

TROUBLESHOOTING MCS®



Maximum Overtemperature

Description

- The current temperature is above the maximum temperature of all zones (system parameter HH-Alarm).
- All outputs are permanently switched off. The controller can only be operated with restart or error acknowledgment using the enter key.

Causes

- Setpoint too close to the HH-Alarm.
- Triac defective. This has the consequence that the hotrunner is heated without output rate.



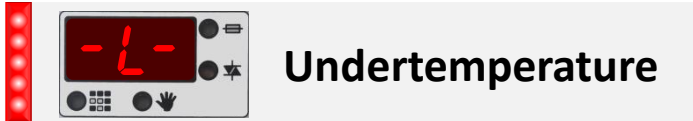
Overtemperature

Description

- The current temperature is above the temperature limit which is set in zone parameter 2 (H-Alarm).
- All outputs are switched off until the actual value drops below the H-Alarm.

Causes

- H-Alarm (zone parameter 2) too close to the setpoint
- Triac defective. This has the consequence that the hotrunner is heated without output rate.



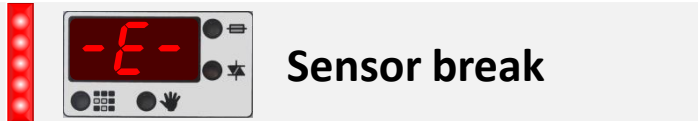
Undertemperature

Description

- The current temperature is below the temperature limit which is set in zone parameter 1 (L-Alarm).

Causes

- Alarm limit (zone parameter 1) is too close to the setpoint
- Heating might not be sufficient
- Heating could be defective
- Sensor is not in contact with this zone
- Sensor at reverse polarity



Sensor break

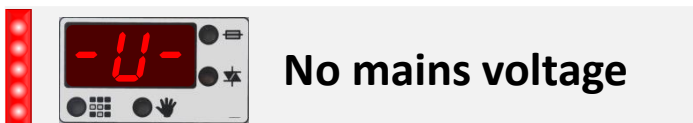
Description

- This or other zones have a sensor break

Causes

- No sensor is connected
- Sensor cable defective
- Sensor connectors defective
- NSS fuses are defective

Note: With the system parameter „AUTO POWER“ the behavior at sensor break can be set.



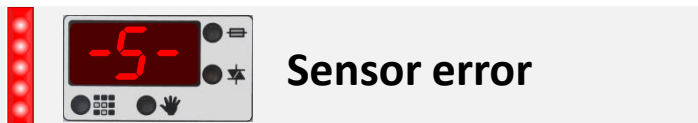
No mains voltage

Description

- For these zones no mains voltage is detected. See parameter L1-L3, or F1-F3.

Causes

- Mains Voltage interrupted
- Internal fuse defective
MCS®2-16: 3 fuses on the processor board
MCS®20-128: 6 fuses in the terminal block



Sensor error

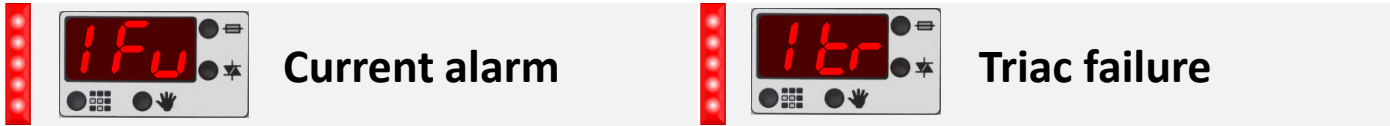
Description

- The sensor has a failure.
- At reverse polarity, the main contactor is switched off at -15 °C and can only be switched on with OFF/ON.

Causes

- Sensor at reverse polarity. The temperature drops when heating.
- Temperature < -15°C

TROUBLESHOOTING MCS®



Current alarm

Triac failure

Description

- By activating the outputs - output rate > 0% - no current flows.

Causes

- Defective fuse
- Cable or connector is defective
- Heating defective
- Triac defective, does not switch

Description

- Without control of the outputs a current flows

Causes

- Triac defective, closes permanently

Note: Depending on the setting of the system parameter SSr the alarm contact is triggered and the main contactor is shut off. The controller can be operated again after the triac has been substituted.



Leakage current

Output rate deviation

Description

- In this phase a leakage current is detected.

Causes

- Defective insulation of the heating current to PE
- To avoid damage, this heating must be dried out.

Note: The type of message depends on the setting of the system parameter LCL.

Description

- Deviation of the monitored output rate out of tolerance

Causes

- Defect in the hot runner system (possible leakage)
- Aging of the heaters
- Output rate values (zone parameter 18) not applicable
- Tolerances too small (zone parameter 19)



Temperature deviation

Temperature deviation

Description

- The actual value is below the permissible deviation from the setpoint.

Causes

- Tolerance band (zone parameter 3) is too small
- Heating might not be sufficient
- Heating could be defective
- Sensor is not in contact with this zone
- The controller is in the heating phase

Description

- The actual value is above the permissible deviation from the setpoint.

Causes

- Tolerance band (zone parameter 3) is too small