

SiCD2 manual

Central laundry dosing system for washing machines



Issued by Scandinavian Instruments ApS
Lilleringvej 12B - 8462 Harlev, Denmark.
Phone +45 8694 1211
www.scan-in.dk

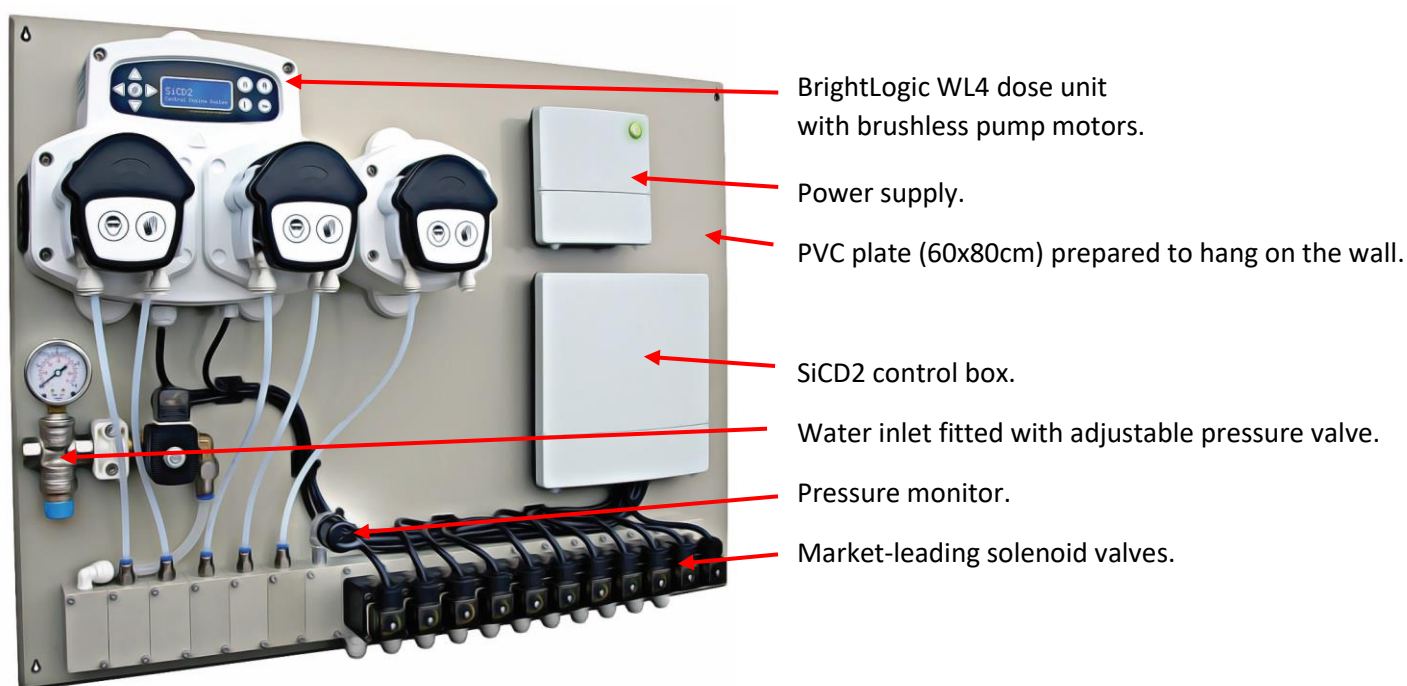
Rev. 1.89

Table of contents

Contents	Page
System Description	3
Parallel Trigger Unit	4
Serial Trigger Unit	5
Computer Program	6-21
Communication local/remote	6
COM port	6
Login	6
Read/write Data	7
System Setup	7
Alarm Setup	8-9
Alarm Reset	9
Setting up a Dosing Program	10-23
Pump Calibration	11-12
Selection of Machine Type	12-16
Keyboard Lock	14
Resetting the Dosing Program	15
Loading a Dosing Program	17
Output test	18
Instruction lines	19-23
Copy Program	23
Save a program	24
Deleting a Program	25
Log data (consumption, etc.)	25
Alarm Log	26
Firmware Update SiCD2	27
Firmware Update Trigger Box	27
SiCD2 Connection Cables	28
Specifications	29

SiCD2 is a central dosing system with a capacity of up to 10 washing machines and 7 chemicals.

- SiCD2 has been developed using the latest technology and designed with components intended for use in industrial environments.
- Compatible with virtually all kinds of washing machines in the market.
- Direct communication with MieleLogic washing machines.
- Supplied preassembled on an 11mm PVC plate, ready to suspend on a wall.
- BrightLogic dosing unit with maintenance-free brushless motors.
- Automatic SMS and e-mail alarm notification in case of low chemical level or stoppage.
- Online access to SiCD2 systems (Windows) for reading the current chemical consumption, number of performed washes, any alarms, etc. Moreover, it is possible to change the dosing program via the internet.



SiCD2 edition for 10 washing machines and 5 chemicals.

SiCD2 must be connected to the general water supply by means of an approved non-return valve.

It is also recommended to install a water filter (e.g. 50 Micron) before the water intake, to avoid corrosion particles, sludge etc. blocking the solenoid valves.

Each washing machine is to be connected to an interface box (Trigger Box) situated in or next to each washing machine. The individual interface boxes must be connected in series by means of cables (RJ12 connectors) and finally to the SiCD2 control unit.

If using a MieleLogic washing machine connected to an Ethernet connection, the interface boxes are not necessary.

Parallel Trigger Box

A Parallel Trigger Box is applied in washing machines emitting "manual trigger signals" 12V-240V AC or DC.

You will need one trigger box per washing machine.

The Trigger Box can be fed with up to six input trigger signals from the washing machine through the terminal box on the left.

On the right side of the Trigger Box, a 3-button membrane keyboard must be plugged in using a ribbon cable.

Plug in a trigger bus cable (RJ12 connector) between the Trigger Box and the SiCD2 unit.

All Trigger Boxes must be connected in series.

The relevant washing machine number is set on a rotary switch with a slotted screwdriver.

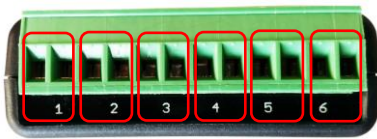
Trigger signal input from the washing machine.

A maximum of six trigger signals 12V-240V AC or DC.
(Input is galvanic isolated).



Parallel Trigger Box

- Sets the machine number.
- Trigger bus (RJ12 connector).
- Trigger bus (RJ12 connector).
- Plug-in for 3-button membrane keyboard.



Input for trigger 1-6.

Phase and Zero. 12V-240V AC or DC.



3-button adhesive membrane keyboard is installed on the front of the washing machine and is connected to the interface box by means of the provided ribbon cable.

Using the three keys on the membrane keyboard, the end user may choose between six different dosing programs, select or deselect softener and choose between a low, medium or high dose.



Serial Trigger Box

Washing machines with RS232 data communication applies a Serial Trigger Box.

You will need one Trigger Box per washing machine.

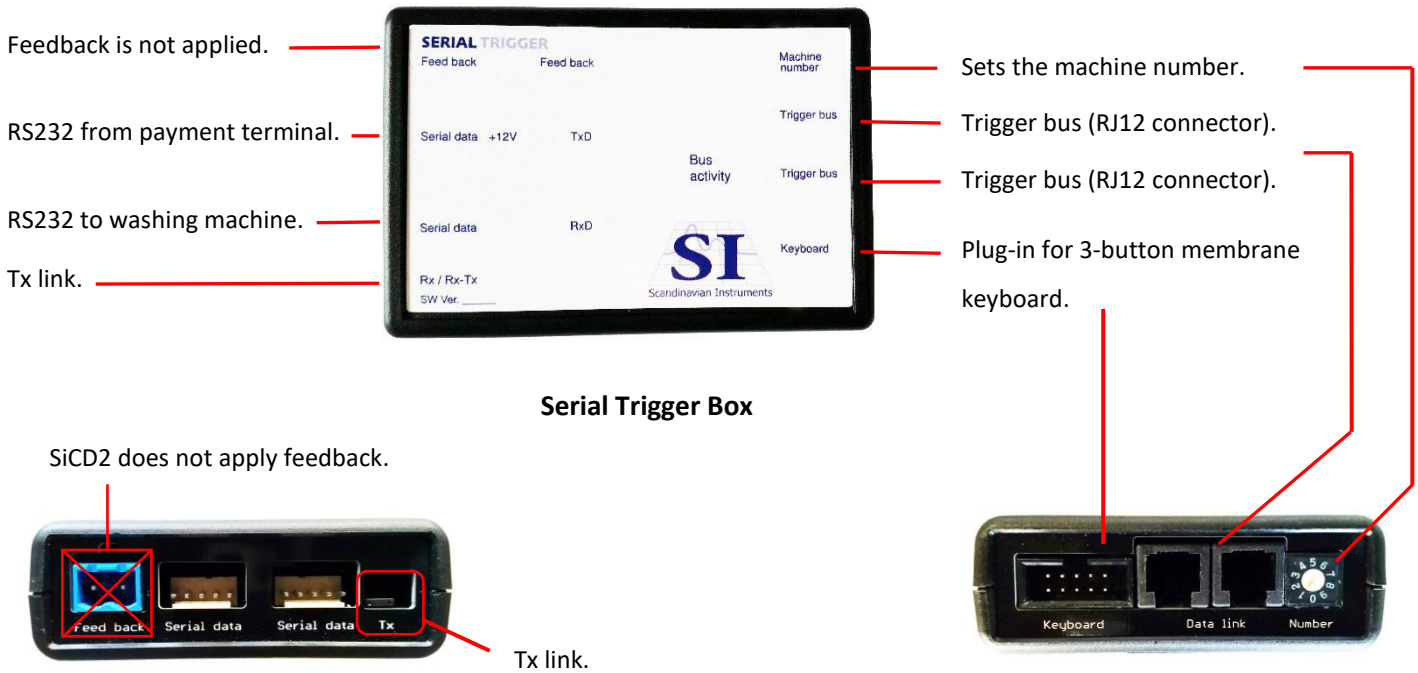
On the left side of the Trigger Box, a RS232 signal is supplied from the washing machine.

On the right side of the Trigger Box, a 3-button membrane keyboard must be plugged in, using a ribbon cable.

Plug in a trigger bus cable (RJ12 connector) between the Trigger Box and the SiCD2 unit.

All Trigger Boxes must be connected in series.

The relevant washing machine number is set on a rotary switch with a slotted screwdriver.



Two parallel connectors for RS232 communication with the washing machine and possibly to the payment terminal. In case the washing machine is connected to a payment terminal, the serial Trigger Box must be connected between the two units and the Tx link must be removed.

The Serial Trigger Box is to be used along with Electrolux Compass Pro washing machines.

