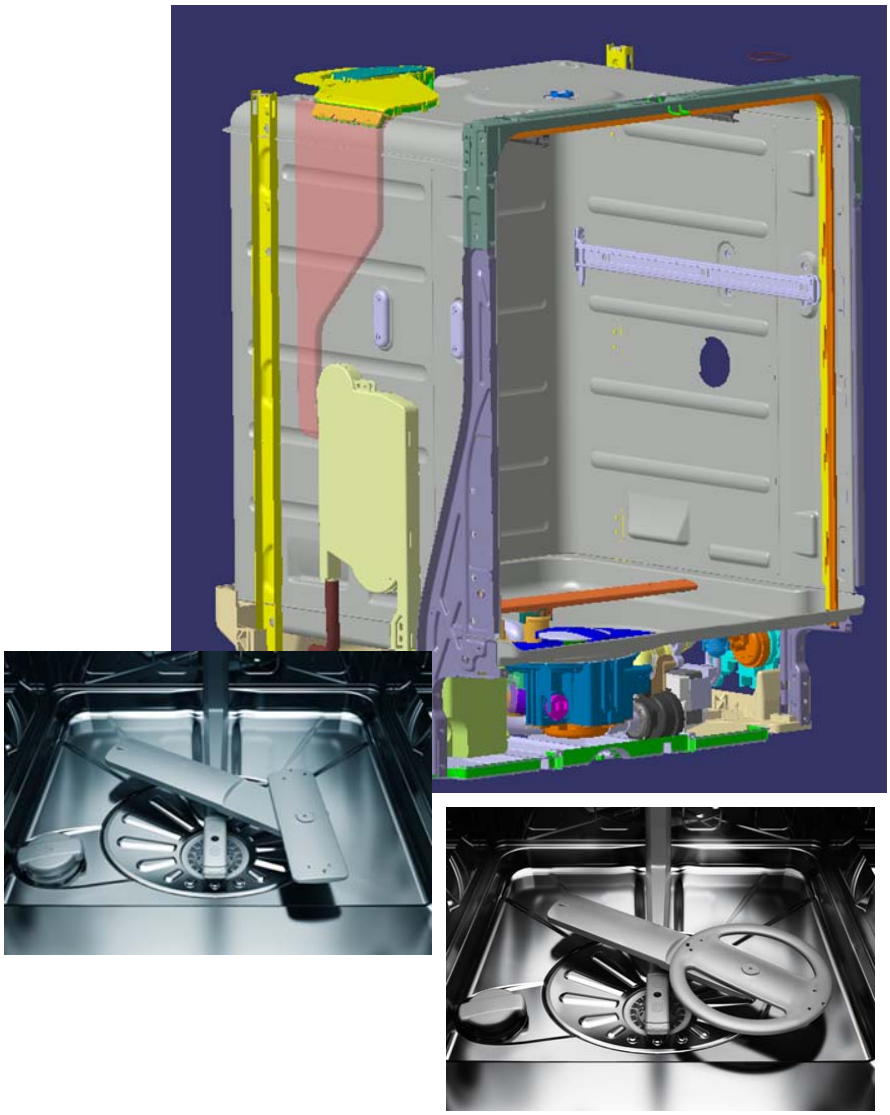
Electrolux
Distriparts

SERVICE MANUAL

DISHWASHERS



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Dishwashers with electronic control system

ProClean RealLife

CONTENTS

1 Purpose of this manual

The purpose of this Service Manual is to provide Service Engineers with technical information regarding the new range of “ProClean/RealLife” dishwashers and to give a description of the alarm codes and service functionality of the following families:

- EDW5xx
- EDW750
- EDW1xxx-2G
- EDW2500
- EDW3000
- EDW3510

This Manual describes:

- General characteristics
- Control panel and programmes
- Technical characteristics
- Guide to diagnostics

For more detailed information regarding the hydraulic circuits and the structural characteristics of the appliances, please refer to the Service Manual for the “ProClean/RealLife” structure.

2 Precautions

- **Electrical appliances must be serviced only by qualified Service Engineers.**
- **Always remove the plug from the power socket before touching internal components.**

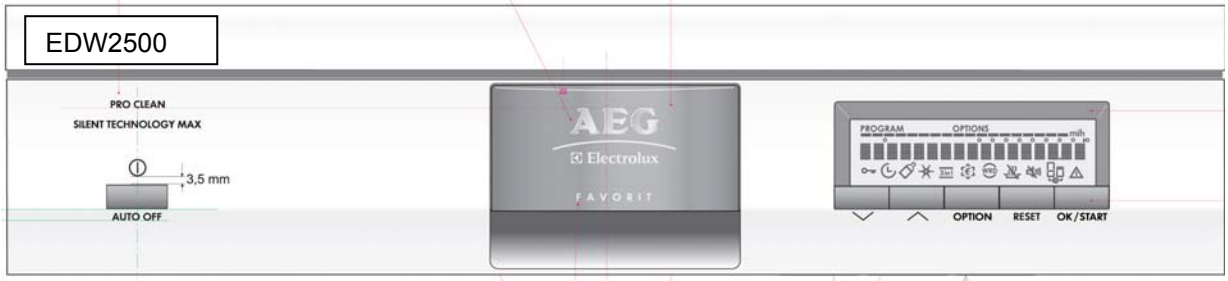
REVISIONS:

Revision	Date	Description
00	12/2009	Document creation
01	07/2010	Added Service Mode Settings for EDW2510 “Touch”
02	10/2010	Alarm i00 added
03	01/2011	Stylings updated and “Service Mode” variants added

3 Styling overview

3.1 Free Standing

EDW2500



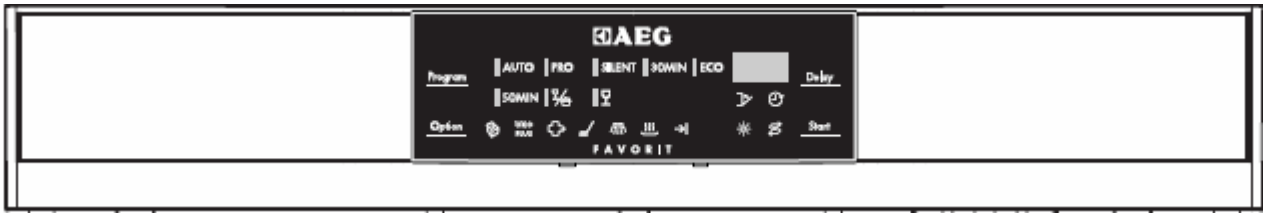
EDW1510-1750

EDW1500

EDW750

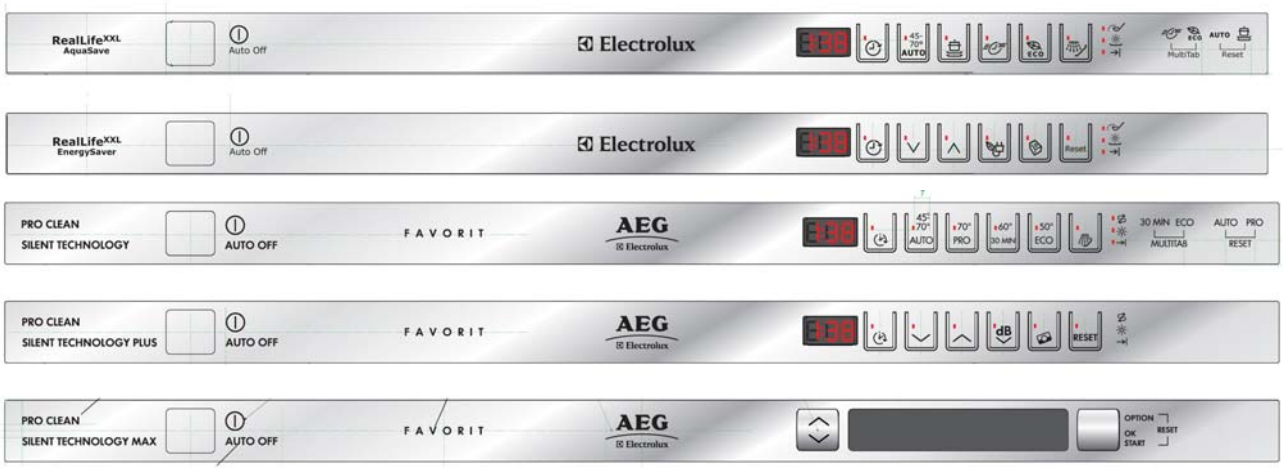
EDW1850

EDW1950



EDW3510

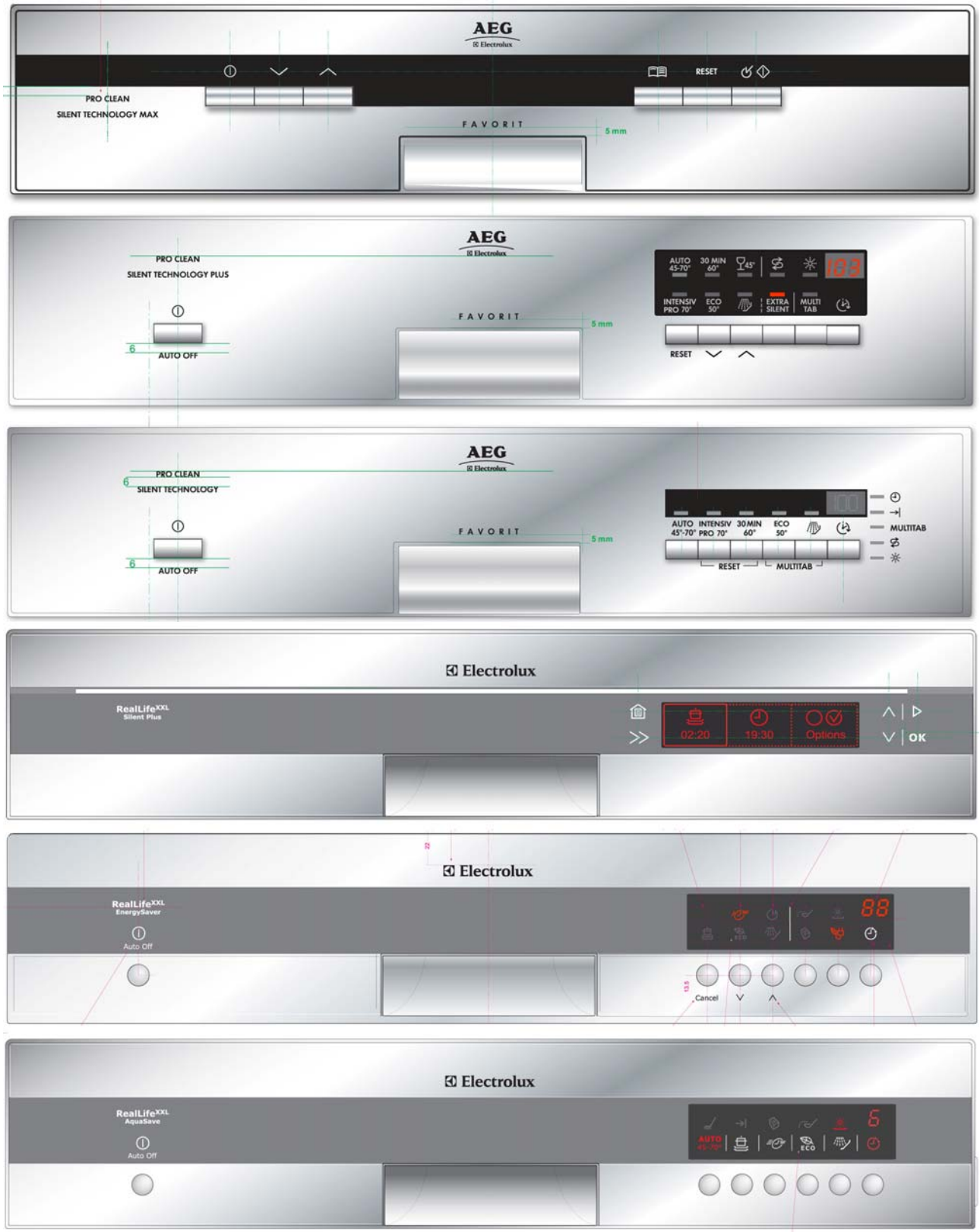
3.2 Fully Integrated



EDW1953

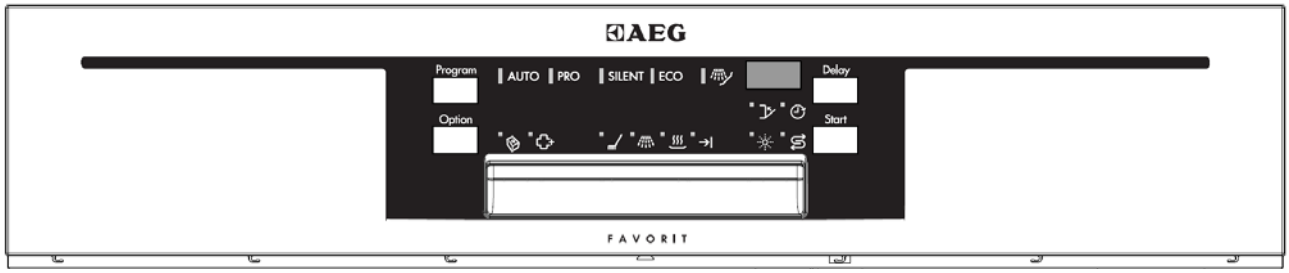
EDW1103

3.3 Built In


AEG
PRO CLEAN
SILENT TECHNOLOGY MAX
RESET
FAVORIT
5 mm
AEG
PRO CLEAN
SILENT TECHNOLOGY PLUS
AUTO OFF
FAVORIT
5 mm
AUTO 45-70°
30 MIN 60°
INTENSIV PRO 70°
ECO 50°
EXTRA SILENT
MULTI TAB
RESET
AEG
PRO CLEAN
SILENT TECHNOLOGY
AUTO OFF
FAVORIT
5 mm
AUTO 45°-70°
INTENSIV PRO 70°
30 MIN 60°
ECO 50°
MULTITAB
RESET
MULTITAB
Electrolux
RealLife XXL
Silent Plus
02:20
19:30
Options
OK
Electrolux
RealLife XXL
EnergySaver
Auto Off
Cancel
Electrolux
RealLife XXL
AquaSave
Auto Off

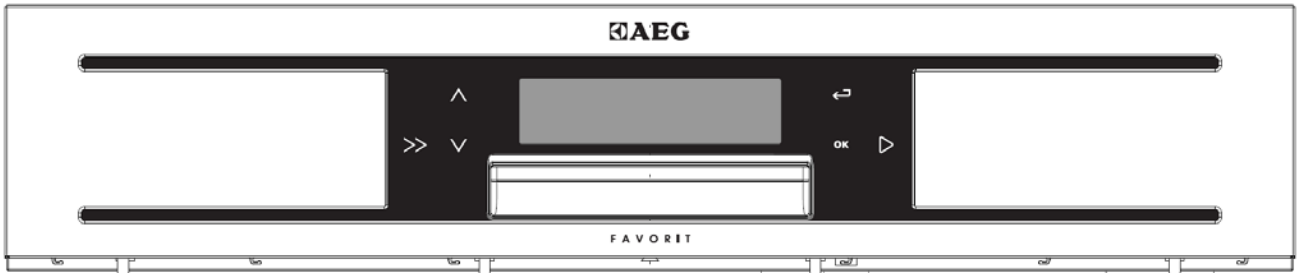
EDW750

EDW1850

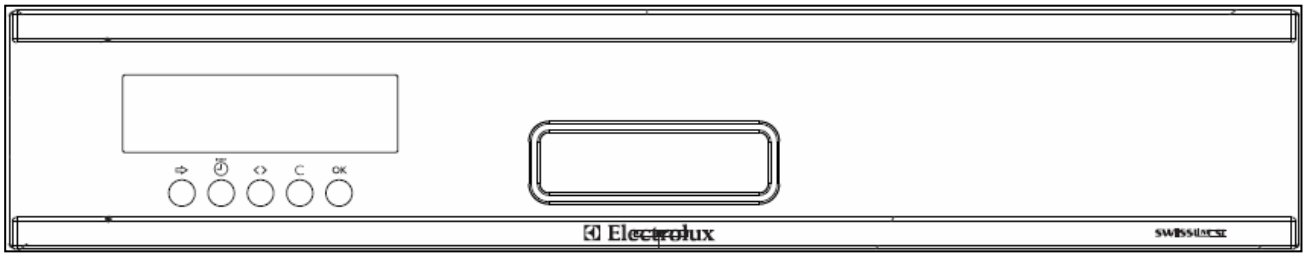


EDW1950

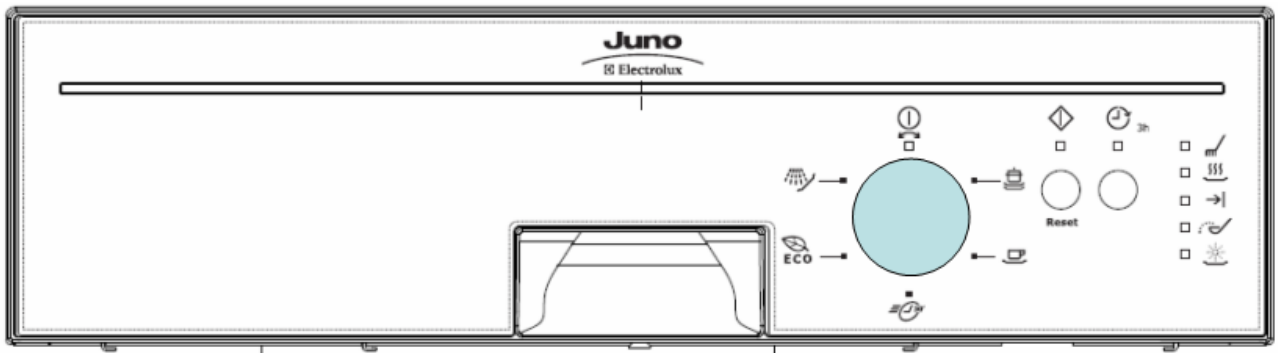
EDW3510



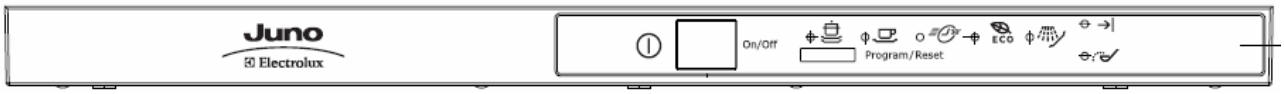
EDW2500 SWISS



EDW 500



EDW 503

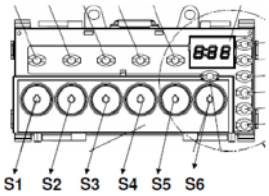


EDW 1503

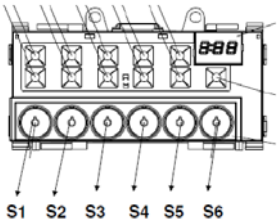
4 Location of LEDs and Push Buttons

4.1 EDW1xxx-2G display boards

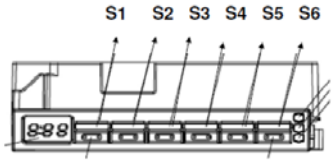
EDW 1500-2G-UI:



