Service Manual
MSDW16012

(updated 28/04/2020)

Models:

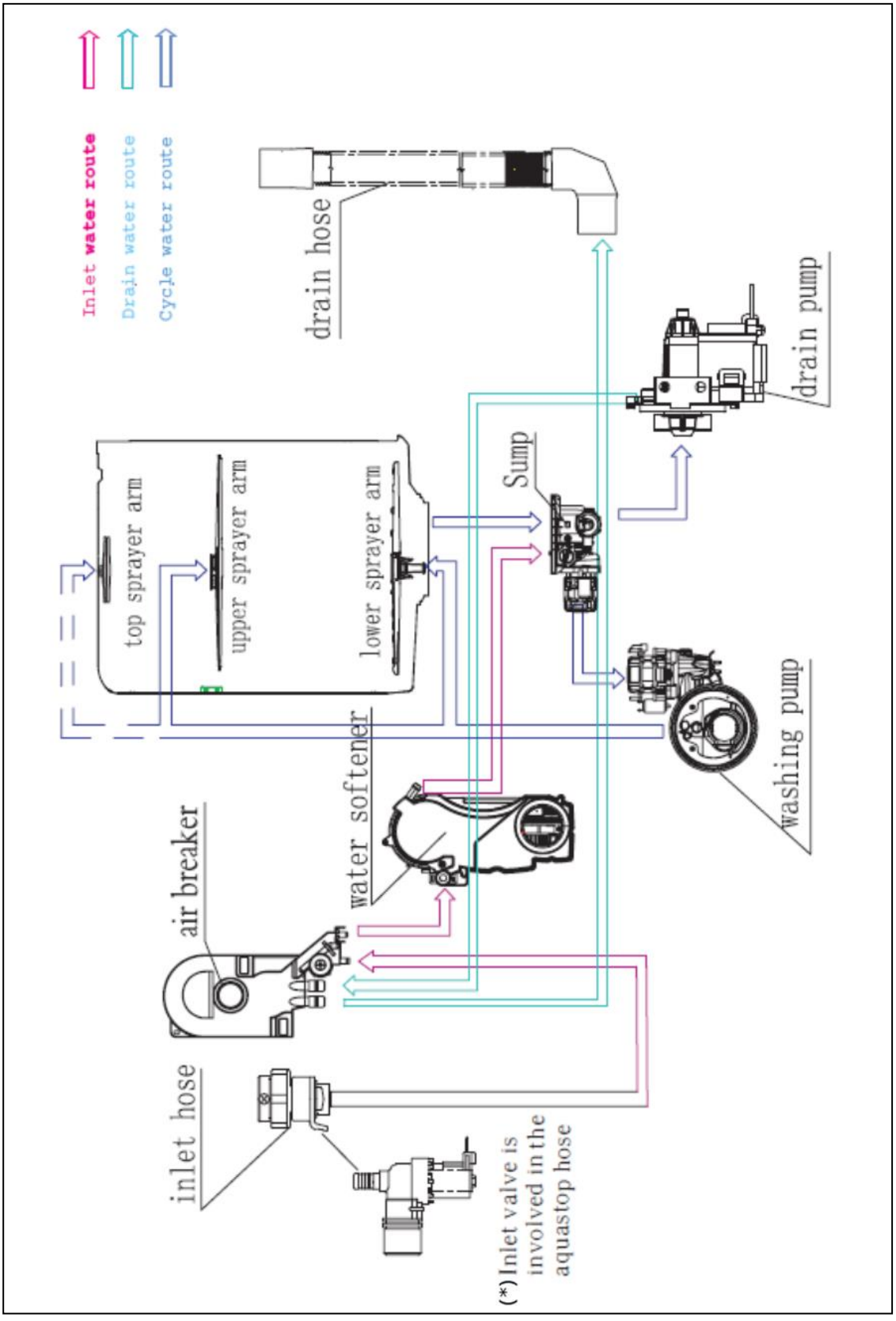
LP2 140
LP8 400
LP8 410
LP8 700
LP8 810
LP8 818
LP8 820
LP 825
LP8 840 (VR01/VR02)
LP8 440 (VR01/VR02)
LP9 850
LP9 840
LP9 440
LP8 850 (VR02/VR03)
LPM 819
LPZ 417
LPZ 817 BL/INOX
LVS 831 BL/INOX
DW 605 S (VR01/VR02)
DW 455 S (VR01)
DW1 605 FI (VR01/VR02)
DW1 455 FI (VR01/VR02)
DW8 40 FI
DW8 41 FI
DW8 55 FI
DW8 57 FI
DW8 58 FI
DW8 70 FI
DW9 70 FI
DWM 859 FI
DWZ 57 FI

