PENKO Engineering B.V.

Your Partner for Fully Engineered Factory Solutions

How to…

Connect the SGM720 or SGM820 BLT, CHK or MFL to a FLEX 2100, FLEX or FLEX 2ch. – 4ch.

PENKO
an ETC Company

Table of Contents

General information

When the SGM720/SGM820 is powered by USB (not 24Vdc) the load cell interface and the analog output will not work.

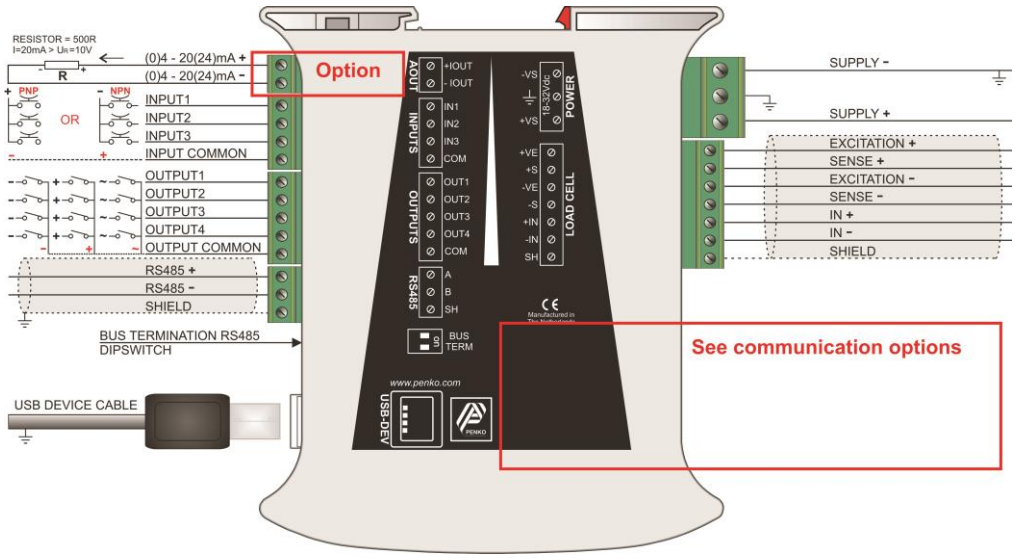
Analoge output (option)

Inputs
Input 1=5khz
18-28Vdc

Outputs
25V/0.5A
AC/DC

Local bus

To PC
Config
software

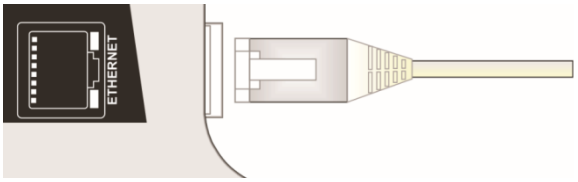


DC POWER
SUPPLY
18-32Vdc

6-Wire load cell
connection
Vexc=5Vdc

SGM720

Ethernet connection



It is possible to connect an Indicator to a controller, or a controller with another controller, but it is not possible to connect an Indicator to another Indicator.

Ethernet

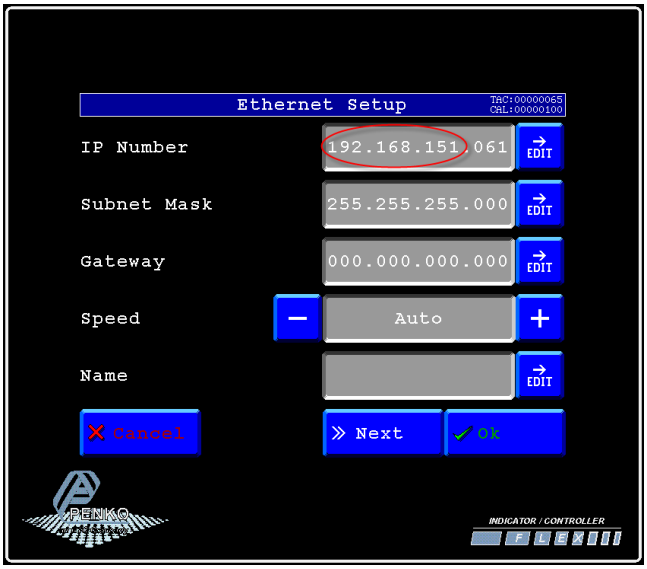
The SGM720/SGM820 shows the 3 inputs, 4 outputs and 40 markers, 15 weighing values the FLEX can read.

Use a Ethernet crossover cable to connect the SGM720/SGM820 to a FLEX, FLEX2100 or FLEX 2ch. – 4ch directly, or use a switch to connect one or more SGM720/SGM820's.

