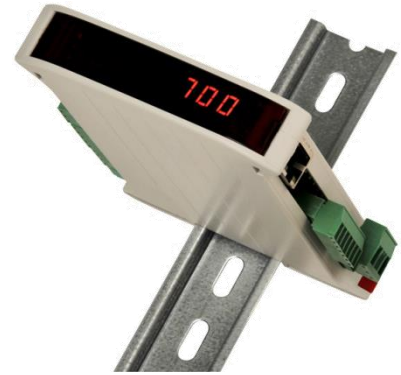# PENKO Engineering B.V.

Your Partner for Fully Engineered Factory Solutions

How to...
Connect an external display to a SGM750/SGM850

PENKO

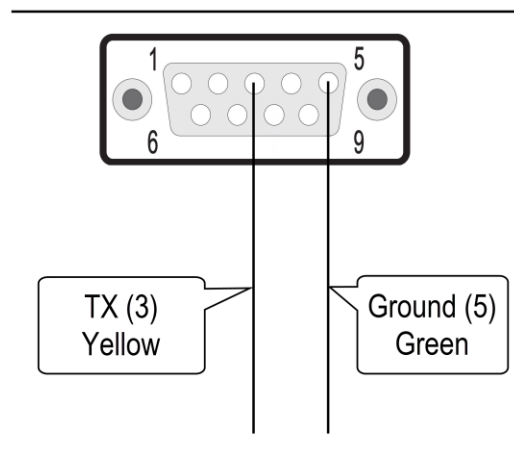an ETC Company

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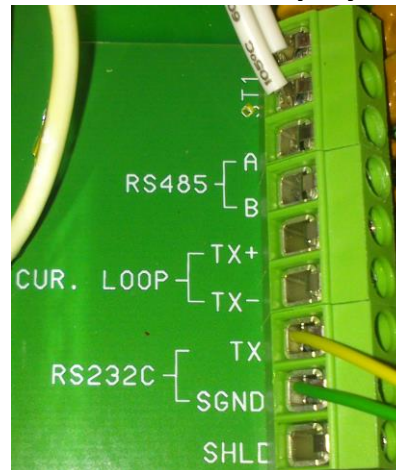
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RS232

Hardware connection

In the example we use a Vishay RD10-S-2-E display. Connect **pin 3** of the SGM750/SGM850 sub-D connector to **RS232 TX** on the display, and connect **pin 5** of the SGM750/SGM850 sub-D connector to **RS232-SGND** on the display.

RS232 SGM750/SGM850

RS232 External display

Settings

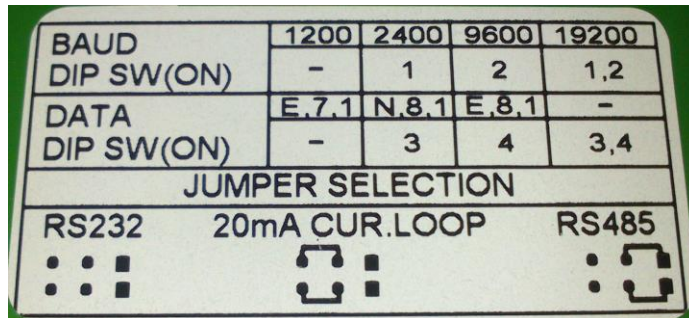| RS232	SGM750/SGM850 Settings	Display settings
Baudrate*	1200	1200
Protocol**	ASCII	
Adress	255	
Stopbits	1	1
Data bits		8
Parity	None	None
Indicator	1	

*The Baudrate 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 <u>cannot</u> be both set to ASCII at the same time.

Check if the settings on the display are correct. In this case dipswitch 1 and 2 must be set in the "Off" position to get the Baudrate of 1200 and dipswitch 3 must be set in the "On" position for the correct data settings. And the jumpers must be set in the "RS232" position.

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	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.
16	Valley x10	The lowest point weighted on the Indicator with 1 extra decimal point for more accuracy.
17	Sample	The actual sample of the load cell(s) in mV.

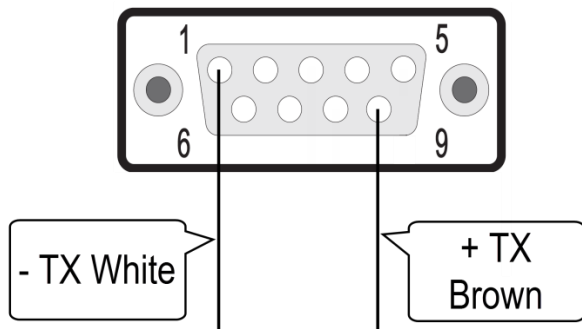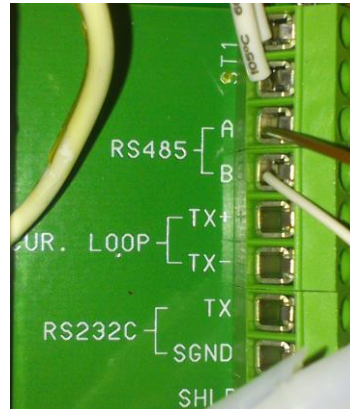Now the display will show the same weight as the SGM750/SGM850.

RS422

Hardware connection

In the example we use a Vishay RD10-S-2-E display. Connect **pin 1** of the SGM750/SGM850 sub-D connector to **RS485-B** on the display, and connect **pin 9** of the SGM750/SGM850 sub-D connector to **RS485-A** on the display.

RS422 SGM750/SGM850

RS485 External display

Settings

RS422	SGM750/SGM850 Settings	Display settings
Baudrate*	1200	1200
Protocol**	ASCII	
Adress	255	
Stopbits	1	1
Data bits		8
Parity	None	None
Indicator	1	

*The Baudrate 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 <u>cannot</u> be both set to ASCII at the same time.

Check if the settings on the display are correct. In this case dipswitch 1 and 2 must be set in the "Off" position to get the Baudrate of 1200 and dipswitch 3 must be set in the "On" position for the correct data settings. And the jumpers must be set in the "RS485" position.

BAUD DIP SW(ON)	1200	2400	9600	19200
	–	1	2	1,2
DATA DIP SW(ON)	E,7,1	N,8,1	E,8,1	–
	–	3	4	3,4
JUMPER SELECTION				
RS232	20mA CUR.LOOP		RS485	

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	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.
16	Valley x10	The lowest point weighted on the Indicator with 1 extra decimal point for more accuracy.
17	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**