Contents

1. General description.

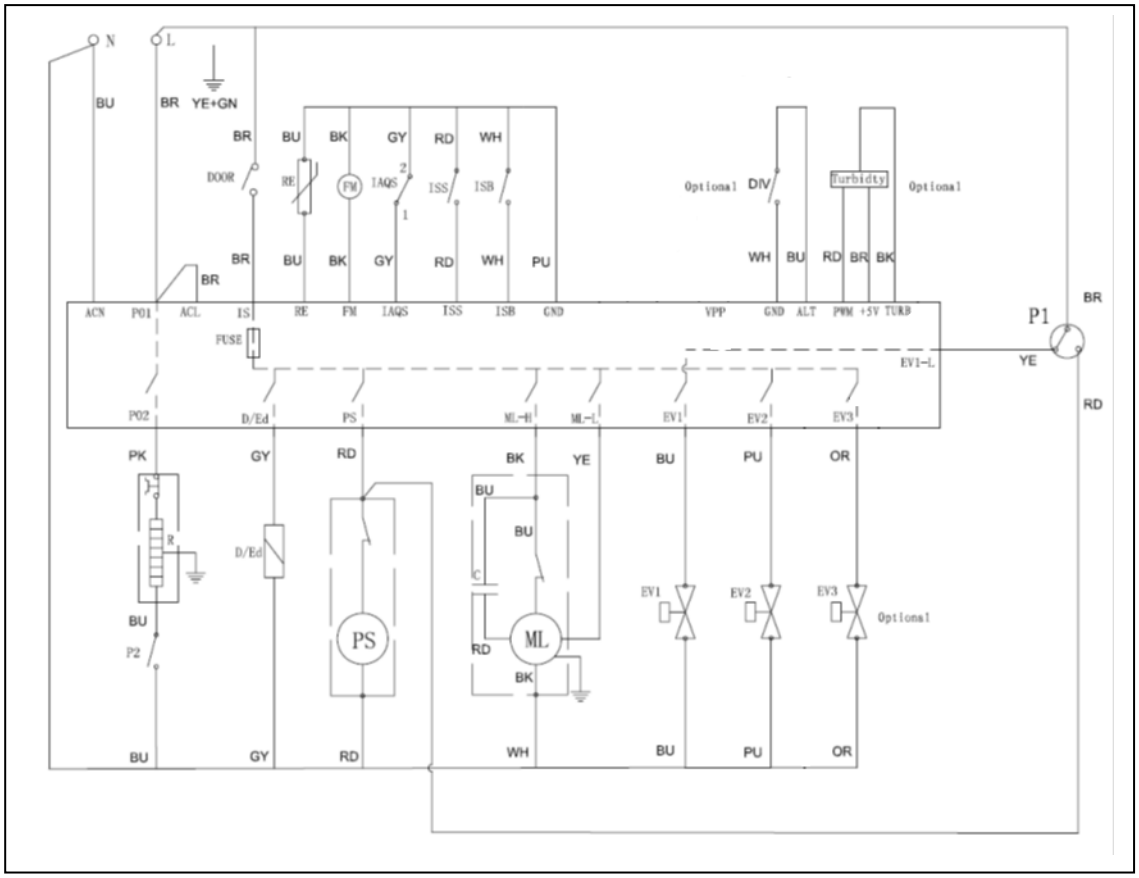
This document contains the technical information for the related models (wiring diagrams, main components features, etc.), meaning of error messages, how they are shown and how to perform a service test and their phases.

2. Hydraulic diagram



(*) The inlet valve can be assembled in the inlet pipe depending on the model.

