

# TROUBLESHOOTING

## KF3

### Technology HF

Rev.3 – 2018. Mar

#### Display messages:

**AC INPUT FAIL**

**POWER STAGE  
ALERT!**

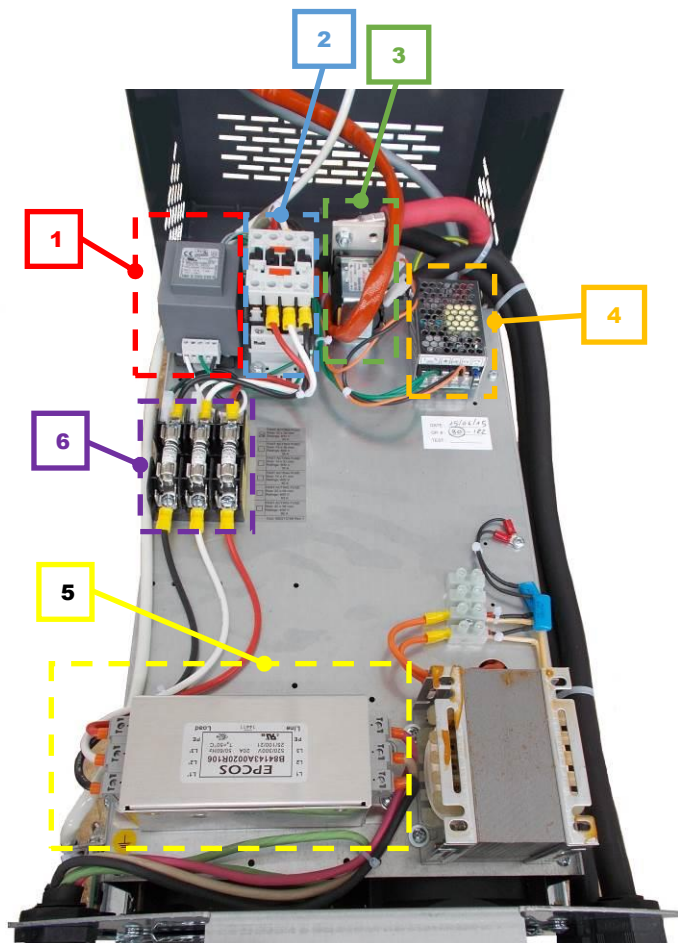
**STANDBY CHARGE  
INTERNAL CONTROL**

**EMERGENCY STOP  
SEE MANUAL**

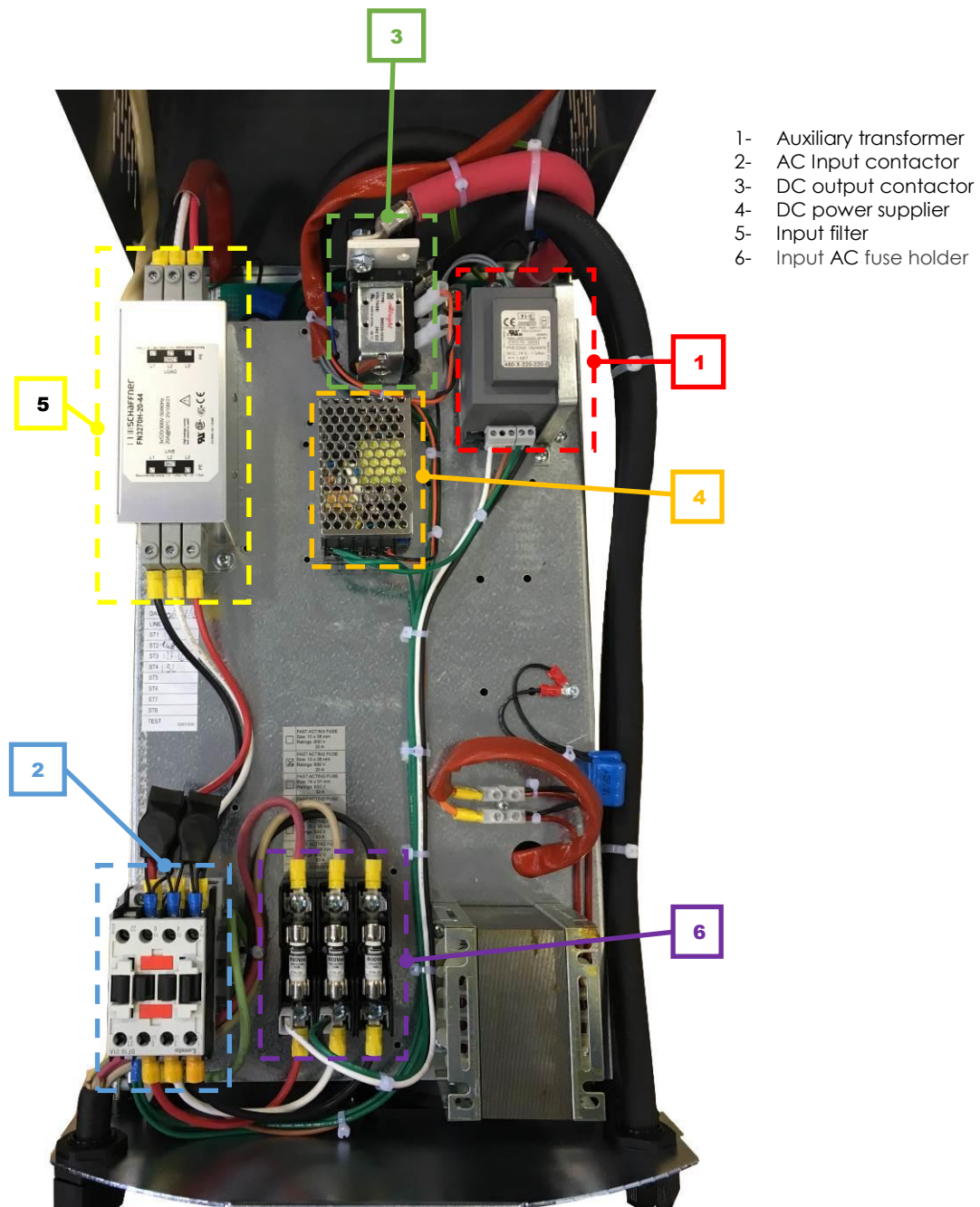
#### Charger models:

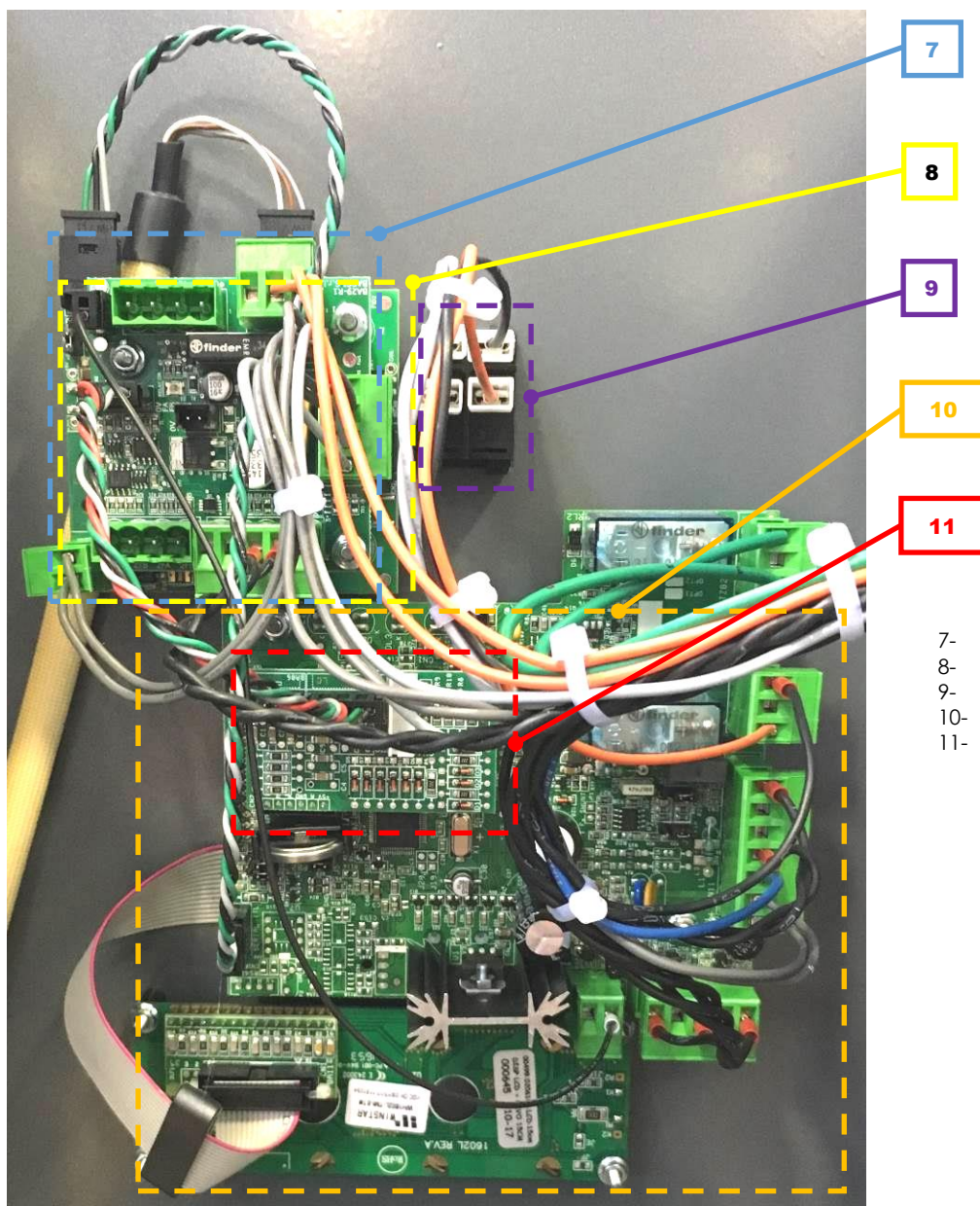
**KF3048150T**

# A. Main Part List



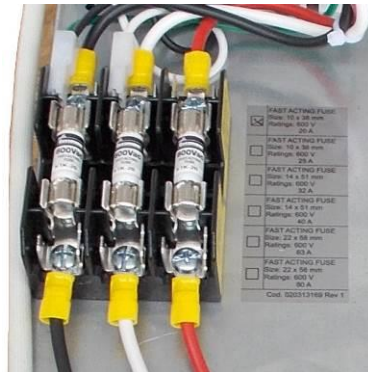
- 1- Auxiliary transformer
- 2- AC Input contactor
- 3- DC output contactor
- 4- DC power supplier
- 5- Input filter
- 6- Input AC fuse holder





- 7- BA29 (the board on the top)
- 8- BA19 (the board on the bottom)
- 9- Main switch
- 10- BA03 + Display Board
- 11- BA06

- B. Unplug the battery from the charger;
- C. Check if the line is the one that is supposed to have and if all three phases are present. Be sure none of them is missing;
- D. Check the electric continuity of each fuses:



- E. Check the voltages on the auxiliary transformer:



ON THE TOP SIDE (OUTPUT):  
Between 0 and 14, you have to read ~16 Vac

ON THE BUTTOM SIDE (INPUT):  
Between 0 and 480, you have to read ~480 Vac  
Between 0 and 220, you have to read ~220 Vac

If the inputs are good but no output → replace auxiliary transformer (**BASSI PN: 0205556** - TRAFIO AUX T6 20VA 220/480 14V/1,5A)

If input and output is good, proceed to next step "F"



- F. Login into the manufacturer mode:

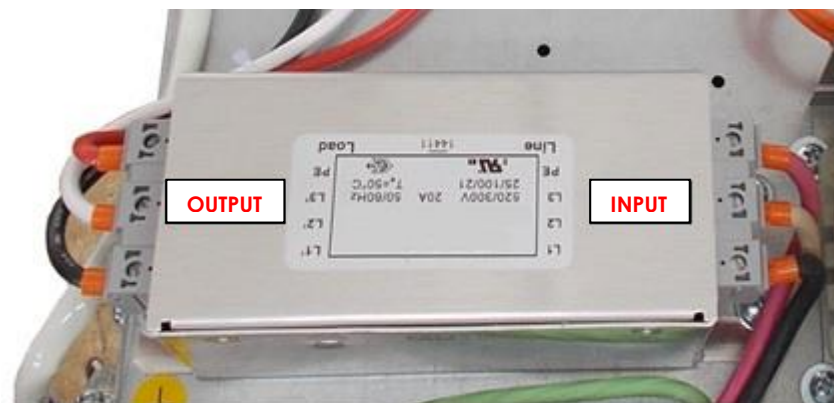
With battery unplugged press and hold the "PROGRAMMING" button. After few seconds, the display prompts for a password.

