

Air Top 3500/5000 ST

Troubleshooting

Error code output

If the heater is fitted with a combination timer, an error code output will appear on the display of the timer after a fault occurs.

NOTE

The error code is output if the heater is fitted with a control element after an error has occurred by the switch-on indicator/error code indicator flashing. After 5 seconds of fast flashing, the error code will be output by a sequence of long flash pulses, the number of flashes is shown in the table below (for example F04 – 4 long flash pulses).

Error code	Error (group)	Additional information during PC diagnostic	Remedy
F 00	Control unit error	01 Control unit error 81 EOL checksum error 11 Incorrectly coded control unit or incorrect heater (fuel type) installed (the heater will not work if this error occurs) 91 Neutrally coded or disabled control unit (the heater will not work if this error occurs) 92 Maintain command failed (the heater will not work if this error occurs) 18 Customer bus defective	Replace control unit
F 01	No start	02 Even after the restart, no flame has formed 82 No start in test	Check fuel supply (tank empty, lines blocked) Clean burner insert, replace flame sensor
F 02	Flame failure	03 The flame has gone out during operation and has not reformed after a restart attempt 83 The flame has gone out during a heating cycle more than FAZ times (EEPROM)	Check fuel supply (tank empty, lines blocked) Clean burner insert, replace flame sensor
F 03	Undervoltage or overvoltage	84 The voltage was less than 10.5 V or 21 V for longer than 20 seconds 04 The voltage was more than 16 V or 32 V for longer than 6 seconds	
F 04	Premature flame recognition	05 The flame sensor recognised a flame before combustion had started	Replace flame sensor
F 06	External temperature sensor break or short circuit	14 Temperature sensor circuit short circuit to earth 94 Temperature sensor circuit break or short circuit to +Ub	Check cables, replace temperature sensor Check cables and terminating resistor, replace temperature sensor

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F 07	Metering pump interrupt or short circuit	88 Break or short circuit to +Ub 08 Short circuit to earth	Check cables, replace metering pump Check cables, replace metering pump
F 08	Drive unit (combustion and hot air blower) break or short circuit	89 Break or short circuit to +Ub 09 The switched drive unit cable (combustion and hot air blower) has a short circuit to earth or the drive unit is overloaded 15 Burner motor block guard has tripped 95 Burner motor not turning easily sensor has tripped	Replace drive unit (combustion and hot air blower) Eliminate the cause of the blockage / difficulty in movement Replace drive unit (combustion and hot air blower)
F 09	Glow plug/Flame monitor interrupt or short circuit	8A Glow plug / Flame sensor: Break or short circuit to + Ub 19 Glow circuit: The switched cable of the element has a short circuit to earth	Replace glow plug / flame monitor Replace glow plug / flame monitor
F 10	Overheating	06 The overheating fault lock-out has tripped (heater overheated) 17 Incorrect application or illegal insulation (ÜHS gradient too high)	Find and remove the cause of the overheating NOTE If no other cause can be found for the overheating, the pressure losses caused by the hot air distribution (too many resistance points) are too high or a hot air filter is soiled
F 11	Overheating sensor interrupt or short circuit	AB Overheating sensor circuit break or short circuit to +Ub 1B Overheating circuit: The switched cable of the element has a short circuit to earth	Replace overheating sensor Replace overheating sensor
F 12	Heater fault lock-out	07 The heater fault lock-out has been activated	Remove the fuse and then refit it NOTE The following error has occurred several times: Fault counter more than 3 times Incorrect start counter more than 9 times Overheating counter more than 3 times Flame failure counter more than 2 times
F 13	Permanent heater fault lock-out	87 The permanent heater fault lock-out has been activated	Delete the error with the PC diagnostic NOTE Permanent flame failure counter more than 3 times
F 14	Overheating sensor incorrect position	97 Incorrect position of the overheating system (ÜHS gradient too low)	Position the overheating sensor correctly
F 15	Nominal sensor break	9B Nominal value potentiometer circuit break or short circuit to + Ub	Check cables, replace control element