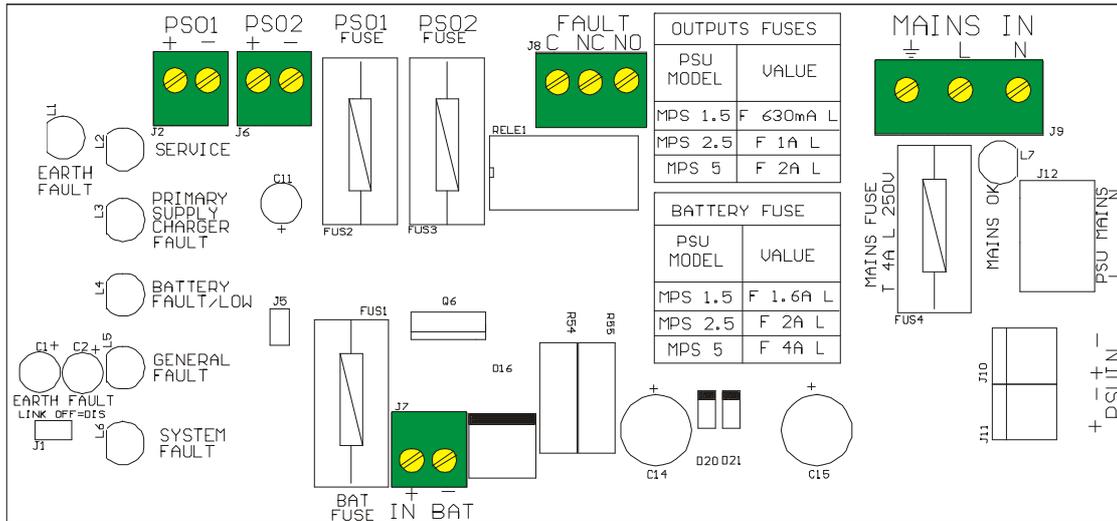
Control in fault-free operation, i.e. NORMAL STATE

Between C and NC → circuit open

Between C and NO → continuity



Control Unit Connectors:



There are four connectors at the top of the Control Unit:

OUTPUT 1:

PSO1 (+) Output 1 positive
 PSO1 (-) Output 1 negative

OUTPUT 2 :

PSO2 (+) Output 2 positive
 PSO2 (-) Output 2 negative

FAULT RELAY:

FAULT (C) Fault relay common
 FAULT (NC) Contact normally closed
 FAULT (NO) Contact normally open

MAINS IN:

MAINS IN (⏏) Equipment earth
 MAINS IN (L) Input phase
 MAINS IN (N) Input neutral

There is 1 connector at the bottom of the control unit:

BATTERY IN:

IN BAT (+) Battery positive
 IN BAT (-) Battery negative

LED Description:

EXTERNAL LEDES:



POWER SUPPLY LED

Green LED that turns on when the control unit is providing service through either of its two outputs.



PRIMARY POWER SUPPLY FAULT/ BATTERY CHARGER FAULT LED

Yellow LED:

It turns on without blinking if no power is received from the converter, either because of a lack of mains in or else converter failure.

It blinks when the control detects a malfunction of the charger block in the control unit.



BATTERIES NOT CONNECTED FAULT/LOW BATTERY WARNING LED.

Yellow LED:

It turns on without blinking when the batteries are disconnected, either because of a connection fault or else because they are at low discharge level and the control disconnects them for protection.

It blinks when the batteries are at the last level of discharge before disconnection



GENERAL FAULT LED

Yellow LED that turns on when there is a fault in the power supply source. If this indication is triggered, the fault relay will also be triggered.

INTERNAL LEDES:

EARTH SHUNT LED

This lights up when the equipment has detected an earth shunt, depending on the position of the bridge in J1. If the bridge is in place, earth shunts are supervised.

Solution for the earth shunt => Check that there is no shunt between Earth and outputs 1 and 2 (+) and (-)



SYSTEM FAULT LED

The microprocessor of the power supply source is not functioning properly.



MAINS OK LED

This lights up if mains power reaches the control board.



3. SPECIFICATIONS

Dimensions:	380 mm wide x 410 mm high x 97 mm deep.
Source Power:	130 W (SSG5) 65 W (SSG2,5) 45 W (SSG1,5)
Input voltage:	Universal 90-264 Vac 47-440Hz
Maximum absorbed current:	1.6 Amp.
Efficiency:	80%.
Output voltage:	27 Vdc protected against over-voltages and short-circuits.
Power supply outputs:	2.
Connection terminals:	Terminal for 2.5 mm cable.
Maximum current per output:	630mA (SSG 1,5) 1 A (SSG 2,5) 2 A (SSG 5)
Battery charge current:	300mA (7 Amp/hour) / 600mA (17 Amp/hour) Charges batteries to 80% in less than 24 hours and to 100% in less than 48 hours.
Faulty Relay:	Contacts C, NO, NC maximum 1 Amp/24Vdc. Energized in normal state.
State indication LEDs:	4 external 5 mm + 3 internal 5 mm.
Space for batteries:	2 x 17 Amp/hour.
Tube inlets:	Ø 21 mm <input type="checkbox"/> at the top. <input type="checkbox"/> at the top rear.
Earth Shunt Supervision	2 levels (intermediate, without supervision)
Conforms with safety standards:	Designed as per EN54-4; UL1950; TUV EN60950 and Standards EMC, EN55022, IEC1000-4-2,3,4,5 IEC1000-3-2.