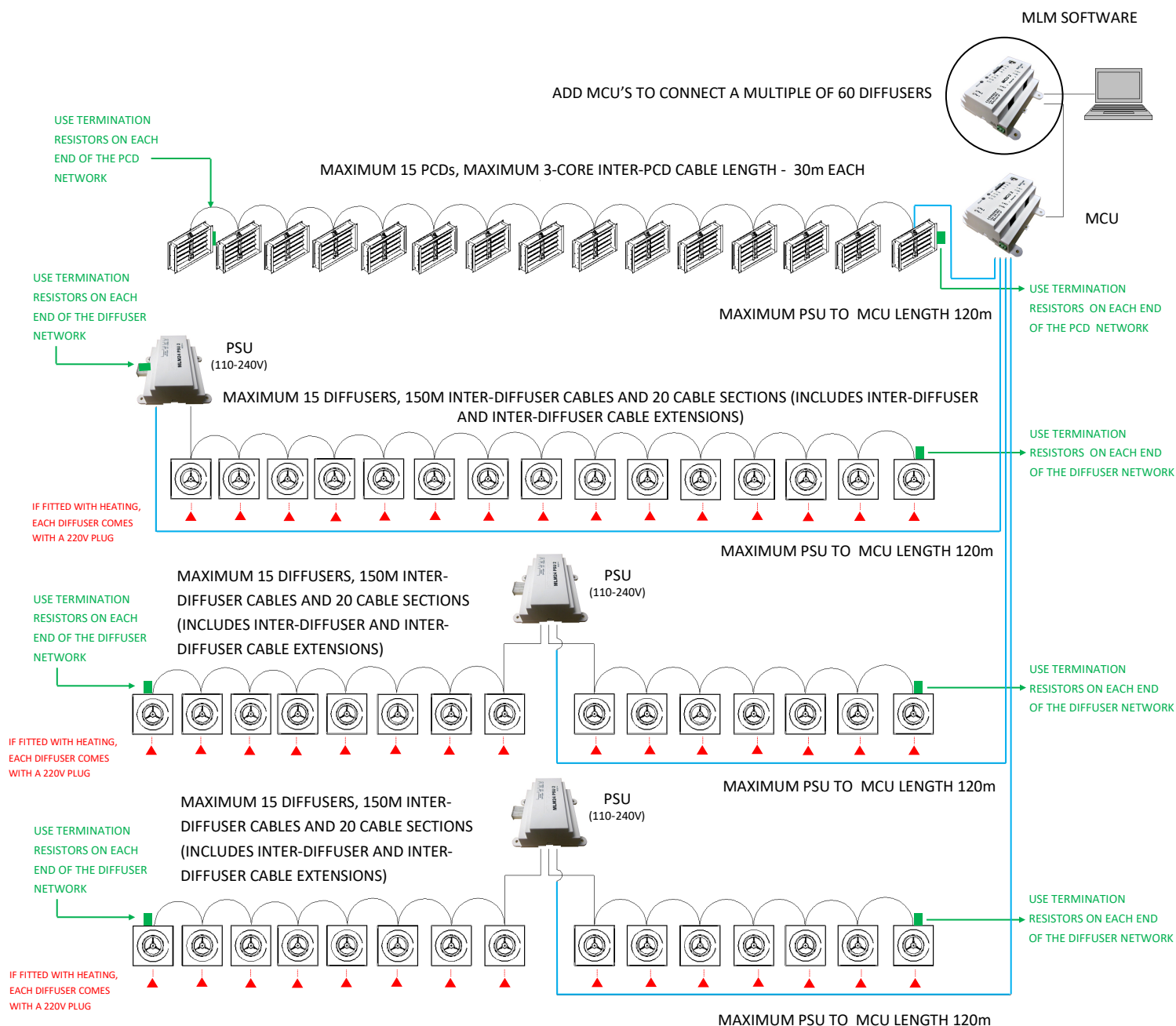


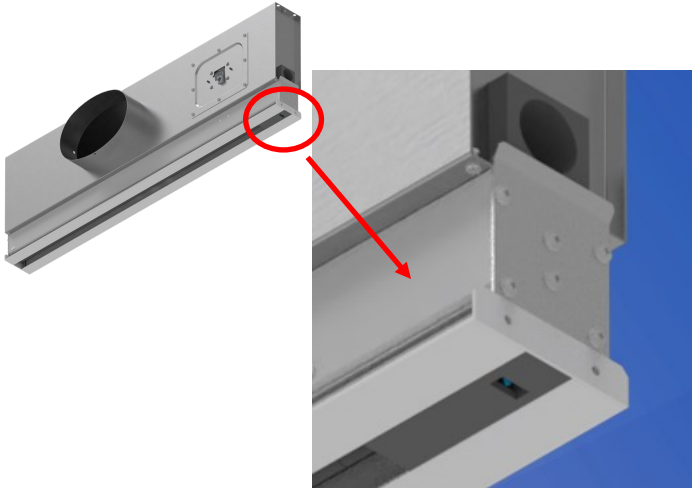
MLM+ LINEAR DIFFUSER HARDWARE & SOFTWARE COMMISSIONING GUIDE



MLM+ CONTROLS WIRING SCHEMATIC



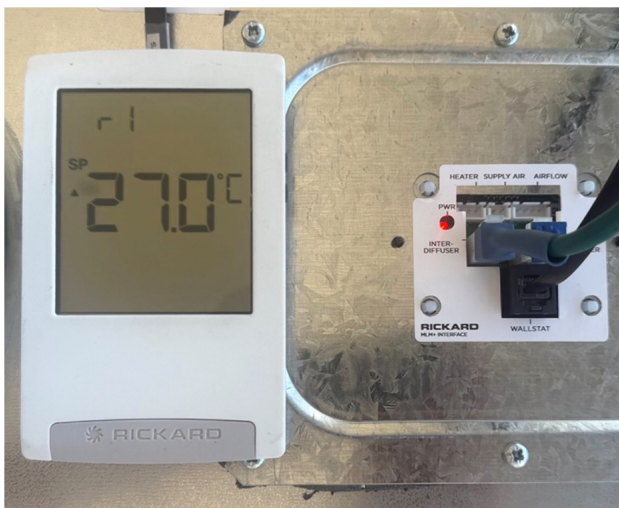
Rickard linear diffusers can be ordered as a Primary Diffuser with On-board Sensing.