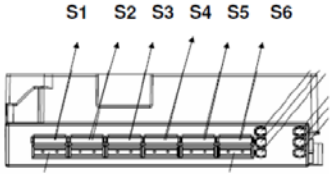
EDW 1510-2G-UI (also used as EDW 1750-2G-UI)



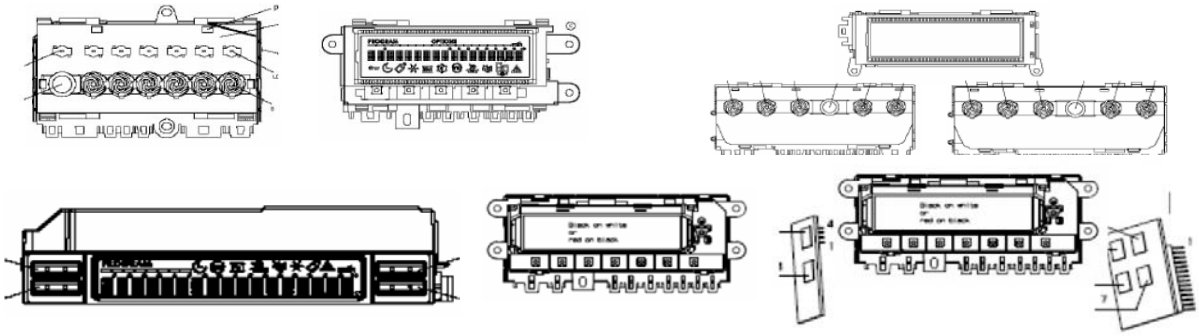
EDW 1503-2G-UI (also used as EDW1753-2G-UI):



EDW 1103-2G-UI (also used as EDW603 user interface):

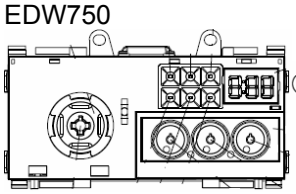


4.2 EDW3000 display boards

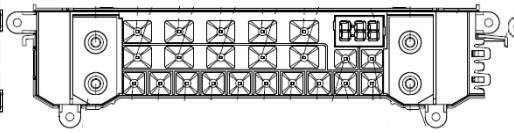


4.3 "New Collection" display boards

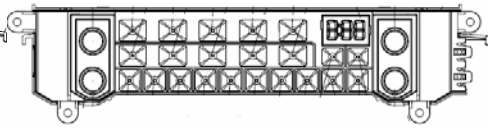
EDW750



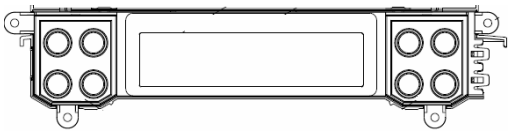
EDW1850



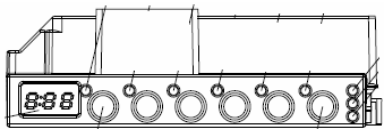
EDW1950 TOUCH



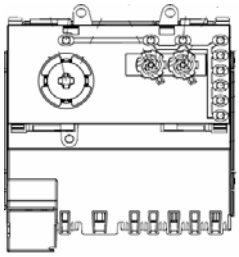
EDW3510



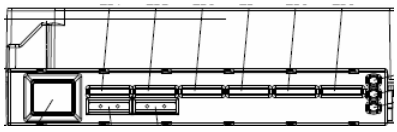
EDW1953 FI



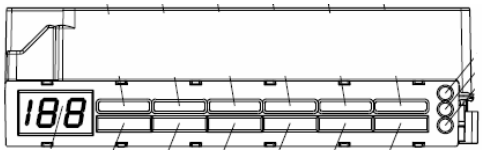
EDW500



EDW 503



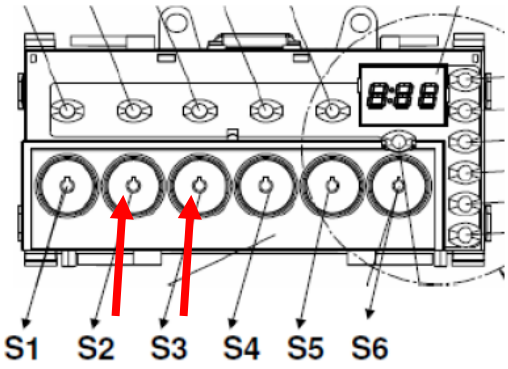
EDW1503 1.5 DIGIT



5 Reset

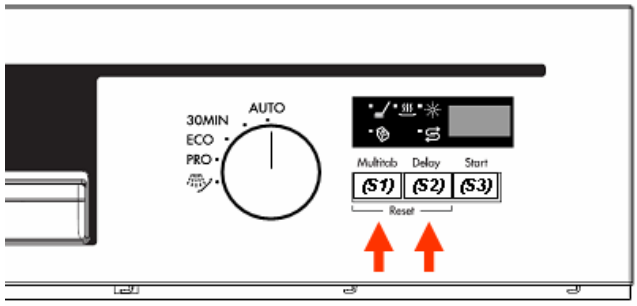
"Reset" is a special kind of User mode to stop or deselect a running programme. When this function is enabled, the appliance will be on stand-by without any selected settings.
RESET can only be performed after the washing cycle has started.

With EDW1xxx-2G display boards: press buttons S2+S3 simultaneously for at least 1 sec or press the specific button dedicated to this function by the custom software.



With EDW3000 display boards: press buttons S3+S4 simultaneously for at least 1 sec or press the specific button dedicated to this function by the custom software.

With display boards from the "New Collection": press buttons S1+S2 or S3+S4 simultaneously for at least 1 sec or press the specific button dedicated to this function by the custom software.

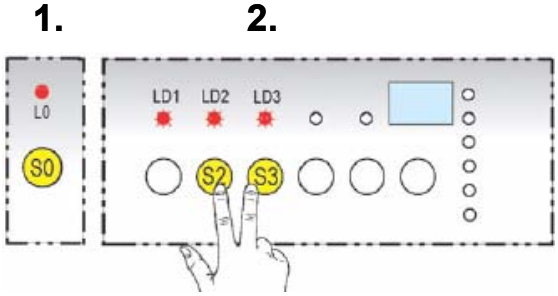


6 User Mode Settings

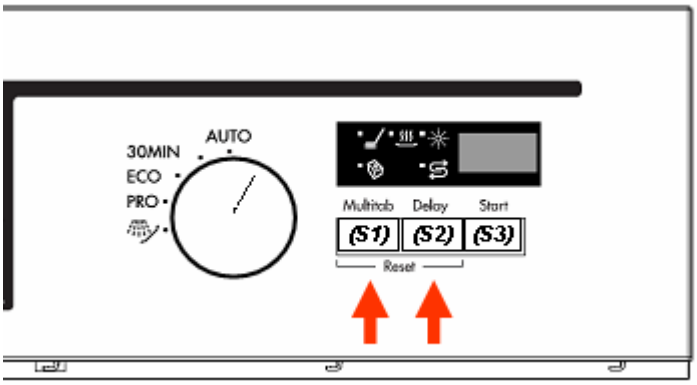
6.1 Entering the User Mode

You can enter this Mode by pressing the two configured buttons simultaneously for at least 2 sec after the appliance has been turned on and is on stand-by without any selected programme:
with EDW1xxx-2G display boards: by pressing buttons S2+S3.
with EDW3xxx display boards: from the options menu.

You can quit User Mode by turning off the appliance or after a 60 sec timeout.
When this mode is enabled, it is indicated by the flashing of the LEDs corresponding to the buttons available in this mode. The User mode is incorporated into the options menu on the displays.
Example for a 3-digit display:

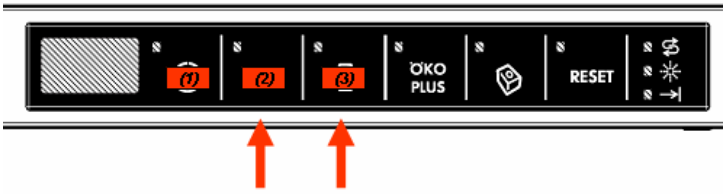


For the EDW750, set the knob to a position without a washing cycle indication, as shown in the figure, and press buttons S1+S2 simultaneously for a few seconds.



For the EDW1850-1950, you can enable it by pressing the two configured buttons simultaneously for at least 2 sec after the appliance has been turned on and is on stand-by without any selected programme:

For the EDW1953 TOUCH, you can enable it by pressing the two configured buttons simultaneously for at least 2 sec after the appliance has been turned on and is on stand-by without any selected programme:

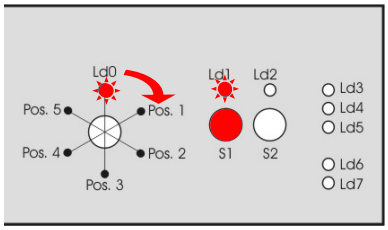
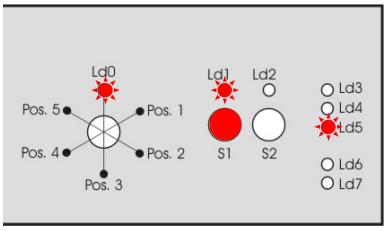


6.2 Water hardness

The water hardness setting range is from 1 to 10 (soft to hard).
In appliances with a 3-digit display, once you have entered the User mode, press button S1 to display the current water hardness level from “1L” to “10L”.

In appliances without a display, once you have entered the User mode, press button S1 to display the current water hardness level from “1L” to “10L" with the flashing of the cycle end LED.
Press button S1 to increase the hardness setting by one.
The new level is displayed accordingly. To store the new setting, press button S0.

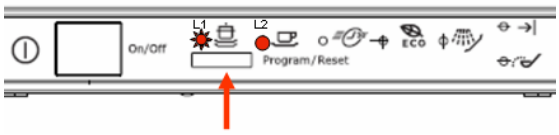
6.2.1 EDW500

1. Hold down button **S1** 2. Turn the knob clockwise to **Position 1** ↳ LEDs LD0 and LD1 flash ↳ release button **S1**	
3. Press button **S1** ↳ the level of regenerating is displayed through a series of flashes, interrupted by pauses, emitted by the **Cycle end** LED	
4. Press button **S1** again to increase the regenerating level	

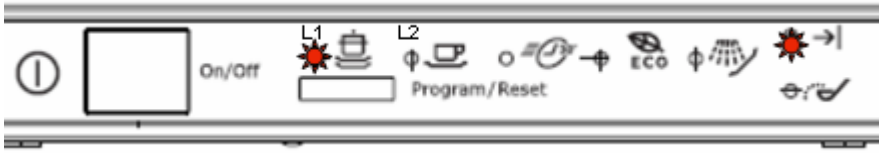
6.2.2 EDW503

Hold down the programmes button.

LED L1 flashes and L2 is turned on permanently.



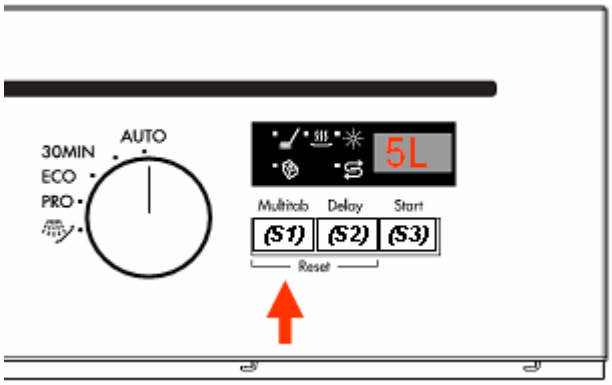
Release the button.
LED L1 flashes, LED L2 is turned off and the CYCLE END LED flashes to indicate the regenerating level set.



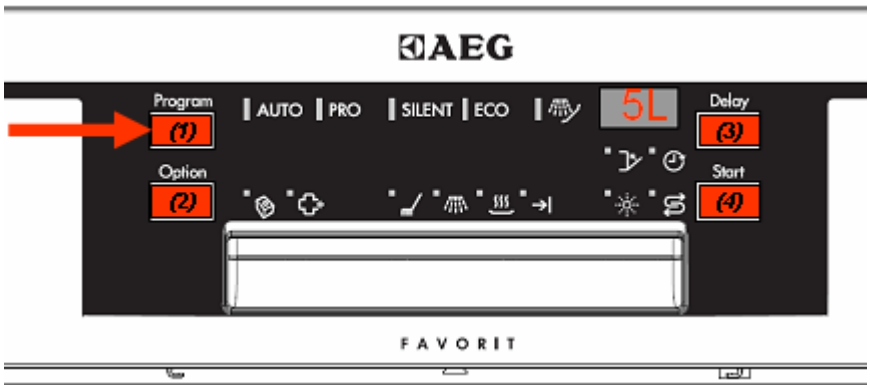
To modify the regenerating level, press the programmes button.

The CYCLE END LED will flash to indicate the new level set.

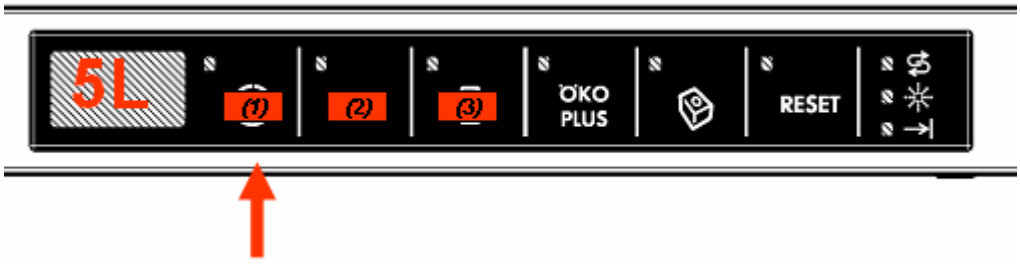
6.2.3 EDW750



6.2.4 EDW1850/1950



6.2.5 EDW1953 TOUCH



6.3 Disable/Enable Rinse Aid

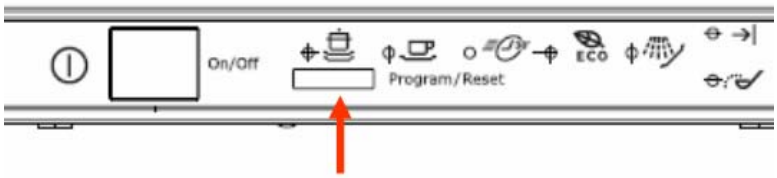
This function allows you to disable the rinse aid dosing.
In appliances with a 3-digit display, once you have entered the User mode, press button S2 to display the current status where “0d” indicates it is disabled and “1d” that it is enabled.
To modify the enabled/disabled status, press button S2.
The new setting is then displayed.

6.4 Disable/Enable Buzzer

This function allows you to disable the cycle end buzzer.
In appliances with a 3-digit display, once you have entered the User mode, press button S3 to display the current status where “0b” indicates it is disabled and “1b” that it is enabled.
To modify the enabled/disabled status, press button S3.
The new setting is then displayed.

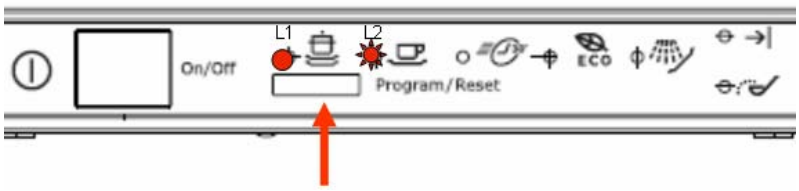
6.4.1 EDW503

Hold down the programmes button

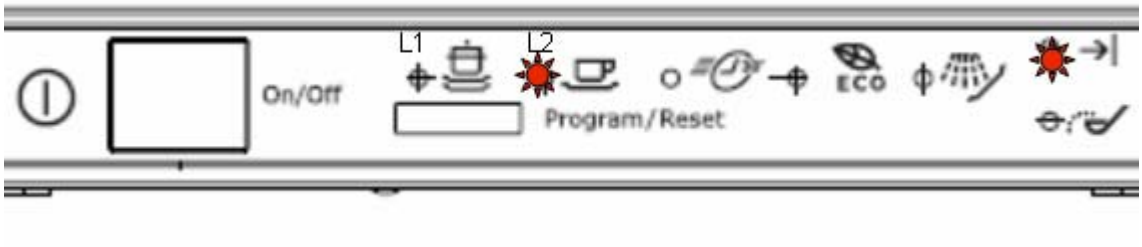


LED L1 flashes and L2 is turned on permanently

Release the button and press it again: LED L1 is lit permanently and L2 flashes



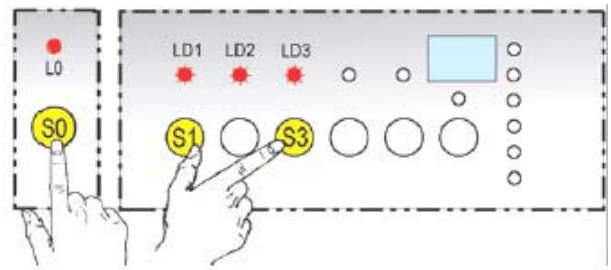
After a few seconds, LED L1 is turned off and L2 flashes;
the CYCLE END LED will indicate whether the buzzer is enabled.



To enable or disable the BUZZER, press the programmes button (cycle end on = buzzer enabled).

7 Service Mode Settings

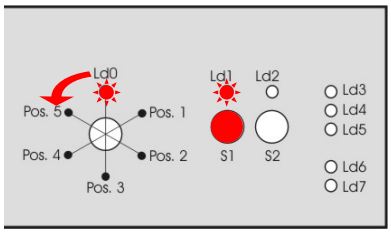
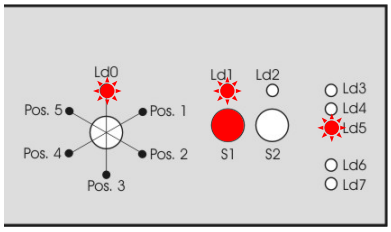
Only if the appliance is on stand-by awaiting instructions, hold down the two configured buttons simultaneously, turn on the appliance and wait for at least 4 sec.
With EDW1xxx-2G display boards: by pressing buttons S1+S3.



