

BATTERY POWERED PRECISION DIGITAL GAUGE TYPE 3311



Nominal size 100

Stainless steel sensor

Accuracy $\leq \pm 0,05\%$ / $0,125\%$



Description

Digital manometers are the ideal solution to control and regulate processes in numerous application areas.

The digital manometer Type 3311 can be used in combination with the recording and storage software for linear measurements in a wide variety of industries and for evaluation.

The integrated data logger is able to record pressure and temperature values linearly and cyclically. These values can be further processed using optional software.

The pressure transmitter can be selected for different measuring ranges and connected to the display without a separate tool.

Anwendungen

- Mechanical engineering
- Plant construction
- Laboratory applications
- Calibration technology

Characteristics

- Stainless steel case
- Graphics-capable display
- Data logger
- Modular sensor concept
- Zero point adjustment
- Communication interface USB 2.0
- Automatic switch-off

Nominal pressure

- 0...100 mbar up to 0...400 bar
- Vacuum -1...0 bar

Options and accessories

- Service case (without content)
- Rubber cap (black)
- Minimes connection piece (max. pressure strength 630 bar)
- USB converter (including software on US stick)
- Calibration certificate acc. to DKD / DaKKs
- Ex- version zone 0/1

Type 3311



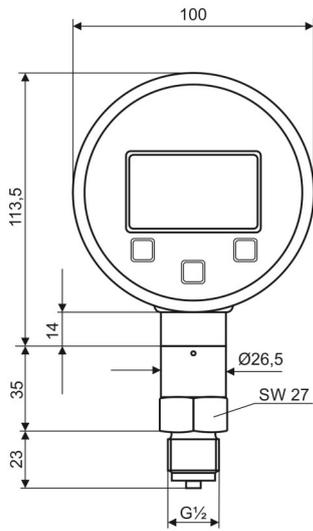
DRUCK & TEMPERATUR

Technical data

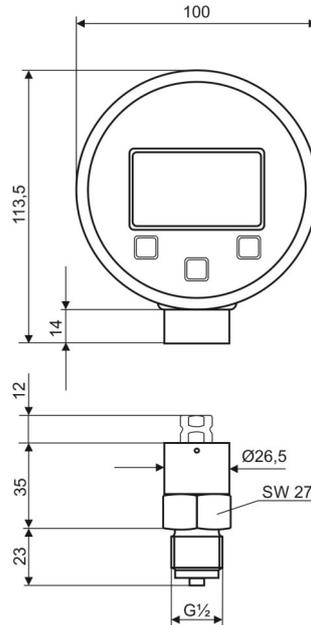
Type	3311									
Nominal size	100									
Accuracy	$P_N \geq 0,4 \text{ bar: } \leq \pm 0,1 \% \text{ FS IEC 60770}$ $P_N < 0,4 \text{ bar: } \leq \pm 0,25 \% \text{ FS IEC 60770}$									
Measuring ranges	-1...0 bar, 0...100 / 0...160 / 0...250 / 0...400 / 0...600 mbar 0...5 / 0...10 / 0...20 / 0...50 / 0...100 / 0...160 / 0...250 / 0...400 bar optional 0...600 / 0...1000 / 0...1600 bar display and sensor welded									
Long term stability	$\leq \pm 0,1 \% \text{ FS/year}$ at reference conditions									
Measuring rate / display	1, 2 and 50 measurements per second, adjustable									
Thermal error (Zero point and span)	For nominal pressure ranges $P_N \leq 160 \text{ bar}$: tolerance band $\leq \pm 0,2 \% \text{ FSO}$ For nominal pressure ranges $P_N > 160 \text{ bar}$: tolerance band $\leq \pm 0,75 \% \text{ FSO}$									
Material process connection and case	1.4404 / display housing 1.4301									
Sealings	FKM, in the welded version without									
Diaphragm	1.4435									
Connection	G1/2, G1/4 DIN 3852, G1/2, G1/4 EN837, others on request									
Mounting position	any									
Display	Graphic LC display: - Visible area 55 x 46 mm; digit height 5.5 mm (resolution 128x64) - Measured value display: max.7 digits, depending on pressure range - Temperature display, time, 100-segment bar graph, potential input value - adjustable backlight - Units adjustable Pressure: mbar, bar, psi, mmHg, inHg, cmHg, kPa, MPa, hPa and others Temperature: °C, °F, K									
Temperature display	Accuracy $\pm 2 \text{ K}$; resolution 0,1 K, Display: $-10^\circ\text{C} \dots 55^\circ\text{C}$									
Power supply	3 x 1,5 V, AA (LR6), battery life in standard operation approx. 2.000 hours									
Current consumption	With backlight: ca. 16 mA, Standby mode: ca. 1,6 μA									
Protection	IP 67									
Operating life	100 million load cycles									
Permissible temperatures	Medium: $-10^\circ\text{C} \dots 55^\circ\text{C}$ Storage: $-20^\circ\text{C} \dots 70^\circ\text{C}$ Ambient: display module $-10^\circ\text{C} \dots 55^\circ\text{C}$, transmitter: $-20^\circ\text{C} \dots 70^\circ\text{C}$									
Data logger	Modes: single, cyclic, linear, off Storage of pressure values and sensor temperature Measuring value interval adjustable (hrs, min, sec, 20 ms, daily at a defined time) Measurement rate adjustable (1/s, 2/s or 50/s only with 20 ms measured value interval)									
Weight	ca. 680 g									
Input pressure										
Nominal pressure bar	-1...0	0,10	0,16	0,25	0,40	0,60	1	1,6	2,5	4
Overload bar	5	1	1	1	2	5	5	10	10	17,5
Burst pressure bar	7,5	1,5	1,5	1,5	3	7,5	7,5	15	15	25
Nominal pressure bar	6	10	16	25	40	60	100	160	250	400
Overload bar	35	35	80	80	105	210	600	600	1000	1000
Burst pressure bar	50	50	120	120	210	420	1000	1000	1250	1250
	PN > 1 bar: unlimited vacuum resistant (<1 bar on request)									

