DIGITAL MANOMETER
Type SGM/DM

Revision 0 of 17 OCT 2023

Equipped with a **visual pressure scale** and a **high-resolution digital display**, the manometer provides immediate, intuitive reading of system status. Its integrated temperature sensor allows simultaneous monitoring of both key parameters, reducing the need for additional instrumentation and improving operational efficiency.

The unit is specifically optimized for use in **SF6 and Green Gas filling systems**, supporting safe, controlled handling of insulating gases used in high-voltage equipment. Its robust construction, ergonomic design, and low power consumption make it suitable for continuous operation in industrial environments.

The Electronic Digital Manometer provides the reliability and precision expected from **Electronsystem MD**, supporting safe, efficient, and accurate gas-handling procedures across modern power distribution and industrial systems.

HIGHLIGHTS & FEATURES

- High-accuracy digital pressure measurement with fast response
- Visual pressure scale for real-time system assessment
- Integrated temperature sensor for dual-parameter monitoring
- Compatibility with **SF6** and **Green Gas** filling and maintenance operations
- High-contrast digital display for clear visibility
- Multi-unit pressure selection
- Auto-zero and auto-calibration functions
- Compact, rugged housing designed for field and service applications
- Low-power consumption with extended battery life
- Battery status indicator for continuous operation monitoring
- Designed for safe and controlled handling of insulating gases
- Intuitive interface for quick configuration
- Ergonomic design for easy handling during service activities
- High resistance to mechanical stress and industrial environments
- Ideal for HV equipment service, industrial plants, and gas-insulated systems
- Supports improved accuracy and reliability in gas filling operations

Rev./Mod. Data Descrizione:

Features

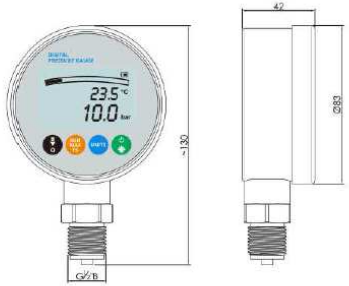
- Measuring ranges from -1 ... 0 to 0 ... 1000 bar
- Accuracy 0.2 %FS, 0.5 %FS
- Battery operation (2 x 1.5 V AA cell)
- LCD display
- Peak value recording function
- Selectable ranges: kgf/cm², psi, MPa, bar

Technical data

Performance	
Pressure Range	-1 ... 0 to 0 ... 1000 bar
Display method	4 numerical digits for pressure display. Peak display/Ambient temperature display
Accuracy	±0.2%FS, ±0.25%FS,
Power supply	2 x 1.5 V AA cell
Overload Pressure	120%FS
Unit Switching	kgf/cm2,psi,MPa,bar
Long Term Stability	±0.3%FS/year
Diaphragm	316L Stainless Steel
Housing Material	304 Stainless Steel
Process Connection	G1/2, G1/4,1/4NPT,1/2NPT, PT1/4, PT1/2
Operating temperature	-10 to 60 °C
Protection	IP54

The listed specifications and dimensions are subject to change without prior notice

Dimensions (All dimensions in mm)



Ordering code

Model	Range		Pressure Port	Accuracy
SGM/DM	01 0.2bar	19 400bar	01 G¼ male	A1 ±0.2%FS
	02 0.35bar	20 600bar	02 G½ male	A2 ±0.5%FS
	03 0.6bar	21 1000bar	03 ¼NPT male	
	04 1bar	22 -0.2...+0.2bar	04 ½NPT male	
	05 2bar	23 -1...0bar	05 PT¼ male	
	06 2.5bar	24 -1...1bar	06 PT½ male	
	07 4bar	25 -1...5bar	07 M20x1.5 male	
	08 5bar	26 -1...10bar	99 Custom	
	09 10bar	27 -1...30bar		
	10 16bar	99 Custom		
	11 20bar			
	12 25bar			
	13 35bar			
	14 50bar			
	15 70bar			
	16 100bar			
	17 160bar			
	18 250bar			

Prep. Dis. G. FORLANI	ELECTRONSYSTEM MD S.r.l.		
App. P. GUIZZETTI	Resp. Dep. / Uff. Resp. Technical Dept.	Title / Titolo: **SGM/DM SGM digital manometer**	Scale / Scala 1:1
First issue: 25.03.2025		Apparatus / Apparecchio	
NOTE :		Doc. No. / N° Doc. **43931378**	Sh.No. / N° Fog. 1

ELECTRONSYSTEM MD
Design and products for safety problem solving in medium and high voltage electrical installations
Via Madonna delle Rose, 72 24061 Albano S.Alessandro (BG) ITALY - Phone +39035584000, Fax +39035584099 E-mail: info@elecmd.it Web www.elecmd.it