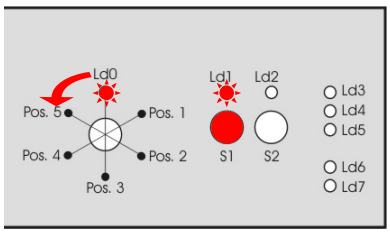
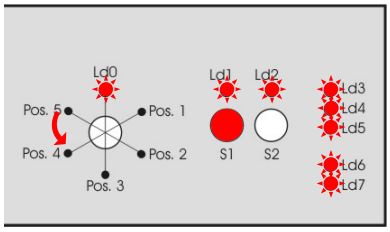
With EDW3xxx display boards: by pressing buttons S1+S3 (EDW2500) or S3+S4 (EDW2503).

7.1 EDW500

7.1.1 Diagnostics mode, alarm reading and testing

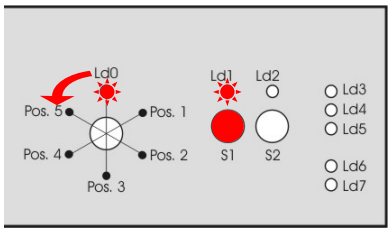
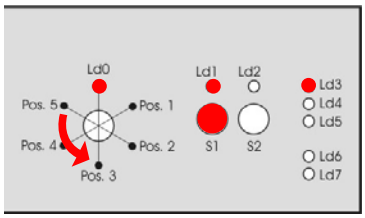
1. Hold down button **S1** 2. Turn the knob anti-clockwise to **Position 5** ↳ LEDs LD0 and LD1 flash ↳ release button **S1**	
3. Press button **S1** ↳ the first alarm stored is displayed: the **Cycle end** LED flashes in sequence, interrupted by pauses, corresponding to the alarm: for the alarm code, please see the alarms summary table.	
4. Press button **S1** again to display the second alarm	
5. Press button **S1** once more to display the third alarm	
6. Press button **S1** for the fourth time to move on to enabling the appliance's actuators, the CYCLE END LED is on: ↳ 4th activation: regenerating solenoid valve ↳ 5th activation: drain pump ↳ 6th activation: water fill to level solenoid valve ↳ 7th activation: heating (only if the level of water is reached) ↳ 8th activation: washing pump ↳ 9th activation: detergent/rinse aid dispenser ↳ 10th activation: drying fan (if turbo-dry)	
7. All the positions can be repeated by pressing button S1 in sequence	
⚠	*The components are powered if the appliance door is shut: open the door to select another actuator then shut it again.* *If button S1 is not pressed for 60 seconds, you automatically quit diagnostics mode.*

7.1.2 Deleting alarm memory/LED test

1. Hold down button **S1** 2. Turn the knob anti-clockwise to **Position 5** ⇩ LEDs LD0 and LD1 flash ⇩ release button **S1**	
3. Turn the knob to **Position 4** 4. Press button **S1** ⇩ all LEDS flash for 30 sec	

7.1.3 Functional test cycle

7.1.3.1 Cycle setting

1. Hold down button **S1** 2. Turn the knob anti-clockwise to **Position 5** ⇩ LEDs LD0 and LD1 flash ⇩ release button **S1**	
3. Turn the knob to **Position 3** ⇩ press button **S1** ⇩ the cycle starts: during its progress, the programme behaves like a normal cycle ⇩ LED LD1 flashes	

N.B.: *at the beginning of the next programme after the test cycle, the resins are washed. The overall duration of the cycle is approximately 50 minutes.*

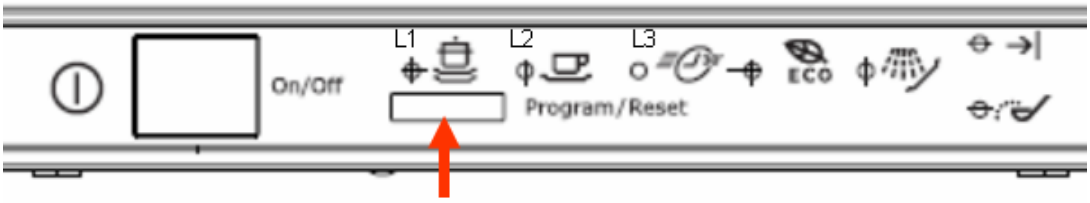
7.1.4 Quitting diagnostics mode

To quit diagnostics mode, press button **S0** and turn off the appliance
or wait **60 seconds**: the LEDS are turned on and the appliance is on stand-by awaiting your selection

7.2 EDW503

7.2.1 Diagnostics mode, alarm reading and testing

1. Hold down the **PROGRAMMES** button



2. Turn the appliance on at the **ON/OFF** button
   - LED **L1** flashes
   - LEDs **L2** and **L3** are turned on
3. Wait for LEDs **L2** and **L3** to be turned off
4. Press the **PROGRAMMES** button
   - the CYCLE END LED shows the first alarm stored with a sequence of flashes
5. Press the PROGRAMMES button twice more to display the other two alarms stored
   - the CYCLE END LED shows the alarms
6. From the 4th activation, the individual components testing begins according to the defined sequence
   - LED **L2** is turned on permanently for the duration of the components test
     - 4th activation: regenerating solenoid valve
     - 5th activation: drain pump
     - 6th activation: water fill to level solenoid valve (level of water reached)
     - 7th activation: heating (only if the level of water is reached)
     - 8th activation: washing pump
     - 9th activation: detergent/rinse aid dispenser
     - 10th activation: drying fan
     - 11th activation: the cycle is repeated from the first alarm

All the positions can be repeated by pressing button **S2** in sequence.

⚠	*The components are powered with the appliance door open and shut.* *If the PROGRAMMES button is not pressed for 60 seconds, you automatically quit diagnostics mode.*

7.2.2 Deleting alarm memory/LED test

1. Hold down the **PROGRAMMES** button
2. Turn the appliance on at the ON/OFF button
   - LED **L1** flashes
   - LEDs **L2** and **L3** are turned on
3. Press the PROGRAMMES button before LEDs **L2** and **L3** are turned off
   - LED **L2** flashes
   - LEDs **L1** and **L3** are turned on
4. Wait for LEDs **L1** and **L3** to be turned off
5. Press the **PROGRAMMES** button
   - all LEDs flash and the buzzer sounds

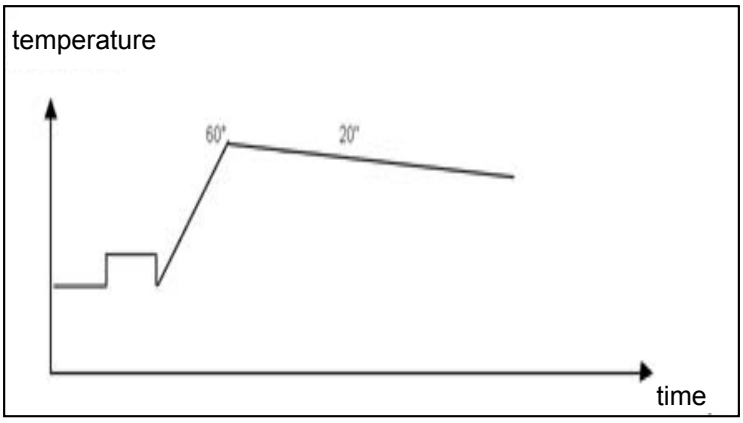
7.2.3 Functional test cycle

7.2.3.1 Cycle setting

1. Hold down the PROGRAMMES button
2. Turn the appliance on at the ON/OFF button
   - ↳ LED **L1** flashes
   - ↳ LEDs **L2** and **L3** are turned on
4. Press the PROGRAMMES button twice before LEDs **L2** and **L3** are turned off
   - ↳ LED **L3** flashes
   - ↳ LEDs **L1** and **L2** are turned on
5. Wait for LEDs **L1** and **L2** to be turned off
6. Press the PROGRAMMES button to start the test cycle
   - ↳ LED **L4** is turned off
   - ↳ LED **L2** flashes for the duration of the cycle

7.2.3.2 Cycle phases

Phase	Duration
Water fill, Turbo activation	30''
Washing continuously, dispenser opening	45''
Drain	dilution
Water fill	---
Washing continuously	60''
Drain	dilution
Water fill	---
Controlled washing at 2600 rpm, heating at 60 °C	
Controlled washing at 2600 rpm, temperature kept at 60 °C	1200''



N.B.: *at the beginning of the next programme after the test cycle, the resins are washed. The overall duration of the cycle is approximately 50 minutes.*

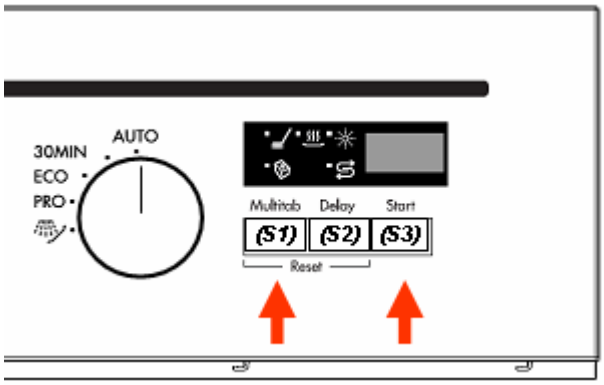
7.2.4 Reading alarms and activating components

Once in Service mode, the reading of alarms and the activation of individual components is possible using button S1. After the last component in the list has been activated, the sequence will be repeated.

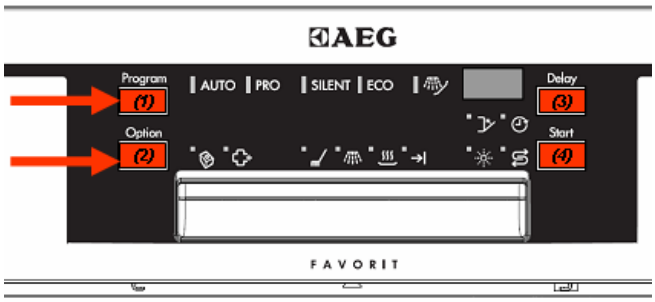
The sequence is defined as follows:
1. Alarm 1
2. Alarm 2
3. Alarm 3
4. Regenerating solenoid valve
5. Drain pump
6. Fill solenoid valve
7. Heating element (if the level of water is reached)
8. Washing pump (at 2800 rpm)
9. Detergent dispenser
10. Drying fan

If a display is available, the activated component is indicated by its own number in the list (starting with number 4).

7.3 EDW750

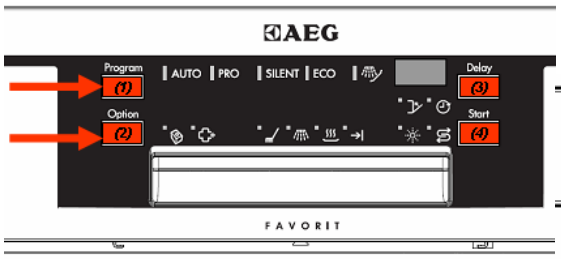


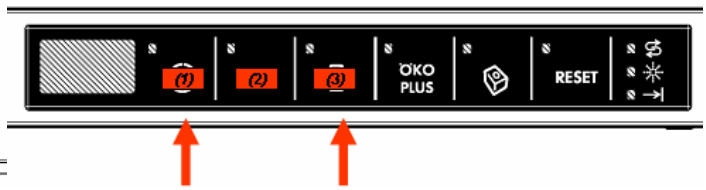
7.4 EDW1850



7.5 EDW1950/1953

In the EDW1950/1953 version, you can only enter service mode with the appliance turned ON and on stand-by awaiting instructions. Hold down the two configured buttons and wait at least 4 sec.





7.6 EDW3510

In the edw3510 touch version, you can only enter service mode with the appliance turned ON and on stand-by awaiting instructions. Hold down buttons 1 and 2 simultaneously as configured and wait a few seconds.

After 3 seconds, the display prompts the Alarms check

- Touch (3) to enter the alarms menu/activate individual components

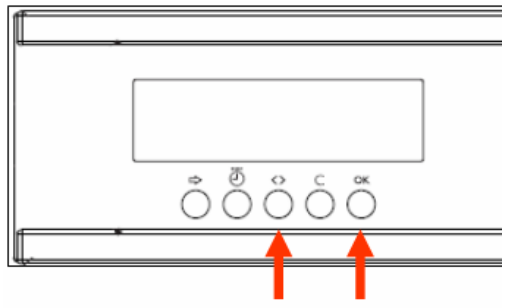
The sequence is defined as follows:
1. Alarm 1
2. Alarm 2
3. Alarm 3
4. Regenerating solenoid valve
5. Drain pump
6. Fill solenoid valve
7. Heating element (if the level of water is reached)
8. Washing pump (at 2800 rpm)
9. Detergent dispenser
10. Drying fan

- Touch (4) followed by (3) to test the LEDs

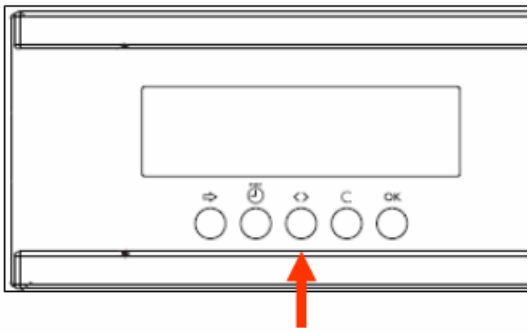
- Touch (4) twice followed by (3) to Select the Test Cycle (15')
- Touch (4) 3 times followed by (3) to Enable/Disable the extra rinse
- Touch (4) 4 times followed by (3) to Set the Brightness
- Touch (4) 5 times followed by (3) to Set the Contrast
- Touch (4) 6 times followed by (3) to Set the Regenerating Level

7.7 EDW2500 SWISS

In the EDW2500 Touch SWISS version, you can only enter service mode with the appliance turned ON and in “CHOOSE PROGRAM” mode; hold down the two OPTION and START buttons as configured and wait a few seconds.

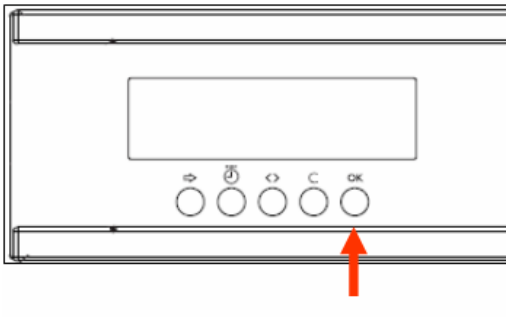


Press the OPTION button to select the menu



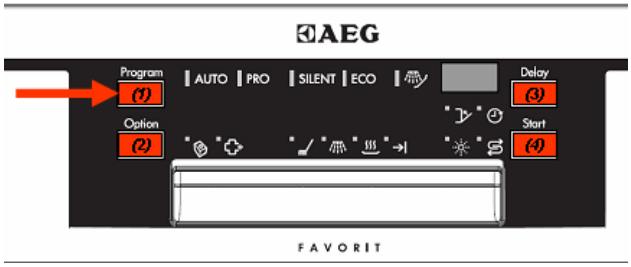
The sequence is defined as follows:
1. Alarm 1
2. Alarm 2
3. Alarm 3
4. Regenerating solenoid valve
5. Drain pump
6. Fill solenoid valve
7. Heating element (if the level of water is reached)
8. Washing pump (at 2800 rpm)
9. Detergent dispenser
10. Drying fan

press the OK button to enter the desired function.



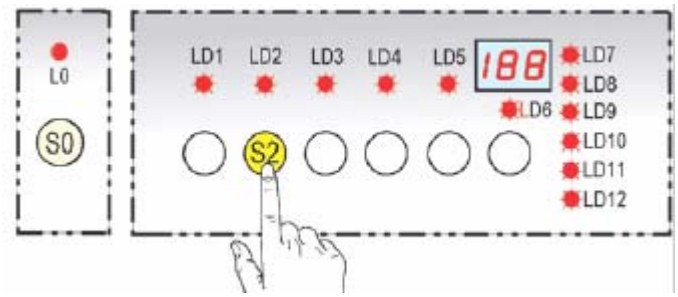
7.8 EDW1850/1950

Alarms and activated components check button 1



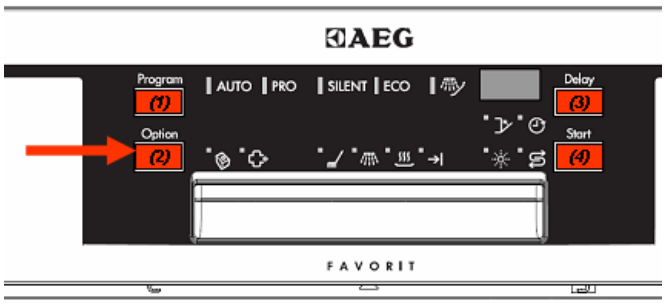
7.8.1 LED test and cancelling alarms stored

Once in Service mode, the LED test and the cancelling of alarms stored is possible using button S2. All LEDs flash for 30 sec. The memory of alarm codes is cancelled.



