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How to…
Configure the analog output on a 1020
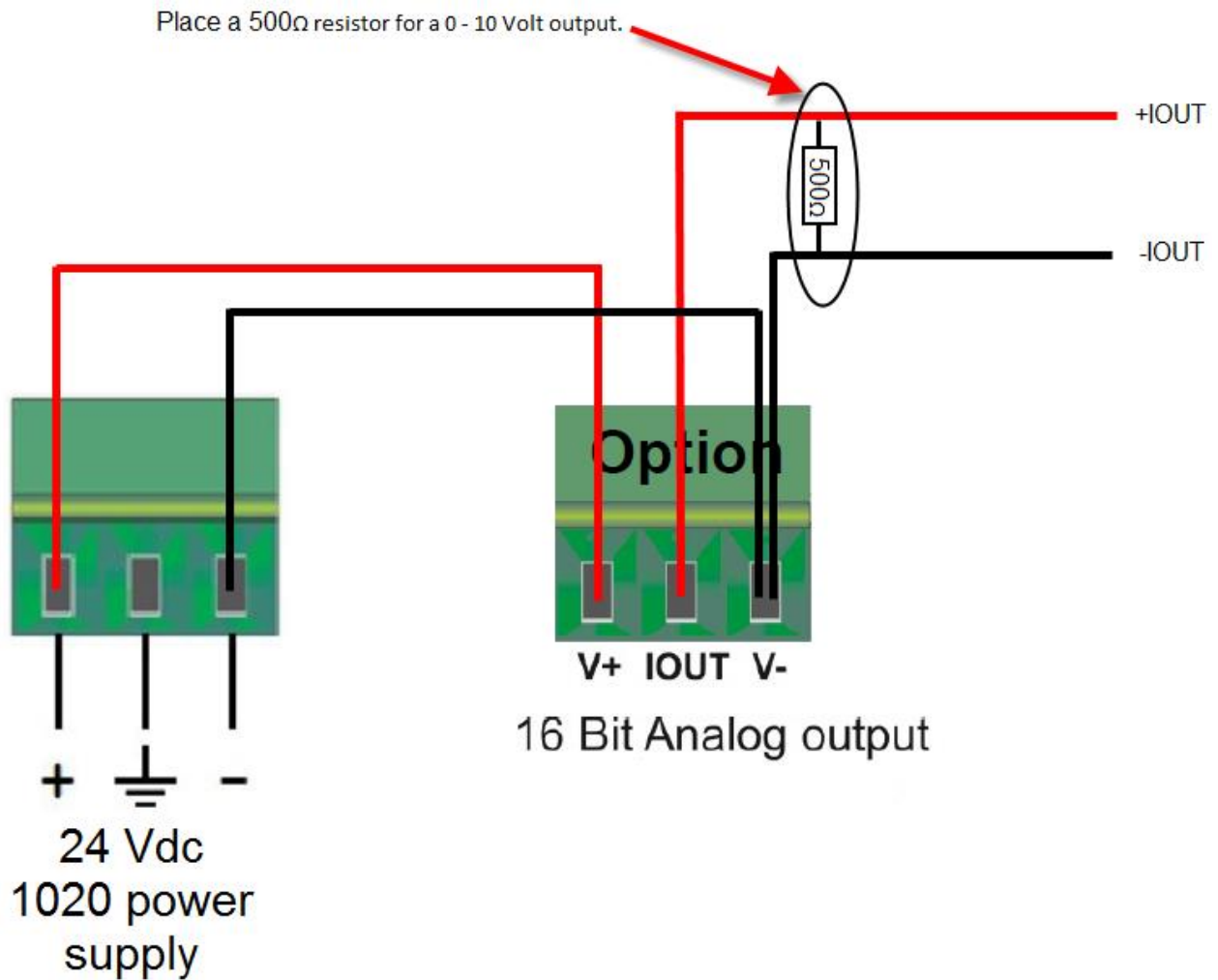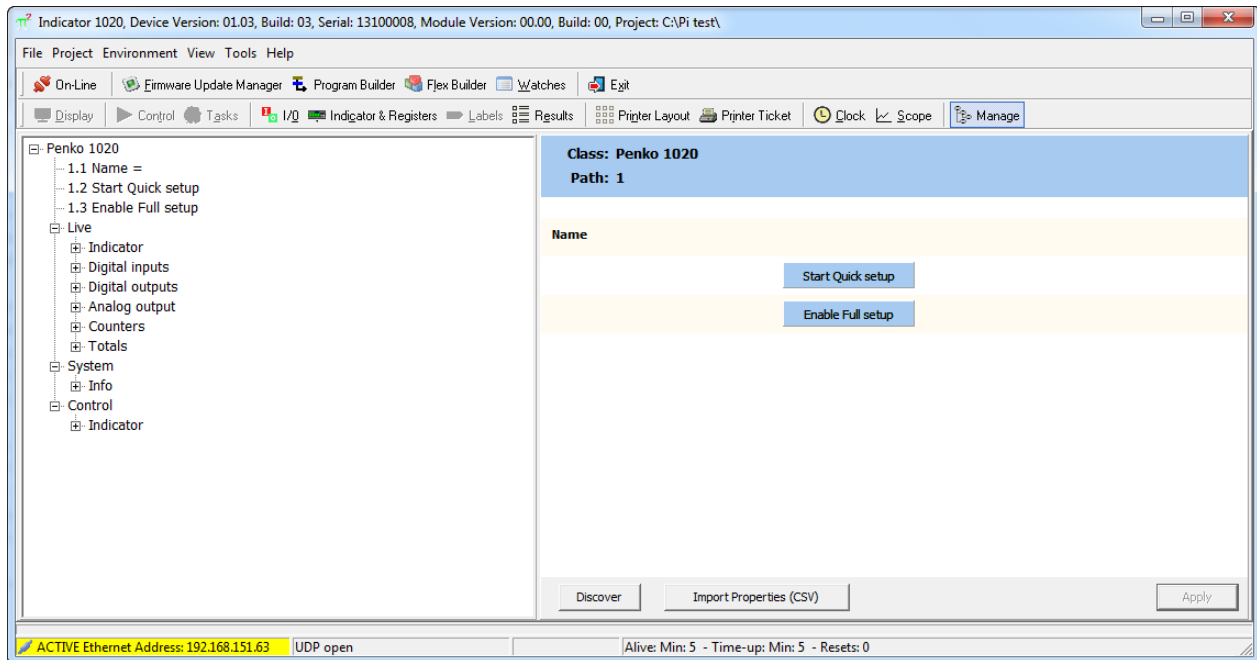

