



Installation Quick Guide

Flosense 4.0

Introduction

This Quick Guide serves as an easy-to-use guide to help make your installation of the Flosense Manifold system as simple as possible. However, beware that the Quick Guide is a supplement to the installation user guides and for that reason cannot stand alone. So please ensure that you have read all relevant User guides (Manifold Installation and Software guides) thoroughly before installing your new Flosense.

During start-up and purge, always follow the Quick Guide.

Warning

Please ensure that flow never exceeds the sensors' maximum.

If pressurized air flow exceeds 0.5 bar, the flow sensors may be damaged due to extreme purge speed.

Disclaimer

Costs connected to any damages to the products caused by lack of following the Instruction Manuals, will be at the customers' own expense.

PRIOR TO STARTUP:

flosense®

Check the label on the sensors to identify the flow or pressure sensor type:



Flow must never exceed the maximum capacity; failure to comply with this precaution may damage the sensor.

Flow sensors are called:

VFS8 1-18 E (1-20 l/min standard)

VFS8 2-40 E (2-40 l/min standard)

VFS8 1-18 K (1-20 l/min high temperature)

VFS8 2-40 K (2-40 l/min high temperature)

Pressure sensors are called:

RPS6 0-10 E (0-10 bar standard)

RPS6 0-10 K (0-10 bar high temperature)

STARTUP PROCEDURE:



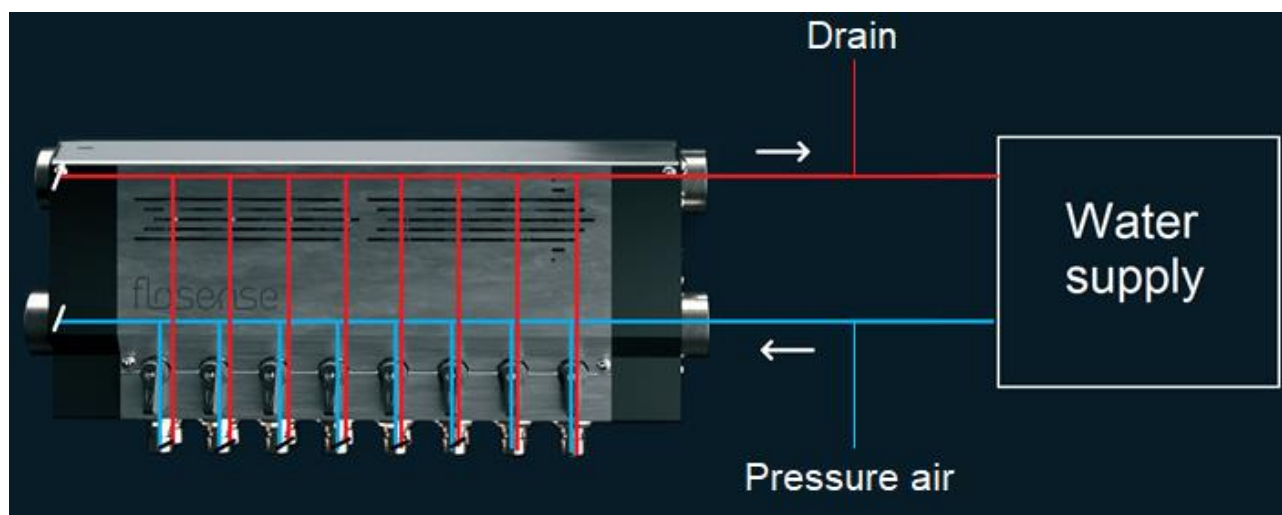
A 3-way ball valve is recommended to be installed either on, or before the main inlet, to enable purging of the manifold and mould with pressurized air. If needed for draining, also add a 3-way ball valve after the main outlet of the manifold. Pressurized air inlet must be adjustable (pressure reducer)

During startup (empty mould and manifold)

1. Fully open all ball valves to/from the mould
2. Open the main return outlet valve on the manifold
3. Slowly open the main inlet valves on the manifold and start filling the system
4. Adjust the inlet flow to match the needed flow only.
5. Let it run until all air is out of the system before fully opening the main valve.

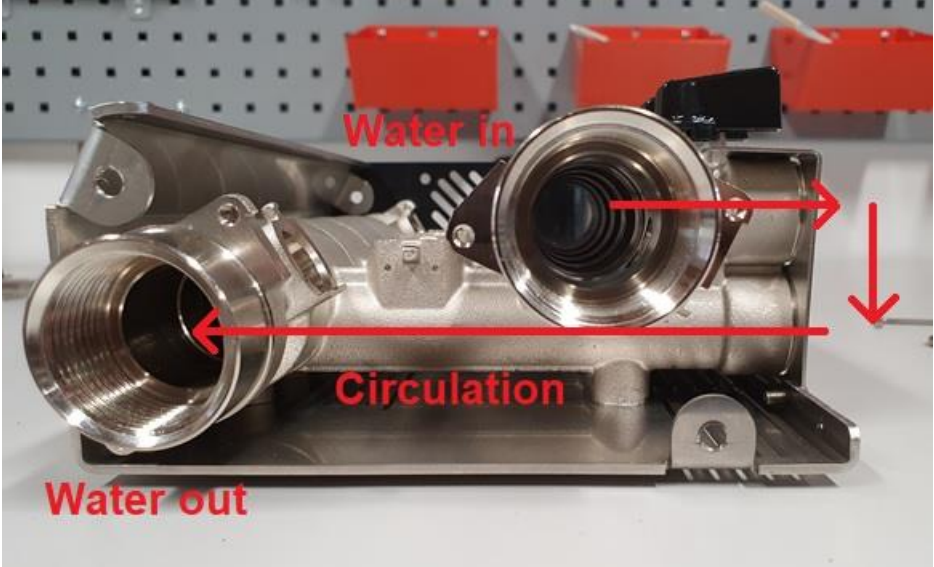

Purging (emptying mould with pressurized air)


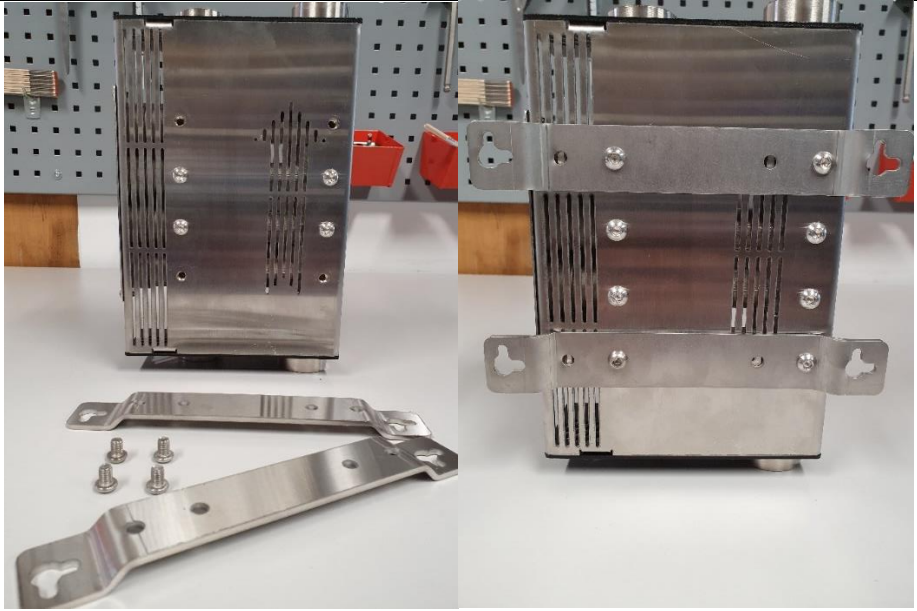
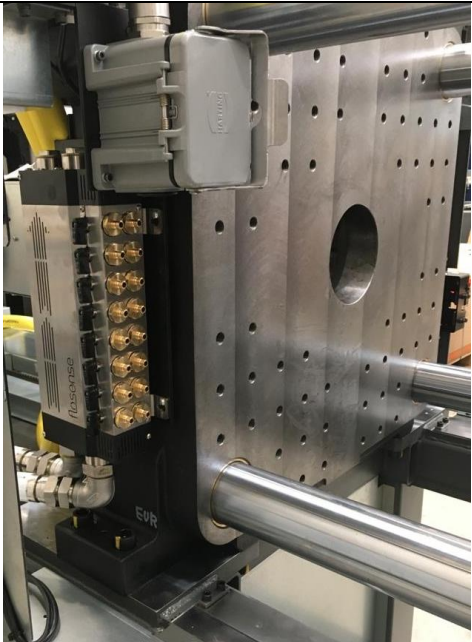
1. Turn the main inlet valve in blocked/closed position.
2. Turn the main outlet valve in “drain” position
3. Turn the main inlet valve in “pressure air in position”
4. Open the adjustable air without exceeding 0.5 bar and ensure slow purge of water.
5. When the system has been emptied, you can fully open the air supply to blow the circuits dry.




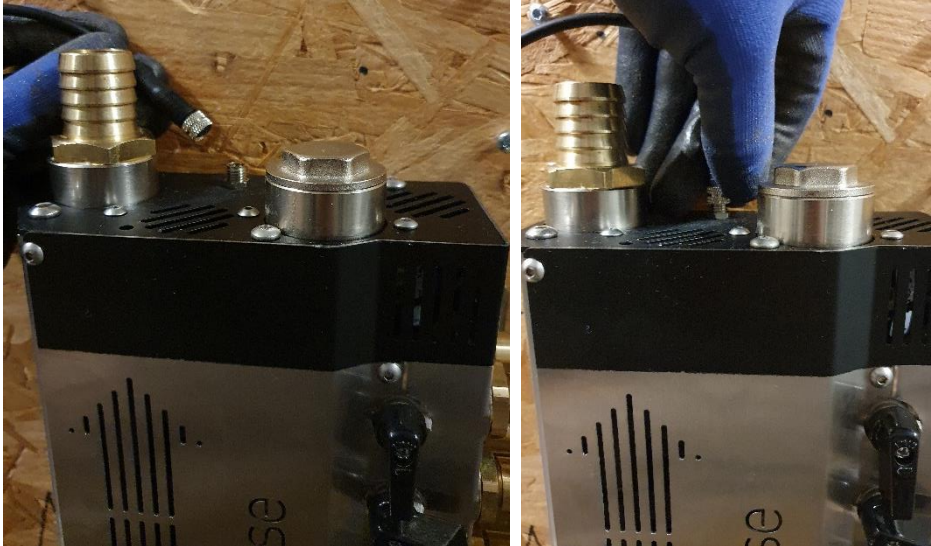
INSTALLATION GUIDE:


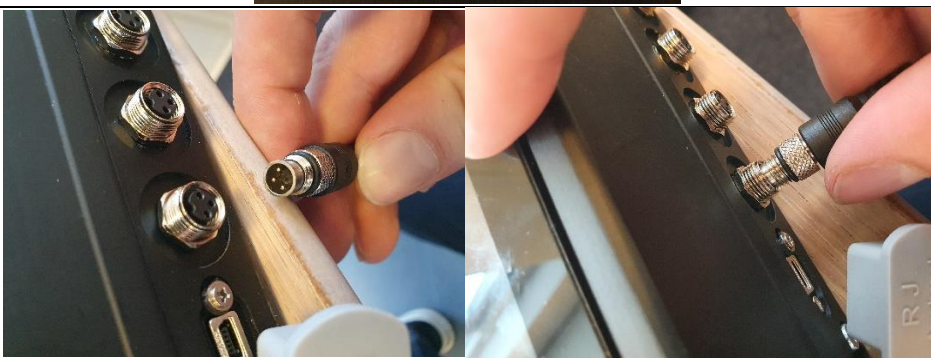




Step 1	Installation package includes
<p>Check that all elements are included</p>	<p>Check that the following elements are included in your package:</p> <p><u>Manifold:</u></p> <ul style="list-style-type: none"> • 1 Flosense manifold pr. package • 2 Brackets for manifold pr. package <p><u>Screen:</u></p> <ul style="list-style-type: none"> • 1 Flosense FS-7100 Screen • 1 Bracket for Screen • 1 Power supply 12V • 1 UBS to Mini-USB adapter
Step 2	Prepare the manifold
<p>Connect the fittings for the main water (in and out) and mount the blinding fittings at the other end</p>	
<p>Mount the fittings of your choice for each cooling channel</p>	



Step 3	Mount the manifold	
<p>The manifold is designed to be able to replace the standard water flow regulator which is installed in most injection moulding machines per default.</p>		
<p>Mount the brackets on the back plate of the manifold.</p> <p>WARNING! The bolts are also used to hold the internal piping in place. Please only remove the bolts needed for the bracket you are currently mounting.</p>		
<p>Mount the manifold on the machine or the mould</p>		

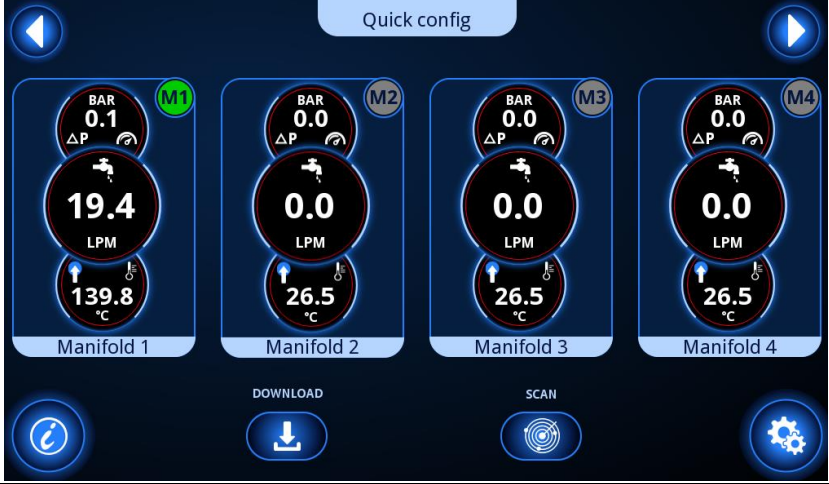
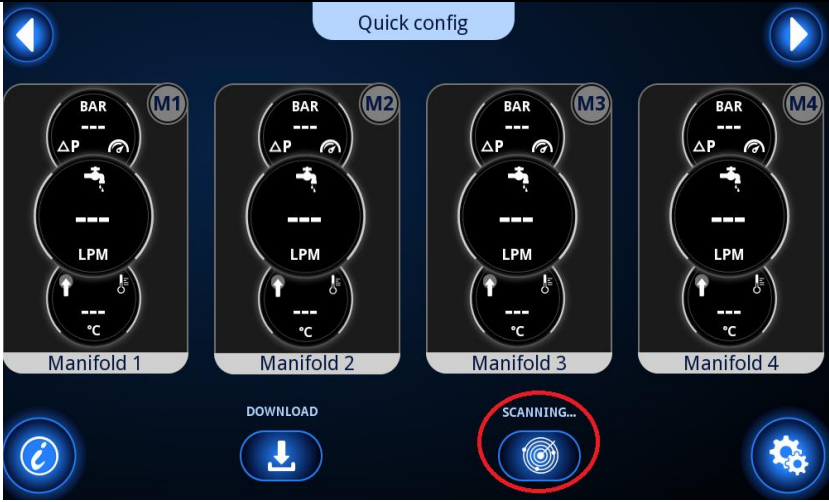
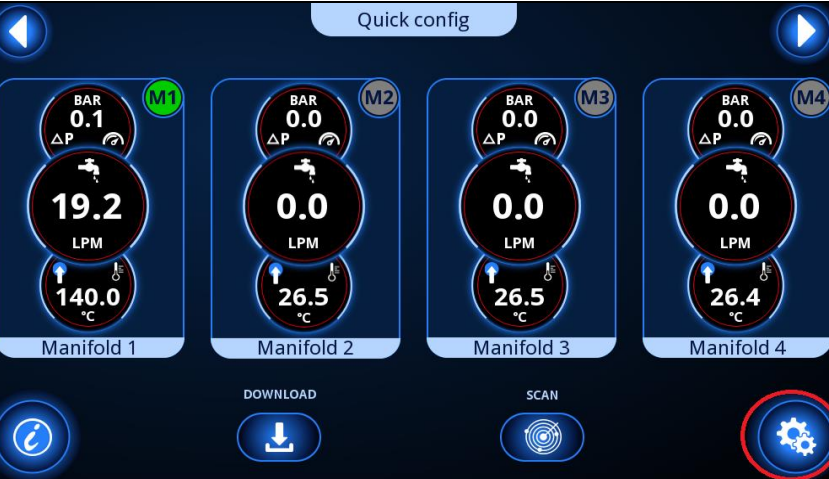
Step 4	Unpack screen and cables	
<p>Unpack the power supply, The Flosense Display, M8 connector cable(s) and extension cable(s) if needed</p>		
Step 5	Mount screen on machine	
<p>Mount screen bracket on the machine.</p> <p>The bracket can be mounted with screws, or with the pre-mounted magnets</p>		
<p>Push the screen into the bracket, until the snap fit clicks into place</p>		

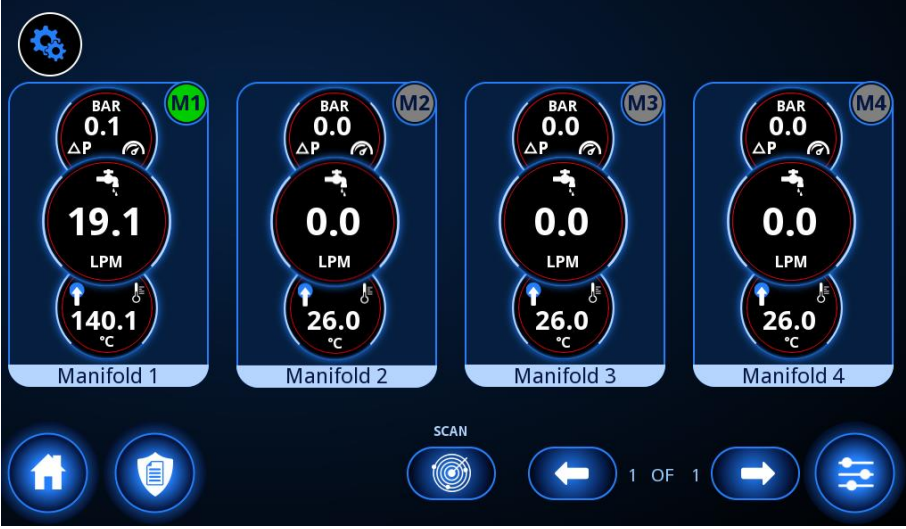

Step 6	Connect the manifold to the screen
<p>Connect the manifold to the screen with the M8 connector cable. The manifold has an M8 connector in next to the inlet/outlet pipes on the side where the arrow on the top plate points towards.</p> <p>The Flosense 4.0 screen can have up to 4 manifold connected at the same time.</p>	
<p>Connect the female end of the M8 cable to the first manifold</p>	

<p>Fasten the cable onto the connector</p>	
<p>Connect the male end of the M8 cable to the first connector of the manifold. Use an extender cable if necessary</p>	
<p>Fasten the cable onto the connector</p>	
<p>Follow the previous four steps for the remaining manifold¹</p>	

¹ See Known Issue on page 13

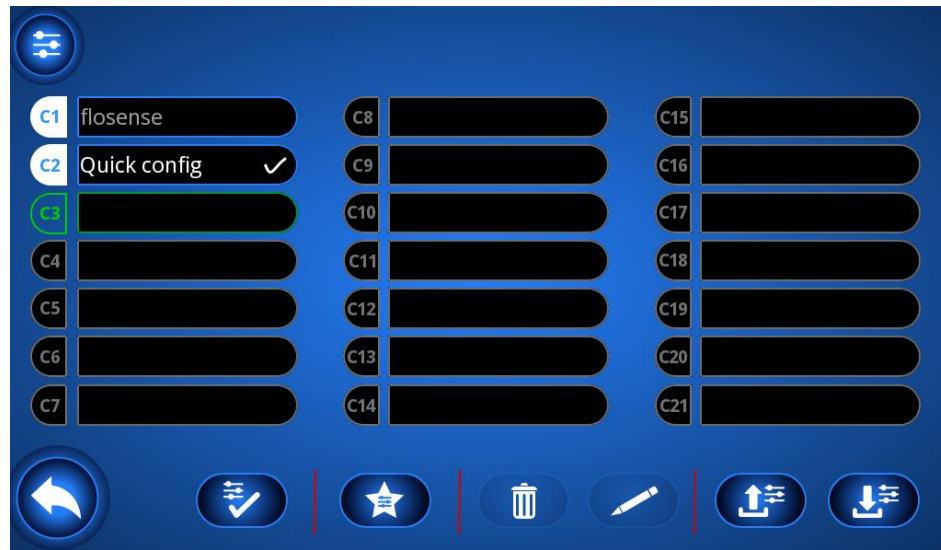
Step 7	Connect Power	
<p>Connect the power supply to the M8 connector next to the grounding, and connect the other side to a power outlet with a voltage of 100-240V</p>		
Step 8	Startup	
<p>When the power has been connected, the screen will startup automatically</p> <p>The manifolds will be numbered 1 through 4, depending on how many manifolds are connected, starting from 1 for the leftmost manifold.</p>		
Step 9	Configure the Manifolds	

<p>Once the screen has been connected and has started up, check to see if the correct number of manifolds are being displayed on the home screen.</p>	 <p>The screenshot shows the home screen with four manifold cards labeled M1, M2, M3, and M4. Each card displays three sensor readings: BAR (0.1, 0.0, 0.0, 0.0), LPM (19.4, 0.0, 0.0, 0.0), and temperature (139.8, 26.5, 26.5, 26.5). At the bottom, there are buttons for 'DOWNLOAD' and 'SCAN'.</p>
<p>If the number of manifold or sensors are wrong, press the scan button below the 4 sensors on the display.</p>	 <p>The screenshot shows the home screen with four manifold cards labeled M1, M2, M3, and M4. All sensor readings are represented by dashes (---). The 'SCAN' button at the bottom right is highlighted with a red circle.</p>
<p>After connecting all manifolds, enter the settings with the button at the bottom right.</p>	 <p>The screenshot shows the home screen with four manifold cards labeled M1, M2, M3, and M4. Each card displays three sensor readings: BAR (0.1, 0.0, 0.0, 0.0), LPM (19.2, 0.0, 0.0, 0.0), and temperature (140.0, 26.5, 26.5, 26.4). The 'SCAN' button at the bottom right is highlighted with a red circle.</p>

<p>Entering the settings will show a similar page, with new options at the bottom. Pressing any button will prompt for you to enter a PIN code.</p>	
<p>The default pin code is 36963 For the initials, any 1-3 initials of the user may be entered.</p>	
<p>After entering the pin, the background will turn bright blue. This indicates that you have full access to the settings.</p> <p>For now, press the configurations button at the bottom right.</p>	

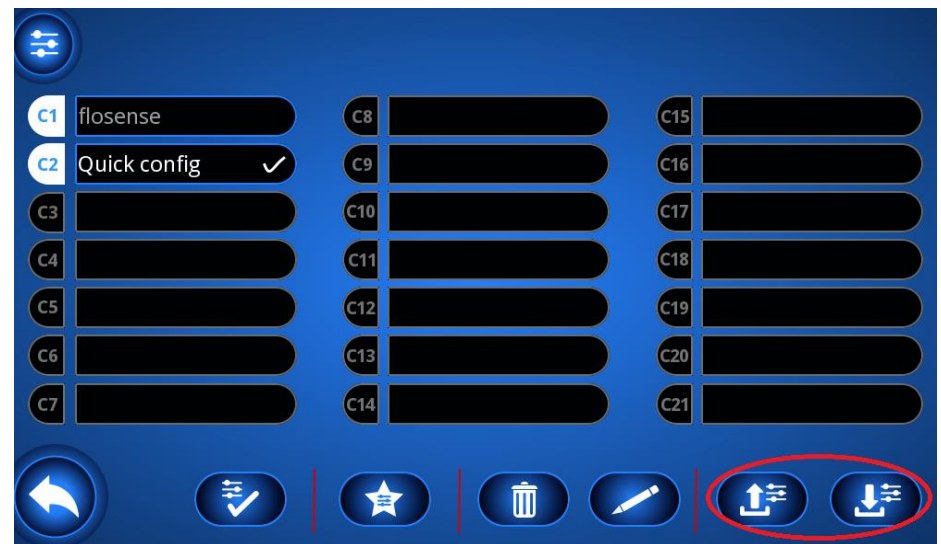
Select a configuration for you to use and press the checkmark button at the bottom. Any changes you make to the settings will be saved

If you wish to rename it, press the pencil button, and a keyboard prompt will let you rename it.



If you wish to save all your configurations to a USB, or to upload previously saved configurations from a USB, you can press the download or upload buttons.

NOTE: Uploading configurations will overwrite the current configurations.



After selecting the configuration, return to the settings menu, and select the manifolds you wish to set up or edit