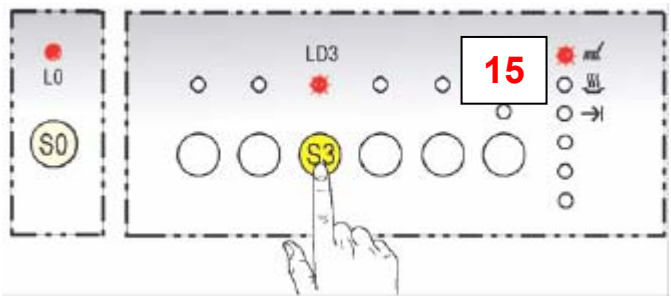
7.9 EDW1850/1950

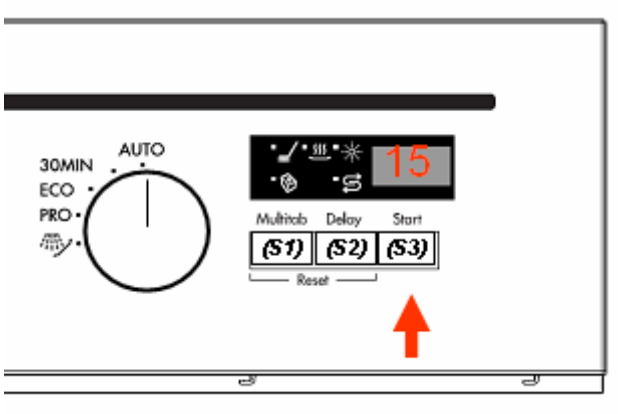
LED check



7.10 Test programme

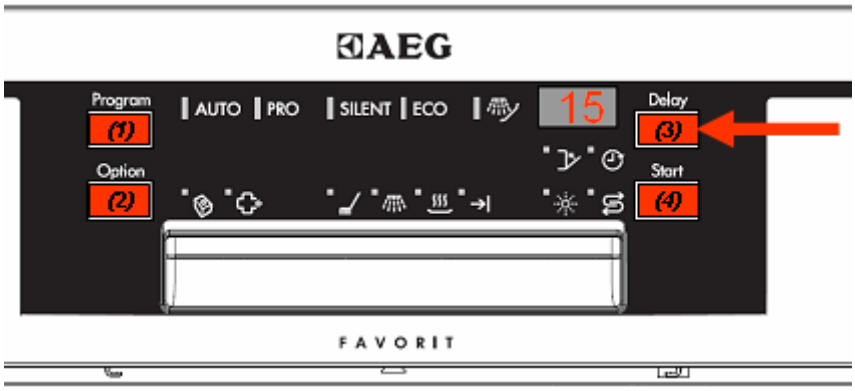
Once in Service mode, activate the test programme using button S3. The test programme starts immediately and lasts approximately 15 minutes.
The test programme progress is shown by the LED relating to button S3.
At the end of the test cycle, the LED relating to button S3 is turned off while the cycle end LED is turned on and the display shows 0.





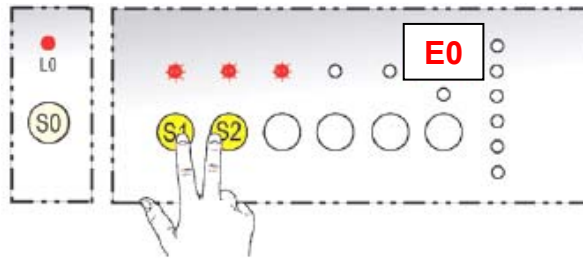
7.11 EDW1850/1950

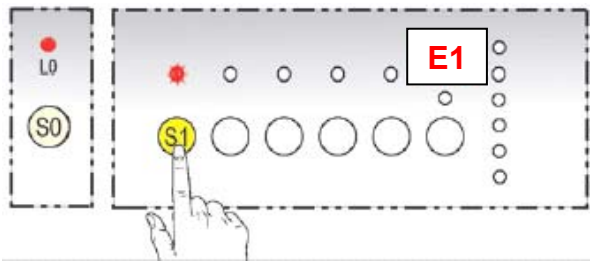
Test programme



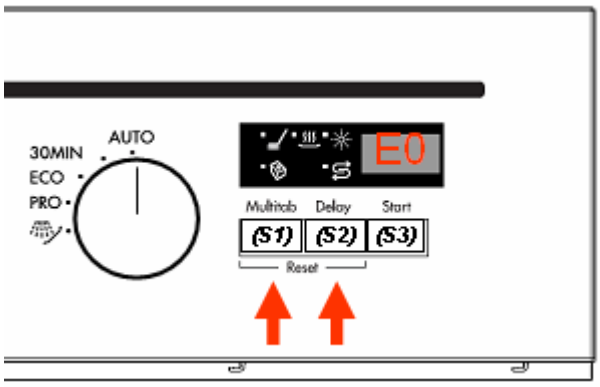
7.12 Enable/Disable additional rinse

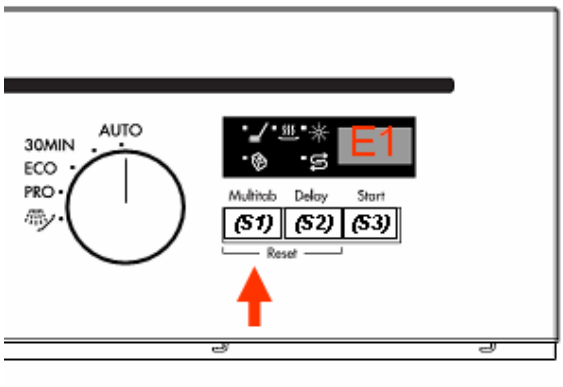
Once in Service Mode, the current status is shown by pressing buttons S1+S2 simultaneously.
With this setting, you can select an additional rinse.
On appliances without a display or with a 1-digit display, the current status is shown by the cycle end LED. If it is on, the function is enabled, if it is turned off, then the function is disabled.
On appliances with a 3-digit display, the current status is shown by “E1” if the function is enabled and by “E0” if the function is disabled.
To modify the enabled/disabled status, press button S1.



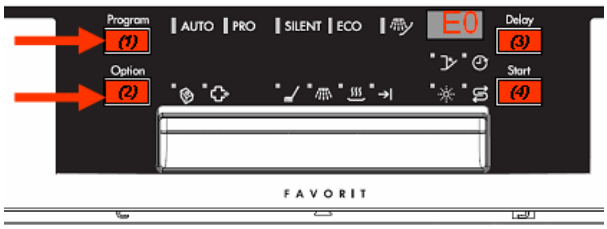


7.13 EDW750

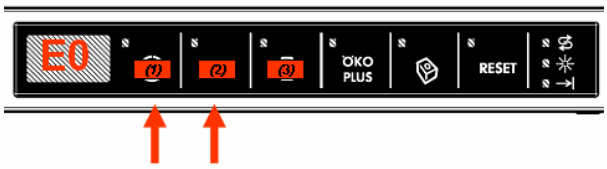


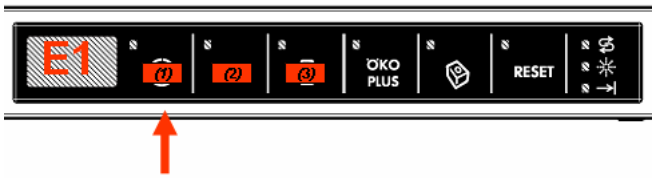


7.14 EDW1850/1950

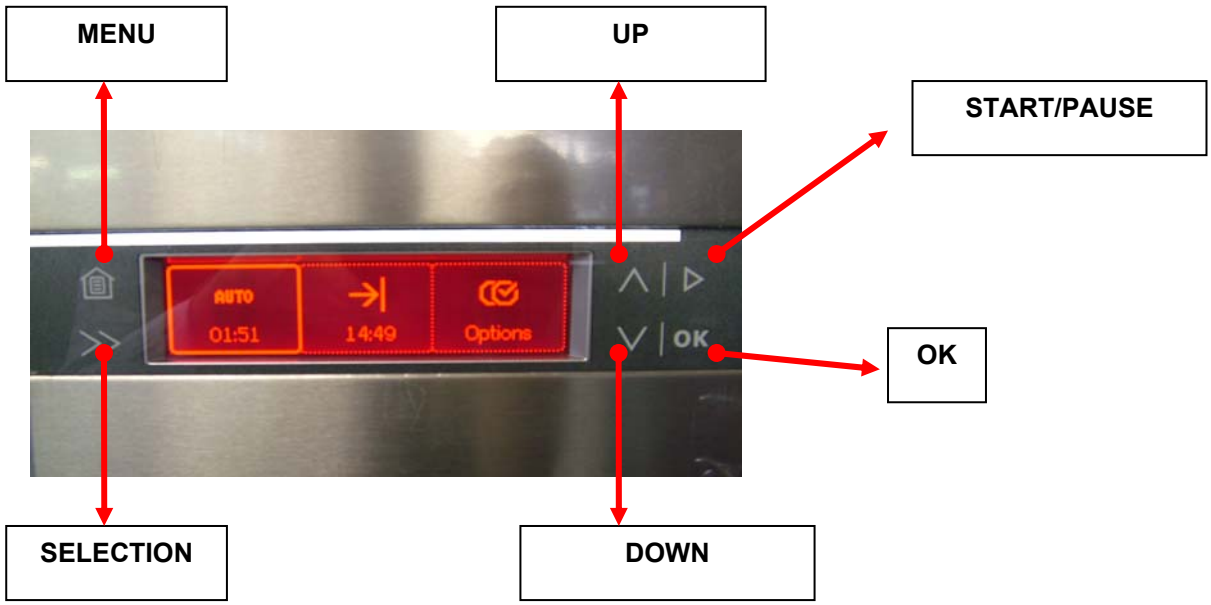


7.15 EDW1953 TOUCH





8 Service Mode Settings for EDW2510 “Touch”



8.1 Accessing diagnostics mode

1. Turn on the appliance by pressing button **S0**
2. Select: Options/Settings/Language
3. Hold down the UP and DOWN buttons simultaneously for 6 sec

4. The first diagnostics mode message is displayed

Press the “Start/Pause” button repeatedly to scroll through the list of the diagnostics mode:

Activations	LCD display	Feature
--	*1 ALARM CODE ixx*	• Shows the alarms stored and activation of the system
1	*3 LED TEST*	• Test of all LEDs and the display • Cancellation of all alarms stored
2	*4 LINE TESTS* *Alternates with* *NUMBER OF CYCLES*	• Selection of test cycle • Count of all cycles carried out
3	*5 PULSE WASHING YES*	• Enables/disables pulse washing
4	*6 EXTRA RINSE NO*	• Enables/disables the extra rinse
5	*BRIGHTNESS 10*	• Brightness setting
6	*CONTRAST 6*	• Contrast setting
7	*HARDNESS 5*	• Adjustment of the regenerating level depending on the water hardness

Press the **OK** button to enter a specific Service Option.

Press **Start/Pause** to change the current setting.

Press **OK** to confirm the modification.
To quit diagnostics mode, press button **S0** to turn off the appliance.

8.2 Alarms and activating individual components

1. Enter diagnostics mode
2. Press the **OK** button to display the alarms:
   ⇩ The display shows the last alarm that occurred (to decode the alarm, please see the table of “Alarms”).
3. Press the **OK** button again to display the second alarm that occurred
4. Press the **OK** button once more to display the third alarm that occurred
5. Press the **OK** button repeatedly to scroll through the list of electronic components, as shown in the table below.

Activations	LCD display	Function enabled
1	1 ERR CODE i 0	⇨ Displays the last alarm that occurred (for example, no alarm)
2	1 ERR CODE i 0	⇨ Displays the last but one alarm that occurred (for example, no alarm)
3	1 ERR CODE i 0	⇨ Displays the last but two alarm that occurred (for example, no alarm)
4	2 TEST ACTIVAT. 4	⇨ Regenerating solenoid valve activated
5	2 TEST ACTIVAT. 5	⇨ Drain pump activated
6	2 TEST ACTIVAT. 6	⇨ Fill to water level solenoid valve activated
7	2 TEST ACTIVAT. 7	⇨ Heating element activated *(only with water at full level!)*

8	2 TEST ACTIVAT. 8	⇨ Washing pump at 2800 rpm activated
9	2 TEST ACTIVAT. 9	⇨ Detergent dispenser cycling
10	2 TEST ACTIVAT. 10	⇨ Drying fan activated *(if turbo-dry)*
11	2 TEST ACTIVAT. 11	⇨ Auto-dosing activated (currently not used)
12	2 TEST ACTIVAT. 12	⇨ Water hardness sensor activated (currently not used)
	*The components are powered when the appliance door is shut. If no button is pressed within 60 seconds, the system automatically quits diagnostics mode.*	

N.B.: All functions can be accessed repeatedly by pressing the **OK** button repeatedly.

9 Alarm codes

9.1 Alarm Management

In “ProClean/RealLife” appliances, the alarm codes are defined in families of alarms and current alarms, displayed as:

iXY

i = alarm indication X = family of the alarm Y = Current alarm

Caution:
Only the alarm family codes are displayed to the user.
The complete alarm code will be stored among the three alarms that can be stored by the appliance.
A new alarm code is only stored if it differs from the last one stored.
The three most recent alarm codes can be displayed only in Service Mode or using the Sidekick tool.
Appliances with a display will show the alarms by a number of flashes of the cycle end LD, such as in “DIVA”: i10=1 flash, i50=5 flashes, iB0=11 flashes

9.2 Description of the alarms

9.2.1 “i00” code family: Low mains voltage

The electronic board makes sure the dishwasher operates within certain voltage limits. If - during a cycle - the voltage drops below the lowest limit, the electronic board suspends all loads and interrupts the cycle under way. The “i00” alarm is then triggered. The lowest main voltage threshold is 180 Volt.
If the voltage goes back to over 186 Volt, the electronic board cancels the error status and the cycle resumes. The “i00” alarm is also deleted.
If the mains voltage continues to exceed the maximum threshold, the electronic board does not do anything.

IMPORTANT: the “i00” alarm is not stored and cannot therefore be read in Service Mode.

9.2.2 “i10” code family: Water tap closed

9.2.2.1 “i10" code – during static filling

This alarm code is used to display problems with the water inlet tap closed at the beginning of the programme. It is set up to detect problems during the static water filling. A drain phase is performed before the error is displayed to the user.

- Acoustic signal and visual alarm, depending on the appliance customisation; the programme can be restarted.
- The water level defined is not reached within the time limit set.
- The time limit set starts when the fill solenoid valve is opened.
- The time limit set is reset when the fill solenoid valve is closed.
- The water will first be drained before an error is displayed to the user.
- Time limit set: Normal 90 sec; Test cycle = 30 sec (times could differ as they are defined in the washing cycle specifications).

9.2.2.2 “i11" code – during dynamic filling

- Acoustic signal and visual alarm, depending on the appliance customisation; the programme can be restarted.
- The water level defined is not reached within the time limit set.
- The time limit set starts when the fill solenoid valve is opened.
- The time limit set is reset when the fill solenoid valve is closed.
- The water will first be drained before an error is displayed to the user.
- Time limit set: Normal 120 sec; Test cycle = 60 sec (times could differ as they are defined in the washing cycle specifications).

9.2.3 “i20” code family: Draining problems

- Acoustic signal and visual alarm, depending on the appliance customisation; the programme can be restarted.
- The level switch restore point is not reached within the time limit set.
- The time limit set starts when the drain pump is activated.
- The time limit set is reset when the drain pump stops normally.
- Time limit set: Normal 90 sec; Test cycle = 60 sec.

9.2.4 “i30” code family: Aqua Control

9.2.4.1 “i30” code

- Acoustic signal and visual alarm, depending on the appliance customisation; the programme is restarted automatically in this alarm condition.
- If this alarm condition occurs, the drain pump is activated.
- Time limit set: 10 sec.

9.2.5 “i40” code family: analogue pressure switch

9.2.5.1 “i41” code

- The alarm is defined if no signal is detected from the analogue pressure switch for more than 1 sec or if the signal is out of range.
- The programme stops and the error is displayed.

9.2.5.2 “i42” code

- The alarm is defined if the signal originating from the sensor is not stable enough or is out of range for an empty appliance.
- The calibration is performed during the activation of the drain pump and immediately after to guarantee that if the non-return valve is not sealed, the backflow of water does not corrupt the actual calibration.

9.2.6 “i50” code family: Washing motor problems

9.2.6.1 “i51” code – asynchronous motor

- Acoustic signal and visual alarm, depending on the appliance customisation; the programme is suspended.
- The washing pump runs without being activated by the software, the cause is a short-circuit.
- The heating element is not activated.
- If the alarm occurs, the fill solenoid valve is activated up to the level pressure switch tripping point, then the cycle is suspended.
- Time limit set: 8 sec.

9.2.6.2 “i52” code – synchronous motor

- The alarm is signalled when an abnormal extra current of 1.3 Amps is detected.

9.2.6.3 “i53” code – asynchronous motor

- The alarm is signalled when a current above the maximum limit allowed of 1.3 Amps is detected.

9.2.6.4 “i54” code – inverter motor with rotor locked

- The alarm is signalled when the motor is locked at the start or during its actual activation.
- Possible causes may be the presence of dirt, too large a load, mechanical problems on impeller.

9.2.6.5 “i55” code – motor control board over voltage

- The alarm is signalled when the voltage detected on the motor control board is more than 400 V.

9.2.6.6 “i56” code – motor control board under voltage

- The alarm is signalled when the voltage detected on the motor control board is less than 255 V.

9.2.6.7 “i57” code

- The alarm is signalled if a voltage of more than 440 V or less than 215 V is detected.

9.2.6.8 “i58” code – washing pump connection

- The alarm is signalled if an incorrect connection of the pump is detected, based on the current measurements check.
- Time limit set: 2 sec.

9.2.6.9 “i59” code – current measurement error on motor control board

- The alarm is signalled if there is an error in reading the current on the motor control board
- The condition is verified by the sum of currents of each of the phases, which should be nearly zero: if this sum is more than 40mA for longer than 300 msec then an error condition occurs.

9.2.6.10 “i5A” – washing pump over temperature

- an internal warning is defined when the internal calculations based on the currents lead us to assume that the temperatures are outside the standard limits (200 °C - with 40 °C margin due to measurement and calculation tolerances).
- The alarm is signalled if the value is more than the threshold of 178 °C.

9.2.7 “i60” code family: Heating element problems

9.2.7.1 “i60” code – heating element

- The alarm is stored and displayed only in service mode; the washing programme continues without the activation of the heating element.
- During the heating phases, the rise in temperature is monitored with an update every 3 min.
- Within these 3 minutes, the temperature must rise by at least 1 °C.

9.2.7.2 “i61” code – heating element in over temperature

- If the temperature of the water detected is more than 78 °C, the cycle is suspended.

9.2.8 “i70” code family: NTC problems

9.2.8.1 “i70” code

- The alarm is stored and displayed only in service mode; the washing programme continues without the activation of the heating element.
- Monitoring starts immediately after the programme has been started.
- The voltage measured at the ends of the NTC must be between 0.04 and 4.7 V.
- Time limit set: 10 sec.

9.2.9 “i90” code family: Configuration problems

9.2.9.1 “i91” code

- No washing programme start is possible, can be resolved by turning the appliance off and back on again.
- The display board does not satisfy the identification requests of the main board.

9.2.9.2 “i92” code

- The alarm is signalled if the configuration control of the washing cycles provided erroneous results.

9.2.10 “iB0” code family: Turbidity Sensor Problems

9.2.10.1 “iB0” code - turbidity sensor

- The alarm is displayed if the calibration procedure is not completed after 15 sec.
- The washing programme will run as though the dirt value to be considered is high.

