



GENERAL POWER™  
THE GENERATOR COMPANY

TECHNICAL DEPARTMENT.

## TROUBLESHOOTING VSS-DIGITAL AVR-DSE-7320MKII

REV OCT 2020.

**SUBJECT: AVR FAULT WITH POSITION LED OFF**

**Applying for: GP-JXXX-X0/GPR-JXXX-X0/ GP-PXXX-X0/ GPR-JXXX-X0.**

COMPONENTS	MODELS
VSS	SALZER: S6XX-SE5749-Y-YY-(XX)
AVR	DSE A 109
CONTROL UNIT	DSE 7320 MKII

TOOLS NEEDED
Steel Insulated Screwdriver for terminals.
Continuity Tester
General Purpose Adjustable Wrench
General Purpose Lanterns

## Warning and safety.

### Safety during operation

All the operation on Genset may require work with dangerous currents and voltages. The installation must only be carried out by authorized personnel who understand the risks involved in working with electrical equipment.



#### **DANGER!**

Hazardous live currents and voltages. Do not touch any terminals, especially the breakers, power cables, measurement inputs and/or the relay terminals. Touching the terminals and/or bare connections could lead to injury or death.



#### **DANGER!**

Unintended breaker closing can cause deadly and/or dangerous situations.



#### **DANGER!**

Unintended engine starts can cause deadly and/or dangerous situations.

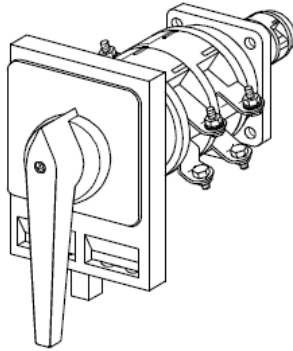
## General Description:

VSS: VOLTAGE SELECTOR SWICTH

AVR: DIGITAL AUTOMATIC VOLTAGE REGULATOR (do not need voltage trim, CANBUS with DSE)

CONTROL UNIT: GENERATOR CONTROL DIGITAL UNIT.

VSS SALZER:



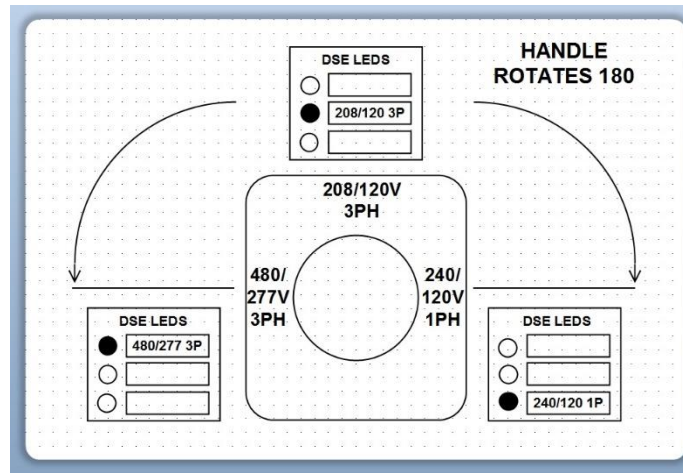
AVR DSE A 109



DSE 7320 MKII



VSS PROCEDURE LABEL:



### DSE LED POSITION AS PER VSS SELECTION:

480/277 OR XXX/XXX. CONFIG SELECTION 1. (LED 1)



208/120 OR XXX/XXX. CONFIG SELECTION 2. (LED 2)

