

pre@flow[®]
by ViscoTec

**Spraying
System**



**Commissioning and
maintenance manual**

**eco-CONTROL SC1200
for preflow[®] eco-SPRAY**

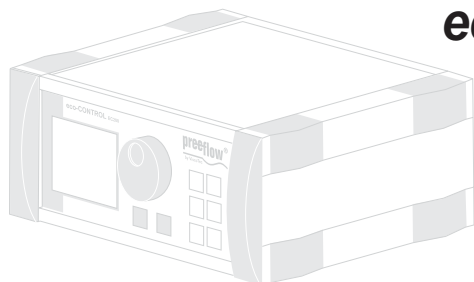


Table of contents

1. This manual	03
2. Designated use	03
3. For your safety.	03
4. Technical data	04
4.1 Parts & description	04
5. Parts of delivery	05
6. Start operation	05
7. Operation	06
7.1 Display	06
7.2 Status LED's	06
7.3 Operation keys	07
8. Parameter	08
9. Service Menu	10
9.1 Display	10
9.2 Settings	10
10. Electrical connections	11
10.1 Foot switch	11
10.2 I/O-port	11
10.3 Wiring diagrams	12
11. Maintenance and cleaning	13
12. Disposal	13

1. THIS MANUAL

Dear customer,


This manual forms part of the operating and maintenance manual for the dosing system eco-CONTROL EC200. The operating and maintenance manual must have been read and understood in full before commissioning or carrying out maintenance work on the eco-CONTROL SC1200. In the following user manual is only spoken about the SC1200.

2. DESIGNATED USE


The digital valve controller SC1200 is used for precise controlling of eco-SPRAY. The SC1200 controls, depending on the options the spray air, and also the electrical drive of the EC200. With the integrated precision air pressure regulator, the pressure for the spray air can be set very exactly. An integrated digital pressure sensor at the inlet air gives an additional point for the process safety.

3. FOR YOUR SAFETY:

WARNING:

- If the SC1200 is used for other functions as in this manual described, it could come to personal or material damage. Use the SC1200 controller only to the functions, which are explained in this user manual. Preeflow is not responsible for personal or material damages, which happen because of incorrect using and no designated use.

- No designated uses are:
- Modifications at the SC1200, which are not recommended in this user manual.
- Using of defective or not compatible spare parts.
- Using of not allowed accessories.

SAFETY PRECAUTIONS:

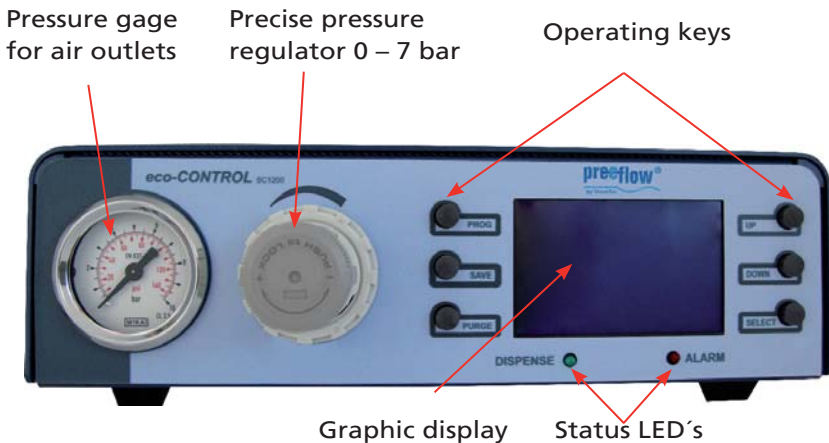
- The SC1200 works with 100 – 240V AC voltage. By touching the 100 – 240V AC voltage, there exists danger of life !! Because of this, the SC1200 must be disconnected from the AC input cable, before opening the housing. It is only allowed for authorized electrical experts to open the housing.

- Use the SC1200 only with the max. described and allowed power / settings.
- Always wear useful protection clothing.
- More details for using the dispensing material, please see the safety data sheets of the dispensing material.
- No smoking or fire by using flammable material.
- The SC1200 is only allowed for using inhouse.