3. Wiring Diagram



Colors	
BK	Black - negro
BR	Brown - marrón
BU	Blue – azul
GN	Green - verde
GY	Grey - gris
OR	Orange - naranja
PK	Pink - rosa
PU	Purple - morado
RD	Red - rojo
WH	White - blanco
YE	Yellow - amarillo

Components		
C		Capacitor - Condensador
D/Ed		Dispenser - Jabonera
DIV	Opc. (1)	Diverter valve switch – int. valv. lavado alternado
Door		Door switch – cierre puerta
EV1		Inlet valve – válvula de entrada
EV2		Softener valve – válvula de regeneración
EV3	Opc. (1)	Water diverter – válvula lavado alternado
FM		Flowmeter - caudalímetro
IAQS		Overflow switch – interruptor desbordamiento
ISB		Rinse aid detector – detector abrillantador
ISS		Salt detector – detector sal
ML		Wash pump – bomba de lavado
P1		Safety level Pressure switch – presostato seguridad
P2		Heater pressure switch – presostato resistencia
PS		Drain pump – bomba de desagüe
R		Heater element - resistencia
RE		Temperature sensor – sonda temperatura
Turbidity	Opc. (2)	Turbidity sensor – sensor de turbiedad

The components marked as Opc.(1) and Opc.(2) are only included in some models.

4. Service Test

Once the service test is launched (see how to start it in the specific page for your model), the following sequence will be executed:

Test Service			
Nº	Display (*)	Consumption (A)	Description
0	8:88	≈ 0,0	Start test
1	05 or (value)	≈ 0,04	The inlet valve turns on until 3.6 l. are loaded (3 l. for 45 cm. models). If the model is equipped with alternative valve, it will be working in this step. If the model is equipped with turbidity sensor, the display will show the value it is measuring.
2	04 / temp.	≈ 8,0	The washing pump starts working at high speed and 10 seconds later, the heater element will turn on until water temperature reaches 57º C. Then, the test will pause until the “Program” or “Start/Pause” (depending on the model) button is pressed.
3	03	≈ 0,4 ≈ 0,05	The washing pump starts working at low speed. After 8 seconds, the dispenser turns on for 45 seconds.
4	02	≈ 0,05	Regeneration valve turns on for 30 seconds.
5	01	≈ 0,2	The draining pump turns on for 30 seconds.
6	F	≈ 0,0	Test ends. The dishwasher beeps once and stays in stand.

(*) Models without display will turn on and off the program led sequentially during the service test.

5. Error messages

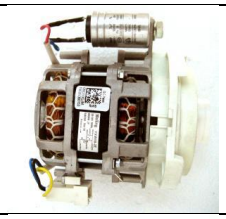
In case of failure, the dishwasher will display an error message. If the dishwasher does not have display, it will show the error code according to the table below.

Error\Program	LED1	LED2	LED3	Meaning
E1	○	○	●	Water filling exceeding pre-set time.
E3	○	●	●	Heating phase exceeding pre-set time.
E4	●	○	○	Overflow.
E6	●	●	○	Open circuit failure of temperature sensor.
E7	●	●	●	Short circuit failure of temperature sensor.
E8				Alternate valve failure.

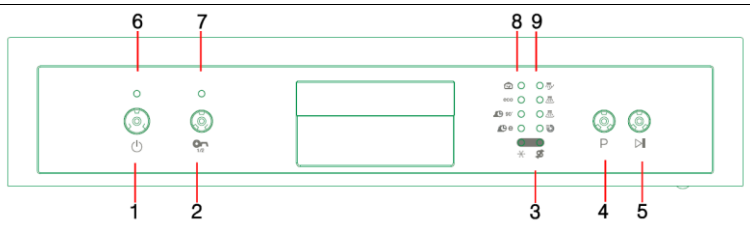
Error	Possible Causes	Remedy
E1	Water tap is not turned on. [User to check].	Turn on the water tap.
	Low water pressure (<0.04MPa). [User to check].	Turn on the water tap and ensure full opening position.
	Pressure switch is broken, stop at inlet process.	Replace the pressure switch.
	Inlet valve is broken, no water in tub.	Replace the Inlet valve.
	Drain pump is broken, water cannot drain out.	Replace the drain pump.
	Wire terminal which connects the pressure switch is loosen.	Reconnect the wire terminal.
	PCB cannot drive the valve, no water in tub.	Replace the PCB.
E3	Temperature sensor is loosening or broken, water is too hot.	Check the sensor or replace the sensor.
	Wire terminal connected to the heater is loosen, water cannot be heat.	Reconnect the wire terminal.
	Heating element is broken, water cannot be heat.	Replace the heater element.

