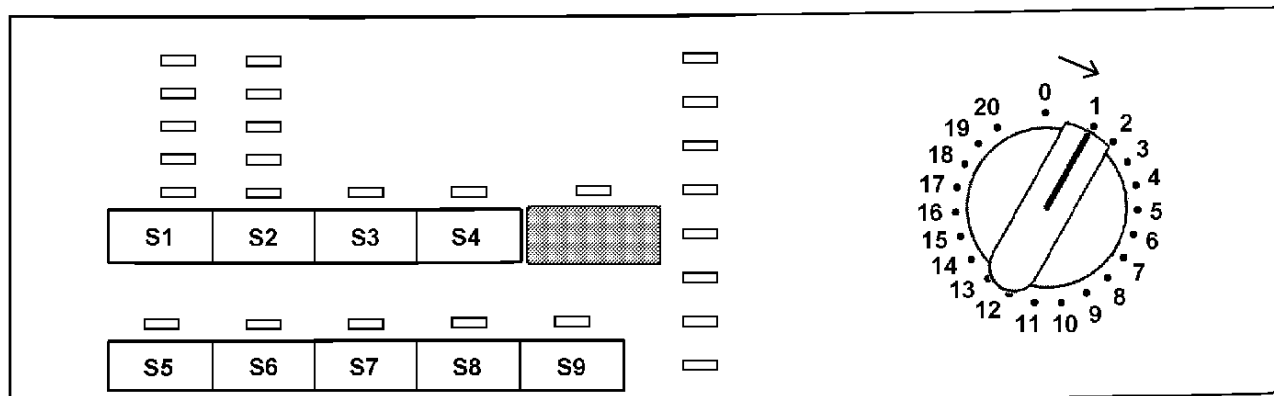


9. Service test programme



9.1 Access to service test programme:

Due to various panel configurations the button combinations to activate the service programme can be different. In each case **the first two buttons seen from left (S1/S5 or S2/S6)** are defined for activation of the service programme.

- Switch off the appliance (programme selector position 0).
- Press and hold down **button S1 and S5** or **button S2 and S6** simultaneously.
- Holding down both buttons, switch the appliance on by turning the programme selector **one position to the right** (clockwise).
- Continue to hold down both buttons at least 2 sec. until the LEDs begin to flash.

Irrespective of the type of PCB and the configuration of the programme selector it is possible, after entering service test mode, to perform diagnostics on the operation of the various components and to read the alarms by turning the programme selector clockwise.

All the alarms are enabled during the diagnostics cycle.

Position 1:	LED-test
Position 2:	Water ducted through washing compartment (water level below fS, max. 5 min.)
Position 3:	Water ducted through pre-wash compartment (water level below fS, max. 5 min.)
Position 4:	Water ducted through conditioner compartment (water level below fS, max. 5 min.)
Position 5:	Water ducted through stain compartment (water level below fS, max. 5 min.)
Position 6:	Heating (water level above 1st level, max. 10 min. or up to 90°C)
Position 7:	Check for leaks from the tub (water level above 1st level, motor 55 rpm, 250rpm impulse)
Position 8:	Drain and spin (drain pump, motor up to 650 rpm then at max. spin speed)
Position 9:	Not used
Position 10:	Reading the last alarm code.

9.2 Exiting service test programme

- To exit the service test programme, switch off the appliance.

Attention: According to the machine configuration it is possible that the electric test cycle will be activated with the next switch on of the machine. In the display will appear „ELE“.

To stop it, switch off/on the appliance again.

10 Alarms

10.1 User alarm display

Control of the alarm system can be configured; according to the model, therefore, some or all of the alarms may be displayed to the user.

Normally, all alarms are displayed for the user, with the exception of:

- “ E61 (insufficient heating during the washing phase)
- “ E83 (error in selector reading)

The alarms are enabled during the execution of the washing programme, with the exception of alarms associated with configuration and the power supply (voltage/frequency), which are also displayed during the programme selection phase.

The door can normally be opened (except where specified) when an alarm condition has occurred on condition that:

- the level of the water in the tub is below 1st level
- the temperature of the water is lower than 40°C.

