10.1 Chlorine

The calibration of the chlorine is done on 2 points :

- zero point
- hand held measurement

In addition to the calibration, we can also choose:

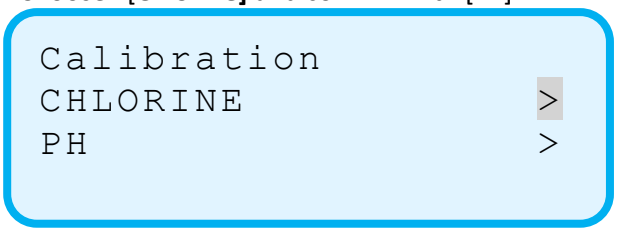
- Reset calibration (restores all calibration settings to factory settings)

10.1.1 Zero calibration

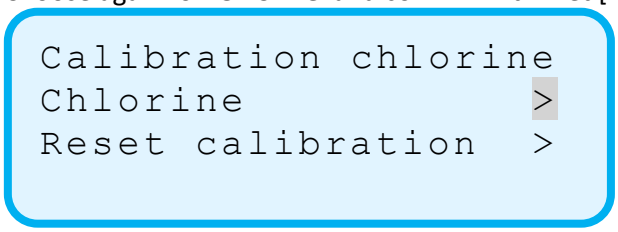
Now take the following actions:

1. For a zero calibration go to main menu with [**X**] and choose with [▼] the menu option [**Calibration]** and confirm with [↵]

2. Choose [**Chlorine]** and confirm with [↵].



3. Choose again for **Chlorine** and confirm with met [↵] :



4. Choose [**Start Chl 0 calibration >**] and confirm with [↵]

```
Chl calibration
Start Chl0 calibr  >
Calibr chl on   0,80
Start Chl calibr   >
```

5. Shut down the water supply by closing the supply valve and the return valve. SPI Controller will now give a circulation error with acoustic signal.

6. Wait for 5 minutes. The chlorine value will decline and stabilize . Then push on [**V**] to confirm the new zero point. The calibration of the zero point is now ready.

```
Chl 0 calibration
Cell input   :    30
Actual  Chl  :  0,01
Save push (V)
```

7. After confirmation of the zero point the following display will appear. Choose again the option **Chlorine** and confirm with [↵].

```
Chlorine calibration
Chlorine            >
Reset calibr        >
```

8. Open the water supply valve and the return valve and regulate the flow on 35l/hour
9. Go to **Calibr Chl on** and confirm with [↵].

```
Chl calibration
Start Chl 0 calibr >
Calibr Chl on   0,80
Start Chl calibr   >
```

10. The following display will appear, Here the value to be calibrated can be entered

```
---  SET VALUE ---
MAX:        5.00
MIN:        0.10
SET:       [0.80]
```

11. Take a water sample en measure the free available chlorine with your hand held meter.
12. Change the SET value with [▲] and [▼] in the value which is determined by hand measurement and confirm with [**V**]
13. The value entered in point 12 must still be completed so that the controller actually takes over this value. Choose [**Start CHL calibration**].

```
Chl 0,80 calibration
Cell input   :   147
Actual Chl   :  0,89
Save push (V)
```

14. The controller shows at **Actual Chl** the last measured value. Check the stability of the **Actual Chl** value and push on [**V**]. Now the value measured with the hand held meter is taken over (see step 12) . The calibration has now been carried out.
15. De controller is going back to the following display:

```
Chlorine calibration
Chlorine            >
Reset calibr        >
```

16. Go back to the main menu with [**X**] and confirm with [↵] to go to **Overview**.
17. Overview displays the new value. This value must be the same as the value measured with the hand held meter at point 12.