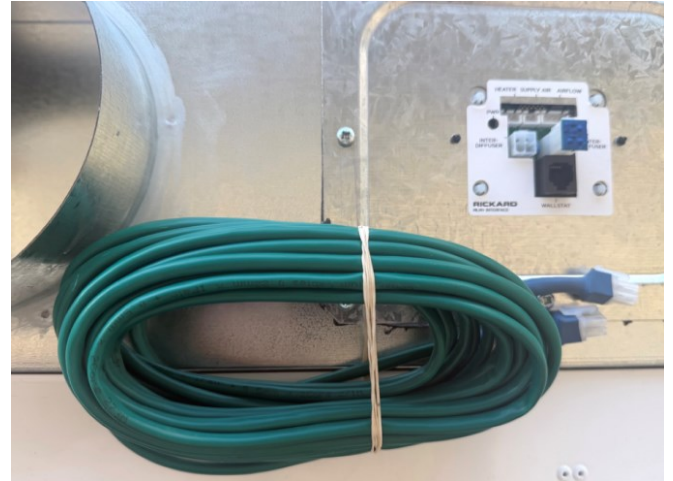
A Primary diffuser is supplied with temperature sensing Induction box



You can convert Primary and Secondary diffusers to Wall Sensing and Setpoint by connecting a Wall Thermostat. Plug the RJ12 cable into the Wallstat port, on the diffuser interface board, located on the back of the diffuser.



Install Diffusers in Ceiling. Note: Every diffuser comes with an Interlinking Cable (Shown)



Record the serial number on your floor layout plan. This will make it easy to locate the correct diffuser later.



Connect the Interlinking Cable to the Interface Box Inter-Diffuser socket as shown.



Connect the next diffuser to the open port and continue to link or daisy chain diffusers together until you reach the last diffuser



PSU shown with both ports populated with Interlinking cables that are going to diffusers.

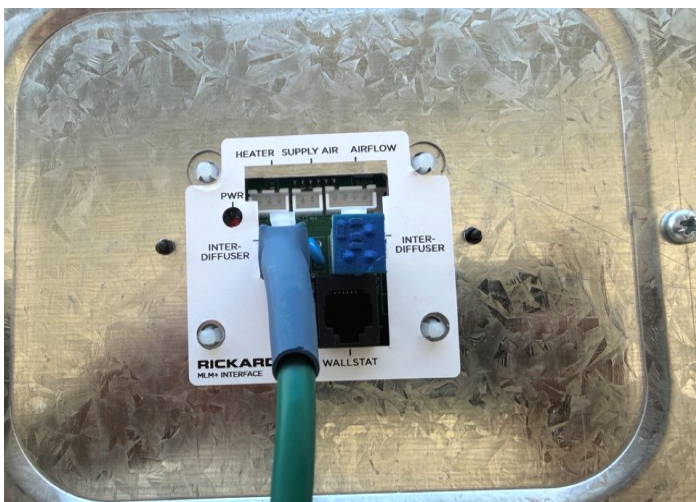


Note: Every Power Supply (PSU) comes with 2 termination resistors. These termination resistors need to be plugged into the last open connector of each diffuser run. **The termination resistors ensure strong communications between diffusers.**

PSU shown with one port populated, with an Interlinking cable going to diffusers and the other correctly terminated with a termination resistor.



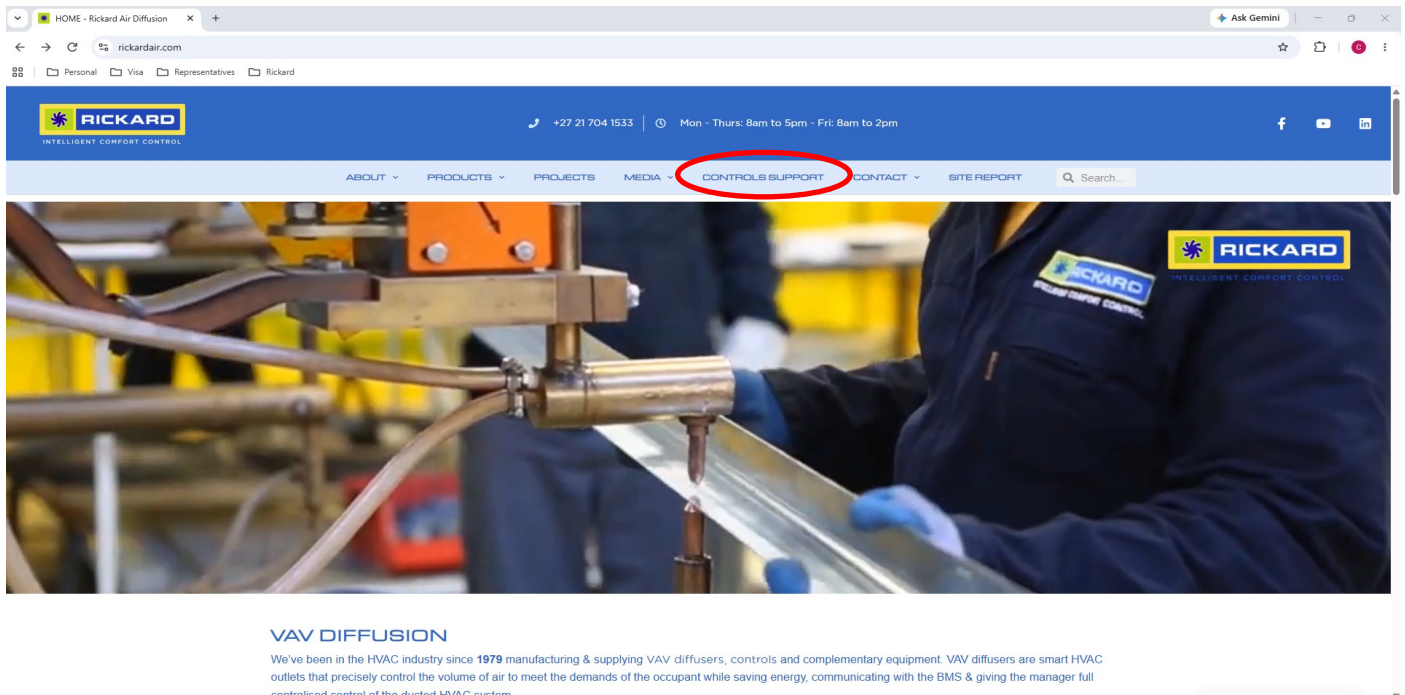
Last diffuser shown with termination resistor



