



# ETd 03

## Battery Powered Digital Pressure Gauge

Stainless Steel Sensor

class 0.1

### Nominal pressure

from 0 ... 100 mbar up to 0 ... 600 bar

### Special characteristics

- ▶ rotatable housing
- ▶ 2-line LC display  
4.5-digit 7-segment display  
6-digit 14-segment additional display

### Functions

- ▶ min / max function with reset function
- ▶ offset and end point calibration
- ▶ setting the pressure unit  
(bar, mbar, psi, InHg, cmHg, mmHg, hPa, kPa, MPa, mH<sub>2</sub>O, InH<sub>2</sub>O)
- ▶ switch-off automatic

The battery-powered digital pressure gauge ETd 03 enables a local displaying of values, satisfying the highest demands for accuracy and long-term stability. The pressure gauge may be applied in all media compatible with the stainless steel used; it shows an excellent robustness and a high overpressure protection.

The ETd 03 display housing is rotatable, thus ensuring an easy reading even under unfavorable mounting conditions.

Additional functions:

changing the unit, displaying min / max values, calibrating of offset and the span, configuring the automatic switching-off

### Preferred areas of use are



Plant and Machine Engineering  
Pneumatics / Hydraulics  
Measurement Technology  
Calibration and Test Purposes



Laboratory Techniques



Environmental Engineering  
(water – sewage – recycling)



Input pressure ranges											
Nominal pressure gauge	[bar]	0.10	0.16	0.25	0.40	0.60	1	1.6	2.5	4	6
Nominal pressure abs.	[bar]	-	-	-	0.40	0.60	1	1.6	2.5	4	6
Overpressure	[bar]	0.5	1	1	2	5	5	10	10	20	40
Burst pressure	[bar]	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50
Nominal pressure gauge / abs.	[bar]	10	16	25	40	60	100	160	250	400	600
Overpressure	[bar]	40	80	80	105	210	210	600	1050	1050	1250
Burst pressure	[bar]	50	120	120	210	420	420	1000	1250	1250	1250
Vacuum pressure	-1 ... 0 bar, overpressure: 5 bar, burst pressure: 7.5 bar other vacuum ranges on request										
Vacuum resistance	$P_N \geq 1$ bar: unlimited vacuum resistance; $P_N < 1$ bar: on request										

Performance	
Accuracy <sup>1</sup>	nominal pressure $\geq 0.4$ bar: $\square \leq \pm 0.125$ % FSO BFSL nominal pressure: $< 0.4$ bar: $\leq \pm 0.25$ % FSO BFSL
Measuring rate	5/sec
Long term stability	$\leq \pm 0.1$ % FSO / year at reference conditions
<sup>1</sup> accuracy according to IEC 60770 – minimum value setting (non-linearity, hysteresis, repeatability)	

Thermal effects (Offset and Span)			
Nominal pressure $P_N$	[bar]	-1 ... 0	$\leq 0.40$
Tolerance band	[% FS]	$\leq \pm 0.75$	$\leq \pm 1$
in compensated range	[°C]	-20 ... 85 °C	0 ... 70 °C
			> 0.40
			$\leq \pm 0.75$
			-20 ... 85 °C

Permissible temperatures			
Permissible temperatures	medium: -20 ... 85 °C	environment: -20 ... 70 °C	storage: -30 ... 80 °C

Mechanical stability			
Vibration	5 g RMS (25 ... 2000 Hz)	according to DIN EN 60068-2-6	
Shock	100 g / 1 msec	according to DIN EN 60068-2-27	

Materials	
Pressure port / Housing	stainless steel 1.4404 (316 L)
Display housing	PA 6.6, polycarbonate
Seals (media wetted)	FKM
Diaphragm	stainless steel 1.4435 (316 L)
Media wetted parts	pressure port, seals, diaphragm

Miscellaneous	
Display	LC display, visible range 40 x 30 mm; 4.5-digit 7-segment-display, digit height 11 mm, range of indication $\pm 19999$ ; 6-digit 14-segment additional display, digit height 7.5 mm
Electromagnetic compatibility	emission and immunity according to EN 61326
Supply	3.6 V Lithium battery; 2 piece (type 1/2 AA)
Data storage	EEPROM (non-volatile)
Ingress protection	IP 65
Installation position	any <sup>2</sup>
Weight	approx. 300 g
AD-converter solution	14 Bit
Operational life of battery	standby mode: approx. 5 years
mech. operational life	$> 100 \times 10^6$ pressure cycles
CE-conformity	EMC Directive: 2004/108/EG Pressure Equipment Directive: 97/23/EG (Modul A) <sup>3</sup>

<sup>2</sup> The digital pressure gauge is calibrated in a vertical position with the pressure connection down. If this position is changed on installation there can be slight deviations in the zero point for devices with stainless steel sensor and pressure range  $P_N \leq 1$  bar.

<sup>3</sup> This directive is only valid for devices with maximum permissible overpressure  $> 200$  bar.

Dimensions (in mm)	

- The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials.