Innovation In and
Out of Parlour

Auto Wash 365 Manual

Version - 1.2

Date - November 2023

Part Number - 39-5715

Index

Index

Manual Versions

Version 1.0 - December 2015.....First Version of Manual (Control v1.08 / IO Board v1.08)

Version 1.1 - June 2019.....Updated manual for new wiring and proximity switch

Version 1.2 - November 2023.....Updated manual to include latest pumps and settings

About the Auto Wash 365

The Auto Wash 365 from ATL is a simple and easy to use wash controller that washes the parlour automatically after each milking. It provides more consistent and efficient cleaning using less chemical than manual washing irrespective of the operator. The system is programmable and it's versatility provides an excellent wash to any type of small to medium size milking parlour.

Control Features

- Programmable settings to be optimised for every milking parlour;
- Large LED display showing washing status;
- 4 wash programs, including dedicated pre-milking key.

Pump Unit Features

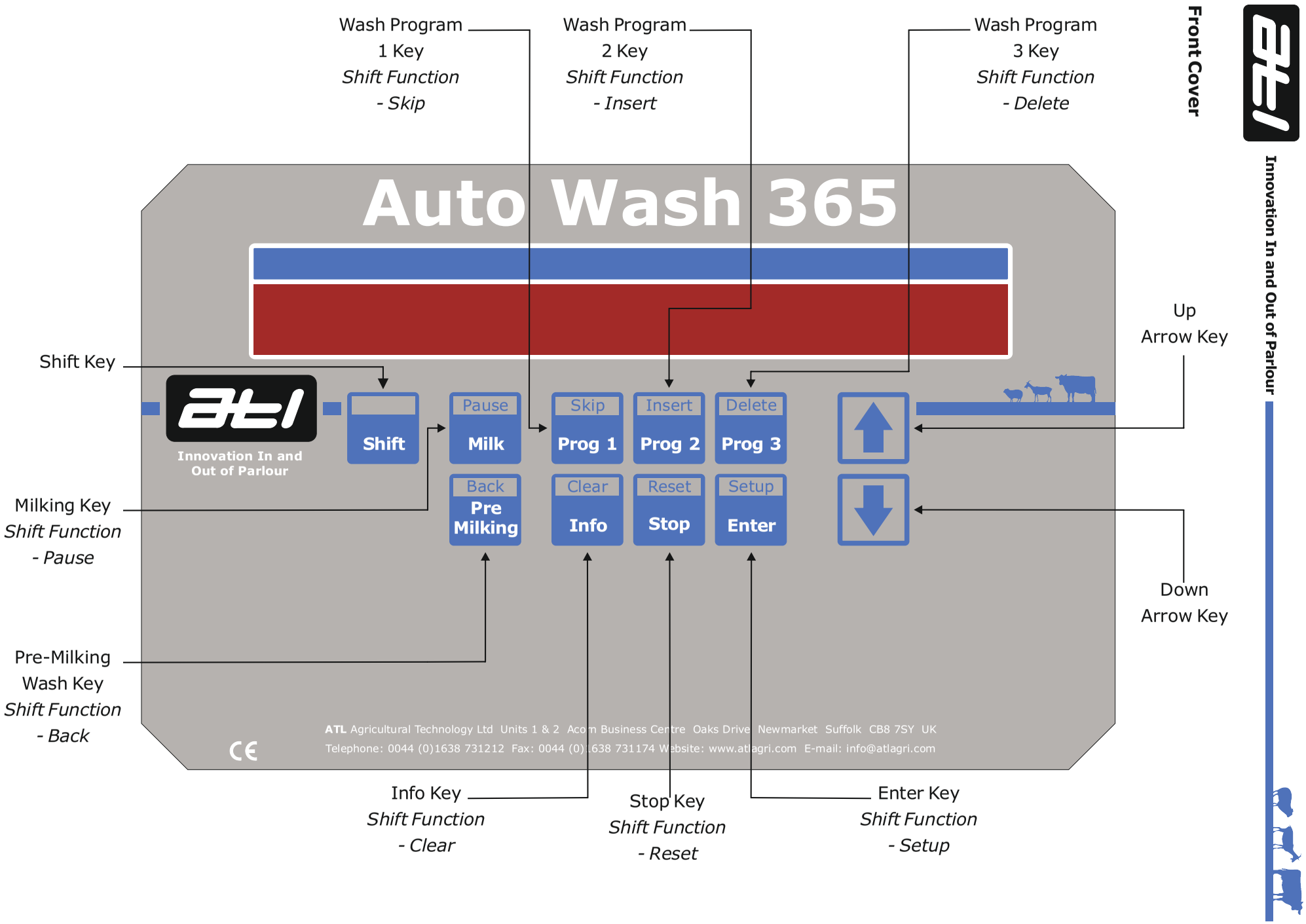
- Separate pump unit keeps electronics and chemicals apart;
- Peristaltic pumps accurately dispense chemicals at up to 700 millilitres per minute - up to a maximum of 3 pumps;
- Automatic chemical dispensing reduces operator handling of chemicals to a minimum;
- 3 different hot and cold water valve sizes - 10mm internal, 13mm internal and large bore external water valves - choose at time of ordering.

Other Features

- Temperature sensor for wash trough;
- Float level sensor in wash trough;
- Controls up to 2 vacuum pumps;
- Vacuum operated 3 way diversion valve in return line for diverting to drain or wash trough;
- 12vDC output to turn milk pump on and off via relay/contactor;
- 12vDC output to turn air blast / wash slugger control on and off via relay/contactor;
- 12vDC output to turn master pulsation control on and off via relay/contactor;
- Link to ATL milk pump control and air blast control to put them into wash, milk and idle via one button press;
- 12vDC output for automatic drain valve included - vacuum or compressed air operated automatic drain valve(s) optional;
- 12vDC input for wash safety switch included - wash safety switch optional;
- 12vDC input for milk safety switch included - milk safety switch optional;
- 12vDC output for wash trough drain valve - drain valve and solenoid not included;
- Spare 12vDC output.

Benefits

- Easy to use - just push a program button and the unit will automatically clean the milking parlour for you;
- Electronic system - optimise settings to suit any small or medium sized parlour;
- Consistent cleaning control - temperature, chemical dosing and time are all automatically controlled irrespective of the operator;
- Automatic dosing of liquid detergents - maximises operator safety and prevents excessive use of detergents;
- Wash safety lock - prevents wash start up if milk delivery line is not in wash position;
- Vacuum pumps - staggered vacuum pump switch on.



Installing the Auto Wash 365 Control Unit and Pump Unit

The Auto Wash 365 system consists of a control unit, pump unit and power supply unit.

All of the units should be mounted on the wall to the side of the wash trough to avoid chemical gases and hot water vapour damaging the units.

Good Practice During the Installation

- A separate mains supply and earth running directly from the consumer meter is essential.
- Avoid routing the mains cable to the power supply close to other supplies especially those providing intermittent current motors that are starting and stopping continually or high power heaters with thermostatic control.
- Terminate in a sealed, fused, double pole switched outlet fitted with a 13Amp (Type 1362) fuse or trip. A 3-pin ring main socket is not suitable in parlour conditions. All mains cabling must be contained in a firmly secured durable conduit.

Power Supply: Siting

- Fix the power supply to a wall or suitable brackets in a well ventilated area sufficiently high to avoid physical contact or damage, leaving a gap of at least 250mm (10") between the top of the power supply casing and the ceiling.
- Position the power supply so that the output (low DC voltage) cables are as short as possible even if this means extending the mains supply.

ATL Power Supplies: Output Voltages

- ATL power supply outputs are factory set and should not be adjusted.

400 Watt 12vDC PSU	60 Watt 12vDC PSU
Input: 100 - 240vAC	Input: 100 - 240vAC
Output: Nominal 12vDC	Output: Nominal 12vDC

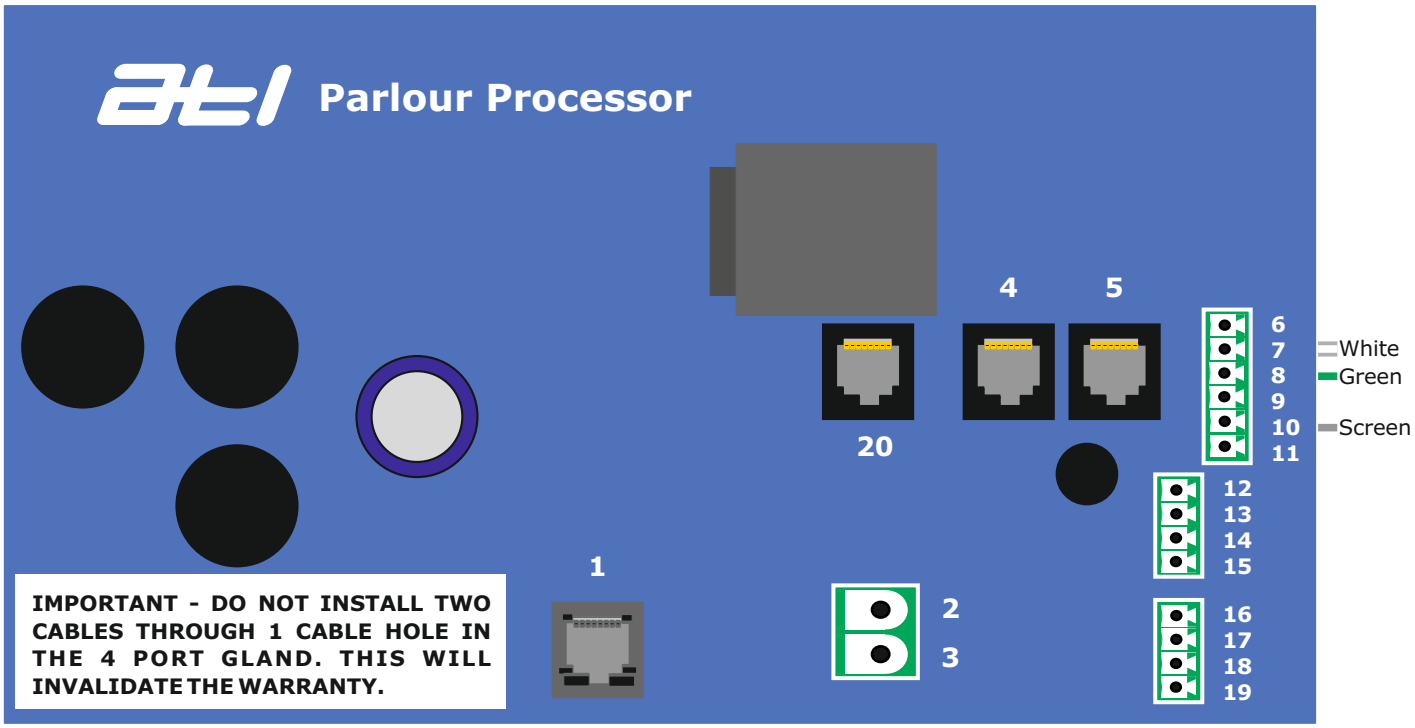
- The 400 Watt 12vDC and 60 Watt 12vDC power supplies have a thermal cutout and overload protection which removes power from the outputs in the event of an overload.
- There are two indicators fitted to the base of the power supply casing; red indicates that the mains is present and green that the output supply is available.

Control and Feeder Cables and Conduit

- Cables must be kept as short as possible running directly from point to point. Cut out any excess cable rather than leaving it coiled.
- Wherever possible cables should be contained in a waterproof conduit using the correct csa cable specified in the diagrams.
- **Entries must be made into the bottom of power supply or control casings but never into the top. This will invalidate the warranty.**
- Strip existing cables back to bright copper before connection.
- Keep multicore cables away from other cables especially those carrying mains or heavy currents. Cross only at 90°where necessary and do not enclose in conduit with other cables.