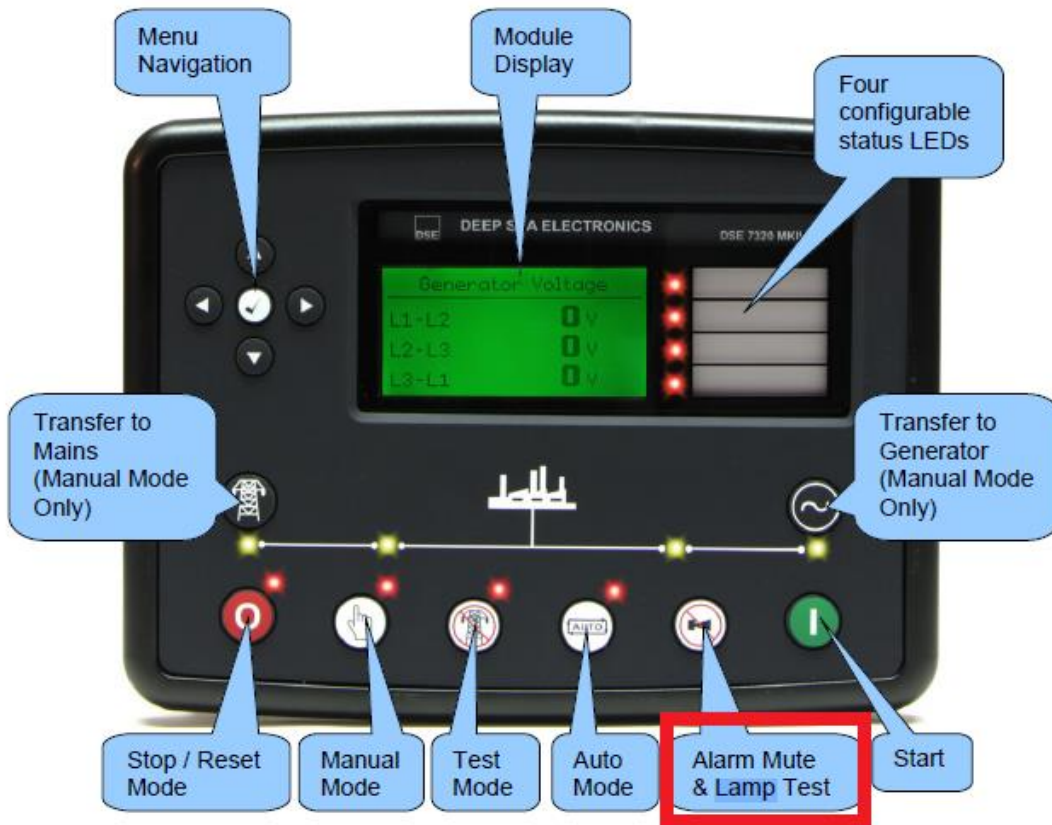


240/120 OR XXX/XXX. CONFIG SELECTION 3. (LED 3)



**BEFORE ALL ELSE:**

Check all the LAMP at DSE,



Use this button for LAMP TEST



#### Alarm Mute / Lamp Test

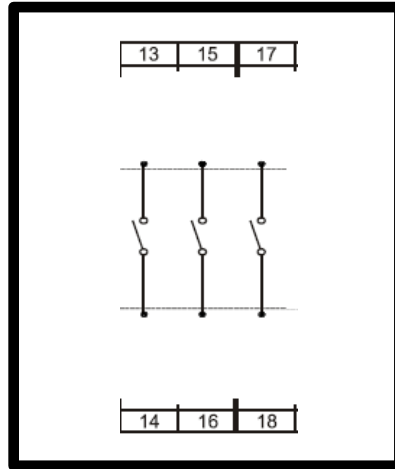
This button silences the audible alarm in the controller, de-activates the *Audible Alarm* output (if configured) and illuminates all of the LEDs on the module's fascia as a lamp test function.

**IF all Led are illuminates, please keep going with this procedure if NOT you need to replace the DSE Unit.**

## CONNECTIONS:

VSS:

### AUXILIARY CONTACTS OF VSS FOR VOLTAGE DSE CONFIGURATION



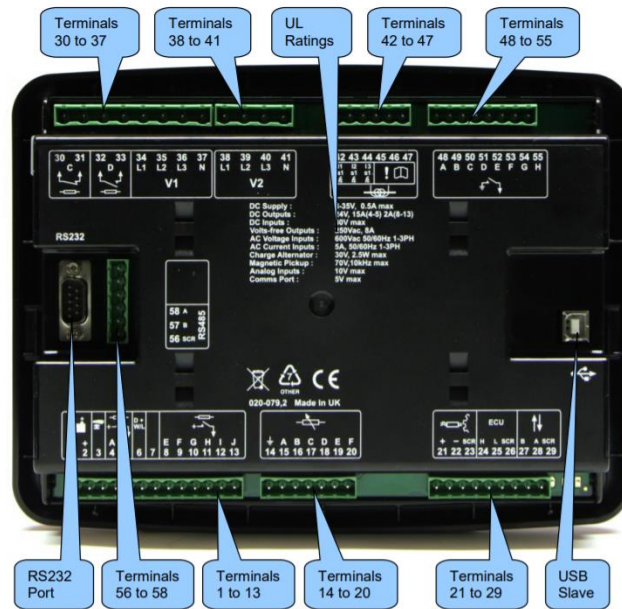
TERMINALS	DESCRIPTION	CONNECTED TO
13	CONFIGURATION NUMBER 1	NEGATIVE Vcc
14	CONFIGURATION NUMBER 1	TO DSE
15	CONFIGURATION NUMBER 2	NEGATIVE Vcc
16	CONFIGURATION NUMBER 2	TO DSE
17	CONFIGURATION NUMBER 3	NEGATIVE Vcc
18	CONFIGURATION NUMBER 3	TO DSE

PICTURE OF THE VSS AUXILIARY TERMINALS, INSIDE THE ALTERNATOR:



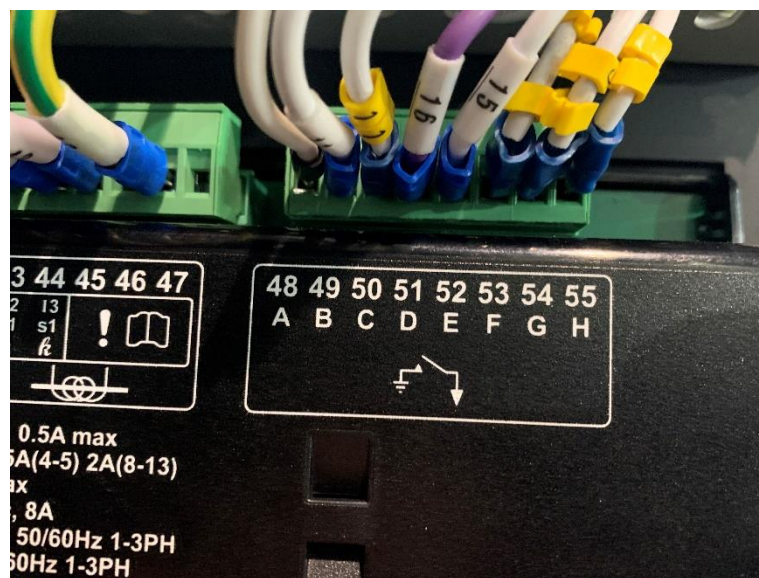


# DSE 7320 MKII TERMINALS



TERMINALS	DESCRIPTION
53	CONFIGURATION NUMBER 1 WIRE
54	CONFIGURATION NUMBER 3 WIRE
55	CONFIGURATION NUMBER 2 WIRE

PICTURE INSIDE THE CONTROL CABINET:





## INTERCONNECTION VSS AUXILIARS TERMINALS TO DSE 7320 MKII TERMINALS

CONNECTION FROM VSS TO DSE	
Where to Find it: INSIDE ALTERNATOR (VSS)	Where to Find it: INSIDE CONTROL CABINET (DSE)
<b>AUX. TERMINAL 14 &gt;</b>	<b>&lt; TERMINAL 53</b>
<b>AUX. TERMINAL 16 &gt;</b>	<b>&lt; TERMINAL 55</b>
<b>AUX. TERMINAL 18 &gt;</b>	<b>&lt; TERMINAL 54</b>

### HOW IT WORKS

CONFIGURATION ACTIVE	VSS AUX. TERMINALS	DSE TERMINALS	DSE LED STATUS
CONFIGURATION N.1	TERMINAL 14 TO NEGATIVE	TERMINAL 53	1 ON, 2 & 3 OFF
CONFIGURATION N.2	TERMINAL 16 TO NEGATIVE	TERMINAL 55	2 ON, 1 & 3 OFF
CONFIGURATION N.3	TERMINAL 18 TO NEGATIVE	TERMINAL 54	3 ON 1 & 2 OFF

### HOW TO CHECK:

Changing at VSS the different Voltage configurations and checking continuity with terminals with negative, in each mode.