9.2.11 “iC0” code family: Communication problems

9.2.11.1 “iC0” code – display board communication

- The error signal is displayed if the communication system does not recognise any display board.

9.2.11.2 “iC1” code

- After three attempts to establish communication, an error is signalled in the hardware control.

9.2.11.3 “iC2” code

- The washing programme is suspended but it can be restarted if the alarm conditions no longer apply.

9.2.11.4 “iC3” code – Communication between the mother board and the motor control board

- The alarm is signalled if the communication between the mother board and the motor control board does not start.
- Acoustic signal and visual alarm, depending on the appliance customisation; the washing programme is restarted automatically if the error conditions no longer apply.

9.2.12 “iD0” code family: Tacho problems

9.2.12.1 “iD0” code – no signal

- The alarm is stored and displayed only in service mode; there is a new control for each new phase.
- If the washing pump is activated but there is no tacho signal for 30 sec then the motor speed is set to full speed and the heating element is not activated.

9.2.12.2 “iD1” code

- The alarm is stored and displayed only in service mode.
- If the washing pump is activated but there is no tacho signal for 5 sec then the heating element is temporarily deactivated. If after another 30 sec there is still no signal the appliance displays an error code iD0.

9.2.13 “iE0” code family: Flowmeter position

- The alarm is stored and displayed only in service mode; there is a new control for each new phase.
- The alarm is signalled if the desired position of the flowmeter is not reached after 120 sec; the heating element is deactivated.
- If the signal from the flowmeter does not change after 15 sec, the software suspends the positioning for 2 sec and resumes after another max 120 sec.

9.2.14 “iF0” code family: Over-filling

9.2.14.1 “iF0” code

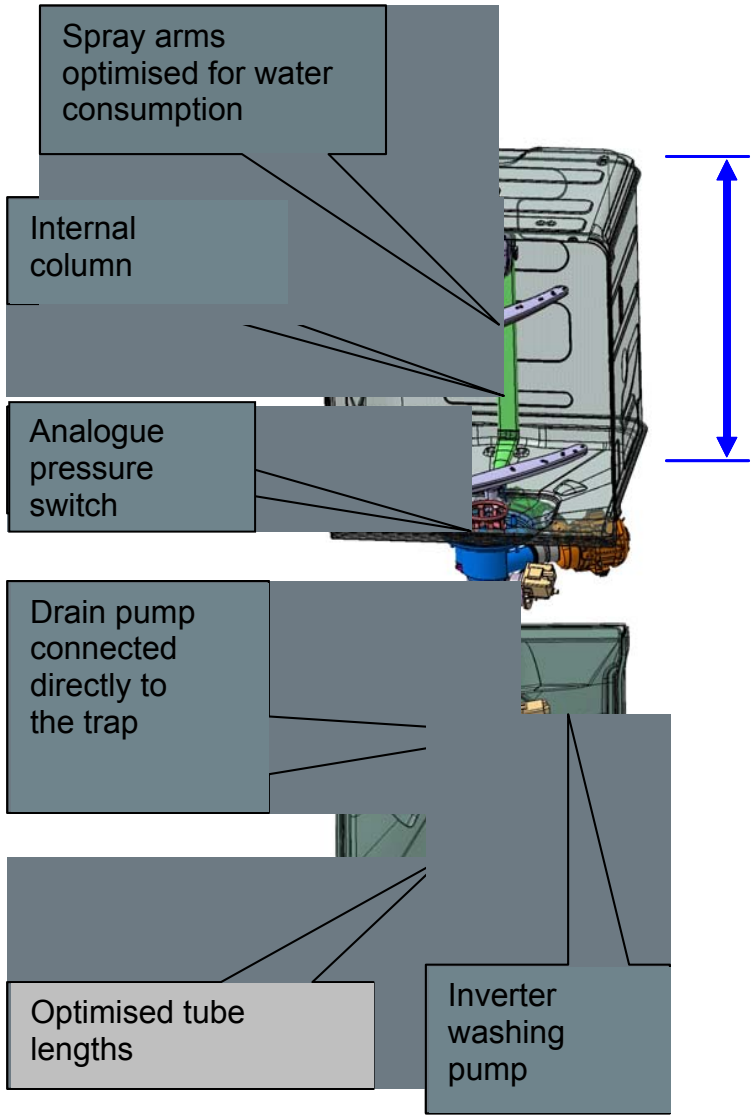
- The alarm is stored and displayed only in service mode; the programme continues.
- The error situation is recognised when the total filling times exceed the limits.
- The times are accumulated at each subsequent filling and reset every time the drain is activated.
- If the alarm is detected, the heating element is not activated and the subsequent fillings are ignored.

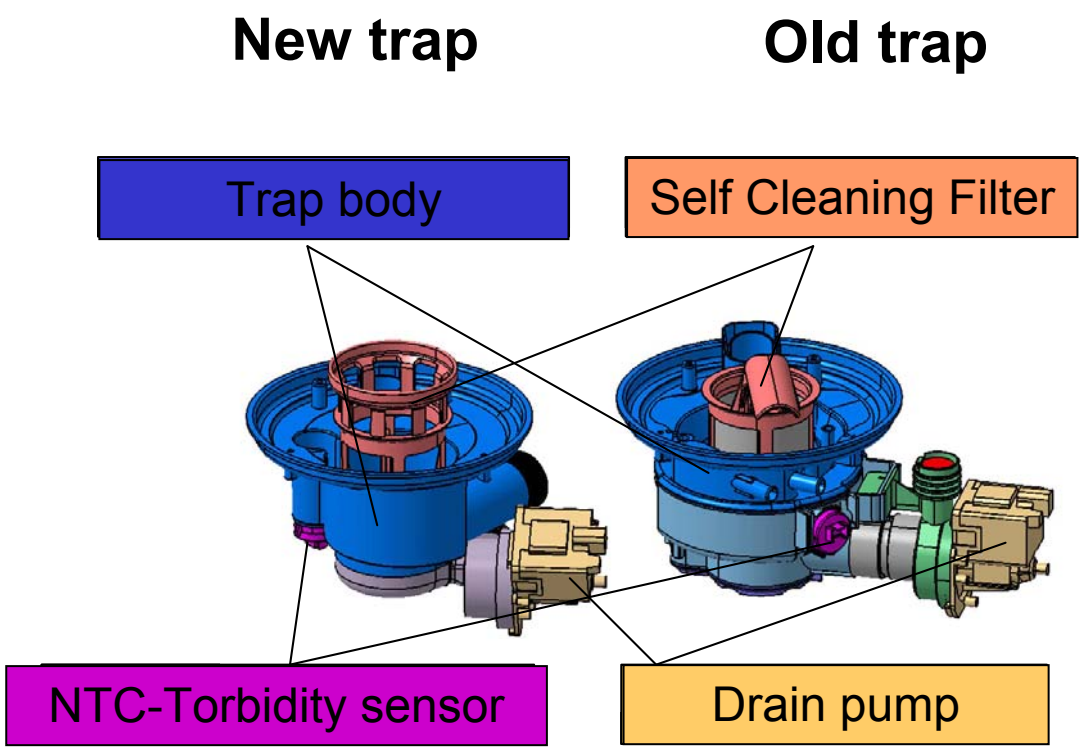
9.2.14.2 “iF1” code

- The alarm is stored and displayed only in service mode.
- The alarm condition is recognised if the safety water level is exceeded for more than 4 sec.
- A drain phase is activated until the water level drops below the safety level.
- The washing programme continues only if this condition is achieved.

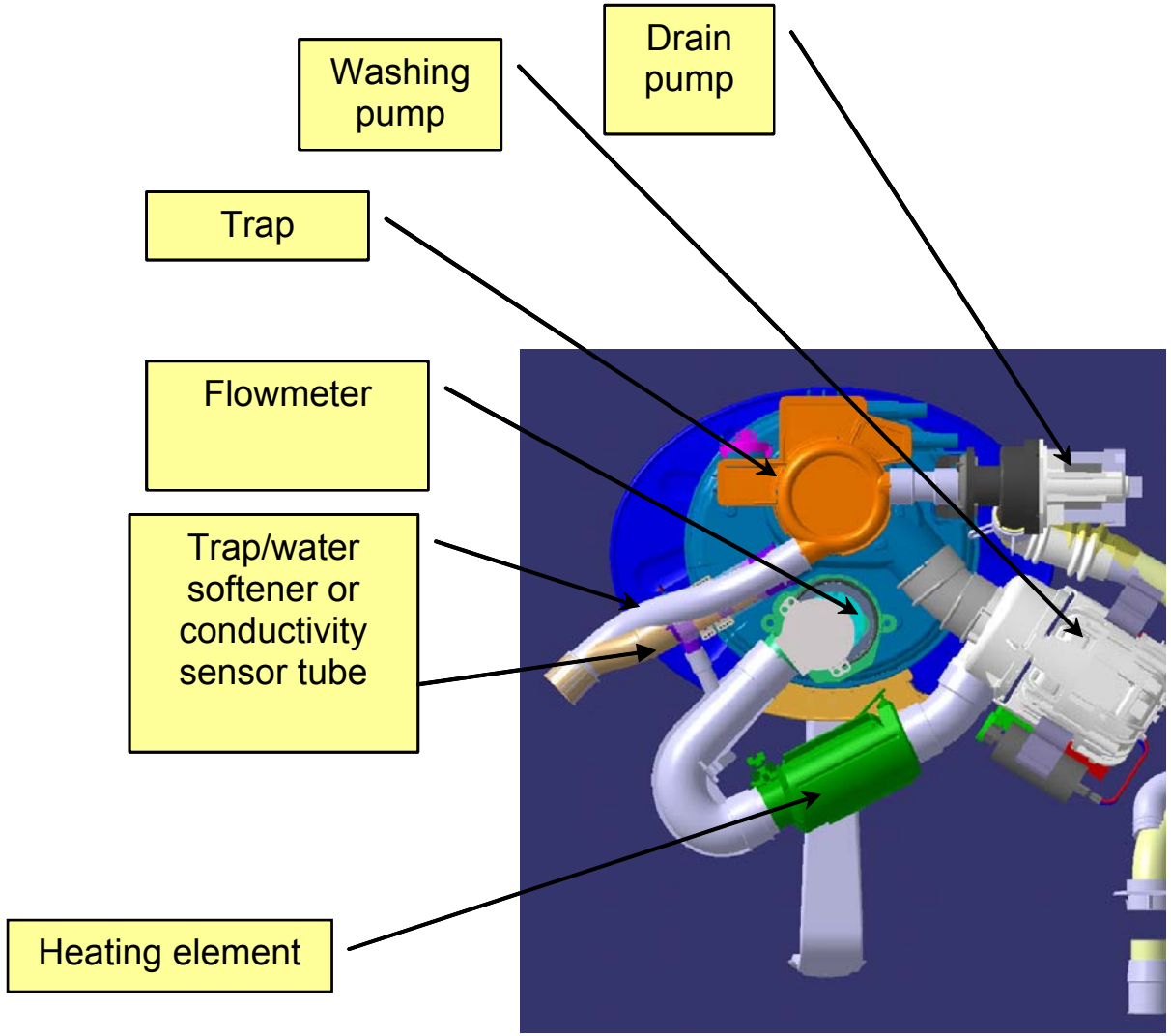
10 Technical details

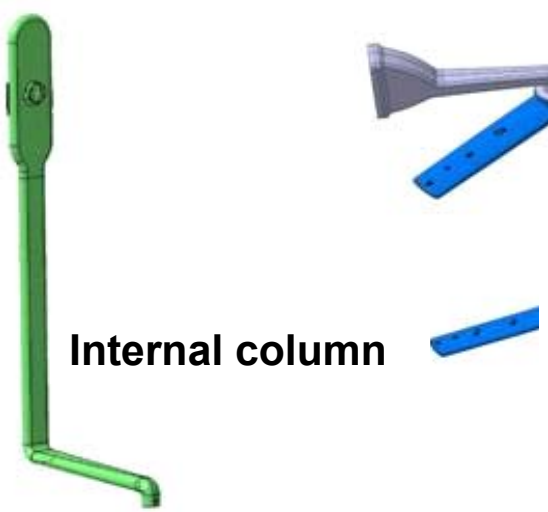
10.1 New hydraulic circuit





Detail of heart between 60cm, 45cm & BIG





Internal column

Spray arms

Flat filter

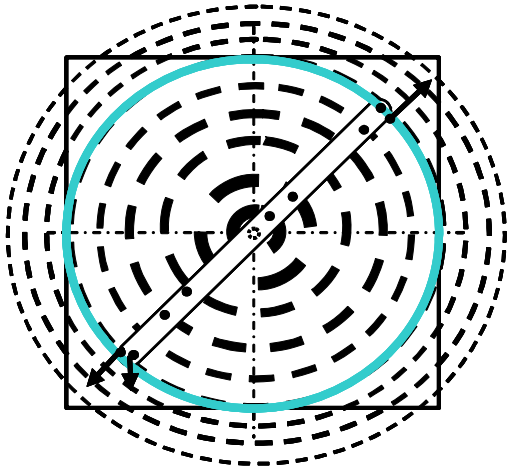
AEG & Elux drain filter

Trap

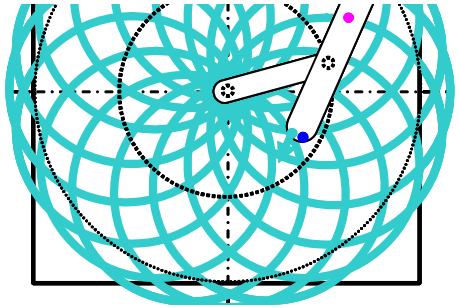
- The hydraulic components were mainly designed to reduce the volume of water contained
- Spray arms and filters were designed differently depending on the Brand
- Flow meter to manage the washing action of the spray arms