Auto Wash 365 Control PCB Wiring Connections (PCB Version - PRO269 Issue A)

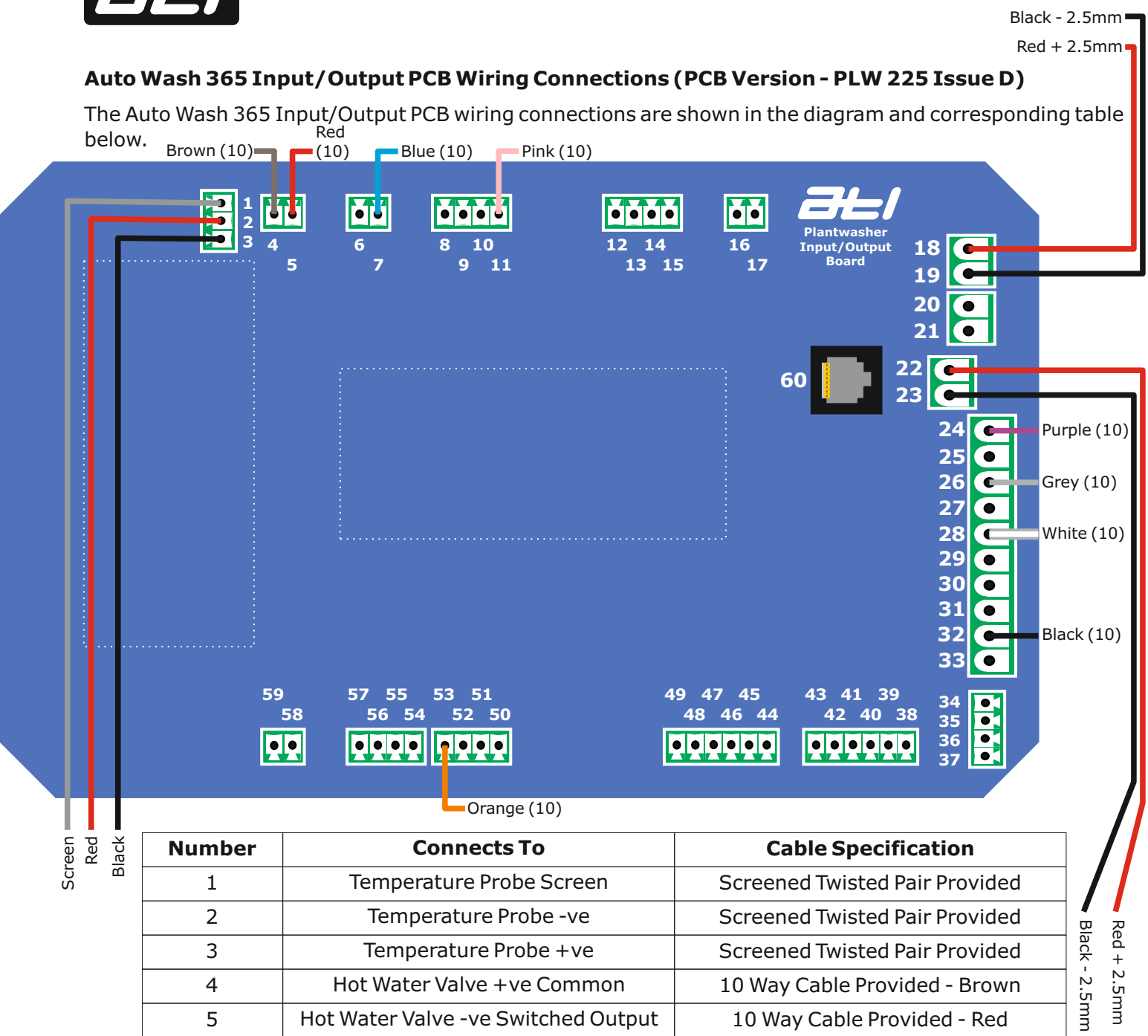
The Auto Wash 365 Control PCB wiring connections are shown in the diagram and table below.



Number	Connects To	Cable Specification
1	Ethernet Cat5e - Input/Output PCB	Purple Cat5e Cable
2	Power In -12vDC	Unused
3	Power In +12vDC	Unused
4	M2 Bus Cat5e Connection	Red Cat5e Cable
5	M2 Bus Cat5e Connection	Red Cat5e Cable
6	M2 Bus +ve Power	Unused
7	M2 Bus Data A	Twisted Pair - White
8	M2 Bus Data B	Twisted Pair -Green
9	M2 Bus EOL Link	Only Connect When Instructed by ATL
10	M2 Bus Screen	Twisted Pair Screen
11	M2 Bus -ve Power	Unused
12	Unused	Unused
13	Unused	Unused
14	Unused	Unused
15	Unused	Unused
16	Unused	Unused
17	Unused	Unused
18	Unused	Unused
19	Unused	Unused
20	Unused	Red Cat5e Cable

Auto Wash 365 Input/Output PCB Wiring Connections (PCB Version - PLW 225 Issue D)

The Auto Wash 365 Input/Output PCB wiring connections are shown in the diagram and corresponding table below.



Number	Connects To	Cable Specification
1	Temperature Probe Screen	Screened Twisted Pair Provided
2	Temperature Probe -ve	Screened Twisted Pair Provided
3	Temperature Probe +ve	Screened Twisted Pair Provided
4	Hot Water Valve +ve Common	10 Way Cable Provided - Brown
5	Hot Water Valve -ve Switched Output	10 Way Cable Provided - Red
6	Cold Water Valve +ve Common	N/C - Commoned In Pump Box
7	Cold Water Valve -ve Switched Output	10 Way Cable Provided - Blue
8	Drain Valve +ve Common	1.5mm CSA
9	Drain Water Valve -ve Switched Output	1.5mm CSA
10	Divertor Valve +ve Common	N/C - Commoned In Pump Box
11	Divertor Valve -ve Switched Output	10 Way Cable Provided- Pink
12	Vac Pump 1 Start 12vDC +ve	Use Appropriate Cable
13	Vac Pump 1 Start 12vDC -ve	Use Appropriate Cable
14	Vac Pump 2 Start 12vDC +ve	Use Appropriate Cable
15	Vac Pump 2 Start 12vDC -ve	Use Appropriate Cable
16	Vac Pump Stop 12vDC +ve	Use Appropriate Cable

Auto Wash 365 Input/Output PCB Wiring Connections

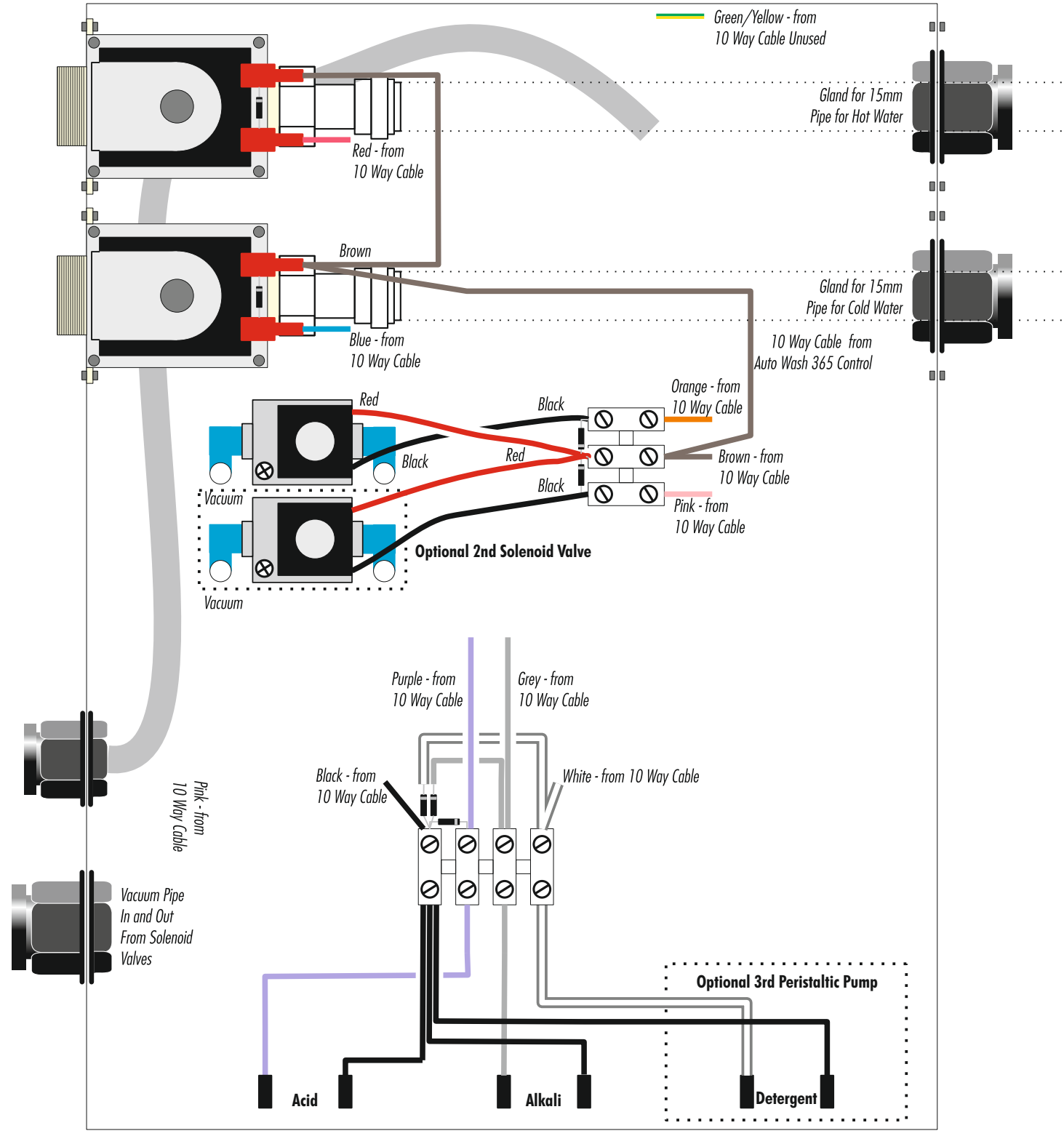
Number	Connects To	Cable Specification
17	Vac Pump Stop 12vDC -ve	Use Appropriate Cable
18	+12vDC IN	2.5mm CSA
19	-ve 12vDC IN	2.5mm CSA
20	+12vDC OUT	2.5mm CSA
21	-ve 12vDC OUT	2.5mm CSA
22	+ve Peristaltic Pump Supply	2.5mm CSA
23	-ve Peristaltic Pump Supply	2.5mm CSA
24	+ve Peristaltic Pump 1 (Acid)	10 Way Cable Provided - Purple
25	-ve Peristaltic Pump 1 (Acid)	N/C - Commoned In Pump Box
26	+ve Peristaltic Pump 2 (Alkaline)	10 Way Cable Provided - Grey
27	-ve Peristaltic Pump 2 (Alkaline)	N/C - Commoned In Pump Box
28	+ve Peristaltic Pump 3 (Detergent)	10 Way Cable Provided - White
29	-ve Peristaltic Pump 3 (Detergent)	N/C - Commoned In Pump Box
30	Unused	–
31	Unused	–
32	-ve Peristaltic Pumps	10 Way Cable Provided - Black
33	-ve Peristaltic Pumps	N/C
34	Sensor Power +vcc	2 x Black from ATL Float / Red from SIC
35	Sensor Power +vcc	Use Appropriate Cable
36	Sensor Power 0v	Use Appropriate Cable
37	Sensor Power 0V	Black from SIC Sensor - Lock Out
38	Input Switch 2 +ve	White from ATL Float
39	Input Switch 2 -ve	Black - Loop from 40
40	Input Switch 2 -ve In	Black - Loop from 39
41	Input Switch 1 +ve	Red from ATL Float
42	Input Switch 1 -ve	Black - Loop from 43
43	Input Switch 2 -ve In	Black - Loop from 42
44	Milk Tank Lockout Input	Green from SIC Sensor - Lock Out
45	Milk Tank Lockout Common	Black - Loop from 46
46	Milk Tank Lockout -ve In	Black - Loop from 45
47	Wash Trough Lockout Input	White from SIC Sensor - Lock Out
48	Wash Trough Lockout Common	Black - Loop from 49
49	Wash Trough Lockout -ve In	Black - Loop from 48
50	Output 1 +ve Common	Use Appropriate Cable
51	Output 1 -ve Switched	Use Appropriate Cable
52	Auto Drain +ve Common	N/C - Commoned In Pump Box
53	Auto Drain -ve Switched	10 Way Cable Provided - Orange

Auto Wash 365 Input/Output PCB Wiring Connections

Number	Connects To	Cable Specification
54	Pulsation +ve Common	Use Appropriate Cable
55	Pulsation -ve Switched	Use Appropriate Cable
56	AirBlast +ve Common	Use Appropriate Cable
57	AirBlast -ve Switched	Use Appropriate Cable
58	Milk Pump +ve Common	Use Appropriate Cable
59	Milk Pump -ve Switched	Use Appropriate Cable
60	Ethernet Cat5e - Parlour Processor	Cat5e Cable