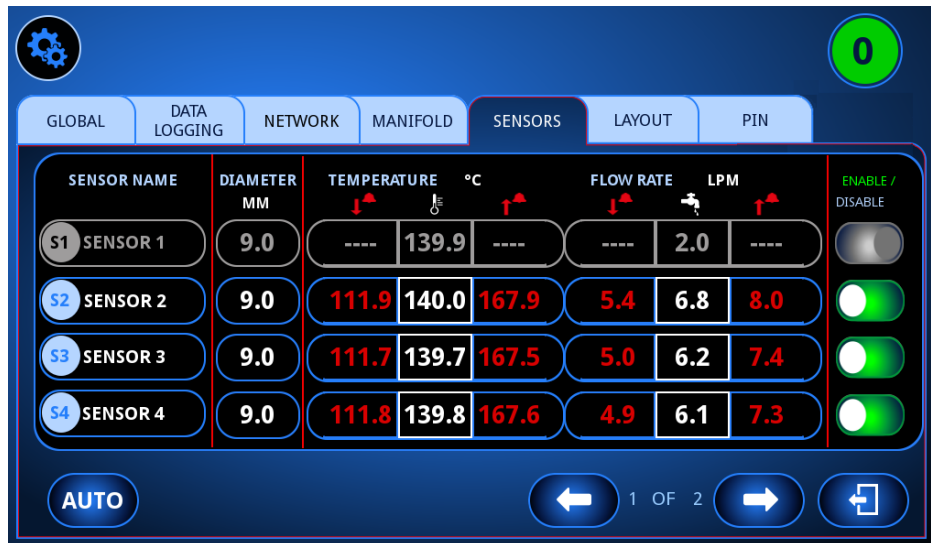


<p>Set the global settings, such as language, time, date and measurement units</p>	
<p>Set the data logging rate</p>	
<p>Select the layout for the selected manifold.</p> <p>Settings A & B indicate the location of the inlet for the cooling medium.</p> <p>Settings C & D indicate the sensor numbering order.</p>	

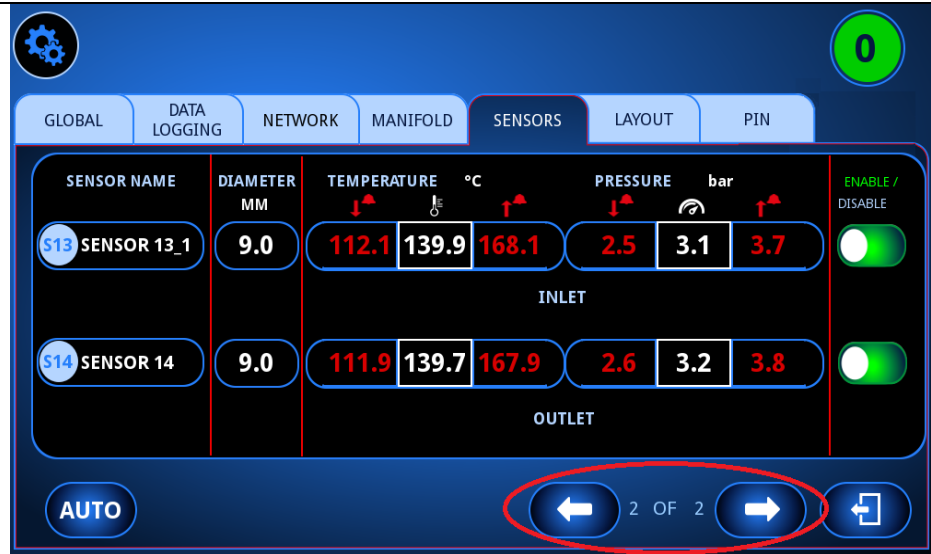
Finally, enable the sensors you wish to use and disable the sensors you will not be using.

Then set the cooling channel diameter, and the temperature range for each cooling circuit

It is also possible to use auto-alarm during operation to set the alarms to be +/-20% of the current operating flow, temperature and pressure



Remember to cycle through all pages of sensors, to set up all sensors, including the pressure sensors.



Set up or edit any remaining manifolds.

It is highly recommended to download any approved configurations on a USB, as it speeds up setup time for any systems with the same settings.

You are now ready to use your new Flosense system!

If you wish to connect to the Flosense system from another device through VNC, check our VNC manuals [here](#)

Known Issues

Below is a list of known issues that will be fixed with the next software version.

26-03-2021

Software version: 5.0.0.440

Firmware version: 1.0.100.5

Sensor interface firmware version: V1.07

There is an issue which occurs extremely rarely, where using the scan feature will find all the connected manifolds, and shortly thereafter all manifolds will disappear and the “No manifolds connected” message will appear. The issue is resolved by rebooting the unit.

As of 26-03-2021 the source of the error has not yet been identified, as we have not found a way to replicate it.

Change log

Date of change	Change	Version
29-04-2020	Product release	001
16-06-2020	Stability issue fixed. Manual edited specifically for Flosense 4.0	002
02-10-2020	Changed list of included parts/elements	003
26-03-2021	Updated procedure and pictures, after major changes in software version 5.0.0.440	004