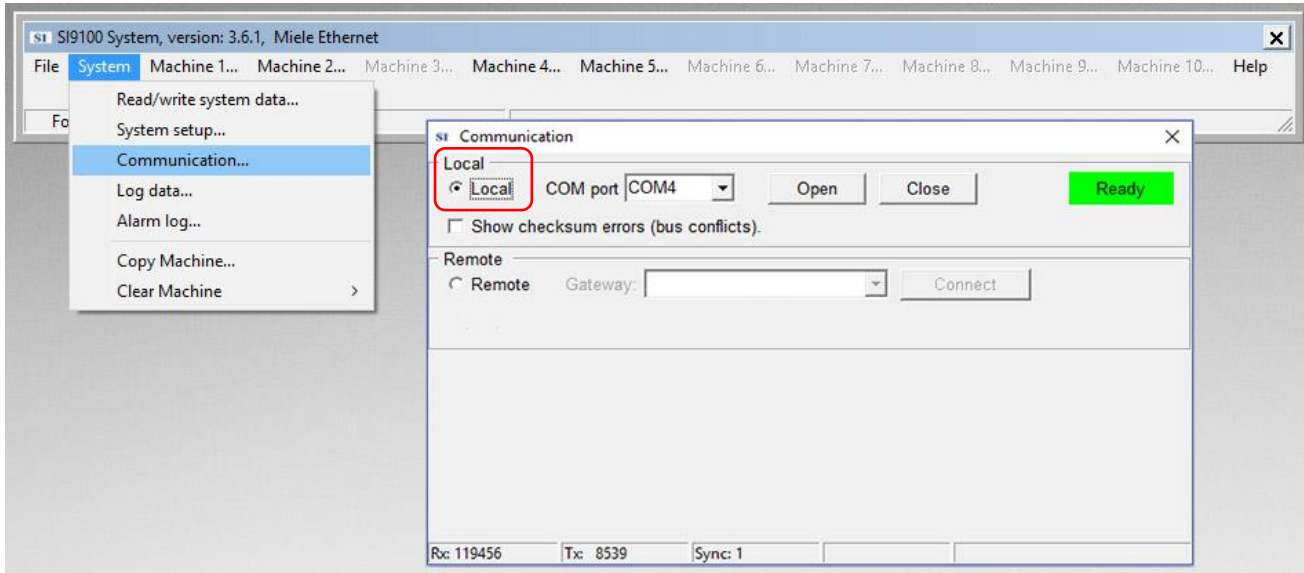
Computer Program

Communication between the computer and the SiCD2 control unit.

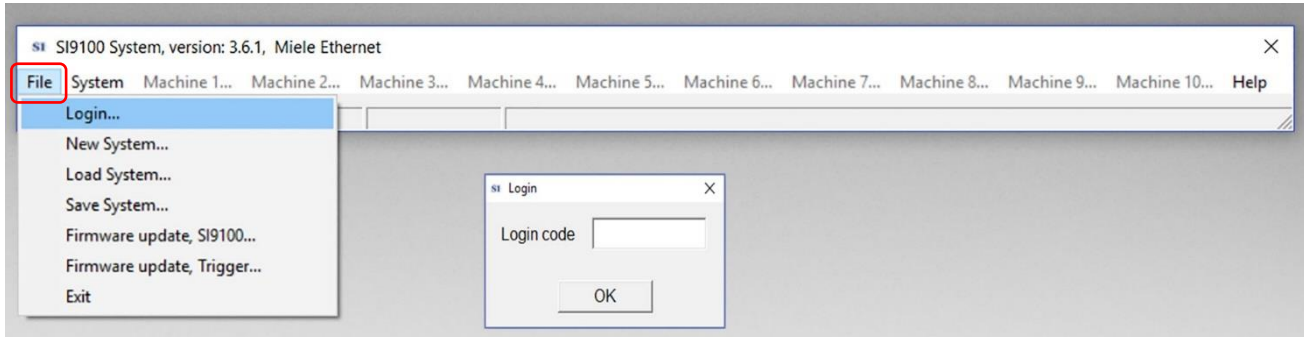
Select the tab *System – Communication...*

Wired USB connection

In case of a wired connection to the SiCD2 unit: select *Local* and choose the relevant COM port to your computer. Click *Open*. The display reads **Ready**, when the connection between the computer and the SiCD2 control unit is established.



In the *File* menu, enter your Login code. (Scan-in supplies the SiCD2 units with customer chosen login pre-encoded). Once entered in your computer, the login code will remain stored for future access.



Online connection

In case of internet connection, select *Remote*.

Enter Gateway: scan-in.remotegateway.dk and click *Connect*.

Enter your *User name* and *Password* provided by Scan-in, click *OK*.

The programming of SiCD2 takes place by means of the PC software SiCD2 version 3.19.

Please see www.scan-in.dk for latest version of SiCD2 software.

Login: Access your installed SiCD2 unit.

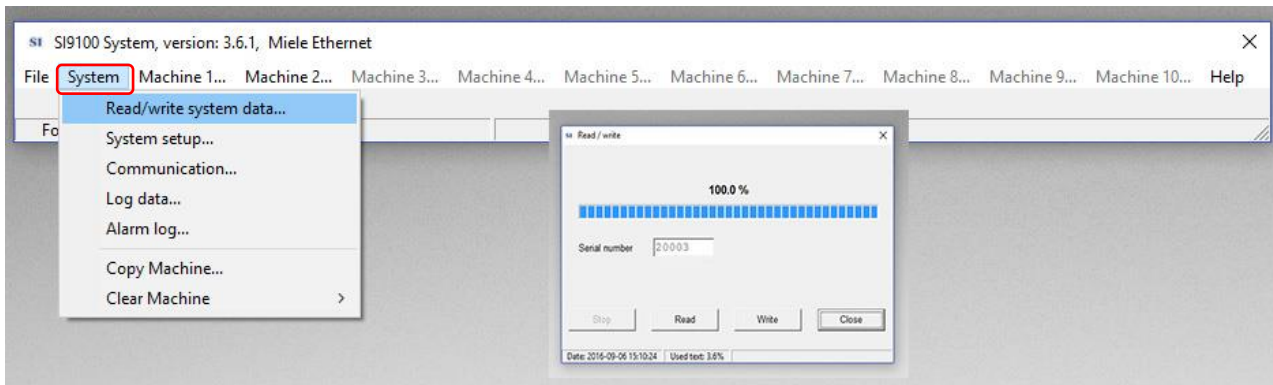
New System: Creating a new system program.

Load System: Load an existing system program (from the computer).

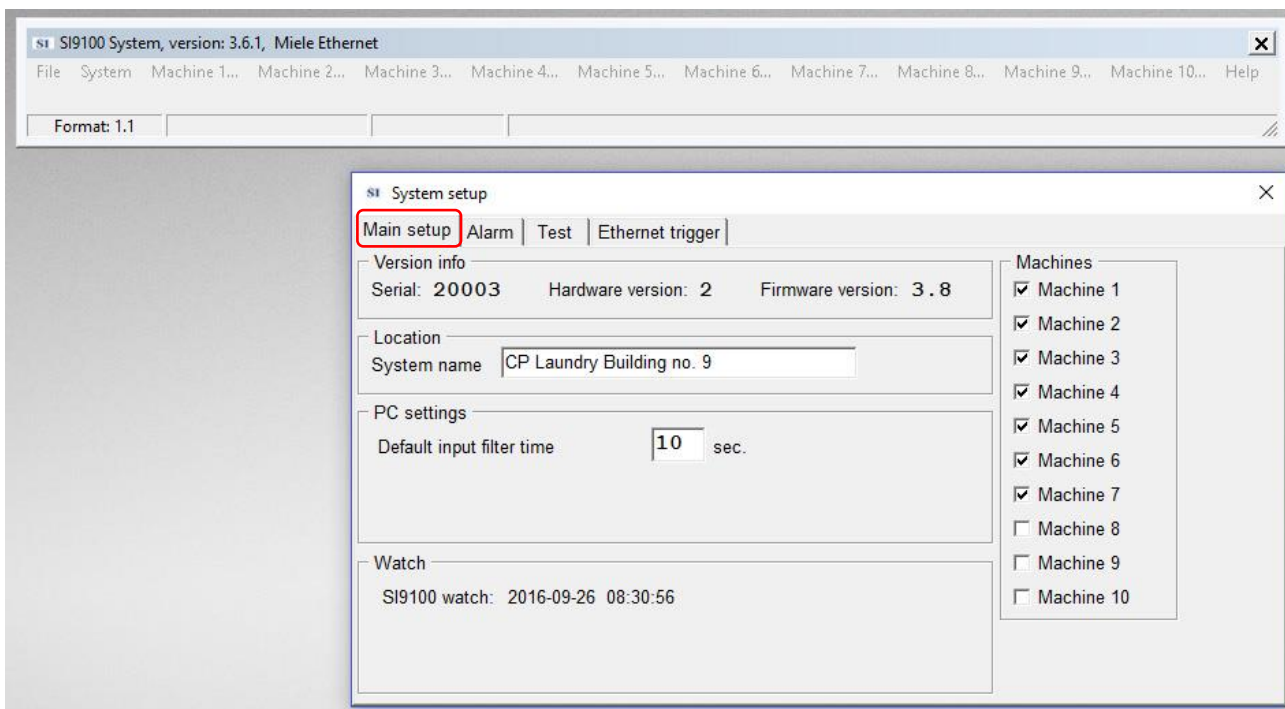
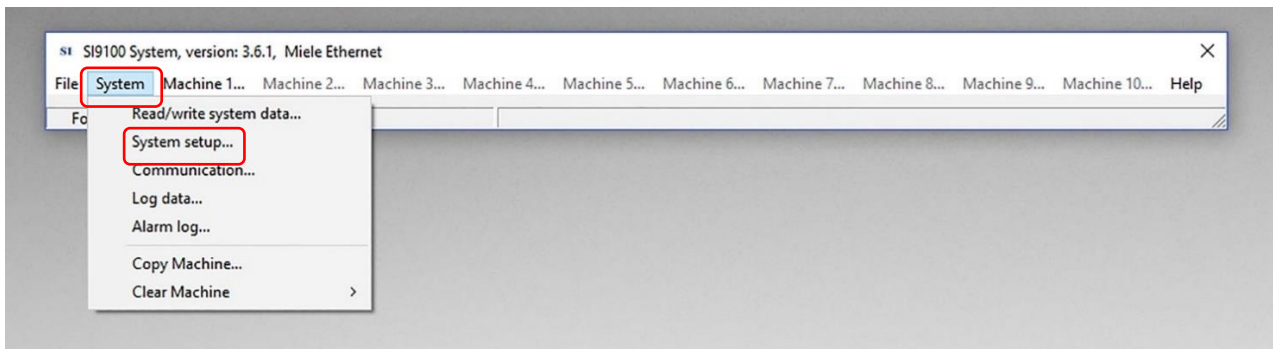
Save System: Save a system program (to the computer).

Firmware Update SiCD2 and Firmware update Trigger Box: (Page 27).

Read/write system data. Data may be transferred between the computer and the SiCD2 central through a cable or internet connection.



System setup. Here, the general data for the relevant installation is loaded.



1. Main setup: Enter the desired *System name*.
2. Select the washing machines included in the current installation.
3. Enter the desired *Default input filter time*. The period, during which an input signal must be activated before it is accepted as a valid input.
NOTE: The period-entered in *Default input time* may be overwritten in the individual dosing programs. (See page 20).
4. *Watch* is the date/watch readout used for timing log functions, among others. The date and time is automatically loaded when data is downloaded from the relevant SiCD2 unit.

Alarm. An alarm can be forwarded by SMS or e-mail to a maximum of eight recipients, divided into two groups of four recipients.

An alarm can be set to release in the following cases:

- | | |
|--------------------|---|
| 1. Level alarm. | Low level in the chemical containers. |
| 2. Water pressure. | The manifold pressure is too high. |
| 3. Trigger error. | A defect in the signal from a Trigger Box. (Trigger Boxes installed in the washing machines). |
| 4. Keyboard error. | A defect in a front panel membrane. (3-button membrane keyboard is installed on the front of the washing machines). |

The desired options are selected in group 1 and group 2, respectively, and you must enter the SMS number and the e-mail addresses of the recipients.