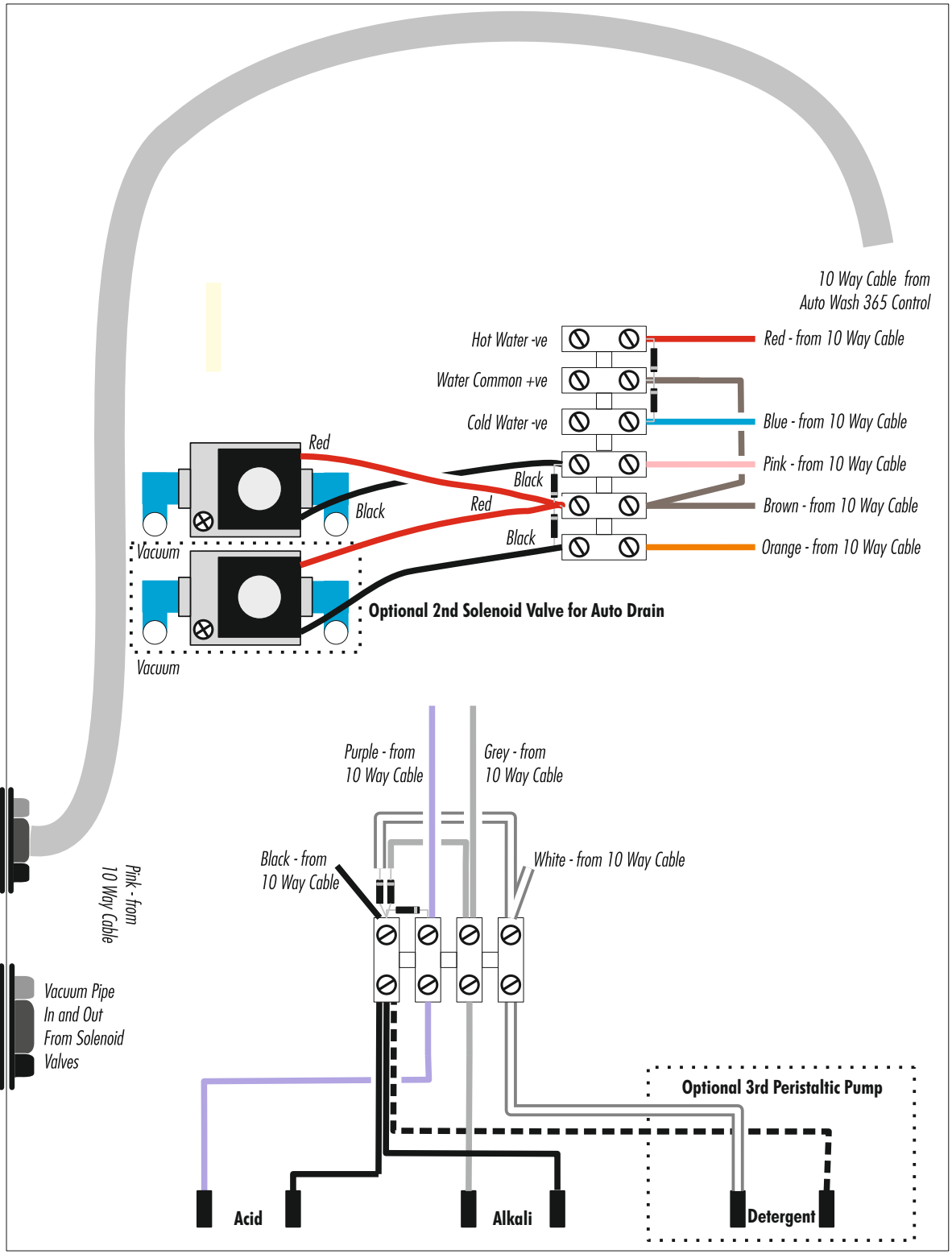
Auto Wash 365 Pump Box Connections - Internal Hot and Cold Water Valves

The Auto Wash 365 Pump Box connections are shown in the diagram below.



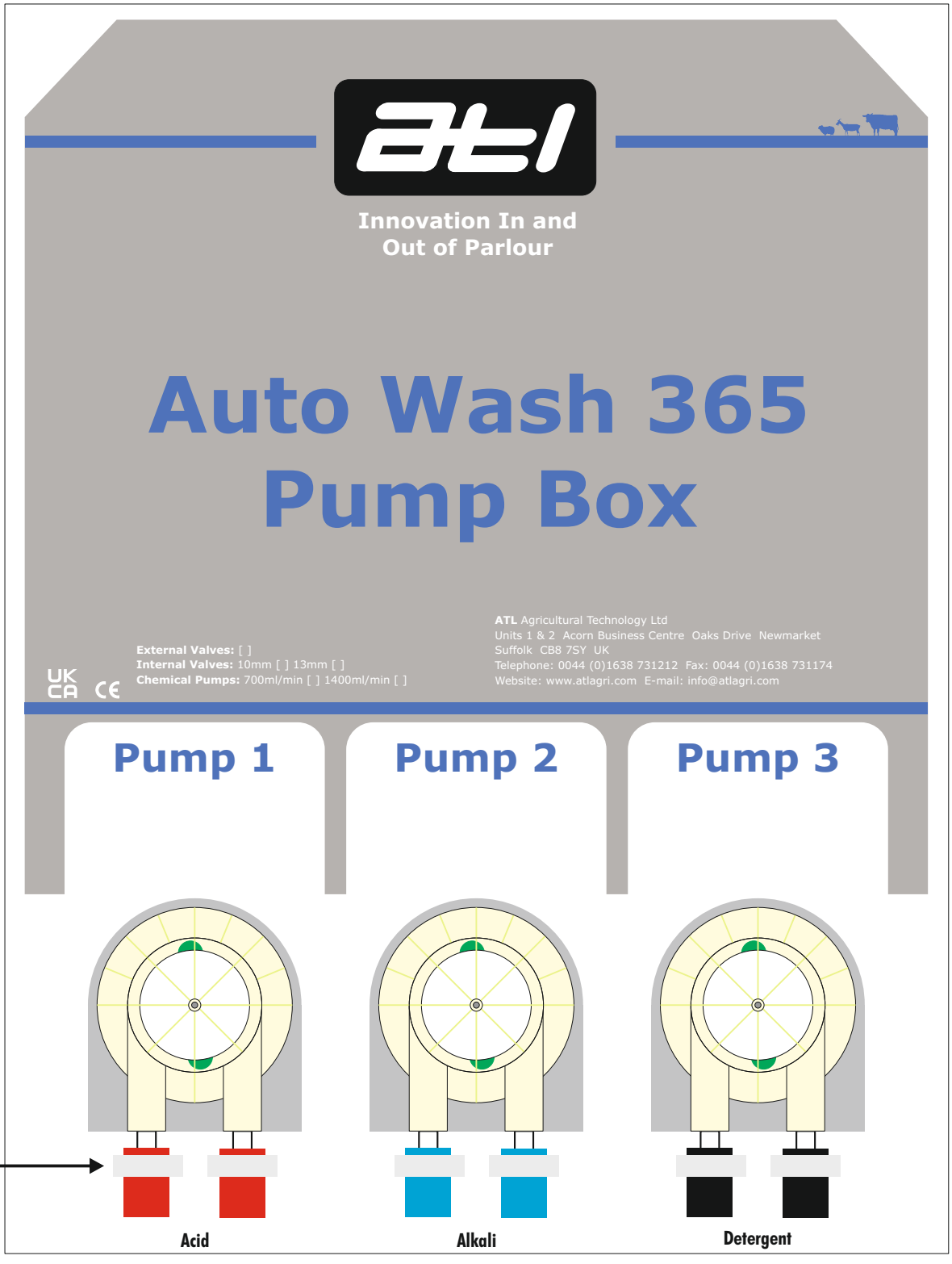
Auto Wash 365 Pump Box Connections - External Hot and Cold Water Valves

The Auto Wash 365 Pump Box connections are shown in the diagram below.

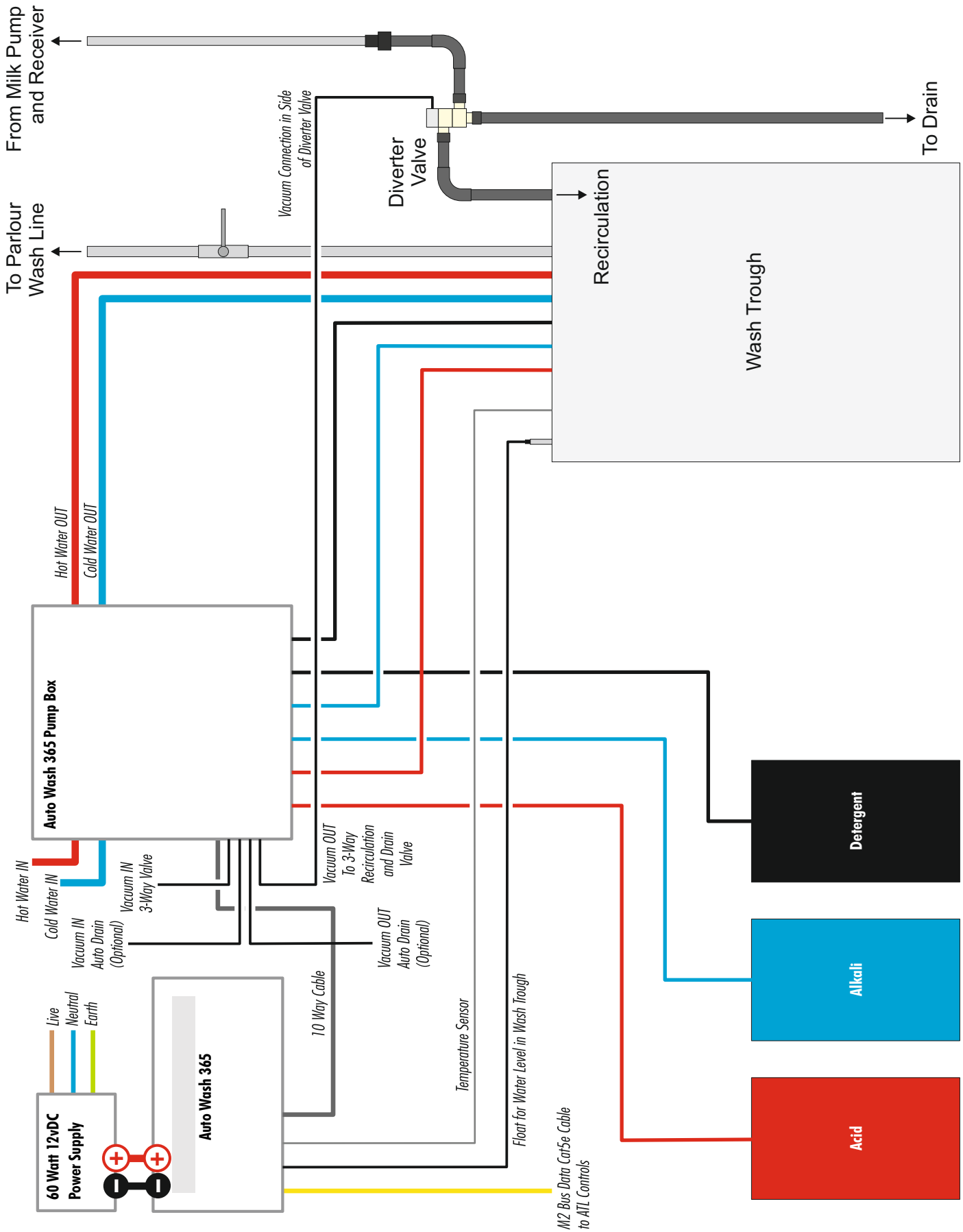


Auto Wash 365 Pump Box Connections - Peristaltic Pump Connections

The Auto Wash 365 Pump Box peristaltic pump connections are shown in the diagram below.

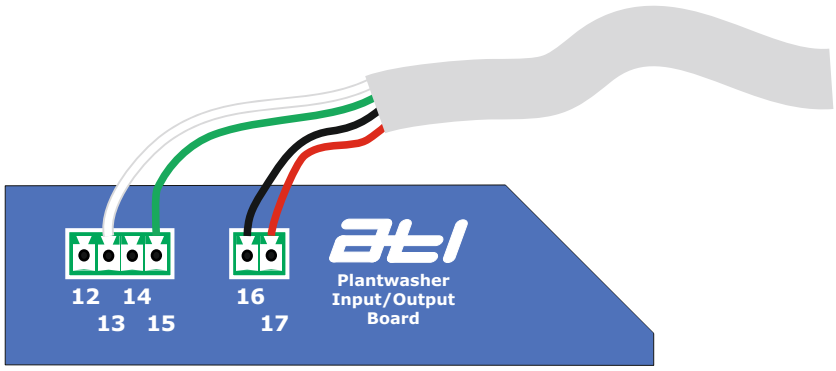


Auto Wash 365 Layout Diagram - Internal Hot and Cold Water Valves



Connecting the Auto Wash 365 to the Vacuum Pumps

Connecting from the Plantwasher Input/Output Printed Circuit Board (PCB)