4. TECHNICAL DATA

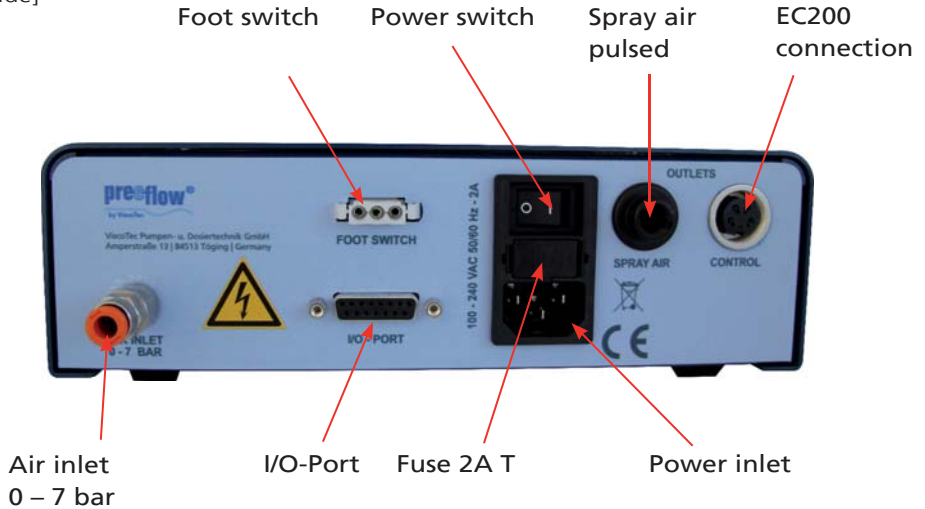
Measurements	235 x 210 x 70mm
Weight	1,65kg
Power supply:	85 – 264V AC 50/60Hz
Internal Voltage	24V DC
Dispense time	0,01 ... 999 sec.
Air Inlet	0 ... 7 bar (Display: digital)
Air Outlet	- spray air: 0 ... 7 bar (pressure regulator)
Parameter display	: 128 x 64 Pixel graphical display
Programs	: 8 programs

4.1 PARTS & DESCRIPTION

[Frontside]



[Backside]



5. PARTS OF DELIVERY:

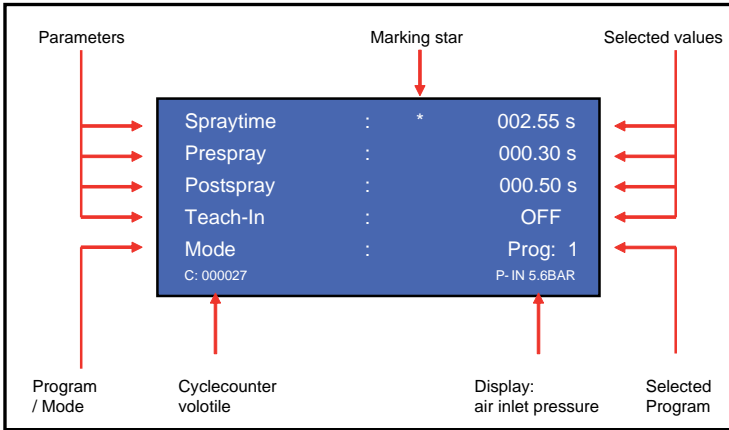
- SC1200 Controller
- Power Inlet cable
- Tube for Air Inlet
- User Manual
- Connection cable preeflow controller EC200
- Compressed air connector plug for compressed air outlet
- Plug connection for I/O-port

6. START OPERATION:

- Connect the power inlet cable to the Power inlet connector on the backside.
- Connect the Air Inlet tube from the compressor to the Air Inlet at the backside of the SC1200.
- Connect the Foot switch (as an option) or the dispense cable of the dispense robot to the Foot switch connector in the backside of the SC1200.
- Connect the Air Outlet (valve) to your eco-SPRAY and adjust the spray air with the pressure regulator of the SC1200. A typical value for the spray air is 1,0 bar.
- Connect the EC200 and the spray controller SC1200 with the delivered cable.
- Switch the SC1200 on. The display shows the initialisation and the installed software version. After 5 sec, the display switches automatically to the standard screen and is ready for operation
- Check the pressure input (e.g. P-IN: 5.6 bar) in the display to be sure, that the air input pressure is connected.

7. OPERATION:

7.1 Display: (values can be different)



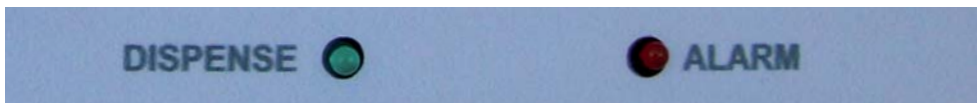
7.2 Status LED's

Below the display are the status-LED's of the SC1200.

