PENKO Engineering B.V.

Your Partner for Fully Engineered Factory Solutions

How to…

Connect an external display (Norsk display ND7036A) to a SGM750 or SGM850

PENKO
an ETC Company

Table of Contents

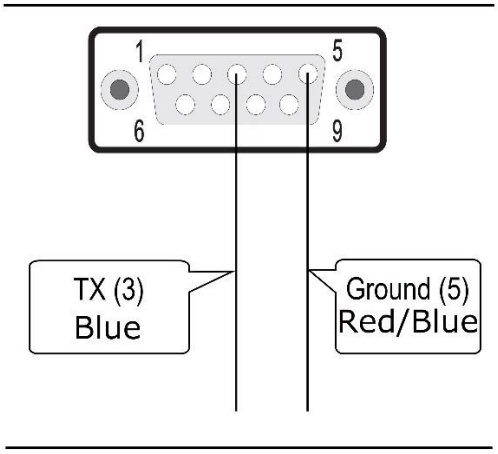
RS232 3
Hardware connection 3
Settings 3
RS422 8
Hardware connection 8
Settings 8

RS232

Hardware connection

In the example we use a Norsk display ND7036A. Connect **pin 3** of the SGM750/SGM850 sub-D connector to **RxD RS232 input** on the display, and connect **pin 5** of the SGM750/SGM850 sub-D connector to **RxD 0V input** on the display.

RS232 SGM750/SGM850



RS232 External display

Settings

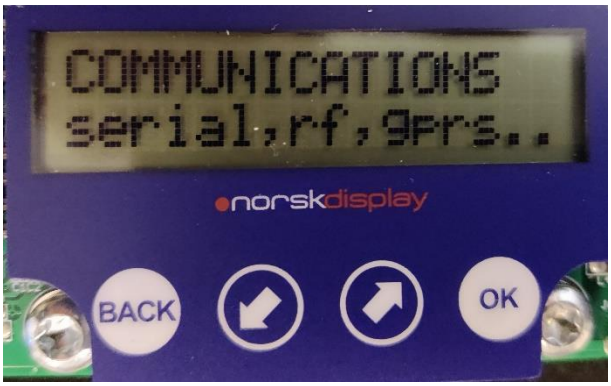
RS232	SGM750/SGM850 Settings	Display settings
Baud rate*	9600	9600
Protocol**	ASCII	
Address	255	
Stop bits	1	1
Data bits		8
Parity	None	None
Indicator	1	

*The Baud rate must be the same on the SGM750/SGM850 side and on the display side, otherwise the communication won't work.

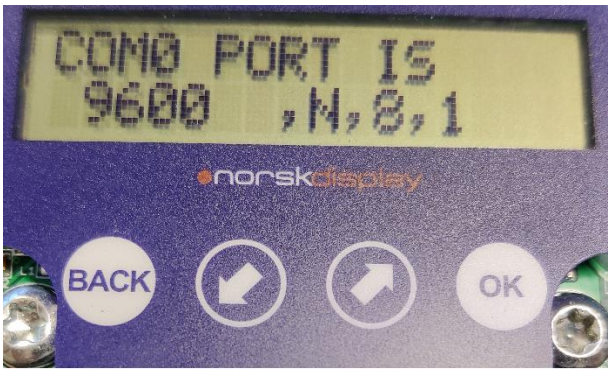
**Make sure that only RS232 is set to ASCII, the RS232 and RS422 cannot be both set to ASCII at the same time.

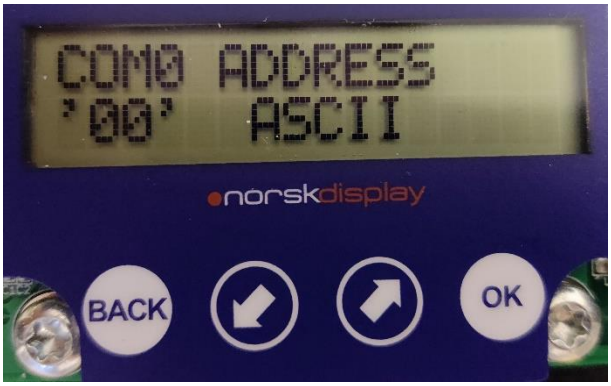
Check if the settings on the display are correct. Press and hold the OK button, then press simultaneously Back. Then press OK to enter the menu.