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The analog output is an option for the 1020 and is an passive output.

In normal configuration the 1020 will give out a mA signal but it is also possible to have a Volt output. This can be done by placing a resistor of 500Ω parallel between IOUT and V−. If the **Range** is set to 0 – 20 mA the output will be 0,45 – 10 Volt.
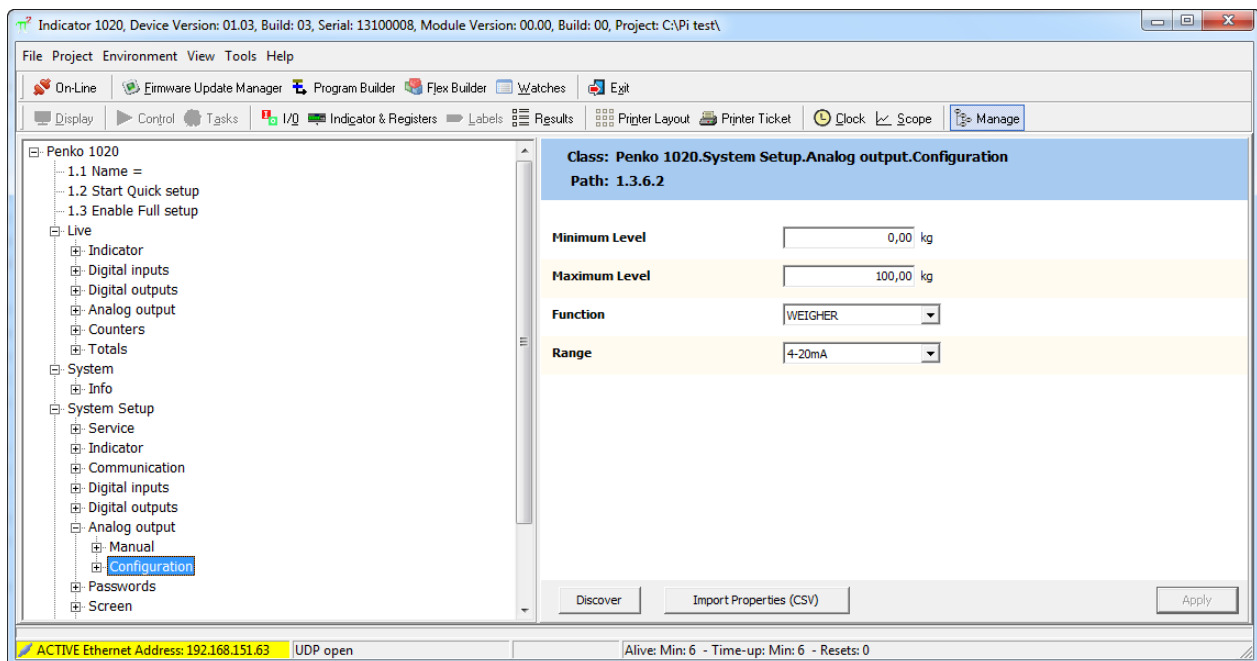