	PCB cannot drive the heater, water cannot be heat.	Replace the PCB.
E4	Tank is leaking.	Pad the tank and check sprayer for any leak on it.
	Hose is leaking.	Replace the hose.
	Floater switch is broken or PCB is faulty.	Replace the float switch or the PCB.
E6	Wire terminal connected to the temperature sensor is loosening. Wire terminal connected to the temperature sensor is short circuited or open circuited.	Reconnect the wire terminal or replace the sensor.
E7		
E8	Wiring damage or alternate valve failure	Check connections or replace valve.
E9	Sensor/button pressed for more than 30 s.	Check if there's water on the control panel.

6. Main components

<table>
<tr><td>  </td><td>Inlet valve / Aquastop (depending on models)
Power supply = 220 – 240 V
Coil resistance = 4.4 – 4.8 KΩ</td></tr>
<tr><td>  </td><td>NTC Sensor
<table><tr><td rowspan="9">NTC</td><td>15°C</td><td>17.48KΩ</td></tr><tr><td>20°C</td><td>12.12KΩ</td></tr><tr><td>25°C</td><td>10KΩ</td></tr><tr><td>30°C</td><td>8.299KΩ</td></tr><tr><td>40°C</td><td>5.807KΩ</td></tr><tr><td>50°C</td><td>4.144KΩ</td></tr><tr><td>60°C</td><td>3.011KΩ</td></tr><tr><td>70°C</td><td>2.224KΩ</td></tr><tr><td>80°C</td><td>1.667KΩ</td></tr><tr><td>85°C</td><td>1.451KΩ</td></tr></table></td></tr>
<tr><td>  </td><td>Flowmeter
Measure with the multimeter in diode function between the two pins in the connector while water is coming in the dishwasher. If the flowmeter is ok, the multimeter should beep intermittently.</td></tr>
<tr><td>  </td><td>Washing pump
Power supply = 220 – 240 V
Main coil resistance = 116.4 Ω (±7%)
Secondary coil resistance = 101.5 Ω (±7%)
Capacitor = 3µF</td></tr>
<tr><td>  </td><td>Draining pump
Power supply = 220 – 240 V
Coil resistance = 235 Ω ± 15 Ω</td></tr>
<tr><td>  </td><td>Heating element
Power supply = 230 V
Rated power = 1800 W
Resistance = 29.3 Ω ± 1.47 Ω</td></tr>
<tr><td></td><td>Alternate valve (Opc.(1))
Power supply = 230 V
Resistance = 5,75 K Ω</td></tr>
<tr><td></td><td>Turbidity sensor (Opc.(2))
It can be check during service test, step 1. If the display shows 99, the sensor is faulty.</td></tr>
</table>

7. LP8 700 / LP8 400



1. ON/OFF button	6. ON / OFF indicator
2. Half load button	7. Half load indicator
3. Salt / rinse indicators	8. Program indicators
4. Program button	9. Program phase indicators
5. Start / Pause button	

Wiring diagram:	See section 3
Optional Components:	None
Hydraulic diagram:	See section 2
Error indication:	eco 90' e

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

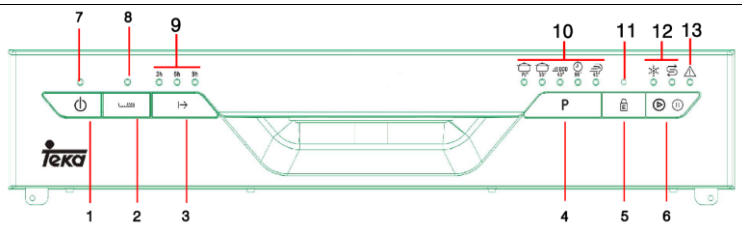
- Keep pressed the Start / Pause button [5]. The door must be open

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Start / Pause button [5], except during water loading.

8. LP8 810 / LP8 818 / LP8 410 / LPM 819/ LPZ 417 / LVS 831 / LPZ 817



1. ON/OFF button	8. Half load indicator
2. Half load button	9. Delay indicator
3. Delay button	10. Program indicators
4. Program button	11. Child lock indicator
5. Child lock button	12. Salt / Rinse indicators
6. Start / Pause button	13. Water faucet indicator
7. ON / OFF indicator	

Wiring diagram:	See section 3
Optional Components:	None
Hydraulic diagram:	See section 2
Error indication:	

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

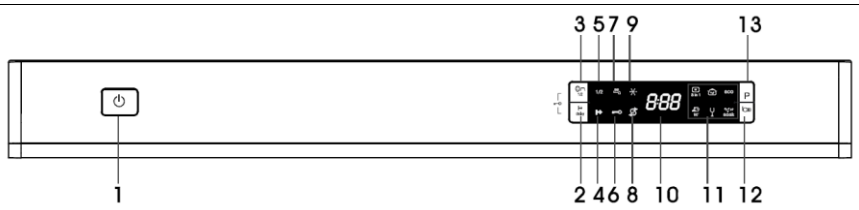
- Keep pressed the Start / Pause button [6]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Start / Pause button [6], except during water loading.