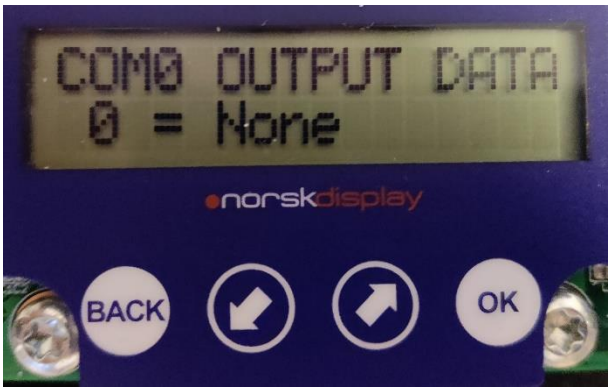
The communication settings are shown, press on OK.

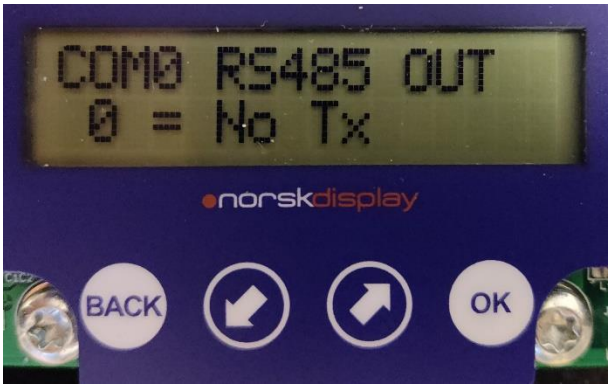


The com should auto detect the port settings, otherwise set the com. port settings as below:

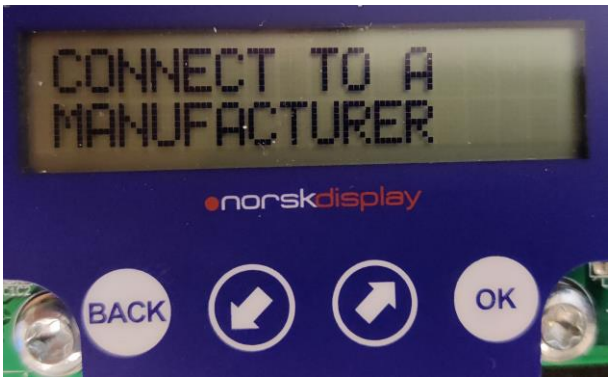




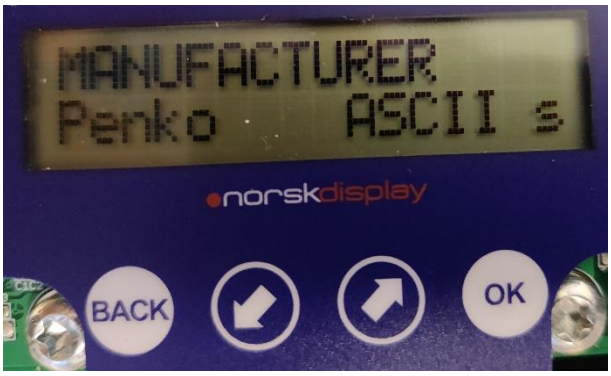




Press OK to set the manufacturer protocol.



Press OK to select the Penko ASCII protocol.