Press → STOP STOP STOP PROGRAMMING PRORAMMNG.

EDIT PASSWORD  
\*\*\*\*\*

Once logged into the manufacturer mode, the system engages all fans and contactors automatically.

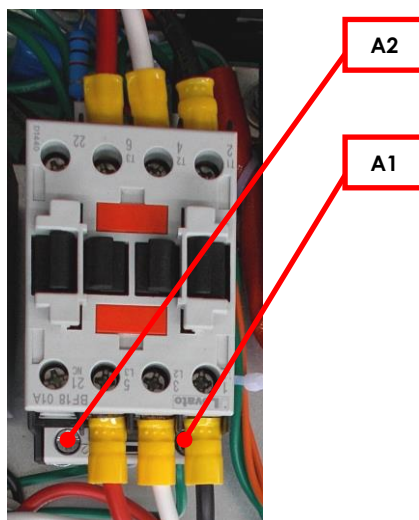
G. Check the filter input and output:



$$\left. \begin{array}{l} \text{Vac L1 L2} = \text{L1}' \text{ L2}' \\ \text{Vac L1 L3} = \text{L1}' \text{ L3}' \\ \text{Vac L2 L3} = \text{L2}' \text{ L3}' \end{array} \right\} \begin{array}{l} \text{If the Input and Output readings are not equal then, replace the filter.} \\ \text{(The charger will operate even with the filter bypassed)} \\ \text{If the Input and Output readings are equal, proceed to step "H" below.} \end{array}$$

H. Check:

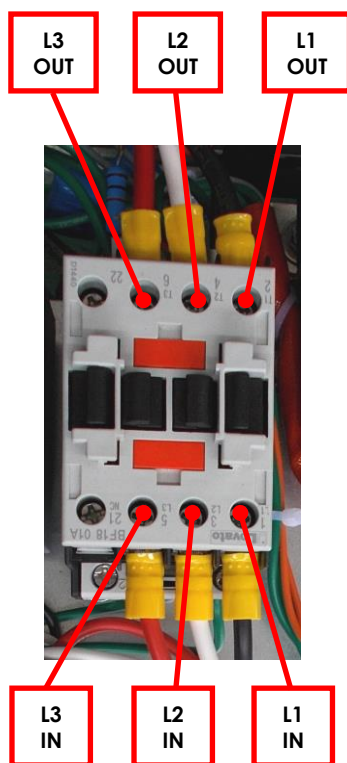
1. Input contactor must be engage. If not, check the AC voltage on the coil between A1 and A2 (must read ~230Vac).



If the contactor remains open, even if 230Vac are read on the coil, replace the contactor (**BASSI PN: 0202961L** - LINE CONTACTOR. BF18 00 A230 230Vac).

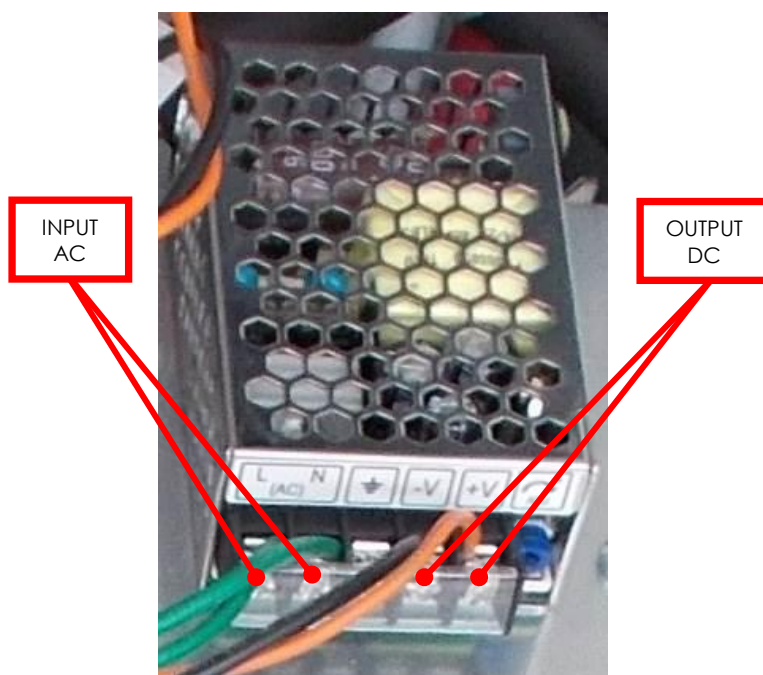
2. All the charger cooling fans are located at the bottom of the charger (on these models) and must be running freely.

