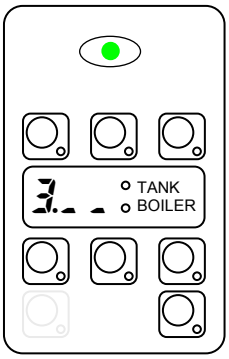
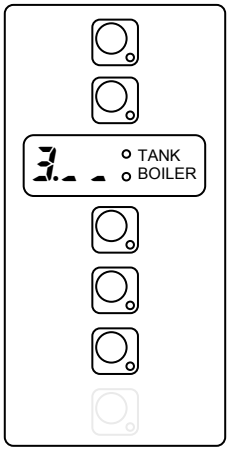
SERVICE MANUAL





CONTENTS: This document contains the instruction to change parameter settings of electronic board by means of user interface.

EDITION: 06.2005

INDEX

1. KEYBOARDS

1.1. HOOD TYPE Style

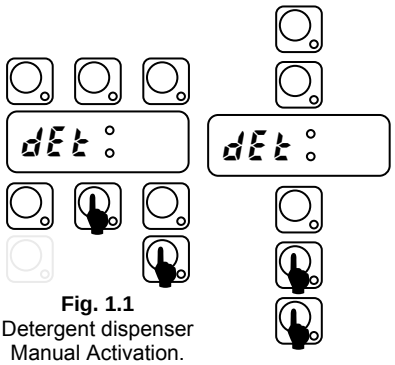


Fig. 1.1
Detergent dispenser
Manual Activation.

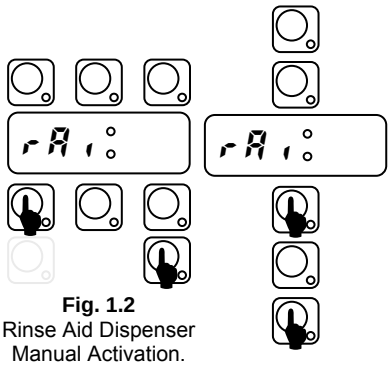


Fig. 1.2
Rinse Aid Dispenser
Manual Activation.

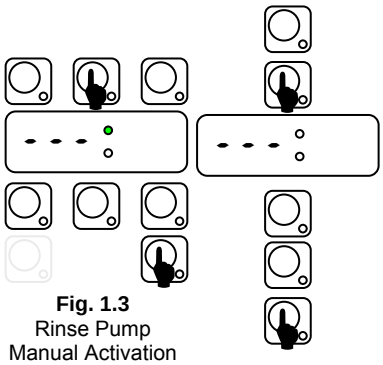


Fig. 1.3
Rinse Pump
Manual Activation
(used to EMPTY BOILER)

SETTING MODES:
To enter into one setting mode (Fig.1.4, Fig.1.5) the appliance should be in stand-by: switch on the appliance, no cycles selected. Is useful keep door open to avoid start cycle in case of not simultaneously pressure of the two keys.

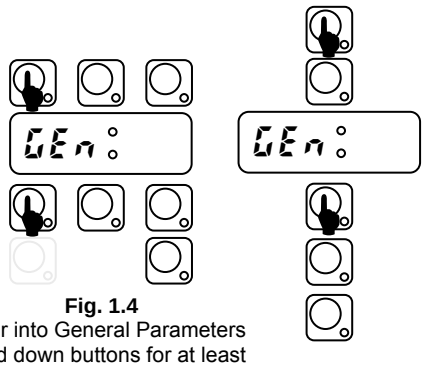


Fig. 1.4
Enter into General Parameters
(Hold down buttons for at least
five seconds).

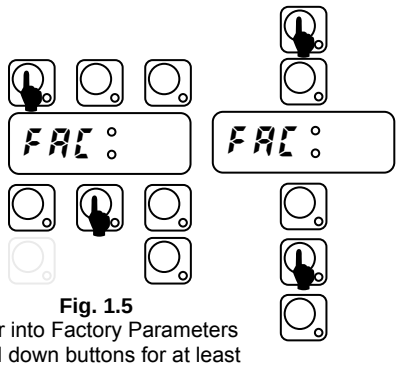


Fig. 1.5
Enter into Factory Parameters
(Hold down buttons for at least
five seconds).

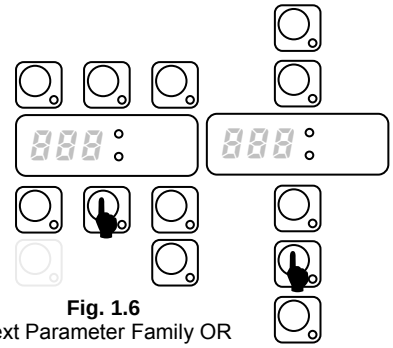


Fig. 1.6
Next Parameter Family OR
Increase Parameter Value
(In setting mode only)

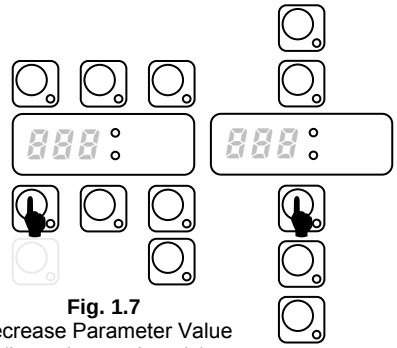


Fig. 1.7
Decrease Parameter Value
(In setting mode only)

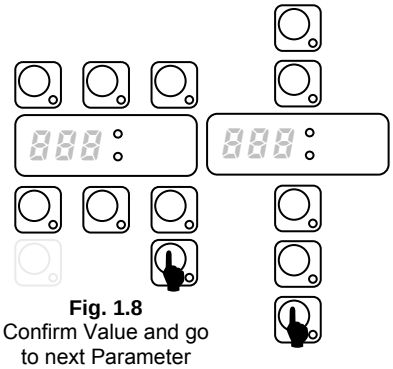


Fig. 1.8
Confirm Value and go
to next Parameter
(In setting mode only)

1.2. UNDERCOUNTER Style

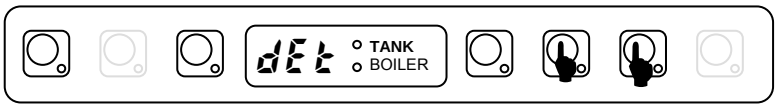


Fig.1.1
Detergent dispenser
Manual Activation

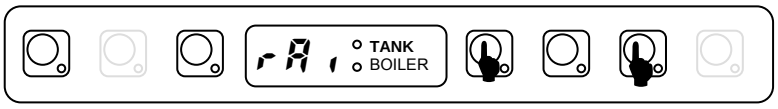


Fig.1.2
Rinse Aid Dispenser
Manual Activation

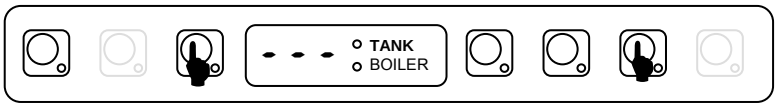


Fig.1.3
Rinse Pump
Manual Activation
(used to EMPTY BOILER)

SETTING MODES:
To enter into one setting mode (Fig.1.4, Fig.1.5) the appliance should be in stand-by: switch on the appliance, no cycles selected. Is useful keep door open to avoid start cycle in case of not simultaneously pressure of the two keys.

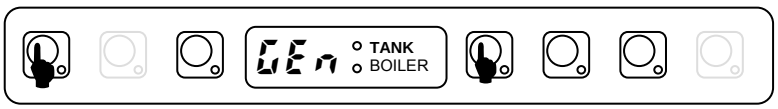


Fig. 1.4
Enter into General Parameters
(Hold down buttons for at least five seconds).

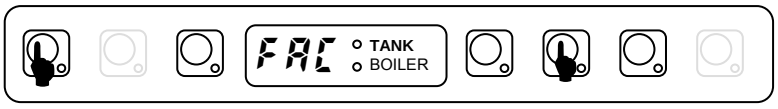


Fig. 1.5
Enter into Factory Parameters
(Hold down buttons for at least five seconds).

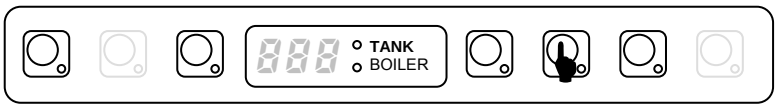


Fig.1.6
Next Parameter Family
OR
Increase Parameter Value
(in setting mode only)

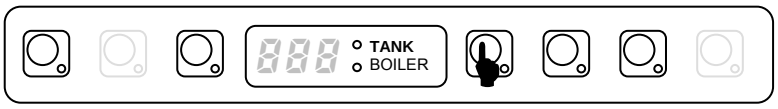


Fig.1.7
Decrease Parameter Value
(In setting mode only)

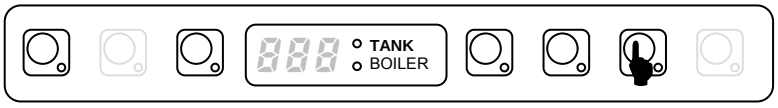
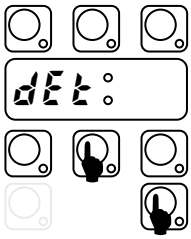


Fig.1.8
Confirm Value and go to next Parameter
(in setting mode only)

2. MANUAL ACTIVATION OF DETERGENT AND RINSE AID DISPENSERS

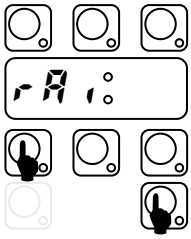
When replacing detergents may be necessary activate the dispensers to fill hoses.

2.1. Detergent Dispenser Activation



Switch on the dishwasher.
Press and hold down CYCLE_2 and CYCLE INFINITE keys, after two 'beep' the detergent dispenser starts work for 20 sec.

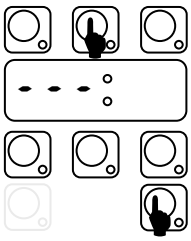
2.2. Rinse Aid Dispenser Activation



Switch on the dishwasher.
Press and hold down CYCLE_1 and CYCLE INFINITE keys, after two 'beep' the rinse aid dispenser starts work for 40 sec.

3. RINSE PUMP MANUAL ACTIVATION

Use this function to empty the boiler (if the dishwasher is not to be used for a long time, for maintenance operation: ex. before replacing main board).



Switch on the dishwasher.
Close the door and press and hold down DRAIN and CYCLE INFINITE keys. A buzzer signal indicates the rinse pump activation and the display shows three blinking lines. Three beeps indicate the cycle end.

4. DETERGENT AND RINSE AID DOSAGE

In this paragraph is explained how to set the working time for the detergent and rinse aid dispensers.
For each dispenser there are two parameters: the initial time and the time during cycle execution.

GEn General Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
d In	Initial Detergent Dosage (during filling tank)	[s]	0	240	90
r In	Initial Rinse Aid Dosage (starts when tank filled)	[s]	0	180	10
dEt	Detergent Dosage During Cycle Execution (during wash phase)	[s]	0	182(*)	8
rA,	Rinse Aid Dosage During Cycle Execution (when refilling boiler)	[s]	0	62 (*)	4

How change the duration:

- Switch OFF and switch ON the dishwasher;
- Enter into the USER SETTING mode by pressing and hold down ON/OFF and CYCLE_1 keys for at least **five seconds** the display shows GEn (Fig.3.1);
- Press CYCLE_INFINITE. The display shows alternatively the symbol d In and the duration in seconds (Fig.3.2 and 3.3);
  NOTE: If User Interface v.3.00 tank led is on if value correspond to factory default (Default 1, HOOD TYPE).
- Use CYCLE_1 key to decrease the duration and CYCLE_2 key to increase (Fig.3.3);
- After settled the duration press CYCLE_INFINITE key to **store value**. The display shows the next parameter (Fig.3.4) and the corresponding value (Fig.3.5);
- In the same way is possible to change the other duration; when finished switch OFF and switch ON.

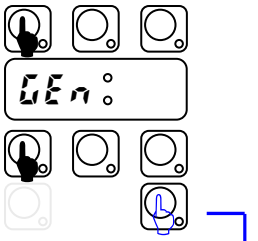


Fig. 3.1
Enter into User Mode
(press for 5 sec).

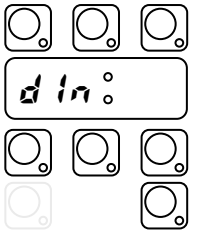


Fig. 3.2
Initial detergent dosage

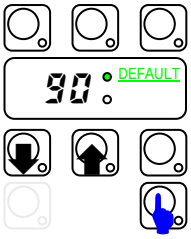


Fig. 3.3
Change duration.
(Tank LED indicates default).

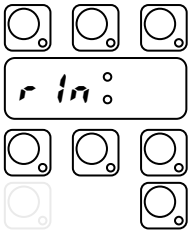


Fig. 3.4
Initial rinse aid dosage

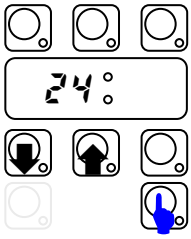


Fig. 3.5
Change duration

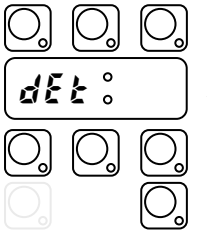


Fig. 3.6
Cycle detergent dosage

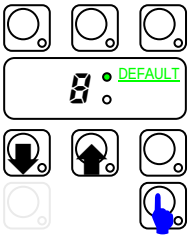


Fig. 3.7
Change time activation
(Tank LED indicates default)

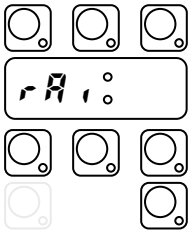


Fig. 3.8
Cycle rinse aid dosage

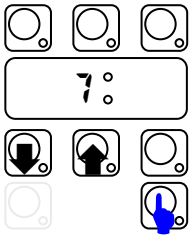


Fig. 3.9
Change time activation

(*) Note for external dispensers:

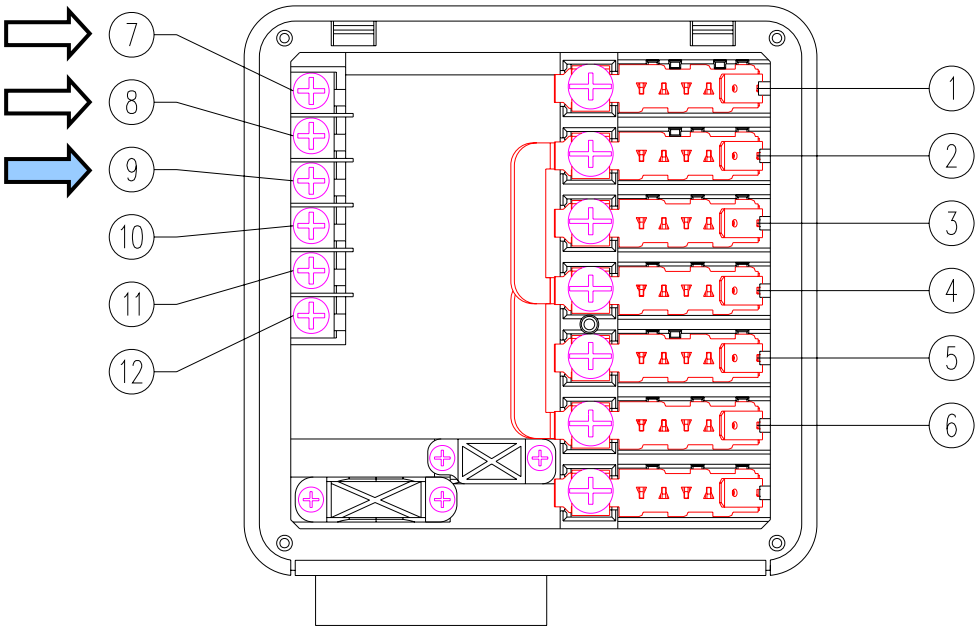
- If dEt: 181 the **detergent dispenser** works when **WASHING PUMP** is being activated; at the same time voltage is supplied between connectors **$L1_7$–$L1_9$** (main terminal box);

- If dEt: 182 the **detergent dispenser** works when **LOADING EV** is being activated to re-fill boiler level; at the same time voltage is supplied between connectors **$L1_7$–$L1_9$** (main terminal box);

- If rA: 61 the rinse aid dispenser works when **LOADING EV** is being activated to re-fill boiler level; at the same time voltage is supplied between connectors **$L1_8$–$L1_9$** (main terminal box);

- If rA: 62 the **rinse aid dispenser** works when **WASHING PUMP** is being activated; at the same time voltage is supplied between connectors **$L1_8$–$L1_9$** (main terminal box);

- For electrical connections refer to electric diagram -



Example

Suppose there is connected an **external detergent dispenser** with a probe into the tank. A typical setting could be:

dIn: 0 the dispenser is not activated during filling tank;

dEt: 181 the dispenser is supplied during washing phase and the probe automatically dose the right detergent amount.

5. COUNTERS

This Parameter Family collects cycle counters and water consumption counters.
For water consumption counters a flow meter must be installed. See PPL (calibration parameter) into dPA section (§ Other Parameters).

Cnt Counters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
CYC	Cycles performed counter. CYC symbol and two numbers blink consecutively. The cycle number is obtained by joining the two numbers. Ex. CYC → 10 → 042 means 10042 cycles executed.	-			
cYc	Cycle counter (resettable). This counter is similar to CYC but is resettable by user (see rSt parameter below).	-			
mmc	Water Consumption. [present up to software version 3.12] Counts m^3 of water consumption.	[m^3]			
L	Water Consumption. [present up to software version 3.12] Counts litres of water consumption. The total consumption is given by adding mmc [m^3] and L [l] values.	[l]			
L rt	Water Consumption: resettable counter. [present up to software version 3.12] Counts the litres of water and is resettable by user (see rSt parameter below).	[l]			
rSt	Reset resettable counters: cYc and L rt To reset put 1 this parameter, switch off and then on again: cYc and L rt will show zero. Note that cYc is used to count cycles for CAI1 message (see next parameter, nCY).	-			
nCY	Store thousand of cycles after that CAI1 message appears on display. Ex. If this parameter is settled to 20, CAI1 message appears when cYc reach 20.000 cycles.	-			
drn	Drain/Cleaning cycles performed. Similar to CYC but counts Cleaning Cycles.	-			
rCY	Numbers of cycles that can be made after a regeneration cycle (only for dishwashers with non-continuous water softener) [See paragraph 9.1 resin regeneration cycle.].	-			20
nrE	Regeneration cycle counter (only for water softener dishwasher) [See paragraph 9.1 resin regeneration cycle / paragraph 9.4 Dishwashers with incorporated continuous water softener].	-			

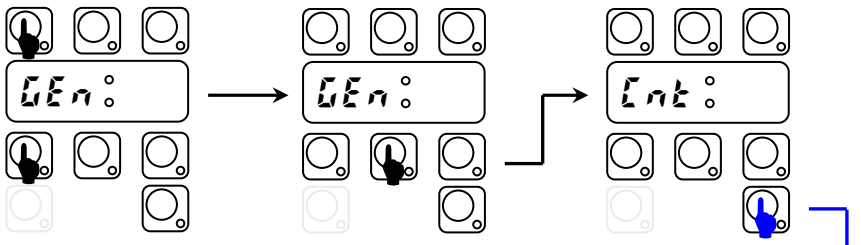


Fig.4.1
USER setting mode
(press for 5s)

Fig.4.2
Next Family

Fig. 4.3
Counters Fam.: **ENTER**

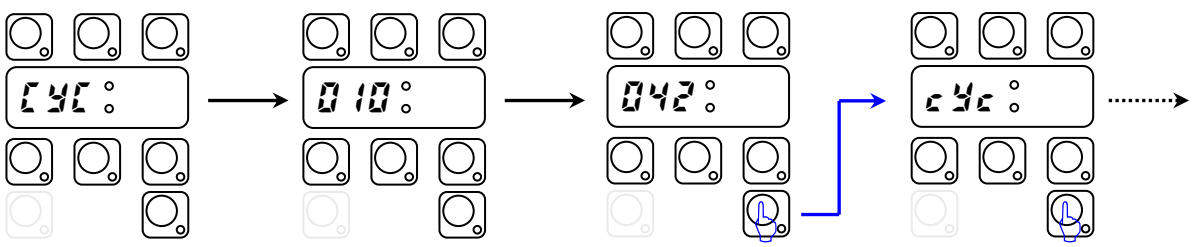


Fig. 4.4
CYCLES

Fig. 4.5
Thousand.

Fig. 4.6
Units.

Fig. 4.7
Next counter.

6. TEMPERATURE SETTING

In this paragraph is explained how to change temperature thresholds and all parameters related to boiler and tank.