DISPENSE The DISPENSE LED lights, during the dispensing valve is open.

ALARM: The ALARM LED lights, during one of the following conditions:

- Pressure alarm is active
- External alarm signal on the I/O-Port



7.3 Operating keys:



PROG => switches to the next program



SAVE => saves the actual parameters.
Press the SAVE key for 2 sec. and select the wanted program with the UP / DOWN keys and press SAVE again to store the parameters. If no different program is selected, the parameters get automatically saved in the actual program.



PURGE => starts the dispensing procedure.



UP => increases the selected value.



DOWN => decreases the selected value



SELECT => Moves the marking to the next display line.

8. PARAMETER:

- **Select mode**
Pressing the PROG key switches to the next program and to manual mode

Manual: In this mode, the dispense time get not saved and the spray valve dispenses as long as the dispense signal is activated on one of the following possibilities: foot switch / purge key / I/O-start. After dispensing, the dispense time starts again at 0.00 sec.

PROG 1-7: If one of the programs 1 – 7 is selected, the SC1200 dispenses as long as the value of the dispense time is saved. It is independent how long the dispense signal is activated on one of the following possibilities: foot switch / purge key / I/O-start.
This mode should be selected, if the dispensing valve should always dispense for the same time.

- **Set the spray time:**

The spray time can be selected with the UP / DOWN keys. The spray time can be set from 0,01 ... 999.99 sec

- **Set the pre spray time:**

The pre spray time can be selected with the UP / DOWN keys. The pre spray time can be set from 0,01 ... 5.00 sec. The pre spray time is the time how long the nozzle sprays air, before the control air opens the material path of the spray valve. This is necessary for cleaning the nozzle before spraying.

- **Set the postspray time:**

The post spray time can be selected with the UP / DOWN keys. The post spray time can be set from 0,01 ... 5.00 sec. The post spray time is the time how long the nozzle sprays air, after the control air closes the material path of the spray valve. This is necessary for cleaning the nozzle after spraying.


- Set the Teach-In function:

The Teach-In Function can be switched ON / OFF and is only in MANUAL mode useable. By activated function, the dispense time will be added to the actual dispense time with every new dispensing signal. To Reset the dispense time to 0,00 sec. please press SAVE + DOWN key together.

- Cycle counter:

The cycle counter counts dispensings after switching ON the SC1200. After power reset, the counter will be set to 000000.

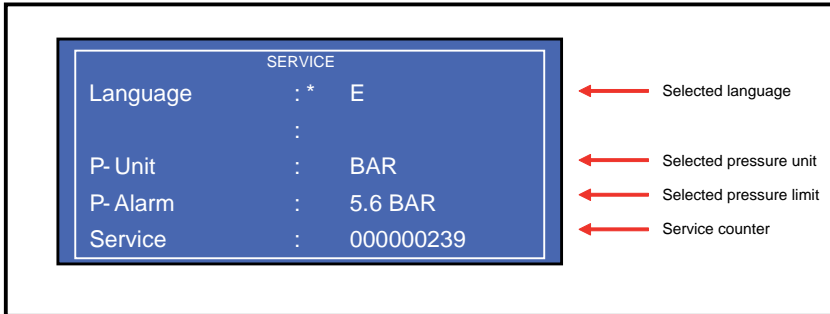
- Key lock:

By pressing SAVE + PRG the same time, a key lock for the SC1200 can be activated. An activated key lock is shown in the display (lower right hand corner) with the symbol: 

By pressing SAVE + PRG again, the key lock can be deactivated.

9. SERVICE Menu: (UP + DOWN during Initialization)

9.1 Display:



9.2 Settings:

- Pressing the SELECT key switches through the Menu (marked with the asterisk).
- Language:
Pressing UP / DOWN keys switches between english and german language.
- P-Unit:
Pressing UP / DOWN keys switches between PSI and BAR as unit for the digital displayed pressure.
- P-Alarm:
By pressing the UP / DOWN keys, the value for the low pressure alarm-limit can be selected. If the input pressure is lower than the selected limit, the SC1200 controller switches to ALARM mode and no new dispensing procedure is possible, as long as the input pressure is less than the selected limit.
- Service:
Service counter – not resetable

