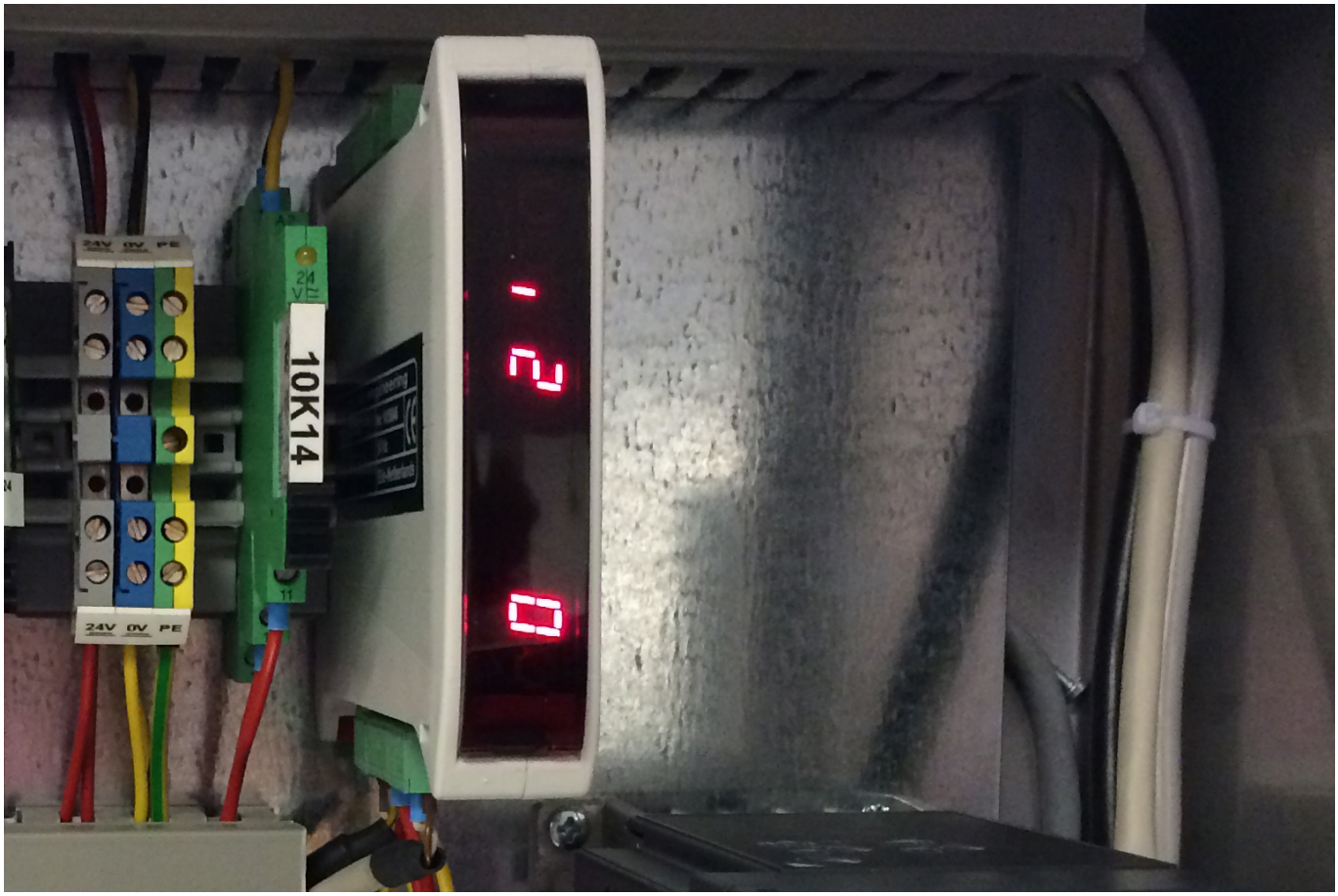
PENKO ENGINEERING B.V.

