

PENKO Engineering B.V. When Weighing Counts

SGM specs extended



SPECIFICATIONS SGM700/SGM800 Range

Wiring	Full Wheatstone bridge with passive connections (6-wire system)
Sense system	Passive sense system
Excitation voltage	5VDC
Minimum bridge resistance	43.75Ω @ 5V excitation
Maximum bridge resistance	1200Ω @ 5V excitation
Number of load cells	1 channel 1 - 8 load cells 350Ω @ 5V excitation 1 - 22 load cells 1000Ω @ 5V excitation
Sensitivity	Certified: 0.4μV minimum voltage for verification scale @ 5V excitation Non-certified: 0.1μV @ 5V excitation
Selectable ranges	1, 1.5, 2, 2.5, 3mV/V → calibrated @ 2 and 3mV/V range
Input voltage unipolar @3mV/V	-1mV to 16mV
Input voltage bipolar @3mV/V	-16mV to 16mV
A/D conversion speed	1600 measurements per second
Internal resolution	24 bits
A/D converter type	Sigma-Delta, ratio metric, isolated from digital
Non linearity	< 0.005% of reading
Offset drift	< +/- 2 ppm/°C
Span drift	< +/- 2 ppm/°C
Display resolution	100,000 divisions max.
Display step	x1, x2, x5, x10, x 20 x50, x100, x200
Decimal comma	Selectable between any digits of the display value
Digital filter	High performance digital filters 1-50Hz
Overall filter	0 to -48dB

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Calibration methods	Dead load and span with up to 8 point linearization
	Millivolt calibration
	G - CAL (Gravity correction)
Measurement functions	Automatic zero tracking, motion detection, zero, tare, preset tare, net mode, peak hold, valley hold, multi range, multi interval
Memory allocation	Calibration data flash, dynamic data in SRAM with battery backup (SGM750/8xx only)
Real-time clock	Standard with rechargeable Lithium battery backup (SGM750/8xx only)
STANDARD DI & DO	
3 digital inputs	Optical isolated, 1 common, 18-28VDC, PNP or NPN Counter inputs <= 1kHz @ 24VDC with 50% duty cycle (not on SGM710/810)
4 digital outputs (level contact)	Isolated PhotoMOS outputs, 1 common, max. 35VDC or VAC, 0.5A nominal, 1A Surge (thermal fuse 0.5A), PNP or NPN (not on SGM710/810)
OPTIONAL I/O	
1 analog output	0 - 20mA, 4 - 20mA, 0 - 24mA, 4 - 24mA, RAW (standard on SGM 710 and SGM8xx, optional on SGM7xx)
ELECTRICAL	
DC power supply	18 - 32VDC (24VDC type) 4W max.
STANDARD COMMUNICATION PORTS	
USB	Device configuration and software updates with PC software
RS485	Connect up to 32 SGM devices via RS485 local bus
OPTIONAL COMMUNICATION PORTS	
Ethernet (SGM720/820)	PENKO TP protocol, plain text/ASCII printer, Zebra ZPL protocol, Modbus TCP, Ethernet/IP, Omron Fins, PENKO Buslink, PENKO Web interface, PENKO ASCII
CANBUS (SGM730/830)	PENKO Buslink, CANopen
PROFIBUS (SGM740/840)	DP Slave
RS232 / RS422 (SGM750/850)	Plain text/ASCII printer, Zebra ZPL protocol, PENKO ASCII, PENKO NPV slave, Modbus RTU, Modbus ASCII
Profinet (SGM760/860)	IO device
CANopen	EDS file



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COMMUNICATION SOFTWARE	
Pi Mach II	PENKO configuration, update and backup/restore software (free)
PDI Client	PENKO configuration software (free)
Profibus	GSD file
Profinet	GSDML file
EtherNet/IP	EDS file
SCREEN	
Display type	6 x 7 segments red LED 0.3 inch (0.76mm)
Display functions	Menu driven user interface
Display rate	Selectable 1, 2, 3, 5, 10, 25, 50 updates/s
Display filter	0, -6, -12, -18, -24, -30, -36, -42, -48dB
Display filter range	Selectable in any range of the display value
Display suppression	Selectable in any range of the display value
Status enunciators	Zero, Net, Tare, I/O status
Display digits	6 digits with leading zero suppression
Display operation	Operate, configure and calibrate via front panel (3 keys)
ENVIRONMENTAL	
Operating temperature	-10°C to +40°C [14°F to 104°F]
Storage temperature	-20°C to +70°C [-4°F to 158°F]
Relative humidity	Max. 85% non-condensing
APPROVALS FOR SGM800	
OIML R76	10000d single or multi interval at $\geq 0,4\mu\text{V}$ scale interval
EU-type approval number	DK0199-R76-14.06
MID certified	
OIML R51	Automatic catchweigher/checkweigher instrument
EU-type approval number	DK0199-R51-14.07
OIML R61	Automatic gravimetric filling instrument
EU-type approval number	DK0199-R61-14.08
ENCLOSURE	
Material	Plastic, grey for SGM7xx, green for SGM8xx
Dimension (w*h*d)	101 x 120 x 22.5mm (housing only)
Weight	150g
Protection class	IP20



About PENKO

At PENKO Engineering we specialize in weighing. Weighing is inherently chemically correct, independent of consistency, type or temperature of the raw material. This means that weighing any kind of material guarantees consistency and thus, it is essential to sustainable revenue generation in any industry. As a well-established and proven solution provider, we strive for the ultimate satisfaction of custom design and/or standard applications, increasing your efficiencies and saving you time, saving you money.

Whether we are weighing raw materials, components in batching, ingredients for mixing or dosing processes, - or weighing of static containers and silos, or - in-motion weighing of railway wagons or trucks, by whatever means required during a process, we are essentially forming vital linkages between processes and businesses, anywhere at any time. We design, develop and manufacture state of the art technologically advanced systems in accordance with your strategy and vision. From the initial design brief, we take a fresh approach and a holistic view of every project, managing, supporting and/or implementing your system every step of the way. Curious to know how we do it? www.penko.com

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:

www.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. Training sessions on request:

www.penko.com/training



PENKO Alliances

PENKO's worldwide network: Australia, Brazil, China, Denmark, Germany, Egypt, Finland, France, India, Italy, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Syria, Turkey, United Kingdom, South Africa, Slovakia Sweden and Switzerland, Singapore.

A complete overview you will find on: www.penko.com/distributor