3. Check the contactor input and output.



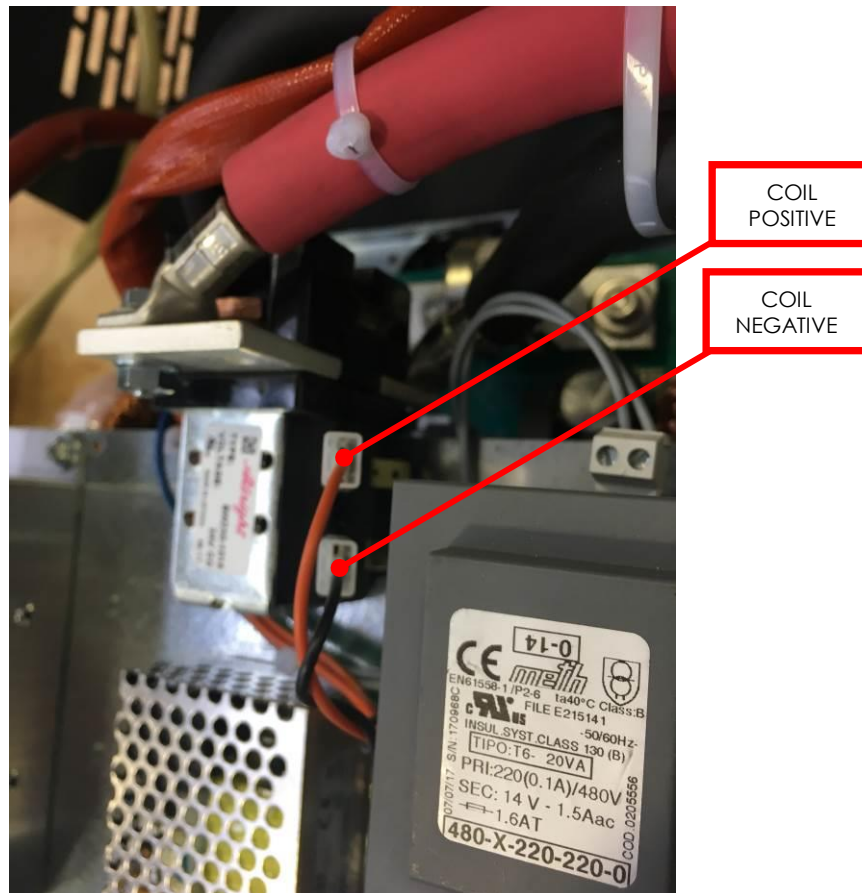
$$\left. \begin{array}{l} \text{Vac L1 IN L2 IN} = \text{L1 OUT L2 OUT} \\ \text{Vac L1 IN L3 IN} = \text{L1 OUT L3 OUT} \\ \text{Vac L2 IN L3 IN} = \text{L2 OUT L3 OUT} \end{array} \right\} \text{ If the Input and Output readings are not equal, but the readings on the coil above measured } \sim 230\text{Vac, then replace the contactor (BASSI PN: 0202961L - LINE CONTACTOR. BF18 00 A230 230Vac).}$$

4. Check input and output of the DC power supply (input must be  $\sim 240\text{Vac}$  – output must be  $\sim 24\text{Vdc}$ )

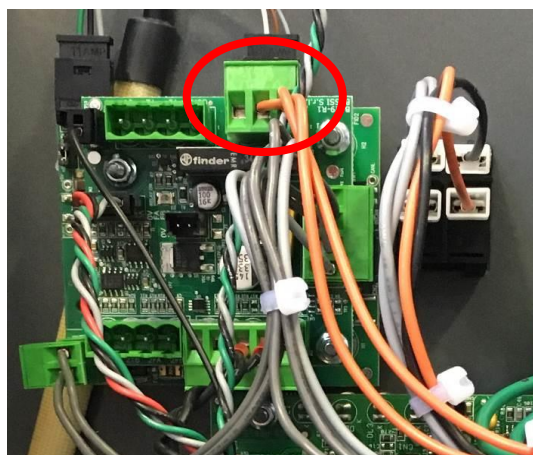


If the input AC is good but there is no DC output, replace the power supply (**BASSI PN: 030003** – 24Vdc POWER SUPPLIER)