Battery Powered Digital Pressure Gauge

User Manual

⚠ 1. Safety instructions

- To avoid operator hazards and damages of the device, the following Instructions have to be worked out by qualified technical personnel.
- By non-observance of the operating manual, inappropriate use, modification or damage, no liability is assumed and warranty claims will be excluded.
- Permissible media are liquids (no solids and frozen media), specified in the Data sheet. In addition it has to be ensured, that this medium is compatible with the media wetted parts.
- Install the device only when there is no pressure and shutdown.
- Handle this high-sensitive electronic precision measuring device with care, Both in packed and unpacked condition.

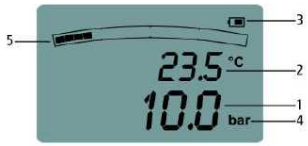
2. General information

2.1 Keypad

Short Press: Key presses are short less than 0.5 seconds
Long Press: Key presses are long greater than 3 seconds

- Long time Press: Power On-Off Pressure Gauge
  Short time Press: Turn on the backlight
- UNITS — Short time Press: Choose engineering units
  Option: kgf/cm2,psi,MPa,bar
- MIN MAX FS — Short time Press: Peak,the max. value/min. value
  Long time Press: Clear Peak value
- Long Press: Zero point calibration

2.2 LCD display



1. 4-1/2 numerical digits for pressure display.
   Peak display
2. Ambient temperature display
3. Battery life indicator
4. Pressure Unit
5. 20 segment pressure range bar graph – each segment equals 5% of range.

3. Basic operation

3.1 Turn the Gauge ON/OFF

☞ Long time Press key
Pressure gauge enters the measurement mode.

3.2 ZERO Tare

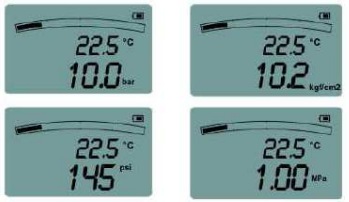
☞ Long Press key
In Measurement mode, apply desired pressure long press ZERO key, to enable the tare function.

3.3 Peak pressure value

☞ Short Press key

3.4 Change Units of Measure

☞ Short Press key
It can switch between different unit
Five engineering units: MPa,bar,kgf/cm2,psi



4. Replacement battery

⚠ To avoid operator hazards and damages of the device, the following Instructions have to be worked out by qualified technical personnel.
Battery specifications: Two 1.5V AAA alkaline battery

5. Mechanical installation

⚠ Please use a suitable wrench to install through the hexagon of the pressure gauge.Do not use a hand to rotate the pressure gauge.

Notes
1. Stored and used in an environmental temperature of -10°C~+60°C,the relative humidity less than 80%.
2. Should be concentric and parallel when connect digital pressure gauge and pressure system.
3. Please use 1.5V AAA alkaline battery when replace the battery.

Prep. Dis. G. FORLANI	ELECTRONSYSTEM MD S.r.l.		
App. P. GUIZZETTI	Resp. Dep. / Uff. Resp. Technical Dept.	Title / Titolo / Apparatus / Apparecchio: SGM/DM SGM digital manometer	Scale / Scala 1:1
First issue:			
NOTE :		Doc. No. / N° Doc. 43931378	Sh.No. / N° Pag. 2

Via Madonna delle Rose, 72 24061 Albano S.Alessandro (BG) ITALY - Phone +39035584000, Fax +39035584099 E-mail: info@elecmd.it Web www.elecmd.it

STORAGE

If the complex must be storage before use, please keep dry and repaired.
Do not leave outdoor.
Device is strongly sensitive to humidity hence avoid to store where relative humidity is more than 90%

STORAGE TEMPERATURE: -30°C ÷ +70°C
RELATIVE HUMIDITY: max 90% @ +40°C

MAINTENANCE

Maintenance of transmitter must be done compulsory in factory. We recommend every 2 years to send back transmitter for calibration check and inspection.

WARRANTY

Device is covered by 24 months after installation or max 36 months after delivery.
In case of service the transmitter must be sent back to factory for inspection.

WARNINGS

CAUTION
Do not drop or hit the manometer. The sensor is fragile and may break from sudden shock.
When transporting the manometer, use the original shipping box from Electronsystem.

NOTE
Keep the manometer dry and clean.
Do not remove the transport protection caps before you are ready to install the manometer

Via Madonna delle Rose, 72 24061 Albano S.Alessandro (BG) ITALY - Phone +39035584000, Fax +39035584099 E-mail: info@elecmd.it Web www.elecmd.it