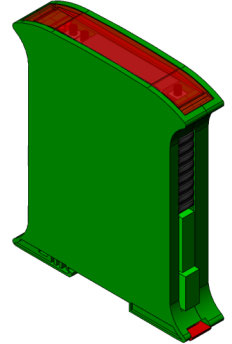# PENKO Engineering B.V.

SGM800 Certified Digitizer Series

The Experts In Weighing & Dosing

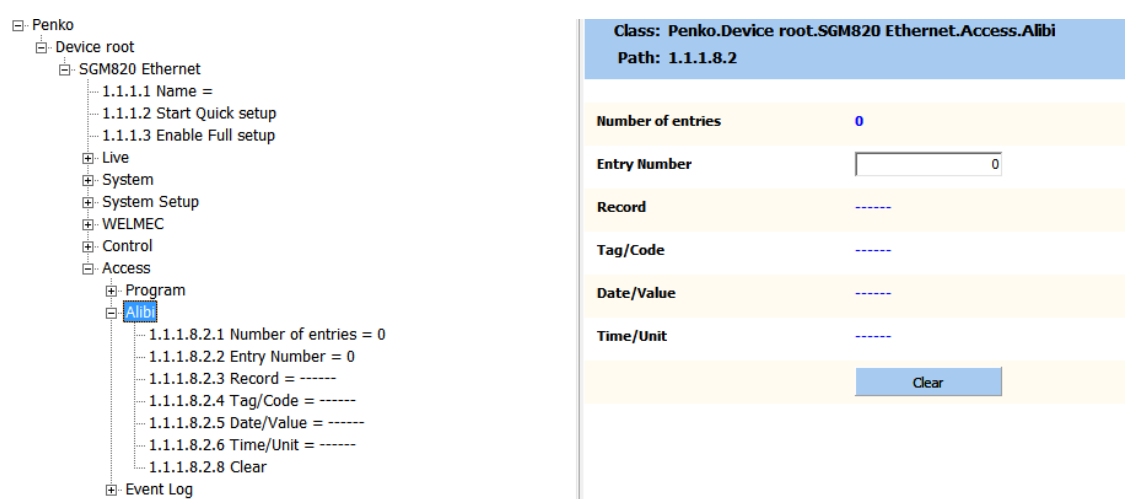Your Partner For Fully Engineered Factory Solutions

PENKO Engineering B.V.

SGM800 Digitizer

SGM800 Certified Series for automatic and non-automatic weighing

The SGM800 Series is a certified series that offers solutions for problem free connections of strain gage load cell based measuring with any supervisory and/or control system. The Series exists of 6 digitizers with different communication options. There is also a series of fixed software is available, making it possible to use the SGM800 certified series as a mini controller.

They all are easy DINrail mountable, and can be used as a stand alone digitizer or as a buslink system. Up to 32 digitizers can be coupled in one buslink system. Configuration of the device can even be done from behind your desk using PENKO's freeware PI Mach II Manage. Trouble shooting is made easy by the small on board display, giving you a fast overview of the SGM800s status.

Figure 1: example of PI Mach II Manage for SGM800 Series.

SGM800 Digitizer Applications

Applications

- Silo & tank weighing

- Weighbridges

- Amplifying strain gage load cell signal

- Digitizing strain gage load cell signal

- Every application where a certified weighing signal is
  used by a supervisory system

Plug & Play applications

- Weighing module for PLC

- Plug & play solution for check weighing

- Plug & play solution for filling

- Plug & play solution for belt weighing

This product is intended to be supplied by a Class 2 or Limited Power Source, rate 18 - 32 Vdc, 0.2A@24Vdc.

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SGM800 Digitizer Characteristics

Saving space with more flexibility & functionality

- Certified
- Small on board display for trouble shooting
- Easy to couple with PLC
- PC configurable
- Back up and restore function through USB connection
- Time-saving, patent-pending G-Cal™ technology (Geographical Calibration) for fast and accurate calibration without using weights anywhere on the planet
- Compact DINrail mountable housing with standard 3 DI and 4 DO build in (except SGM810)
- Option analog output

Communication options

- RS485, USB and optional RS232, RS422, Ethernet, Canbus and Profibus DP protocols
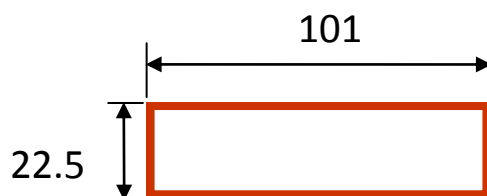- Communicates conveniently via remote devices