Optimising Precision Weighing



SGM700 Digitizer Series

PENKO
an ETC Company



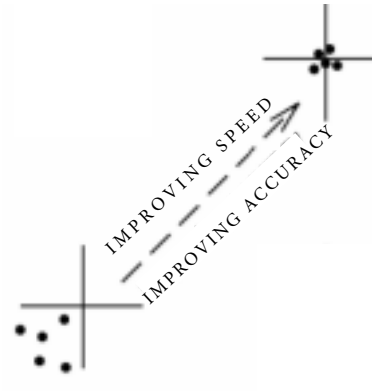
PENKO SGM700 series

The SGM700 series is a serie that offers solutions for problem free connections of strain-gauge load cell based measuring with any supervisory and/or control system. The series exists of 6 digitizers with different communication options.
They all are easy DIN-rail 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 SGM700 status. A certified range, the SGM800 series, is also available.

The Penko approach of precise and fast measurement help to avoid waste of recourses and therefore help to save money. The quickly obtained clean and stable weighing signal from our fast revolutionary digital filters reduce the signal stable waiting time, improving the machine speed and therefore product capability and profitability. Penko amplifiers and controllers ensure precise measurement, quick digitalization and fast responds time, bringing you one step closer to flawless production line which saves time and money.

All our amplifiers/digitizers are designed, manufactured and inspected by Penko employees in our Netherlands facility to maintain best of class quality control, reliability and performance that is not possible for companies that rely on outsourced contract manufacturing facilities.

ADVANTAGE



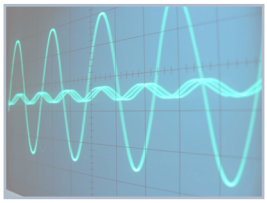
The Penko SGM700 amplifier series provide a wide variety in which a strain-gauge signal can be digitized. They measure at high speed (1600s/s) and have a high internal resolution (24bits), which makes it capable to do extremely accurate measurements. The wide range of available filter options helps to reduce the back ground noise to a minimum and stabilize the weighing signal.
For a trustworthy digitalization a stable, accurate signal is preferred. The high measuring speed has the advantage that the devices react within milliseconds making it possible to couple them with devices with an ultra-fast responds time.



The broad variety in available communication protocols makes it easy to integrate the Penko instruments in a process control system. Protocols like Ethernet-IP, Modbus TCP/RTU, FINS, Profibus-DP slave, Profinet and ASCII are available. The Penko Web interface protocol gives the freedom to configure Penko instruments on any PC or mobile device available on the same network. The configuration is done via a web browser, making software installation on a fixed PC unnecessary.



Together with the Penko Data Reporter software, the measuring data can easily be transferred to Windows based programs like Access and Excel. This give you the opportunity to process the data arithmetical and/or integrate the data in standard forms or export to Excel readable ERP systems. Another option is to store the Data Reporters collected data in a MySQL or MSSQL database. The analyzer extension allows for an easy overview and thorough analyses of the collected data. A PC based scope software is available for graphically monitoring the measuring signal.

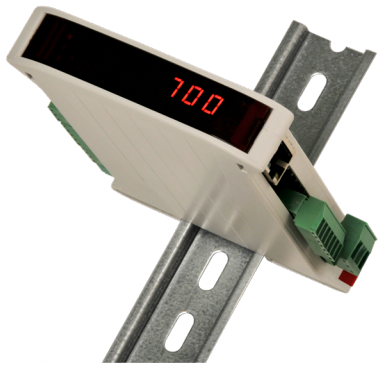


The configuration of the SGM series can be done from your office, using PI Mach II Manage freeware. Error diagnosis is facilitated by the small build-in window, giving a quick overview of the device's status.

PENKO SGM700 Digitizer Series

PENKO SGM700 APPLICATION

https://www.penko.com/Products/Measuring-Instruments/Amplifiers-Digitizers



- Weighing module for PLC
- Amplifying strain gage load cell signal
- Every application where a weighing signal is used by a supervisory system
- Silo- & Tank-weighing

PENKO SGM700 TECHNICAL HIGHLIGHTS

https://www.penko.com/Products/Measuring-Instruments/Amplifiers-Digitizers



- PC configurable .
- Easy to couple with PLC
- Small on board display for trouble shooting
- USB communication options: RS232, RS422, Ethernet, Profinet, Profibus and analog (4-20mA)
- Compact DIN-rail mountable housing

