



# DM-250

## Digital Pressure Gauge with Ceramic Sensor



## Features

- / Accuracy  $\leq \pm 0.25\%$  FSO BFSL
- / Operating ranges up to 600 bar
- / Rotatable display housing
- / Min/Max function
- / Offset- and endpoint calibration
- / Switch-off automatic configuration
- / NPT or G thread
- / Selectable pressure units  
(bar, mbar, psi, InHg, cmHg, mmHG,  
hPa, kPa, MPa, mH2O, InH2O)

## Description:

The battery-powered digital pressure gauge series DM-250 has been designed for pressure measurements in hydraulic and pneumatic systems. Characteristics such as accuracy, reliability and a good overload resistance forms the base for the use of this series in the entire industry. All models are equipped with a stable, rotatable plastic display housing with a 2-line LC display, which guarantees a good readability even under unfavorable mounting conditions. The handling and configuration is menu-driven via three miniature push buttons.

Besides showing information about the nominal pressure range (e.g. limit exceeding), several pressure units and the position of decimal point can be set as well as minimal and maximal pressure of the process can be read. Furthermore, the instruments zero and end point can be calibrated and the configuration of the power off function is possible. Factory defaults can be loaded via menu.

## Application:

Today, in the industry, conventional Bourdon tube pressure gauges are increasingly replaced by digital manometers, since these devices are more accurate, long lasting and stable and possess additional characteristics that are impossible for mechanical manometers due to their design. Especially users from the areas listed below will profit from these facts:

- Environmental technology
- Laboratory technology
- Machine construction
- Plant manufacturing
- Pneumatic & Hydraulic
- Research & Development
- etc.



# Technical Specifications:

<b>Operating ranges /</b>	see table 1
<b>Measuring rate /</b>	5 per sec.
<b>Accuracy /</b>	± 0.25 % FSO BFSL (accuracy according to IEC 60770 - minimum value setting (non-linearity, hysteresis, repeatability))
<b>Thermal error /</b>	± 0.2 % FSO / 10 K for zero and span in compensated range -25...+85°C
<b>max. Temperature /</b>	
Medium:	-20...+85°C
Ambient:	-20...+70°C
Storage:	-30...+80°C
<b>mech. Stability</b>	
Vibration:	5 g RMS (25...2000 Hz) as per DIN EN 60068-2-6
Shock:	100 g / 1 ms as per DIN EN 60068-2-27
<b>Process connection /</b>	
Standard:	G 1/4" EN 837
Optional:	G 1/2" EN 837, 1/4" NPT, 1/2" NPT
<b>Materials /</b>	
Pressure port / housing:	st. steel 1.4404
Display housing:	PA 6.6, polycarbonate
Gaskets:	FKM
Diaphragm:	ceramics Al <sub>2</sub> O <sub>3</sub> 96%
<b>Wetted parts /</b>	pressure port, gaskets and diaphragm
<b>Mounting pos. /</b>	any
<b>Weight /</b>	approx. 300 g

# Electrical Specifications:

<b>Display /</b>	LCD, visible range 40 x 30 mm; 4.5-digit 7-segment main display, digit height 11 mm, range of indication ±19999; 6-digit 14-segment additional display, digit height 7.5 mm
<b>Power supply /</b>	3.6 V Lithium-Battery; 2 Units (1/2 AA)
<b>Operational life /</b>	
Mechanical:	> 100 x 10 <sup>6</sup> pressure cycles
Battery:	Standby mode: approx. 5 years
<b>AD-converter /</b>	14 Bit resolution
<b>Data storage /</b>	EEPROM (non volatile)
<b>Protection class /</b>	IP65
<b>Emission /</b>	as per EN 61326
<b>Immunity /</b>	as per EN 61326
<b>CE-conformity /</b>	
EMV-directive:	2004/108/EG
Pressure directive:	2014/68/EU (Module A) (this directive is only for devices with max. permissible overpressure > 200 bar)