High performance

- 1600 samples per second
- 24 bit internal resolution
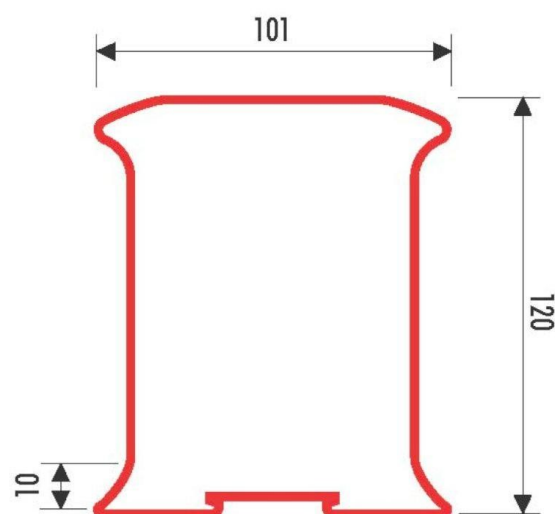- 100 000 parts display resolution

Controller options

- Filler
- Check weighing
- Belt weighing

SGM800 Digitizer Dimensions

Top view

Side view

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SGM800 Digitizer Specifications

Type	SGM800	SGM810	SGM820	SGM830	SGM840	SGM850
Wiring	With sense	With sense	With sense	With sense	With sense	With sense
Type of sense	Passive	Passive	Passive	Passive	Passive	Passive
Power supply	18-32 Vdc; 4 W max.	18-32 Vdc; 2,5 W max.	18-32 Vdc; 2,5 W max.	18-32 Vdc; 2,5 W max.	18-32 Vdc; 4 W max.	18-32 Vdc; 2,5 W max.
Load cell power supply	5 Vdc	5 Vdc	5 Vdc	5 Vdc	5 Vdc	5 Vdc
Sensitivity	0,4 µV/d	0,4 µV/d	0,4 µV/d	0,4 µV/d	0,4 µV/d	0,4 µV/d
Sensitivity range	-0,5 mV/V to +2,25 mV/V	-0,5 mV/V to +2,25 mV/V	-0,5 mV/V to +2,25 mV/V	-0,5 mV/V to +2,25 mV/V	-0,5 mV/V to +2,25 mV/V	-0,5 mV/V to +2,25 mV/V
Measuring range	-2,5 mV to +11,25 mV	-2,5 mV to +11,25 mV	-2,5 mV to +11,25 mV	-2,5 mV to +11,25 mV	-2,5 mV to +11,25 mV	-2,5 mV to +11,25 mV
A/D Conversion speed	1600/s	1600/s	1600/s	1600/s	1600/s	1600/s
Max. load cell impedance	1245 Ω	1245 Ω	1245 Ω	1245 Ω	1245 Ω	1245 Ω
Min. Load cell impedance	43,75 Ω	43,75 Ω	43,75 Ω	43,75 Ω	43,75 Ω	43,75 Ω
Max. no. of load cells 350 Ω	8	8	8	8	8	8
1100 Ω	16	16	16	16	16	16
Max. number of d	10.000	10.000	10.000	10.000	10.000	10.000
Display resolution	100.000	100.000	100.000	100.000	100.000	100.000
Internal resolution	24 bits	24 bits	24 bits	24 bits	24 bits	24 bits
Display steps	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200
Display size	6 digits	6 digits	6 digits	6 digits	6 digits	6 digits
Inputs, 24 V	3	0	3	3	3	3
Outputs, 24 V	4	0	4	4	4	4
Analog output	option	Yes	option	option	option	option
Communication RS232/422	No	No	No	No	No	Yes
RS485	Yes	Yes	Yes	Yes	Yes	Yes
Ethernet	No	No	Yes	No	No	No
USB	Yes	Yes	Yes	Yes	Yes	Yes
CANBUS	No	No	No	Yes	No	No
Profibus	No	No	No	No	Yes	No
Operating temperature	-10°C to +40°C	-10°C to +40°C	-10°C to +40°C	-10°C to +40°C	-10°C to +40°C	-10°C to +40°C
Storage temperature	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
Relative Humidity	Max. 80%	Max. 80%	Max. 80%	Max. 80%	Max. 80%	Max. 80%
Protection class	IP20	IP20	IP20	IP20	IP20	IP20
Weight	About 100g	About 100g	About 100g	About 100g	About 100g	About 100g

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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.

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 www.penko.com .

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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