5. Output contactor must be engaged. If not, check the DC voltage on the coil (must read ~24Vdc).

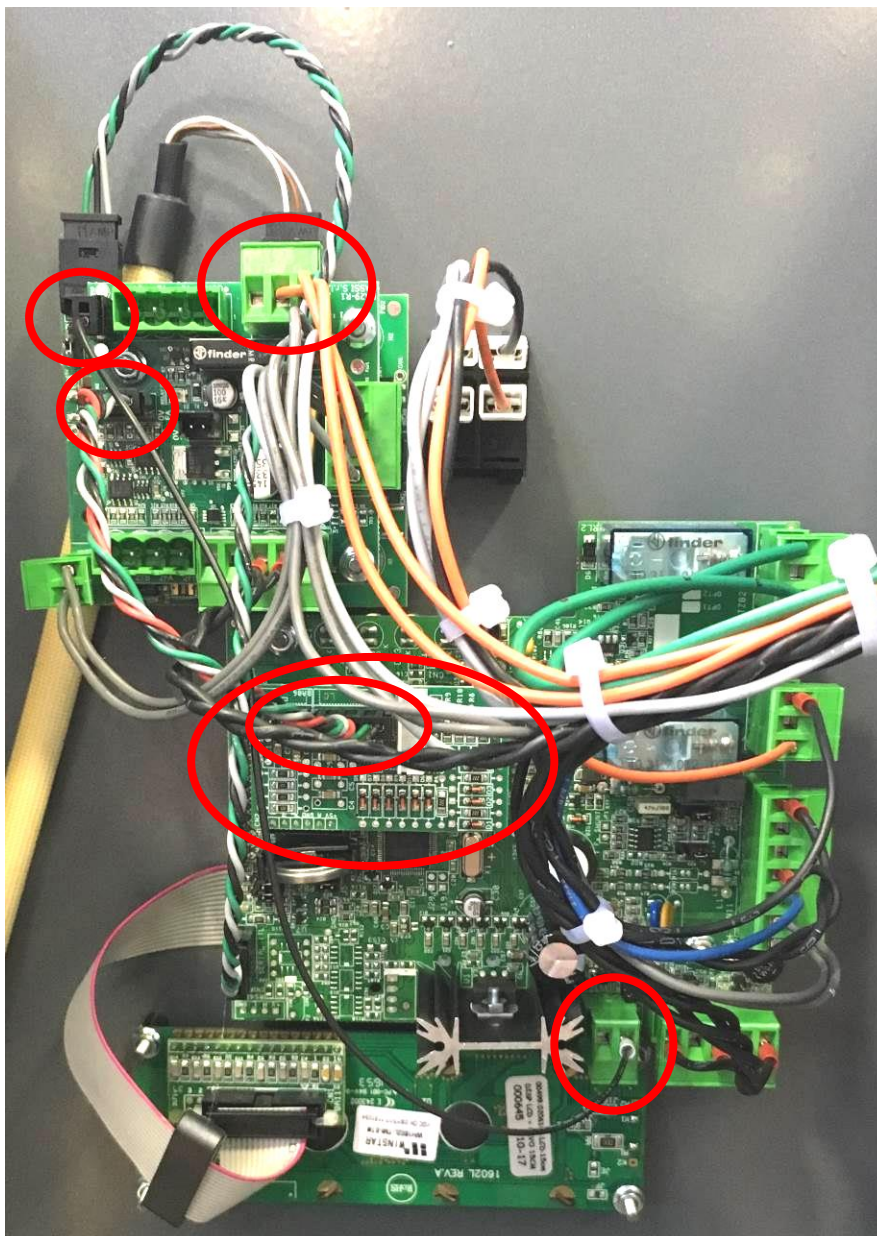


- If the contactor remains open, even if 24Vdc are read on the coil, replace the contactor (**V290203241** - SW 250A – 24VCC (0203241)
- If the contactor remains open and 24Vdc are not read on the coil, switch off the charger and check if BA06 and all wiring are connected properly.
- If the BA06 and all connectors are properly insert, proceed to find the 3 pins green connector on the BA29 board ;