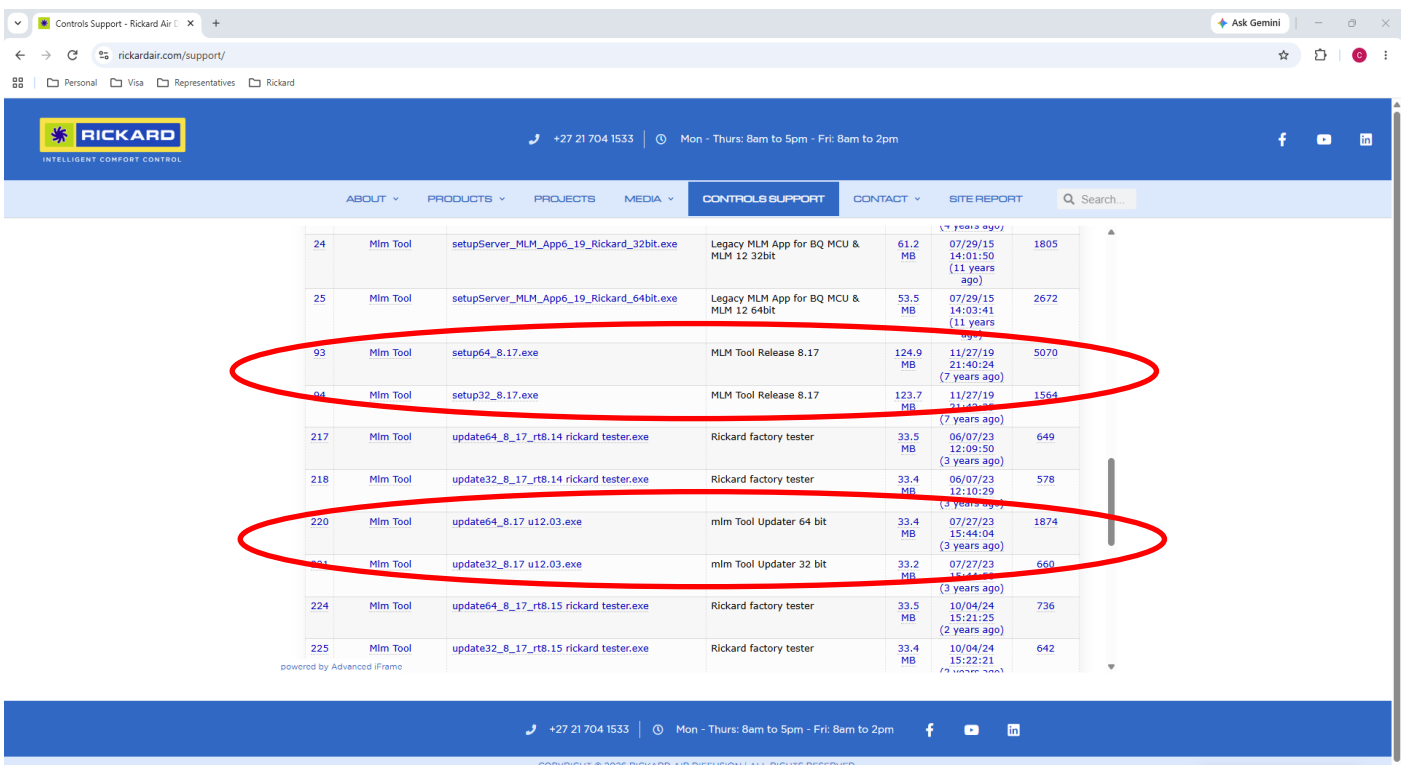
Please note that if cables are modified in any way, the Rickard warranty is void. Do not join, cut or make new cables. If longer cables are required, please order cable extensions from Rickard.



To set-up Rickard diffusers, you need to install Rickards MLM software. If it is not installed follow the following instructions to install it. Go to <http://www.rickardair.com>