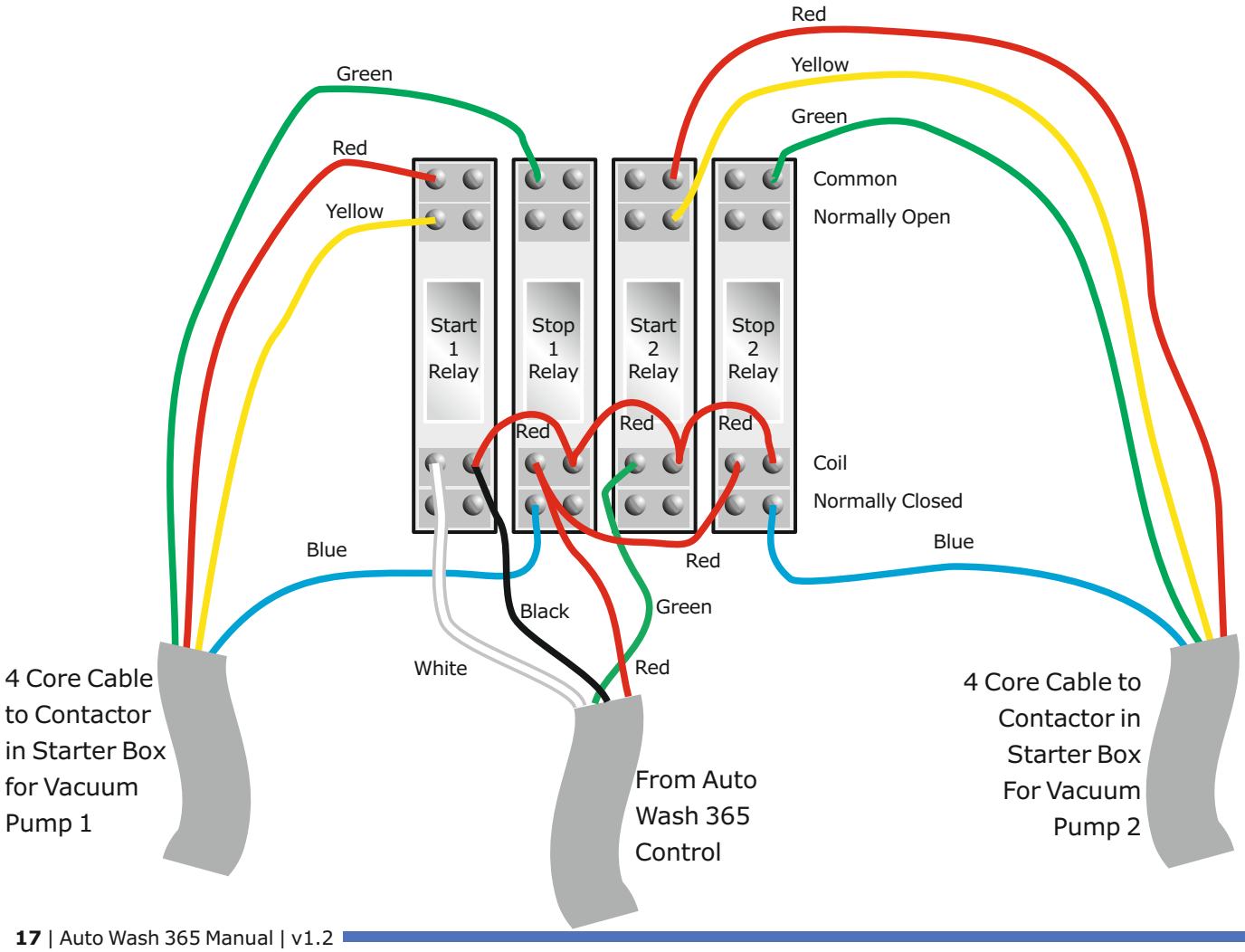
Start 1-ve - White - Connect into connection number 13

Start 2 -ve - Green - Connect into connection number 15

Stop -ve - Red - Connect into connection number 17

Common + - Black - Connect into connection number 16

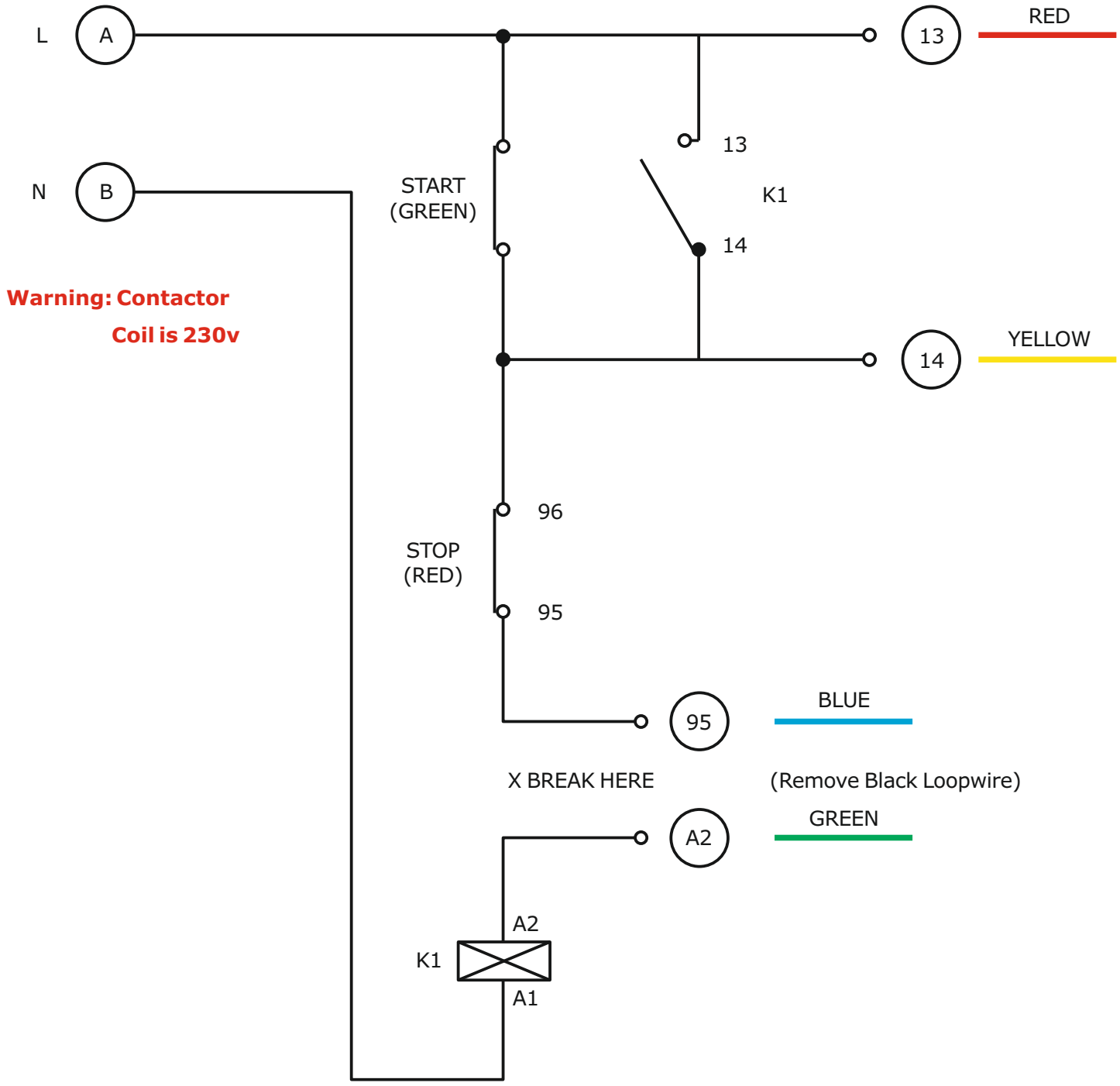
Connecting into the Vacuum Pump Starter Control Box



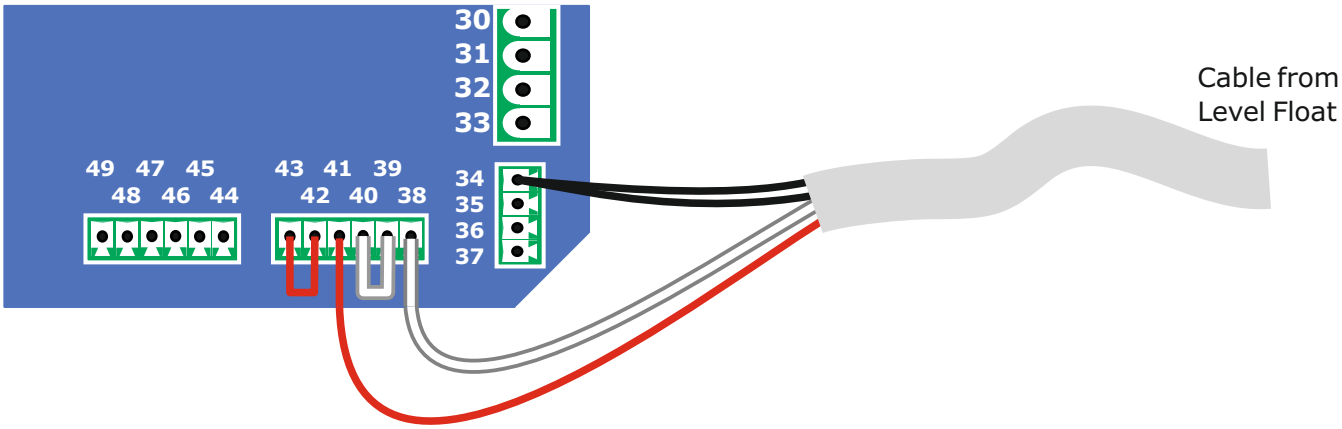
Connecting the Auto Wash 365 to the Vacuum Pumps Continued

Connecting to the Vacuum Motor Starter Box

Red, yellow, blue and green wires are from the Vacuum Pump Starter Control Box.



Connecting the Auto Wash 365 to the Water Level Float (I/O PCB PLW 225 Issue D)

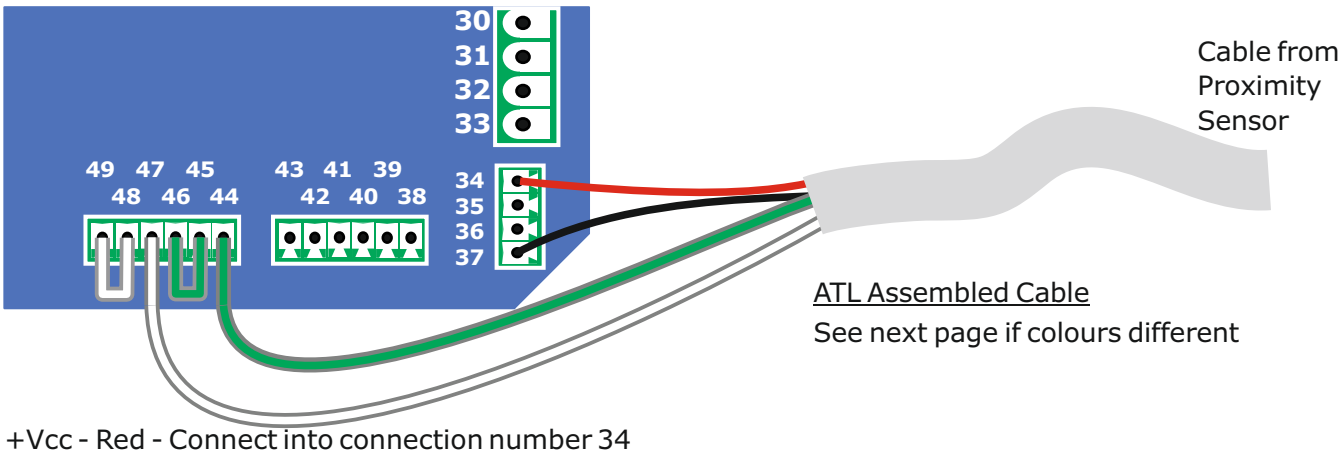


+Vcc - Black x 2 - Connect into connection number34

Switch 2+ve - White - Connect into connection number 38 - loop wire from -Vin (40) to Switch 2 -ve (39)

Switch 1 +ve - Red - Connect into connection number 41 - loop wire from -Vin (43) to Switch 1 -ve (42)

Connecting the Auto Wash 365 to the Milk/Wash Lockout Switch (I/O PCB PLW 225 Issue D)



+Vcc - Red - Connect into connection number 34

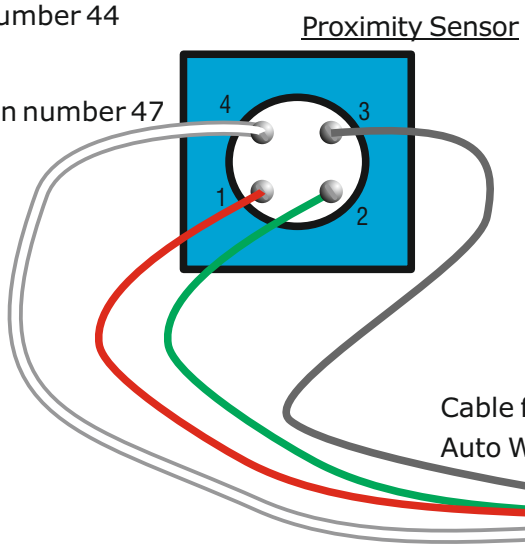
0V - Black - Connect into connection number 37

Milk Tank Lockout Switch +ve - Green - Connect into connection number 44

Loop wire between -Vin to (46) to Sw- (45)

Wash Trough Lockout Switch +ve - White - Connect into connection number 47

Loop wire between -Vin to (49) to Sw- (48)



Connecting into the Proximity Sensor

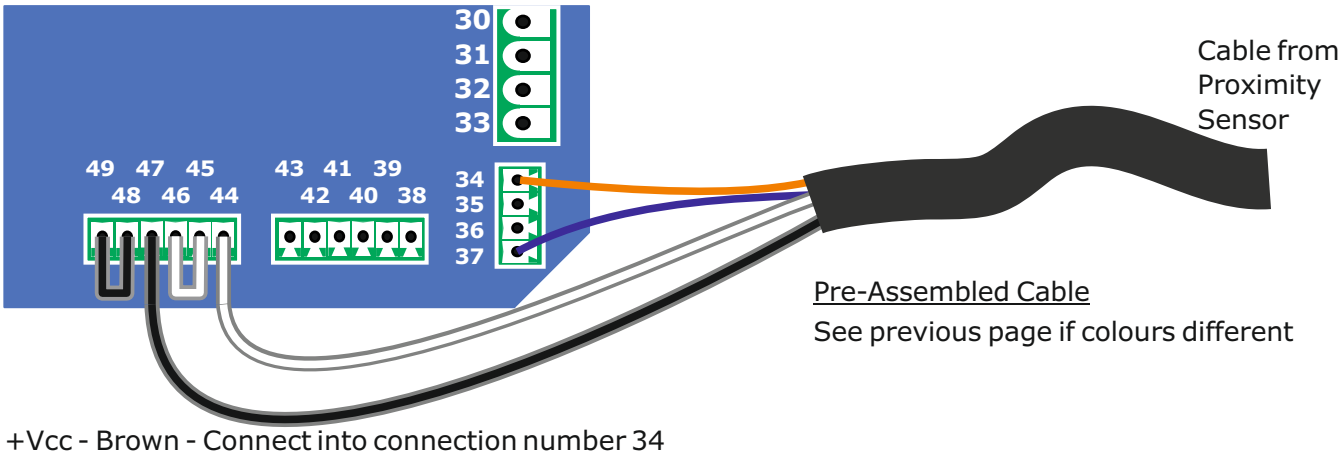
+ve - Red - Connect into connection number 1