SI9100 System, version: 3.6.1, Miele Ethernet

File System Machine 1... Machine 2... Machine 3... Machine 4... Machine 5... Machine 6... Machine 7... Machine 8... Machine 9... Machine 10... Help

Format: 1.1

System setup

Main setup **Alarm** Test Ethernet trigger

Group 1 (send email or SMS)

☒ Level alarm ☒ Pressure alarm ☐ Trigger error ☐ Keyboard error

Recipient (email or mobile number) Recipient (email or mobile number)

00445 1122 3344 0045 4433 2211

Group 2 (send email or SMS)

☐ Level alarm ☐ Pressure alarm ☒ Trigger error ☒ Keyboard error

Recipient (email or mobile number) Recipient (email or mobile number)

technician@serviceteam.com

Active high (Normally Closed sensor contact)

☒ #1 ☒ #2 ☒ #3 ☐ #4 ☐ #5 ☐ #6 ☐ #7

Alarm log (saved in EEPROM)

☒ Level alarm ☒ Pressure alarm ☒ Trigger error ☒ Keyboard error

Active High (normally closed sensor contact).

There are seven inputs for low-level detection in the chemical containers.

For each input, it is possible to choose whether Low Level Sensor is Active High (selection = normally closed contact when the level is correct) or Active Low (no selection = normally open contact when the level is correct).

Recipient (email or mobile number) Recipient (email or mobile number)

technician@serviceteam.com

Active high (Normally Closed sensor contact)

☒ #1 ☒ #2 ☒ #3 ☐ #4 ☐ #5 ☐ #6 ☐ #7

Alarm log (saved in EEPROM)

☒ Level alarm ☒ Pressure alarm ☒ Trigger error ☒ Keyboard error

Alarm log (saved in EEPROM).

The selected circumstances that trigger an SMS or an e-mail will be saved automatically in an *Alarm Log* in the SiCD2 unit. In addition, you may choose to save other alarms in the SiCD2 unit *Alarm Log*, which, subsequently, can be communicated to your computer.

In the below, the following has been selected:

A *Level Alarm* is forwarded to Group 1 consisting of: e-mail: detergent@test.com and SMS message to 0011 42233 4455. (Thus, two out of four possible recipients are used).

A *Pressure Alarm* is forwarded to Group 2 consisting of: e-mail pressure@test.com and SMS message to 0022 3344 5566. (Again, only two out of four possible recipients are used).

In this way, the *Level Alarm* and the *Pressure Alarm* are saved automatically in the *Alarm Log*, and these may be communicated to a computer by means of a cable or internet connection.

The first four digits in the mobile number are your country code, e.g. 0045.

The screenshot shows a 'System setup' window with several tabs: 'Main setup', 'Alarm', 'Test', and 'Ethernet trigger'. The 'Alarm' tab is active. It contains two sections for alarm groups. Group 1, 'Group 1 (send email or SMS)', has 'Level alarm' checked and 'Pressure alarm', 'Trigger error', and 'Keyboard error' unchecked. Its recipients are 'detergent@test.com' and '0011 42233 4455'. Group 2, 'Group 2 (send email or SMS)', has 'Pressure alarm' checked and 'Level alarm', 'Trigger error', 'Keyboard error', and 'Dispense error' unchecked. Its recipients are 'pressure@test.com' and '0022 3344 5566'. Below these is an 'Active high (Normally Closed sensor contact)' section with checkboxes for #1 through #7, all of which are unchecked. At the bottom is the 'Alarm log (saved in EEPROM)' section, where 'Level alarm', 'Pressure alarm', 'Trigger error', and 'Keyboard error' are all checked. Red boxes highlight the checked 'Level alarm' and 'Pressure alarm' options, and the checked 'Trigger error' and 'Keyboard error' options.

In addition, it has been selected to save any *Trigger Error* as well as *Keyboard Error* in the SiCD2 unit's EEPROM *Alarm Log*.

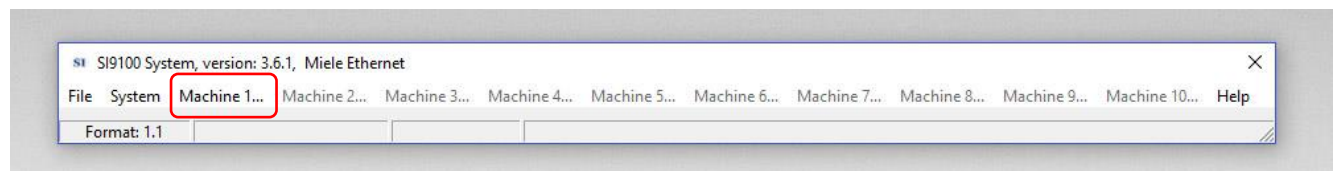
Alarm reset.

When an alarm condition occurs, a SMS and/or an e-mail will be sent. At the same time, the SiCD2 circuit board will activate "Alarm Out" (24VDC). This can be used for an audio signal or a signal lamp.

"Alarm Out" can be reset via the "Alarm Reset" input (page 28).

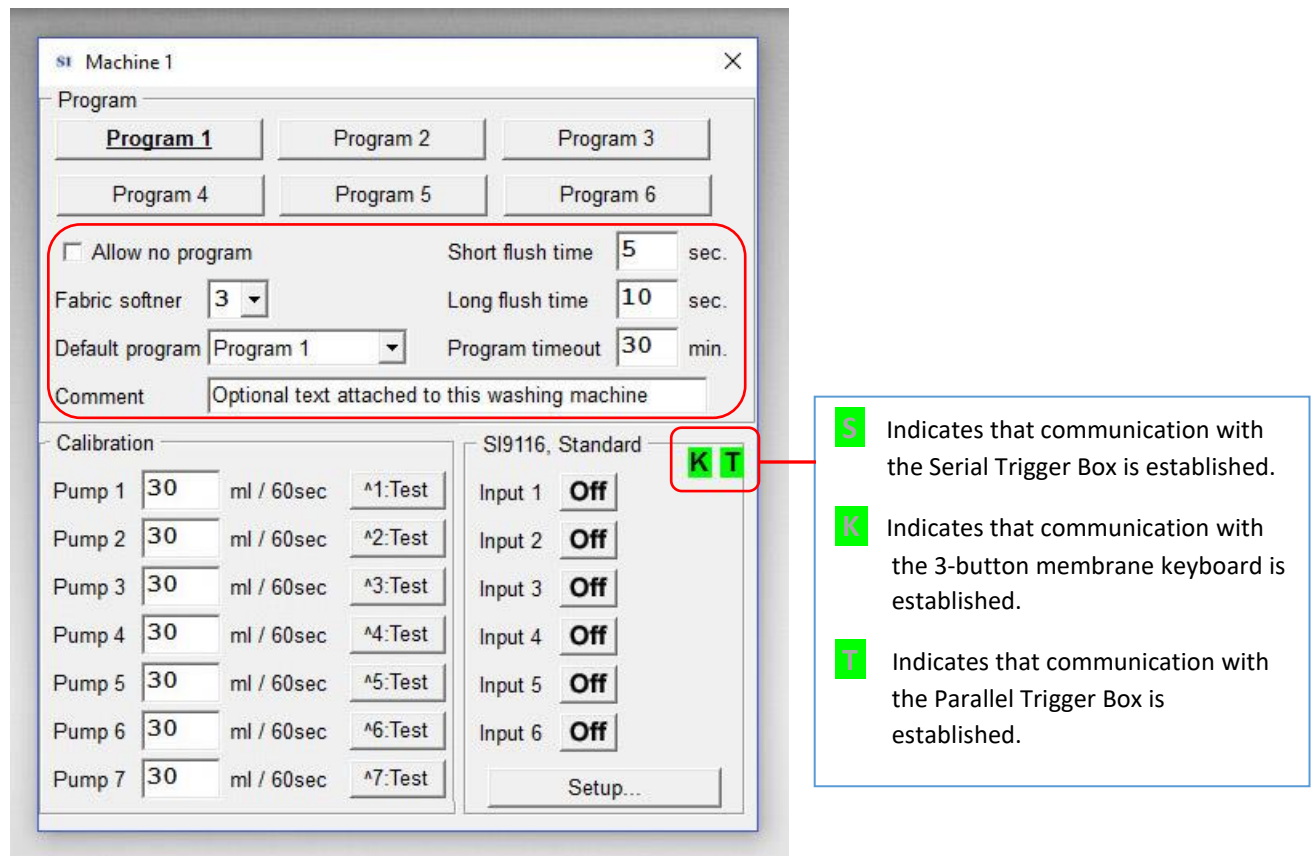
Please note: When Alarm Reset is activated, only the Alarm output is reset. The reason for the alarm must of course be clarified and rectified. If this has not happened within 24 hours, the Alarm Out will automatically re-enable.

Configuration of the individual dosing programs per washing machine.



It is possible to connect up to 10 washing machines. You can configure six dosing programs for each washing machine.

When clicking on Machine 1, a new window appears:



Allow no Program: A check mark in *Allow no program* allows for a program without dosing. (The membrane keyboard is not lit). It is thus possible to apply six dosing programs plus a program without dosing.

Fabric Softener: Determines the pump (1-7) that dispenses the softener.

Default Program: Defines the program (1-6 or "-") to which the machine resets after washing.

Comment: Text string for optional text.

Short Flush Time: If a brief water rinse in between the individual doses is desired, input a duration for the opening of the water valve. This function is particularly useful, if certain products are not to be mixed in the manifold.

Long Flush Time: Like Short Flush, but longer duration. Input a duration for which the water inlet valve is active after dispensing. (Be aware that this *Long Flush Time* should be of a length that allows the dispensed chemical to be carried all the way into the washing machine).

Program Timeout: Enter the number of minutes to await for trigger signals from the machine. If no trigger signal is received within the set time, the program resets automatically.

Pump Calibration.

The screenshot shows the 'Machine 1' configuration window. The 'Program' section includes buttons for Program 1 through Program 6, a checkbox for 'Allow no program', and settings for 'Fabric softner' (3), 'Short flush time' (5 sec), 'Long flush time' (10 sec), 'Default program' (Program 1), and 'Program timeout' (30 min). A 'Comment' field contains 'Optional text attached to this washing machine'. The 'Calibration' section lists seven pumps, each with a volume of 30 ml / 60sec and a test button (^1:Test through ^7:Test). The 'SI9116, Standard' section has six input buttons, all set to 'Off'. A 'Setup...' button is at the bottom right.

When clicking on *Test*, a new window appears.

The screenshot shows the 'Pump 1 calibration' dialog box. It contains fields for 'Calibration time [sec.]' (60), 'Current calibration volume [ml]' (30), and 'New calibration volume [ml]'. There are 'OK' and 'Cancel' buttons. Below the dialog box, the 'Machine 1' configuration window is visible, showing the 'Calibration' section with the '^1:Test' button highlighted by a red box.

While the dosing hose is filled with the relevant chemical (all the way to the washing machine), place a measuring glass at the extremity of the dosing hose, at the washing machine.

In the field *Calibration time (sec.)*, enter the number of seconds, the dosing pump is to be activated, (default set to 60 sec.) and activate *F2: Start test*. The pump dispenses for entered period of time. At the end of the dosing, read the amount of liquid in the measuring glass. Enter this value in the field *New calibration volume (ml)*. Terminate with *OK*. Then calibrate the next pump in line.

(Alternatively, you can fill a measuring glass with 500 ml. of a chemical, for example, and lower the relevant suction hose – from the chemical dispenser – into the measuring glass. The value to enter corresponds to the quantity that has been extracted from the glass).

Selection of Trigger Box/machine type:

Clicking *Setup* opens a new window with an option to select the washing machine type.