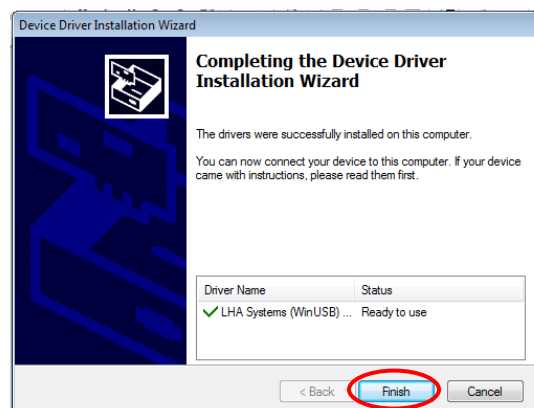
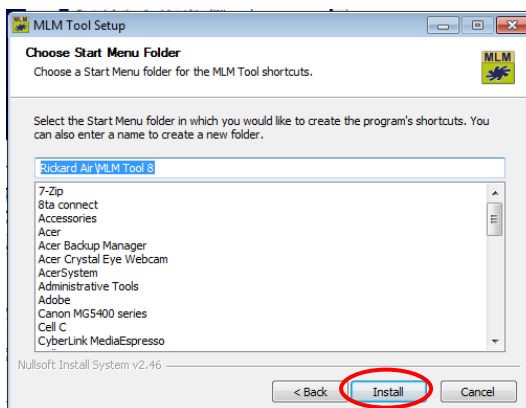
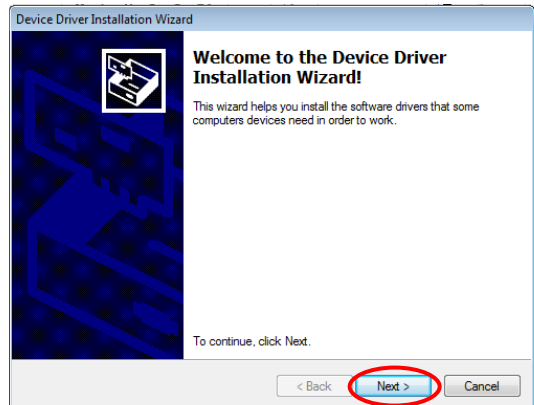
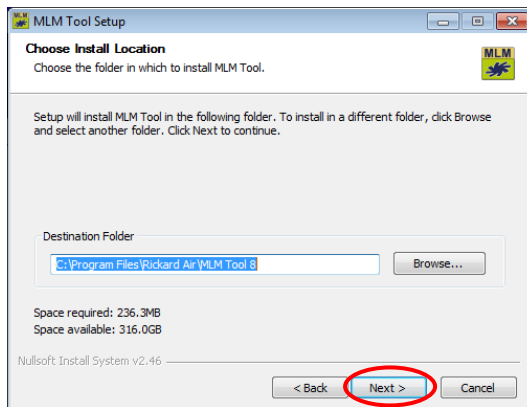
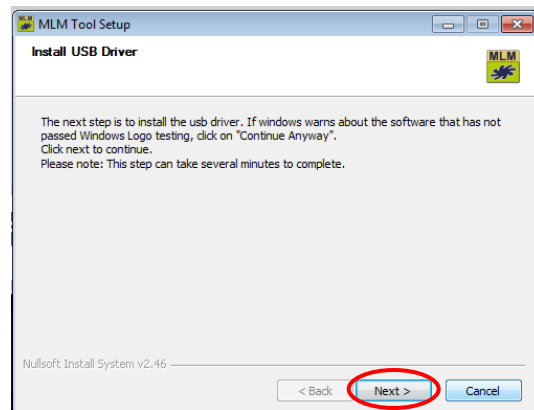
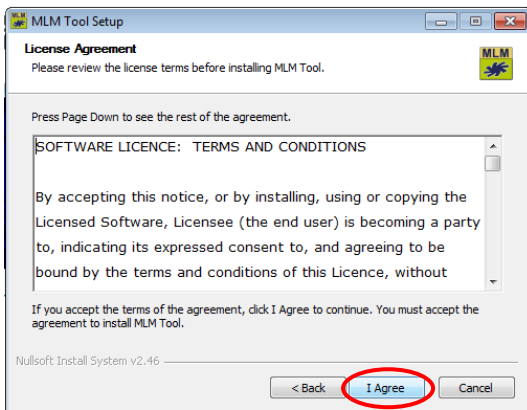
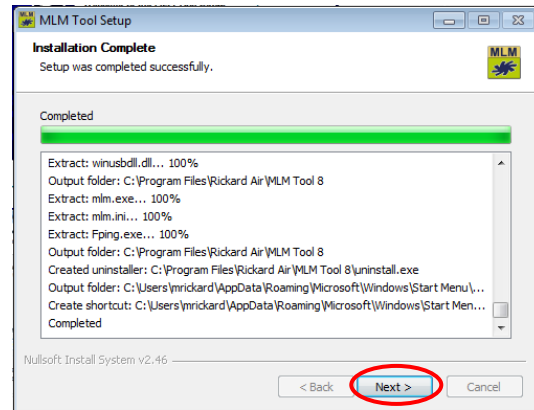
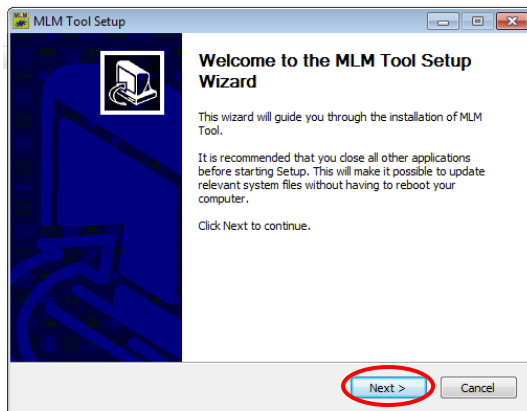
<http://www.rickardair.com/controls-support>

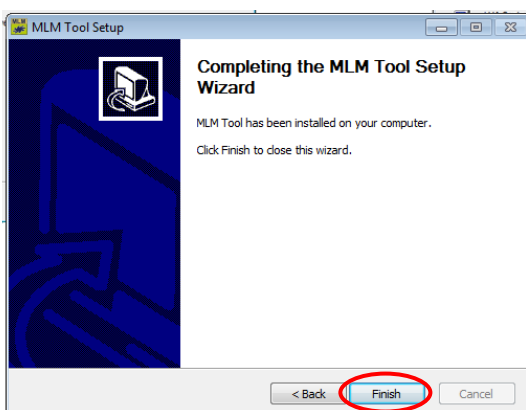
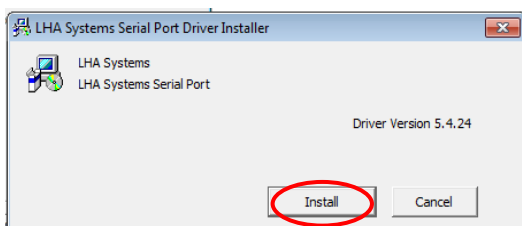
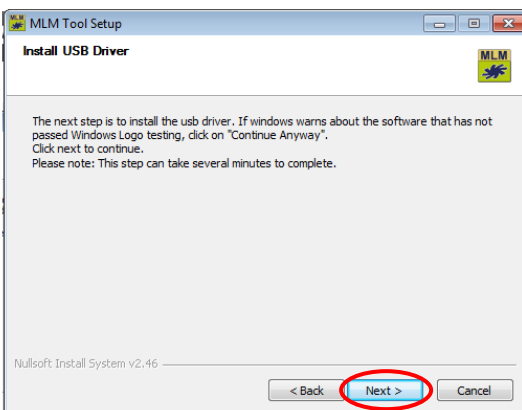
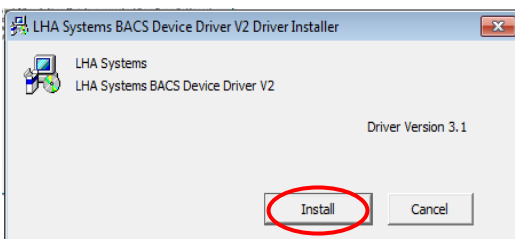
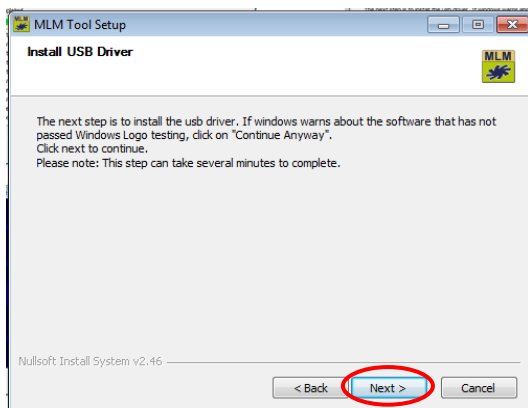


Click on the latest 32 or 64 bit MLM Tool depending if you have a 32 or 64 bit PC and download the file.

Click on the latest 32 or 64 bit MLM Tool Updater to ensure your you have the latest updates installed.