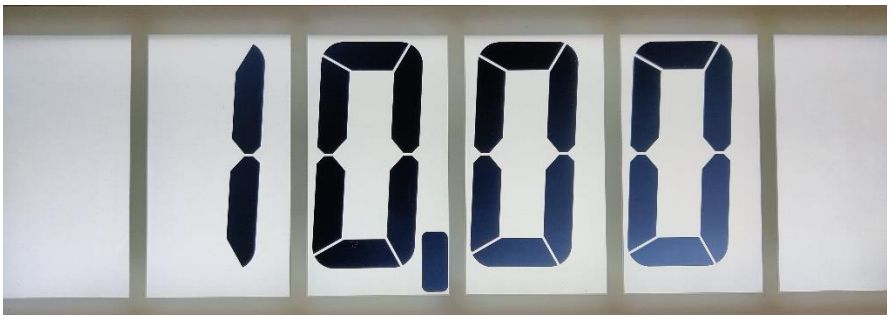


Press back until you can leave the menu, press OK and the display will reboot with the new settings.

If you want a different value to be shown select the indicator number below that you want.

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	Hold	The weight value is frozen.
10	Weigher x10	The actual weight of the Indicator with 1 extra decimal point for more accuracy.
11	Fast Gross x10	The weight without filtering and Tare with 1 extra decimal point for more accuracy.
12	Fast Net x10	The weight without filtering and Tare deducted with 1 extra decimal point for more accuracy.
13	Display Gross x10	The weight with Display filtering and without Tare with 1 extra decimal point for more accuracy.
14	Display Net x10	The weight with Display filtering and Tare deducted with 1 extra decimal point for more accuracy.
15	Tare x10	The weight of an empty container. Gross – Tare = Net with 1 extra decimal point for more accuracy.
16	Peak x10	The highest point weighted on the Indicator with 1 extra decimal point for more accuracy.
17	Valley x10	The lowest point weighted on the Indicator with 1 extra decimal point for more accuracy.
18	Hold x10	The weight value is frozen with 1 extra decimal point for more accuracy.
19	Sample	The actual sample of the load cell(s) in mV.

Now the display will show the same weight as the SGM750/SGM850.

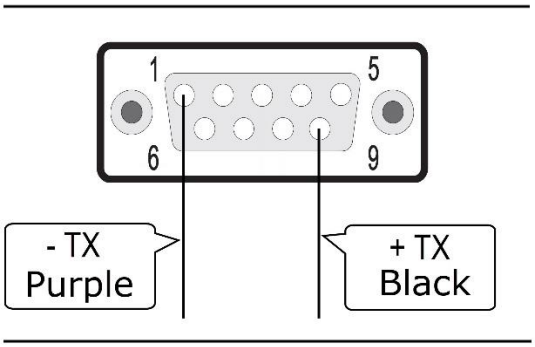


RS422

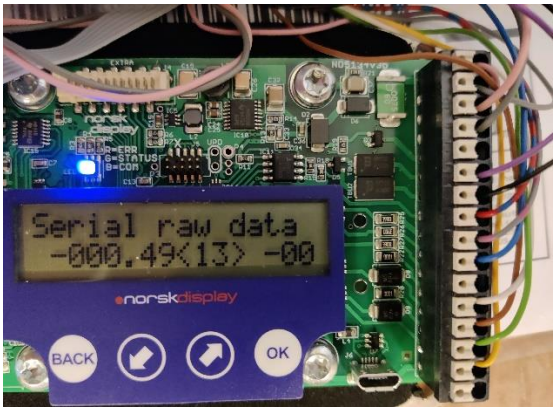
Hardware connection

In the example we use a Norsk display ND7036A. Connect **pin 1** of the SGM750/SGM850 sub-D connector to **-B** on the display, and connect **pin 9** of the SGM750/SGM850 sub-D connector to **+A** on the display.

