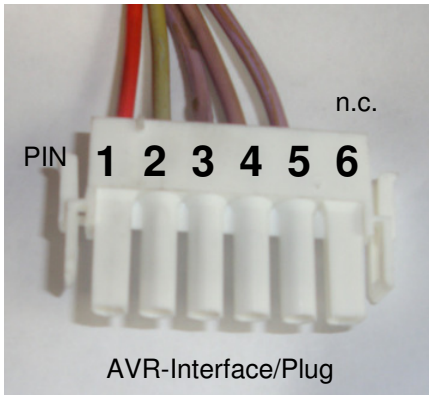
safety instruction - beware:

- **Validity of this manual: only if a electronic AVR LCAR4x is used in combination with generator ID: 4xxx; 7xxx; 8xxx; 97xx;**
- **Before checking the machine it is required to disconnect all electronic parts and loads!**
- **Generator needs to be stopped (hold, no rpm) and secured against resetting and starting spinning up!**
- **Check before if there is no voltage at each interface!**
- **Ensure that the voltage regulator (AVR) of the generator is disconnected!**

Checking AVR-Interface to the generator:



AVR-Interface/Plug

1. exciter resistance of the exciter winding
At cold or warm state of the generator the exciter resistance between the red (PIN1) and gray (PIN2) wire needs to be measured with a common multimeter in mode: „resistance/ohm“.
The value should be in the range of:

between red (1) and gray (2):	**23 to 34 Ohm (= OK)**

2. winding resistance of AVR-Interface (supply wires)
At cold or warm state of the generator the exciter resistance between the violet or black (PIN3 / PIN4 / PIN5) wires against each other needs to be measured with a common multimeter in mode: „resistance/ohm“.
The value should be in the range of:

between wire PIN (3) and (4):	**0 bis 4 Ohm (= OK)**
between wire PIN (4) and (5):	**0 bis 4 Ohm (= OK)**
between wire PIN (5) and (3):	**0 bis 4 Ohm (= OK)**

3. optional measure of insulation resistance
To get a clearly verification if the generator is OK an insulation resistance could be measured by a megaohmmeter with test voltage of 500 VoltDC. Therefore each wire at the AVR-Interface needs to be measured against the generator case (PE or Ground) of the machine.

The insulation resistance at a test voltage of 500V should be:

between red (1) and PE/case	**>10 MegaOhm (= OK)**
between gray (2) and PE/case	**>10 MegaOhm (= OK)**
between violet/black (3) and PE/case	**>5 MegaOhm (= OK)**
between violet/black (4) and PE/case	**>5 MegaOhm (= OK)**
between violet/black (5) and PE/case	**>5 MegaOhm (= OK)**

If the measured values differ from the desired values (OK) the manufacturer recommends dismounting the machine for an extended check or repair. Otherwise operating the machine with values out of the common range could cause a damage of AVR and/or generator.