10. Electrical Connections

10.1 Footswitch:

pins: connections between Pin 1 + 3 starts dispensing

10.2 I/O-Port:

type: 15-pol. SubD female 2-doublerow

pins: see following chart

Pin no.	Input / Output	Description	Comment:
1	--	Reserved	Reserved
2	--	GND	GND
3	--	24V DC	24V DC
4	Output	BUSY	Dispensing procedure active
5	--	GND	GND
6	Input	START	Starts dispensing
7	Input	PRG1	Programmselect Bit #1
8	Input	PRG3	Programmselect Bit #3
9	--	Reserved	Reserved
10	--	Reserved	Reserved
11	Output	READY	Ready Signal
12	Output	ERROR	Error Signal
13	Input	REMOTE	Remote active
14	Input	ERROR-IN	External Error input
15	Input	PRG2	Program select Bit#2

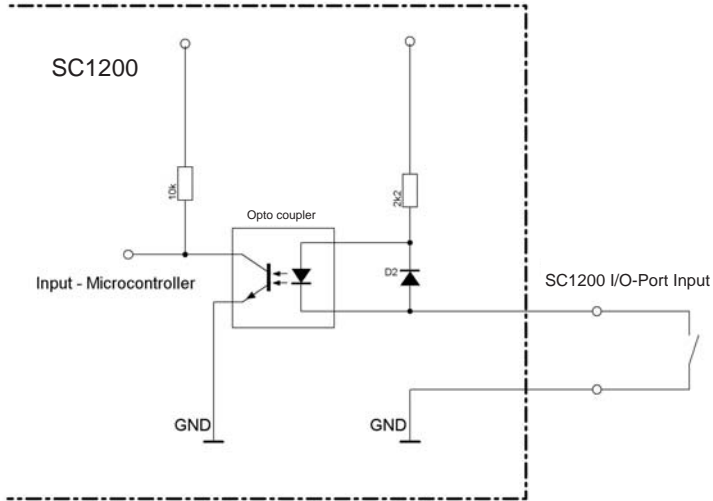
External selection of programs:

Programm no.	PRG-Selectbit #1	PRG-Selectbit #2	PRG-Selectbit #3
Manuell	0	0	0
Programm 1	1	0	0
Programm 2	0	1	0
Programm 3	1	1	0
Programm 4	0	0	1
Programm 5	1	0	1
Programm 6	0	1	1
Programm 7	1	1	1

10.3 Wiring Diagrams:

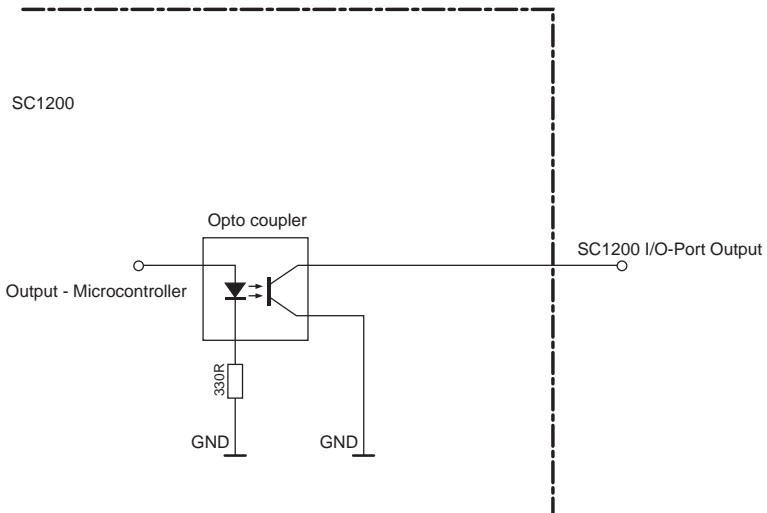
Digital Inputs:

A digital input is active, if the opto coupler is ON. If the opto coupler is connected to GND, the input is activated:



Digital Outputs:

If the digital output is active, the opto coupler is electro conductive.



11. Maintenance and cleaning

The SC1200 is maintenance free

Repairs should only be done by the manufacturer.

Clean the SC1200 controller only with a clean, smooth and dry cloth.

Do not use disolvent material to clean the SC1200 controller. The foil at the front- or back plate or the housing paintings can be destroyed.

12. Disposal



Dispose the product after the economic life-time according to the legal requirements.

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