RS422 SGM750/SGM850



RS485 External display



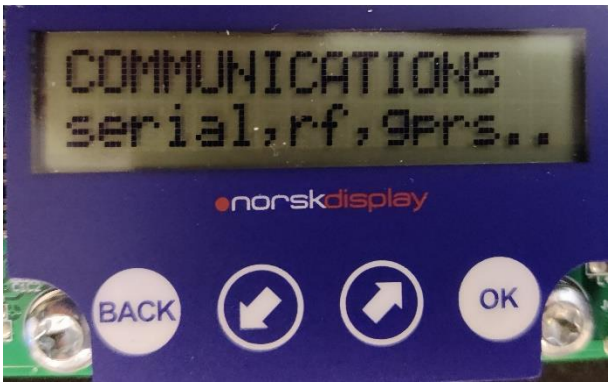
Settings

RS422	SGM750/SGM850 Settings	Display settings
Baud rate*	9600	9600
Protocol**	ASCII	
Address	255	
Stop bits	1	1
Data bits		8
Parity	None	None
Indicator	1	

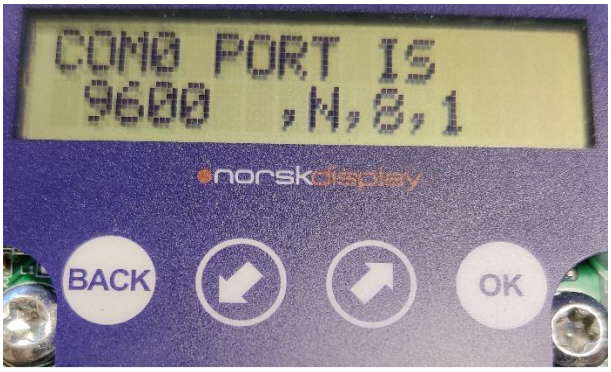
*The Baud rate must be the same on the SGM750/SGM850 side and on the display side, otherwise the communication won't work.

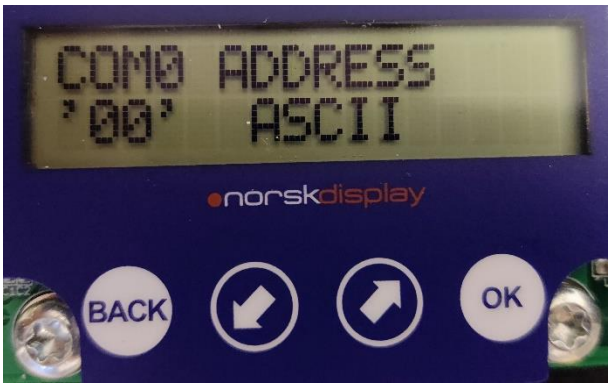
**Make sure that only RS422 is set to ASCII, the RS232 and RS422 cannot be both set to ASCII at the same time.

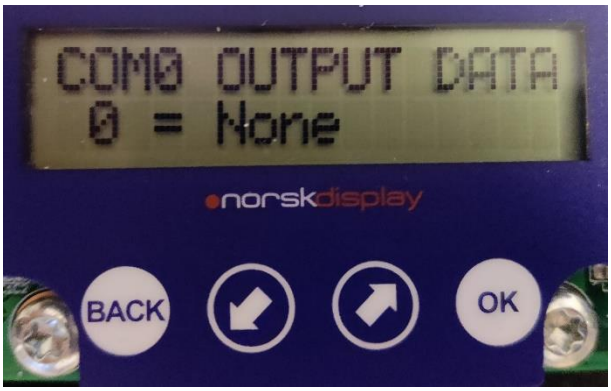
The communication settings are shown, press on OK.

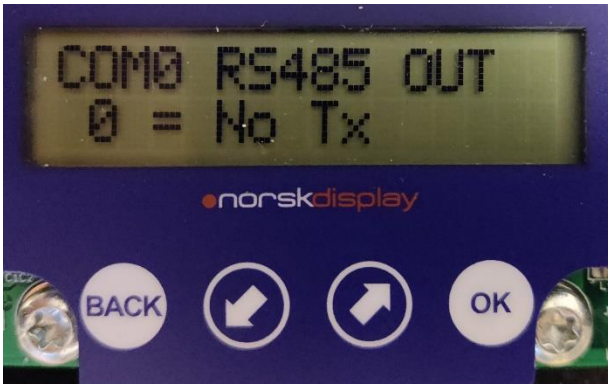


The com should auto detect the port settings, otherwise set the com. port settings as below:

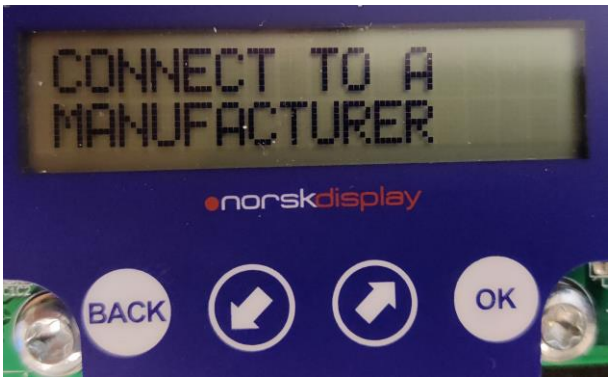




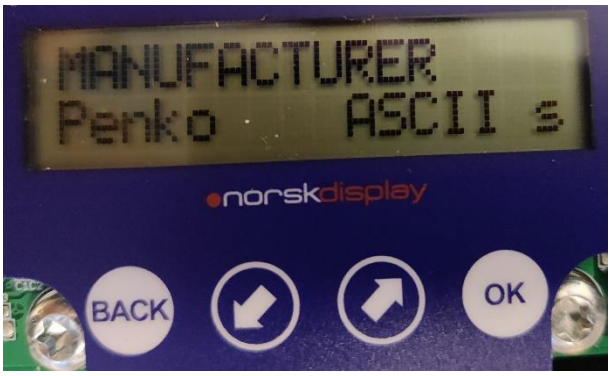




Press OK to set the manufacturer protocol.



Press OK to select the Penko ASCII protocol.

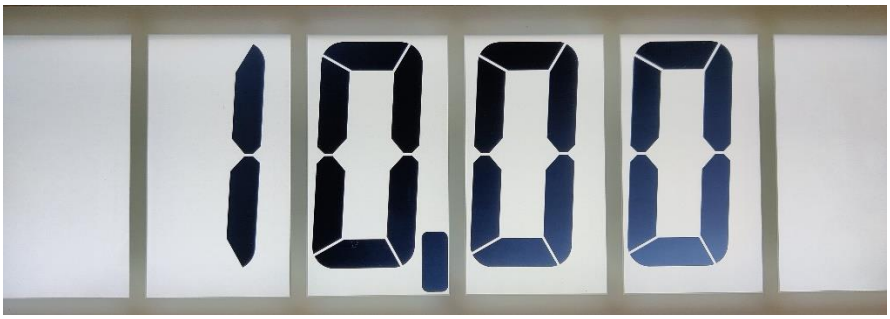


Press back until you can leave the menu, press OK and the display will reboot with the new settings.

If you want a different value to be shown select the indicator number below that you want.

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	Hold	The weight value is frozen.
10	Weigher x10	The actual weight of the Indicator with 1 extra decimal point for more accuracy.
11	Fast Gross x10	The weight without filtering and Tare with 1 extra decimal point for more accuracy.
12	Fast Net x10	The weight without filtering and Tare deducted with 1 extra decimal point for more accuracy.
13	Display Gross x10	The weight with Display filtering and without Tare with 1 extra decimal point for more accuracy.
14	Display Net x10	The weight with Display filtering and Tare deducted with 1 extra decimal point for more accuracy.
15	Tare x10	The weight of an empty container. Gross – Tare = Net with 1 extra decimal point for more accuracy.
16	Peak x10	The highest point weighted on the Indicator with 1 extra decimal point for more accuracy.
17	Valley x10	The lowest point weighted on the Indicator with 1 extra decimal point for more accuracy.
18	Hold x10	The weight value is frozen with 1 extra decimal point for more accuracy.
19	Sample	The actual sample of the load cell(s) in mV.

Now the display will show the same weight as the SGM750/SGM850.



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**

PENKO Engineering B.V. ▪ Schutterweg 35, NL 6718XC Ede ▪ Tel +31 (0) 318525630 ▪ Fax +31 (0) 31852971 ▪ info@penko.com
Web ▪ www.penko.com ▪ Copyright © 2014 ETC All rights reserved.