Double click on the file you downloaded and follow these steps.

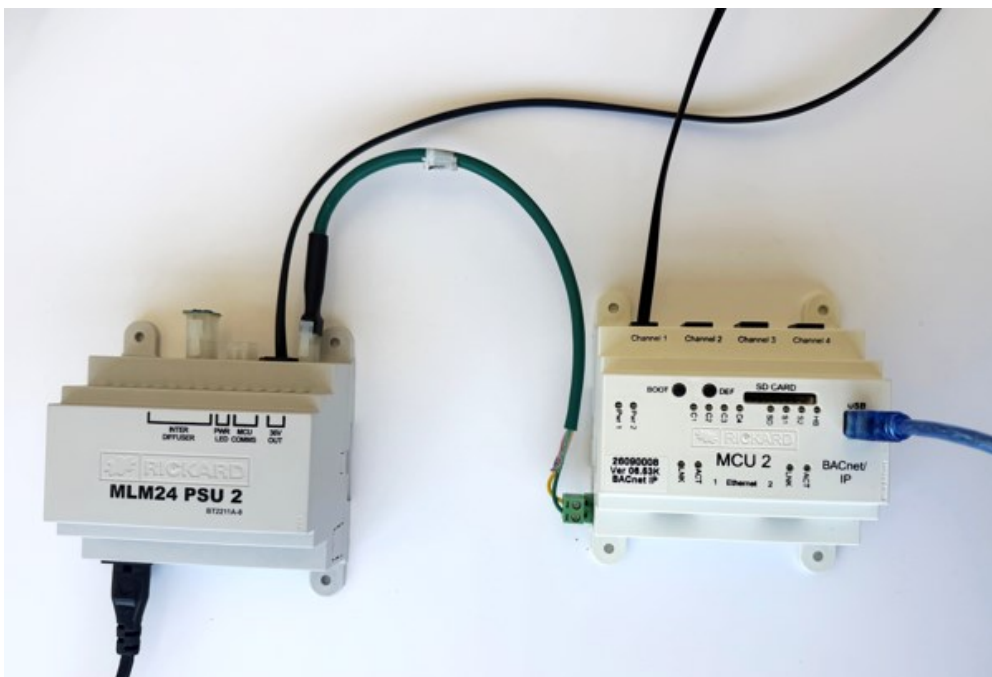




For single channel connection to the MLM application (1 channel is 1 PSU and up to 15 diffusers). Connect the USB modules with the RJ9 cable provided to the PSU as shown. (the USB module can also be plugged into any Wall Thermostat connected to view all diffusers on the same power pack)



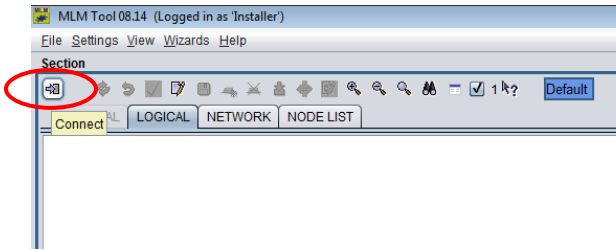
Connect the included USB cable to the USB module and plug the other end into a USB connector in your PC.



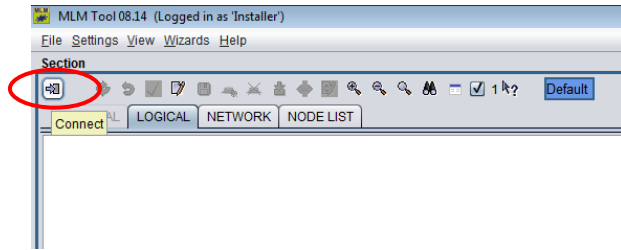
Four channels can be connected to the MLM software by connecting the four powerpacks to the MCU using the RJ9 cables provided. The MCU can be powered from a PSU using the 36V output. (Polarity is not important)

Connect the USB cable to the MCU as shown for easy connection to the MLM software. With this cable it will auto detect IP address. The ethernet port is available to connect via the network with a set IP address.

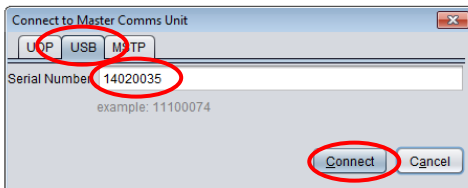
Open the MLM Application and click connect.



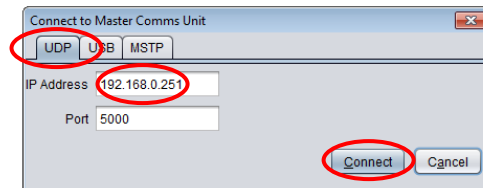
Click Connect.



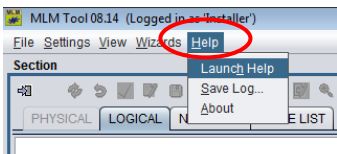
If you are using a USB module, click on the USB tab and type in the serial number written on the USB black box. Click Connect



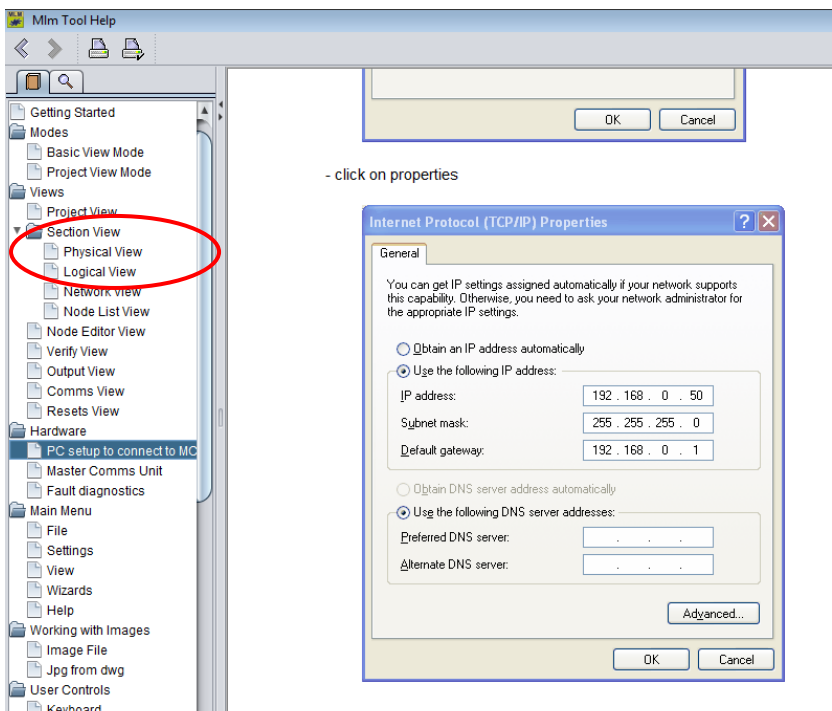
Click on the UDP tab and type in the MCU's default IP address i.e. 192.168.0.251. Click Connect.