Inverted Output - Green - Connect to connection number 2

-ve - Black - Connect into connection number 3

Output - White - Connect into connection number 4

Connecting the Auto Wash 365 to the Milk/Wash Lockout Switch (I/O PCB PLW 225 Issue D)



+Vcc - Brown - Connect into connection number 34

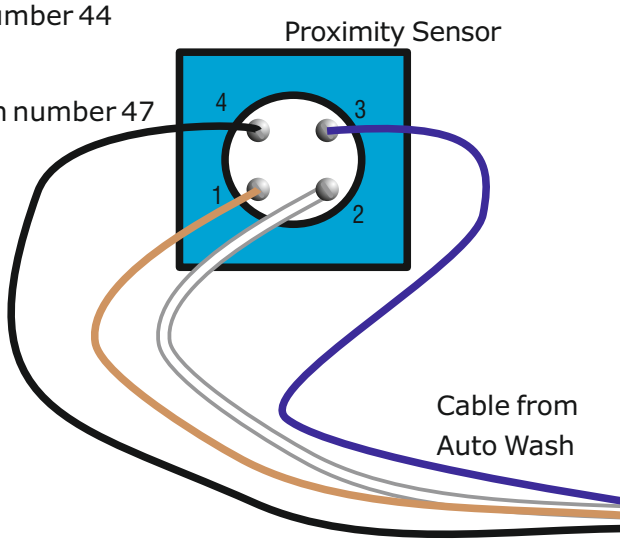
0V - Blue - Connect into connection number 37

Milk Tank Lockout Switch +ve - White - Connect into connection number 44

Loop wire between -Vin to (46) to Sw- (45)

Wash Trough Lockout Switch +ve - Black - Connect into connection number 47

Loop wire between -Vin to (49) to Sw- (48)



Connecting into the Proximity Sensor

+ve - Brown - Connect into connection number 1

Inverted Output - White - Connect to connection number 2

-ve - Blue - Connect into connection number 3

Output - Black - Connect into connection number 4

Setting up the Auto Wash 365

Before it can be used, the Auto Wash 365 must be setup. This is outlined in the following pages.

The Keypad

There are 11 keys on the keypad. 4 are for washing programs - Pre-Milking, Prog 1, Prog 2 and Prog 3 - the Milk key is for milking mode, the Info key provides information on the wash, and the remaining keys are Stop, Enter, Shift, Up and Down.

There are a number of keys that are dual function with the use of the Shift key - these provide the programming and user functions when a wash program is running. The second (shift) function of the key is shown in the grey box at the top of the key. The keys which have dual function are Milk, Prog 1, Prog 2, Prog 3, Pre-Milking, Info, Stop and Enter.

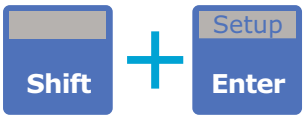
The keypad is constructed from a tough membrane overlaying individual key switches. This is a proven, reliable construction which will last for many years provided it is cleaned only with warm soapy water and not hosed down at high pressure.

The Display

The display has two areas. The Mode area shows the current mode - either Idle when neither milking or washing, Milk when in Milking Mode or PRE, PG1, PG2 or PG3 when in Washing Mode. The Function area shows where the control is in Wash Mode or displays the time in Milking or Idle Modes.

Entering Setup

During the setup process, it is necessary to enter and modify data. Before this can be achieved, the Auto Wash 365 Control has to be put into setup using this key sequence:

Press the Shift + Enter keys 

to enter setup.

After 2 seconds the key buzzer setting will be displayed.

The Key Buzzer Setting

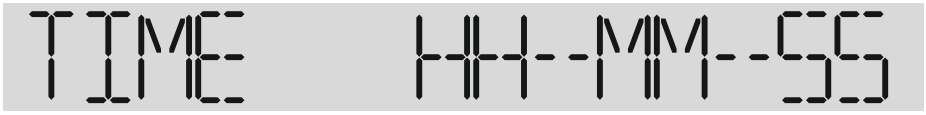
This sets whether the key buzzer sounds when the keys are pressed. It is an ON/OFF setting. The factory default is OFF.

Press the Enter key 

to toggle between ON or OFF.

Press the Up Arrow key 
to move onto the time setting.

Setting the Time



This sets the time on the control unit.

Press the Enter key 

to change the time.

The display will now show 'SET HOUR HH' with HH being the hour.

Press the Up or Down Arrow keys 

to change.

Setting the Time Continued

Press the Enter key (Setup / Enter) to save or press Shift + Stop key (Shift + Reset / Stop) to cancel.

If the Enter key is pressed, the display will now show 'SET HOUR MM' with MM being the minute.

Press the Up or Down Arrow keys or to change.

Press the Enter key (Setup / Enter) to save or press Shift + Stop key (Shift + Reset / Stop) to cancel.

Press the Enter key (Setup / Enter) to toggle between ON or OFF.

Press the Up Arrow key to move onto the date setting.

Setting the Date

This sets the date on the control unit.

Press the Enter key (Setup / Enter) to change the day of the month.

The display will now show 'SET DAY DD' with DD being the day of the month.

Press the Up or Down Arrow keys or to change.

Press the Enter key (Setup / Enter) to save or press Shift + Stop key (Shift + Reset / Stop) to cancel.

If the Enter key is pressed, the display will now show 'WDAY DDDDDDD' with D being the day of the week - this is needed so the control knows what day of the week it is.

Setting the Date Continued

Press the Up or Down Arrow keys or to change.

Press the Enter key Setup Enter to save or press Shift + Stop key Shift + Reset Stop to cancel.

If the Enter key is pressed, the display will now show 'SET MONTH MM' with MM being the month.

Press the Up or Down Arrow keys or to change.

Press the Enter key Setup Enter to save or press Shift + Stop key Shift + Reset Stop to cancel.

If the Enter key is pressed, the display will now show 'SET YEAR YY' with YY being the month.

Press the Up or Down Arrow keys or to change.

Press the Enter key Setup Enter to save or press Shift + Stop key Shift + Reset Stop to cancel.

If the Enter key is pressed, the display will return to the setup menu.

Press the Up Arrow key to move onto edit programs.

Editing Programs

Press the Enter key 

to edit the wash programs. See separate section on editing programs.

Press the Up Arrow key  to move onto the edit tasks setting.

Editing Tasks

Press the Enter key 

to edit the tasks. See separate section on editing tasks.

Press the Up Arrow key  to move onto the vacuum pump setup.

Vacuum Pump Setup

Press the Enter key 

to enter the vacuum pump setup menu.

Vacuum Pump Type

This sets the type of signal required for controlling the vacuum pumps. ON/OFF leaves the outputs on for the entire time they are running. PULSED pulses the outputs sequentially and pulses the vac pump stop at the end of the program. RVS is used to communicate with a variable speed vacuum pump. The factory default is ON/OFF.

Press the Enter key 

to alternate between on/off, pulsed and rvs for vacuum pump 1.

Press the Up Arrow key 
to step onto the setting for vacuum pump 2.

Press the Enter key 

to alternate between on/off, pulsed and rvs for vacuum pump 2.

Press the Up Arrow key 
to step onto the setting for vacuum pump 3.

Press the Enter key 

to alternate between on/off, pulsed and rvs for vacuum pump 3.

Press the Up Arrow key 
to step onto the setting for vacuum minimum setting.

IMPORTANT - Please note that there are no connectors on the I/O PCB populated for vacuum pump 3 on the Auto Wash 365 and therefore this setting is not useable.

Vacuum Minimum Setting

The vacuum minimum setting is used to alert the operator if the vacuum drops below the entered value during a wash program or when milking. **NB -** Requires Remote Vacuum Sensor (RVS) running variable speed system and connected to M2 bus. **Default Setting** - 0 kPa

Press the Enter key Setup Enter to edit the value.

Press the Up or Down Arrow keys or to enter the value.

Press the Enter key Setup Enter to save or press the Shift + Stop key Shift + Reset Stop to cancel

---

Milking Vacuum Level Setting

The milking vacuum level setting is used as the milking vacuum level and warns if there is variation from this level. **NB -** Requires Remote Vacuum Sensor (RVS) running variable speed system and connected to M2 bus. **Default Setting** - 46 kPa

Press the Enter key Setup Enter to edit the value.

Press the Up or Down Arrow keys or to enter the value.

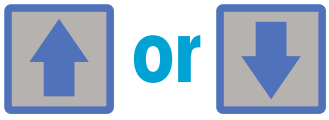
Press the Enter key Setup Enter to save or press the Shift + Stop key Shift + Reset Stop to cancel

Washing Vacuum Level Setting

The washing vacuum level setting is used as the washing vacuum level and warns if there is variation from this level. **NB -** Requires Remote Vacuum Sensor (RVS) running variable speed system and connected to M2 bus. **Default Setting** - 46kPa

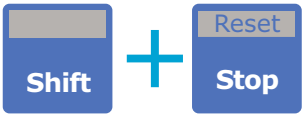
Press the Enter key 

to edit the value.

Press the Up or Down Arrow keys 

to enter the value.

Press the Enter key 

to save or press the Shift + Stop key 

to cancel

Maximum Vacuum Level Setting

The vacuum maximum setting is used to alert the operator if the vacuum rises above the entered value during a wash program or when milking. **NB -** Requires Remote Vacuum Sensor (RVS) running variable speed system and connected to M2 bus. **Default Setting** - 99 kPa

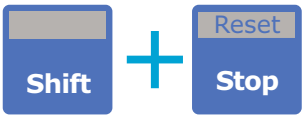
Press the Enter key 

to edit the value.

Press the Up or Down Arrow keys 

to enter the value.

Press the Enter key 

to save or press the Shift + Stop key 

to cancel

Power on Restart

This setting allows the Auto Wash to continue a wash program if it is interupted by a mains power outage. The wash program will be saved and when the power comes back on, it will continue from where it was interupted. IMPORTANT - This relys on the water being available (and at the correct temperature), both of which are out of the control of the Auto Wash.

Press the Enter key 

to toggle between ON or OFF.

Press the Up Arrow key  to move onto the wash trough lock setting.

Setting the Wash Trough Lock Out

This sets whether the wash trough lock prevents a wash program starting if the wash line is not in the correct position (i.e. not attached to the wash line or still attached to the milk tank) and the wash safety switch engaged. It is an ON/OFF setting. The factory default is ON.

Press the Enter key 

to toggle between ON or OFF.

Press the Up Arrow key  to move onto the milk tank lock setting.

Setting the Milk Tank Lock Out

This sets whether the milk tank lock prevents milking starting if the milk delivery line is not in the correct position (i.e. attached to the milk tank) and the milk safety switch engaged. It is an ON/OFF setting. The factory default is OFF.

Press the Enter key 

to toggle between ON or OFF.

Press the Up Arrow key  to move onto the peristaltic pump calibration.

Calibrating the Peristaltic Pumps

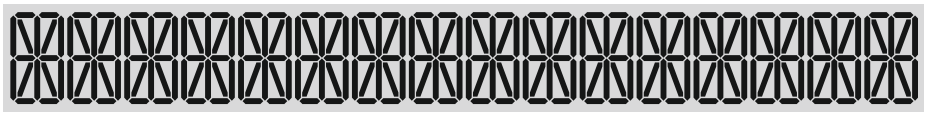
Press the Enter key (Setup / Enter) to set the peristaltic pump calibration. See separate section on calibrating the peristaltic pumps.

Press the Up Arrow key  to move onto the test displays diagnostic.

Test Displays Diagnostic

This turns on all the display LEDs so faulty LEDs can be diagnosed.

Press the Enter key (Setup / Enter) to go into the diagnostic routine.



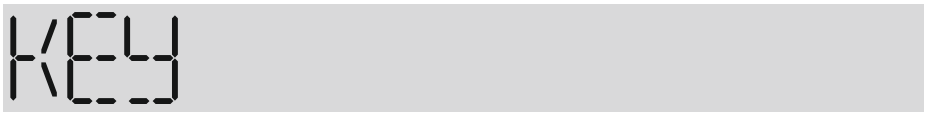
Press the Shift + Stop key (Shift + Reset / Stop) to return to the setup menu.

Press the Up Arrow key  to move onto the test keyboard diagnostic.

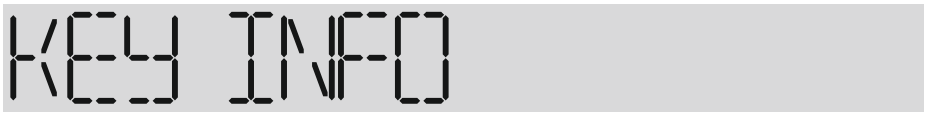
Test Keyboard Diagnostic

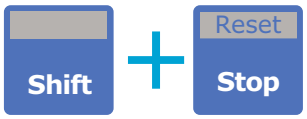
This enables the user to press each key individually to check they are functioning correctly.