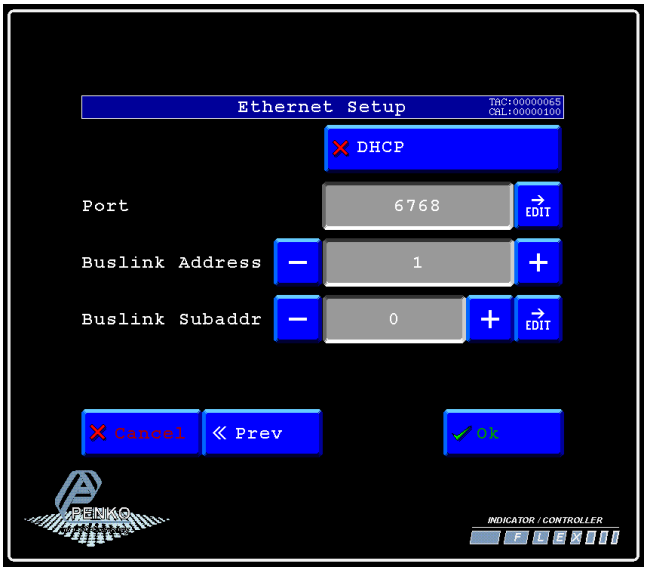
Set up the FLEX

Go to **Menu → System Setup → Port Setup → Ethernet Setup** Set the **IP Address.**

Note: the first 3 numbers must be the same as the SGM720 or SGM820.



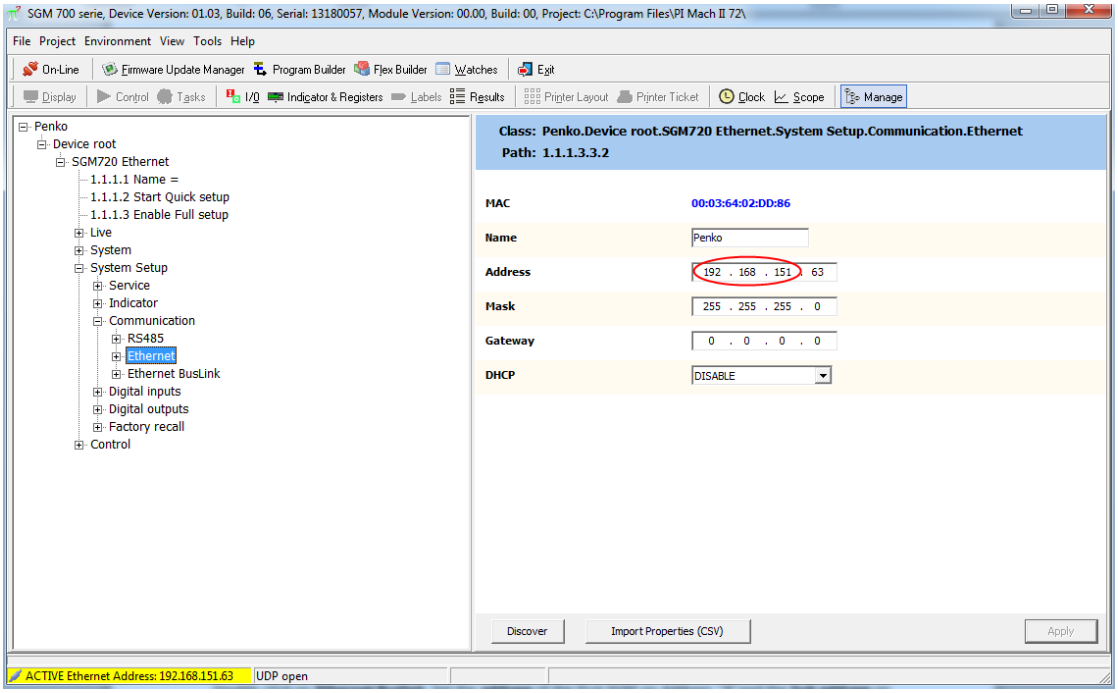
Press **Next**. Set **Buslink Address** on "**1**" and **Buslink Subaddr** on "**0**". Press **OK** to save settings.