FAC Factory Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
btT	Boiler Temperature: THRESHOLD. When boiler temperature reaches this value, heaters switch off.	[°C]	45	95	**78**
btH	Boiler Temperature HISTERESIS, (represent dead band). Heater switch on if boiler temperature is below: btT - btH	[°C]	2	10	**2**
bH,	Boiler Temperature: HIGH LIMIT. When boiler temperature reaches this value E 2 alarm appears. Put 0 to disable E 2 alarm.	[°C]	0	98	**96**
bLo	Boiler Temperature: LOW LIMIT. During boiler warm-up, temperature must increase at least bLo °C otherwise E 3 warning appears. Put 0 to disable E 3 warning.	[°C]	0	10	**1**
bFL	Boiler Filling Timeout. If filling time is longer than bFL, A 1 alarm appears. Put 0 to disable A 1 alarm.	[min]	0	42	**5**
bAJ	Boiler Temperature Adjust.	[°C]	0	7	**4**
bP	Boiler Priority (enable boiler wait function) 0=disabled 1=enabled	-	0	1	**1**
bSt	Booster Function Overheat gap over Boiler Temperature Threshold	[°C]	0	15	**2**
btd	Boiler temperature negative differential: when the dishwasher is in standby, boiler threshold becomes: btT - btd (Used to save energy during machine inactivity by keeping boiler water at a lower temperature).	[°C]	0	20	**0**
ttT	Tub Temperature: THRESHOLD When tank temperature reaches this value, heater switch off.	[°C]	40	85	**63**
ttH	Tub Temperature: HISTERESIS, (represent dead band). Heater switch on if tank temperature is below: ttT - ttH	[°C]	2	30	**5**
tH,	Tank Temperature: HIGH LIMIT. When tank temperature reaches this value E 3 alarm appears. Put 0 to disable E 3 alarm.	[°C]	0	95	**75**
tLo	Tank Temperature: LOW LIMIT. During tank warm-up, temperature must increase at least bLo °C otherwise E 2 warning appears. Put 0 to disable E 2 warning.	[°C]	0	10	**1**
tFL	Tank Filling Timeout. If filling time is longer than tFL, A 1 alarm appears. Put 0 to disable A 1 alarm.	[min]	0	42	**20**

To modify thresholds do the following:

- Switch OFF and switch ON the dishwasher;
- Enter into the FACTORY SETTING mode by pressing and hold down ON/OFF and CYCLE_2 keys for at least five seconds (Fig.5.1);
- Press CYCLE INFINITE. The display shows alternatively the symbol btC (Fig.5.2) and the corresponding value 76 (Fig.5.3);
- Use CYCLE_1 key to decrease the value and CYCLE_2 key to increase (Fig.4.3);
- Press CYCLE INFITE key to confirm. The display shows the next parameter (Fig.4.4) and the corresponding value (Fig.4.5);
- In the same way is possible to change the other parameters; when finished switch OFF and switch ON.

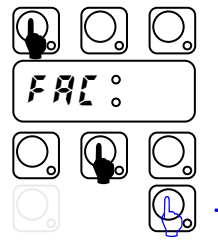


Fig. 5.1
Factory setting mode

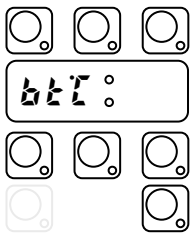


Fig. 5.2
Boiler temp. threshold

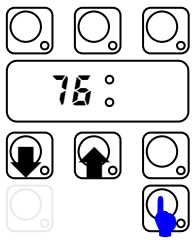


Fig. 5.3
Change value & Store

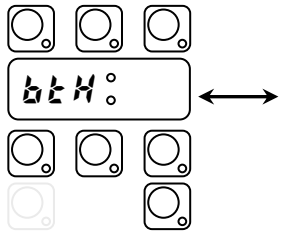


Fig. 5.4
Boiler Temp Hysteresis

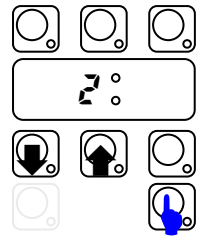


Fig. 5.5
Change value & Store

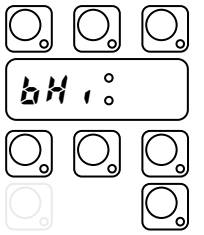
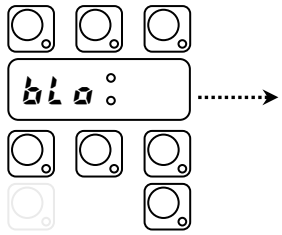


Fig. 5.6
Tank temp. High limit.

Fig. 5.7
Change value & Store



At the end the display will show again 'FAC' and by pressing CYCLE_2 key (Fig.4.9) is possible to change cycle duration (see next paragraph).

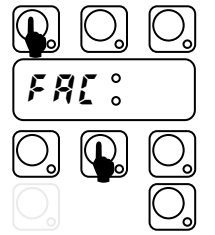


Fig. 5.9
Factory setting mode

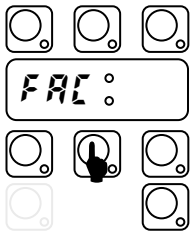


Fig. 5.10
Next Family

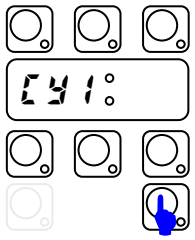


Fig. 5.11
Cycle 1 Family: **ENTER**

7. CYCLE SETTING

In this paragraph is explained how to change cycle phases duration (see Tab.1 next page).

- Switch on the dishwasher;
- Enter into the FACTORY SETTING mode: press and hold down ON/OFF and CYCLE_2 keys for at least **5 seconds** (Fig.5.1);
- Press CYCLE_2 key to select CYCLE_1 parameters.
- Press CYCLE_INFINITE. The display shows alternatively the symbol (Fig.5.2) and the corresponding value (Fig.5.3);
- Use CYCLE_1 key to increase the value and CYCLE_2 key to decrease (Fig.5.3);
- Press CYCLE_INFINITE key to confirm. The display shows the next parameter (Fig.5.4) and the corresponding value (Fig.5.5);
- In the same way is possible to change the other parameters;

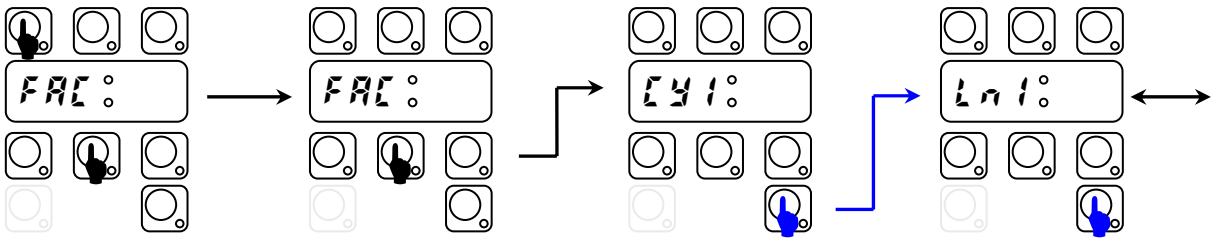


Fig. 6.1 Factory setting mode.
Fig. 6.2 Select next class.
Fig. 6.3 Cycle 1 Family: **ENTER**
Fig. 6.4 Wash duration [min].

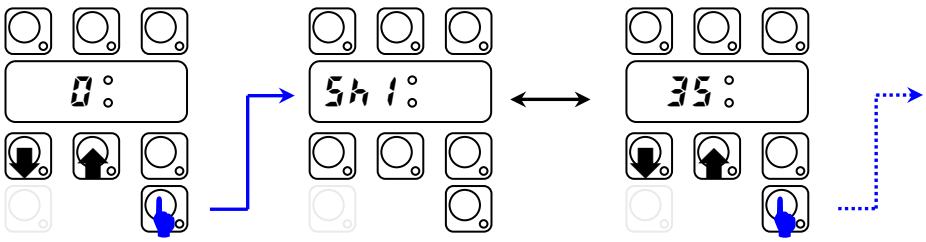


Fig. 6.5 Change value & Store.
Fig. 6.6 Wash duration [sec].
Fig. 6.7 Change value & Store.

After settled all parameters referring Cycle 1, by pressing CYCLE_2 key is possible to change the Cycle 2 parameters (Fig.5.8, 5.9) and so on.

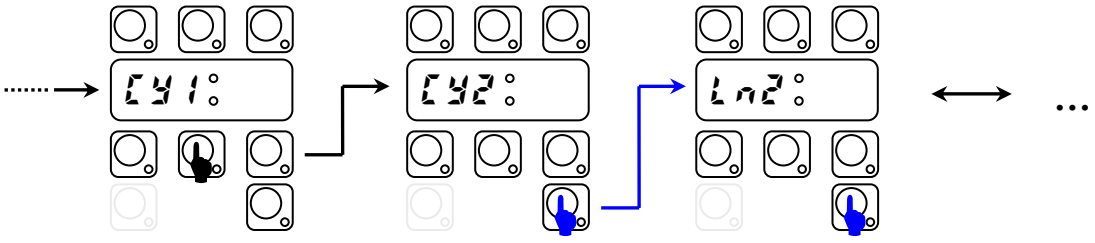


Fig. 6.8 Cycle 1 Parameters.
Fig. 6.9 Cycle 2 Parameters: **ENTER**
Fig. 6.10 Wash duration [min].

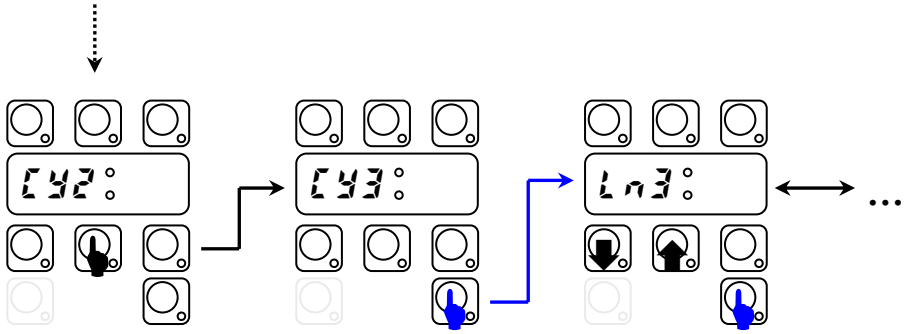
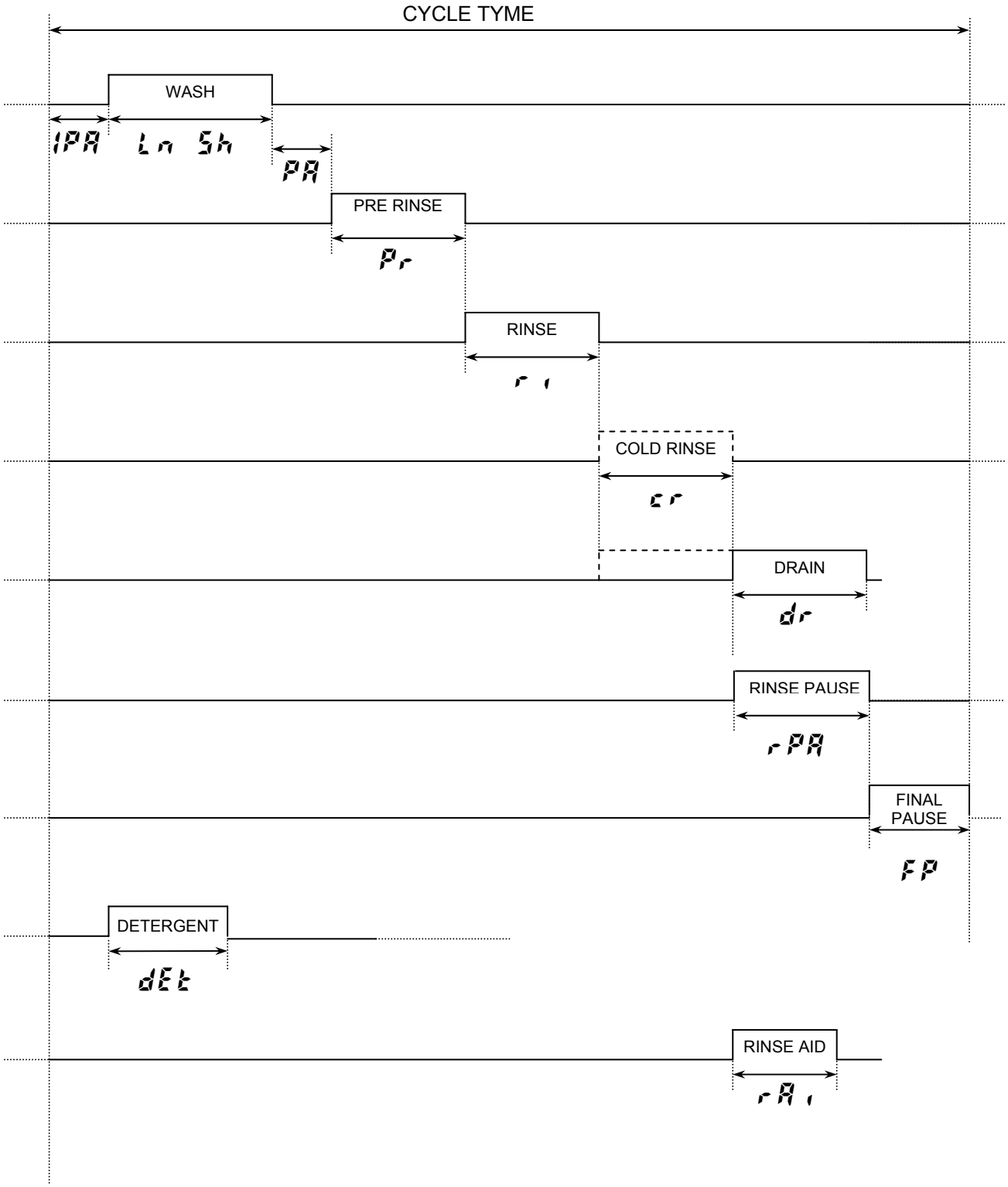


Fig. 6.11 Cycle 2 Parameters: next Family
Fig. 6.12 Cycle 3 Parameters: **ENTER**
Fig. 6.13 Wash duration [min].

CYCLE DIAGRAM



CY1 Cycle 1 Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
Ln1	Wash Phase Long	[min]	0	20	**0**
Sh1	Wash Phase Short	[s]	1	60	**35**
PA1	Pause	[s]	0	20	**4**
Pr1	Pre-rinse Duration	[s]	0	30	**0**
r.1	Rinse Phase Duration	[s]	10	45	**16**
cr1	Cold Rinse Phase Duration	[s]	0	50	**0**
dr1	Drain	[s]	0	40	**16**
FP1	Final Pause at End of Cycle	[s]	0	60	**0**

CY2 Cycle 2 Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
Ln2	Wash Phase Long	[min]	0	20	**0**
Sh2	Wash Phase Short	[s]	1	60	**45**
PA2	Pause	[s]	0	20	**4**
Pr2	Pre-rinse Duration	[s]	0	30	**0**
r.2	Rinse Phase Duration	[s]	10	45	**16**
cr2	Cold Rinse Phase Duration	[s]	0	50	**0**
dr2	Drain	[s]	0	40	**16**
FP2	Final Pause at End of Cycle	[s]	0	60	**0**

CY3 Cycle 3 Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
Ln3	Wash Phase Long	[min]	0	20	**1**
Sh3	Wash Phase Short	[s]	1	60	**40**
PA3	Pause	[s]	0	20	**4**
Pr3	Pre-rinse Duration	[s]	0	30	**0**
r.3	Rinse Phase Duration	[s]	10	45	**16**
cr3	Cold Rinse Phase Duration	[s]	0	50	**0**
dr3	Drain	[s]	0	40	**16**
FP3	Final Pause at End of Cycle	[s]	0	60	**0**
bt3	Boiler Temperature Threshold: only for Cycle 3. This parameter allows having a different rinsing temperature for the third cycle. Only values above 45°C are allowed.	[°C]	0	95	**0**

drn Drain/Cleaning Cycle Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
Idr	Initial Drain Phase Duration	[s]	0	240	**40**
Fdr	Final Drain Phase Duration	[s]	0	240	**60**

8. OTHER PARAMETERS

dPA Dishwashing Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
IPA	Initial Pause before start washing (for ALL cycles)	[s]	0	10	**0**
dLY	Delay for the 2nd wash pump (PW only)	[s]	0	10	**3**
Pdr	Active a drain phase at the end of washing phase.	[s]	0	40	**0**
rPA	Duration of pause after rinse cycle (valid for dishwashers with door/hood lock device) [See par. 9.2 Medical line dishwasher with door/hood lock device].	[s]	0	60	**0**
C F	Celsius/Fahrenheit selection 0 = Celsius 1 = Fahrenheit	-	0	1	**0**
r tE	Rinse Temperature Display. Enable rinse temperature probe (if installed). 0 = during rinse phase the display shows boiler temperature; 1 = during rinse phase the display shows rinse temperature;	-	0	1	**0**
PPL	Pulse Per Litre. This parameter must be settled in according to flow meter installed.	[p/l]	0	255	**0**
CdE	Number of wash cycles performable without detergent (only for dishwashers with external detergent level sensor – par. 9.2.1 Detergent and rinse aid level sensors activation) [LES: 1]	-	0	5	**5**
1LE	Pressure sensor threshold 1 [present up to software version 2.11].	-	0	255	**140**
1HS	Pressure sensor histeresis 1 [present up to software version 2.11].	-	0	255	**50**
2LE	Pressure sensor threshold 2 [present up to software version 2.11].	-	0	255	**140**
2HS	Pressure sensor histeresis 2 [present up to software version 2.11].	-	0	255	**50**

Note: 1LE, 1HS, 2LE, 2HS parameters emulates a two levels pressure switch, keep in mind that value doesn't correspond to a physical quantity.

ron Read Only Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
rEL	Main Board Firmware Release	-	-	-	-
rLS	Water softener board software version.	-	-	-	-
CAI 1	When CAI 1 message appears, the parameter value becomes 1. After maintenance, to clear CAI 1 message, insert 0.	-	-	-	-
C 8	When C 8 alarm appears, the machine is frozen and this parameter is 1. After maintenance (see alarm codes document), insert 0 to enable the machine.	-	-	-	-
F21	This alarm appears in case of malfunctioning in the continuous water softener. To facilitate fault-finding, see par. E "Alarm codes that stop the machine for models with incorporated continuous water softener".	-	-	-	-

HCP Communication and HACCP Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
SEr	Serial Device 0 = 8N1 1 = PC connection (DAAS 8E1) 7 = HACCP network (ECAP 8E1+LK485) (LK485 board is necessary) 9 = Dishwashers with incorporated continuous water softener 16 = HACCP printer (8N1) 32 = MODEM GSM (DAAS 8N1) 33 = MODEM GSM (DAAS 8E1) 48 = Hyper Terminal (8N1)	-	0	63	**1**
Adr	Address. This parameter specifies the address of the appliance into the 'HACCP_network'. Works only if 'HACCP network' is selected (see above parameter).	-	0	255	**1**

Prn	Print parameter table.	-	0	1	**1**
bt	HACCP 'Basic' (printer) Boiler temperature: high limit.	[°C]	45	95	**90**
bH	HACCP 'Basic' (printer) Boiler temperature: gap below high limit.	[°C]	0	20	**10**
tt	HACCP 'Basic' (printer) Tank temperature: high limit.	[°C]	35	75	**68**
tH	HACCP 'Basic' (printer) Tank temperature: gap below high limit.	[°C]	0	20	**10**

CFG Configuration Parameters

Sym.	Parameter Description	Unit	Min	Max	Factory Default
typ	Dishwasher Model: 0 = HOOD TYPE & UNDERCOUNTER 1 = POT WASHER 2 = AUTOMATIC POT WASHER 3 = MEDICAL LINE DISHWASHER WITH LOCK DOOR/HOOD DEVICE	-	0	3	**0**
boi	Boiler type: 0 = ATMOSPHERIC BOILER 1 = PRESSURE BOILER 2 = EXTERNAL BOILER	-	0	2	**0**
doo	Door type: 0 = AUTOMATIC HOOD 1 = MANUAL HOOD 2 = FRONT LOADING 3 = POT WASHER		0	3	**1**
dFL	Default model (see *Default tables*): 1 = HOOD TYPE 2 = POT WASHER 3 = UNDERCOUNTER	-	0	3	**-**
trc	Solid State Relay (TRIAC). 0 = not enabled; 1 = **SOFT START** enabled; 3 = **SLOW SOFT START** enabled (works only on boards with Solid State Relay).	-	0	3	**0**
b_t	Boiler/Tank heating swap: 0 = boiler heaters and tank heater can work simultaneously; 1 = swap enabled: tank heating starts only boiler temperature is reached; (Note: disabling this function changes the global electrical power of appliance; before enabling this function check available power, supply cable section, fuses in according to User Manual).	-	0	1	**1**
btF	Tank Filling Mode Enable filling tank by means of rinsing cycles. Ex: btF = 75 means that boiler water is heated at 75°C, then follows a rinse phase and so on until tank is full. If btF = 0 the tank is filled by solenoid valve in the traditional way.	[°C]	0	85	**75**
LES	Detergent Level Switches 0 = level switches not enabled; 1 = enable detergent level switches;	-	0	1	**0**
UI	USER INTERFACE MODEL 8 = ACTIVE function disabled **(up to version 3.11 [up to serial nr. 42100099] set to 0)** 9 = hood type, under counter **(up to version 3.11 [up to serial nr. 42100099] set to 1)** 13 = LS5 with atmospheric boiler**(up to version 3.11 [up to serial nr. 42100099] set to 5)** 15 = LS5 with pressure boiler (user interface without display); **(up to version 3.11 [up to serial nr. 42100099] set to 7)** See parameter rEL (family ron) to check the software version installed in the board.	-	0	15	**9**
rE	Enable "regeneration cycle" key (only for dishwashers with non-continuous water softener) [See paragraph 9.1 resin regeneration cycle].	-	0	1	**0**
ALr	ALARMS ENABLE 0 = alarms disabled (to disable also warnings see bLo and tLo); 1 = alarms enabled; If this function is disabled, faults can be detected so display do not shows any alarm code.	-	0	1	**1**

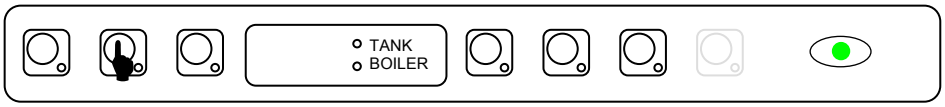
AAG	Air gap with float level sensor.	-	0	1	**0**

dbG Parameters for automatic hood type dishwashers

Sym.	Parameter Description	Unit	Min	Max	Factory Default
t 1	DELAY_K1 Time (during hood lifting) within which S3" must return to the rest position.	0.1 s	0.0 s.	20.0 s	**15**
t 2	HOOD_TOUT TIMEOUT – max. time allowed for complete hood opening/closing.	0.1 s	0.0 s.	20.0 s	**200**
t 3	DELAY_K1_S3 During hood lowering, firstly S3" must cut in and then after a time t3 .the bottom limit switch S3.	0.1 s	0.0 s.	20.0 s	**15**
t 4	DELAY_K Time within which K and K' must be both closed or both open.	0.1 s	0.0 s.	20.0 s	**10**
t 5	DELAY_S3 Time during hood lifting within which the bottom limit switch must return to the rest position..	0.1 s	0.0 s.	20.0 s	**20**
t 6	DELAY_S5 Time during hood lowering within which the top limit switch must return to the rest position.	0.1 s	0.0 s.	20.0 s	**20**
AL_	Displays the last alarm code relative to automatic hood type dishwashers.	-	-	-	-
tEh	Parameter only valid for hood type models. Hood lifting motor absorption threshold. (50 units correspond to a current of approx. 1 ampere).	-	0	250	**100**
SEn	Parameter for the implementation of new characteristics [present up to software version 3.12].	-	0	1	**0**

9. SPECIAL FEATURES

9.1 RESIN REGENERATION CYCLE



The regeneration cycle is activated by pressing the button shown in the figure, for at least 5 seconds.

For this key to be enabled parameter rE (in family CFG) must be set to 1.

At this point you can enter the number of wash cycles that can be performed after each regeneration: parameter rCY in the counters family Cnt. If rCY is set to zero the counter is disabled, otherwise after the preset number of cycles the message rEG is displayed to confirm that regeneration is possible (this is an information-only message with no effect on operation of the appliance, so you can continue to use the dishwasher). The message is cleared when the regeneration cycle is terminated.

The number of regeneration cycles performed can be checked by consulting the parameter nrE in the Cnt family of counters.

When there are just 15 cycles remaining before the next regeneration cycle, at the end of the wash cycle the display shows the message End followed by 15, at the end of the next wash cycle the display shows End and 14, and so forth, i.e. the display informs the user of the number of wash cycles still available before resin regeneration is required.

Before starting the regeneration cycle remove the siphon spillway.

CAUTION: if the regeneration cycle is accidentally started, it can be switched off by pressing the button shown in the figure, for at least 5 seconds.

The hardness of the water exiting the softener can vary between 3°fH - 10 °fH / 1.7 °dH - 5.6 °dH / 2.1 °cH - 7 °cH.

9.2 MEDICAL LINE DISHWASHER WITH DOOR/HOOD LOCK DEVICE

The medical line dishwasher with door/hood lock device has a device that prevents door/hood opening for the entire duration of the work cycle.

For the door/hood lock to be active, the parameter tYP (in the CFG family) must be set to 3.

The dishwasher door/hood is locked at the start of a wash cycle and is released at the end of the final pause after rinse. The wash compartment can be accessed by stopping the work cycle in progress, as the locking device is thus disabled.

A pause at the end of rinse can be set by means of the parameter rPA (in the dPA family). This parameter is common to all 3 wash cycles. The rinse water temperature is displayed during this pause. Another final pause in the cycle can be set by setting the parameters FP1, FP2, FP3. During the final pause the display shows the time remaining for completion of the cycle.

The door/hood lock device will be deactivated at the end of the final pause (FP1, FP2, FP3).

For correct performance of the wash cycle the pause at the end of rinse and the final pause must assume the default values (see Prog 032 – 034 - 035).

9.3 DETERGENT AND RINSE AID LEVEL SENSORS ACTIVATION

By setting the parameter LES (in the CFG family) to 1, management of the level sensors located inside the external detergent and rinse aid tanks is enabled. During the rinse phase, when the rinse aid inside the tank has finished, the message rA, 0 appears on the display.

When the detergent inside the tank is finished, the message dEt 0 is displayed and after a number of wash cycles equal to CdE (in the dPA family) the dishwasher inhibits the activation of other wash cycles. Therefore the detergent level in the tank must be restored.

9.4 DISHWASHER WITH INCORPORATED CONTINUOUS WATER SOFTENER

Dishwashers with incorporated continuous water softener have a continuous softener in the water circuit. By means of special resins, this device removes the calcareous substances from the feed water, supplying decalcified water for washing.

To activate the continuous water softener set the parameter SEr (in the HCP family) to the value 9.

For the continuous softener to work properly the resins must be regenerated periodically, with frequency depending on the hardness of the water and the number of wash cycles carried out. Unlike conventional water softeners, this continuous softener does not require machine stops for regenerating the resins.

To regenerate the resins it is necessary to put kitchen salt in the special container located in the dishwasher.

In particular, the salt container must be filled when the dishwasher is used for the first time and whenever the message SAL 0 is displayed at the start of a wash cycle. The salt container holds up to 1.5 kg of salt.

IMPORTANT: The message SAL 0 may appear for several wash cycles even after topping-up the salt, as the salt must circulate in the entire system. Correct operation of the dishwasher is not, however, affected.

The number of regeneration cycles performed can be checked by consulting the parameter nrE in the Cnt family of counters.

The hardness of the water exiting the softener can vary between 3°fH - 10 °fH / 1.7 °dH - 5.6 °dH / 2.1 °cH - 7 °cH.

10. MAIN BOARD CONFIGURATION

When receiving an electronic board (spare part) may be necessary to configure it in according to the machine where has to be replaced.

1. With the machine **CODE** enter into the following table and read the corresponding **Prog**. number;
2. Follow the instructions reported into the corresponding Prog.XXX sheet (next pages).
3. With the machine **CODE** find the **Layout** number in Par. 12.2 – Connectors layout.

10.1. CODE→Prog. TABLE

MODEL	CODE	Prog.	Layout
WT4	**400007**	**021**	**11**
WT4B	**400008**	**020**	**8**
WT4D	**400009**	**021**	**11**
WT4DB	**400015**	**020**	**8**
WT46	**400016**	**020**	**8**
WT4G	**400017**	**022**	**8**
WT4DG	**400018**	**022**	**8**
WT4WS1	**400019**	**024**	**11**
WT4BWS	**400027**	**012**	**8**
WT4DWS1	**400028**	**024**	**11**
WT4BDWS	**400029**	**012**	**8**
WT4D60	**400042**	**021**	**11**
LS5/1	**400100**	**021**	**11**
LS5/1 DP	**400102**	**021**	**11**
LS5/1WS	**400103**	**024**	**11**
LS5/1WSDP	**400110**	**024**	**11**
LS5/3	**400112**	**020**	**8**
LS5/3 DP	**400113**	**020**	**8**
LS5/3WS	**400114**	**012**	**8**
LS5/3WSDP	**400115**	**012**	**8**
LS5/3WSDPD	**400117**	**012**	**8**
LB5G	**400118**	**022**	**8**
LB5GDP	**400119**	**022**	**8**
LS5/1DP60	**400124**	**021**	**11**
LS5/1DPAUS	**400125**	**036**	**11**
LS6EP	**502003**	**013**	**8**
LS6EP/DD	**502004**	**013**	**8**
LS6EA/DD	**502005**	**011**	**8**
LS6EA/DD/DP	**502006**	**011**	**8**
WT38TDE	**502007**	**032**	**10**
WT38/M50	**502008**	**015**	**9**
LS6EADPWS	**502014**	**044**	**8**
LS6EADPWSG	**502015**	**044**	**8**
WT38WS	**502016**	**048**	**8**
WT38WSG	**502017**	**048**	**8**
WT38MEDWS	**502018**	**045**	**8**
WT38PM50	**502019**	**039**	**9**
WT37LEV/9	**502020**	**033**	**8**
WT38M50/4	**502029**	**015**	**9**
LS6EA/UK	**502030**	**011**	**8**
LS6EA/UKDP	**502031**	**011**	**8**

MODEL	CODE	Prog.	Layout
LS6EA/60	**502041**	**011**	**8**
WT 38DD	**502110**	**046**	**8**
WT 37	**502111**	**046**	**8**
WT 38	**502112**	**046**	**8**
WT 37/4.5	**502117**	**046**	**8**
WT 38/4.5	**502118**	**046**	**8**
WT 37/UK	**502122**	**046**	**8**
WT38C	**502125**	**033**	**8**
WT38C60	**502126**	**033**	**8**
WT38CUK	**502127**	**033**	**8**
WT 38/UK	**502217**	**046**	**8**
WT37J60	**502218**	**046**	**8**
WT37J50	**502219**	**046**	**8**
LS6AH240U	**502312**	**027**	**9**
WT30H208U	**502313**	**031**	**9**
WT30H240U	**502314**	**031**	**9**
WT30H208DU	**502315**	**031**	**9**
WT30H240DU	**502316**	**031**	**9**
WT30H208RU	**502317**	**031**	**9**
WT30H240RU	**502318**	**031**	**9**
LS6H208DU	**502319**	**027**	**9**
LS6AH208U	**502320**	**027**	**9**
WT 38/60	**502321**	**046**	**8**
WT 38/M60	**502322**	**015**	**9**
WT 38MED	**502323**	**014**	**8**
LS6H240DU	**502325**	**027**	**9**
LS6H208RU	**502326**	**027**	**9**
LS6H240RU	**502327**	**027**	**9**
WT30M208U	**502328**	**034**	**10**
WT30M240U	**502329**	**034**	**10**
WT30M208DU	**502339**	**034**	**10**
WT30M240DU	**502341**	**034**	**10**
WT30M208RU	**502342**	**034**	**10**
WT30M240RU	**502343**	**034**	**10**
WT30C208DU	**502344**	**038**	**9**
WT30C240DU	**502345**	**038**	**9**
WT38PM60	**502346**	**039**	**9**
WT38M60/4	**502347**	**015**	**9**
LS6EA	**502520**	**011**	**8**
LS6EA/DP	**502521**	**011**	**8**
LS6EAH	**502523**	**011**	**8**

MODEL	CODE	Prog.	Layout
LS6MCD	502524	033	8
LU7PDP	503020	040	9
LU7ADP	503021	041	9
WTU40PDP	503023	040	9
WTU40ADP	503024	047	9
LS 10	504100	002	1
LS14EA	504101	001	4
LS 10 UK DP	504102	002	1
ET12E	504104	003	1
LS 10/60Hz	504105	002	1
LS 10 CW	504107	002	1
LS 10 INS	504108	002	1
HT 1200 ins DEK	504109	001	1
LS14EA/INS	504110	001	4
LS 10 N	504111	002	1
LS 10 DP	504114	002	1
LS 10 HD	504115	008	1
LS14EA/AU	504116	004	4
LS14EA/60	504117	001	4
LS 10 UK1	504118	002	1
LS 10 UK3	504119	002	1
LS 12 INS	504120	001	1
LS 12	504121	001	1
LS 12 DP	504122	001	1
LS 12 60Hz	504125	001	1
LS 12 CW	504128	001	1
HT 1200 DEK	504129	001	1
LS14EA/ASIA	504131	009	4
LS14EA/G	504133	001	4
WT 60 DP	504134	001	1
WT 60	504135	001	1
WT 60 CW	504136	001	1
WT 60 UK DP CW INS	504137	001	1
WT 60 INS	504138	001	1
WT 60 CW INS	504139	001	1
WT 60 AU CW	504140	004	1
WT 60 AU N	504141	004	1
LS10EA	504142	002	4
WT 60/60HZ	504145	001	1
WT 60/60HZ CW	504146	001	1
WT 60 N	504151	001	1
WT 60 N INS	504152	001	1
LS 12 HD	504153	007	1
LS14EA/DD	504155	001	4
WT65E	504156	001	1
WT65EB	504157	001	4
WT65EI	504158	001	1
WT 60 AU DP	504159	004	1
LS 12 UK/3 CW	504161	001	1
WT 60 UK CW	504162	001	

MODEL	CODE	Prog.	Layout
LS 12 AU	504163	004	1
LS 12 UK DP CW	504164	001	1
ECOTEMP 12 SW	504165	001	1
WT65EBI	504166	001	4
WT65EBIA	504167	004	4
WT65EIA	504168	004	1
WT65E60	504169	001	1
WT65EB60	504170	001	4
WT 60 U/400	504171	006	
WT 60 U/440	504172	006	
WT65EBIDG	504173	001	4
WT65EBASIA	504174	009	4
WT65EIM50	504175	006	2
WT65EIM60	504176	006	2
WT 60 MX 220/60	504177	001	1
LS 12 CW INS	504178	001	1
LS14ADP/G	504179	001	4
WT65MED	504180	010	4
WT65EJ50	504183	001	1
WT65EJ60	504186	001	1
LS14AH240U	504187	028	3
WT65H208U	504188	028	3
WT65H240U	504189	028	3
LS 12 ASIACW	504190	009	1
WT 60 ASIACW	504191	009	1
LS 12 ASIANB	504192	009	
WT60ASIANB	504193	009	
LS14H208DU	504194	028	3
LS14AH208U	504195	028	3
LS14H240DU	504196	028	3
LS14H208RU	504197	028	3
LS14H240RU	504198	028	3
WT65H208DU	504199	028	3
WT65H240DU	504200	028	3
WT65H208RU	504201	028	3
WT65H240RU	504202	028	3
WT65M208U	504203	035	12
WT65M240U	504204	035	12
WT65M208DU	504205	035	12
WT65M240DU	504206	035	12
WT65M208RU	504207	035	12
WT65M240RU	504208	035	12
LS14EAWS	504209	042	4
LS14ADPWSG	504210	042	4
LS14EAIWS	504211	042	4
WT65EBWS	504212	042	4
WT65BIDWSG	504213	042	4
WT65EBIWS	504214	042	4
WT65MEDWS	504215	043	4
LS9P	505022	019	6

MODEL	CODE	Prog.	Layout
LS9P DD	505033	019	6
LS9A UK	505034	018	6
LS9P60	505035	019	6
WT55P	505038	019	6
WT55P6	505039	019	6
LS9ADG1	505041	018	6
WT55ADG1	505042	018	6
LS9PAUS	505043	019	6
WT55PM50	505044	019	13
WT55PM60	505045	019	13
PPW1 M	506010	005	7
PPW1 M UK	506011	005	7
PPW1 60 Hz	506012	005	7
PPW1 MH	506013	005	7
PPW2 M	506014	005	7
PPW2 M UK	506015	005	7
PPW2 60 Hz	506016	005	7
PPW2 V	506017	005	
WT830 M	506018	005	7
WT830 M UK	506019	005	7
WT830 60 Hz	506020	005	7
WT850 M	506022	005	7
WT850 M UK	506023	005	7
WT850 60 Hz	506024	005	7
WT850 V	506025	005	
WT830 MH	506026	005	7
WT830EA	506215	017	5
WT850EA	506216	017	5
WT830EAG	506217	017	5
WT850EAG	506218	017	5
WT830M208U	506029	037	3
WT830M240U	506030	037	3
WT830H208U	506031	037	3
WT830H240U	506032	037	3
WT850M208U	506033	037	3
WT850M240U	506034	037	3
PW1M208U	506035	037	3
PW1M240U	506036	037	3
PW1MH208U	506037	037	3
PW1MH240U	506038	037	3
PW2M208U	506039	037	3
PW2M240U	506042	037	3
FL5	690004	020	8
FL5DP	690005	020	8
LV5	690006	020	8
LV5DP	690007	020	8
LV5/3WSDP	690008	012	8
FL5/3WSDP	690009	012	8
UC5/1DP	690010	021	11
UC5/1WSDP	690011	024	11
LD5DP	690013	020	8

MODEL	CODE	Prog.	Layout
LD5	690014	020	8
FL 620EP	698003	013	8
ET5EDG	698004	023	8
LV6EP	698006	013	8
H3300	698007	029	8
H2500	698008	019	6
H3500	698009	001	4
ET5EDCW	698010	016	8
LV6EADPWS	698011	048	8
HT1200WS	698012	042	4
HT1200IWS	698013	042	4
FL620ADPWS	698014	048	8
H1310SANA	698016	030	8
H1510SANA	698017	010	4
LV1200IWS	698018	042	4
HT900P	698022	019	6
LV900P	698023	019	6
LD900	698024	019	6
LU700PDP	698033	040	9
LU700ADP	698034	047	9
PW100 M	698040	005	7
PW200 M	698041	005	7
PW200 V	698042	005	7
PW100 MH	698043	005	7
LV100M	698044	005	7
LV200M	698045	005	7
HT 1200	698050	001	4
HT 1000	698051	002	4
HT 1000 INS	698052	002	1
HT 1200 INS	698053	001	4
HT 1200 DP	698055	001	1
ET12EIG	698056	026	3
ET12EI	698057	025	1
LV1000	698059	002	4
LV1200INS	698060	001	4
ET12EICWG	698061	001	3
ET12EICW	698062	025	3
FL 620EA	698070	046	8
FL 620EADP	698071	046	8
ET5E	698076	016	8
ET5ED	698077	016	8
FL 620EP/DD	698078	013	8
FL 620EA/DD	698079	046	8
FL 620EADP/DD	698080	046	8
LV6EA	698081	046	8
LV6EADP	698082	046	8
LS10 INS DP	S36220	002	
LS 10 INS	S37858	002	
LS 10	S39968	002	
LS 10/fiera	S42549	002	

MODEL	CODE	Prog.	Layout
LS 10 INS	S43062	002	
LS 10	S43327	002	
HT 1000	S475CH	002	
LS 10 CW	S47APN	002	
LS 10 CW	S47CF5	002	
LS 10 CW	S47DU4	002	
LS 10 CW	S47DU7	002	
LS 10 CW	S47DUA	002	
LS 10 CW	S47DUF	002	
LS 10 CW	S47E17	002	
LS 10 CW	S47E2C	002	
LS 10 CW	S47E2H	002	
LS 10 CW	S47E2M	002	
LS 10 CW	S47E2R	002	
LS 10 UK1	S47E50	002	
LS 10 CW	S47E6M	002	
HT1200	S46002	001	
WT 60 CW INS	S46880	001	
HT 1000	S4734M	002	
WT 60/9	S47539	001	
WT 60/9	S4756O	001	
WT 60/9	S4756P	001	
WT60 INS	S475GJ	001	
WT60 INS	S475GY	001	
WT 60 CW	S476HA	001	
LS 12 HD	S4775E	007	
HT1200	S4777U	001	
LS 12 CW INS	S477BM	001	
WT 60 AU CW	S477JR	004	
WT 60 INS	S477M1	001	
WT 60 INS	S477M1	001	
WT 60 N INS	S477MB	001	
WT 60/60HZ DP	S477QB	001	
LS 12 CW INS	S477V7	001	
WT 60 DP	S47811	001	
WT 60/9	S4781D	001	
WT 60/60HZ DP	S4781I	001	
WT 60/9 INS	S4786P	001	
WT 60 U/230	S478KF	006	
LS 12 CW INS	S478LV	001	
WT 60 CW INS	S478SP	001	
LS 12 CW INS	S479VE	001	
WT 60	S479Z3	001	
WT 60	S479Z9	001	
WT 60 AU CW	S47AP80	004	
LS 12 CW	S47APP	001	
HT 1200	S47B9I	001	
LS 12 UK/3 CW	S47BJI	001	
LS 12 CW	S47C1Z	001	
WT 60 CW	S47C6B	001	
LS 12 CW	S47CCS	001	

MODEL	CODE	Prog	Layout
WT 60	S47CCY	001	
WT 60 CW	S47CEA	001	
WT 60/9	S47CEH	001	
WT 60/9	S47CEI	001	
WT 60	S47CKD	001	
LS 12 CW	D04713	001	
LS 12 CW	S34369	001	
WT 60 giappone	S34377	001	
WT 60 giappone	S34378	001	
WT 60 giappone	S35178	001	
WT 60 giappone	S35179	001	
LS 12 CW	S35246	001	
HT1200	S35330	001	
WT 60 giappone	S36384	001	
WT 60 giappone	S36385	001	
LS 12 CW	S36846	001	
LS 12 CW	S36847	001	
HT1200	S39964	001	
HT1200	S40472	001	
ECOTEMP 12	S40785	003	
WT 60/9 INS	S41170	001	
HT1200	S41185	001	
LS 12 INS	S42032	001	
WT 60/60HZ	S42170	001	
LS 12/fiera	S42550	001	
WT 60/60HZ	S42617	001	
WT 60 N	S43119	001	
LS12 CW	S43488	001	
LS 12 INS	S43563	001	
LS 12 DP CW	S43734	001	
LS 12 CW	S43806	001	
LS 12 CW	S43830	001	
WT 60 CW INS	S44421	001	
LS6EA	S477BL	011	
WT 37	S4784U	011	
LS6EA	S4787B	011	
FL 620EA	S478BN	011	
WT830 MH	S46881	005	
PPW1 M	S4758V	005	
WT830 MH	S476YZ	005	
PPW1 MH	S477IT	005	
WT830 M	S479QS	005	
PPW1 M UK	S47BKQ	005	
WT 60 CW INS	S47CPB	001	
WT 60 CW INS	S47CQS	001	
ECOTEMP 12 SW	S47CVG	001	
ECOTEMP 12 SW	S47CVH	001	
WT 60 CW INS	S47D9Y	001	
WT 60	S47DCA	001	
LS 12 CW	S47DE0	001	

MODEL	CODE	Prog	Layout
LS 12 CW	**S47DMM**	**001**	
WT 60	**S47DSK**	**001**	
WT 60	**S47DWC**	**001**	
WT 60	**S47DWD**	**001**	
PPW1 MH	**S47C37**	**005**	
PPW1 MH	**S47DE1**	**005**	
WT850 M	**S43016**	**005**	
PPW2 M	**S44099**	**005**	
PPW2 M	**S44399**	**005**	
PPW2 M	**S45958**	**005**	
PPW2 M	**S47BW4**	**005**	
WT850 M	**S47CFG**	**005**	
PPW2 M	**S47CZ1**	**005**	

10.2. PROGRAMMING SHEETS

LS12 – LS14 / WT60 - 65	Prog. 001

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ	0	Hood Type like working cycles.
	bo1	0	Atmospheric boiler.
	doo	1	Manual Hood.
	dFL	1	Default values for Hood Type models.
	trc	0	(for this appliance SOFT START is NOT possible).
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Factory parameters family	
	btC	78	Boiler Temperature Threshold.
5.	Switch OFF and then switch ON the machine.		

LS10	Prog. 002

1.	Switch OFF and then switch ON the machine.		
2.	CFG Enter into CFG parameter family and set the following parameters:		
	typ	0	Hood Type like working cycles.
	bo1	0	Atmospheric boiler.
	doo	1	Manual Hood.
	dFL	1	Default values for Hood Type models.
	trc	0	(for this appliance SOFT START is NOT possible).
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC Factory parameters family		
	btC	78	Boiler Temperature Threshold.
5.	Modify Cycle parameters:		
	CY1 Cycle 1		
	Sh1	45	Short Wash Phase [s]
	CY2 Cycle 2		
	Ln2	1	Long Wash Phase [min]
	Sh2	40	Short Wash Phase [s]
6.	Switch OFF and then switch ON the machine.		

ECOTEMP12	Prog. 003

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters:	
	typ	0	Hood Type like working cycles.
	bo1	0	Atmospheric boiler.
	doo	1	Manual Hood.
	dFL	1	Default values for Hood Type models.
	trc	0	(for this appliance SOFT START is NOT possible).
	b_t	0	Boiler heaters and tank heater work simultaneously. .
	btF	0	The tank is filled into the traditional way.
	LES	0	Detergent level switches not enabled.
	U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Factory parameters family	
	btC	65	Boiler Temperature Threshold.
	bAJ	2	Boiler Temperature Adjust.
5.	Switch OFF and then switch ON the machine.		

LS12 AU / WT60 - 65 AU	Prog. 004

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters:		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	0	Automatic Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Factory parameters family		
		btC	78	Boiler Temperature Threshold.
5.	Modify the other parameters:			
	C y1	Cycle 1		
		FP1	2	Final Pause [s]
	C y2	Cycle 2		
		FP2	2	Final Pause [s]
	C y3	Cycle 3		
		FP3	2	Final Pause [s]
	dPA	Dishwashing parameters family.		
		IPA	2	Initial Pause
6.	Switch OFF and then switch ON the machine.			

PW 1 - 2 / WT830 - 850					Prog. 005
1.	Switch OFF and then switch ON the machine.				
2.	CFG	Enter into CFG parameter family and set the following parameters:			
		typ	1	Pot Washer.	
		bo1	0	Atmospheric boiler.	
		doo	2	Front loading function.	
		dFL	2	Default values for Pot Washer models.	
		trc	0	(for this appliance SOFT START is NOT possible).	
		b_t	1	Tank heater works only if boiler temperature reached.	
		btF	0	The tank is filled into the traditional way.	
		LES	0	Detergent level switches not enabled.	
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**	
		rE	0	Regeneration cycle disabled.	
		ALr	1	Alarms enabled.	
3.	Switch OFF and then switch ON the machine.				
4.	Modify Factory parameters:				
	FAC	Factory parameters family			
		btC	78	Boiler Temperature Threshold.	
5.	Switch OFF and then switch ON the machine.				

WT60 - 65 USPH	Prog. 006

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters:		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	1	Manual Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Factory parameters family		
		btC	78	Boiler Temperature Threshold.
5.	Modify the cycle parameters:			
	CY1	Enter into Cycle 1 parameters family.		
		r1	25	Rinse Phase Duration [s]
		dr1	25	Drain [s]
	CY2	Enter into Cycle 2 parameters family.		
		r2	25	Rinse Phase Duration [s]
		dr2	25	Drain [s]
	CY3	Enter into Cycle 3 parameters family.		
		r3	25	Rinse Phase Duration [s]
		dr3	25	Drain [s]
6.	Select Fahrenheit :			
	dPA	Enter into Dishwashing parameter family.		
		C F	1	Select Fahrenheit degrees.
6.	Switch OFF and then switch ON the machine.			

LS12HD				Prog. 007
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters:		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	1	Manual Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify the cycle parameters:			
	CY1	Enter into Cycle 1 parameters family.		
		Pr1	20	Pre-rinse Duration [s]
		dr1	36	Drain [s]
	CY2	Enter into Cycle 2 parameters family.		
		Pr2	20	Pre-rinse Duration [s]
		dr2	36	Drain [s]
	CY3	Enter into Cycle 3 parameters family.		
		Pr3	20	Pre-rinse Duration [s]
		dr3	36	Drain [s]
5.	Switch OFF and then switch ON the machine.			

LS10HD	Prog. 008

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters:		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	1	Manual Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify the cycle parameters:			
	C y1	Enter into Cycle 1 parameters family.		
		Sh1	45	Short Wash Phase [s]
		Pr1	20	Pre-rinse Duration [s]
		dr1	36	Drain [s]
	C y2	Enter into Cycle 2 parameters family.		
		Ln1	1	Long Wash Phase [min]
		Sh2	40	Short Wash Phase [s]
		Pr2	20	Pre-rinse Duration [s]
		dr2	36	Drain [s]
5.	Switch OFF and then switch ON the machine.			

LS12 - 14 / WT60 - 65 ASIA				Prog. 009
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	1	Manual Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Factory parameters family		
		btC	78	Boiler Temperature Threshold.
		bP	0	Boiler Priority Disabled
5.	Switch OFF and then switch ON the machine.			

WT65MED	Prog. 010

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters:	
	typ	0	Hood Type like working cycles.
	bo1	0	Atmospheric boiler.
	doo	0	Automatic Hood.
	dFL	1	Default values for Hood Type models.
	trc	0	(for this appliance SOFT START is NOT possible).
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Factory parameters family	
	btT	90	Boiler Temperature Threshold.
	bH1	0	Disable boiler high Temperature alarm (C 2).
	bAJ	0	Boiler Temperature Adjust.
	bSt	0	Booster Function.
	tH1	85	Tank high Temperature limit.
5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
	Ln1	2	Long Wash Phase [min]
	Sh1	32	Short Wash Phase [s]
	r.1	35	Rinse Phase Duration [s]
	dr1	40	Drain [s]
	FP1	15	Final Pause [s]
	CY2	Cycle 2 parameters family.	
	Ln2	3	Long Wash Phase [min]
	Sh2	32	Short Wash Phase [s]
	r.2	35	Rinse Phase Duration [s]
	dr2	40	Drain [s]
	FP2	15	Final Pause [s]
	CY3	Cycle 3 parameters family.	
	Ln3	5	Long Wash Phase [min]
	Sh3	32	Short Wash Phase [s]
	r.3	35	Rinse Phase Duration [s]
	dr3	40	Drain [s]
	FP3	15	Final Pause [s]

WT65MED	Prog. 010

	dPA			Set other parameters.
		IPA	4	Initial Pause [s]
6.	Switch OFF and then switch ON the machine.			

LS6 6000W ATM	Prog. 011

1.	Switch OFF and then switch ON the machine.			
2.	CFG			Enter into CFG parameter family and set the following parameters.
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			

LS5WS / WT4WS TRIPHASE			Prog. 012
1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ 0	Hood Type like working cycles.	
	bo1 0	Atmospheric boiler.	
	doo 2	Front loading door type.	
	dFL 3	Default values for Undercounter models.	
	trc 1	SOFT START ENABLED.	
	b_t 1	Tank heater works only if boiler temperature reached.	
	btF 75	Enable filling tank by means of rinsing cycles.	
	LES 0	Detergent level switches not enabled.	
	UI 13	Select user interface for LS5 **(up to version 3.11 set to 5).**	
	rE 1	Regeneration cycle enabled.	
	ALr 1	ALARMS ENABLED.	
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family.	
	btC 83	Boiler Temperature Threshold.	
	bAJ 2	Boiler Temperature Adjust.	
	bSt 2	Booster Function.	
5.	Modify the cycle parameters:		
	CY3	Cycle 3 parameters family.	
	Ln3 1	Long Wash Phase [min]	
	Sh3 40	Short Wash Phase [s]	
6.	Switch OFF and then switch ON the machine.		
7.	Modify Detergent dosage:		
	GEn	Enter into GEn parameter family.	
	d In 70	Initial Detergent Dosage [s].	
	r In 5	Initial Rinse Aid Dosage [s].	
8.	Cnt	Counters	
	rCy 20	Number of cycles allowed before regeneration.	
9.	Switch OFF and then switch ON the machine.		

LS6 PRESS				Prog. 013
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	1	Pressure boiler.
		doo	2	Front loading.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	0	The tank is filled into the traditional way.
		LES	0	Detergent level switches not enabled.
		U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family and change boiler threshold.		
		btC	86	Boiler Temperature Threshold.
5.	Switch OFF and then switch ON the machine.			

WT38 MED			Prog. 014
1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ	0	Hood Type like working cycles.
	bo1	0	Atmospheric boiler.
	doo	2	Front loading.
	dFL	3	Default values for Undercounter models.
	trc	1	SOFT START ENABLED.
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family and change boiler threshold.	
	btT	90	Boiler Temperature Threshold.
	bH1	0	Disable boiler high Temperature alarm (tr2).
	bAJ	0	Boiler Temperature Adjust.
	bSt	0	Booster function not needed.
	btd	10	During stand-by boiler is kept at lower temperature than Temperature Threshold.
	ttT	65	Tub Temperature Threshold.
	tH1	85	Tank high Temperature limit.
5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
	Ln1	4	Long Wash Phase [min]
	Sh1	10	Short Wash Phase [s]
	r.1	35	Rinse Phase Duration [s]
	dr1	40	Drain [s]
	FP1	15	Final Pause at End of Cycle
	CY2	Cycle 2 parameters family.	
	Ln2	6	Long Wash Phase [min]
	Sh2	10	Short Wash Phase [s]
	r.2	35	Rinse Phase Duration [s]
	dr2	40	Drain [s]
	FP2	15	Final Pause at End of Cycle
	CY3	Cycle 3 parameters family.	
	Ln3	9	Long Wash Phase [min]
	Sh3	10	Short Wash Phase [s]
	r.3	35	Rinse Phase Duration [s]
	dr3	40	Drain [s]
	FP3	15	Final Pause at End of Cycle
6.	Switch OFF and then switch ON the machine.		

WT30 USPH				Prog. 015
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading.
		dFL	3	Default values for Undercounter models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family and change boiler threshold.		
		btC	82	Boiler Temperature Threshold.
		btd	3	During stand-by boiler is kept at lower temperature than Temperature Threshold.
		bSt	0	Booster Function not necessary.
		ttC	66	Tank Temperature Threshold.
		tH1	80	High limit for tank temperature.
5.	Modify the cycle parameters:			
	CY1	Cycle 1 parameters family.		
		Ln1	1	Long Wash Phase [min]
		Sh1	22	Short Wash Phase [s]
		r11	25	Rinse Phase Duration [s]
		dr1	40	Drain [s]
		FP1	4	Final Pause [s]
	CY2	Cycle 2 parameters family.		
		Ln2	2	Long Wash Phase [min]
		Sh2	22	Short Wash Phase [s]
		r12	25	Rinse Phase Duration [s]
		dr2	40	Drain [s]
		FP2	4	Final Pause [s]
	CY3	Cycle 3 parameters family.		
		Ln3	4	Long Wash Phase [min]
		Sh3	22	Short Wash Phase [s]
		r13	25	Rinse Phase Duration [s]
		dr3	40	Drain [s]
		FP3	4	Final Pause [s]

WT30 USPH				Prog. 015
	dr n	Drain parameters family.		
		1dr	30	Initial Drain Phase Duration [s]
	dPA	Set other parameters.		
		1PA	5	Initial Pause [s]
		C F	1	Fahrenheit.
6.	Switch OFF and then switch ON the machine.			

ECOTEMP 5			Prog. 016
1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	tYP	0	Hood Type like working cycles.
	bo1	0	Atmospheric boiler.
	doo	2	Front loading.
	dFL	3	Default values for Undercounter models.
	trc	1	SOFT START ENABLED.
	b_t	0	Tank and boiler heaters work simultaneously.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family and change boiler threshold.	
	btC	77	Boiler Temperature Threshold.
	btd	3	During stand-by boiler is kept at lower temperature than Temperature Threshold.
5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
	Ln1	1	Long Wash Phase [min]
	Sh1	10	Short Wash Phase [s]
	r.1	25	Rinse Phase Duration [s]
	dr1	40	Drain [s]
	FP1	4	Final Pause [s]
	CY2	Cycle 2 parameters family.	
	Ln2	2	Long Wash Phase [min]
	Sh2	22	Short Wash Phase [s]
	r.2	25	Rinse Phase Duration [s]
	dr2	40	Drain [s]
	FP2	4	Final Pause [s]
	CY3	Cycle 3 parameters family.	
	Ln3	4	Long Wash Phase [min]
	Sh3	22	Short Wash Phase [s]
	r.3	25	Rinse Phase Duration [s]
	dr3	40	Drain [s]
	FP3	4	Final Pause [s]
	drn	Drain parameters family.	
	Idr	30	Initial Drain Phase Duration [s]
	dPA	Set other parameters.	
	IPA	5	Initial Pause [s]
6.	Switch OFF and then switch ON the machine.		

WT830EA / WT850EA	Prog. 017

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		typ	2	Automatic Pot Washer.
		boi	0	Atmospheric boiler.
		doo	3	Automatic Pot Washer
		dFL	2	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	0	The tank is filled into the traditional way.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify the cycle parameters:			
	C y 1	Cycle 1 parameters family.		
		Ln1	2	Long Wash Phase [min]
		Sh1	29	Short Wash Phase [s]
		FP1	5	Final Pause [s]
	C y 2	Cycle 2 parameters family.		
		Ln2	5	Long Wash Phase [min]
		Sh2	29	Short Wash Phase [s]
		FP2	5	Final Pause [s]
	C y 3	Cycle 3 parameters family.		
		Ln3	8	Long Wash Phase [min]
		Sh3	29	Short Wash Phase [s]
		FP3	5	Final Pause [s]
5.	Switch OFF and then switch ON the machine.			

LS9 / WT 55 ATM	Prog. 018

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	1	Manual Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family and change boiler threshold.		
		btC	82	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		bSt	1	Booster Function.
5.	Modify the cycle parameters:			
	C32	Cycle 2 parameters family.		
		Sh2	55	Short Wash Phase [s]
	C33	Cycle 3 parameters family.		
		Ln3	4	Long Wash Phase [min]
	dPA	Set other parameters.		
		IPA	5	Initial Pause [s]
6.	Switch OFF and then switch ON the machine.			

LS9 / WT55 PRESS	Prog. 019

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	1	Pressure boiler.
		doo	1	Manual Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	0	The tank is filled into the traditional way.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family and change boiler threshold.		
		btC	84	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		bSt	1	Booster Function.
5.	Modify the cycle parameters:			
	C02	Cycle 2 parameters family.		
		Sh2	55	Short Wash Phase [s]
	C03	Cycle 3 parameters family.		
		Ln3	4	Long Wash Phase [min]
6.	Switch OFF and then switch ON the machine.			

LS5 / WT 4 PRES	Prog. 020

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		typ	0	Hood Type like working cycles.
		bo1	1	Pressure boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	0	The tank is filled into the traditional way.
		LES	0	Detergent level switches not enabled.
		U1	15	Select user interface without display **(up to version 3.11 set to 7).**
		rE	0	Regeneration cycle enabled.
		ALr	0	ALARMS NOT ENABLED.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	84	Boiler Temperature Threshold.
		bAJ	3	Boiler Temperature Adjust.
		bSt	2	Booster Function.
5.	Modify the cycle parameters:			
	C93	Cycle 3 parameters family.		
		Ln3	1	Long Wash Phase [min]
		Sh3	40	Short Wash Phase [s]
6.	Switch OFF and then switch ON the machine.			
7.	Modify Detergent dosage:			
	GEn	Enter into GEn parameter family.		
		dIn	165	Initial Detergent Dosage.
		rIn	0	Initial Rinse Aid Dosage.
		dEt	182	Detergent dispenser works when LOAD SOLENOID VALVE in activated.
		rA1	61	Rinse Aid dispenser works when LOAD SOLENOID VALVE in activated.
8.	Switch OFF and then switch ON the machine.			

LS5 / WT 4 PRES MONO	Prog. 021

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		typ	0	Hood Type like working cycles.
		boi	1	Pressure boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	0	The tank is filled into the traditional way.
		LES	0	Detergent level switches not enabled.
		UI	15	Select user interface without display **(up to version 3.11 set to 7).**
		rE	0	Regeneration cycle disabled.
		ALr	0	ALARMS NOT ENABLED.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	82	Boiler Temperature Threshold.
		bAJ	3	Boiler Temperature Adjust.
		bSt	2	Booster Function.
5.	Modify the cycle parameters:			
	C33	Cycle 3 parameters family.		
		Ln3	1	Long Wash Phase [min]
		Sh3	40	Short Wash Phase [s]
6.	Switch OFF and then switch ON the machine.			
7.	Modify Detergent dosage:			
	GEn	Enter into GEn parameter family.		
		din	165	Initial Detergent Dosage.
		rin	0	Initial Rinse Aid Dosage.
		dEt	182	Detergent dispenser works when LOAD SOLENOID VALVE in activated.
		rA1	61	Rinse Aid dispenser works when LOAD SOLENOID VALVE in activated.
8.	Switch OFF and then switch ON the machine.			

LB5G/WT4G				Prog. 022
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	0	The tank is filled into the traditional way.
		LES	0	Detergent level switches not enabled.
		UI	15	Select user interface for LS5 **(up to version 3.11 set to 7).**
		rE	0	Regeneration cycle disabled.
		ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	85	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		bSt	2	Booster Function.
5.	Modify the cycle parameters:			
	CY3	Cycle 3 parameters family.		
		Ln3	1	Long Wash Phase [min]
		Sh3	40	Short Wash Phase [s]
6.	Switch OFF and then switch ON the machine.			
7.	Modify Detergent dosage:			
	GEn	Enter into GEn parameter family.		
		dIn	70	Initial Detergent Dosage [s].
		rIn	5	Initial Rinse Aid Dosage [s].
8.	Switch OFF and then switch ON the machine.			

ECOTEMP5 EAG				Prog. 023
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.

		LES	0	Detergent level switches not enabled.
		UI	0	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE	0	Regeneration cycle disabled.
		ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.			

LS5WS / WT4WS MONO				Prog. 024
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		boi	0	Atmospheric boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		UI	13	Select user interface for LS5 **(up to version 3.11 set to 5).**
		rE	1	Regeneration cycle enabled.
		ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	83	Boiler Temperature Threshold.
		bAJ	2	Boiler Temperature Adjust.
		bSt	2	Booster Function.
5.	Modify the cycle parameters:			
	C03	Cycle 3 parameters family.		
		Ln3	1	Long Wash Phase [min]
		Sh3	40	Short Wash Phase [s]
6.	Switch OFF and then switch ON the machine.			
7.	Modify Detergent dosage:			
	GEn	Enter into GEn parameter family.		
		d In	70	Initial Detergent Dosage [s].
		r In	5	Initial Rinse Aid Dosage [s].
8.	Cnt	Counters		
		rCY	20	Number of cycles allowed before regeneration.
9.	Switch OFF and then switch ON the machine.			

LS12 ECOTEMP (EUROPE)	Prog. 025

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ	0	Hood Type like working cycles.
	boi	0	Atmospheric boiler.
	doo	1	Manual Hood.
	dFL	1	Default values for Hood Type models.
	trc	0	(for this appliance SOFT START is NOT possible).
	b_t	0	Tank and boiler heaters work simultaneously.
	btF	0	The tank is filled into the traditional way.
	LES	0	Detergent level switches not enabled.
	UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
	rE	0	Regeneration cycle disabled.
	ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family.	
	btC	82	Boiler Temperature Threshold.
	bAJ	0	Boiler Temperature Adjust.
5.	Switch OFF and then switch ON the machine.		

LS12 ECOTEMP UK	Prog. 026

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ	0	Hood Type like working cycles.
	bo1	0	Atmospheric boiler.
	doo	1	Manual Hood.
	dFL	1	Default values for Hood Type models.
	trc	0	(for this appliance SOFT START is NOT possible).
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	0	The tank is filled into the traditional way.
	LES	0	Detergent level switches not enabled.
	U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
	rE	0	Regeneration cycle disabled.
	ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family.	
	btT	82	Boiler Temperature Threshold.
	bAU	0	Boiler Temperature Adjust.
5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
	dr1	0	Drain [s]
	CY2	Cycle 2 parameters family.	
	dr2	0	Drain [s]
	CY3	Cycle 3 parameters family.	
	dr3	0	Drain [s]
	drn	Drain parameters family.	
	idr	30	Initial Drain Phase Duration [s]
	dPA	Set other parameters.	
	Pdr	30	Drain Phase Duration at the end of washing phase. [s]
6.	Switch OFF and then switch ON the machine.		

LS6AH				Prog. 027
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	84	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		btd	3	During stand-by boiler is kept at lower temperature than Temperature Threshold.
		ttC	68	Tank Temperature Threshold.
		ttH	2	HISTERESIS of Tank Temperature.
5.	Modify the cycle parameters:			
	CY1	Cycle 1 parameters family.		
		Ln1	1	Long Wash Phase [min]
		Sh1	36	Short Wash Phase [s]
		FP1	4	Final Pause [s]
	CY2	Cycle 2 parameters family.		
		Ln2	2	Long Wash Phase [min]
		Sh2	36	Short Wash Phase [s]
		FP2	4	Final Pause [s]
	CY3	Cycle 3 parameters family.		
		Ln3	3	Long Wash Phase [min]
		Sh3	36	Short Wash Phase [s]
		FP3	4	Final Pause [s]
	dPA	Set other parameters.		
		C F	1	Fahrenheit.
6.	Switch OFF and then switch ON the machine.			

LS14AH / WT65H	Prog. 028

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	1	Manual Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	84	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		ttC	68	Tank Temperature Threshold.
		ttH	2	HISTERESIS of Tank Temperature.
5.	Modify the cycle parameters:			
	CY1	Cycle 1 parameters family.		
		Sh1	37	Short Wash Phase [s]
		PA1	3	Pause [s]
		FP1	4	Final Pause [s]
	CY2	Cycle 2 parameters family.		
		Sh2	46	Short Wash Phase [s]
		FP2	4	Final Pause [s]
	CY3	Cycle 3 parameters family.		
		Sh3	36	Short Wash Phase [s]
		FP3	4	Final Pause [s]
	dPA	Set other parameters.		
		C F	1	Fahrenheit.
6.	Switch OFF and then switch ON the machine.			

H3300			Prog. 029
1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ	0	Hood Type like working cycles.
	boi	0	Atmospheric boiler.
	doo	2	Front loading.
	dFL	3	Default values for Undercounter models.
	trc	1	SOFT START ENABLED.
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		

H1310SANA				Prog. 030
1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		typ	0	Hood Type like working cycles.
		boi	0	Atmospheric boiler.
		doo	2	Front loading.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family and change boiler threshold.		
		btC	90	Boiler Temperature Threshold.
		bH1	0	Disable boiler high Temperature alarm (C 2).
		bAJ	0	Boiler Temperature Adjust.
		bSt	0	Booster function not needed.
		btd	10	During stand-by boiler is kept at lower temperature than Temperature Threshold.
		ttC	65	Tub Temperature Threshold.
		tH1	85	Tank high Temperature limit.
5.	Modify the cycle parameters:			
	C y 1	Cycle 1 parameters family.		
		Ln1	4	Long Wash Phase [min]
		Sh1	10	Short Wash Phase [s]
		r.1	35	Rinse Phase Duration [s]
		dr1	40	Drain [s]
		FP1	15	Final Pause at End of Cycle
	C y 2	Cycle 2 parameters family.		
		Ln2	6	Long Wash Phase [min]
		Sh2	10	Short Wash Phase [s]
		r.2	35	Rinse Phase Duration [s]
		dr2	40	Drain [s]
		FP2	15	Final Pause at End of Cycle
	C y 3	Cycle 3 parameters family.		
		Ln3	9	Long Wash Phase [min]
		Sh3	10	Short Wash Phase [s]
		r.3	35	Rinse Phase Duration [s]
		dr3	40	Drain [s]
		FP3	15	Final Pause at End of Cycle
6.	Switch OFF and then switch ON the machine.			

WT30H	Prog. 031

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
		typ	0	Hood Type like working cycles.
		boi	0	Atmospheric boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE	0	Regeneration cycle disabled.
		ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family.	
		btC	84	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		btd	3	During stand-by boiler is kept at lower temperature than Temperature Threshold.
		ttC	68	Tank Temperature Threshold.
		ttH	2	HISTERESIS of Tank Temperature.
5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
		Ln1	1	Long Wash Phase [min]
		Sh1	36	Short Wash Phase [s]
		FP1	4	Final Pause [s]
	CY2	Cycle 2 parameters family.	
		Ln2	2	Long Wash Phase [min]
		Sh2	36	Short Wash Phase [s]
		FP2	4	Final Pause [s]
	CY3	Cycle 3 parameters family.	
		Ln3	3	Long Wash Phase [min]
		Sh3	36	Short Wash Phase [s]
		FP3	4	Final Pause [s]
	dPA	Set other parameters.	
		C F	1	Fahrenheit.
6.	Switch OFF and then switch ON the machine.		

WT38 MED	Prog. 032

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ	3	Medical line dishwasher with lock door/hood device.
	bo1	0	Atmospheric boiler.
	doo	2	Front loading.
	dFL	3	Default values for Undercounter models.
	trc	1	SOFT START ENABLED.
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family and change boiler threshold.	
	btC	92	Boiler Temperature Threshold.
	bH1	0	Disable boiler high Temperature alarm (C 2).
	bAJ	0	Boiler Temperature Adjust.
	bSt	0	Booster function not needed.
	btd	10	During stand-by boiler is kept at lower temperature than Temperature Threshold.
	ttC	65	Tub Temperature Threshold.
	tH1	85	Tank high Temperature limit.
5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
	Ln1	3	Long Wash Phase [min]
	Sh1	35	Short Wash Phase [s]
	PA1	5	Pause [s]
	r11	35	Rinse Phase Duration [s]
	dr1	40	Drain [s]
	FP1	60	Final Pause at End of Cycle [s].
	CY2	Cycle 2 parameters family.	
	Ln2	6	Long Wash Phase [min]
	Sh2	35	Short Wash Phase [s]
	PA2	5	Pause [s]
	r12	35	Rinse Phase Duration [s]
	dr2	40	Drain [s]
	FP2	60	Final Pause at End of Cycle[s].

WT38 MED				Prog. 032
	C y 3	Cycle 3 parameters family.		
		L n 3	8	Long Wash Phase [min]
		S h 3	35	Short Wash Phase [s]
		P A 3	5	Pause [s]
		r . 3	35	Rinse Phase Duration [s]
		d r 3	40	Drain [s]
		F P 3	60	Final Pause at End of Cycle [s].
	d P A	Set other parameters.		
		r P A	45	Duration of pause after the rinse cycle [s].
6.	Switch OFF and then switch ON the machine.			

LS6MCD				Prog. 033
1.	Switch OFF and then switch ON the machine.			
2.	C F G	Enter into CFG parameter family and set the following parameters.		
		t y P	0	Hood Type like working cycles.
		b o .	0	Atmospheric boiler.
		d o o	2	Front loading.
		d F L	3	Default values for Undercounter models.
		t r c	1	SOFT START ENABLED.
		b _ t	1	Tank heater works only if boiler temperature reached.
		b t F	75	Enable filling tank by means of rinsing cycles.
		L E S	1	Detergent level switches enabled.
		U I	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		r E	0	Regeneration cycle disabled.
		A L r	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			

WT30M	Prog. 034

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ	3	Medical line dishwasher with lock door/hood device.
	bo1	0	Atmospheric boiler.
	doo	1	Manual Hood.
	dFL	1	Default values for Hood Type models.
	trc	0	(for this appliance SOFT START is NOT possible).
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family and change boiler threshold.	
	btC	92	Boiler Temperature Threshold.
	bH1	0	Disable boiler high Temperature alarm (C 2).
	bAJ	0	Boiler Temperature Adjust.
	bSt	0	Booster function not needed.
	btd	10	During stand-by boiler is kept at lower temperature than Temperature Threshold.
	ttC	65	Tub Temperature Threshold.
	tH1	85	Tank high Temperature limit.
5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
	Ln1	3	Long Wash Phase [min]
	Sh1	35	Short Wash Phase [s]
	PA1	5	Pause [s]
	r11	35	Rinse Phase Duration [s]
	dr1	40	Drain [s]
	FP1	60	Final Pause at End of Cycle [s].
	CY2	Cycle 2 parameters family.	
	Ln2	6	Long Wash Phase [min]
	Sh2	35	Short Wash Phase [s]
	PA2	5	Pause [s]
	r12	35	Rinse Phase Duration [s]
	dr2	40	Drain [s]
	FP2	60	Final Pause at End of Cycle[s].

WT30M				Prog. 034
	CY3		Cycle 3 parameters family.	
		Ln3	8	Long Wash Phase [min]
		Sh3	35	Short Wash Phase [s]
		PA3	5	Pause [s]
		r 13	35	Rinse Phase Duration [s]
		dr3	40	Drain [s]
		FP3	60	Final Pause at End of Cycle [s].
	dPA		Set other parameters.	
		rPA	45	Duration of pause after the rinse cycle [s].
		C F	1	Fahrenheit.
6.	Switch OFF and then switch ON the machine.			

WT65M				Prog. 035
1.	Switch OFF and then switch ON the machine.			
2.	CFG		Enter into CFG parameter family and set the following parameters.	
		tYP	3	Medical line dishwasher with lock door/hood device.
		bo 1	0	Atmospheric boiler.
		doo	1	Front loading.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC		Enter into FAC parameter family and change boiler threshold.	
		btC	92	Boiler Temperature Threshold.
		bH 1	0	Disable boiler high Temperature alarm (C 2).
		bAJ	0	Boiler Temperature Adjust.
		bSt	0	Booster function not needed.
		btd	10	During stand-by boiler is kept at lower temperature than Temperature Threshold.
		ttC	65	Tub Temperature Threshold.
		tH 1	85	Tank high Temperature limit.

WT65M	Prog. 035

5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
		Ln1	3 Long Wash Phase [min]
		Sh1	35 Short Wash Phase [s]
		PA1	5 Pause [s]
		r.1	35 Rinse Phase Duration [s]
		dr1	40 Drain [s]
		FP1	60 Final Pause at End of Cycle [s].
	CY2	Cycle 2 parameters family.	
		Ln2	6 Long Wash Phase [min]
		Sh2	35 Short Wash Phase [s]
		PA2	5 Pause [s]
		r.2	35 Rinse Phase Duration [s]
		dr2	40 Drain [s]
		FP2	60 Final Pause at End of Cycle[s].
	CY3	Cycle 3 parameters family.	
		Ln3	8 Long Wash Phase [min]
		Sh3	35 Short Wash Phase [s]
		PA3	5 Pause [s]
		r.3	35 Rinse Phase Duration [s]
		dr3	40 Drain [s]
		FP3	60 Final Pause at End of Cycle [s].
	dPA	Set other parameters.	
		rPA	45 Duration of pause after the rinse cycle [s].
		°F	1 Fahrenheit.
6.	Switch OFF and then switch ON the machine.		

LS5/1DPAUS	Prog. 036

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		typ	0	Hood Type like working cycles.
		boi	1	Pressure boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	0	The tank is filled into the traditional way.
		LES	0	Detergent level switches not enabled.
		UI	13	Select user interface for LS5 **(up to version 3.11 set to 5).**
		rE	0	Regeneration cycle disabled.
		ALr	0	ALARMS NOT ENABLED.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	82	Boiler Temperature Threshold.
		bAJ	3	Boiler Temperature Adjust.
		bSt	2	Booster Function.
5.	Modify the cycle parameters:			
	C33	Cycle 3 parameters family.		
		Ln3	1	Long Wash Phase [min]
		Sh3	40	Short Wash Phase [s]
6.	Switch OFF and then switch ON the machine.			
7.	Modify Detergent dosage:			
	GEn	Enter into GEn parameter family.		
		dIn	165	Initial Detergent Dosage.
		rIn	0	Initial Rinse Aid Dosage.
		dEt	182	Detergent dispenser works when LOAD SOLENOID VALVE in activated.
		rA1	61	Rinse Aid dispenser works when LOAD SOLENOID VALVE in activated.
8.	Switch OFF and then switch ON the machine.			

PW1-PW2 / WT830 -WT850 USA | Prog. 037

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	1	Pot Washer.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading function.
		dFL	2	Default values for Pot Washer models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	0	The tank is filled into the traditional way.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	84	Boiler Temperature threshold.
		bH1	98	Boiler Temperature high limit.
		bAJ	0	Boiler Temperature Adjust.
		ttC	70	Tub Temperature Threshold.
		ttH	2	HISTERESIS of Tank Temperature.
		tH1	80	Tank high Temperature limit.
5.	Modify the cycle parameters:			
	CY1	Cycle 1 parameters family.		
		Ln1	5	Long Wash Phase [min]
		Sh1	11	Short Wash Phase [s]
		r.1	23	Rinse Phase Duration [s]
		FP1	20	Final Pause at End of Cycle [s].
	CY2	Cycle 2 parameters family.		
		Ln2	9	Long Wash Phase [min]
		Sh2	11	Short Wash Phase [s]
		r.2	23	Rinse Phase Duration [s]
		FP2	20	Final Pause at End of Cycle [s].
	CY3	Cycle 3 parameters family.		
		Ln3	14	Long Wash Phase [min]
		Sh3	11	Short Wash Phase [s]
		r.3	23	Rinse Phase Duration [s]
		FP3	20	Final Pause at End of Cycle [s].
	dPA	Set other parameters.		
		C F	1	Fahrenheit.
6.	Switch OFF and then switch ON the machine.			

WT30C (Café Line)	Prog. 038

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		typ	0	Hood Type like working cycles.
		boi	0	Atmospheric boiler.
		doo	2	Front loading door type.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	1	Detergent level switches enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	ALARMS ENABLED.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family.		
		btC	84	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		btd	3	During stand-by boiler is kept at lower temperature than Temperature Threshold.
		ttC	68	Tank Temperature Threshold.
		ttH	2	HISTERESIS of Tank Temperature.
5.	Modify the cycle parameters:			
	CY1	Cycle 1 parameters family.		
		Ln1	1	Long Wash Phase [min]
		Sh1	36	Short Wash Phase [s]
		FP1	4	Final Pause [s]
	CY2	Cycle 2 parameters family.		
		Ln2	2	Long Wash Phase [min]
		Sh2	36	Short Wash Phase [s]
		FP2	4	Final Pause [s]
	CY3	Cycle 3 parameters family.		
		Ln3	3	Long Wash Phase [min]
		Sh3	36	Short Wash Phase [s]
		FP3	4	Final Pause [s]
	dPA	Set other parameters.		
		C F	1	Fahrenheit.
6.	Switch OFF and then switch ON the machine.			

WT38PM50 / WT38PM60	Prog. 039

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
	typ	0	Hood Type like working cycles.
	boi	1	Pressure boiler.
	doo	2	Front loading.
	dFL	3	Default values for Undercounter models.
	trc	0	(for this appliance SOFT START is NOT possible).
	b_t	1	Tank heater works only if boiler temperature reached.
	btF	75	Enable filling tank by means of rinsing cycles.
	LES	0	Detergent level switches not enabled.
	UI	0	ACTIVE function disabled **(up to version 3.11 set to 0).**
	rE	0	Regeneration cycle disabled.
	ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family and change boiler threshold.	
	btC	90	Boiler Temperature Threshold.
	btd	10	During stand-by boiler is kept at lower temperature than Temperature Threshold.
	bSt	0	Booster Function not necessary.
	ttC	66	Tank Temperature Threshold.
	tHi	85	High limit for tank temperature.
5.	Modify the cycle parameters:		
	CY1	Cycle 1 parameters family.	
	Ln1	1	Long Wash Phase [min]
	Sh1	22	Short Wash Phase [s]
	ri1	25	Rinse Phase Duration [s]
	dr1	40	Drain [s]
	FP1	4	Final Pause [s]
	CY2	Cycle 2 parameters family.	
	Ln2	2	Long Wash Phase [min]
	Sh2	22	Short Wash Phase [s]
	ri2	25	Rinse Phase Duration [s]
	dr2	40	Drain [s]
	FP2	4	Final Pause [s]
	CY3	Cycle 3 parameters family.	
	Ln3	4	Long Wash Phase [min]
	Sh3	22	Short Wash Phase [s]
	ri3	25	Rinse Phase Duration [s]
	dr3	40	Drain [s]
	FP3	4	Final Pause [s]

WT38PM50 / WT38PM60	Prog. 039

	dra	Drain parameters family.	
		Idr 30	Initial Drain Phase Duration [s]
	dPA	Set other parameters.	
		IPA 5	Initial Pause [s]
6.	Switch OFF and then switch ON the machine.		

LU7P / LU700P / WTU40P	Prog. 040

1.	Switch OFF and then switch ON the machine.		
2.	CFG	Enter into CFG parameter family and set the following parameters.	
		tYP 0	Hood Type like working cycles.
		boi 1	Pressure boiler.
		doo 2	Front loading.
		dFL 1	Default values for Hood Type models.
		trc 3	SLOW SOFT START ENABLED
		b_t 1	Tank heater works only if boiler temperature reached.
		btF 0	The tank is filled into the traditional way.
		LES 0	Detergent level switches not enabled.
		U1 8	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE 0	Regeneration cycle disabled.
		ALr 1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.		
4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family and change boiler threshold.	
		btC 84	Boiler Temperature Threshold.
		bAJ 0	Boiler Temperature Adjust.
		bSt 1	Booster Function.
5.	Modify the cycle parameters:		
	C y2	Cycle 2 parameters family.	
		Ln2 1	Long Wash Phase [min]
		Sh2 10	Short Wash Phase [s]
	C y3	Cycle 3 parameters family.	
		Ln3 4	Long Wash Phase [min]
6.	Switch OFF and then switch ON the machine.		

LU7A	Prog. 041

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading.
		dFL	1	Default values for Hood Type models.
		trc	3	SLOW SOFT START ENABLED
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Enter into FAC parameter family and change boiler threshold.		
		btC	82	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		bSt	1	Booster Function.
5.	Modify the cycle parameters:			
	C y2	Cycle 2 parameters family.		
		Ln2	1	Long Wash Phase [min]
		Sh2	10	Short Wash Phase [s]
	C y3	Cycle 3 parameters family.		
		Ln3	4	Long Wash Phase [min]
6.	Switch OFF and then switch ON the machine.			

LS14WS / WT65WS	Prog. 042

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		typ	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	1	Manual Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled (only for dishwashers with non-continuous water softener).
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC	Factory parameters family		
		btC	78	Boiler Temperature Threshold.
5.	Modify Communication and HACCP parameters:			
	HCP	Enter into HCP parameter family and set the following parameters.		
		SEr	9	Dishwasher with incorporated continuous water softener.
6.	Switch OFF and then switch ON the machine.			

WT65MEDWS	Prog. 043

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters:		
		typ	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	0	Automatic Hood.
		dFL	1	Default values for Hood Type models.
		trc	0	(for this appliance SOFT START is NOT possible).
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		UI	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled (only for dishwashers with non-continuous water softener).
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			

WT65MEDWS				Prog. 043
4.	Modify Factory parameters:			
	FAC	Factory parameters family		
		bEC	90	Boiler Temperature Threshold.
		bH1	0	Disable boiler high Temperature alarm (C 2).
		bAJ	0	Boiler Temperature Adjust.
		bSt	0	Booster Function.
		tH1	85	Tank high Temperature limit.
5.	Modify the cycle parameters:			
	C y1	Cycle 1 parameters family.		
		Ln1	2	Long Wash Phase [min]
		Sh1	32	Short Wash Phase [s]
		r.1	35	Rinse Phase Duration [s]
		dr1	40	Drain [s]
		FP1	15	Final Pause [s]
	C y2	Cycle 2 parameters family.		
		Ln2	3	Long Wash Phase [min]
		Sh2	32	Short Wash Phase [s]
		r.2	35	Rinse Phase Duration [s]
		dr2	40	Drain [s]
		FP2	15	Final Pause [s]
	C y3	Cycle 3 parameters family.		
		Ln3	5	Long Wash Phase [min]
		Sh3	32	Short Wash Phase [s]
		r.3	35	Rinse Phase Duration [s]
		dr3	40	Drain [s]
		FP3	15	Final Pause [s]
	dPA	Set other parameters.		
		1PA	4	Initial Pause [s]
6.	Modify Communication and HACCP parameters:			
	HCP	Enter into HCP parameter family and set the following parameters.		
		SEr	9	Dishwasher with incorporated continuous water softener.
7.	Switch OFF and then switch ON the machine.			

LS6WS	Prog. 044

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Undercounter like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	9	Select user interface hood type model **(up to version 3.11 set to 1).**
		rE	0	Regeneration cycle disabled (only for dishwashers with non-continuous water softener).
		ALr	1	Alarms enabled.
3.	Modify Communication and HACCP parameters:			
	HCP	Enter into HCP parameter family and set the following parameters.		
		SEr	9	Dishwasher with incorporated continuous water softener.
4.	Switch OFF and then switch ON the machine.			

WT38MEDWS	Prog. 045

1.	Switch OFF and then switch ON the machine.			
2.	CFG	Enter into CFG parameter family and set the following parameters.		
		tYP	0	Under counter like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE	0	Regeneration cycle disabled (only for dishwashers with non-continuous water softener).
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			

WT38MEDWS	Prog. 045

4.	Modify Factory parameters:		
	FAC	Enter into FAC parameter family and change boiler threshold.	
		btC 90	Boiler Temperature Threshold.
		bH1 0	Disable boiler high Temperature alarm (C 2).
		bAJ 0	Boiler Temperature Adjust.
		bSt 0	Booster function not needed.
		btd 10	During stand-by boiler is kept at lower temperature than Temperature Threshold.
		ttC 65	Tub Temperature Threshold.
		tH1 85	Tank high Temperature limit.
5.	Modify the cycle parameters:		
	C y1	Cycle 1 parameters family.	
		Ln1 4	Long Wash Phase [min]
		Sh1 10	Short Wash Phase [s]
		r 1 35	Rinse Phase Duration [s]
		dr1 40	Drain [s]
		FP1 15	Final Pause at End of Cycle
	C y2	Cycle 2 parameters family.	
		Ln2 6	Long Wash Phase [min]
		Sh2 10	Short Wash Phase [s]
		r 2 35	Rinse Phase Duration [s]
		dr2 40	Drain [s]
		FP2 15	Final Pause at End of Cycle
	C y3	Cycle 3 parameters family.	
		Ln3 9	Long Wash Phase [min]
		Sh3 10	Short Wash Phase [s]
		r 3 35	Rinse Phase Duration [s]
		dr3 40	Drain [s]
		FP3 15	Final Pause at End of Cycle
6.	Modify Communication and HACCP parameters:		
	HCP	Enter into HCP parameter family and set the following parameters.	
		SEr 9	Dishwasher with incorporated continuous water softener.
7.	Switch OFF and then switch ON the machine.		

FL620 / LV6 / WT30 6000W ATM	Prog. 046

1.	Switch OFF and then switch ON the machine.			
2.	CFG Enter into CFG parameter family and set the following parameters.			
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading.
		dFL	3	Default values for Undercounter models.
		trc	1	SOFT START ENABLED.
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	0	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			

LU700A / WTU40A	Prog. 047

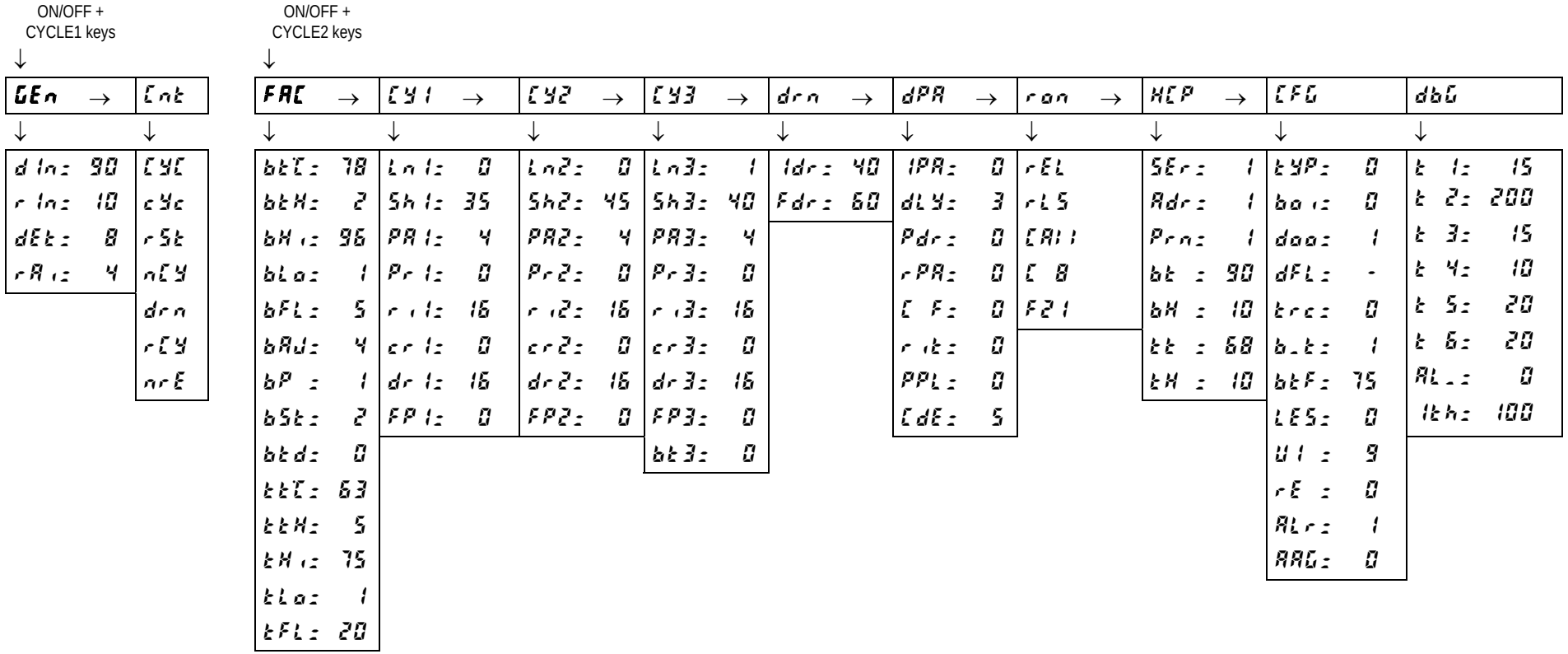
1.	Switch OFF and then switch ON the machine.			
2.	CFG Enter into CFG parameter family and set the following parameters.			
		tYP	0	Hood Type like working cycles.
		bo1	0	Atmospheric boiler.
		doo	2	Front loading.
		dFL	1	Default values for Hood Type models.
		trc	3	SLOW SOFT START ENABLED
		b_t	1	Tank heater works only if boiler temperature reached.
		btF	75	Enable filling tank by means of rinsing cycles.
		LES	0	Detergent level switches not enabled.
		U1	0	ACTIVE function disabled **(up to version 3.11 set to 0).**
		rE	0	Regeneration cycle disabled.
		ALr	1	Alarms enabled.
3.	Switch OFF and then switch ON the machine.			
4.	Modify Factory parameters:			
	FAC Enter into FAC parameter family and change boiler threshold.			
		btC	82	Boiler Temperature Threshold.
		bAJ	0	Boiler Temperature Adjust.
		bSt	1	Booster Function.
5.	Modify the cycle parameters:			

LU700A / WTU40A				Prog. 047
	C y 2	Cycle 2 parameters family.		
		L n 2	1	Long Wash Phase [min]
		S h 2	10	Short Wash Phase [s]
	C y 3	Cycle 3 parameters family.		
		L n 3	4	Long Wash Phase [min]
6.	Switch OFF and then switch ON the machine.			

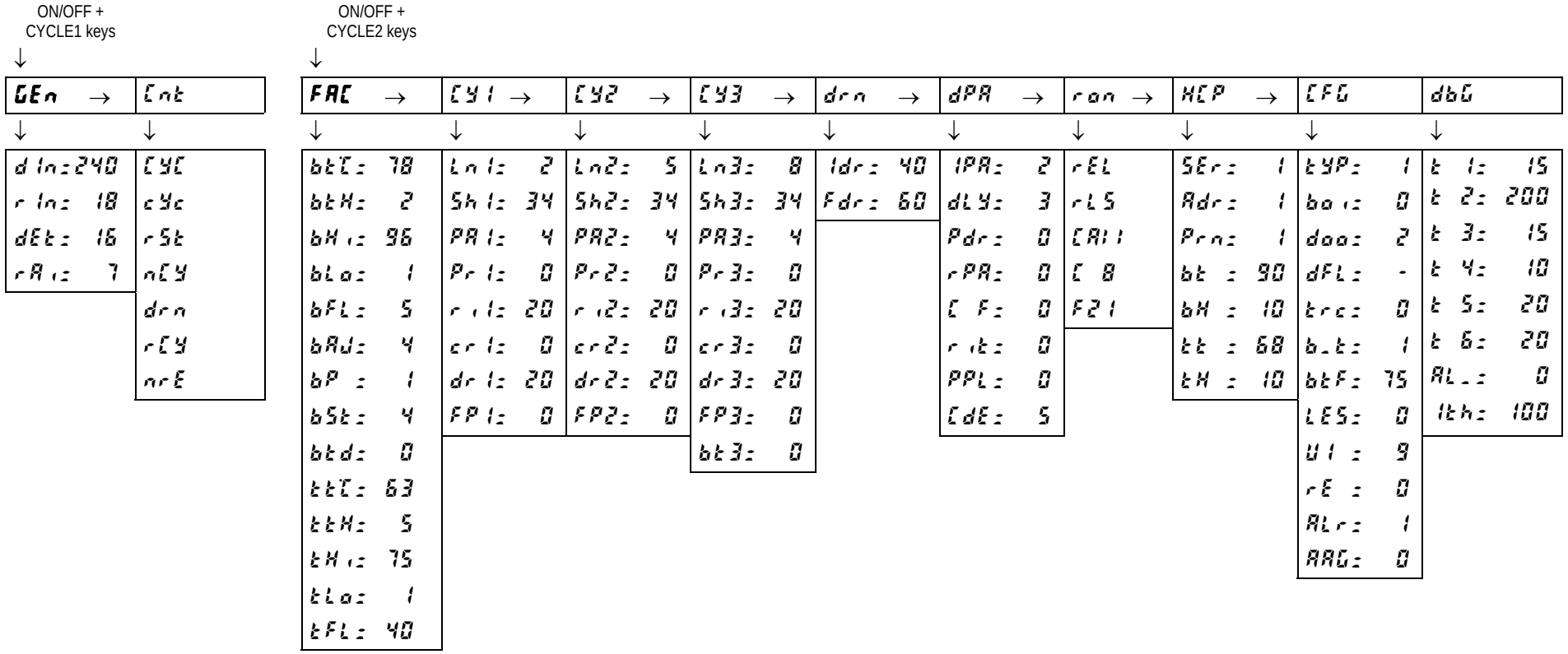
FL620WS / LV6WS / WT38WS				Prog. 048
1.	Switch OFF and then switch ON the machine.			
2.	C F G	Enter into CFG parameter family and set the following parameters.		
		t y P	0	Undercounter like working cycles.
		b o ı	0	Atmospheric boiler.
		d o o	2	Front loading.
		d F L	3	Default values for Undercounter models.
		t r c	1	SOFT START ENABLED.
		b _ t	1	Tank heater works only if boiler temperature reached.
		b t F	75	Enable filling tank by means of rinsing cycles.
		L E S	0	Detergent level switches not enabled.
		U 1	8	ACTIVE function disabled **(up to version 3.11 set to 0).**
		r E	0	Regeneration cycle disabled (only for dishwashers with non-continuous water softener).
		A L r	1	Alarms enabled.
3.	Modify Communication and HACCP parameters:			
	H C P	Enter into H C P parameter family and set the following parameters.		
		S E r	9	Dishwasher with incorporated continuous water softener.
4.	Switch OFF and then switch ON the machine.			

11. DEFAULT VALUES

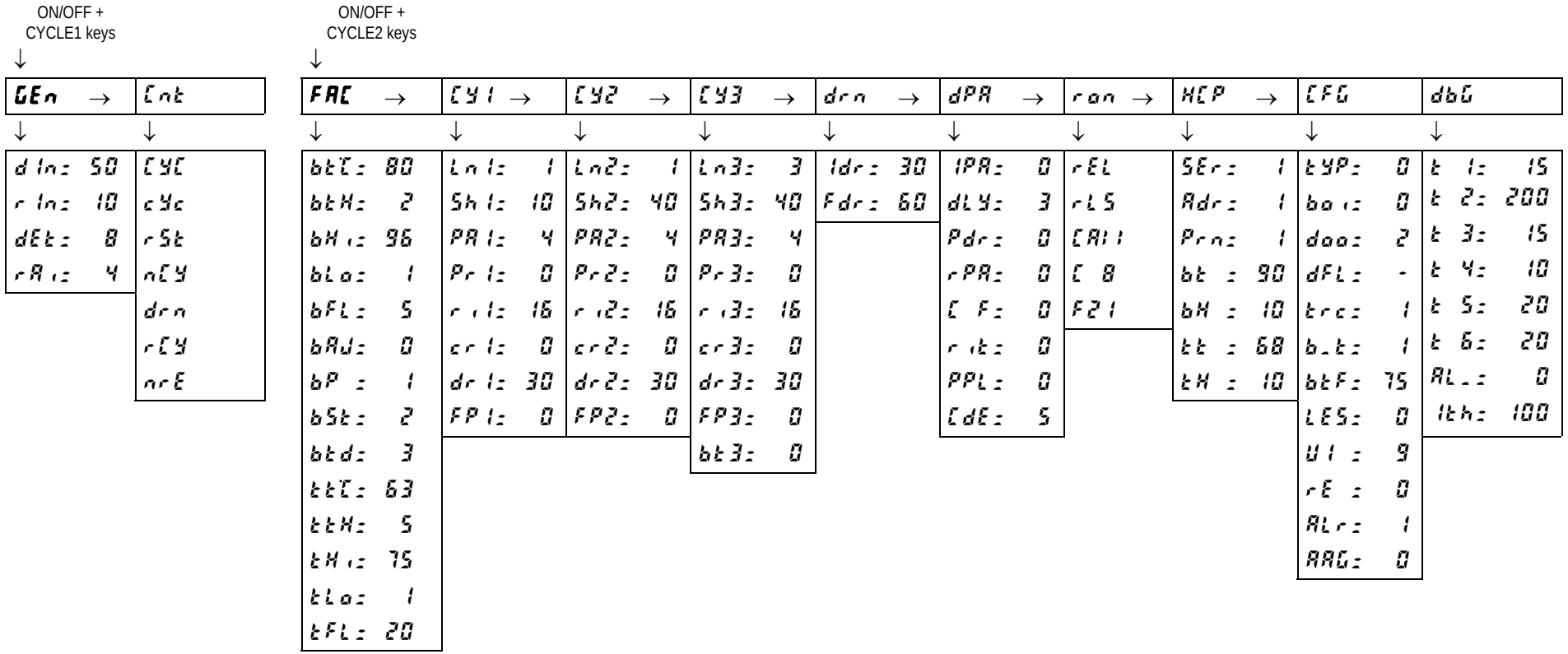
Default 1 – Hood Type



Default 2 - POT WASHER



Default 3 - UNDERCOUNTER



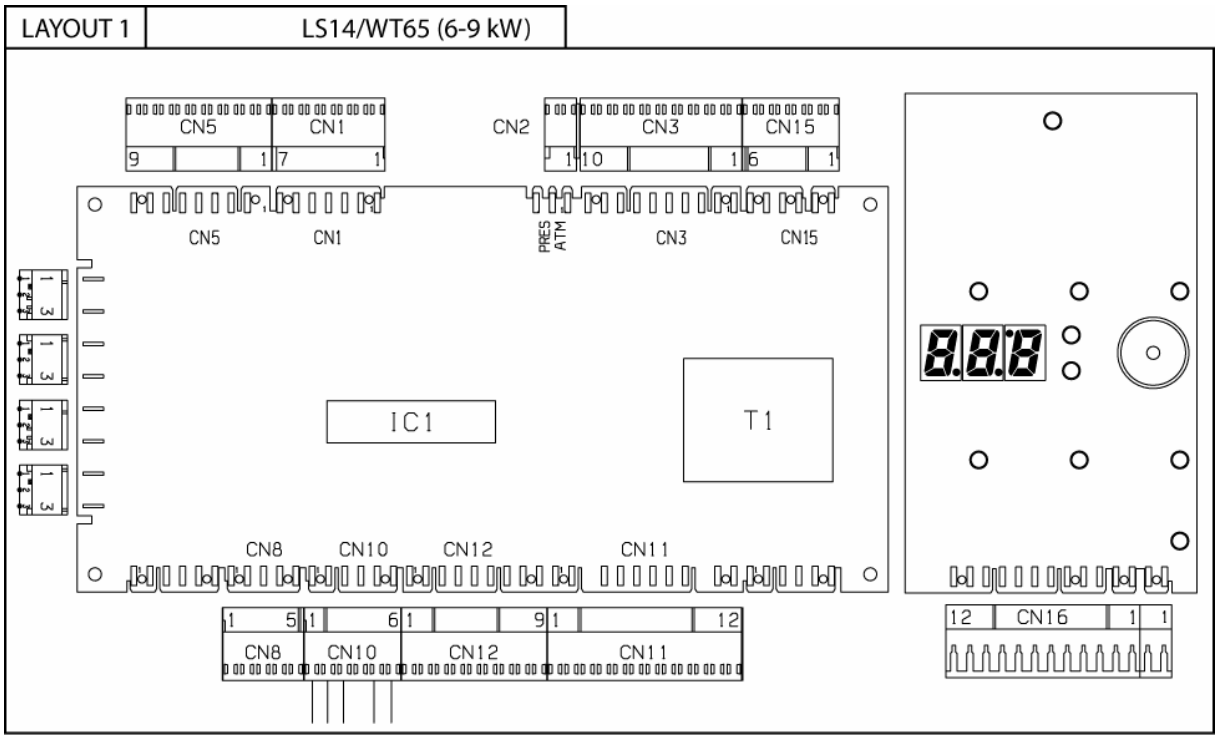
12. USER INTERFACE AND MAIN BOARD CONNECTORS

12.1 MAIN MALFUNCTIONS NOT DUE TO THE MAIN BOARD

The display shows CLOSE with door/hood closed	Check door/hood micro/sensor
No cycle starts	Check the user interface buttons (have they remained pressed? etc.)
A cycle fails to start	Is a user interface button extension missing?
After replacing the main board only the 3rd cycle starts	The main board is still configured for LS5/WT4.
Cycle time longer than that foreseen	Does the boiler work? Is the feed water at 50°C?
Noisy wash pump (only on HT and PP versions)	Check the current for single phase during operation.

12.2 CONNECTORS LAYOUT

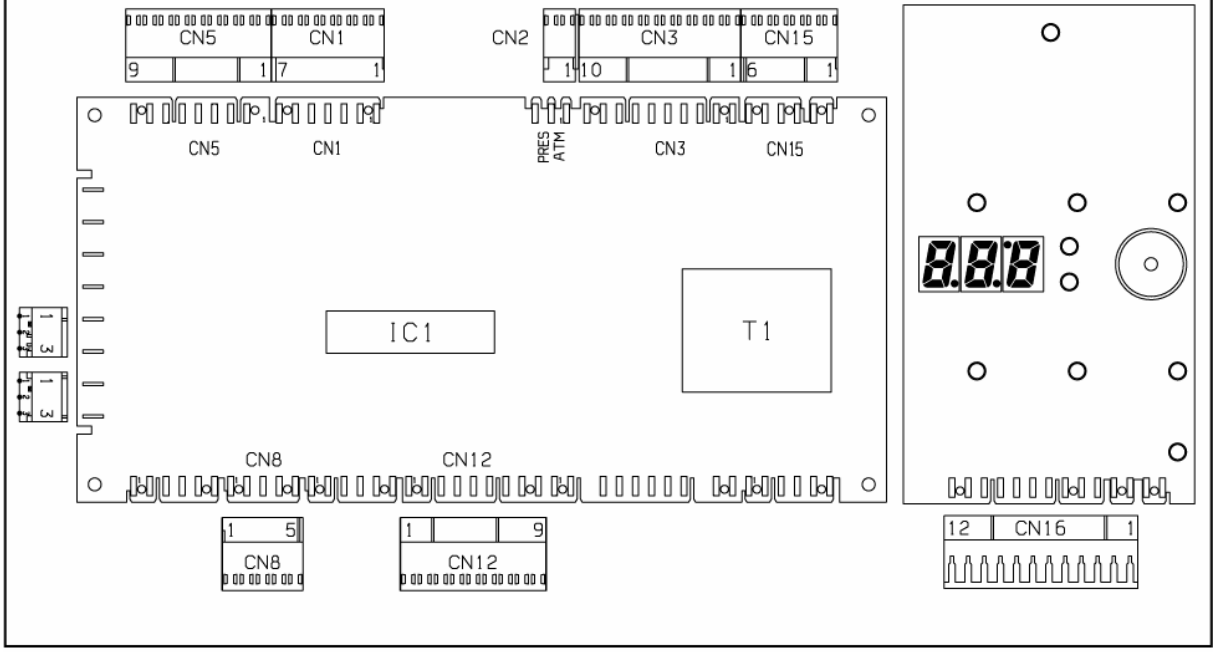
LAYOUT 1 | LS14/WT65 (6-9 kW)



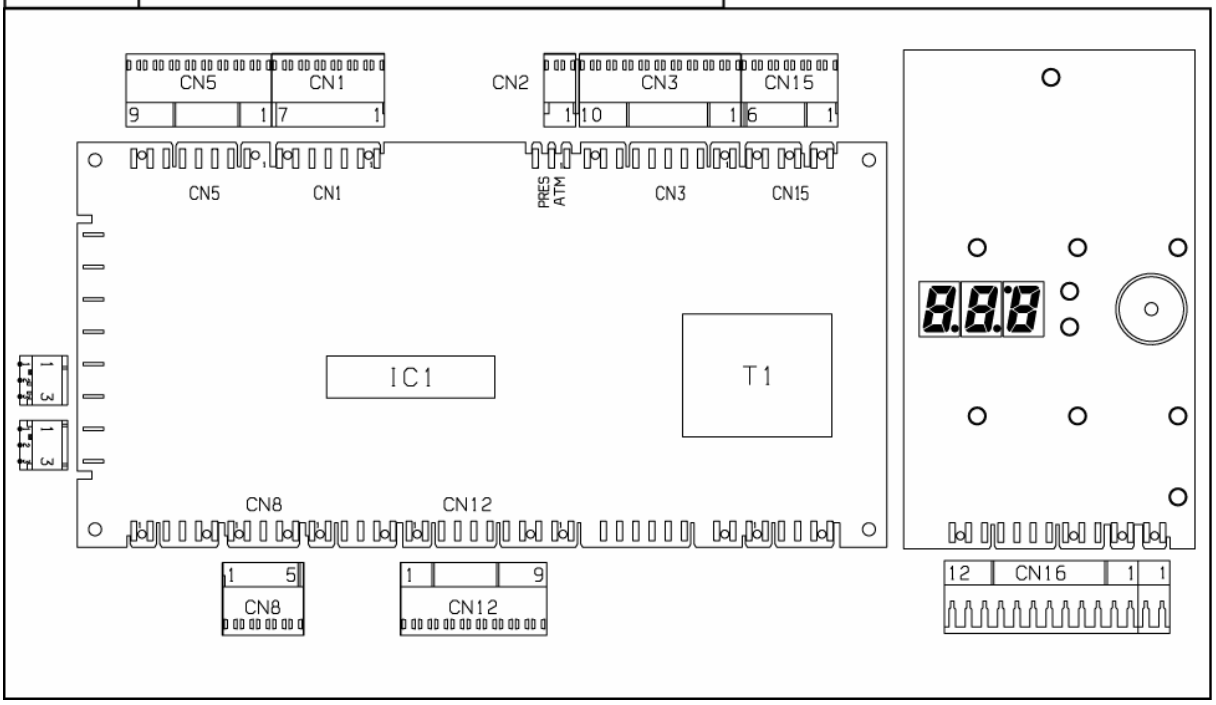
KEY

CN1 Rinse pump/wash pump/solenoid valve outputs
CN2 Pressure/atmospheric dishwasher solenoid valve connection
CN3 ECOTEMP transformer and detergent/rinse aid dispenser outputs
CN5 Tank/boiler temperature sensor inputs
CN8 Energy peak controller input
CN10 Safety and upper/lower limit switch input
CN11 Gear unit current control input - Gear unit polarity inversion/connection
CN12 User interface inputs/outputs
CN15 Overflow/tank level/board feed input
CN16 User interface inputs/outputs and hood/door sensor input