The top screenshot shows the 'Machine 1' configuration window. It has a title bar 'Machine 1' and a close button. The main area is divided into several sections. The first section is 'Program, Keyboard locked' with buttons for 'Program 1' through 'Program 6'. Below this is a checkbox 'Allow no program' and a 'Short flush time' of 5 sec. There is a 'Fabric softener' dropdown set to 3, a 'Long flush time' of 10 sec., and a 'Default program' dropdown set to 'Program 1'. A 'Program timeout' of 30 min. is also shown. A 'Comment' field is at the bottom. The second section is 'Calibration' with a table for 7 pumps. Each pump has a 'Calibration time (sec.)' of 30, a unit 'ml / 60sec', and a test label '^1:Test' through '^7:Test'. To the right of this table is a 'Parallel Trigger box' section with 'Input 1' through 'Input 6', each with an 'Off' button. A red box highlights the 'Setup...' button at the bottom right of the 'Calibration' section.

The bottom screenshot shows the 'Trigger, Machine 1' window. It has a title bar 'Trigger, Machine 1' and a close button. The 'Type' dropdown is set to 'Parallel Trigger box', and a dropdown menu is open showing 'Parallel Trigger box', 'Miele Logic', 'Electrolux Compass Pro', and 'Ethernet, Miele Logic'. The 'Version' is 'SI9116, version: 3.1'. There is a 'Comment' field. Below this is a 'Keyboard' section with a 'Keyboard lock' dropdown and a 'Delay' of 0 sec. There is also a 'Machine reset' dropdown and a 'Delay' of 0 sec. At the bottom are 'Close' and 'Save' buttons.

The selection of *Parallel Trigger box* requires a Parallel Trigger Box to be placed in each washing machine. Also there has to be placed a 3-button adhesive membrane keyboard on the front of each washing machine, to choose a certain dosing program (see page 4). The Parallel Trigger Box can be used for any washing machine that can provide trigger signals 12-240V AC or DC.

The selection of *MieleLogic* requires a Serial Trigger box in each washing machine.
 Membrane Keyboard is not required.
 (Connection between the MieleLogic and the Serial Trigger Box via SI no. 985017154 cable).

Low-level dose adjust and High-level dose adjust are default set to minus 25% and plus 25%.
 These values can be changed in the range 1-100%

It is crucial to enter the max. weight of the MieleLogic washing machine, as the dose calculation relate to the max. machine weight. (Thus, if the max. load is e.g. 7.0 kg. and the MieleLogic washing machine send a signal related to an actual amount of clothes e.g. 4.5kg. load, the SiCD2 will calculate the dose amount to 64 %).

As for the *Program selection*, *Fabric softener selection* and *Level selection* a short text can be entered and loaded to the MieleLogic washing machine display.

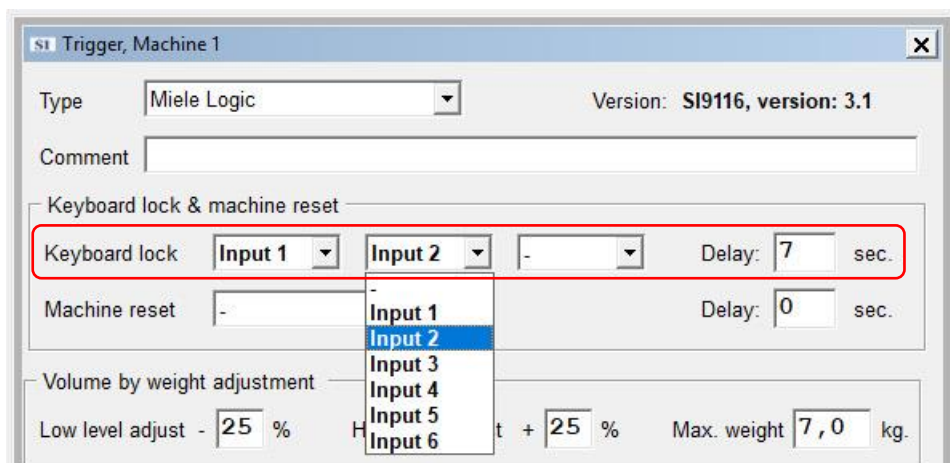
Please note: It is necessary to have a Miele operator to set up the Miele washing machine to receive these data.

Finally, a softener 2 can be chosen. This will automatically be allocated to pump no. 7.

Keyboard lock.

When initiating a new wash, it is possible to "Lock the Keyboard" on demand. This way, it is not possible to use the 3-button membrane keyboard during the duration of a dosing program. Once the wash is completed, and the dosing program has been reset, the membrane keyboard is released.

In addition, it is possible to lock the keyboard prior to a certain wash trigger input. In the example below, the Keyboard lock feature is ON when either Input 1 or Input 2 has been present for 7 seconds.



If for some reason no keyboard lock function is desired, in already entered programs, the Keyboard Lock functionality can be overruled on the SiCD2 circuit board by switching the DIP switch 4 to ON.

This is a time saving feature, as any Keyboard Lock instruction *in all programs* will be overruled by this simple setting.

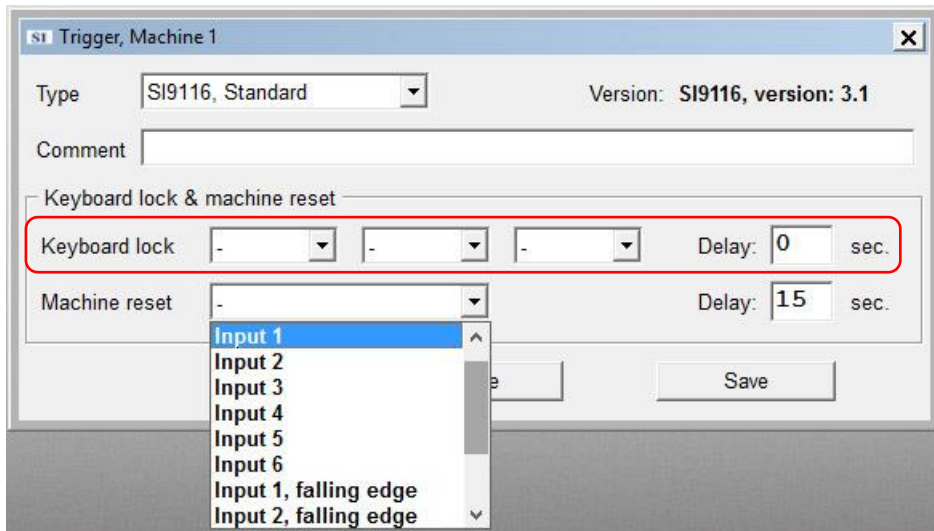


Important Keyboard Lock Information:

The Keyboard Lock function MUST be selected - either as a program instruction or as input choice during Machine Setup - if data collection is required on the number of washings completed and consumption. (This data can be retrieved under System - Lock data). This also applies when connecting to washing machines where keyboards are not used.

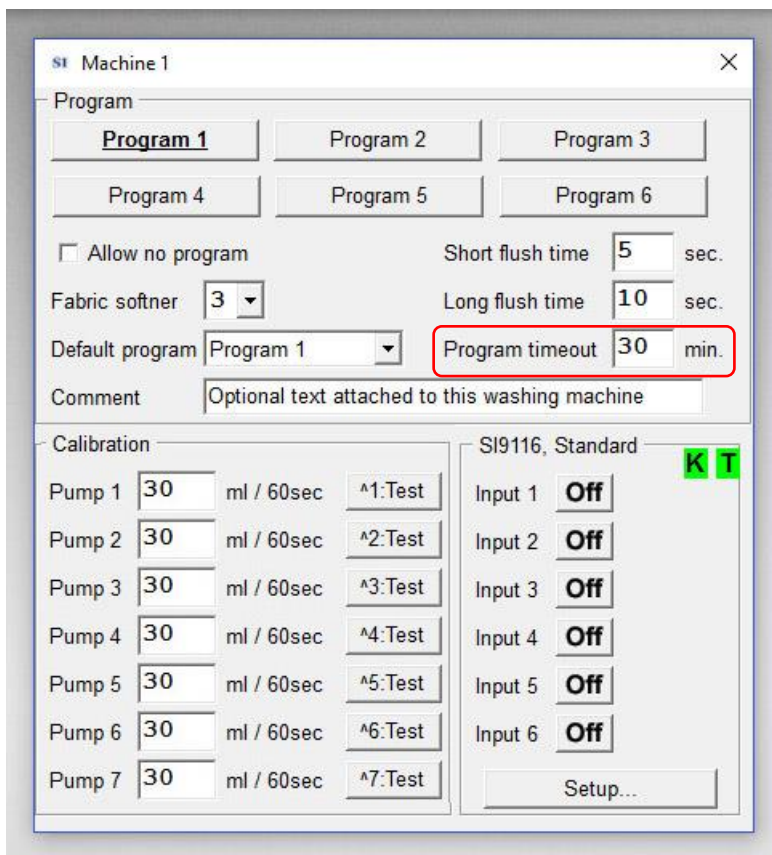
Resetting a program cycle.

The individual dosing programs will reset automatically, when the last instruction line has been performed. (See page 19 Instruction lines). Generally, a dosing program can be reset by means of a “Machine reset” input. You can choose between input 1-6 as well as input 1-6 *falling edge*. The reset signal must be present during the entered time (seconds) in the *Delay* field.



A program may also be reset automatically, if it does not receive input from the washing machine during a given period of time.

You can enter the desired period of time in minutes in the field *Program timeout*.



The selection of *Electrolux Compass Pro*: Serial Trigger Box required. (Membrane keyboard not required).
(Connection from the Electrolux Compass Pro machine to the Serial Trigger Box via SI no. 985017152 cable).

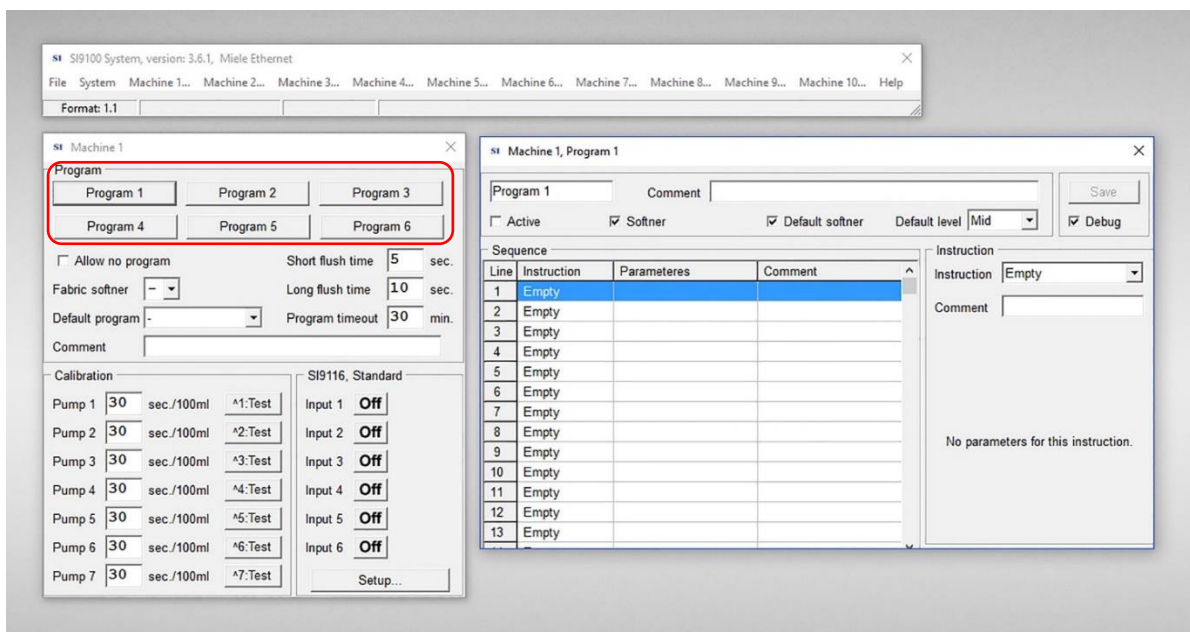
The Electrolux Compass Pro laundry machine can provide 15 washing programs. These has to be addressed into the maximum six dosing program available in the SiCD2. Multiple washing programs can be directed to the same dosing program. Such as for example washing program no. 1, 5 and 9 may all use dosing program no. 2.

