



BAROLI 02

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, mH₂O, InH₂O)
- ▶ switch-off automatic

The battery-powered digital pressure gauge BAROLI 02 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 BAROLI 02 display housing is rotatable, thus ensuring an easy reading even under unfavourable 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 | 105 | 210 | 600 | 1050 | 1050 | 1250 |
| Burst pressure [bar] | 50 | 120 | 120 | 210 | 210 | 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 ¹ | nominal pressure ≥ 0.4 bar: $\leq \pm 0.125$ % 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 |

¹ accuracy according to IEC 60770 – minimum value setting (non-linearity, hysteresis, repeatability)

| Thermal effects (Offset and Span) | | | |
|-----------------------------------|-----------------|--------------|-----------------|
| Nominal pressure P_N [bar] | -1 ... 0 | ≤ 0.40 | > 0.40 |
| Tolerance band [% FS] | $\leq \pm 0.75$ | $\leq \pm 1$ | $\leq \pm 0.75$ |
| in compensated range [°C] | -20 ... 85 °C | 0 ... 70 °C | -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 ± 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 pieces (type 1/2 AA) |
| Data storage | EEPROM (non-volatile) |
| Ingress protection | IP 65 |
| Installation position | any ² |
| Weight | approx. 300 g |
| AD-converter solution | 14 Bit |
| Operational life of battery | standby mode: approx. 5 years |
| Mech. operational life | 100 million load cycles |
| CE-conformity | EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (Modul A) ³ |

² 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.

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

| Dimensions (in mm) | |
|--------------------|---|
| | <p>⇒ for nominal pressure $P_N > 60$ bar increases the length of devices by 9 mm!</p> |

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Ordering code BAROLI 02

BAROLI 02

| | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

| Pressure | | | |
|---------------------------------------|---------|---|-------|
| gauge | M | 0 | E |
| absolute ¹ | M | 0 | F |
| Input | | | |
| [bar] | | | |
| 0.10 | 1 | 1 | 0 0 0 |
| 0.16 | 1 | 1 | 6 0 0 |
| 0.25 | 1 | 2 | 5 0 0 |
| 0.40 | | 4 | 0 0 0 |
| 0.60 | | 6 | 0 0 0 |
| 1.0 | | 1 | 0 0 1 |
| 1.6 | | 1 | 6 0 1 |
| 2.5 | | 2 | 5 0 1 |
| 4.0 | | 4 | 0 0 1 |
| 6.0 | | 6 | 0 0 1 |
| 10 | | 1 | 0 0 2 |
| 16 | | 1 | 6 0 2 |
| 25 | | 2 | 5 0 2 |
| 40 | | 4 | 0 0 2 |
| 60 | | 6 | 0 0 2 |
| 100 | | 1 | 0 0 3 |
| 160 | | 1 | 6 0 3 |
| 250 | | 2 | 5 0 3 |
| 400 | | 4 | 0 0 3 |
| 600 | | 6 | 0 0 3 |
| -1 ... 0 | X | 1 | 0 2 |
| customer | | 9 | 9 9 |
| Accuracy | | | |
| [BFSL] | | | |
| standard for P _N ≥ 0.4 bar | 0.125 % | | B 2 |
| standard for P _N < 0.4 bar | 0.25 % | | B 5 |
| customer | | 9 | 9 |
| Mechanical connection | | | |
| G1/2" EN 837 | | 2 | 0 0 |
| G1/4" EN 837 | | 4 | 0 0 |
| 1/2" NPT | | N | 0 0 |
| 1/4" NPT | | N | 4 0 |
| customer | | 9 | 9 9 |
| Seals | | | |
| FKM | | 1 | |
| customer | | 9 | |
| Pressure port | | | |
| stainless steel 1.4404 (316L) | | 1 | |
| customer | | 9 | |
| Diaphragm | | | |
| stainless steel 1.4435 (316L) | | 1 | |
| customer | | 9 | |
| Front foil | | | |
| standard | | | 1 |
| neutral | | N | |
| customer | | 9 | |
| Special version | | | |
| standard | | | 0 0 0 |
| customer | | 9 | 9 9 |

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¹ absolute pressure possible from 0.4 bar

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