LAYOUT 2 WT65 MARINE



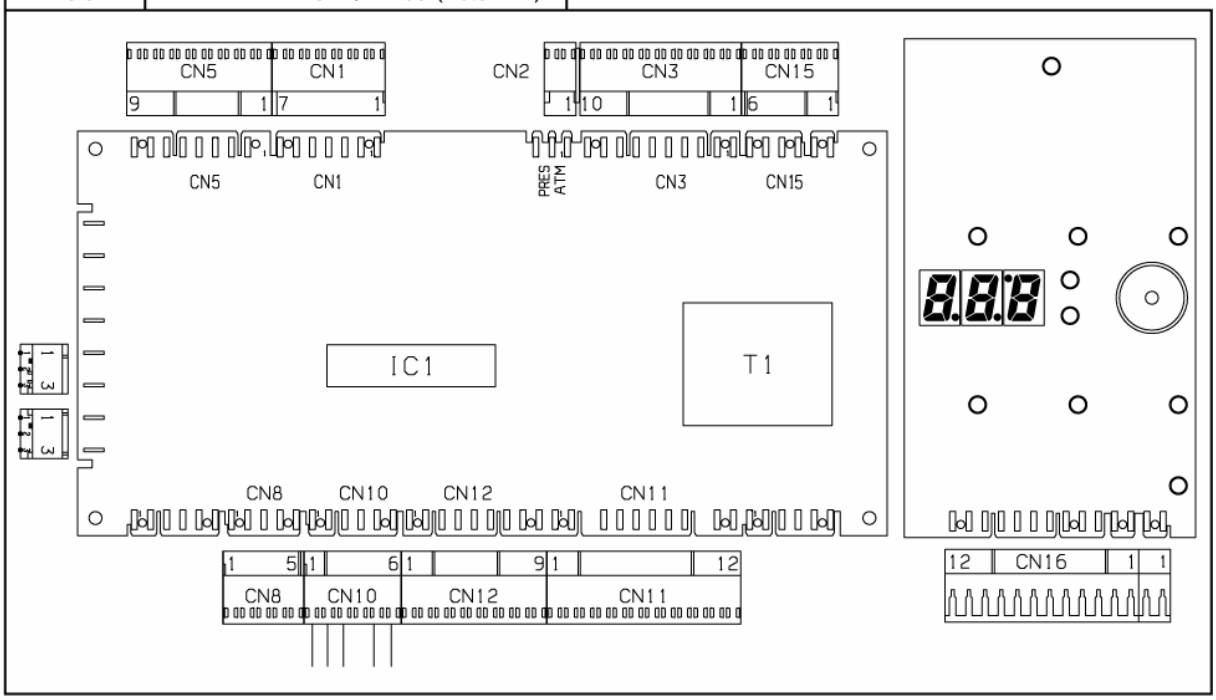
LAYOUT 3 ECOTEMP12 UK / LS14AH - WT65H /PW USA



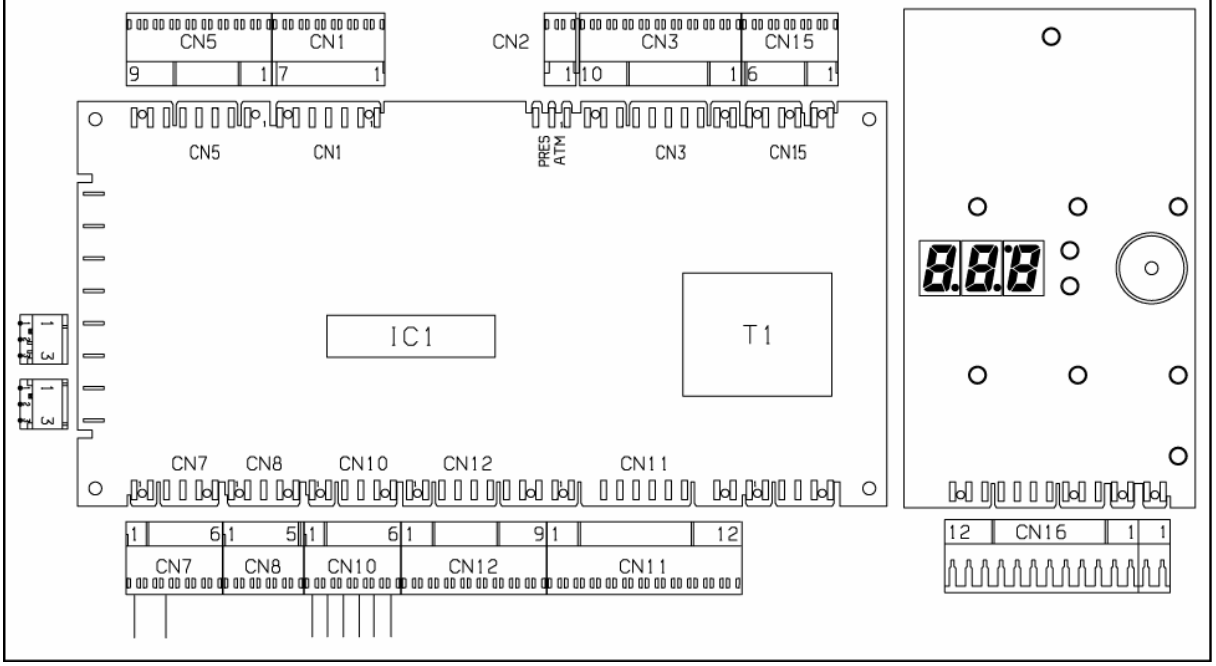
KEY

CN1 Rinse pump/wash pump/solenoid valve outputs
CN2 Pressure/atmospheric dishwasher solenoid valve connection
CN3 ECOTEMP transformer and detergent/rinse aid dispenser outputs
CN5 Tank/boiler temperature sensor inputs
CN8 Energy peak controller input
CN12 User interface inputs/outputs
CN15 Overflow/tank level/board feed input
CN16 User interface inputs/outputs and hood/door sensor input

LAYOUT 4 LS14/WT65 (10.5 kW)



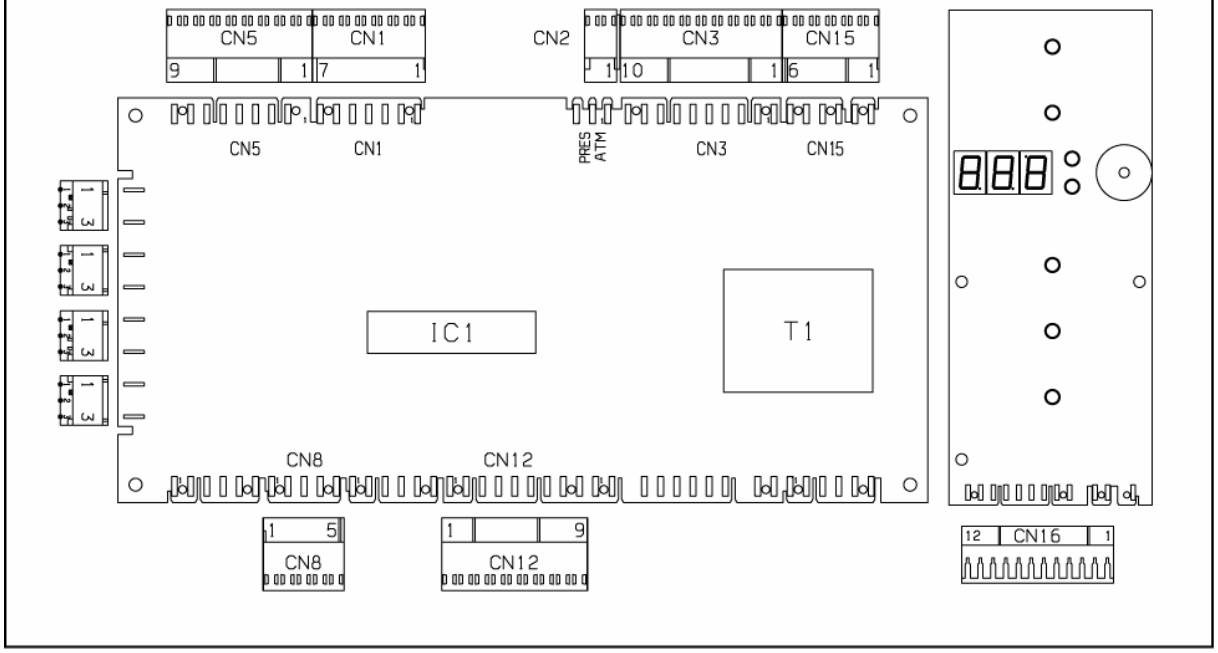
LAYOUT 5 WT830EA / WT850EA



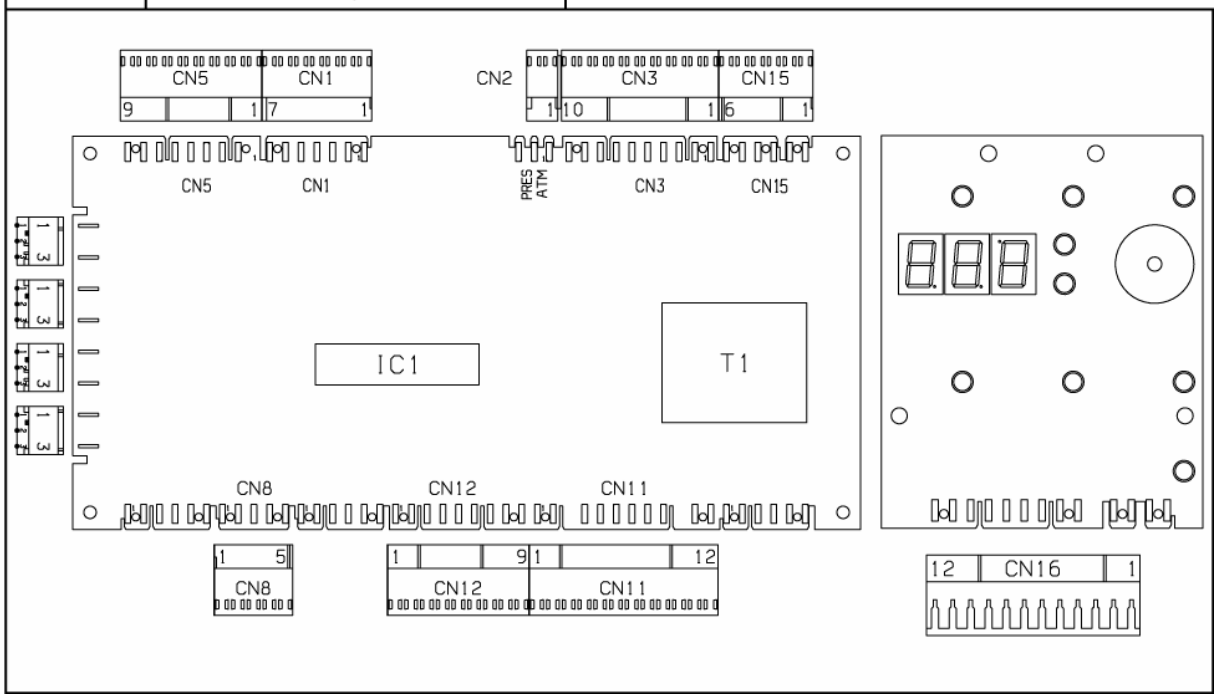
KEY

CN1 Rinse pump/wash pump/solenoid valve outputs
CN2 Pressure/atmospheric dishwasher solenoid valve connection
CN3 ECOTEMP transformer and detergent/rinse aid dispenser outputs
CN5 Tank/boiler temperature sensor inputs
CN7 Hand safety system microswitch input
CN8 Energy peak controller input
CN10 Safety and upper/lower limit switch input
CN11 Hand safety system input - Gear motor current control input - Gear motor polarity inversion connection
CN12 User interface inputs/outputs
CN15 Overflow/tank level/board feed input
CN16 User interface inputs/outputs and hood/door sensor input

LAYOUT 6 LS9/WT55



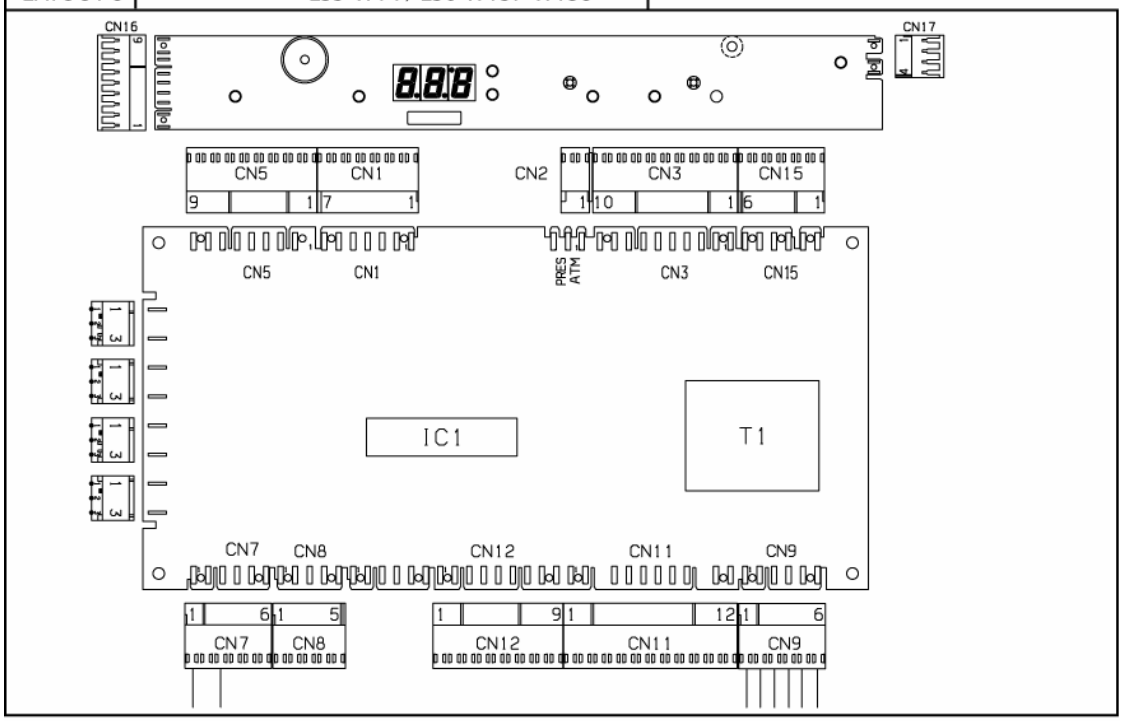
LAYOUT 7 PW1/PW2



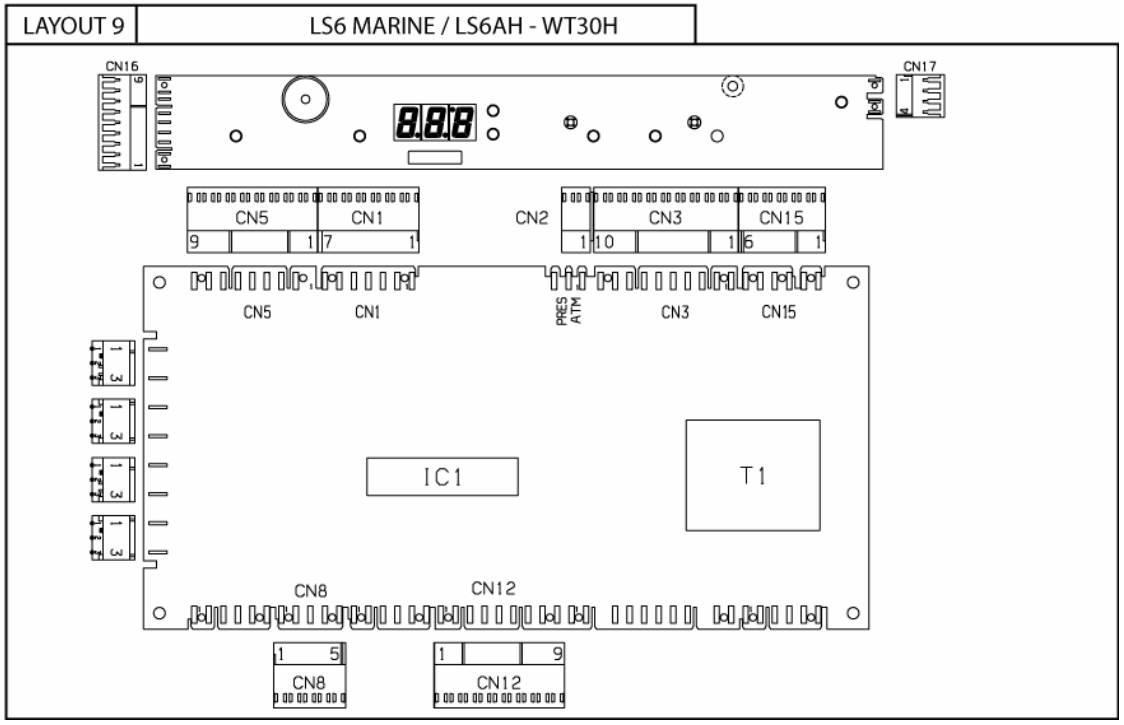
KEY

CN1 Rinse pump/wash pump/solenoid valve outputs
CN2 Pressure/atmospheric dishwasher solenoid valve connection
CN3 Detergent/rinse aid dispenser outputs
CN5 Tank/boiler temperature sensor inputs
CN8 Energy peak controller input
CN11 Water feed solenoid valve output
CN12 User interface inputs/outputs
CN15 Overflow/tank level/board feed input
CN16 User interface inputs/outputs and hood/door sensor input

LAYOUT 8 LS5-WT4 / LS6-WT37-WT38



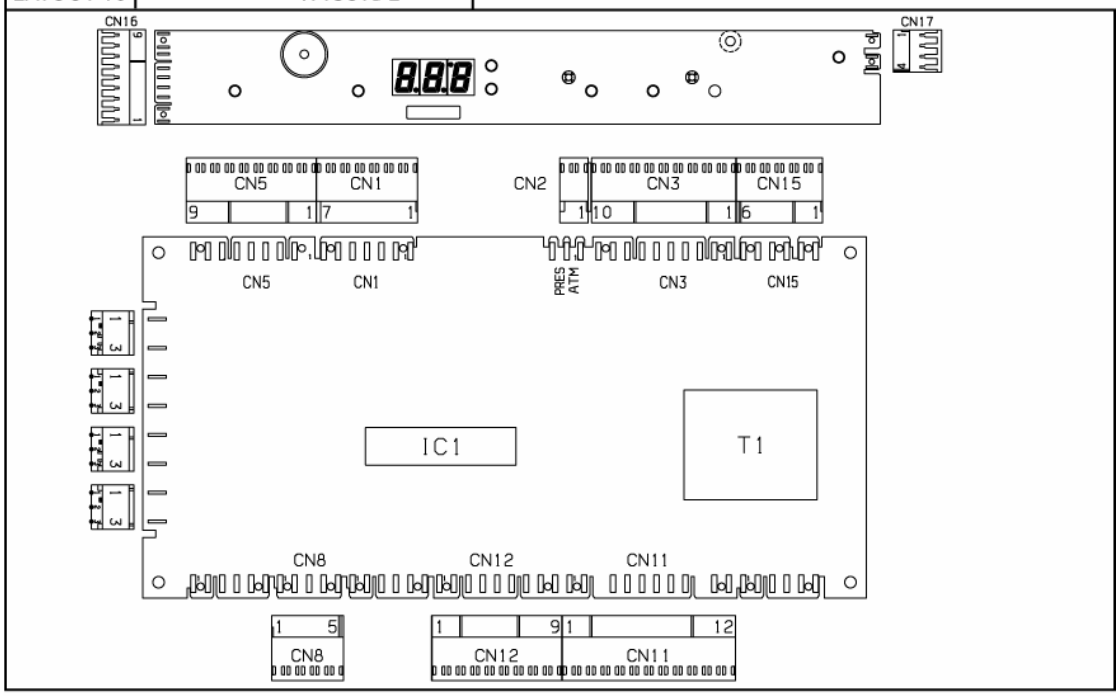
LAYOUT 9 LS6 MARINE / LS6AH - WT30H



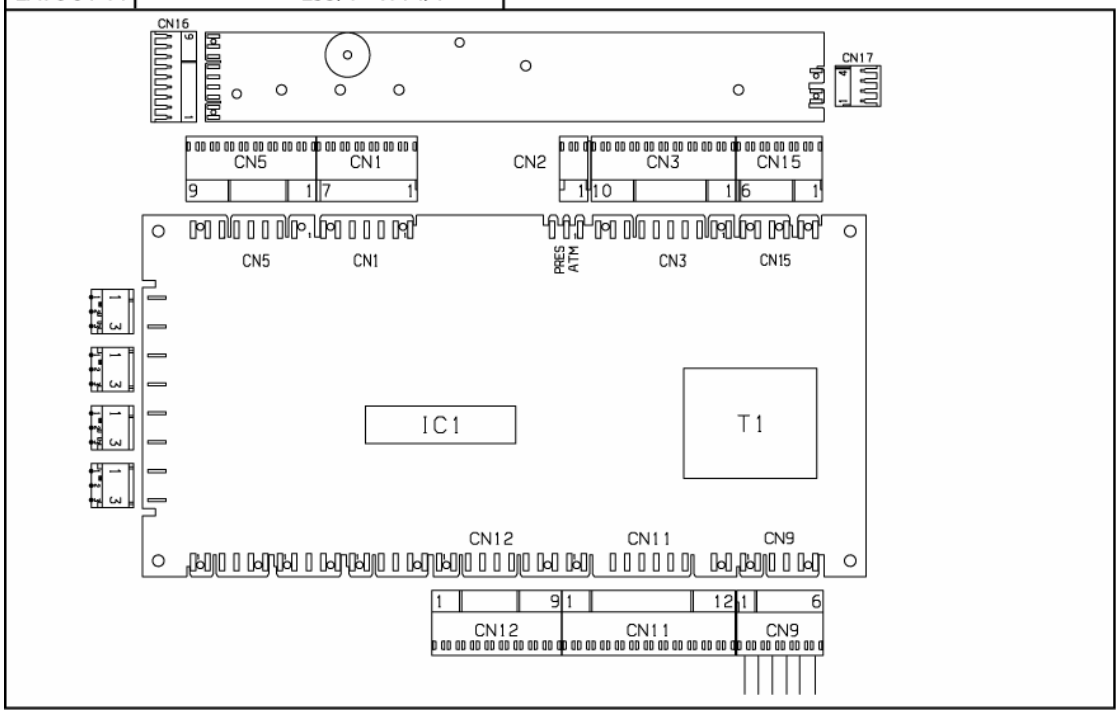
KEY

CN1	Rinse pump/wash pump/solenoid valve outputs
CN2	Pressure/atmospheric dishwasher solenoid valve connection
CN3	Detergent/rinse aid dispenser outputs
CN5	Tank/boiler temperature sensor inputs
CN7	Detergent/rinse aid level sensors input
CN8	Energy peak controller input
CN9	Salt receptacle drain pump and low pressure solenoid valve outputs
CN11	Brine solenoid valve output
CN12	User interface inputs/outputs
CN15	Overflow/tank level/board feed input
CN16	User interface inputs/outputs and hood/door sensor input
CN17	Door microswitch connection