9. LP8 820 / LP8 825



1. ON/OFF button	8. Salt indicator
2. Delay button	9. Rinse indicator
3. Half load button	10. Display
4. Delay indicator	11. Program indicators
5. Half load indicator	12. Start / Pause button
6. Child lock indicator	13. Program button
7. Closed tap indicator	

Wiring diagram:	See section 3
Optional Components:	None
Hydraulic diagram:	See section 2
Error indication:	Display

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

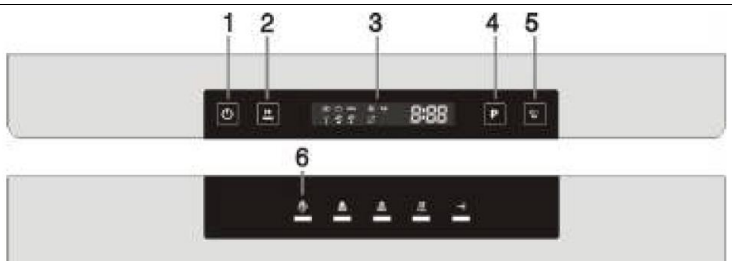
- Keep pressed the Start / Pause button [12]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Start / Pause button [12], except during water loading.

10. LP8 840 (VR01 / VR02) / LP8 440 (VR01 / VR02)



1. ON/OFF button	5. Half load button
2. Delay button	6. Program phase indicators
3. Program indicators	
4. Program button	

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose)
Hydraulic diagram:	See section 2
Error indication:	Display

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

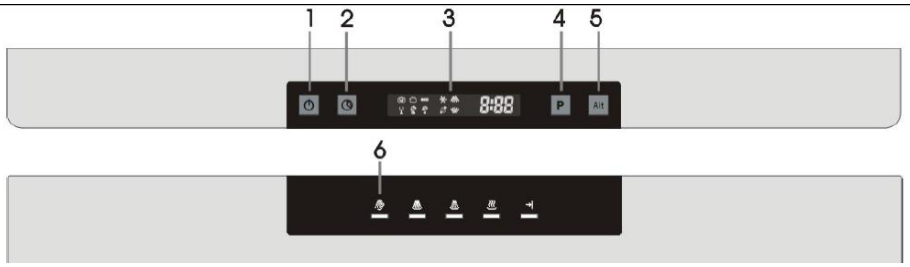
- Keep pressed the Program button [4]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Program button [4], except during water loading.

11.LP8 850 (VR02 / VR03)



1. ON / OFF button	5. Dual wash button
2. Delay button	6. Program phase indicators
3. Program indicators	
4. Program button	

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose), Alternate wash valve (Opc.(1))
Hydraulic diagram:	See section 2
Error indication:	Display

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

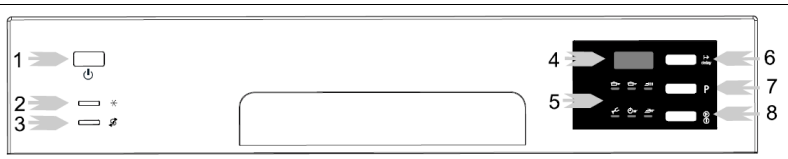
- Keep pressed the Program button [4]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Program button [4], except during water loading.

12. LP2 140



1. ON/OFF button	5. Program indicators
2. Salt indicator	6. Delay button
3. Rinse indicator	7. Program button
4. Display	8. Start / Pause button

Wiring diagram:	See section 3
Optional Components:	None
Hydraulic diagram:	See section 2
Error indication:	Display

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

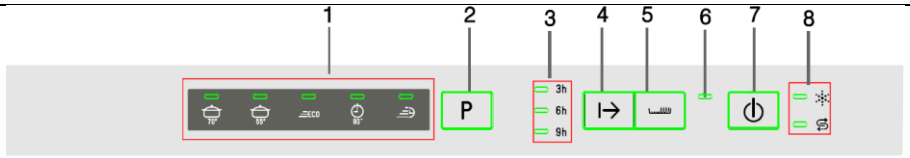
- Keep pressed the Start / Pause button [8]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

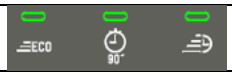
- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Program button [7], except during water loading.