Certain alarm conditions require that a drain phase be performed before the door can be opened:

- Cooling water fill if the temperature is in excess of 60°C.
- Drain until closure of both pressure switch contacts (1st level and anti-boiling safety system) on EMPTY within a maximum of 5 minutes.

10.1.1 Alarms displayed during normal operation

The type of alarm condition is displayed to the user by the repeated flashing of the END OF CYCLE LED and in the display (if featured). This LED is featured on all models, though configured in different positions. All the LEDs flash to indicate a configuration error.

If, for example, the user should forget to close the door, the control system will detect alarm E41 about 15 seconds after the start of the cycle; the cycle remains in PAUSE mode and the LED flashes repeatedly in the sequence shown in the table.

The four flashes indicate the first of the two digits of alarm E41 (the alarms for a given function are grouped in "families").

In this case, after closing the door, it is sufficient to press START in order to re-start the programme.

10.2 *Reading the alarm codes*

In order to read the last alarm code memorized in the EEPROM on the PCB:

- Enter service test programme (see page 29)
- Irrespective of the type of PCB and configuration, turn the programme selector clockwise to the tenth position.

10.2.1 *Displaying the alarm*

The alarm is displayed by a repeated flashing sequence of the two LEDs and in the display (if featured). The buzzer (if featured) will sound "bips" in synchronization with the flashing of the alarm code family.

- END OF CYCLE-LED indicates the first digit of the alarm code (family).
- START/PAUSE-LED indicates the second digit of the alarm code (number within the family).

These two LEDs are featured on all models, though they are configured differently.

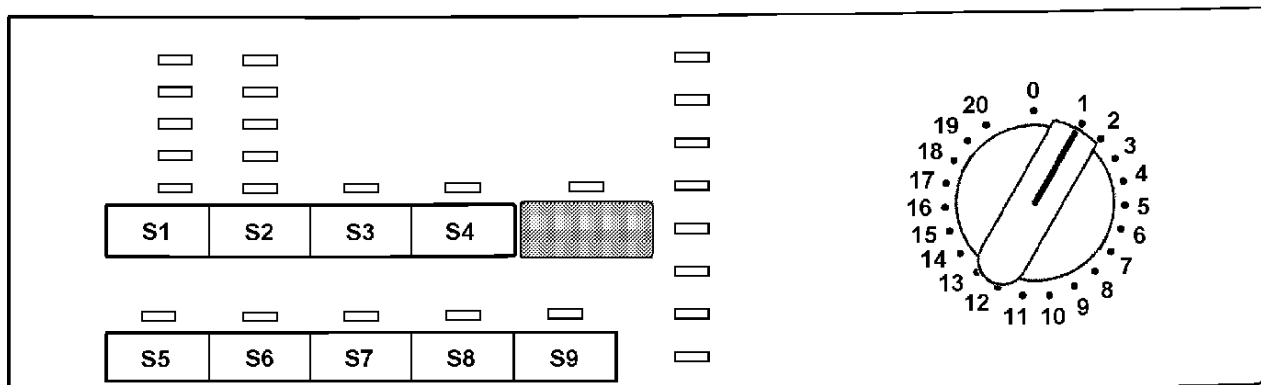
Notes:

- The first letter of the alarm code "E" (Error) is not displayed, since this letter is common to all alarm codes.
- The alarm code "families" are shown in hexadecimal; in other words:
A is represented by 10 flashes
B is represented by 11 flashes
...
F is represented by 15 flashes
- Configuration errors are shown by the flashing of all the LEDs (user interface not configured).

10.2.2 *Operation of alarms during diagnostics*

All alarms are enabled during the components diagnostics phase.

10.3 Rapid reading of alarm codes



The last alarm code can be displayed even if the programme selector is not in the 10th position (service test mode) or if the appliance is in normal operating mode (e.g. during the execution of an washing programme):

- Press and hold down **button S1 and S5** or **button S2 and S6** simultaneously for at least 2 seconds: the LEDs initially switch off, and then display the flashing sequence corresponding to the alarm.
- The alarm sequence continues as long as the two buttons are held down.
- The alarm reading system is as described in paragraph 10.2
- While the alarms are displayed, the appliance continues to perform the cycle or, if in the programme selection phase, maintains the previously-selected options in memory.