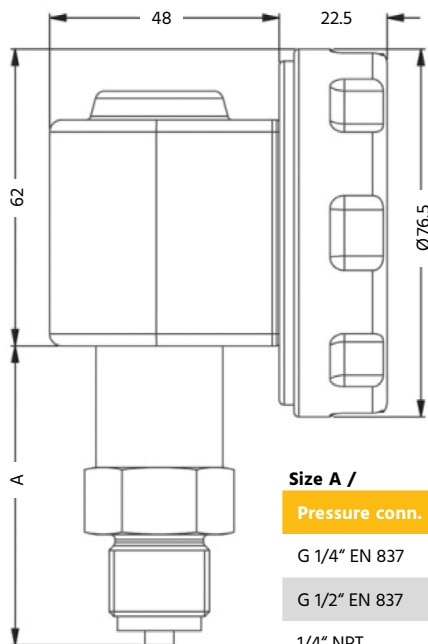
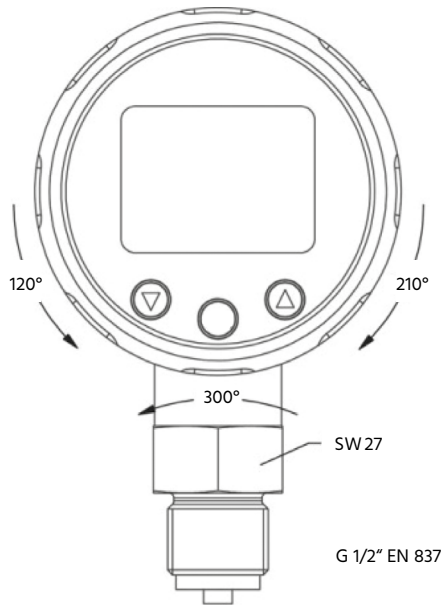
# Ranges & Burst Pressure:

Nominal pressure	Nom. pressure abs.	overpressure	burst press. ≥
-1...0 bar		4 bar	7 bar
0...0.4 bar		1 bar	2 bar
0...0.6 bar	0...0.6 bar	2 bar	4 bar
0...1.0 bar	0...1.0 bar	2 bar	4 bar
0...1.6 bar	0...1.6 bar	4 bar	5 bar
0...2.5 bar	0...2.5 bar	4 bar	5 bar
0...4.0 bar	0...4.0 bar	10 bar	12 bar
0...6.0 bar	0...6.0 bar	10 bar	12 bar
0...10 bar	0...10 bar	20 bar	25 bar
0...16 bar	0...16 bar	40 bar	50 bar
0...25 bar	0...25 bar	40 bar	50 bar
0...40 bar	0...40 bar	100 bar	120 bar
0...60 bar	0...60 bar	100 bar	120 bar
0...100 bar	0...100 bar	200 bar	250 bar
0...160 bar	0...160 bar	400 bar	500 bar
0...250 bar	0...250 bar	400 bar	500 bar
0...400 bar	0...400 bar	600 bar	650 bar
0...600 bar	0...600 bar	800 bar	880 bar

Vacuum resistance: PN ≥ 1 bar: unlimited vacuum resistance; PN < 1 bar: on request



## Dimensions in mm:



### Size A /

Pressure conn.	mm
G 1/4" EN 837	54.5
G 1/2" EN 837	62.5
1/4" NPT	54.5
1/2" NPT	60.5

## Ordering Codes:

**Order number** DM-250. 2. 2. A. 0

**DM-250 Digital Pressure Gauge**

### Process connection /

- 1 = G 1/4" EN 837
- 2 = G 1/2" EN 837
- 3 = 1/4" NPT
- 4 = 1/2" NPT

### Calibration /

- 1 = relative pressure
- 2 = absolute pressure <sup>1</sup>

### Operating range /

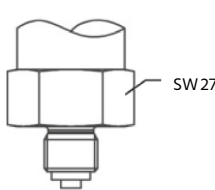
- A = -1...0 bar <sup>1</sup>
- B = 0...0.4 bar <sup>1</sup>
- C = 0...0.6 bar
- D = 0...1 bar
- E = 0...1.6 bar
- F = 0...2.5 bar
- G = 0...4 bar
- H = 0...6 bar
- I = 0...10 bar
- J = 0...16 bar
- K = 0...25 bar
- L = 0...40 bar
- M = 0...60 bar
- N = 0...100 bar
- O = 0...160 bar
- P = 0...250 bar
- Q = 0...400 bar
- R = 0...600 bar
- 9 = other

### Option /

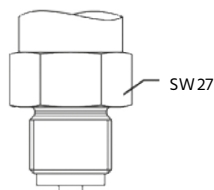
- 0 = none
- 9 = special (please specify in detailed text)

<sup>1</sup> absolute pressure possible from 0.6 bar (operating range „C“)

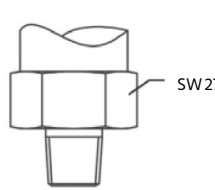
## Process connection /



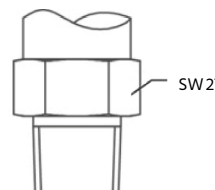
G 1/4"EN 837



G 1/2"EN 837



1/4"NPT



1/2"NPT