The selection of *Ethernet, Miele Logic* can only be used where MieleLogic washing machines are connected to the laundry Ethernet. This option does not require trigger boxes or membrane keyboards.

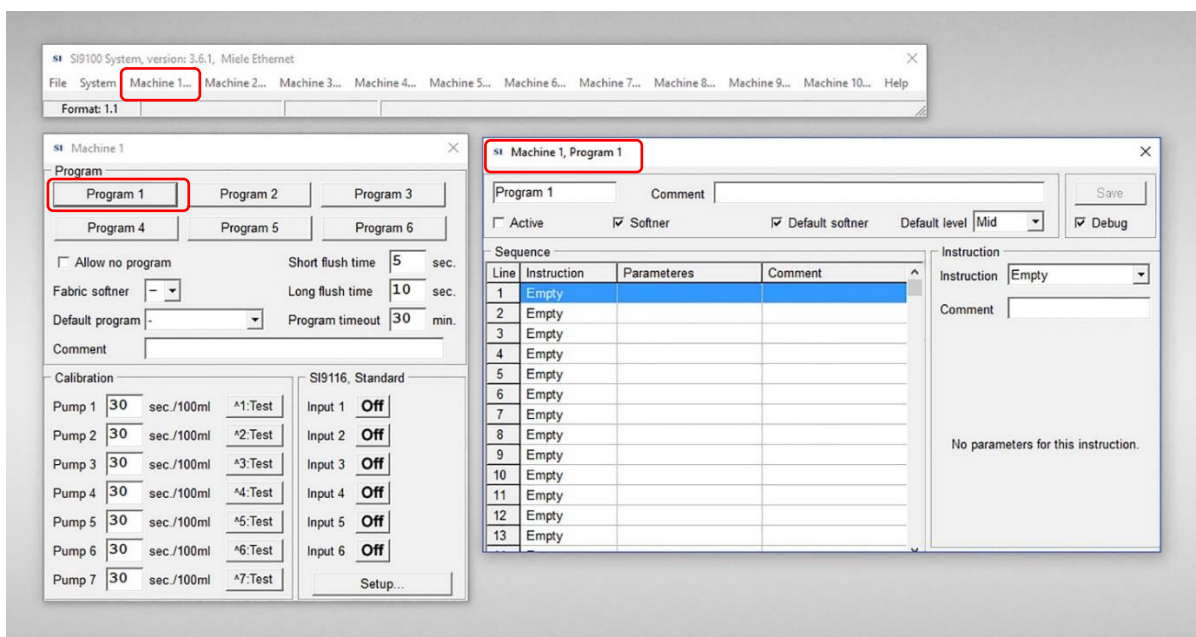
It is important to enter the Serial number (refer to the number of the current laundry) and the Machine ID of the individual washing machines. If Serial Number and Machine IDs are not available in the laundry, these can be obtained from Miele.

Loading a dosing program

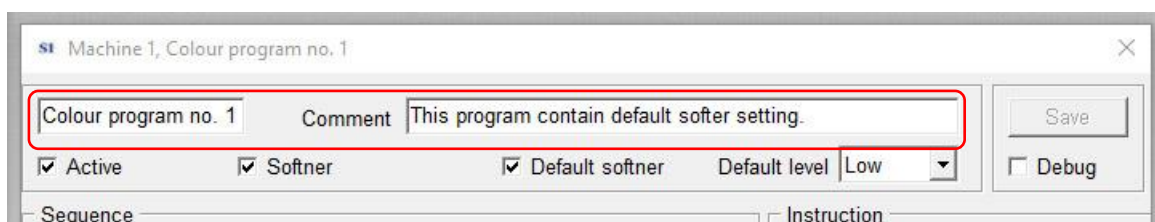
Clicking Program 1-6 opens a new tab for each program.

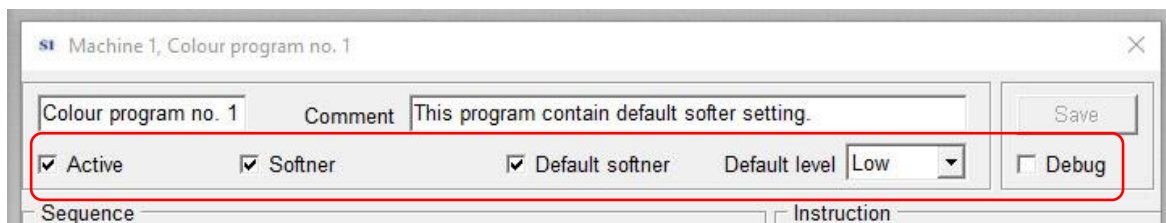


In the shown example, washing machine no. 1 and dosing program no. 1 have been selected.



You may enter an optional program name and program description.





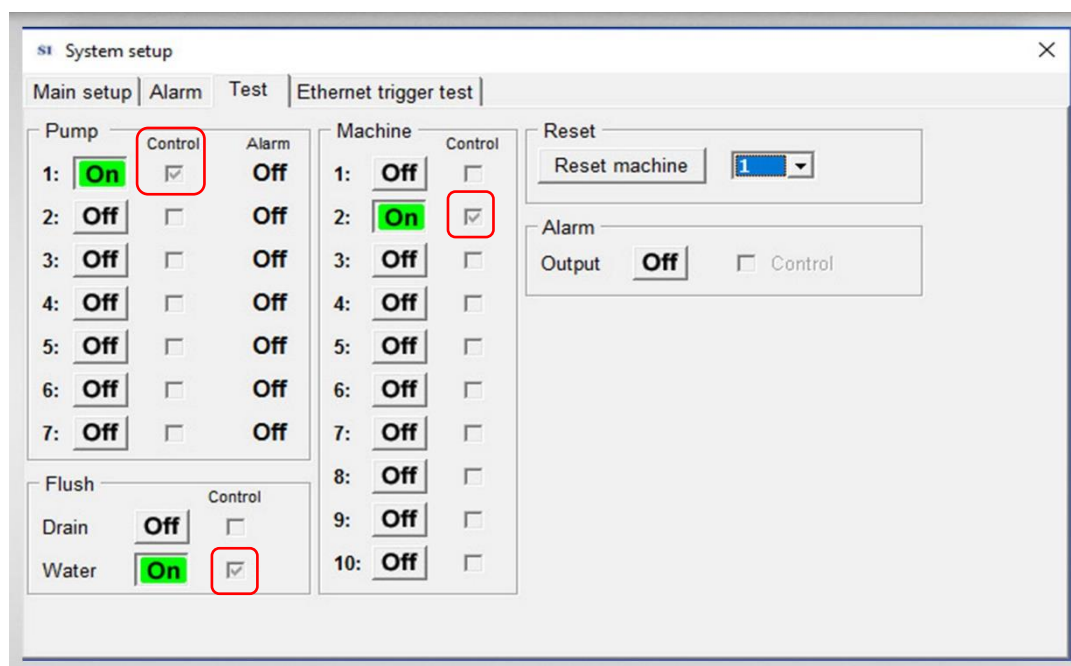
- Active:** Under normal circumstances, *Active* must always be selected. Only remove the *Active* check mark, if you want to deactivate a running program.
- Softener:** A check mark in *Softener* means that the customer can select/deselect softener on the membrane keyboard.
- Default Softener:** A check mark in *Default softener* means that the softener is added automatically. This way, the customer has to deselect the softener via the membrane keyboard, if he or she does not want softener.
- Default level:** Select the default dosing level: Low, Med or High. (The customer can choose between a low, medium or high dosing on the membrane keyboard).
- Debug:** Typically applied to control the dosing program. With Debug selected, the Sequence lines in the dosing program will be shown in real time.

Output test. An output test can be made by choosing the *Test* tab and click on the desired Pump, Machine, Drain, Water and/or Alarm button. Any of these can be set ON and OFF.

Please note: Pumps and solenoid valves can only be controlled ON/OFF when communication to the SiCD2 has been established via the program cable.

IMPORTANT NOTE: When any of the output has been set ON, a Control mark is placed automatically, to indicate that this output is now manually controlled. When the manually output control is done, make sure to remove the Control mark by clicking on the actual mark. Otherwise, the dosing program will not run correctly.

Also, from this tab you can reset a running dosing program by choosing machine 1-10 (or all) and click on the *Reset machine* button.



Instruction lines.

Sequence: Line no. 1: Clicking *Instruction* opens a drop down menu with 12 possible instructions:

Empty	Instruction line with no content.
Reset:	Reset the dosing program and return to line no. 1.
Input wait:	Await a positive input signal (trigger signal).
Input off wait:	Await a negative input signal (trigger signal).
Input event:	If a certain input occur, go to a specified instruction line, no matter how far the program execution has come.
Input jump:	If a certain input is high, when the program reach this instruction line, go to a specified instruction line.
Jump:	Go to specified instruction line.
Wait:	Wait for a given period of time before proceeding to the next instruction.
Pump:	Activate a dosing pump.
Flush:	Open the water inlet solenoid valve.
Keyboard lock:	Lock the membrane keyboard. (See page 14).
Pump, high volume:	Activate a dosing pump to dose more than 255mL. (When using standard BrightLogic low flow pump unit).

There are 24 program lines available per dosing program.

Machine 1, Colour program no.1

Colour program no.1 Comment: This program contain default softner setting. Save

☒ Active ☒ Softner ☒ Default softner Default level: Low ☐ Debug

Line	Instruction	Parameteres	Comment
1	Empty		
2	Empty		
3	Empty		
4	Empty		
5	Empty		
6	Empty		
7	Empty		
8	Empty		
9	Empty		
10	Empty		
11	Empty		
12	Empty		
13	Empty		
14	Empty		
15	Empty		
16	Empty		
17	Empty		
18	Empty		
19	Empty		
20	Empty		
21	Empty		
22	Empty		
23	Empty		
24	Empty		

Instruction: Empty

Comment: Reset, Input wait, Input off wait, Input event, Input jump, Jump, Wait, Pump, Flush, Keyboard lock, Pump, high volume

No param

The following is an example of a dosing program.

Activate the relevant instruction line (the blue bar) and select the desired instruction.

Machine 1, Colour program no. 1

Colour program no. 1 Comment: This program contain default softer setting.

☒ Active ☒ Softner ☒ Default softner Default level: Low ☐ Debug

Line	Instruction	Parameters	Comment
1	Empty		
2	Empty		
3	Empty		
4	Empty		
5	Empty		
6	Empty		
7	Empty		
8	Empty		
9	Empty		
10	Empty		
11	Empty		
12	Empty		

Instruction: Empty

Comment: Empty

Input wait (selected)

Input off wait

Input event

Input jump

Jump

Wait

Pump

Flush

No param

Keyboard lock

Clicking *Input wait* reveals new options, where you must specify which input to await as well as which one instruction line to execute, when the specified input is activated.

Machine 1, Colour program no. 1

Colour program no. 1 Comment: This program contain default softer setting.