Flowmeter

Traditional spray arm

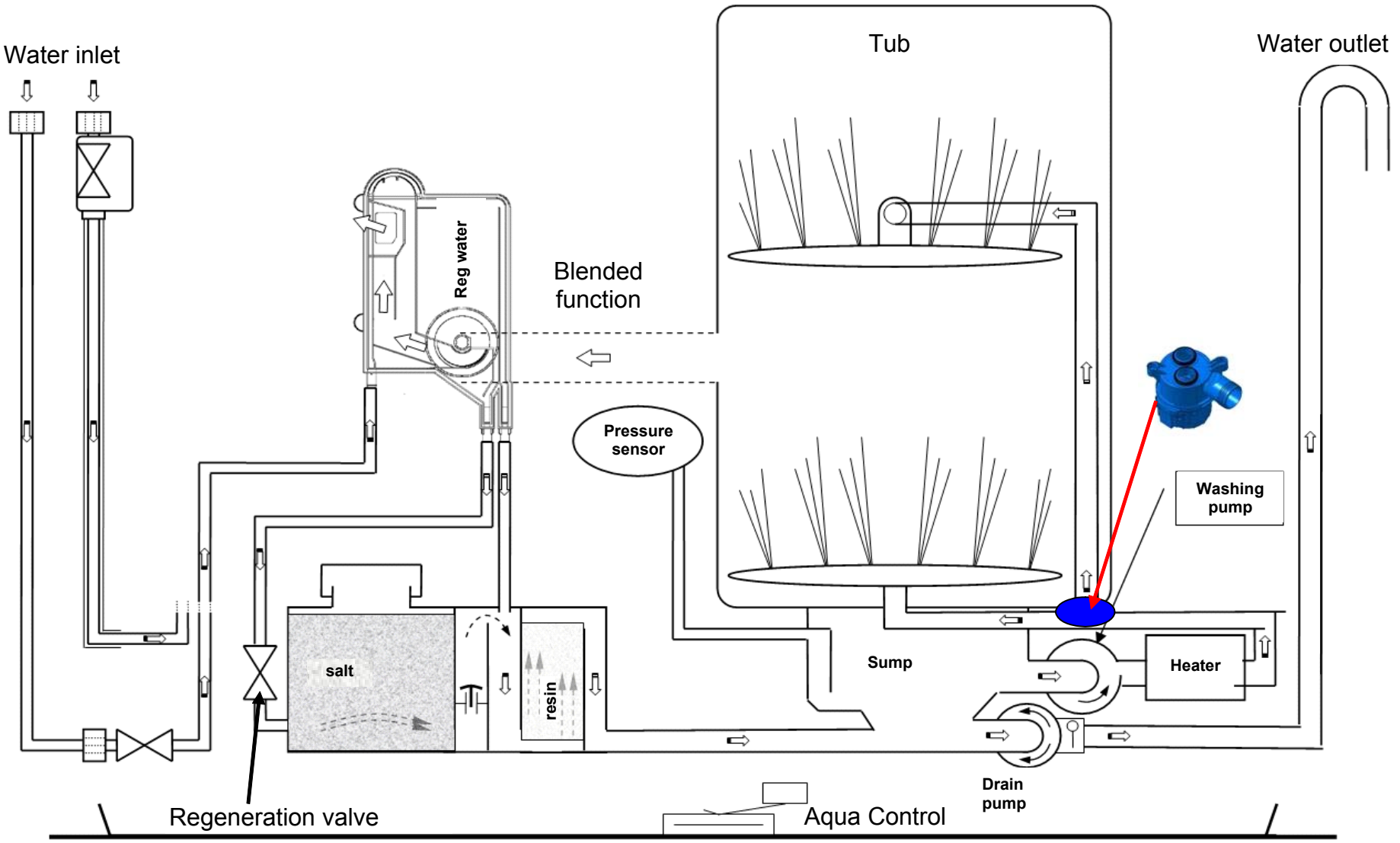


Satellite Spray Arm

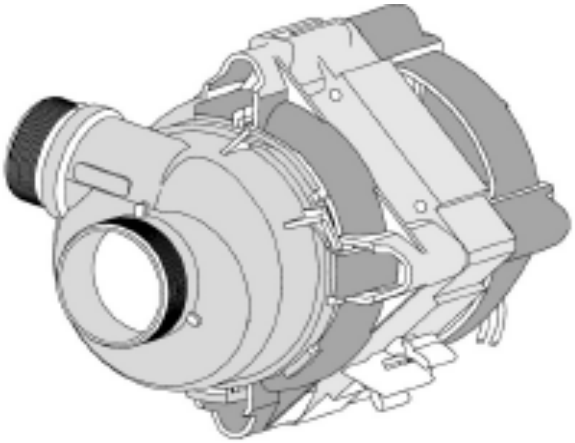


Better cover in washing results in a higher cleaning index

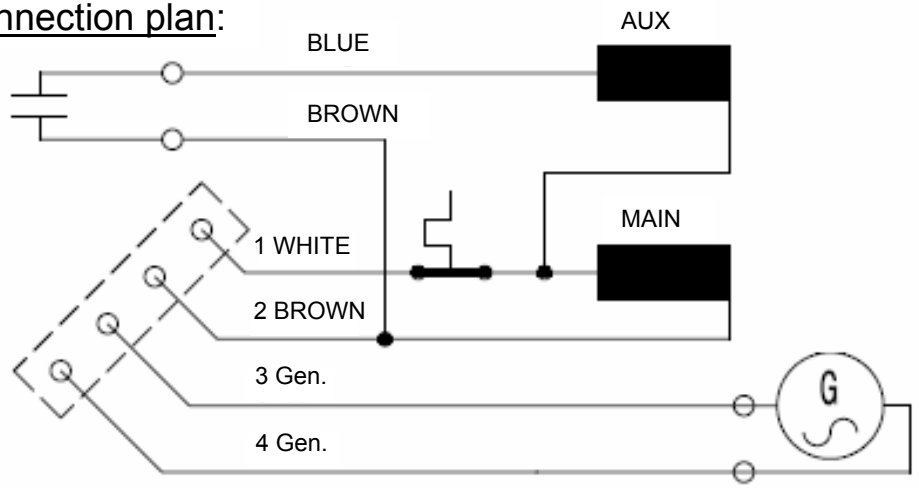
10.3 Water circuit



10.4 Single-phase asynchronous washing pump

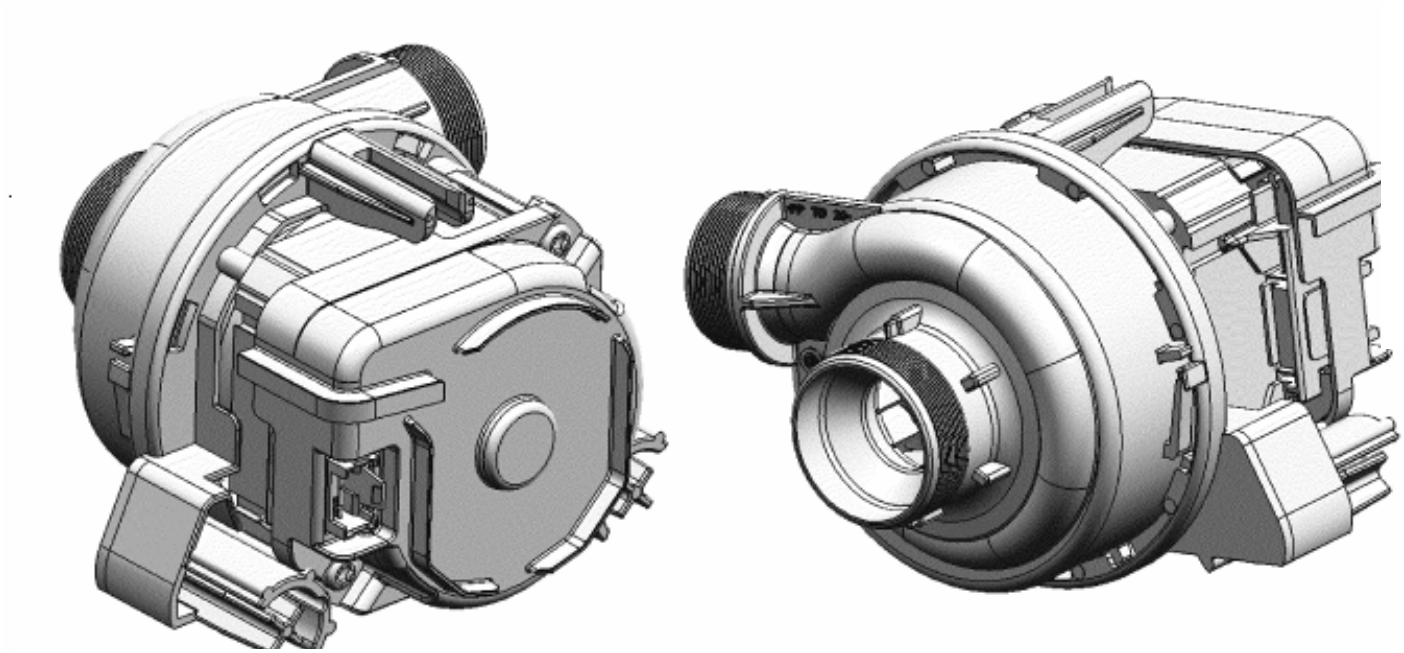


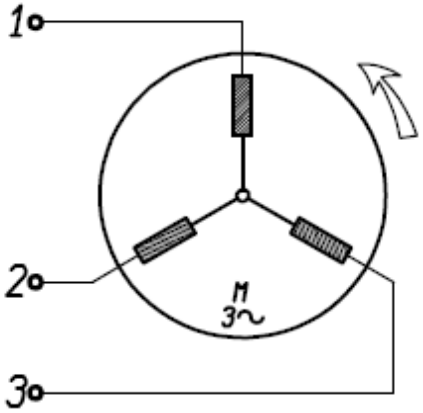
Connection plan:

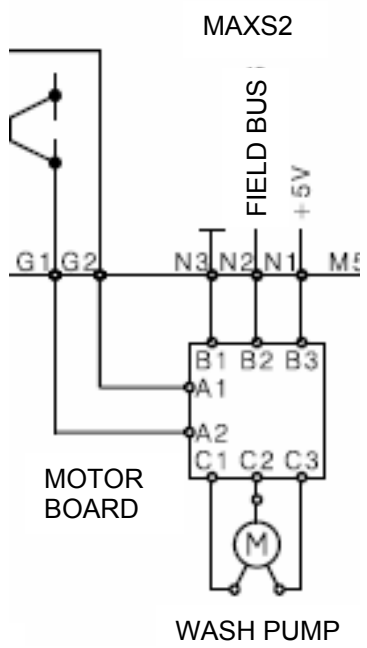


- Driven by a single-phase induction motor and auxiliary coil (condenser 3 µF) with an absorbed power of 90 W
- In models with tachometric function, the speed may vary from 1600 to 2800 rpm for pulse washing (control on phase)
- Main coil resistance: 95 ohms
- Auxiliary coil resistance: 130 ohms
- Tachometric resistance: 220 ohms

Three-phase asynchronous motor (Inverter motor):





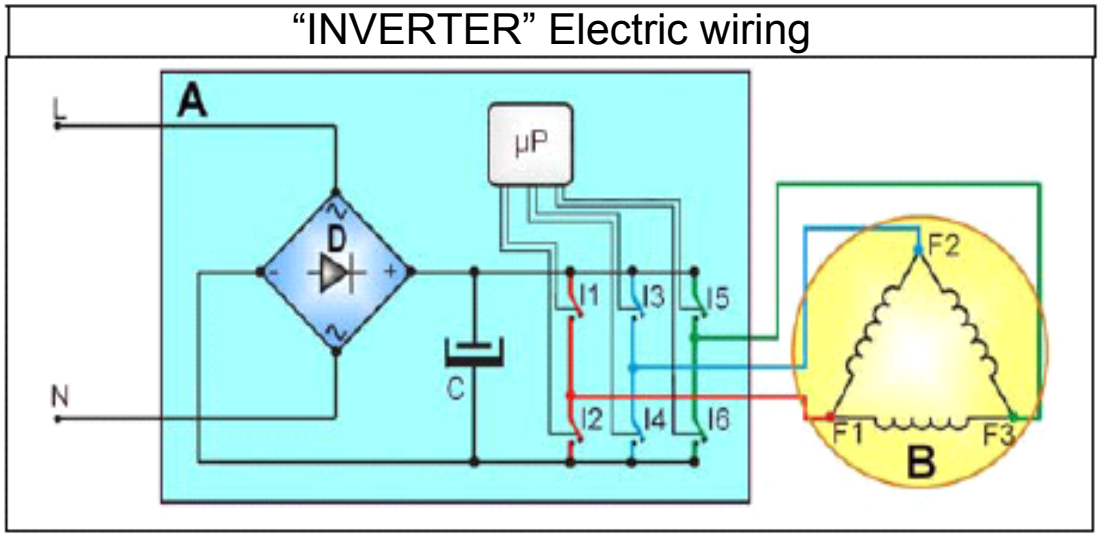


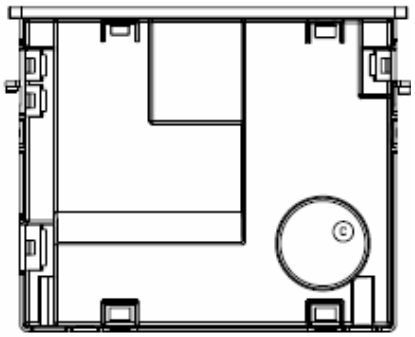
The motor must be powered by a specific electronic board, which also guarantees the thermal cut-out of the actual motor.

Electrical details:
230/240 V 50/60 Hz Class F
Resistance: 1-2: 56 ohms/2-3: 56 ohms/3-1: 56 ohms

L = Phase
N = Neutral
A = Inverter board
B = Motor
C = Condenser
D = Diodes
I1-6 = Switches
F1-3 = Motor connectors
µP = Microprocessor

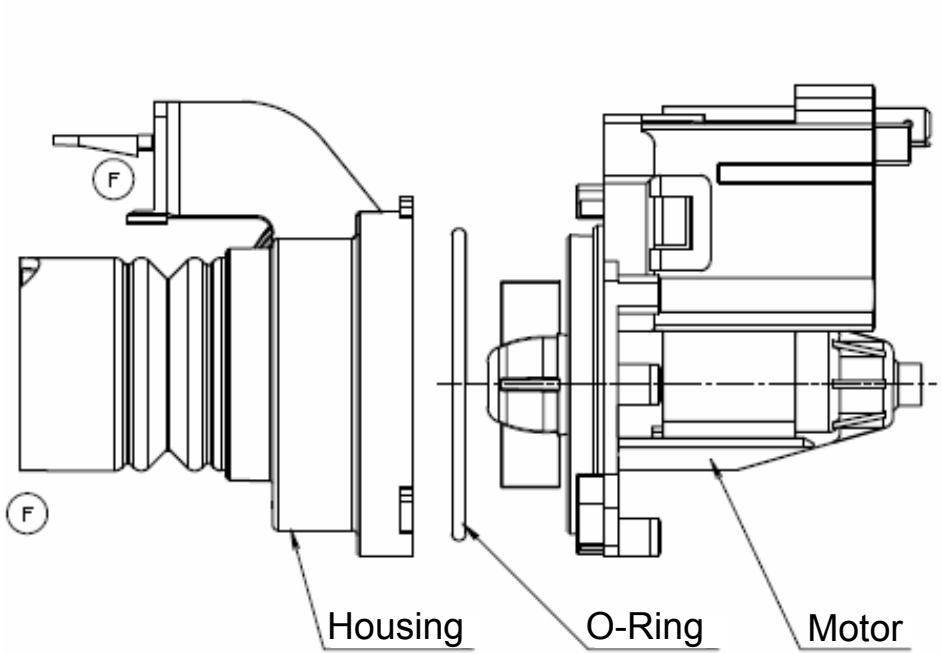
“INVERTER” Electric wiring

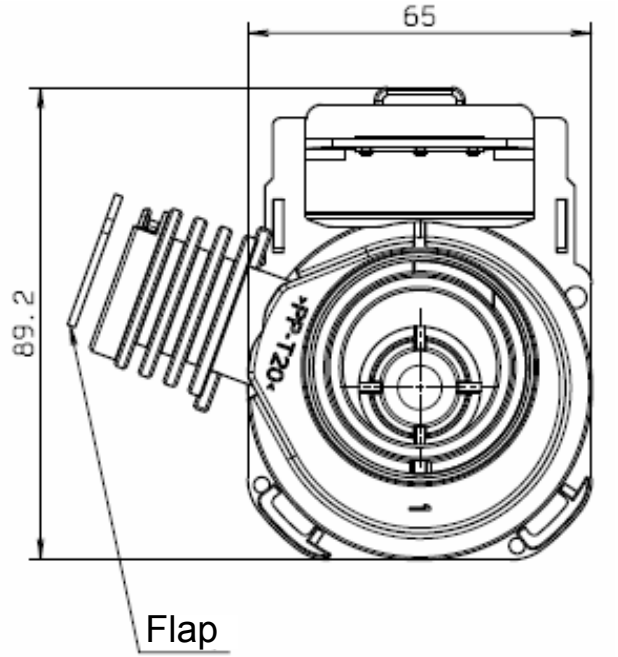




A specific electronic board (A) converts the single-phase domestic power into three-phase power. The characteristics of the three-phase power may be changed to manage the motor power and its speed respectively.
Single-phase power (applied to connectors L-N) is modified by a diode (D) to generate approx. **325 V** at the ends of condenser C.
The combined opening and closing of switch I1-I6 (managed by the microprocessor) determines the voltage and frequency of the power applied to the motor.

10.6 Drain pump





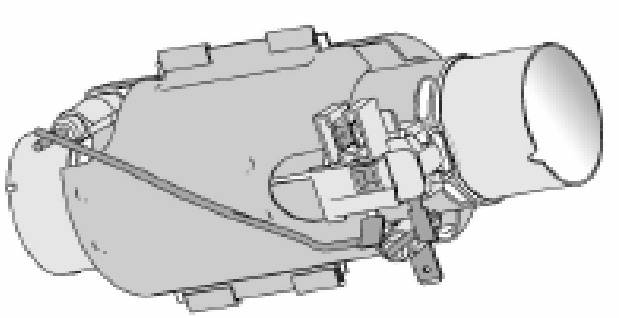
Driven by a synchronous motor:

Voltage 230 V 50 Hz

Power: 30 W → resistance approx. 225 ohms

Max. flow rate: 15 litres/min

10.7 Heating element

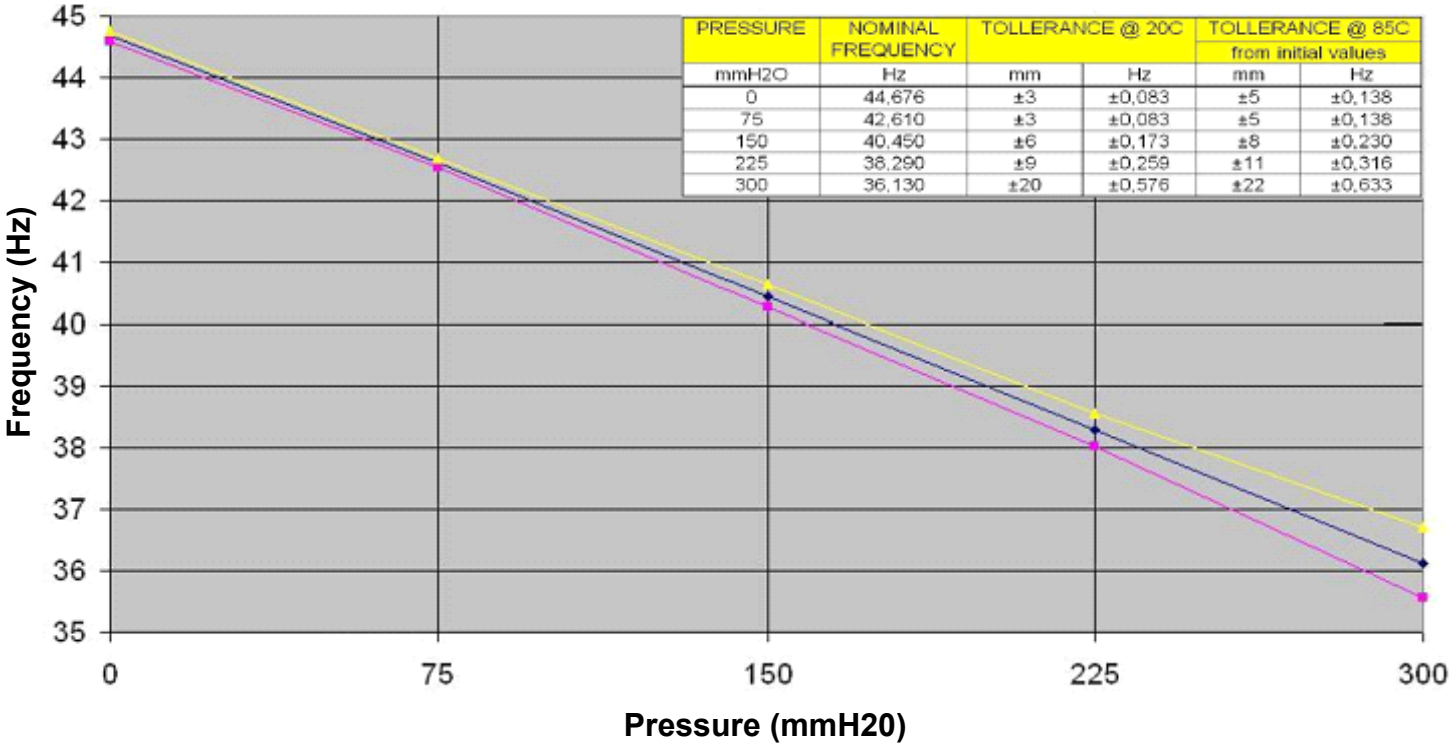


Absorbed power:	2100 W
Cold resistance:	25 Ω
Safety thermostat:	98 °C ± 5 °C
Safety thermostat:	206 °C

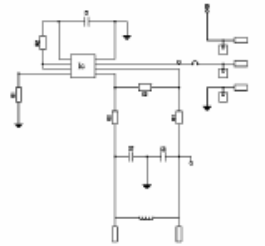
The heating element, housed in a tube, is used to heat the water.
The heating element is not activated during the drying phase.
Connected to the washing pump delivery and to the conduit or the flowmeter which directs the water to the top spray arm.
Standard version version for all the appliances in the range.