Press the Enter key  to go into the diagnostic routine.



Press any of the keys and the display will show the key pressed. If a key does not show on the display, the key is more than likely faulty. The display below shows what happens if the Info key is pressed.



Press the Shift + Stop key  to return to the setup menu.

Press the Up Arrow key  to move onto the input/output (I/O) board (PCB) type.

I/O Board Type

This displays the I/O board type and is factory set.

Press the Up Arrow key  to move onto the input/output (I/O) printed circuit board (PCB) diagnostic.

Input/Output (I/O) Printed Circuit Board (PCB) Diagnostics

This enables to user to display diagnostic information on the Input/Output (I/O) PCB Diagnostics.

Press the Enter key 

to go into the diagnostic routine.

Where X is the number of I/O PCBs

or

Displays when no PCB responds

Press the Enter key 

to go into the diagnostics for the individual I/O PCB.

Displays software version of I/O PCB

Press the Up Arrow key  to step through the diagnostic information.

Displays serial number of I/O PCB

Input/Output (I/O) Printed Circuit Board (PCB) Diagnostics Continued

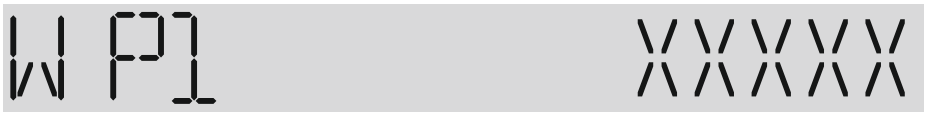
Where X is the wash trough level in cm - not available on when using level float

Where XXX.X is the wash trough water temperature

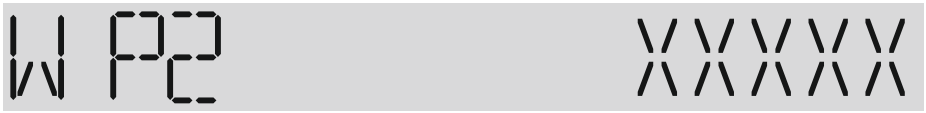
The wash temperature screen will not display if there is an error with the temperature measurement chip. If this occurs, the screen below will display.

The wash temperature screen will also not display if the temperature measured is over 1000°C. If this occurs, the screen below will display.

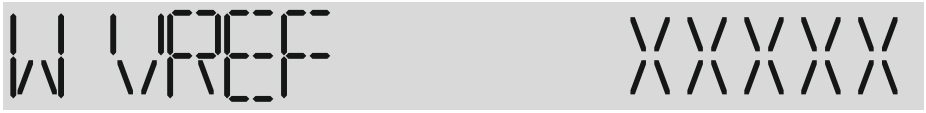
Press the Up Arrow key  to step onto the W P1 internal setting.



Internal setting

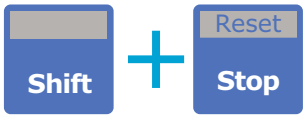


Internal setting



Internal setting

Internal setting

Press the Shift + Stop key 

to return to the setup menu.

Input/Output (I/O) Printed Circuit Board (PCB) Diagnostics Continued

Press the Up Arrow key  to move onto the input/output printed circuit board (pcb) test routines.

Input/Output (I/O) Printed Circuit Board (PCB) Test Routines

This enables to user to test individual outputs by turning them on or off.

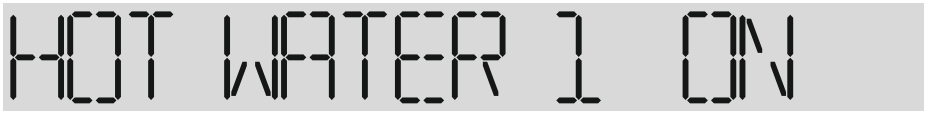
Press the Enter key 

to go into the diagnostic routine.

Press the Up or Down Arrow keys  to step through the different outputs.

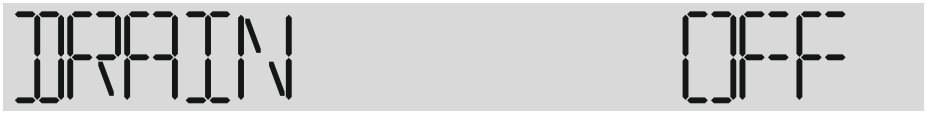
Press the Enter key 

to toggle to output ON or OFF.



Hot water valve output

Cold water valve output



Wash trough drain valve output

Return water 3-way diverter vave

Input/Output (I/O) Printed Circuit Board (PCB) Test Routines Continued

Vacuum pump 1 output

Vacuum pump 2 output

Vacuum pump stop output

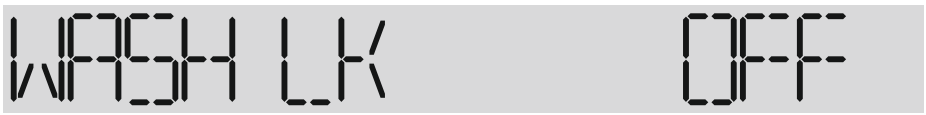
Milk pump output

Air blast / wash slugger output

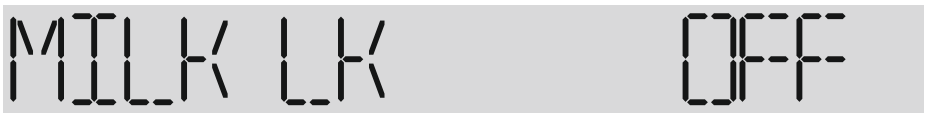
Pulsation output

Auto drain valve output

Spare output



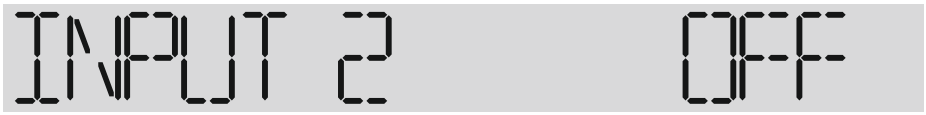
Wash trough lock input - shows state of input and changes if input activated



Milk tank lock input - shows state of input and changes if input activated

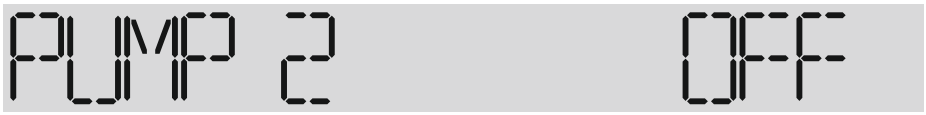
Input/Output (I/O) Printed Circuit Board (PCB) Test Routines Continued

Switch 1 input - shows state of input and changes if input activated

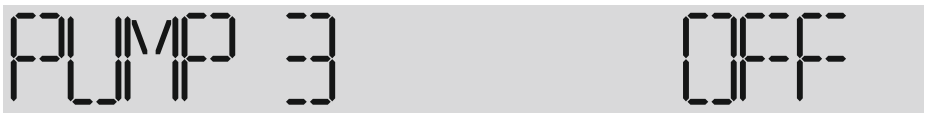


Switch 2 input - shows state of input and changes if input activated

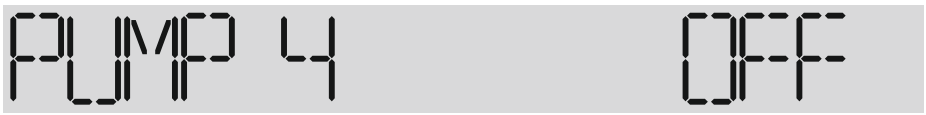
Peristaltic pump 1 output



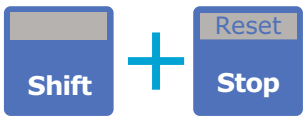
Peristaltic pump 2 output



Peristaltic pump 3 output



Peristaltic pump 4 output

Press the Shift + Stop key 

to return to the setup menu.

Press the Up Arrow key  to move onto the M2 Bus Settings.

M2 Bus Settings

This enables the user to turn controls on the M2 Bus on or off in a step of the program if turned ON here.

Press the Enter key 

to go into the diagnostic routine.

Press the Up or Down Arrow keys 

to step through the different outputs.

Press the Enter key 

to toggle to output ON or OFF.

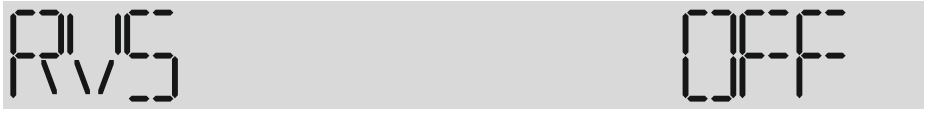
Rotary parlour

Milk pump control

Pulse 8 pulsation control

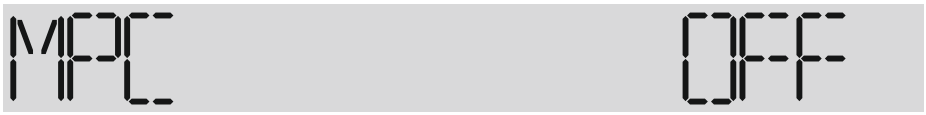
Powerflush system

Airblast wash slugger control



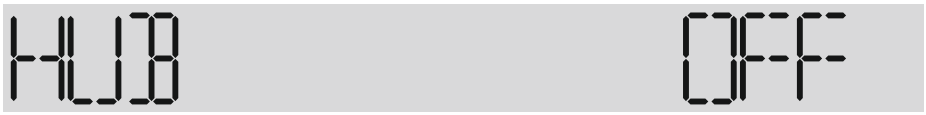
Remote vacuum sensor (RVS) on variable speed vacuum pump

M2 Bus Settings Continued

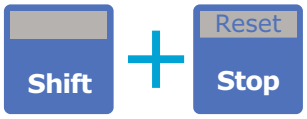


Milking point controls

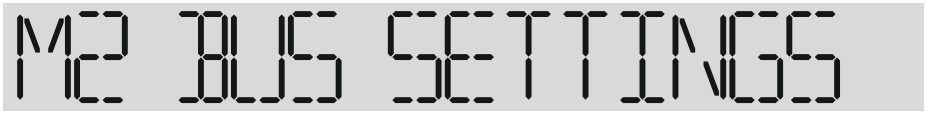
Number of milking point controls



MM Hub control

Press the Shift + Stop key 

to return to the setup menu.



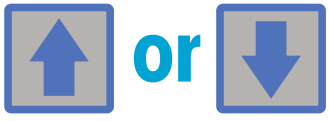
Press the Up Arrow key  to move onto the M2 Bus IDS.

M2 Bus IDS Routine

The M2 Bus IDS routine allows the user to check the communications bus is working correctly.

Press the Enter key 

to go into the diagnostic routine.

Press the Up or Down Arrow keys 

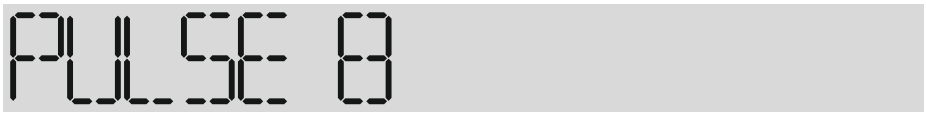
to step through the different items.

Press the Enter key 

to check the IDS to the item shown.

Milk pump control

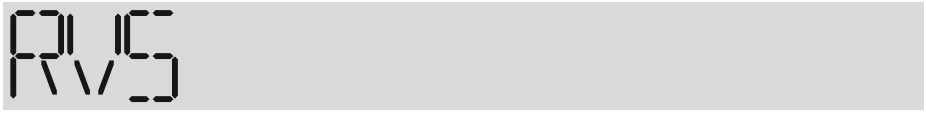
M2 Bus IDS Routine Continued



Pulse-8 pulsation control

Powerflush control

Powerflush nodes



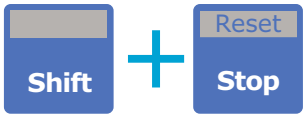
Remote vacuum sensor

Milking point control

MM Hub

Airblast wash slugger control

Delivery line drain valve & compressed air purge on AirBlast

Press the Shift + Stop key 

to return to the setup menu.

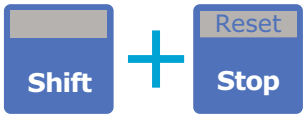
Press the Up Arrow key  to move onto the Control Printed Circuit Board (PCB) Serial Number.

Running an IDS Menu Item

Each IDS menu item functions in an identical manner, the display will show a short code for the device type being tested. If multiple units are supported, the unit number is show and the step key is enabled.

If the unit is present and responds to the IDS request, the software version will be shown, for example, an MM Hub:

Here we can see the MM Hub is present, and has version 1.00 software installed. If the control is not present, "Error" will be shown, for example:

Press the Shift + Stop key 

to return to the setup menu.

Control Printed Circuit Board (PCB) Serial Number

This displays the control printed circuit board (PCB) serial number.

Press the Up Arrow key  to move onto the control printed circuit board (pcb) software version.

Control Printed Circuit Board (PCB) Software Version

This displays the control printed circuit board (PCB) software version.