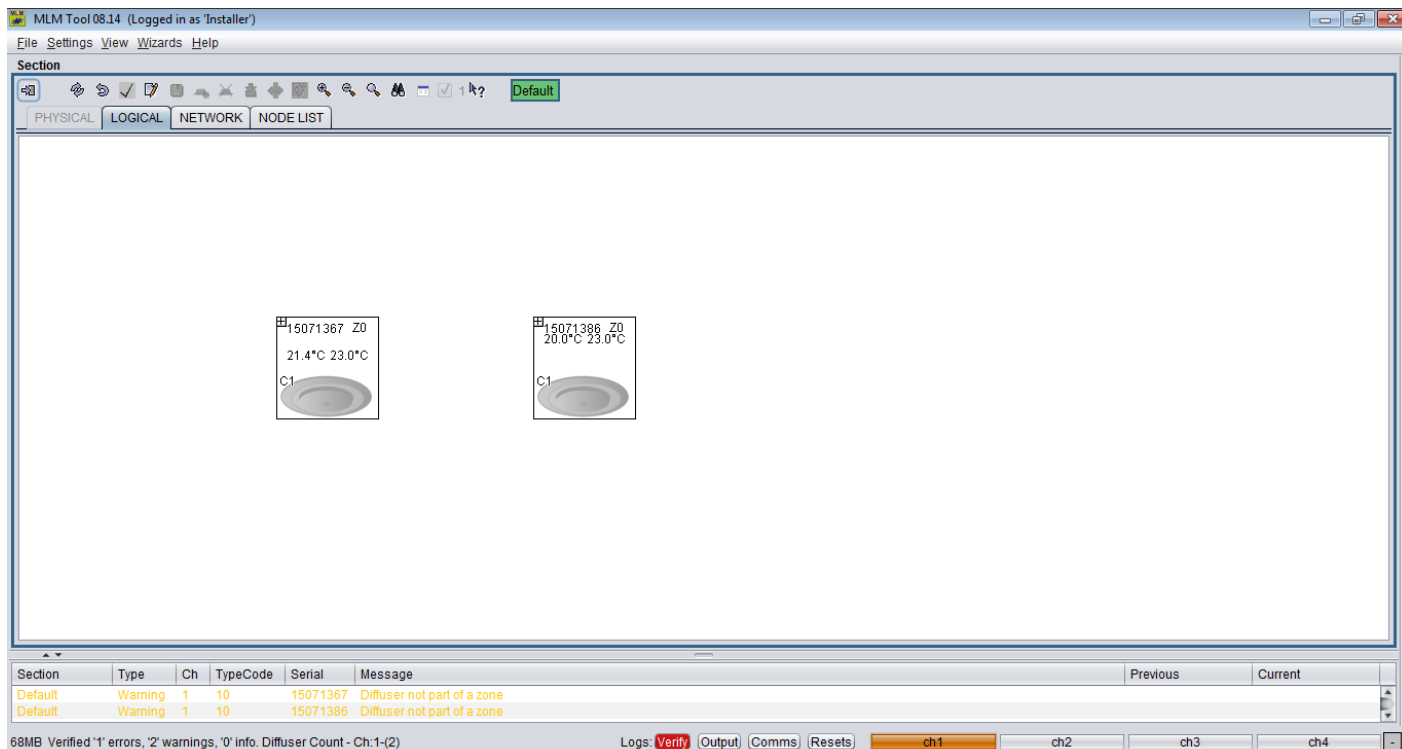
If you are connecting through a MCU module. Make sure your Computers IP address is setup correctly. Please go to the Help menu on the MLM application and select "Launch Help" for instructions.



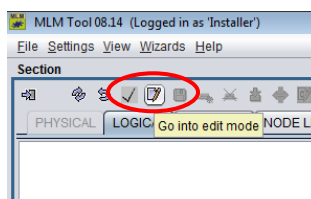
Go to Hardware and PC setup to connect to MCU in the contents menu. Set your PC's IP address correctly.



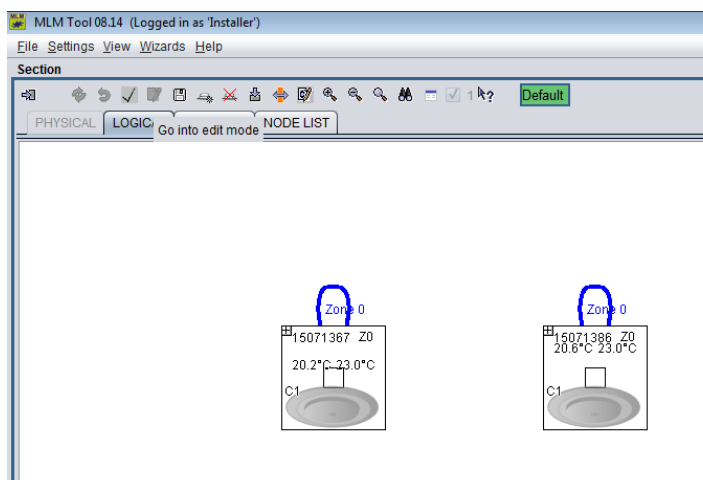
The diffusers you are connected to will look something like this. You will need to wait until the diffusers sync before the diffusers will be visible.



To Zone the diffusers correctly start by clicking on the edit icon shown.

