Anybus® BY HMS NETWORKS

HMS Sequence

Exercise: I/O Mapping

SOLUTION SHEET

SCM-1202-134 1.0 en-US ENGLISH

HMS Connecting Devices™

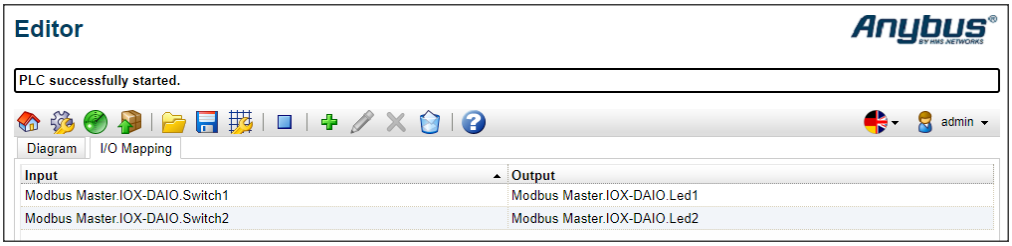
1 I/O Mapping

This exercise explains how to transfer data between networks. There are two possible ways to do this. For simple copying of data, use the Editor's I/O mapping (see *I/O Mapping View, p. 2*). For more control and the ability to modify data, use the Editor's Diagram view (see *Diagram View, p. 2*).

1.1 I/O Mapping View

For simple copying of data between I/Os, networks or HMS Hub tags, use the Editor's I/O mapping.

1. Enter the Editor view (Function Chart).
2. Click the I/O Mapping tab.
3. Map inputs to outputs. Add I/O mappings by clicking the green plus sign in the toolbar.

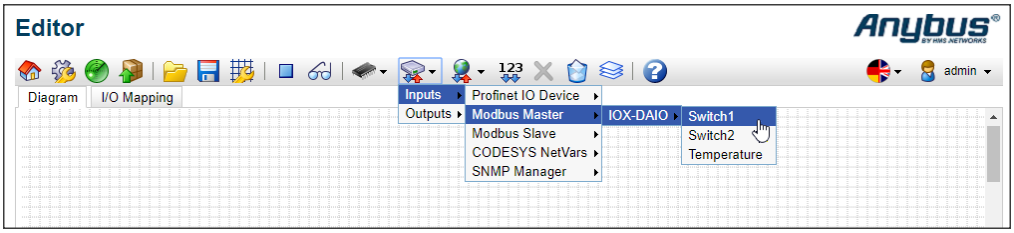


4. Press Save in the toolbar.
5. Start. Do this by clicking the start button (play button) in the toolbar. When you have started the program, this will be indicated by activity on the PLC LED on the gateway.
6. Verify that the LEDs turn and off on when you flick the switches.
7. For the next part of the exercise, we need to start with an empty I/O mapping. Erase the inputs and outputs that you created above. To do this, select each item separately and click "X" in the menu.

1.2 Diagram View

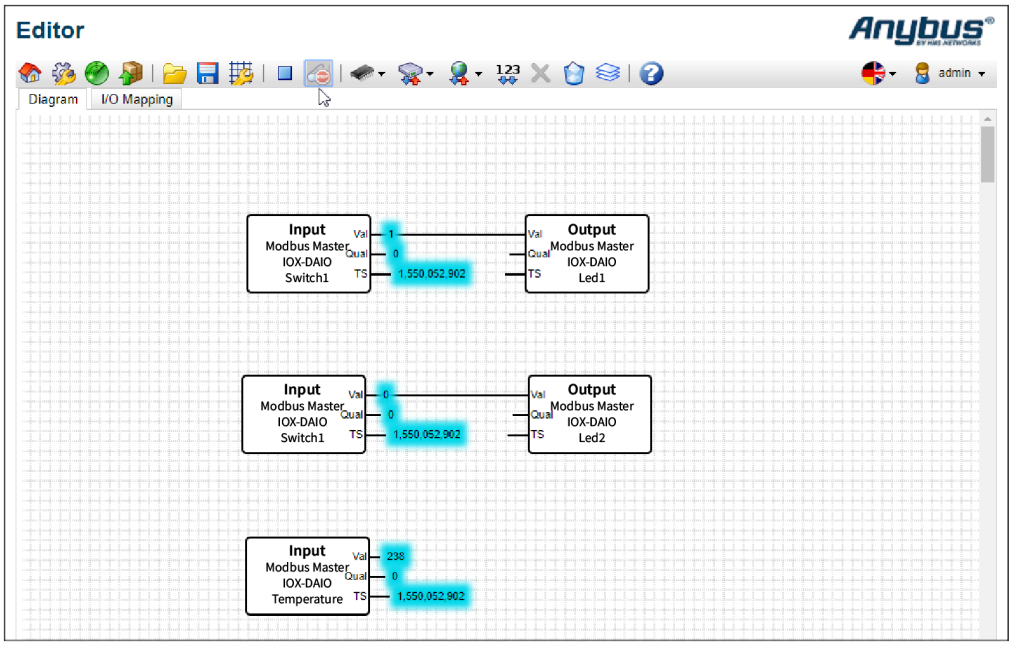
For cases where data has to be modified, the Editor's Diagram view should be used.

1. Click the Diagram tab (Function Chart).
2. Add local I/O –> Input –> Modbus Master –> IOX–DAIO –> Switch 1. Do this according to the image below. Move the new element to a new position, because all new elements will show up in the left corner.