13. DW8 55 FI / DW8 40 FI/ DWM 859 FI / DWZ 57 FI



1. Program indicators	5. Half load button
2. Program button	6. ON / OFF indicator
3. Delay indicator	7. ON / OFF button
4. Delay button	8. Salt / Rinse indicator

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose)
Hydraulic diagram:	See section 2
Error indication:	

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

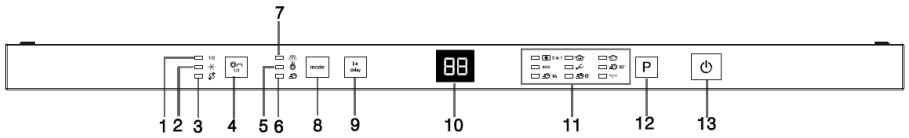
- Keep pressed the Program button [2]. The door must be open.

- Press and release ON/OFF button [7]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Program button [2], except during water loading.

14. DW8 57 FI / DW8 58 FI/ DW8 41 FI



1. Half load indicator	8. Function button
2. Rinse indicator	9. Delay button
3. Salt indicator	10. Display
4. Half load button	11. Program indicators
5. Extra dry button	12. Program button
6. Rapid wash indicator	13. ON/OFF button
7. Extra wash indicator	

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose)
Hydraulic diagram:	See section 2
Error indication:	Display

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

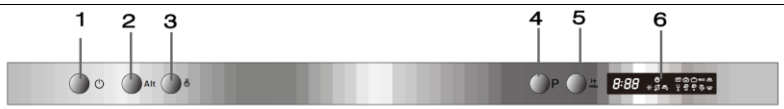
- Keep pressed the Program button [12]. The door must be open.

- Press and release ON/OFF button [13]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Program button [12], except during water loading.

15.DW8 70 FI



1. ON / OFF button	5. Delay button
2. Dual wash button	6. Display
3. Extra dry button	
4. Program button	

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose), alternate wash valve (Opc.(1)), turbidity sensor (Opc.(2)).
Hydraulic diagram:	See section 2
Error indication:	Display

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

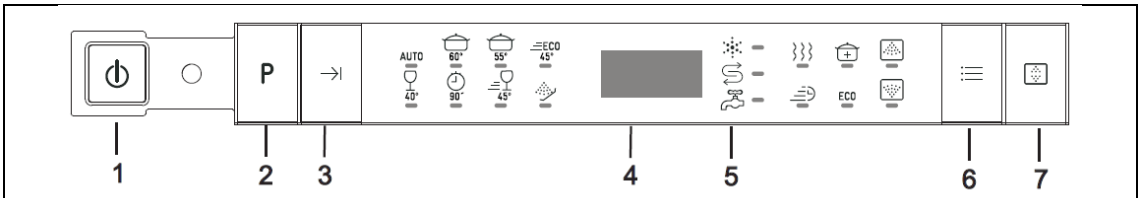
- Keep pressed the Program button [4]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Program button [4], except during water loading.

16.DW9 70 FI



1. ON / OFF button	5. Salt/rinse indicators
2. Program button	6. Extra functions button
3. Delay button	7. Half-load button
4. Display	

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose), alternate wash valve (Opc.(1)), turbidity sensor (Opc.(2)).
Hydraulic diagram:	See section 2
Error indication:	Display

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

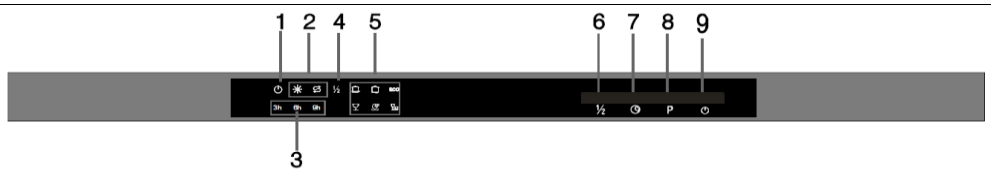
- Keep pressed the Program button [2]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Program button [4], except during water loading.