10.4 Cancelling the last alarm

- Enter service test programme (see page 29)
- Press and hold down **button S1 and S5** or **button S2 and S6** simultaneously for at least 2 sec.

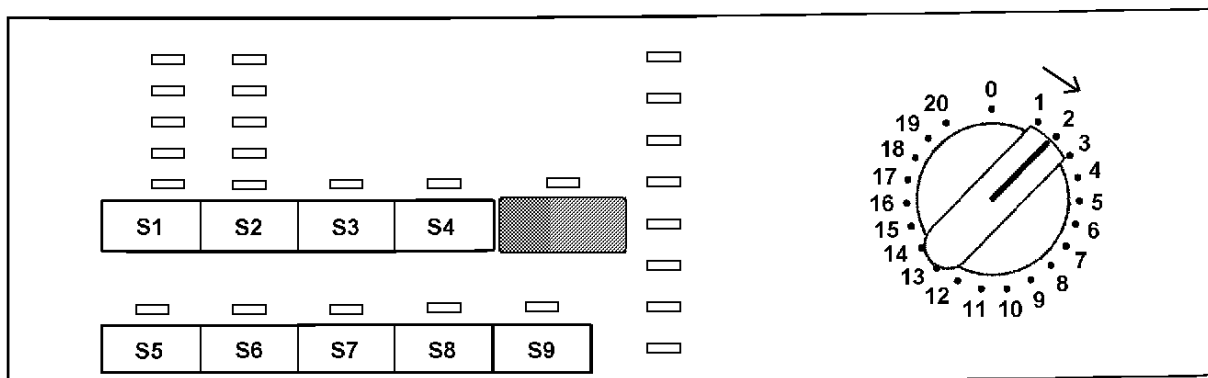
It is good practice to cancel the last alarm:

- after reading the alarm code, to check whether the alarm re-occurs during diagnostics
- after repairing the appliance, to check whether it re-occurs during testing.

Alarm	Description	Possible fault	Action/machine status	Reset
E11	Difficulties in water fill for washing	Tap closed or mains pressure insufficient; drain hose incorrectly positioned; water fill solenoid faulty; leaks from the hydraulic circuit of the pressure switch; pressure switch faulty; wiring faulty; PCB faulty.	Cycle paused	Start
E13	Water leakage	Drain hose incorrectly positioned; mains pressure insufficient; water fill solenoid faulty; leakage/blockage of pressure switch hydraulic circuit; pressure switch faulty.	Cycle paused	Start
E21	Difficulties in draining	Drain hose kinked/blocked/incorrectly positioned; drain filter blocked/dirty; drain pump faulty; wiring faulty; PCB faulty; current leakage from heating element to ground.	Cycle paused	Start
E23	Drain pump triac faulty	Drain pump faulty; wiring faulty; PCB faulty.	Safety drain cycle – Cycle stopped with door open	Off
E24	Fault in "sensing" circuit of drain pump triac	PCB faulty.	Safety drain cycle – Cycle stopped with door released	Off
E33	Incongruence between closure of anti-boiling and 1st level pressure switch contacts	Pressure switch faulty; current leakage from heating element to ground; heating element; wiring faulty; PCB faulty.	Safety drain cycle – Cycle stopped with door open	Off
E35	Water overflow (flooding)	Water fill solenoid faulty; leakage from pressure switch hydraulic circuit; pressure switch faulty; wiring faulty; PCB faulty.	Cycle blocked. Safety drain cycle. Drain pump always in operation (5 minutes on, 5 minutes Off etc.)	Off
E36	Fault in "sensing" circuit of anti-boiling pressure switch	PCB faulty.	Cycle blocked, door locked.	Off
E37	1st level sensing circuit faulty	PCB faulty.	Cycle blocked, door locked.	Off
E39	"HV" sensor of anti-overflow level faulty	PCB faulty.	Cycle blocked, door locked.	Off
E41	Door open	Door interlock faulty; wiring faulty; PCB faulty.	Cycle paused	Start
E42	Problems of door closure	Door interlock faulty; wiring faulty; PCB faulty.	Cycle paused	Start
E43	Interlock power supply triac faulty	Door interlock faulty; wiring faulty; PCB faulty.	(Safety drain cycle) Cycle blocked	Off
E44	Door interlock sensor faulty	PCB faulty.	(Safety drain cycle) Cycle blocked	Off
E45	Door interlock sensing circuit triac faulty	PCB faulty.	(Safety drain cycle) Cycle blocked	Off
E51	Motor power supply triac short-circuited	PCB faulty; current leakage from motor or from wiring.	Cycle blocked, door locked (after 5 attempts)	Off
E52	No signal from motor tachymetric generator	Motor faulty; wiring faulty; PCB faulty.	Cycle blocked, door locked (after 5 attempts)	Off
E53	Motor triac sensing circuit faulty	PCB faulty.	Cycle blocked, door locked	Off
E54	Motor relay contacts sticking	PCB faulty; current leakage from motor or from wiring.	Cycle blocked, door locked (after 5 attempts)	Off