Place a 500Ω resistor for a 0 - 10 Volt output.

+IOUT

500Ω

-IOUT

Option

V+ IOUT V-

16 Bit Analog output

+ ⏚ -

24 Vdc
1020 power
supply

Setup the 1020

Connect the 1020 to a PC using a USB-cable and open Pi Mach II and double click on **1020**.

Click on **Enable Full** setup and double click on **System Setup**, then double click on **Analog outputs,** double click on **Configuration**. Here you can change the following parameters:

Click on **Apply** to save settings.

Minimum level:

The analog output will give the lowest output at the weight level you have set here. This will be 0 or 4 mA depending on your range settings.

Maximum level:

The analog output will give the highest output at the weight level you have set here. This will be 20 or 24 mA depending on your range settings.

Function:

You can choose the following function you want the analog output to react to.

Indicator number	Function	Description
1	Weigher	The actual weight of the Indicator, without filtering.
2	Fast Gross	The weight without filtering and Tare.
3	Fast Net	The weight without filtering and Tare deducted.
4	Display Gross	The weight with Display filtering and without Tare.
5	Display Net	The weight with Display filtering and Tare deducted.
6	Tare	The weight of an empty container. Gross – Tare = Net.
7	Peak	The highest point weighted on the Indicator. The analog output will constantly supply this value.
8	Valley	The lowest point weighted on the Indicator. The analog output will constantly supply this value.
9	Weigher x10	The actual weight of the Indicator with 1 extra decimal point for more accuracy.
10	Fast Gross x10	The weight without filtering and Tare with 1 extra decimal point for more accuracy.
11	Fast Net x10	The weight without filtering and Tare deducted with 1 extra decimal point for more accuracy.
12	Display Gross x10	The weight with Display filtering and without Tare with 1 extra decimal point for more accuracy.
13	Display Net x10	The weight with Display filtering and Tare deducted with 1 extra decimal point for more accuracy.
14	Tare x10	The weight of an empty container. Gross – Tare = Net with 1 extra decimal point for more accuracy.
15	Peak x10	The highest point weighted on the Indicator with 1 extra decimal point for more accuracy. The analog output will constantly supply this value.
16	Valley x10	The lowest point weighted on the Indicator with 1 extra decimal point for more accuracy. The analog output will constantly supply this value.
17	Sample	The ADC value of the weight