17. DW1 605 FI / DW1 455 FI (VR01/VR02)



1. ON / OFF indicator	6. Half load button
2. Salt / Rinse indicator	7. Delay button
3. Delay indicator	8. Program button
4. Half load indicator	9. ON/OFF button
5. Program indicator	

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose).
Hydraulic diagram:	See section 2
Error indication:	

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

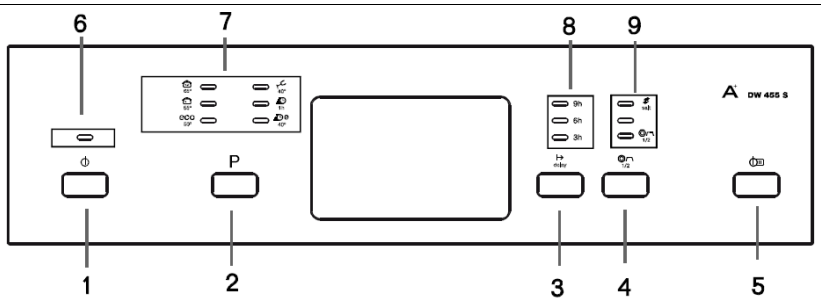
- Keep pressed the Program button [8]. The door must be open.

- Press and release ON/OFF button [9]. All leds from control panel start to blink.

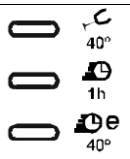
- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Program button [8], except during water loading.

18. DW 605 S (VR01/VR02) / DW 455 S (VR01)



1. ON / OFF button	6. ON / OFF indicator
2. Program button	7. Program indicator
3. Delay button	8. Delay indicator
4. Half load button	9. Half load, salt and rinse indicators
5. Start / Pause button	

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose).
Hydraulic diagram:	See section 2
Error indication:	

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

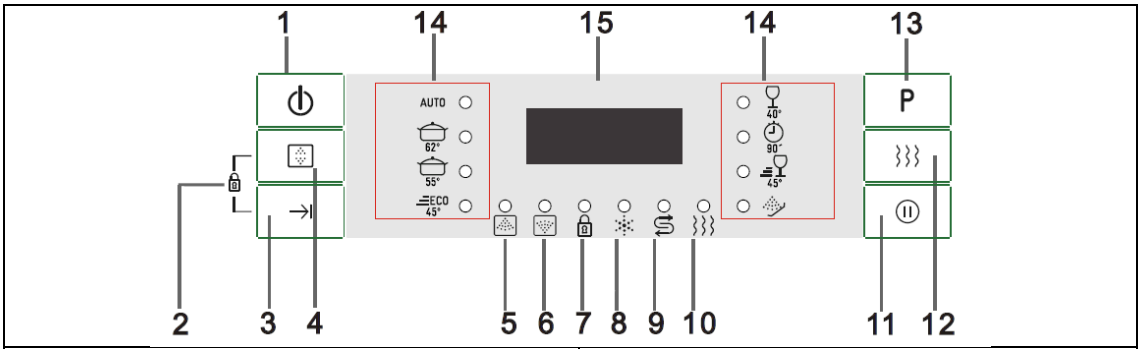
- Keep pressed the Start / Pause button [5]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Start / Pause button [5], except during water loading.

19. LP9 850 / LP9 840 / LP9 440



1. ON / OFF button	9. Salt indicator
2. Child lock. Push 3 & 4	10. Extra dry indicator.
3. Delay button	11. Start / Pause button
4. Alternate wash button	12. Extra dry button
5. Upper basket indicator	13. Program button
6. Lower basket indicator	14. Program indicators
7. Child lock indicator	15. Display
8. Rinse indicator	

Wiring diagram:	See section 3
Optional Components:	Aquastop (inlet hose) Alternate wash valve Turbidity sensor (only LP9 850) Dry fan (only LP9 850)
Hydraulic diagram:	See section 2
Error indication:	Display

Service Test

Follow the next steps to launch the test service:

- Connect the appliance to the power supply.

- Keep pressed the Start / Pause button [11]. The door must be open.

- Press and release ON/OFF button [1]. All leds from control panel start to blink.

- Once the door is closed, service test will start.

You can advance to the next step of the test by pressing the Start / Pause button [11], except during water loading.