

Fault Finding in Smoke Detection System SDS-48:

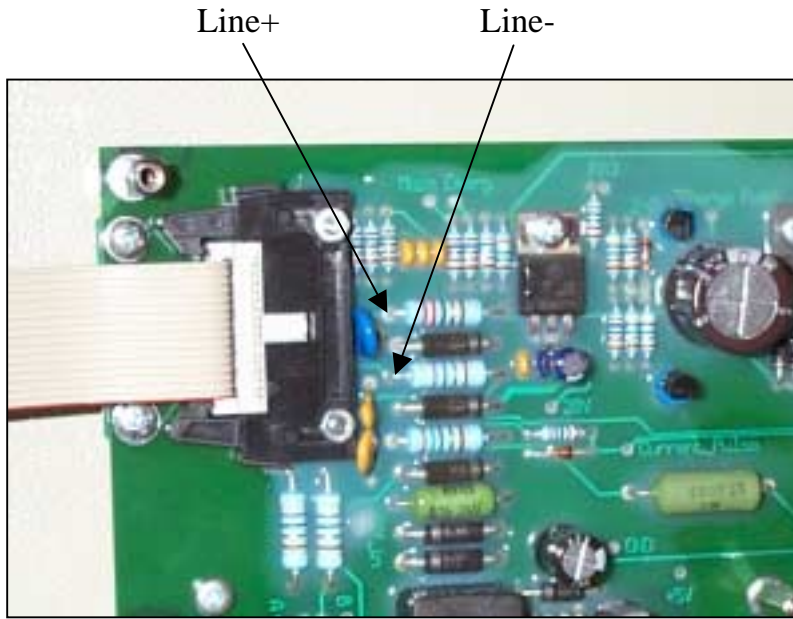
## **Faults in the Smoke Detector Line Driver**

If the smoke detection panel indicates all detection lines as faulty (see below), a fault in the line driver could be the reason.

Display example: **FAULT: Smoke Detector Line 1-2-3-4-...**

The smoke detector line driver is mounted on the control module in the smoke detection panel. The output of the line driver will be led through the flat cable to the power supply module, from the power supply module terminals 40/41 to the galvanic isolators and from the galvanic isolators through the smoke detector loops to the smoke detectors. To locate the defective part, please proceed as follows:

1. Measure the voltage at the terminals 40/41 on the power supply module. The voltage should be between 18V and 22V. The value is flickering a little bit due to voltage pulses which are superimposed.
2. If the voltage is correct, measure the voltage at the output terminals 1/2 resp. 4/5 of the galvanic isolators. The voltage should be approx. 2V less than measured at the terminals 40/41 at the power supply module. If the voltage is below this value, disconnect the wires of the smoke detector loop(s) at the terminals 1/2 resp. 4/5 and measure again. If the voltage is still below the required value, the galvanic isolator appears to be defective and should be exchanged. If however the voltage is correct now, the reason for the fault (e.g. short circuit) appears to be in the connected smoke detector loop(s).
3. If the voltage at terminals 40/41 is below 18V, disconnect the wires which connect the terminals 40/41 with the galvanic isolator(s). If the voltage at terminals 40/41 is now between 18V and 22V, the galvanic isolator appears to be defective and should be exchanged.
4. If the voltage at terminals 40/41 is still below 18V, remove the cover plate of the control module at the rear side of the door and measure the driver voltage at the test points *Line+* and *Line-* at the wires of the resistors as shown below. If the voltage at the test points is between 18V and 22V, the power supply module or the flat cable between control panel and power supply module appear to be defective and both should be exchanged.
5. If the voltage at the test points *Line+* and *Line-* is still below 18V, the control module appears to be defective and should be exchanged.



Test points for line driver voltage on control module BG02.500