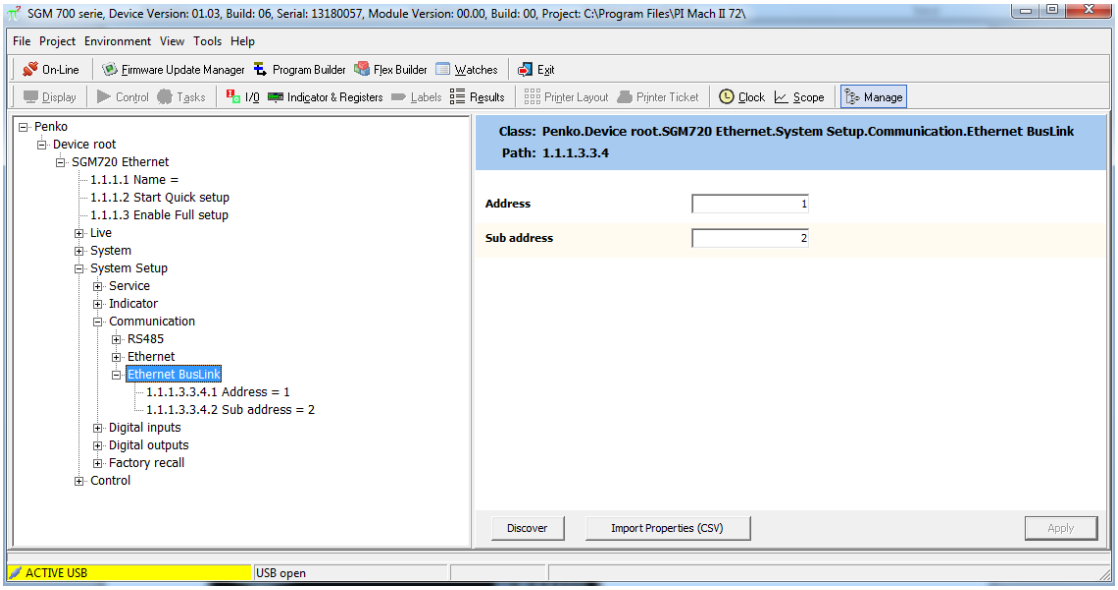
Setup the SGM720/SGM820

Connect the SGM720/SGM820 to a PC using a USB-cable and open Pi Mach II and double click on **SGM720** or **SGM820**, then double click on **System Setup**, then double click on **Communication**, then double click on **Ethernet**, set the **Ethernet address**. Click on **Apply** to save settings.

Note: the first 3 numbers must be the same as the FLEX.