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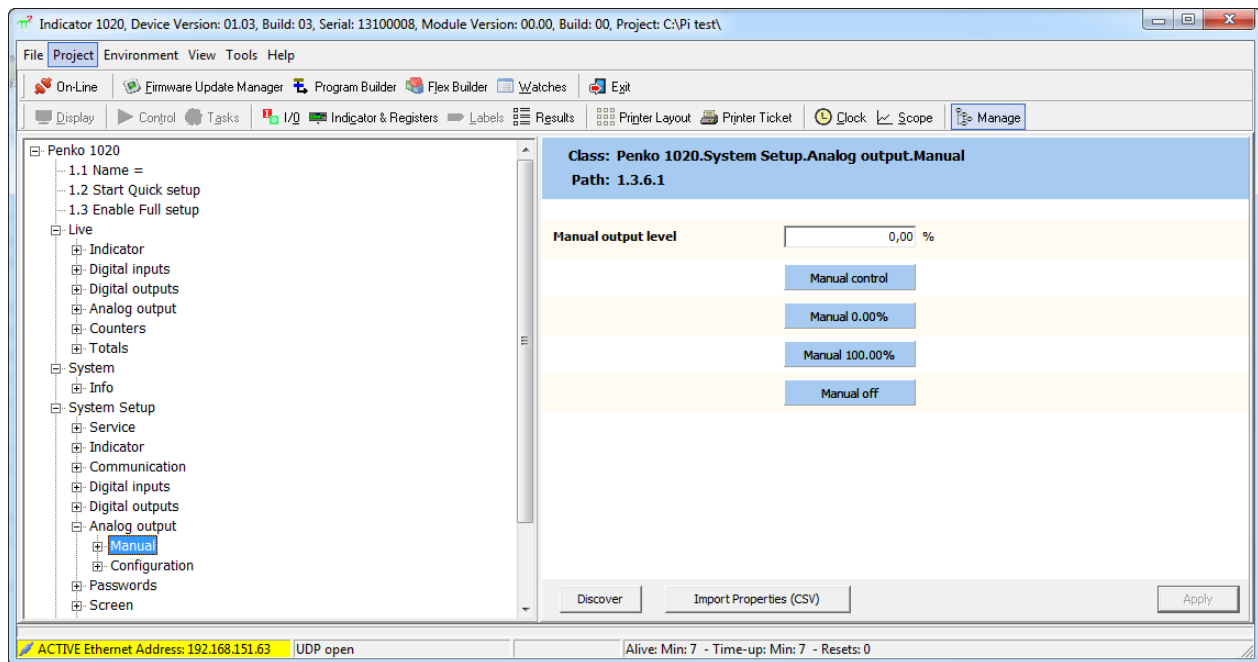
Range:

Range	Description
RAW	16 bit DAC value. For a custom calibration (controller version only)
0 – 20 mA	The minimum and maximum output of the analog output.
0 – 24 mA	The minimum and maximum output of the analog output.
4 – 20 mA	The minimum and maximum output of the analog output.
4 – 24 mA	The minimum and maximum output of the analog output.

Check the analog output

Go to **System Setup**, then double click on **Analog outputs** and double click on **Manual**. Here you can control the analog output manual.

Click on **Manual control** to activate the analog output manually. Now you can click on **Manual 0.00%** or **Manual 100.00%**. Or set the **Manual output level** in a percentage and press "enter" or click on **Apply**.

To leave the Manual mode click on **Manual off.**

About PENKO

Our design expertise include systems for manufacturing plants, bulk weighing, check weighing, force measuring and process control. For over 35 years, PENKO Engineering B.V. has been at the forefront of development and production of high-accuracy, high-speed weighing systems and our solutions continue to help cut costs, increase ROI and drive profits for some of the largest global brands, such as Cargill, Sara Lee, Heinz, Kraft Foods and Unilever to name but a few.

Whether you are looking for a simple stand-alone weighing system or a high-speed weighing and dosing controller for a complex automated production line, PENKO has a comprehensive range of standard solutions you can rely on.

Certifications

PENKO sets high standards for its products and product performance which are tested, certified and approved by independent expert and government organizations to ensure they meet – and even – exceed metrology industry guidelines. A library of testing certificates is available for reference on:
http://penko.com/nl/publications_certificates.html

PENKO Professional Services

PENKO is committed to ensuring every system is installed, tested, programmed, commissioned and operational to client specifications. Our engineers, at our weighing center in Ede, Netherlands, as well as our distributors around the world, strive to solve most weighing-system issues within the same day. On a monthly basis PENKO offers free training classes to anyone interested in exploring modern, high-speed weighing instruments and solutions. A schedule of training sessions is found on: **www.penko.com/training**

PENKO Alliances

PENKO's worldwide network: Australia, Belgium, Brazil, China, Denmark, Germany, Egypt, Finland, France, India, Italy, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Syria, Turkey, United Kingdom, South Africa, Slovakia Sweden, Switzerland and Singapore. A complete overview you will find on: **www.penko.com/dealers**