☒ Active ☒ Softner ☒ Default softner Default level: Low ☐ Debug

Line	Instruction	Parameters	Comment
1	Input wait	F5, I1->Nxt, I2->L4	Await Prewash input
2	Empty		
3	Empty		
4	Empty		
5	Empty		
6	Empty		
7	Empty		
8	Empty		
9	Empty		
10	Empty		
11	Empty		
12	Empty		
13	Empty		
14	Empty		

Instruction: Input wait

Comment: Await Prewash input

Filter: 5 0.250 sec.

Input: 1 -> Next line

Input: 2 -> Line 4

Input: - -> Line

Input: - -> Line

Filter: You can enter a period of time, during which the input signal must be present, before being accepted as valid. This field shows the value entered under *System – Main Setup – PC Settings – Default input filter time* (page 7). The value for the *Default input filter time* could be exceeded within a range of 0-250 seconds.

Read the following from instruction line no. 1:

Instruction is an *Input wait*. (Waiting for an input).

F5 = The input signal must be present for at least 5 seconds.

I1>Nxt = When Input 1 is accepted, continue to the next instruction line.

I2>L4 = When Input 2 is accepted, continue to instruction line no. 4.

Activate the following instruction line for the next command. (Line no. 2 = blue bar).

Machine 1, Colour program no. 1

Colour program no. 1 Comment: This program contain default softer setting. Save

☒ Active ☒ Softner ☒ Default softner Default level: Low ☐ Debug

Line	Instruction	Parameters	Comment
1	Input wait	F5, I1->Nxt, I2->L4	Awaite Pre wash input
2	Pump	P1, FS, V=50/100/150	Pump 1 = Detergent
3	Empty		
4	Empty		
5	Empty		
6	Empty		
7	Empty		
8	Empty		
9	Empty		
10	Empty		
11	Empty		
12	Empty		
13	Empty		
14	Empty		

Instruction: Pump

Comment: Pump 1 = Detergent

Pump: 1 1..7

Delay: 0.250 sec.

Volume, low: 50 ml

Volume, mid: 100 ml

Volume, high: 150 ml

Flush: Short

☐ Wait until disp: No, Short, Long

If you select a *Pump* instruction, you can enter a *Delay* 0 – 250 seconds before the pump is activated. The time delay begins, when the input signal has been accepted, and runs for the period of time entered in the field *Delay*.

Read the following from instruction line 2:

The instruction is a *Pump*.

P1 = Pump no. 1 (doses detergent).

FS = Flush Short = Short water inlet to the manifold (Interim rinse).

V=50/100/150 = Low dose: 50ml, Medium dose: 100ml, High dose: 150ml.

(Subsequently, the selection of Low, Medium or High dose is carried out via the membrane keyboard).

Comment = Optional text.

The *Wait until dispense done* and *Wait until flush done* Instructions should be used only at the very end of the dosing program, typical before a *Wait* instruction. Typically in conjunction with a *Wait* instruction prior to a *Réset* instruction. Example: If a delay of 2 minutes is required after the last pump has dosed, select *Wait until dispense done* in the *Pump* instruction line. Subsequent instructions must be a *Wait*, and enter here the desired delay time 120 sec.

9	Empty		
10	Empty		
11	Empty		
12	Empty		
13	Empty		
14	Empty		

Volume, high: 150 ml

Flush: Short

☒ Wait until dispense done

Thus, the program cycle so far is set to await an input (a trigger signal) from prewash. Once this signal has been received, the program continues to line no. 2 with an instruction to activate pump no. 1. Depending on the selection, the customer has made on the membrane keyboard (low – medium – high), pump no. 1 dispenses either 50ml – 100ml – 150ml.

If the washing machine does not perform a prewash, but proceeds directly to the main wash, instruction line no. 1 contains a command that makes the program continue to instruction line 4. (I2>L4).

Now we are moving on with the program configuration with: Await trigger signal no. 2 (Main wash) in instruction line 3, which must be present for at least 5 seconds (F5), and once the signal has been accepted, move forward to the next line. (I2>Nxt).

Machine 1, Colour program no. 1

Colour program no. 1 Comment: This program contain default softer setting. Save

☒ Active ☒ Softner ☒ Default softner Default level: Low ☐ Debug

Line	Instruction	Parameteres	Comment
1	Input wait	F5, I1->Nxt, I2->L4	Await Prewash input
2	Pump	P1, FS, V=50/100/150	Pump 1 = Detergent
3	Input wait	F5, I2->Nxt	Await Mainwash input
4	Empty		
5	Empty		
6	Empty		
7	Empty		
8	Empty		
9	Empty		
10	Empty		
11	Empty		

Instruction: Input wait
Comment: Await Mainwash input

Filter: 5 0..250 sec.
Input: 2 -> Next line
Input: - -> Line:
Input: - -> Line:
Input: - -> Line:

When the Main wash input (trigger signal) has been accepted, the program moves on to instruction line four. This example of a dosing program is for a main wash with two chemicals: Detergent and Bleach.

Instruction line 4-7 reads that Pump no. 1 (detergent) will dose followed by a short flush (FS). After this, a *flush to drain* is performed to clean the manifold entirely of detergent before the next chemical is used. Pump no. 2 (bleach) is then activated followed by a long flush (FL) in order to flush the bleach all the way to the washing machine. (The long flush must therefore last at least the period of time it takes to carry the bleach through the hose from the manifold to the washing machine). Finally, a *Flush to drain* is chosen again in line 7 with flush time set to 4 seconds to clean the manifold. The *Flush to drain* instructions are chosen in this example to avoid mixing of the detergent and the bleach in the manifold.

At Instruction, line eight the system is set to await the next input (I3), which here is a Softener input. Again, the input has to be active for at least 5 seconds (F5) before it is accepted and the system moves forward to the next line (I3->Nxt).

Machine 1, Colour program no. 1

Colour program no. 1 Comment: This program contain default softer setting. Save

☒ Active ☒ Softner ☒ Default softner Default level: Low ☐ Debug

Line	Instruction	Parameteres	Comment
1	Input wait	F5, I1->Nxt, I2->L4	Await Prewash input
2	Pump	P1, FS, V=50/100/150	Pump 1 = Detergent
3	Input wait	F5, I2->Nxt	Await Mainwash input
4	Pump	P1, FS, V=50/100/150	Pump 1 = Detergent
5	Flush	T=4, To drain	Flush to drain
6	Pump	P2, FL, V=10/15/20	Pump 2 = Bleach
7	Flush	T=4, To drain	Flush to drain
8	Input wait	F5, I3->Nxt	Await Softener input
9	Empty		
10	Empty		
11	Empty		
12	Empty		
13	Empty		
14	Empty		

Instruction: Pump
Comment: Pump 2 = Bleach

Pump: 2 1..7
Delay: 0 0..250 sec.
Volume, low: 10 ml
Volume, mid: 15 ml
Volume, high: 20 ml
Flush: Long
☒ Wait until dispense done.

The cycle ends with a dosing of softener from pump no. 4 (see instruction line 9). Once the softener has been dispensed and after the *Flush Long*, there is set a delay of 120 seconds before the system resets to line 1. This is to prevent the initiation of a new dosing for example if the washing machine performs an extra rinse with water from several solenoid valves. Program 1 terminates with a *Reset* instruction and is thus complete.

Machine 1, Colour program no. 1

Colour program no. 1 Comment: This program contain default softer setting.

☒ Active ☒ Softner ☒ Default softner Default level: Low ☐ Debug

Line	Instruction	Parameteres	Comment
1	Input wait	F5, I1->Nxt, I2->L4	Await Prewash input
2	Pump	P1, FS, V=50/100/150	Pump 1 = Detergent
3	Input wait	F5, I2->Nxt	Await Mainwash input
4	Pump	P1, FS, V=50/100/150	Pump 1 = Detergent
5	Flush	T=4, To drain	Flush to drain
6	Pump	P2, FL, V=10/15/20	Pump 2 = Bleach
7	Flush	T=4, To drain	Flush to drain
8	Input wait	F5, I3->Nxt	Await Softener input
9	Pump	P4, FL, V=20/25/30	Pump 4 = Softener
10	Wait	Wait: 120 sec	Wait 120 sec. to reset
11	Reset		Reset to start (Line no.1)
12	Empty		
13	Empty		
14	Empty		

Instruction: Flush
 Comment: Flush to drain
 Delay: 0 0..250 sec.
 Flush time: 4 0..250 sec.
☒ Drain flush
☒ Wait until flush done.

HINT: When configuring the dosing program, you can insert instruction lines with ctrl + Insert.

Copy Machine. A dosing program can be copied from one machine to another via the tab *System – Copy Machine*. Select the washing machine that you wish to copy from in the field *Copy from*, as well as the washing machine that you wish to copy to in the field *Copy to* and click *Copy*.

SI SI9100 System, version: 3.6.1, Miele Ethernet

File **System** Machine 1... Machine 2... Machine 3... Machine 4... Machine 5... Machine 6... Machine 7... Machine 8... Machine 9... Machine 10... Help

- Read/write system data...
- System setup...
- Communication...
- Log data...
- Alarm log...
- Copy Machine...**
- Clear Machine >

Copy Machine

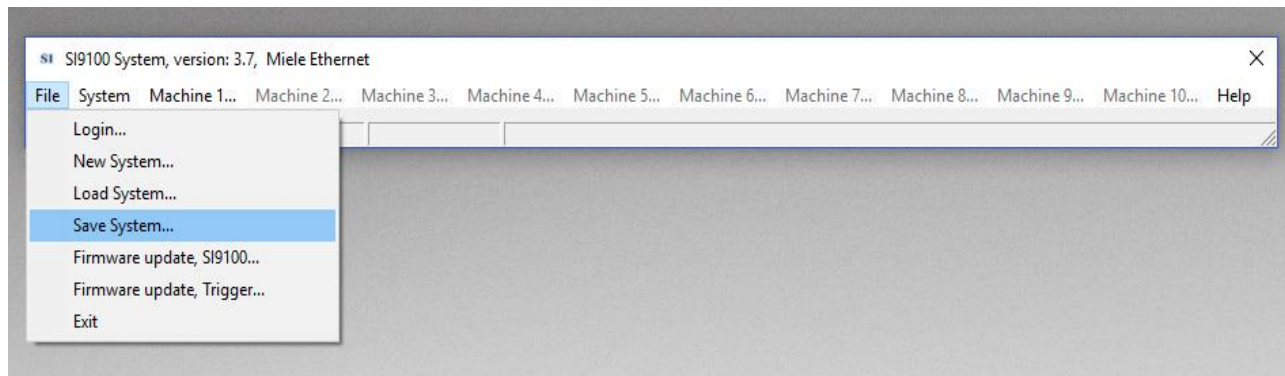
Copy from: Machine 1
 Copy to: Machine 2

Save Program.

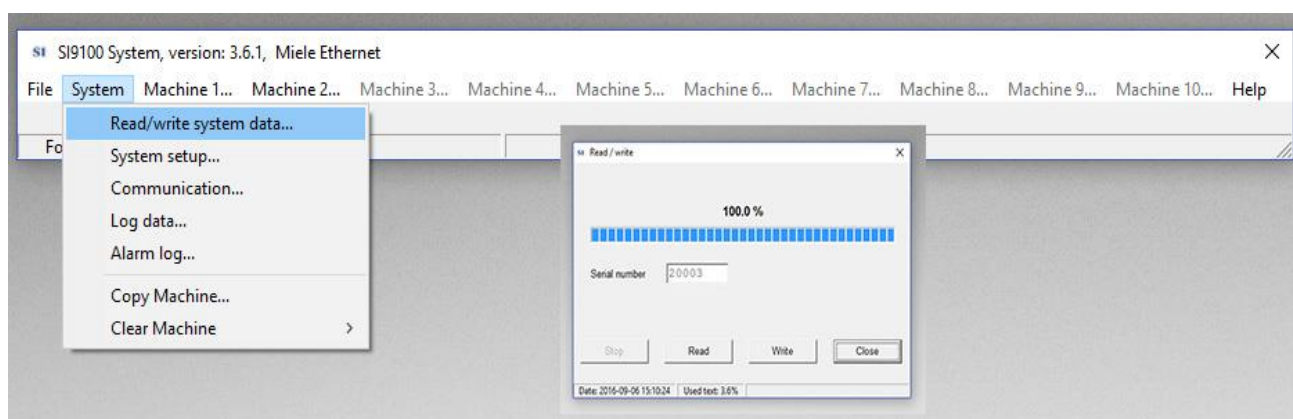
When all the dosing programs are encoded, they can partly be stored in the PC and partly transferred to the SiCD2 unit.