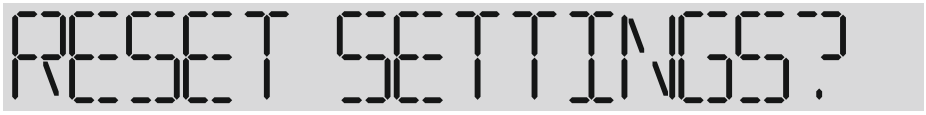
Press the Up Arrow key  to move onto the factory reset function.

Restore Factory Settings

Factory settings can be restored by running this function. This function clears ALL of the settings. The data is lost and is not recoverable so use with caution.

Press the Enter key Setup Enter to proceed with the factory reset.

Press the Enter key Setup Enter to go to reset settings.



Press the Shift + Prog 1 key reset settings. Shift + Skip Prog 1 to skip or press the Enter key Setup Enter to confirm

Press the Skip + Prog 1 key reset programs. Shift + Skip Prog 1 to skip or press the Enter key Setup Enter to confirm

Press the Skip + Prog 1 key reset tasks. Shift + Skip Prog 1 to skip or press the Enter key Setup Enter to confirm

Press the Up Arrow key to move onto the exit setup screen.

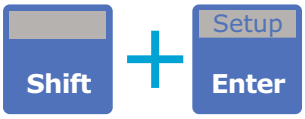
Exit Setup

This enables to user to exit the setup routine.

Press the Enter key 

to exit the setup menu.

Editing Programs

Press the Shift + Enter keys 

to enter setup.

Press the Up Arrow key  a number of times until Edit Programs is reached.

Press the Enter key 

to edit the programs.

Press the Up or Down arrow keys 

or the program key 

to choose the program to edit.

The programs available are pre-milking, milking, program 1, program 2 and program 3. This section will cover editing one step from the pre-milking program.

Press the Enter key 

to edit the pre-milking program.

Step number

Press the Milk key 

to toggle forwards through the step setting options.

The setting options available for each step are as follows:

User has to press skip or stop to terminate step

Editing Programs Continued

Step will run for 6 minutes and then go onto next step

Only shows if pump output is set on

Pump 1 delivers 0.8 litres of chemical and then go onto next step

Pump Number - 1, 2, 3 or 4

Step will complete when wash trough temperature is greater than 60°C

Can be less than (<) or greater than (>) X temperature

Step will complete when wash trough level is greater than 90cm - not used with float level

Can be less than (<) or greater than (>) X cetimetres

Has ON and OFF options

Step will complete when wash trough level triggers float switch

Level float comes with 2 level switches - one at bottom and one part way up

Has ON and OFF options

Step will complete when wash trough level triggers float switch

Level float comes with 2 level switches - one at bottom and one part way up

IMPORTANT - WTL is also available - this is not used on float level systems

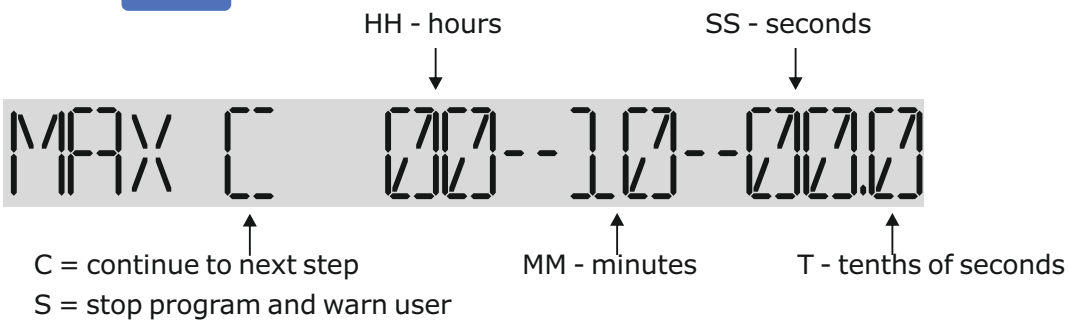
Pressing the Info key 

allows the user to edit which outputs are ON during each step - the same functionality as the I/O PCB test list. The outputs available are:

Hot Water 1	Vac Pump Stop	Peristaltic Pump 1
Cold Water	Milk Pump 1	Peristaltic Pump 2
Drain	Air Blast	Peristaltic Pump 3
Diverter	Pulsation	
Vac Pump 1	Auto Drain	
Vac Pump 2	Output 1	

Editing Programs Continued

Pressing the Stop key (Reset / Stop) shows the maximum step time and controls what happens if this time is reached.



Press Info key to toggle between Max C & Max S (Clear / Info)

Pressing the Insert key (Insert / Prog 2) will insert a copy of the current step after it and move onto it to edit.

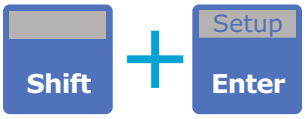
Pressing the Delete key (Delete / Prog 3) will delete the current step.

Press the Up or Down arrow keys or to step up and down through the steps.

The final 2 steps Stop Block and Pause Block. They have the same outputs available, but are used to set the output status if the step is paused or when program finishes.

Press the Shift + Stop keys (Shift + Reset / Stop) to return to the setup menu.

Editing Tasks

Press the Shift + Enter keys 

to enter setup.

Press the Up Arrow key  a number of times until Edit Tasks is reached.

Press the Enter key 

to edit the tasks.

Task number

Press the Info key 

to edit the tasks.

Press Enter to edit, press Up and Down to step through programs, then press Enter to save.

HH - hours

MM - minutes

Press Enter to edit, press Up and Down to step between hours and minutes (one chosen will flash), press Info to select hours and minutes, then press Enter to save.

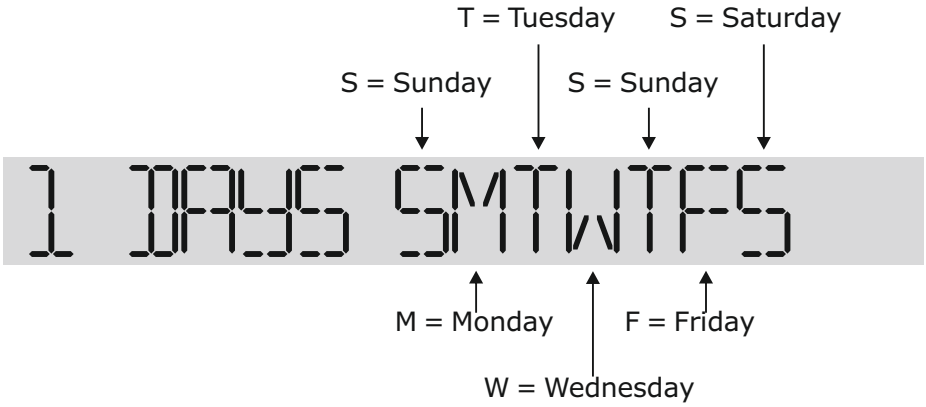
M = Monday

Press Enter to edit, press Up and Down to step between days (one chosen will flash), press Info to select, then press Enter to save.

The above show a task to automatically run a pre-milking wash program at 15:00 every Monday.

Editing Tasks Continued

The days of the week are displayed in the position shown below. The days the task is enabled are only visible when set ON.



Press the Shift + Stop keys [Shift] + [Reset / Stop] to return to the setup menu.

Additional Notes on Editing Tasks

Press the Info key [Clear / Info] to step through parameters for each task.

Press Shift + Prog 2 key [Shift] + [Insert / Prog 2] to step backwards or Shift + Prog 3 key [Shift] + [Delete / Prog 3] to step forward through the tasks

Press the Enter key [Setup / Enter] to toggle a task enabled or disabled

Press Prog 1, Prog 2, Prog 3, Pre-Milk or Milk keys to select a task [Back / Pre Milking] [Pause / Milk] [Skip / Prog 1] [Insert / Prog 2] [Delete / Prog 3]

Press the Enter key + Up or Down arrows to set a start time [Setup / Enter] + ↑ or ↓

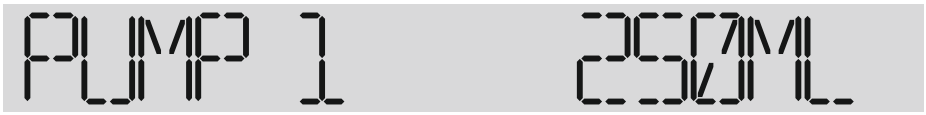
Press the Enter key [Setup / Enter] to edit days then the Info key [Clear / Info] to change the days ON or OFF

Calibrating the Peristaltic Pumps

Press the Shift key [Shift] then press the Enter key [Setup / Enter] to enter the setup menu.

Press the Up Arrow key [↑] a number of times until Pump Calibration is reached.

Press the Enter key [Setup / Enter] to calibrate the peristaltic pumps.



Press the Up or Down arrow keys [↑] or [↓] to choose which peristaltic pump to calibrate.

Put the outlet pipe from the selected peristaltic pump into a measuring beaker / jug to collect the pumped chemical. The measuring beaker / jug should be chemical resistant. **IMPORTANT** - Be careful to not mix chemicals in the jug and rinse well with water between use on the different pumps.

Press the Info key [Clear / Info] to run peristaltic pump 1 and measure the collected chemical.

Press the Enter key [Setup / Enter] to edit the measured amount of chemical.

Number flashes when being edited

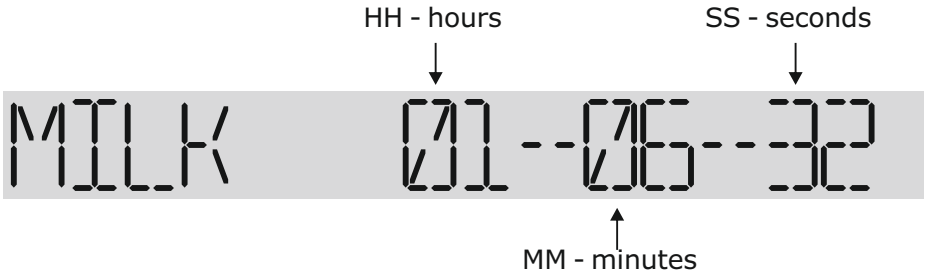
Press the Enter key [Setup / Enter] to store the measured value. Repeat a number of times to check correct.

Press the Shift + Stop keys [Shift] + [Reset / Stop] to return to the setup menu.

Milking Mode

Press the Milk key 

to put the system into Milk mode before milking.



The display will show 'MILK' and the milking time.

If the Auto Wash 365 is connected to other ATL equipment (ie. AirBlast, Milk Pump Control, Pulse-8 Pulsation Control or Milk Meter System), these can be linked together so that when the milk key is pressed, they all go into milking mode.

Press the Info key 

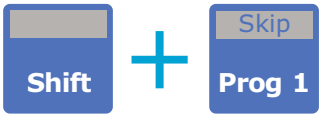
to access information on the Milking program. See separate section.

Press the Stop key 

to finish milking and return to Idle mode.

<u>Steps in the Milk Program</u>

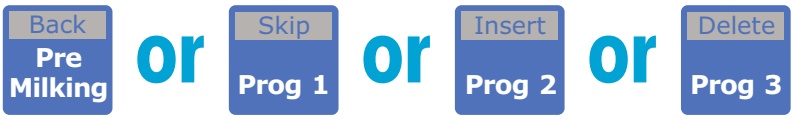
Steps can be added to the Milk program the same as the washing programs. This can be useful if for example, the vacuum pumps are required to be turned off after milking but before washing, and the automatic drain valves need to be kept closed.

Press the Shift and Prog 1 keys 

to skip to the next step in the Milk program.

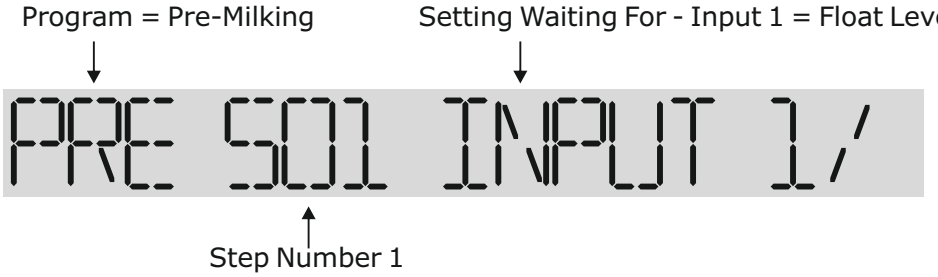
Washing Mode

Press either the Pre-Milking, Program 1, Program 2 or Program 3 keys to start the system washing.

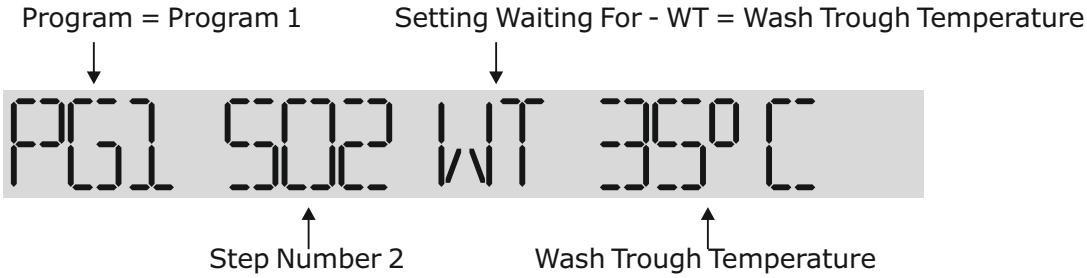


The display will show the following during washing depending upon whether the control is waiting for wash trough level, wash trough temperature, time remaining in step, and user pressing stop key.