Type	SGM700	SGM710	SGM720	SGM740	SGM750	SGM760
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; 4 W max.	18-32 Vdc; 4 W max.	18-32 Vdc; 4 W max.	18-32 Vdc; 4 W max.	18-32 Vdc; 4 W max.
Load cell power supply	5 Vdc	5 Vdc	5 Vdc	5 Vdc	5 Vdc	5 Vdc
Sensitivity	0,1 µV/d non-certified 0,4 µV/d certified	0,1 µV/d non-certified 0,4 µV/d certified	0,1 µV/d non-certified 0,4 µV/d certified	0,1 µV/d non-certified 0,4 µV/d certified	0,1 µV/d non-certified 0,4 µV/d certified	0,1 µV/d non-certified 0,4 µV/d certified
Selectable ranges	1; 1.5; 2; 2.5; 3 mV/V	1; 1.5; 2; 2.5; 3 mV/V	1; 1.5; 2; 2.5; 3 mV/V	1; 1.5; 2; 2.5; 3 mV/V	1; 1.5; 2; 2.5; 3 mV/V	1; 1.5; 2; 2.5; 3 mV/V
Input voltage Unipolar @3mV/V	-1 mV to + 16 mV	-1 mV to +16 mV	-1 mV to +16 mV	-1 mV to +16 mV	-1 mV to +16 mV	-1 mV to +16 mV
Input voltage Bipolar @3mV/V	-16 mV to +16 mV	-16 mV to +16 mV	-16 mV to +16 mV	-16 mV to +16 mV	-16 mV to +16 mV	-16 mV to +16 mV
A/D Conversion speed	1600/s	1600/s	1600/s	1600/s	1600/s	1600/s
Max. load cell impedance	1200Ω	1200 Ω	1200Ω	1200 Ω	1200 Ω	1200Ω
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
1000 Ω	22	22	22	22	22	22
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	1,2,5,10,20,100,200	1,2,5,10,20,100,200	1,2,5,10,20,100,200	1,2,5,10,20,100,200	1,2,5,10,20,100,200	1,2,5,10,20,100,200
Display size	6 x 7 segments LED 0,3”	6 x 7 segments LED 0,3”	6 x 7 segments LED 0,3”	6 x 7 segments LED 0,3”	6 x 7 segments LED 0,3”	6 x 7 segments LED 0,3 ‘’
Inputs, 24 V	3; 18-28Vdc, PNP or NPN or count ≤ 5kHz	0	3; 18-28Vdc, PNP or NPN or count ≤ 5kHz	3; 18-28Vdc, PNP or NPN or count ≤ 5kHz	3; 18-28Vdc, PNP or NPN or count ≤ 5kHz	3; 18-28Vdc, PNP or NPN or count ≤ 5kHz
Outputs, 24 V; PNP or NPN	4; Max. 35V / 0.5A	0	4; Max. 35V / 0.5A	4; Max. 35V / 0.5A	4; Max. 35V / 0.5A	4; Max. 35V / 0.5A
Analog output	optional 0/4-20/24mA, 10.000d	Yes; 0/4-20/24mA, 10.000d	optional0/4-20/24mA, 10.000d	optional 0/4-20/24mA, 10.000d	optional 0/4-20/24mA, 10.000d	optional 0/4-20/24mA, 10.000d
Communication RS232/422	No	No	No	No	Yes	No
RS485	Yes	Yes	Yes	Yes	Yes	Yes
Ethernet	No	No	Yes	No	No	No
USB	Yes	Yes	Yes	Yes	Yes	Yes
Profinet	No	No	No	No	No	Yes
Profibus	No	No	No	Yes	No	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	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C
Relative Humidity	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing	Max. 85% non-condensing
Protection class	IP20	IP20	IP20	IP20	IP20	IP20



Source: Kelderman Bouw

Certifications

PENKO sets high standards for its products and product performance to ensure they meet - and even - exceed metrology industry guidelines. PENKO is ISO9001 certified, giving our long term quality work the official stamp of approval. Additional certificates are available on: http://www.penko.com/Support/Certificates

PENKO is a member of the Association of Dutch Suppliers of Weighing Equipment (VLW) and represented in he European Weighing Association (CECIP).



Find a PENKO Distributor

www.penko.com/Find-A-Dealer

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SGM700