Saving the dosing program on pc.

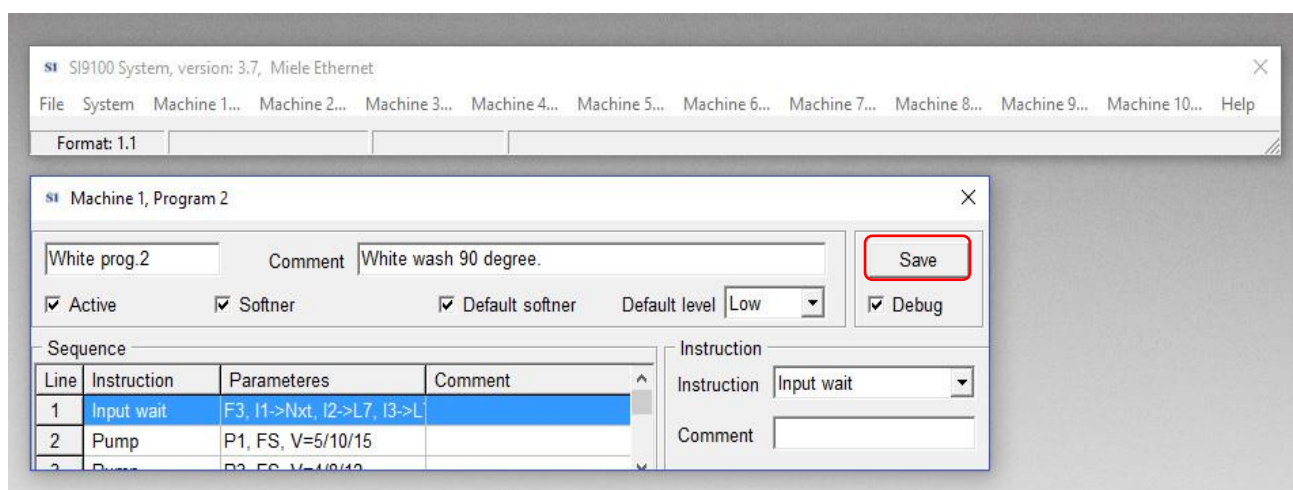
Under *File* and *Save System*, the dosing program can be stored as a file on your computer. This file can be downloaded to the SiCD2 device at any time via the *Load System* command.



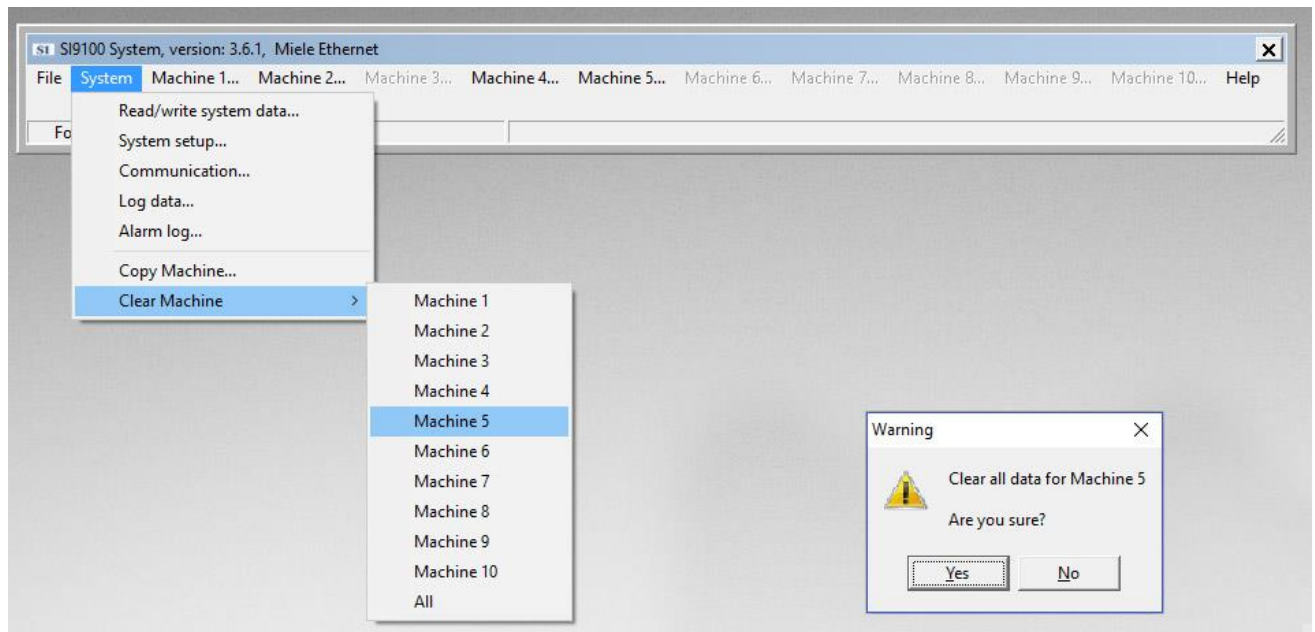
A dosing program stored on your PC can be downloaded via *Load System*. The program can then be transferred to the SiCD2 device with the *Read/write system data* command.



NOTE: The function *Save* does not save the dosing program in the SiCD2 unit or on the PC. *Save* stores only "screen update" in connection with setting up or changes in the dosing program.

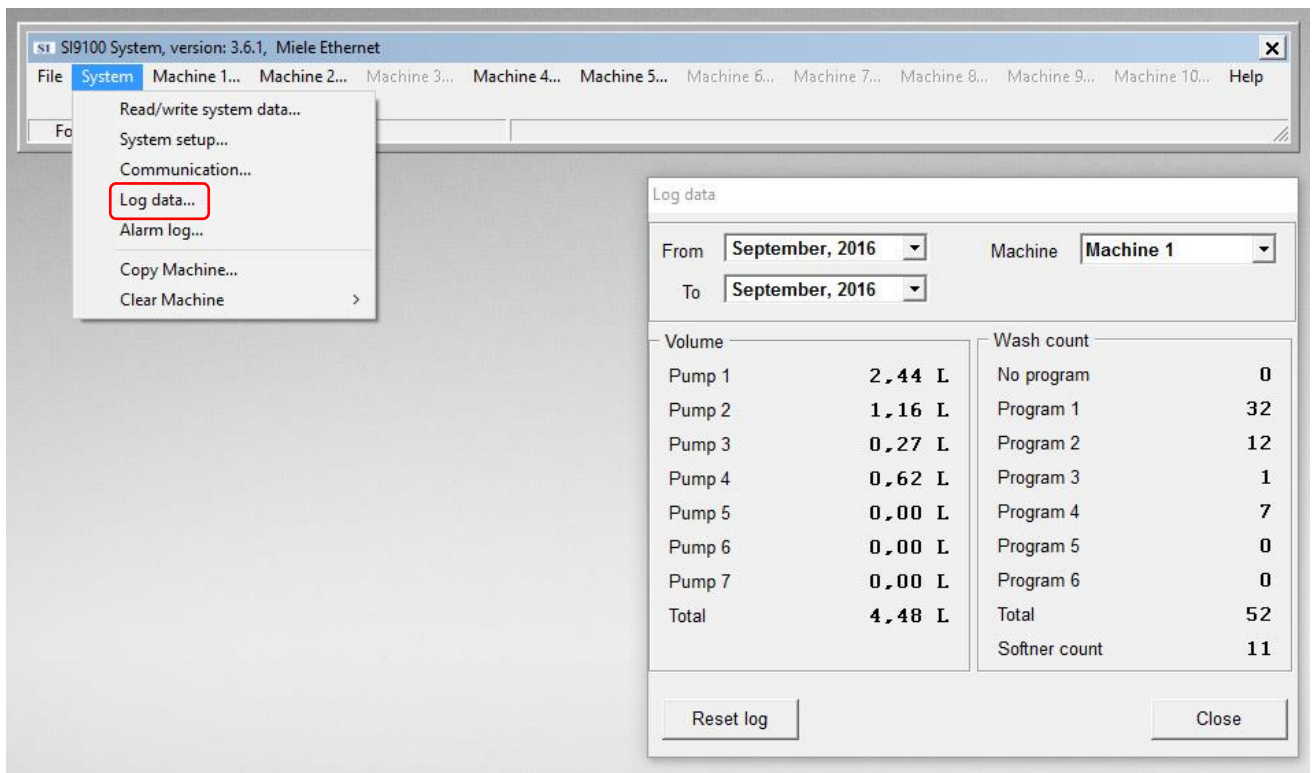


Clear Machine. You can delete an entire dosing program from a washing machine via the tab *System – Clear Machine*.