3. Repeat the procedure for Switch 2 and temperature.
4. Add local I/O –> Output –> Modbus Master –> IOX–DAIO –> LED 1.
5. Repeat the procedure for LED 2.

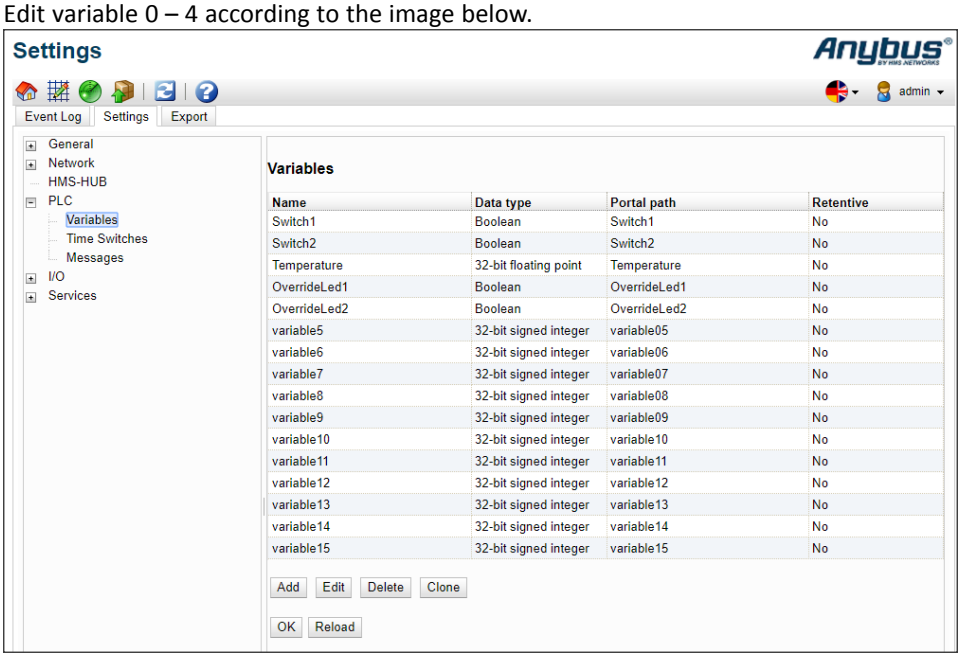
6. Place the local I/Os in a logical way in the editor. Draw a line from Val of Switch 1 to Val of LED 1. Draw a line from Val of Switch 2 to Val of LED 2. To draw a line, click a port, press the mouse button and drag the appearing blue connector over to the other port. Release the mouse button.



7. Press **Save**.
8. Start.
9. In the Diagram view, it is possible to monitor values. To do this, start Live view by pressing **Live view** in the toolbar.
10. Test the program.

1.3 Prepare Data for HMS Hub

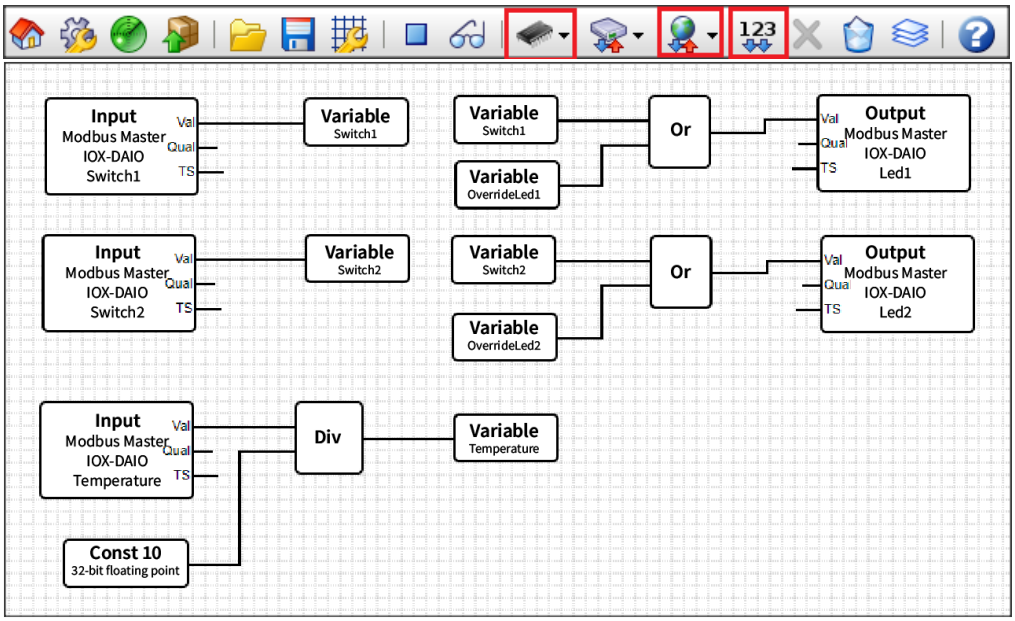
1. The next step is to prepare to use the data in HMS Hub. As a best practice, we use variables.
   - Go to Settings, then select the **Settings** tab. Expand **PLC** in the menu tree.
   - Click **Variables**.
   - Edit variable 0 – 4 according to the image below.



   - Click OK, and reboot to apply.

2. Click the Diagram tab. If you see a popup window, click Convert. Arrange the variables according to this image.

   You will find variables under the globe icon, the numerical function under the chip icon and constants are defined under the 123 icon.



3. Save the program.
4. Start the program, and test it. This marks the end of the exercises on Sequence I/O mapping.

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Box 4126
300 04 Halmstad, Sweden

info@hms.se