Type 3311

Dimensional drawings, Dimensions in mm



Connection standard G1/2 EN 837

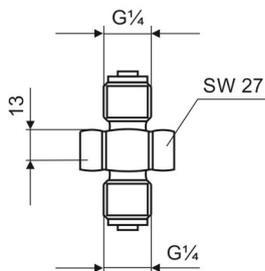


Pressure transmitter and display separated

Options connection transmitter

- G 1/2 DIN 3852
- G 1/4 DIN 3852
- G 1/2 DIN 3852 with flush sensor (only $P_N \leq 40$ bar)
- G 1/4 EN 837 IG, welded (only $P_N \leq 40$ bar)
- 1/2 NPT
- 1/4 NPT
- G 1/4 EN 837
- G 1/2 DIN 3852 open pressure port
- others on request

Adapter for pressure sensor, G1/4 EN 837 IG, welded



Dimensional drawing:

- external thread G1/4 EN 837
- external thread G1/4 EN 837

more adapters

- external thread G1/4 EN 837
- external thread G1/2 EN 837

- external thread G1/4 EN 837
- external thread 1/4 NPT

- external thread G1/4 EN 837
- external thread 1/2 NPT

others on request

Accessories (not included, please order separately)



Software Interface cable

- display of device information (serial number, pressure and temperature range, ...)
- configuration area for all parameters
- download area for recorded data (date, pressure measurement, temperature)
- protected data acquisition
- measured value representation in tabular or graphic form
- free scaling of the diagram
- creation of measurement / test report as a PDF file
- data export

Interface cable USB (type A) to mini connector (3.5 mm) with integrated converter: 1.7 m



Hard shell case

Dimension in mm (L x W x H): 432 X 363 X 138



Protection cap



Flat seal copper for mechanical connections according to EN 837



Seal tape for mechanical connections material: PTFE (Teflon)
Temperature range: -200°C ... 280 °C



Wrench SW27



Calibration hand test pump

Calibration hand test pump including test item hose is used to generate pressure for checking, adjusting and calibrating pressure measuring devices by means of comparative measurements. These pressure tests may be carried out in laboratories, workshop or on site at the measuring point.

Pressure generation: 0 ... 35 bar
vacuum generation: 0 ... -0.95 bar
weight: ca. 510 g
dimensions: ca. 220 x 105 x 63 mm



Adapter for calibration hand test pump

Adapter to connect the test unit to the calibration hand test pump

External thread: G ¼ EN 837
to
internal thread G ¼ DIN 3852
or G ½ DIN or EN
or ¼ NPT
or ½ NPT



Adapter for calibration hand test pump

Adapter to connect the pressure sensor module to the calibration hand test pump

External thread: G ½ EN 837
to
internal thread G ¼ DIN 3852
or G ½ DIN 3852
or ¼ NPT
or ½ NPT