Here are the main characteristics of the pressure switch:
frequency output (0-5 V signal),
range: 0-300 mm of water,
connection: 3way RAST 2.5 mm,
frequency and characteristics of tolerances:

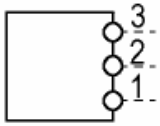
PRESSURE	NOMINAL FREQUENCY	TOLLERANCE @ 20C		TOLLERANCE @ 85C from initial values	
mmH2O	Hz	mm	Hz	mm	Hz
0	44,676	±3	±0,083	±5	±0,138
75	42,610	±3	±0,083	±5	±0,138
150	40,450	±6	±0,173	±8	±0,230
225	38,290	±9	±0,259	±11	±0,316
300	36,130	±20	±0,576	±22	±0,633



Electronic pressure switch



Electric symbol

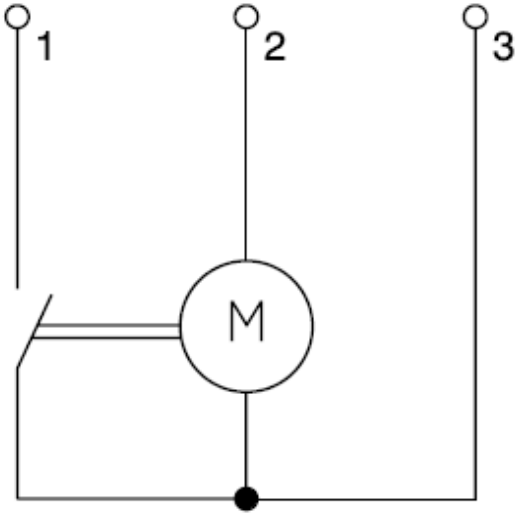


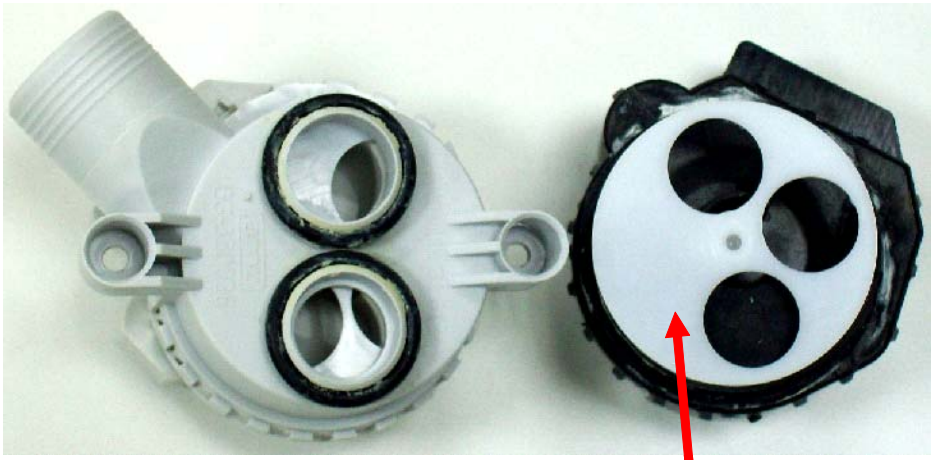
10.9 Flowmeter

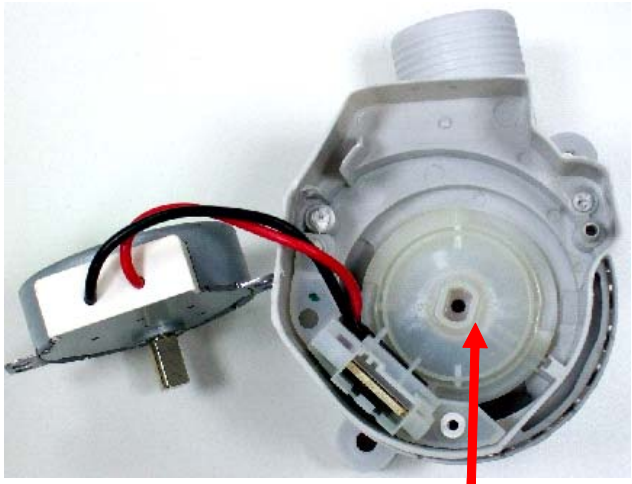
The flowmeter controls the flow of water towards the two dishwasher spray arms.
The flowmeter is designed to split the flow of water towards the bottom spray arm, towards the top one or towards both spray arms.

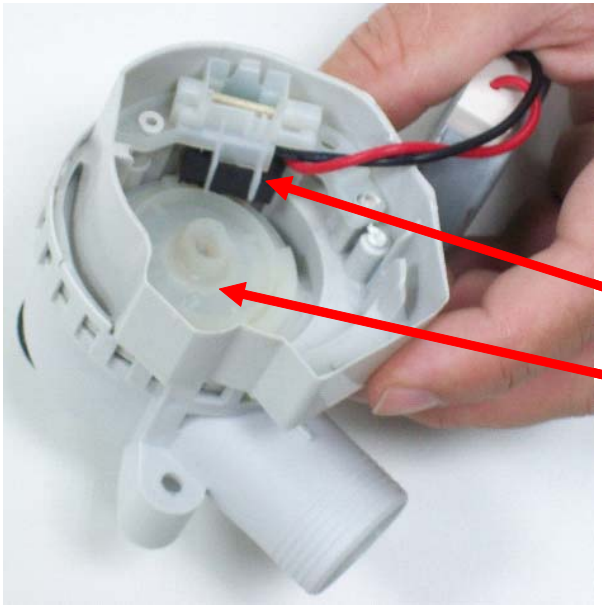
Micro-switch

Synchronous motor
230 V AC, 50/60 Hz
2.5/3 rpm
Anti-clockwise rotation





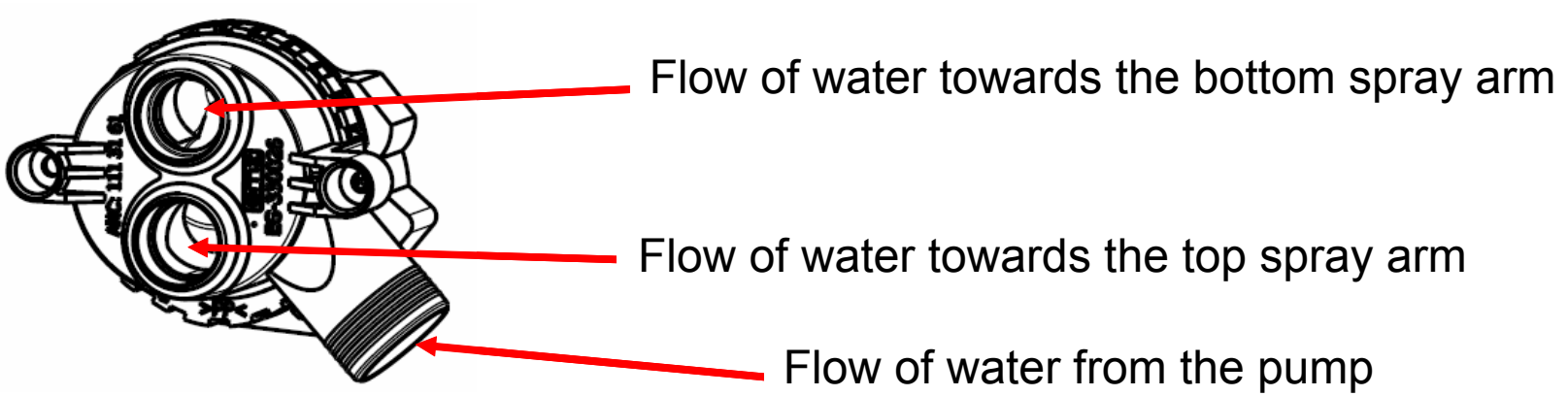




Separator with three holes to define different water flows

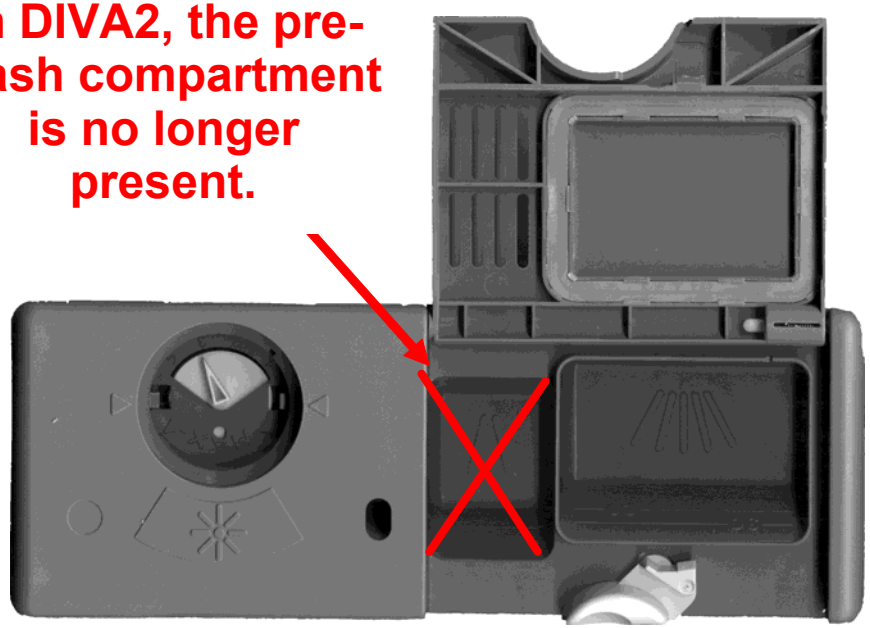
Micro-switch

The cam activates the micro-switch



ANC	111 31 61-00	
SBP no.	111 31 87 - 00	
T1 on	1.00 sec. +/- 0.35	(only upper)
T1 off	6.50 sec. +/- 0.35	**Contact open**
T2 on	5.50 sec. +/- 0.35	(only lower)
T2 off	3.00 sec. +/- 0.35	**Contact open**
T3 on	3.00 sec. +/- 0.35	(upper and lower)
T3 off	5.00 sec. +/- 0.35	**Contact open**
Water leakage at 0.3 Bar	1.2 litre/min.	(only upper)
Water leakage at 0.3 Bar	2.0 litre/min.	(only lower)
Rated voltage	220/240 VAC - 50 Hz	
Connection	RAST2.5 housing, suitable for RAST2.5 connector R2.5/2-3cdef	
Current at switch	0.5 ... 1 mA	
Contract resistance	< 1 KOhm (measure with 3 V/10 mA	

In DIVA2, the pre-wash compartment is no longer present.



Caution:

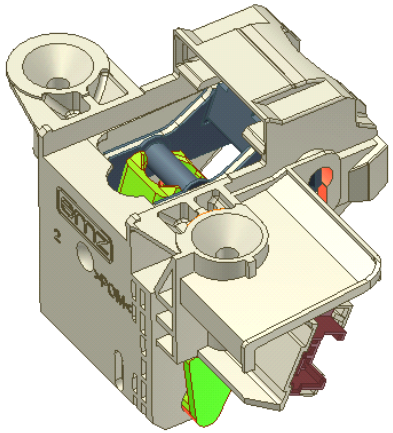
If the dishwasher is turned off after the detergent dispenser was opened, the latter needs to be closed manually.

This should also be done in service mode.

Otherwise the sequence will be modified.

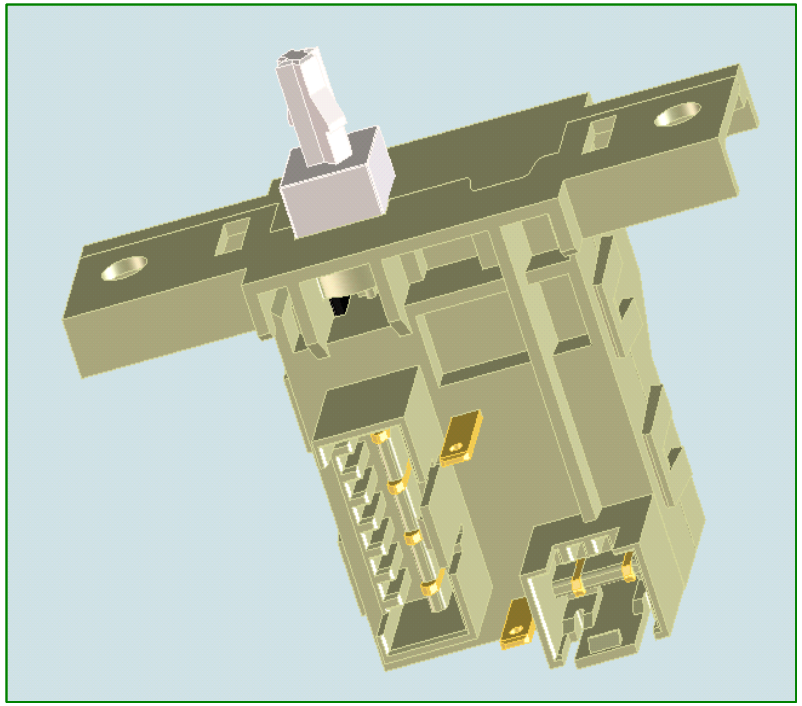
The dispenser can only be closed when the dispenser coil has cooled.

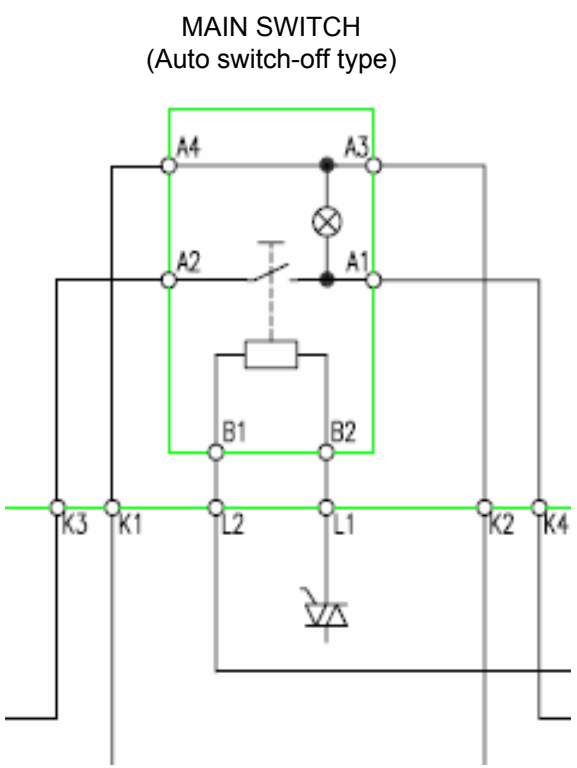
10.11 Traditional door

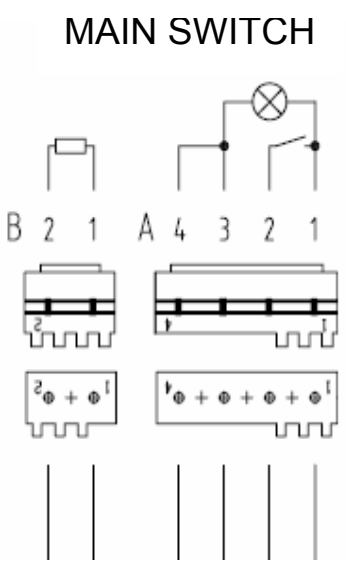


The door lock is guaranteed by a mechanical latch. The system is also connected to the main electronic board by a micro-switch at **12 V**, which detects the status of the door.
This means that the micro-switch does not disconnect the appliance from the mains voltage when the door is open.