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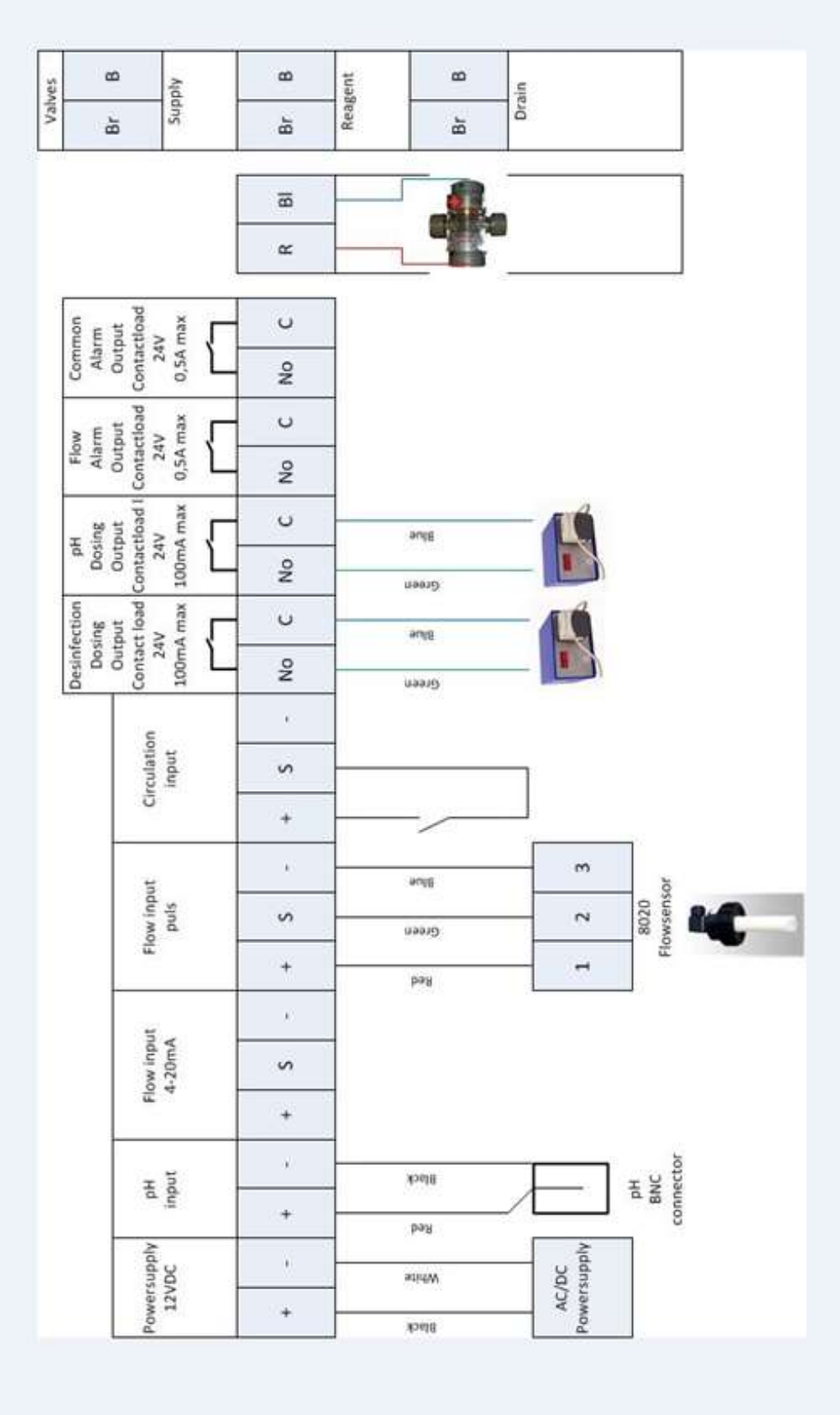
! Calibration can not be performed at a measurement less than 0.20 mg / l. Make sure the chlorine value in the basin is more than 0.20 mg / l and then perform the calibration.

Remark: When using a new electrode or in case of a high chlorine level it is possible that the waiting time is more then 5 min for the zero point calibration. When it is not possible to get a correct zero point calibration than fill up the chlorine cell with chlorine free tap water.
Wait after filling about 10 sec. and do the zero calibration as described above again. When chlorine tablets (chlorine 60 or 90 , chlorine with isocyanurate) were used, the unit can not be precisely calibrated
The controller can always be put back to factory settings by selecting the "reset calibration" option.

Error messages:

Texst on display	Description	Possible solution
EL1	Electrode error, low calibration point < 4 µA	
EL2	Electrode error, low calibration point > 30 µA	
EL3	Electrode error, high cailibration point < 44 µA	
EL4	Electrode error, high calibration point > 400 µA	
noC	Chl level to low to do a calibration < 0,20 mg/L	


Valves
Br
B
Supply
Br
B
Reagent
Br
B
Drain
R
Bl
Common Alarm Output Contactload 24V 0,5A max
Flow Alarm Output Contactload 24V 0,5A max
pH Dosing Output Contactload I 24V 100mA max
Desinfection Dosing Output Contact load 24V 100mA max
C
No
C
No
C
No
C
No
Blue
Green
Blue
Green
Circulation input
Flow input puls
Flow input 4-20mA
pH input
Powersupply 12VDC
-
S
+
-
S
+
-
+
-
+
-
+
Blue
Green
Red
1
2
3
8020 Flowsensor
Black
Red
pH BNC connector
Black
White
AC/DC Powersupply