### CONDITIONS FOR TESTING:

- With all tolls required
- With battery switch connected, Power Control Cabinet Switch in OFF position.
- Emergency Stop Active
- Alternator without cover part allowing the access to the VSS.
- Control Cabinet Door Open.

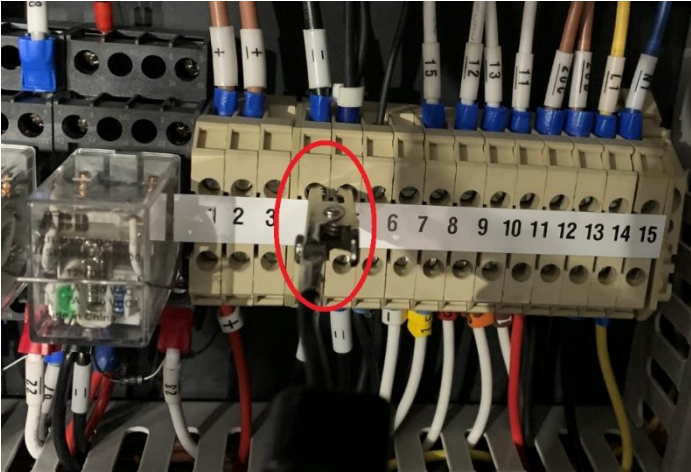
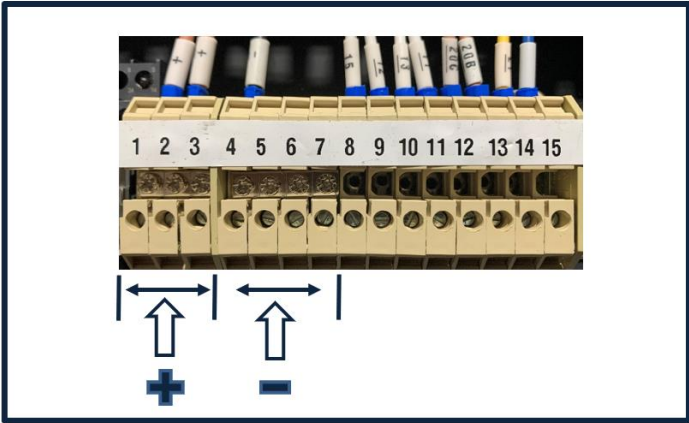
### Checking Configuration Number 1:

NO LED ON (NUMBER 1, NUMBER TWO AND THREE)

\*\*\*\*\*AVR FAULT ALARM\*\*\*\*\*

1. Checking at the alternator on the VSS if the terminal 14 is NEGATIVE > Continuity with Negative.

2. If STEP 1 is OK, check CONTUNUITY at the DSE terminals with negative terminals. (Terminals 4-7, Inside control Cabinet.





3. Keep checking all the entire wire from to VSS to respective DSE terminal.
4. In case of NO CONTINUITY replace the specific wire from VSS to DSE terminal.

**Repeat this procedure to check the Configuration number two and number three in case if needed.**

CONFIGURATION ACTIVE	VSS AUX. TERMINALS	DSE TERMINALS	DSE LED STATUS
CONFIGURATION N.1	T. 14 TO NEGATIVE	T. 53 TO NEGATIVE	1 ON
CONFIGURATION N.2	T. 16 TO NEGATIVE	T. 55 TO NEGATIVE	2 ON
CONFIGURATION N.3	T. 18 TO NEGATIVE	T. 54 TO NEGATIVE	3 ON

**At this point if the troubleshooting can identify your problem you can try to contact the General Power LTD technical support for assistant.**