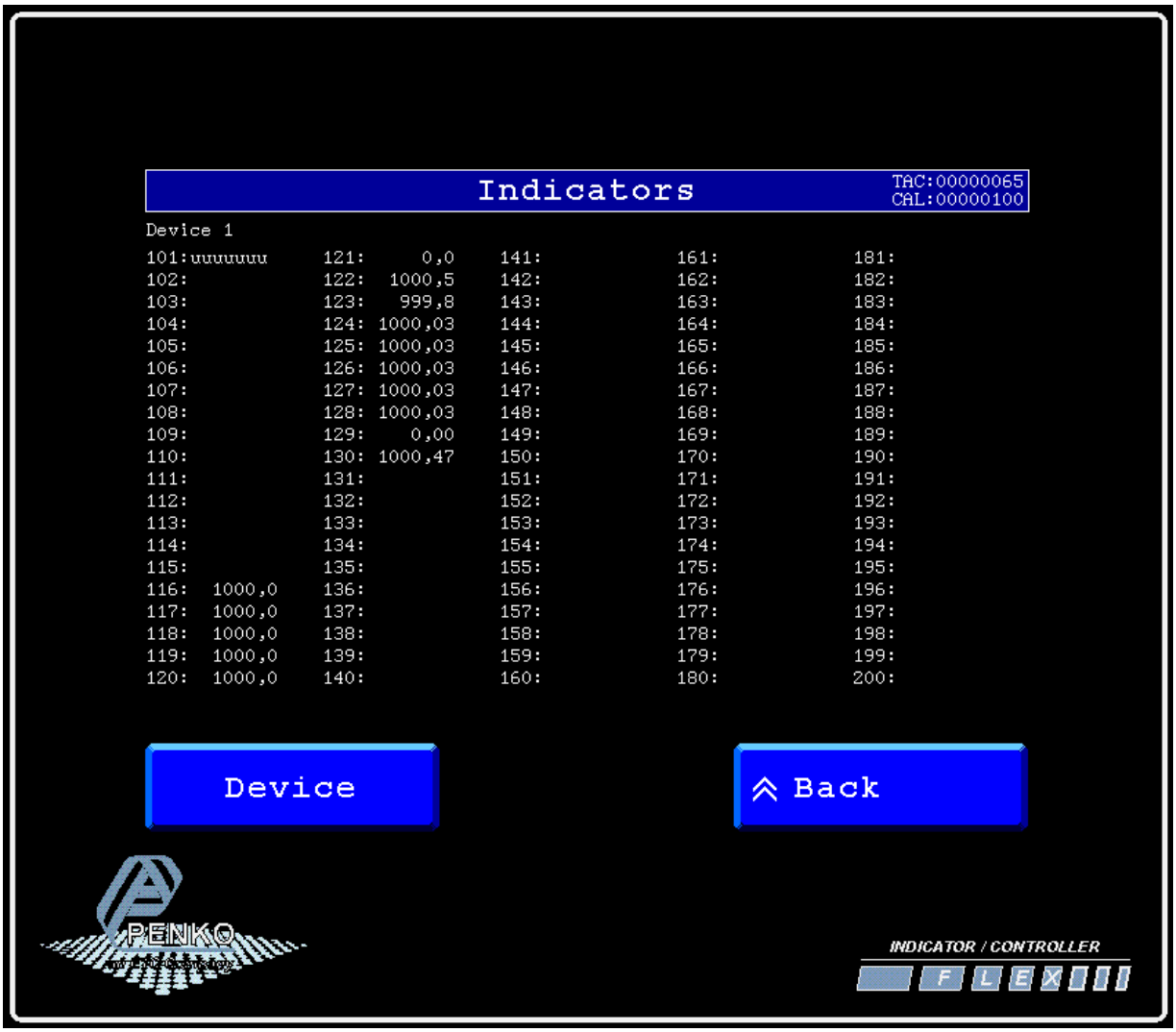


Double click on **Ethernet Buslink**. Set the **address** of the first SGM on Address "**1**"and the **Sub address** on "**2**". Click on **Apply** to save settings.



Checking the connection

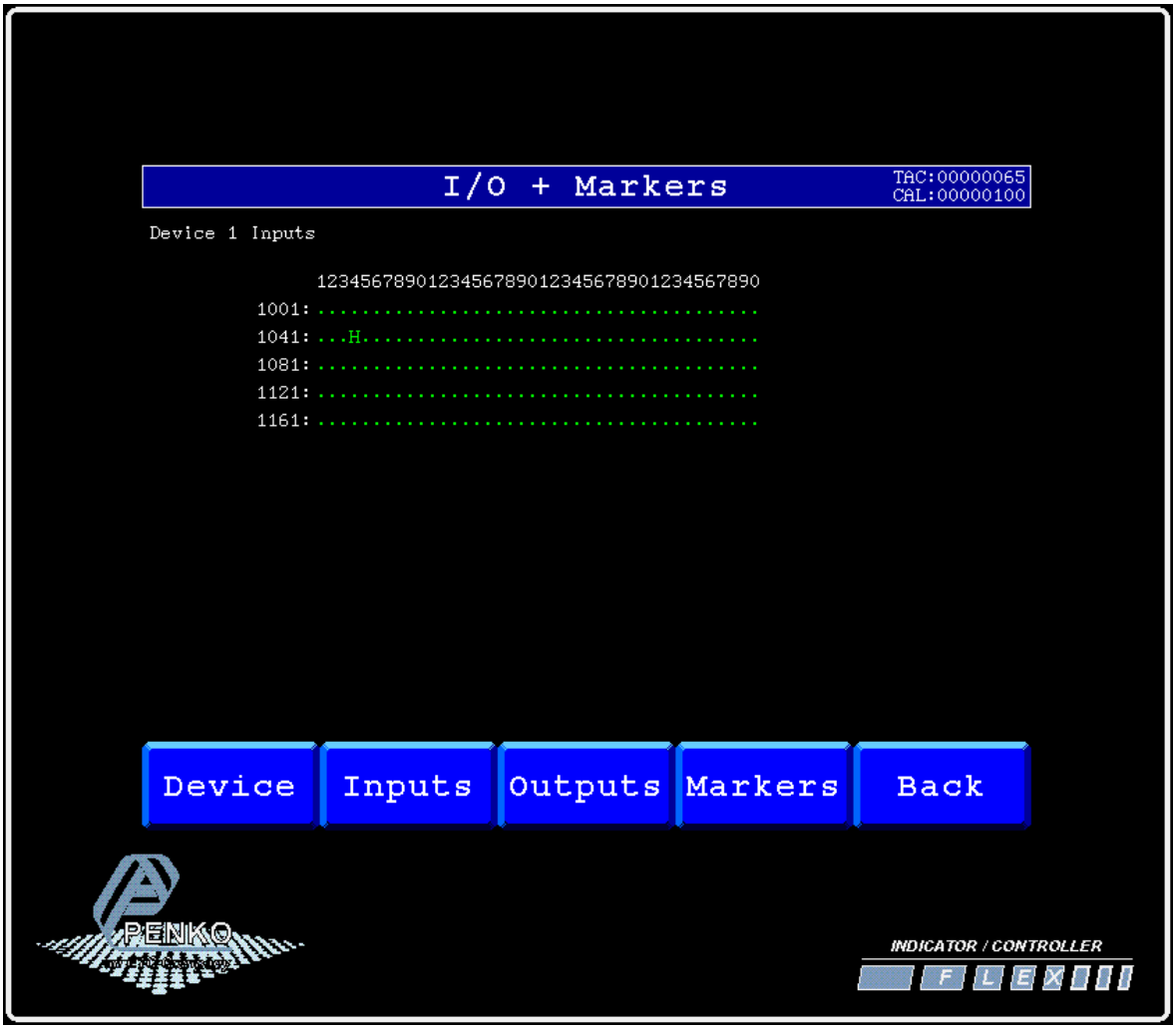
To check if the connection works, use the FLEX and go to **Menu → Status → Indicators → Device**. Now you should see the values of the SGM720/SGM820 from 116 to 130. The values are described below.