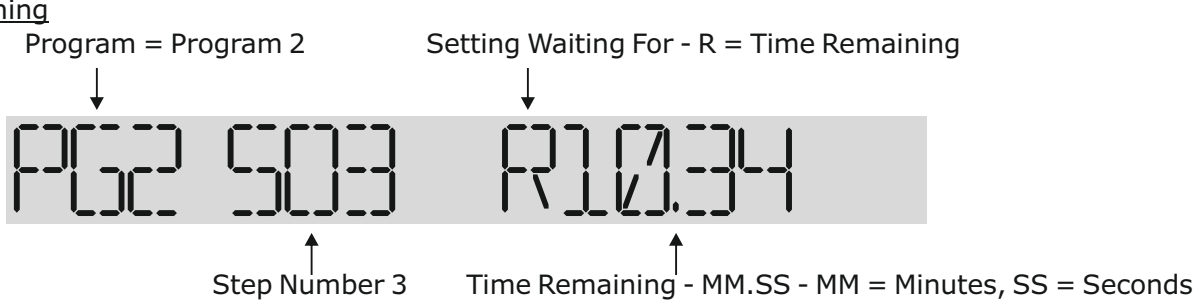
Wash Trough Level



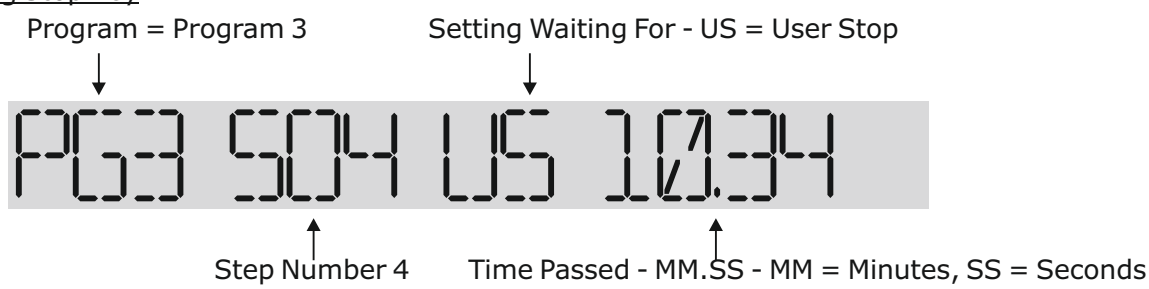
Wash Trough Temperature



Time Remaining



User Pressing Stop Key



Washing Mode Continued

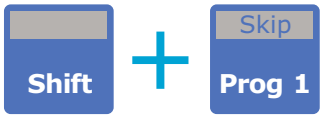
Peristaltic Pump Running

Program = Pre-Milking

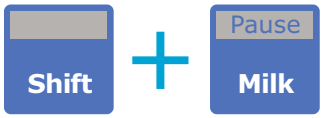
Peristaltic Pump Number

Chemical to be dispensed in Litres from Pump

Functionality during Washing

Press the Shift and Prog 1 keys 

to skip to the next step in the Wash program or to acknowledge user stop.

Press the Shift and Milk keys 

to pause the current step in the Wash program.

Press the Info key 

to access information on the Washing program. See separate section.

Press the Stop key 

to finish milking and return to Idle mode.

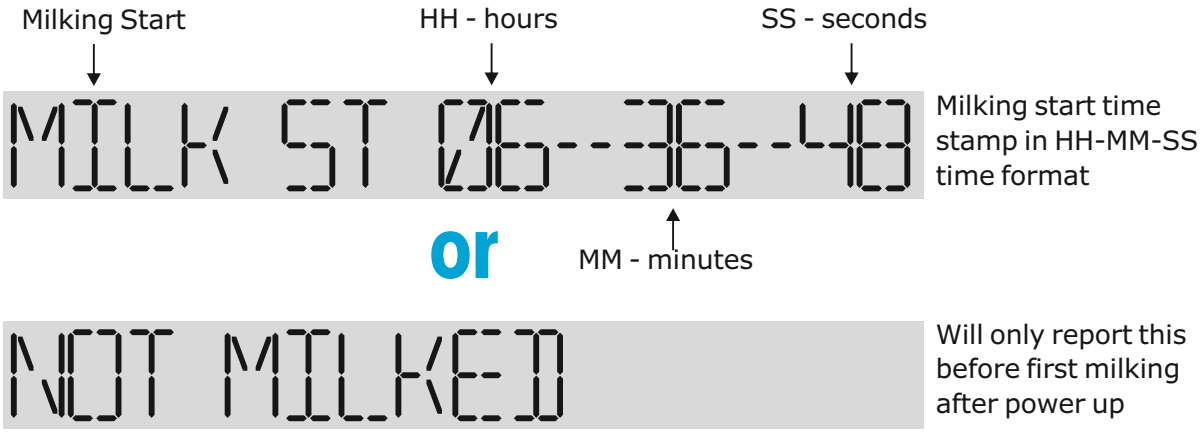
Info Function

The info function provides information on milking and washing programs. The information is available all of the time (i.e. both when milking and washing programs are running or when the control is in idle).

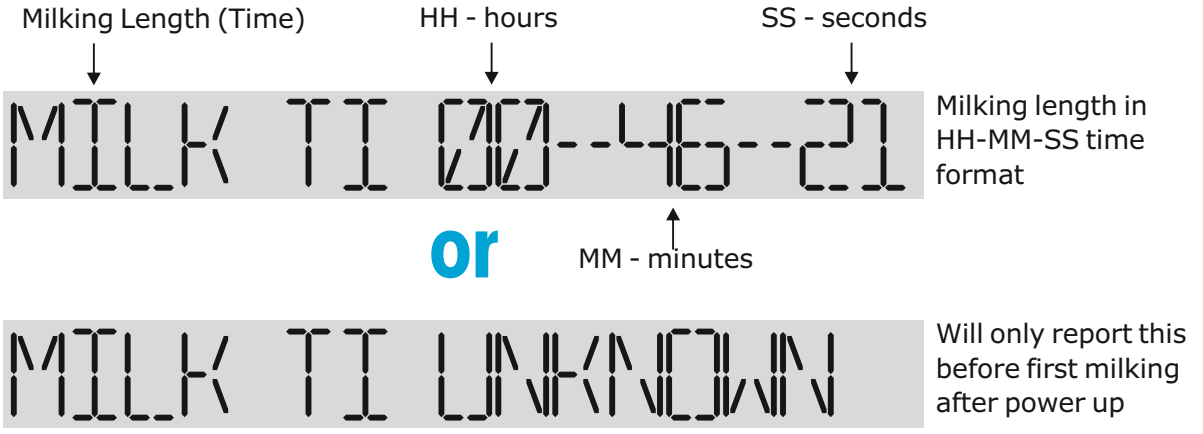
Press the Info key 

to access the info function.

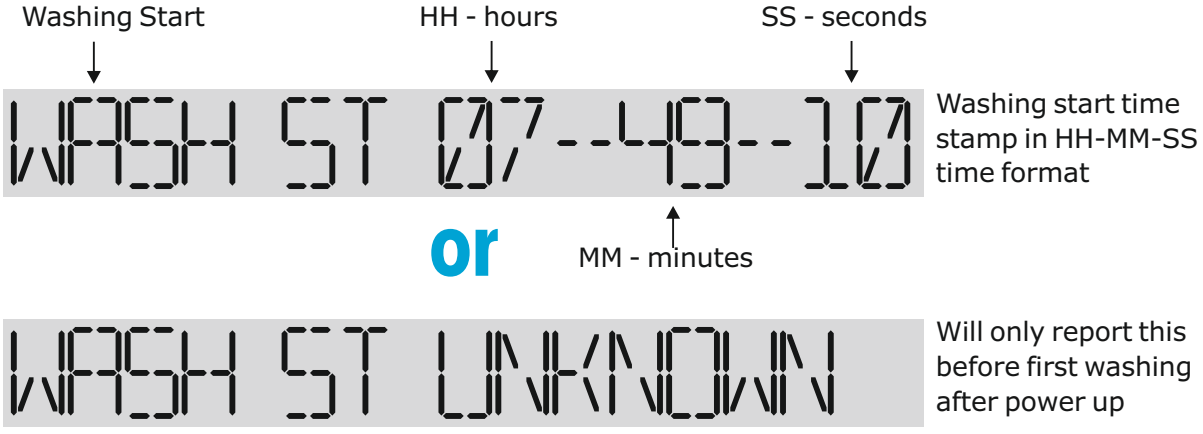
Milking Start Time - Reports last milking start time



Milking Length (Time) - Reports last milking length

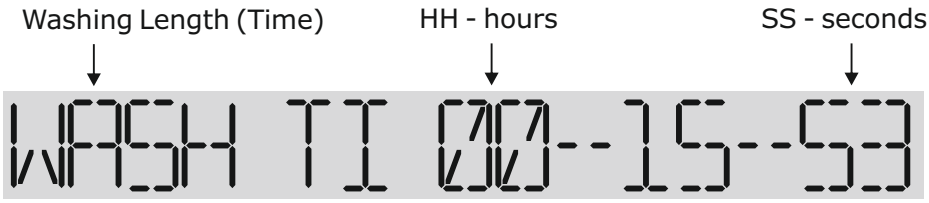


Washing Start Time - Reports last washing start time



Info Function Continued

Washing Length (Time) - Reports last washing length

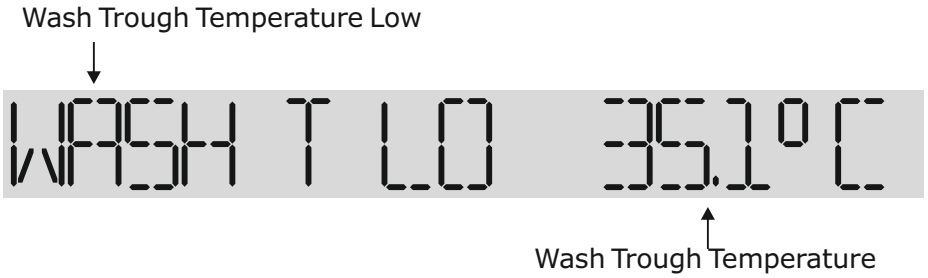


Washing length in HH-MM-SS time format

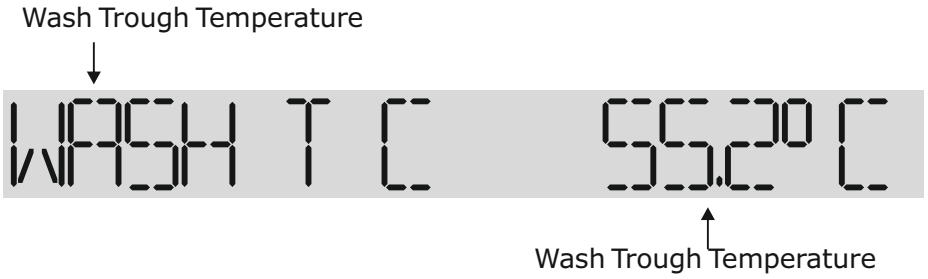
or

Will only report this before first washing after power up

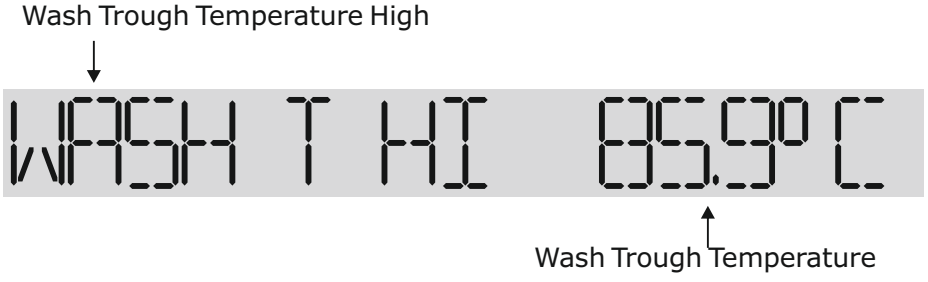
Wash Trough Lowest Temperature - Reports the lowest temperature of the water in the wash trough during last washing.



Wash Trough Current Temperature - Reports the current temperature of the water in the wash trough.



Wash Trough Highest Temperature - Reports the highest temperature of the water in the wash trough during the last washing.

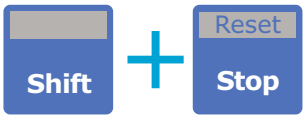


Info Function Continued

Wash Trough Water Level - Reports current wash trough level (NB - does not work with level float)

Wash Trough Water Level

Water level in centimetres

Press the Shift + Stop keys 

to exit the info function.

Monthly/ Six Monthly / Yearly Routine Maintenance

- Visually inspect the Auto Wash 365 Control box for damage. Any damage will admit water causing the premature failure of the electronics and should be fixed as soon as possible.

Parlour Wash Down

- The Auto Wash 365 control enclosure is IP65 rated. However, no indirect or direct pressure washing should be used to wash the Auto Wash 365 Control, as this will cause the seals to fail and water to ingress and damage the electronic components. Please note that water damage is not covered under warranty.