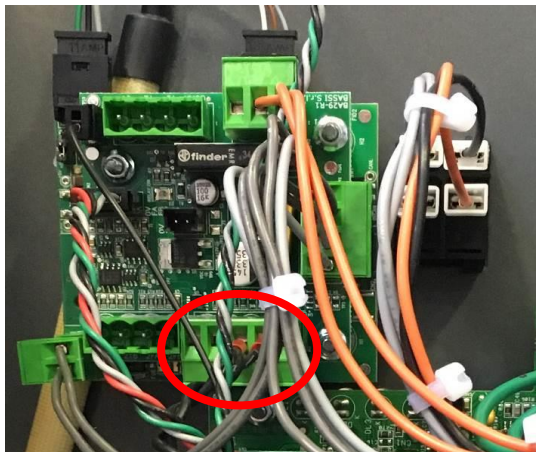


- Connect together these two orange wires and repeat the test from step 4.

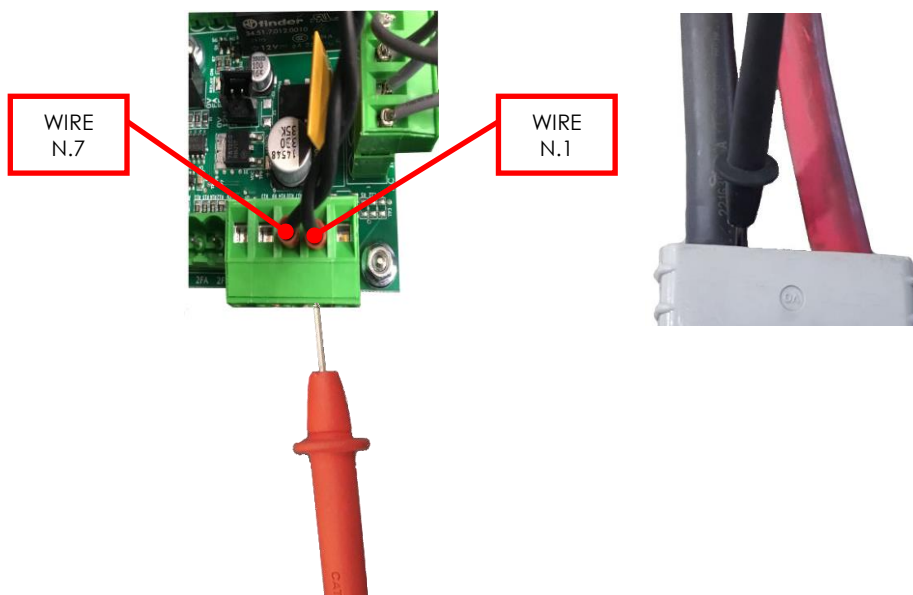
- If the contactor works properly check if the green light is been switched on, on the BA29:
  - If it is ON → replace the BA29 board (**BASSI PN: 020559864** - CONTROL BOARD BA29 AUX POWERSTAGE KF1-KF3 (rev2))
  - If it is OFF and all wiring and connectors are properly insert in their location (as picture below)→ replace the BA06 (**BASSI PN: 0206106** - BA06 PICCBACK BOARD AUX SIGNAL (ON BA03)) and the BA03 (**BASSI PN: ASK DIRECTLY TO BASSI SENDING THE UNIT SERIAL NUMBER**)