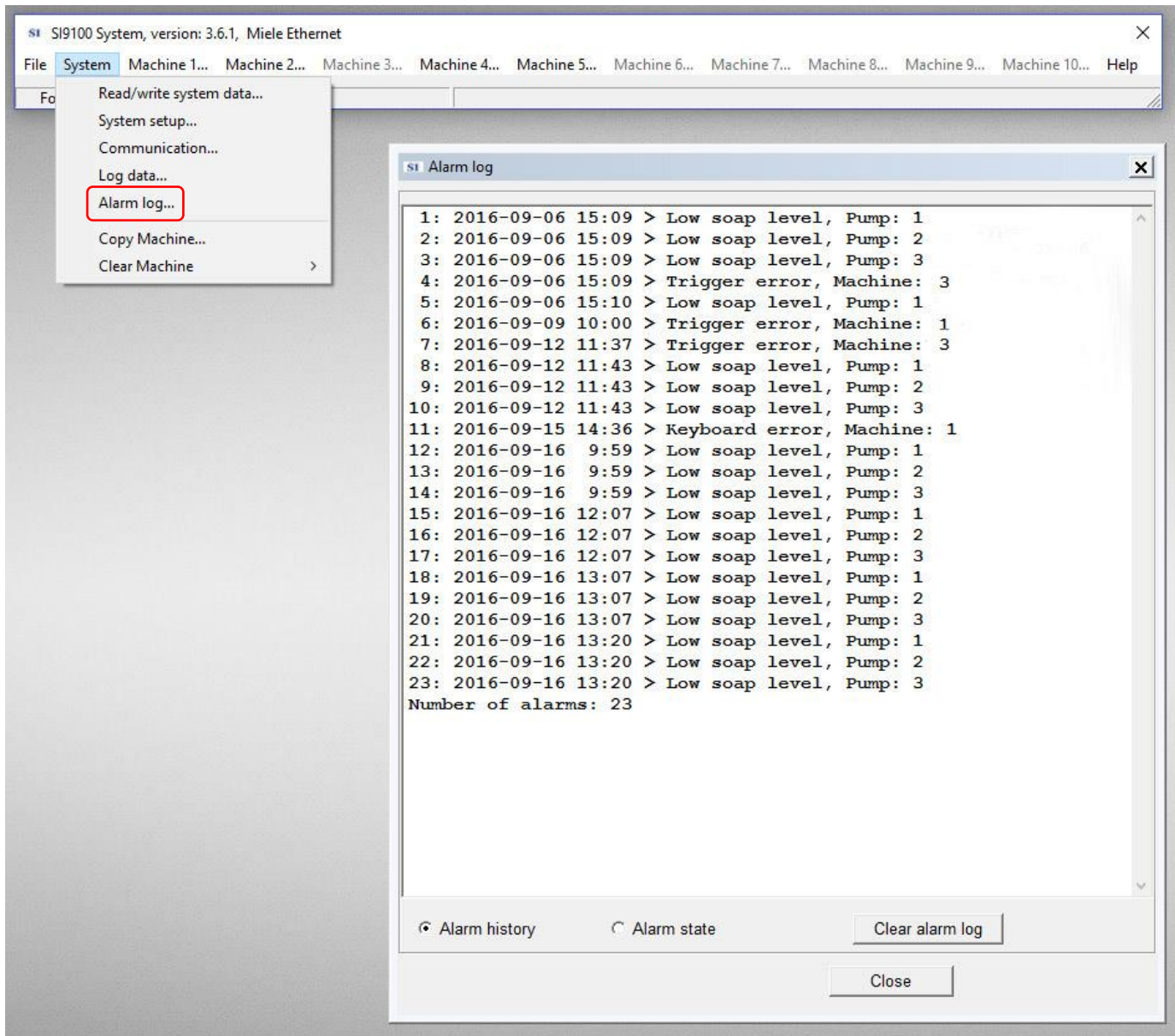


Log data. A data log can be downloaded via the tab *System – Log data...* Here it is possible (for an optional period) to read out the total liquid volume dispensed by each pump, which dosing programs have been used, the total number of washes and the number of softener doses.

You may read the washing machines individually as well as all the washing machines collectively. You can reset log data by clicking *Reset log*.



Alarm log. An alarm can be retrieved via the tab *System – Alarm log...*

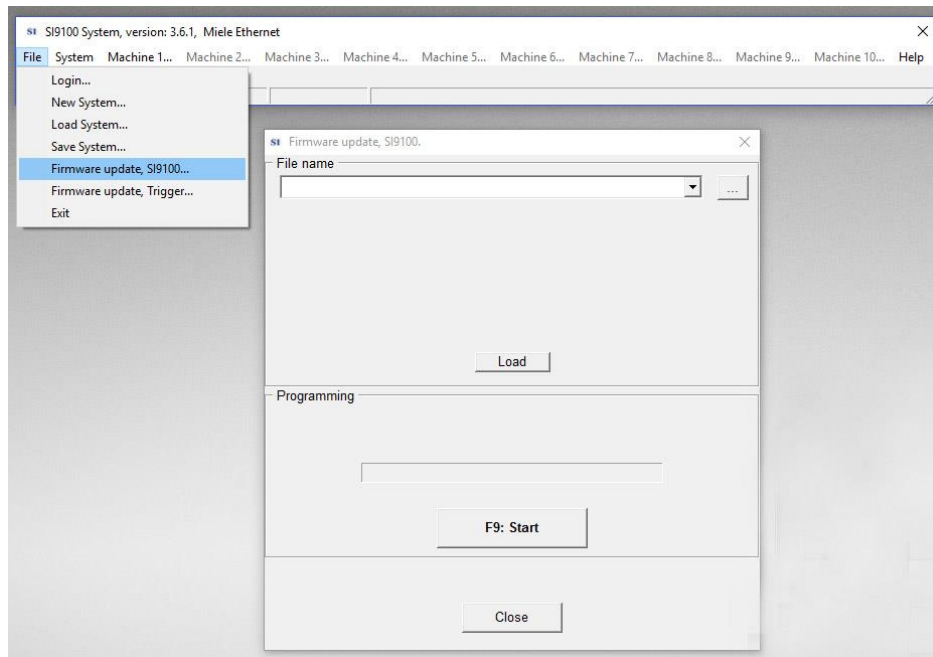


You can choose between a readout of the *Alarm history* or the *Alarm state*.

You can reset the *Alarm history* by clicking *Clear alarm log*.



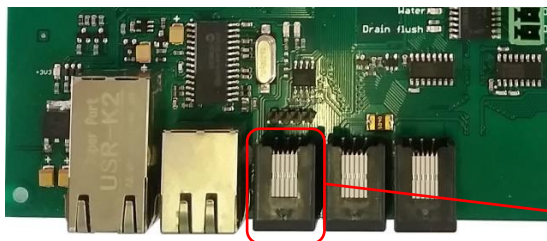
Firmware Update: Firmware update of the SiCD2 central.



Any new SiCD2 firmware will be available for download - free of charge - from our website.

The process of loading firmware is as follows:

1. Download the relevant file with the new firmware to the computer, and load it into the line *File name*.
2. Connect the programming cable between the computer and the SiCD2 central. (Socket no. 1. See the illustration below).



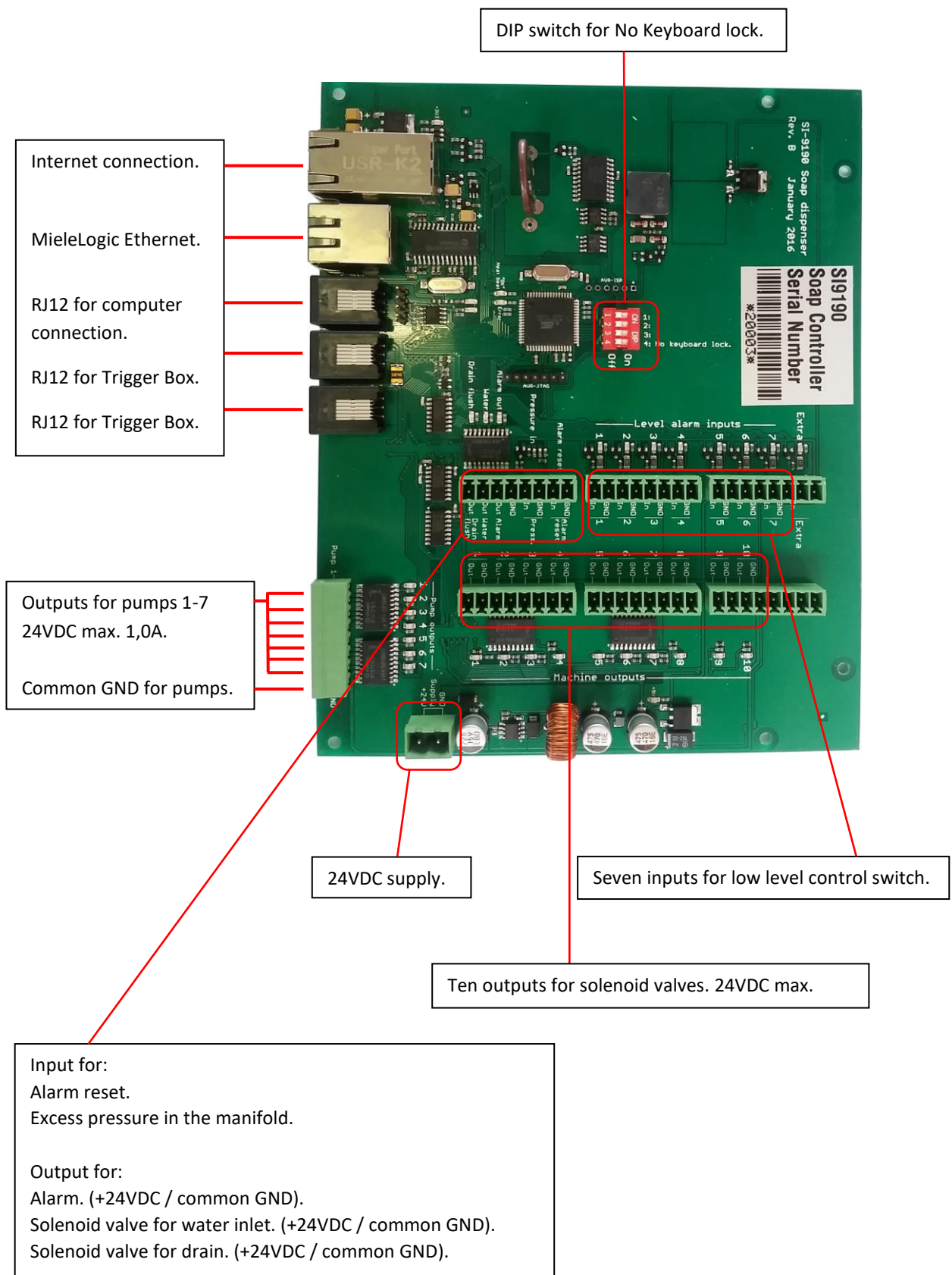
Socket no. 1 (RJ12) for Firmware updating.

3. Disconnect the supply voltage to the SiCD2 central.
4. **Dismantle the central's connection cables to any trigger boxes.**
5. Reconnect the supply voltage to the SiCD2 central. NOTE: The firmware update must be initiated within 5 minutes after the supply voltage has been re-established.
6. Click *Start*.
7. When the new firmware has been written: Reconnect the connection cables into any trigger boxes.

Firmware update, Trigger Box:

If you want to load new firmware into the trigger boxes, you will have to connect the individual trigger boxes to the computer one by one, by means of a programming cable.

1. Dismantle the RJ12 connector in the Trigger Box and insert the programming cable.
2. Load the forwarded new firmware into the line *File name* and activate *Start*.
3. Dismantle the programming cable and reassemble the RJ12 connectors.



SiDC2 specifications

Voltage supply: 90 - 260VAC 50/60Hz.

Inputs:

Pressure switch: Input for pressure switch NO. (For pressure control in the manifold).
Low Level: 7 inputs for Low Level NO/NC. (For liquid level control in the chemical containers).
Alarm Reset: NO. (Réset to GND).
Serial link: 2 x RJ12 for communication with Trigger Boxes.
1 x RJ12 for computer communication.

Outputs:

Pump outputs: 7 outputs for dosing pumps 24VDC (Common zero). Max. 1,0A.
Output laundry valves: 10 outputs for solenoid valves 24VDC. Max. 1,0A (Washing machine 1 to 10).
Output drainage valve: 1 output for solenoid valve 24VDC. Max. 1,0A.
Output water in valve: 1 output for solenoid valve 24VDC. Max. 1,0A.
Alarm: 1 output for alarm 24VDC. Max 1,0A.

Communication:

Programming: 3 x RJ12.
Internet: 1 x RJ45.
MieleLogic: 1 x RJ45 (Communication with MieleLogic washing machine via Ethernet).

Computer software version: V3.19 as of March 2022.

Computer connection cable: Specially designed cable supplied by Scandinavian Instruments ApS. Item no. 985017144.

Chemical supply: 1 x 6mm quick connector socket per pump.

Water inlet: ½" pipe thread (coupler).

Water/chemical outlet: 10mm quick connector socket. (1 pc. per washing machine + 1 pc. for drainage).

Pump capacity: 4-7 peristaltic pumps. Maximum capacity 285ml/min. (BrightChem hose)

Approvals: EN 61000-6-2 EN61000-6-4 EN 61000-3-2/-3-12 EN 6000-3-3/-3-11

Size: Supplied assembled on an 11mm PVC plate and fitted with a BrightLogic standard dosing unit: D x H x W = 18cm x 60cm x 76cm. Note: The width is larger on our biggest model.

Weight: Depending on the version:
For example, the SiCD2 intended for 10 washing machines and five chemicals,
weight = 15.5kg.