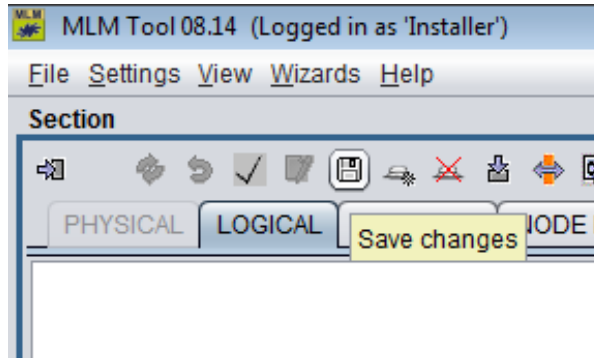
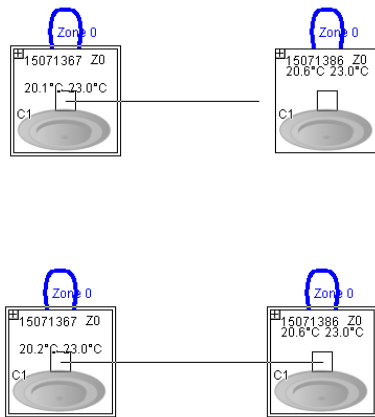


You will now be able to edit the diffusers zones.

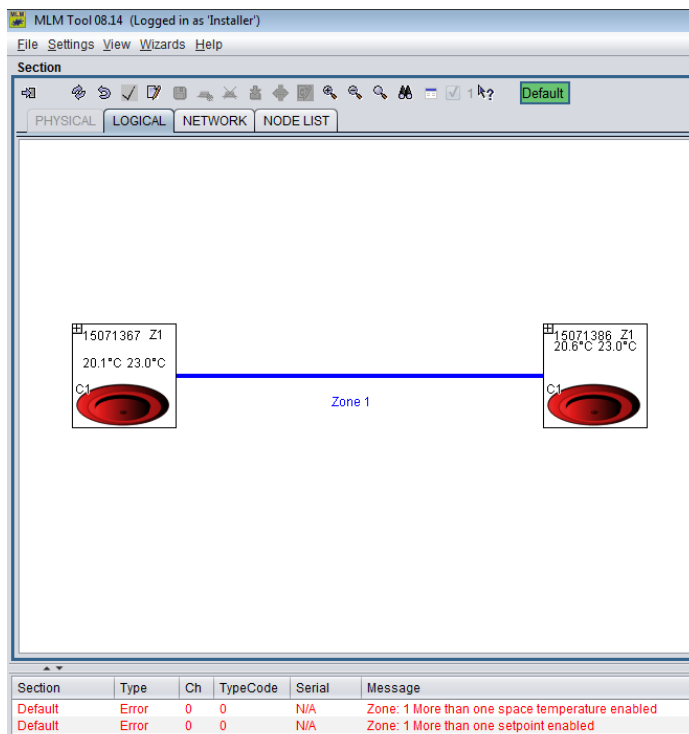
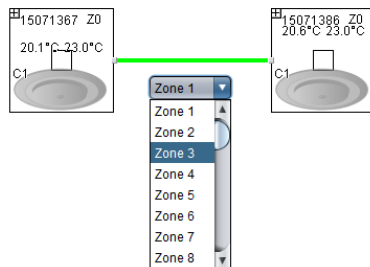


To create one zone between two diffusers, click on the square that is active inside the diffuser icon and drag the connecting line to the diffuser you want to connect to.

Click on the Save Icon to save the changes.



Double click on the line and choose a zone number.

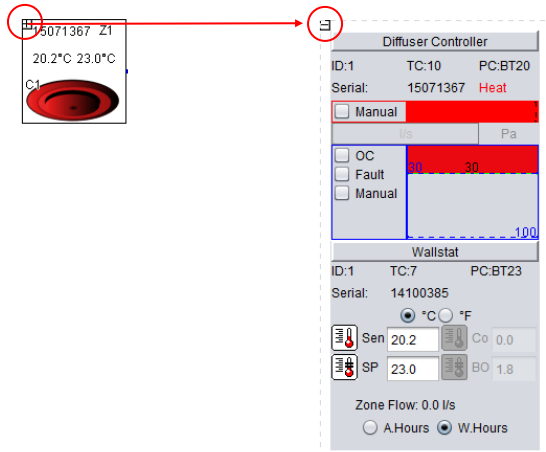


Zone Conflict:

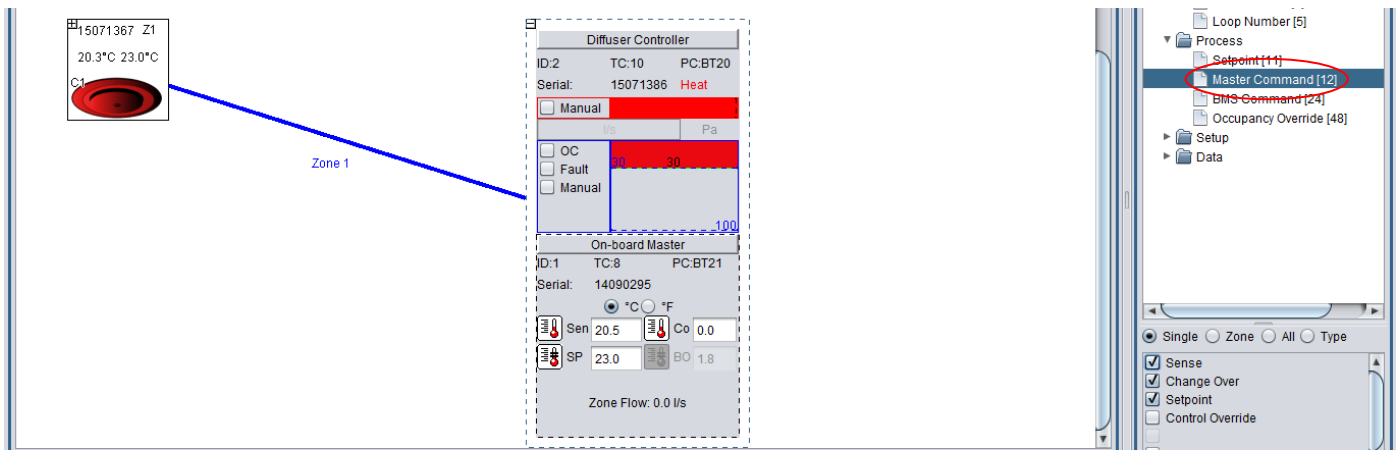
Where sensing options are activate in the same zone there will be control conflict. The control conflict will be highlighted as an error message in the message table at the bottom of the screen.