Alarm	Description	Possible fault	Action/machine status	Reset
E61	Insufficient heating during washing	NTC sensor faulty; heating element faulty; wiring faulty; PCB faulty.	The heating phase is skipped	—
E62	Overheating during washing	NTC sensor faulty; heating element faulty; wiring faulty; PCB faulty.	Safety drain cycle – Cycle stopped with door open	Off
E66	Heating element power relay faulty	PCB faulty; current leakage from heating element to ground.	Safety drain cycle – Cycle stopped with door open	Off
E71	Washing NTC sensor faulty	NTC sensor faulty; wiring faulty; PCB faulty.	The heating phase is skipped	Start
E74	Washing NTC-sensor badly positioned	NTC sensor badly positioned; NTC sensor faulty; wiring faulty; PCB faulty.	The heating phase is skipped	Start
E82	Error in selector reset position	PCB faulty.	—	Off
E83	Error in reading selector	Incorrect configuration data; PCB faulty.	Cycle cancelled	—
E91	Communication incongruence between main PCB and display board (versions not compatible)	Wiring faulty; faulty control/display board; Main PCB faulty.	Cycle interrupted	Off
E92	Communication incongruence between main PCB and display board (versions not compatible)	Wrong control/display board; Wrong PCB (does not correspond to the model).	Cycle interrupted	Off
E93	Incorrect configuration of appliance	Incorrect configuration data; PCB faulty.	Cycle interrupted	Off
E94	Incorrect configuration of washing cycle	Incorrect configuration data; PCB faulty.	Cycle interrupted	Off
E95	Communications error between microprocessor and EEPROM	PCB faulty.	Cycle interrupted	Off
E97	Incongruency between selector and cycles configuration	Incorrect configuration data; PCB faulty.	Cycle interrupted	Off
EB1	Frequency of appliance incorrect	Power supply problems (incorrect / disturbance); PCB faulty.	Cycle interrupted	—
EB2	Voltage too high	Power supply problems (incorrect / disturbance); PCB faulty.	Cycle interrupted	—
EB3	Voltage too low	Power supply problems (incorrect / disturbance); PCB faulty.	Cycle interrupted	—
EF1	Drain filter blocked (too long drain phase)	Drain tube blocked/kinked/too high; Drain filter dirty/blocked.	Warning displayed at the end of cycle (specific LED)	Start
EF2	Overdosing of detergent (too much foam during drain phases)	Excessive detergent dosing; drain tube kinked/blocked; Drain filter dirty/blocked.	(specific LED)	—
EF3	Control water intervention	Water leakage on the base; faulty water control device.	Water drain and cycle blocked	Off

11. Demo-mode



11.1 Access to demo-mode

- Switch off the appliance (programme selector position 0).
- Press and hold down **button S1 and S5** or **button S2 and S6** simultaneously.
- Holding down both buttons, switch the appliance on by turning the programme selector **two positions to the right** (clockwise).
- Continue to hold down both buttons at least 2 sec.

11.2 Exiting demo-mode

- To exit demo-mode, switch off the appliance.