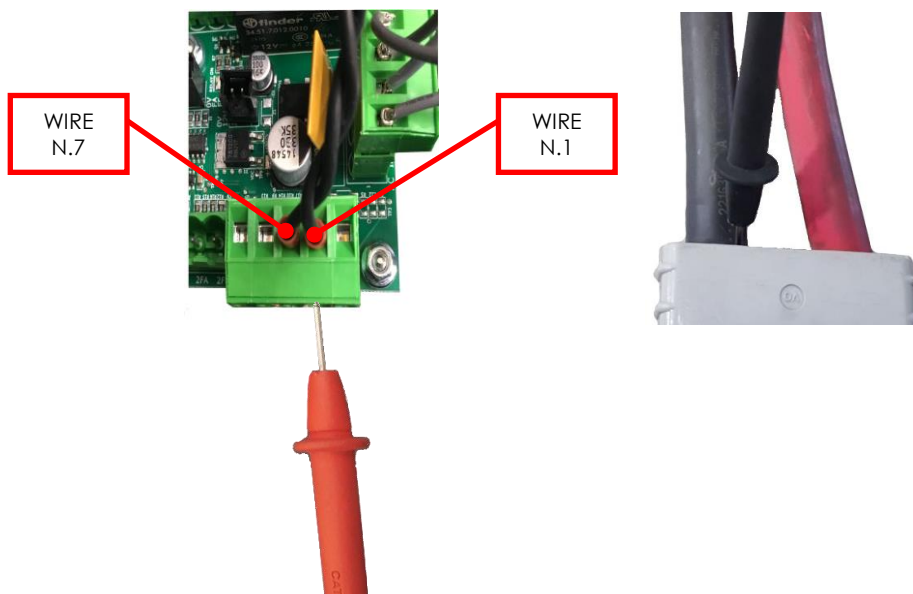
- I. If all previous checks were good but the charger doesn't work properly, leaving the charger on and stay logged into the manufacturer mode:
  1. Find the 5 pins green connector on the BA29 board;



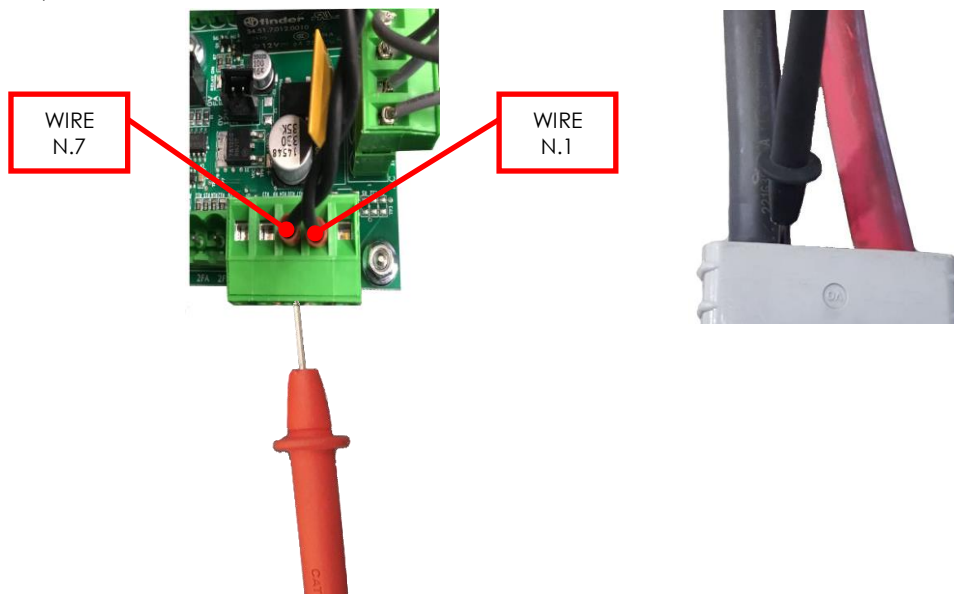
2. Check the voltage between wire number 1 and the negative output cable. Readings should be 0Vdc or 5Vdc;



3. Check the voltage between wire number 1 and the negative output cable. Readings should be 0Vdc or 5Vdc;



4. Check the voltage between wire number 7 and the negative output cable. Readings should be 0Vdc or 5Vdc;



5. Look the table below for results:

| WIRE N.1 | WIRE N.2 | RESULT                   | EFFECT                            |
|----------|----------|--------------------------|-----------------------------------|
| 0 Vdc    | 0 Vdc    | No power stage errors    | Proceed to step I-5               |
| 0 Vdc    | 5 Vdc    | Power stage error signal | Charger needs to be replaced      |
| 5 Vdc    | 0 Vdc    | Fan error signal         | Charger needs to be replaced      |
| 5 Vdc    | 5 Vdc    | One phase is missing     | Check charger input point D, G, H |

6. Switch off and on again the charger. Plug the battery in. The charge cycle should start.