10.12 ON/OFF Switch



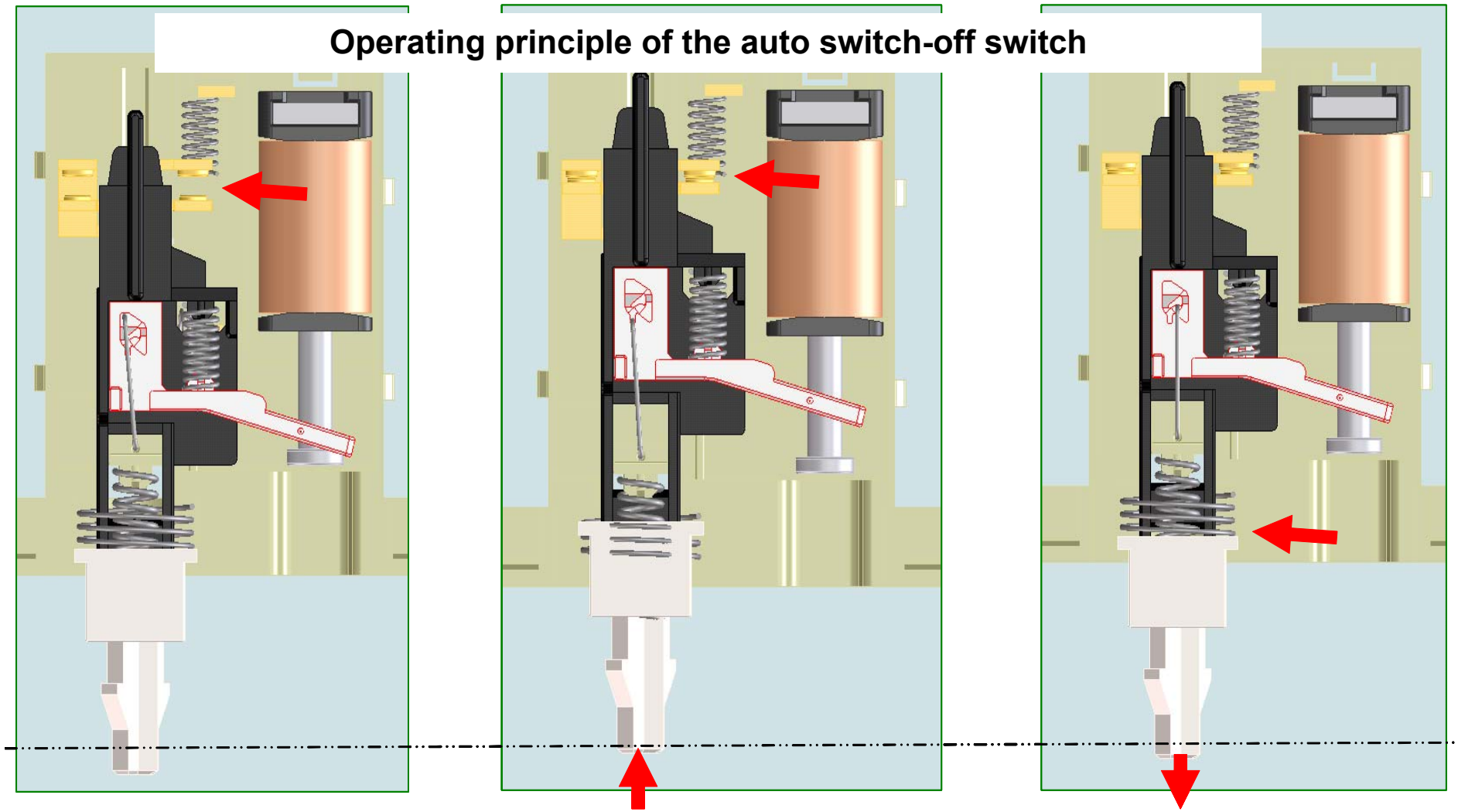




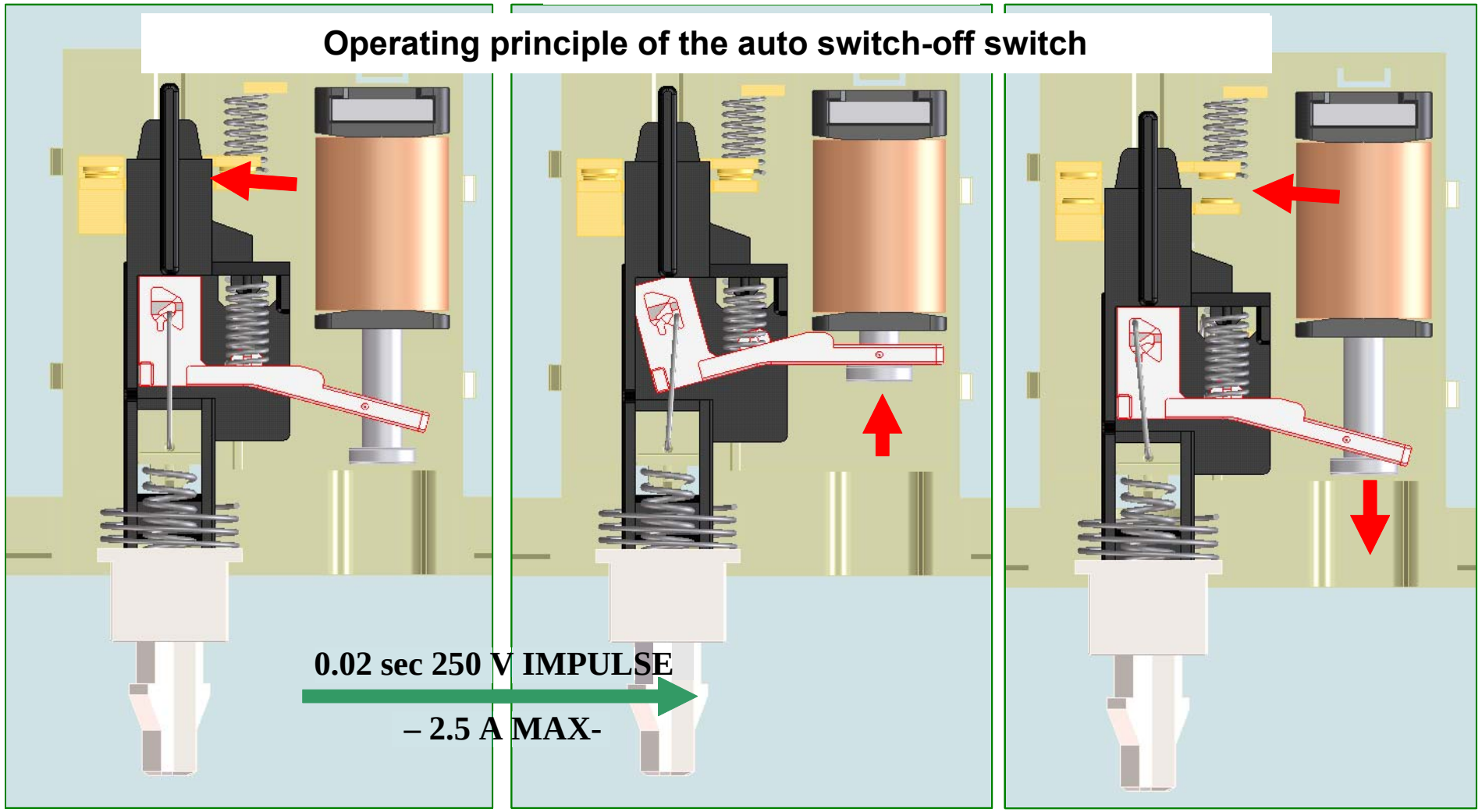
Objectives:

- remove all electricity consumption at the end of each cycle
- cost benefits for use of a standard switch
- possible use in all Diva2 electronic platforms in FS/BI/FI structures

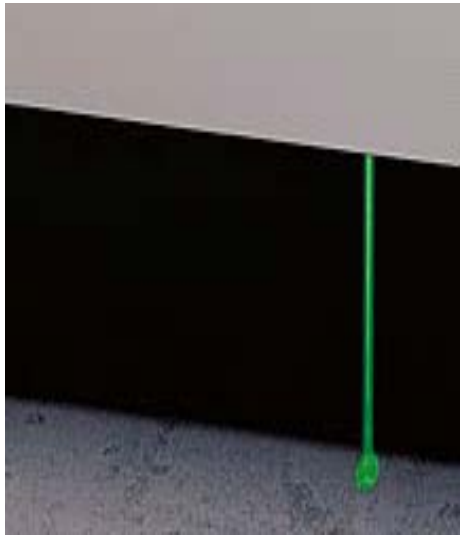
Operating principle of the auto switch-off switch



Operating principle of the auto switch-off switch



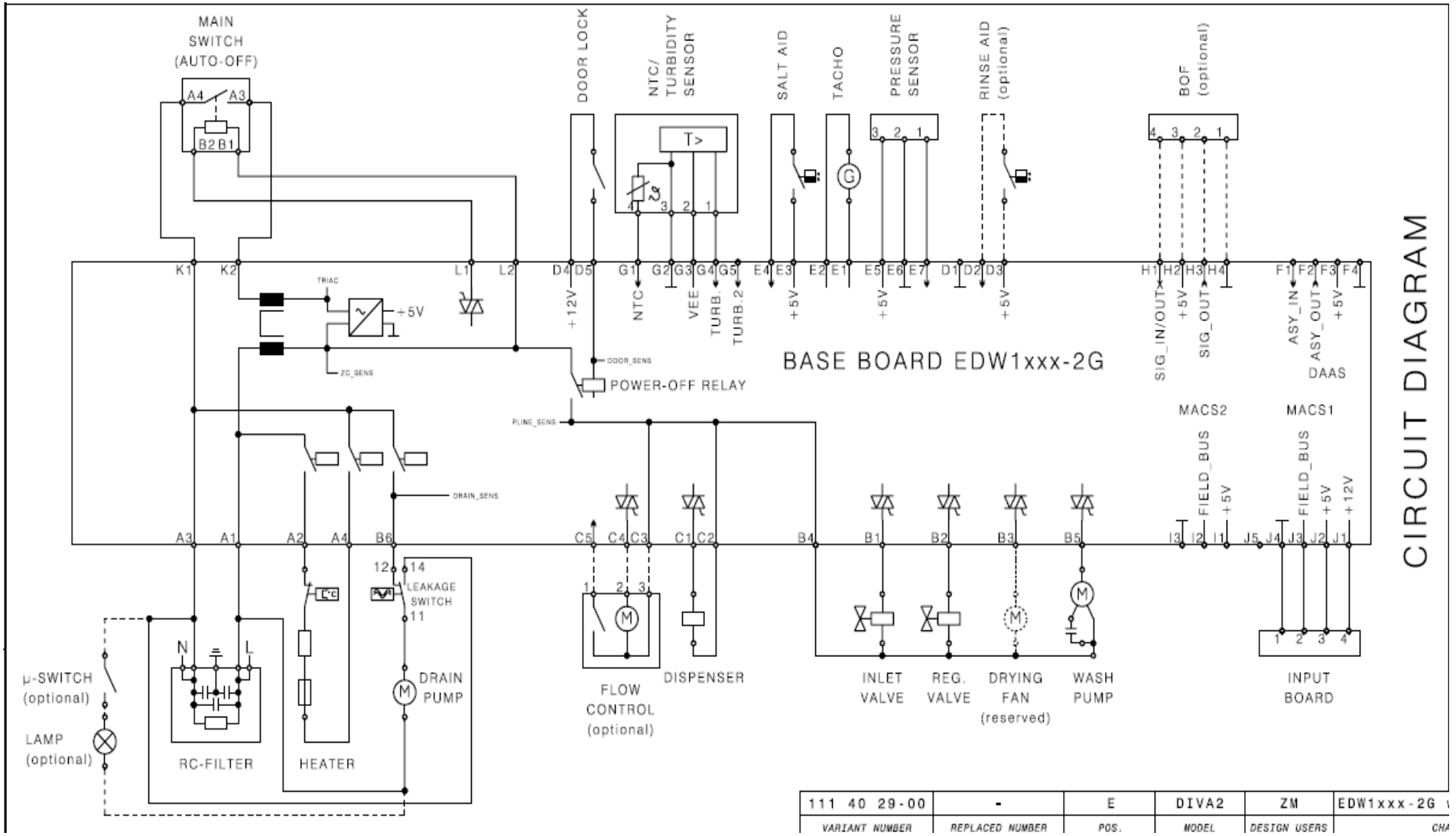
Beam on Floor (DIVA2): envisaged in two colours and with 3-digit display



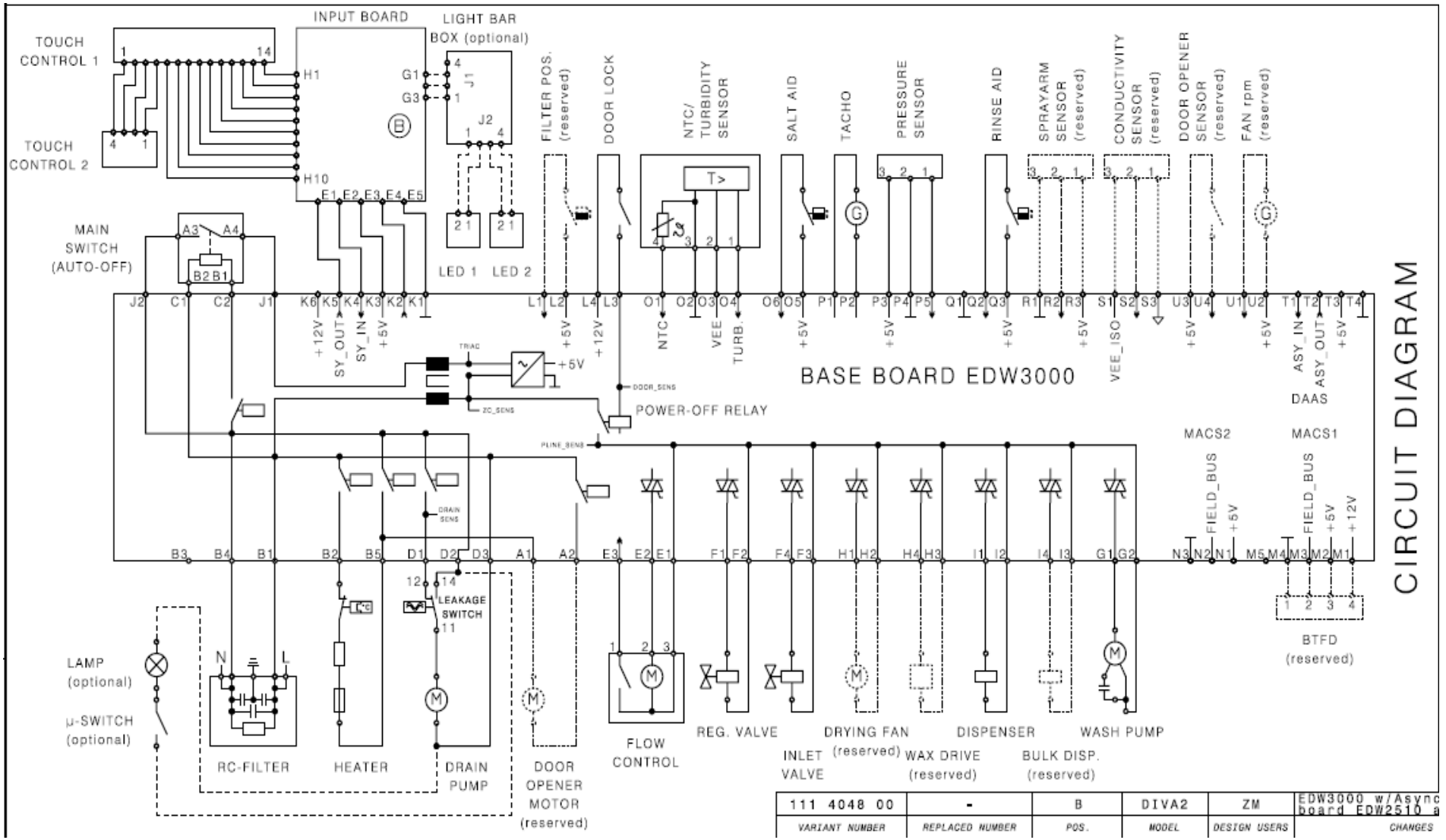
Red: cycle in progress
Green: cycle ended

The three digits indicate the time left until the end of the cycle in progress; the colour projected can be changed according to the type of floor.

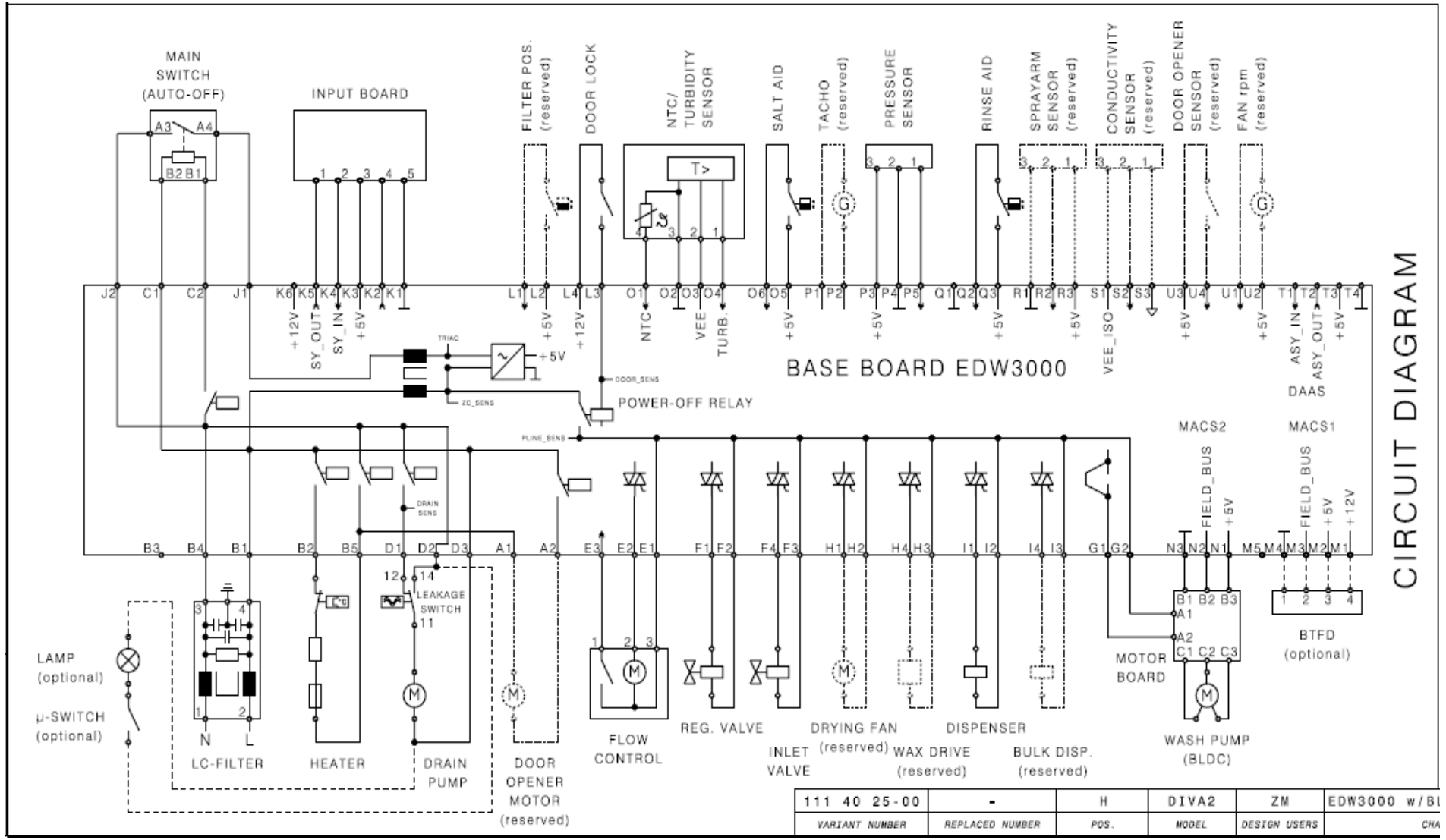
10.14 EDW1xxx-2G operating diagram



10.15 EDW3000 operating diagram (single-phase motor)



10.16 EDW3000 operating diagram (three-phase Inverter motor)



10.17 Components check for AC motor

PARTS	LEAD CONNECTIONS			CORRECT VALUE	REMARKS
POWER CABLE	A1	↔	L	**0 Ω**	
	A3	↔	N	**0 Ω**	
ON/OFF SWITCH	K1	↔	K2	**0 Ω**	
AUTO OFF COMMAND	L1	↔	L2	**250 VOLT**	Activation
				130 Ω ± 8 %	DH off
Heating ELEMENT + Safety THERMOSTAT	A2	↔	A4	**25 Ω ± 8 %**	Serial connection 1900 W
DOOR SWITCH	D4	↔	D5	**0 Ω**	Door closed
DISPENSER	C1	↔	C2	**3900 Ω ± 8 %**	
RINSE AID SENSOR	D2	↔	D3	**0 Ω**	Without Rinse Aid
				INFINITE	With Rinse Aid
SALT SENSOR	E4	↔	E3	**0 Ω**	Without Salt
				INFINITE	With Salt
TEMPERATURE SENSOR	G2	↔	G1	**4850 Ω ± 5 %**	25 °C
				1205 Ω ± 5 %	60 °C
TACHO SENSOR	E1	↔	E2	**220 Ω ± 8 %**	The motor has stopped
REGENERATING solenoid valve	B4	↔	B2	**3800 Ω ± 8 %**	
FILL solenoid valve	B4	↔	B1	**4200 Ω ± 8 %**	Solenoid valve in fill tube
				3500 Ω ± 8 %	Solenoid valve in base
WASHING MOTOR	B4	↔	B5	**100 Ω ± 8 %**	AC Motor
DRAIN MOTOR + Anti-flooding	B6	↔	A1	**230 Ω ± 8 %**	Serial connection
FLOW CONTROL	C3	↔	C4	**10400 Ω ± 8 %**	Motor
	C3	↔	C5	**0/INFINITE**	Micro-switch