LAYOUT 10 WT38TDE



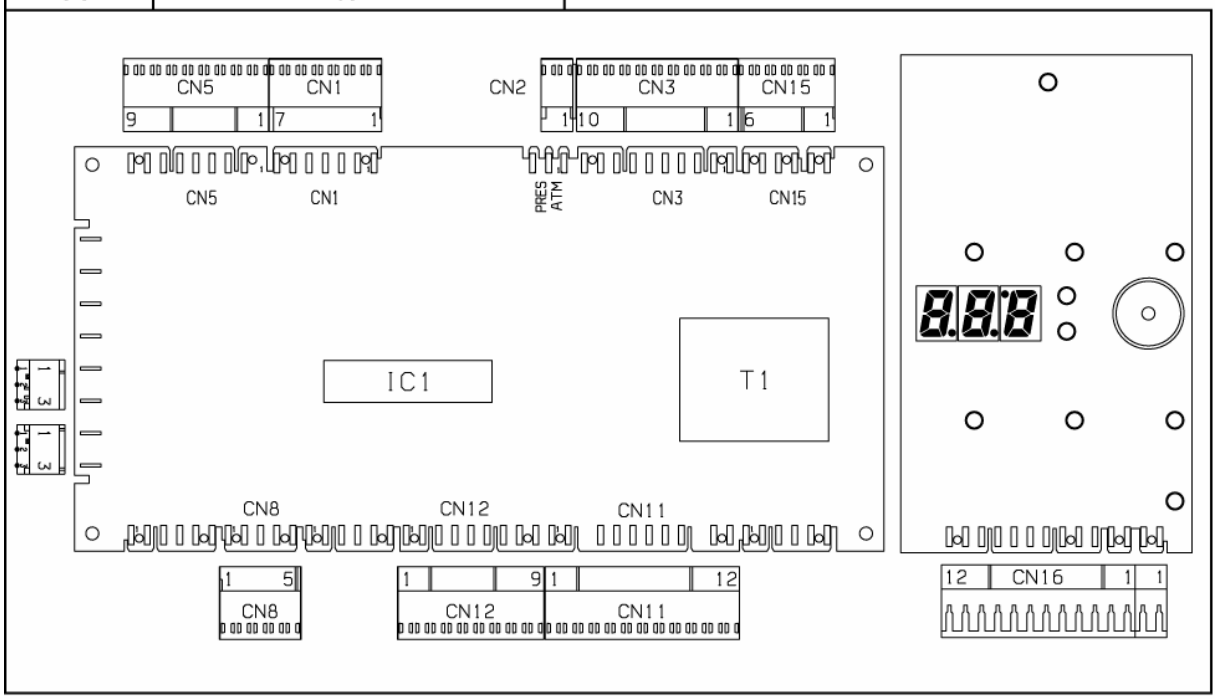
LAYOUT 11 LS5/1 - WT4/1



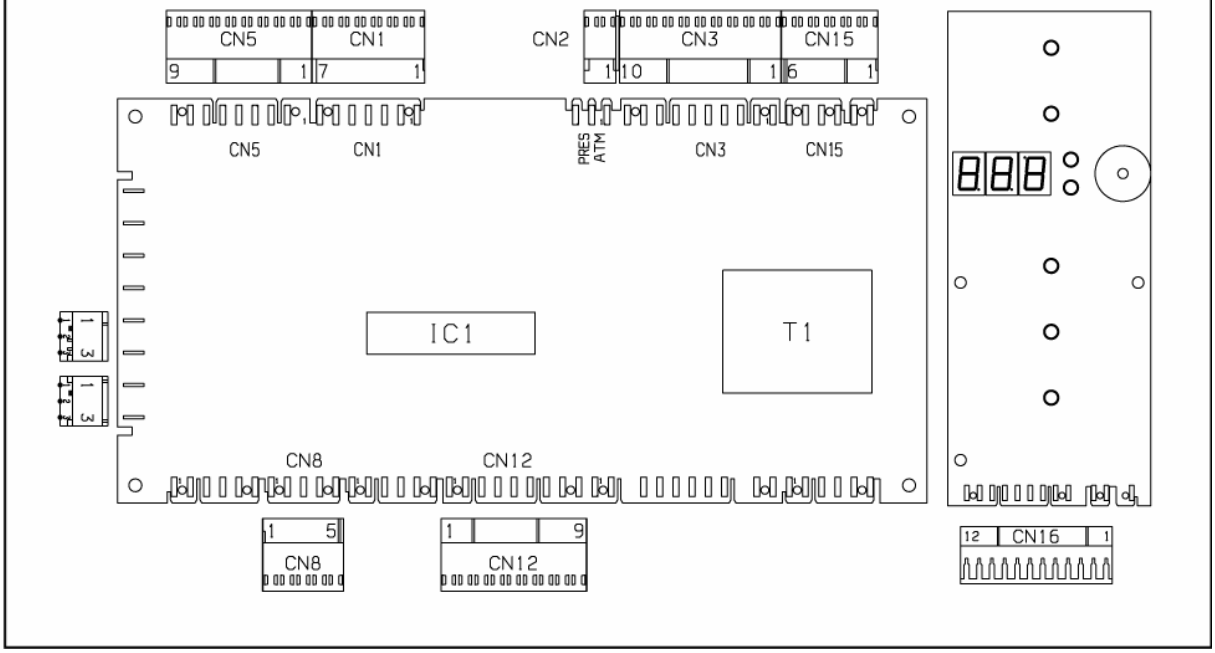
KEY

CN1	Rinse pump/wash pump/solenoid valve outputs
CN2	Pressure/atmospheric dishwasher solenoid valve connection
CN3	ECOTEMP transformer and detergent/rinse aid dispenser outputs
CN5	Tank/boiler temperature sensor inputs
CN7	Detergent/rinse aid level sensors input
CN8	Energy peak controller input
CN9	Salt receptacle drain pump and low pressure solenoid valve outputs
CN11	Door lock electromagnet and brine solenoid valve output
CN12	User interface inputs/outputs
CN15	Overflow/tank level/board feed input
CN16	User interface inputs/outputs and hood/door sensor input
CN17	Door microswitch connector

LAYOUT 12 WT65M



LAYOUT 13 WT55PM50/WT55PM60



KEY

CN1 Rinse pump/wash pump/solenoid valve outputs
CN2 Pressure/atmospheric dishwasher solenoid valve connection
CN3 ECOTEMP transformer and detergent/rinse aid dispenser outputs
CN5 Tank/boiler temperature sensor inputs
CN8 Energy peak controller input
CN11 Hood lock electromagnet output
CN12 User interface inputs/outputs
CN15 Overflow/tank level/board feed input
CN16 User interface inputs/outputs and hood/door sensor input

13. ALARM MESSAGES AND TROUBLESHOOTING

A Alarms that stop the dishwasher

A 1	Want of water
	Is the water cock open? Does the water load solenoid valve work? Is the water feed flow a min. of 5 l/min? Is the water inlet filter clean? Is the load solenoid valve filter clean? Is the overflow inserted? Is the main board (ATM-PRES) CN2 connector correctly positioned? Do the tank/boiler pressure switches work properly?

B Alarms that don't stop the dishwasher

b 1	Drain not efficient
	Has the overflow been removed? Is the water drain blocked? Is the drain pump blocked? Are the air trap and tank pressure switch clean? Is there a constriction in the drain tube? Is the pump breather pipe returning to the tank clogged or constricted? Does the tank pressure switch work properly? Is there a hole in the drain tube (only for versions with drain pump)?
b 2	Overflow alarm
	Is the water drain blocked? Are the air trap and tank pressure switch clean? Does the tank pressure switch work properly? Is the load solenoid valve blocked? (E1 - LOAD_EV) Is the load solenoid valve relay stuck? (RL8 - LOAD_EV)

C Alarms that stop the functioning and suggest to call the service

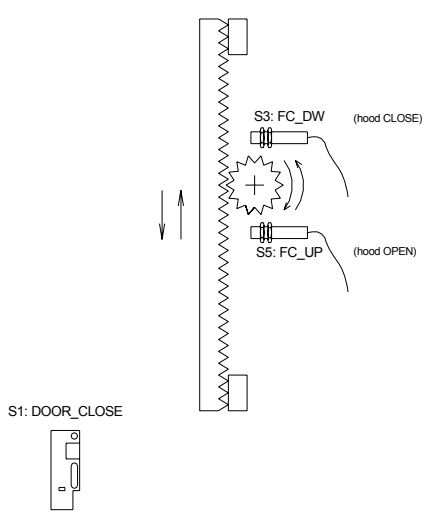
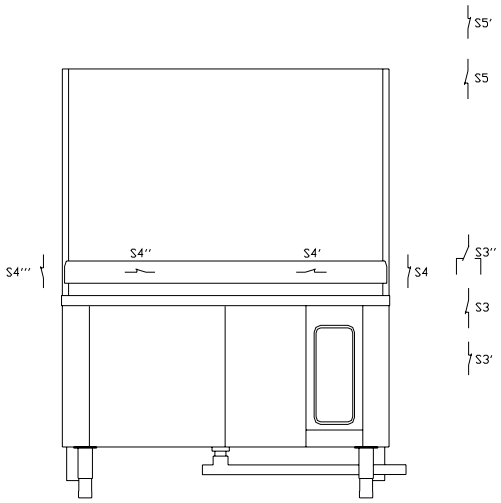
E 1	Boiler temperature rise too fast
	Does the boiler level sensor work properly? The boiler could be empty. Are non-original power resistances installed?
E 2	Boiler temperature too high
	Has the boiler temperature been changed (btE - increased above 90°C)? Has the software alarm value been modified (bH 1)? Does the boiler level sensor work properly? Is the boiler relay stuck (see RL2, RL3, RL4)?
E 3	Tank temperature too high
	Is the feed water above 60°C? Has the software alarm value been modified (bH 1)? Is the rinse water temperature too high? Is the tank relay stuck (RL5 - TUB_HEAT)?
E 4	Tank temperature sensor out of order
	Is the temperature sensor broken or disconnected (NT1)? Is the temperature sensor connector correctly inserted?
E 5	Tank temperature sensor out of order
	Is the temperature sensor short-circuited (NT1)?
E 6	Boiler temperature sensor out of order
	Is the temperature sensor broken or disconnected (NT2)? Is the temperature sensor connector correctly inserted?
E 7	Boiler temperature sensor out of order
	Is the temperature sensor short-circuited (NT2)?
E 8	During rinse phase boiler doesn't empty
	Are the rinse arms clogged? Does the rinse pump work correctly? Is there water in the level sensor tube? Is there scale in the boiler? Does the boiler level sensor work properly? CAUTION: RESETTING THIS ALARM WITHOUT FIRST ELIMINATING THE CAUSE IS DANGEROUS; THE BOILER HEATING ELEMENTS COULD WORK DRY, FURTHER DAMAGING THE INTERNAL PARTS OF THE DISHWASHER. CAUTION: E8 IT MUST BE MANUALLY RESET AFTER ELIMINATING THE CAUSE OF THE MALFUNCTION.
E 9	Automatic hood out of order
	See par. C1 - Alarm codes for automatic hood type dishwashers.

C.1 – Alarm codes for automatic hood type dishwashers

When the alarm C9 appears, to facilitate fault-finding another parameter providing a more detailed indication has been introduced.
The parameter is AL and is found in the dbG family.
The possible cause of the anomaly can be found (see table below) according to the value of the parameter AL.

With pot washers the cause that generated a b3 type alarm can also be found.

E.g.: With an automatic hood type the alarm C 9 appears.
Access the parameter AL in the dbG family.
AL_8 ⇒ the top limit switch could be disconnected or interrupted.

	Hood	Pot Washer
		
AL_1	Appears with hood closed if the top limit switch (FC_UP) cuts in.	**Appears with hood closed, if:** - the bottom limit switch (S3) returns to the rest position; - the top limit switch (S5) cuts in; - S3'' does not cut in.
AL_2	During lifting, the bottom limit switch (FC_DW) has not returned to the rest position. The limit switch must return to the rest position within a time given by the parameter t_5 : a) check that the motor works.	b3 During the initial lifting phase the bottom limit switch (S3) must return to the rest position within a time given by the parameter t_5 otherwise the alarm b3 appears. - S3 could be stuck. - S5' could be disconnected. On installation this alarm can occur due to incorrect sequence of the phases: invert the two phases on the power supply terminal board.
AL_3	-	Appears if during lifting S3'' does not return to the rest position within a time t1.
AL_4	Appears if the bottom limit switch (FC_DW) cuts in during lifting.	b3

	(Polarity/motor rotation direction inverted?!).	Appears if the bottom limit switch (S3) cuts in during lifting. On installation this alarm can occur due to incorrect sequence of the phases: invert the two phases on the power supply terminal board.
AL_5	**TIMEOUT-** The time taken for hood lifting was more than the time fixed by parameter t_2 : a) check that the motor works.	**TIMEOUT-** The time taken for lifting was more than the time fixed by parameter t 2. Check correct operation of the: a) motor (thermal protection N7); b) top limit switch (S5 and S5').
AL_6	The hood is open but the bottom limit switch (FC_DW) has cut in.	**Appears with hood fully open, if:** - the limit switch (S5) returns to the rest position; - the bottom limit switch (S3) cuts in; - S3'' cuts in.
AL_7	Appears if with hood fully open the "door closed" microswitch cuts in.	Appears if with hood fully open the "door closed" microswitch cuts in. - S5 could be disconnected.
AL_8	During lowering, the top limit switch (FC_UP) has not returned to the rest position. The limit switch must return to the rest position within a time given by parameter t_6: a) check that the motor works; b) (Polarity/motor rotation direction inverted?!).	b 3 During the initial lowering phase the top limit switch (S5) must return to the rest position within a time given by the parameter t_6 otherwise the alarm b 3 appears. - S5 could be stuck. - S3' could be disconnected. On installation, this alarm can occur due to incorrect sequence of the phases: invert the two phases on the power supply terminal board.
AL_9	-	Appears if the bottom limit switch S3 cuts in before S3" during lowering.
AL_10	Appears if the top limit switch (FC_UP) cuts in during lowering. (Polarity/motor rotation direction inverted?!).	b 3 Appears if the top limit switch (S5) cuts in during lowering. On installation, this alarm can occur due to incorrect sequence of the phases: invert the two phases on the power supply terminal board.
AL_11	**TIMEOUT-** The time taken for hood closing was more than the time fixed by parameter t_2 : a) check that the motor works.	**TIMEOUT-** The time taken for lowering was more than the time fixed by parameter t_2. - S3' could be disconnected.
AL_12	-	Appears during hood lowering if, after S3'' cuts in, the bottom limit switch S3 does not cut in within the time fixed by parameter t 3.
AL_13	-	**The two hand safety contacts K and K' must be both closed or both open. If this does not occur the alarm appears.** - One of the two relays (K or K') could be stuck or disconnected. (See parameter t 4)

AL_14	Limit switch combination not allowed: top limit switch (FC_UP) and bottom limit switch (FC_DW) activated at the same time!	**Limit switch combination not allowed. Appears if one of the following combinations occurs:** - top limit switch (S5) and bottom limit switch (S3) both activated (S3 and S5 could be disconnected); - top limit switch S5 and S3'' both cut in; - bottom limit switch (S3) cut in but not S3''.
AL_20	During lifting, the current absorbed by the lifting motor has exceeded the threshold (see parameter tSh): a) excessive mechanical force during lifting.	-
AL_21	During lowering, the current absorbed by the lifting motor has exceeded the threshold (see parameter tSh): a) excessive mechanical force during lowering.	-
AL_22 AL_23 AL_24 AL_25	The hood should be stopped but the card detects a high current absorption by the lifting motor: a) the relay RL18/RL19 could be stuck; b) feeder connector CN32 could be disconnected.	-

D Alarms that don't stop the functioning, but suggest to call the service

E 1	Communication error
	Is the connection between main board and control panel correct? Are the connectors correctly connected? Are connector contacts clean?
E 2	Tank temperature low
	Does the tank heating element work properly? Are the connectors correctly connected? Are the dishwasher feed voltage and current correct? Is the relay RL5 on the board disconnected or faulty?
E 3	Boiler temperature low
	Does/do the boiler heating element/s work properly? Are the connectors correctly connected? Does the possible remote control switch connected to the heating element work correctly? Is there power at the remote control switch input terminals? Does relay RL2 on the board work properly? CAUTION: IF THERE IS A MALFUNCTION ON RELAY RL2 AND THE BOILER HEATING ELEMENTS ARE FED BY MEANS OF A REMOTE CONTROL SWITCH, THE BOARD DOES NOT HAVE TO BE REPLACED; JUST MOVE THE BOILER HEATING ELEMENT CONNECTOR TO ONE OF THE TWO FREE POSITIONS ON THE BOARD. CAUTION: WHEN ONE BRANCH OF THE HEATING ELEMENT DOES NOT WORK AND THE OTHER TWO CONTINUE TO FUNCTION, ON REACHING THE SET TEMPERATURE VALUE, ALARM 3 DISAPPEARS AND REAPPEARS IN THE SUBSEQUENT RINSE PHASE. THIS ALSO OCCURS WHEN A PHASE IS MISSING.

E Alarms that stop the dishwasher for models with incorporated continuous water softener

F21	Water softener operation errors
	This alarm appears in case of malfunctioning in the continuous water softener.
F22	Communication errors between the mother board and softener board
	This alarm appears in case of problems in communication between the mother board and water softener board; check the connection between mother board connector J1 and water softener connector ST8.

To facilitate the finding of faults signalled by alarm F21, another parameter providing a more detailed indication of the possible cause of malfunction has been introduced in the C07 family (see table below).

F21 1	Water softener conductivity sensor short-circuit
	Two or more water softener conductivity sensors are short-circuited. Check the connections between the water softener board and sensors, replacing the connection wiring if necessary.
F21 2	Water softener conductivity sensors open
	One or more water softener conductivity sensors are disconnected. Check the connections between the water softener board and sensors, replacing the connection wiring if necessary.
F21 3	Resin temperature sensor malfunction
	Replace the water softener electronic board.
F21 4	Water softener electronic board malfunction
	Replace the water softener electronic board.
F21 6	Salt water filling malfunction
	The salt water container in the water softener was not completely filled within the set max. filling time. Make sure: – the water cock is open – the water filling solenoid valve works correctly – the salt container solenoid valve works correctly – the feed water pressure is at least 50 kPa / 0.5 bar – the water inlet filter is clean – the filling solenoid valve filter is clean – the salt container cap is properly closed – the mother board (ATM-PRES) connector CN2 is correctly positioned – the water softener board connector ST5 is correctly positioned.
F21 7	Inefficient resin washing
	After carrying out the maximum permissible number of resin washes, the resins are not sufficiently cleaned by the salt water used to regenerate them. Make sure: – the water filling solenoid valve works correctly – the feed water pressure is at least 50 kPa / 0.5 bar – the water inlet filter is clean – the filling solenoid valve filter is clean – the mother board (ATM-PRES) connector CN2 is correctly positioned.