(See next page for deactivation of one of the controllers)

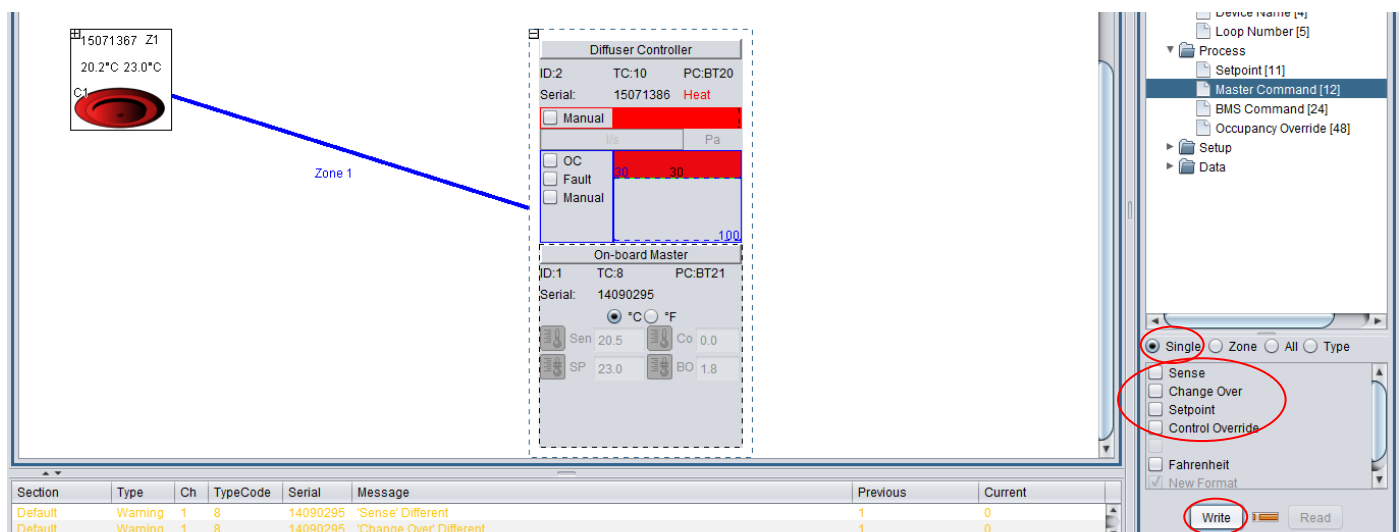
If you connect 2 master diffusers into one zone you must deactivate one master controller. Click on the diffuser + sign to view the controllers attached to the diffuser.



Click on the On-board Master or Wallstat so that its box is highlighted with a hashed line. In the Node Editor panel open the Process Menu and click on Master Command.



Deselect Sense, Change-Over and Setpoint. Be sure to select Single so that only that diffusers settings are changed. Click Write or hit Enter. Zone, All and Type affect changes across the entire Zone, across All the diffusers attached or all the diffusers of that Type respectively.

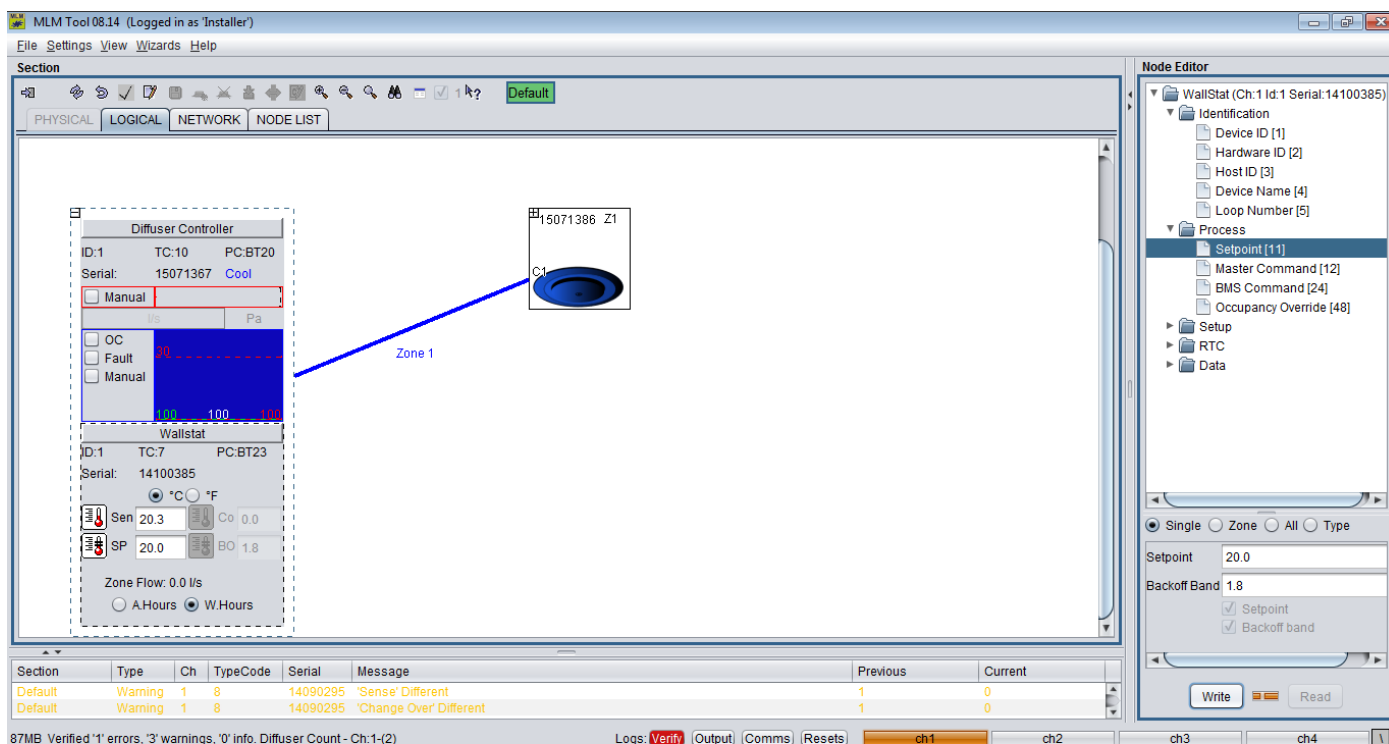


To set the diffuser Setpoint. Double click on the minimised diffuser icon and adjust the setpoint to the desired temperature as shown.



Alternatively maximize the diffuser, click on the On-board or Wallstat Controller, go to Process, Setpoint, type in the new Setpoint temperature and hit Enter or click Write.

Be sure to select Single so that only that diffusers settings are changed. Zone, All and Type affect changes across the entire Zone, across All the diffusers attached or all the diffusers of that Type respectively.



For more help with the MLM Software please go to the help menu shown below.