Indicator number	Function	Description
1	Weigher	The actual weight of the Indicator.
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.
8	Valley	The lowest point weighted on the Indicator.
9	Weigher x10	The actual weight of the Indicator with 1 extra decimal point for more accuracy.

Indicator number	Function	Description
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.

Go back to **Status** and select **I/O + Markers** to see the status of the Inputs, Outputs and Markers. If an Input, Output or Marker is high it will show as a "H". In the example below input 4 is high.



If you want to connect more than one SGM720/SGM820's, use the following settings for the Indicators:

Device number	Address	Sub address	weight values shown on the FLEX	Inputs shown on the FLEX	Outputs shown on the FLEX	Markers shown on the FLEX
1	1	2	116-130	1041-1043	1241-1244	1441-1480
2	1	3	131-145	1081-1083	1281-1284	1481-1520
3	1	4	146-160	1121-1124	1321-1324	1521-1560
4	1	5	161-175	1161-1164	1361-1364	1561-1600
5	2	1	201-215	2001-2004	2201-2204	2401-2440
6	2	2	216-230	2041-2044	2241-2244	2441-2480
7	2	3	231-245	2081-2084	2281-2284	2481-2520
8	2	4	246-260	2121-2124	2321-2324	2521-2560
9	2	5	261-275	2161-2164	2361-2364	2561-2600
10	3	1	301-315	3001-3004	3201-3204	3401-3440
11	3	2	316-330	3041-3044	3241-3244	3441-3480
12	3	3	331-345	3081-3084	3281-3284	3481-3520
13	3	4	346-360	3121-3124	3321-3324	3521-3560
14	3	5	361-375	3161-3164	3361-3364	3561-3600
15	4	1	401-415	4001-4004	4201-4204	4401-4440
16	4	2	416-430	4041-4044	4241-4244	4441-4480
17	4	3	431-445	4081-4084	4281-4284	4481-4520
18	4	4	446-460	4121-4124	4321-4324	4521-4560
19	4	5	461-475	4161-4164	4361-4364	4561-4600
20	5	1	501-515	5001-5004	5201-5204	5401-5440
21	5	2	516-530	5041-5044	5241-5244	5441-5480
22	5	3	531-545	5081-5084	5281-5284	5481-5520
23	5	4	546-560	5121-5124	5321-5324	5521-5560
24	5	5	561-575	5161-5164	5361-5364	5561-5600
25	6	1	601-615	6001-6004	6201-6204	6401-6440
26	6	2	616-630	6041-6044	6241-6244	6441-6480
27	6	3	631-645	6081-6084	6281-6284	6481-6520
28	6	4	646-660	6121-6124	6321-6324	6521-6560
29	6	5	661-675	6161-6164	6361-6364	6561-6600
30	7	1	701-715	7001-7004	7201-7204	7401-7440
31	7	2	716-730	7041-7044	7241-7244	7441-7480
32	7	3	731-745	7081-7084	7281-7284	7481-7520
33	7	4	746-760	7121-7124	7321-7324	7521-7560
34	7	5	761-775	7161-7164	7361-7364	7561-7600
35	8	1	801-815	8001-8004	8201-8204	8401-8440
36	8	2	816-830	8041-8044	8241-8244	8441-8480
37	8	3	831-845	8081-8084	8281-8284	8481-8520
38	8	4	846-860	8121-8124	8321-8324	8521-8560
39	8	5	861-875	8161-8164	8361-8364	8561-8600

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.

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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**

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