



BAROLI 02P

Battery Powered Digital Pressure Gauge

Stainless Steel Diaphragm Flush Welded

class 0.1

Nominal pressure

from 0 ... 100 mbar up to 0 ... 40 bar

Special characteristics

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

Functions

- ▶ min / max function with reset function
- ▶ offset and end point calibration
- ▶ setting the pressure unit
- ▶ configuration of switch-off automatic

The battery-powered digital pressure gauge BAROLI 02P with flush welded stainless steel sensor enables a local displaying of values in applications, where high requirements on hygienic process connections and easy cleaning or sterilization are requested. The filling medium is food compatible oil with FDA approval.

The BAROLI 02P display housing is rotatable, thus ensuring an easy reading even under unfavourable mounting conditions.

Additional functions:

switching the unit, displaying min / max values, calibrating the offset and the end point, configuring the automatic switching-off

Preferred areas of use are



Food industry



Pharmacy



| Input pressure ranges ¹ | | | | | | | | |
|------------------------------------|----------|------|------|------|------|------|-----|-----|
| Nominal pressure, gauge [bar] | -1 ... 0 | 0.10 | 0.16 | 0.25 | 0.40 | 0.60 | 1 | 1.6 |
| Nominal pressure, abs. [bar] | - | - | - | - | 0.40 | 0.60 | 1 | 1.6 |
| Overpressure [bar] | 5 | 0.5 | 1 | 1 | 2 | 5 | 5 | 10 |
| Burst pressure ≥ [bar] | 7.5 | 1.5 | 1.5 | 1.5 | 3 | 7.5 | 7.5 | 15 |

| | | | | | | | |
|-------------------------------------|---|----|----|----|-----|-----|-----|
| Nominal pressure gauge / abs. [bar] | 2.5 | 4 | 6 | 10 | 16 | 25 | 40 |
| Overpressure [bar] | 10 | 20 | 40 | 40 | 80 | 80 | 105 |
| Burst pressure ≥ [bar] | 15 | 25 | 50 | 50 | 120 | 120 | 210 |
| Vacuum resistance | P _N ≥ 1 bar: unlimited vacuum resistance P _N < 1 bar: on request | | | | | | |

¹ consider the pressure resistance of fitting and clamps

| Performance | |
|-----------------------|--|
| Accuracy ² | nominal pressure ≥ 0.4 bar : ≤ ± 0.125 % BFSL nominal pressure < 0.4 bar: ≤ ± 0.25 % BFSL |
| Measuring rate | 5/sec |

² 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 [% FSO] | ≤ ± 0.75 | ≤ ± 1.5 | ≤ ± 0.75 |
| in compensated range [°C] | 0 ... 70 °C | 0 ... 50 °C | 0 ... 70 °C |

| Permissible temperatures | |
|---------------------------------------|---|
| Permissible temperatures ³ | medium: -40 ... 125 °C for filling fluid of silicone oil -10 ... 125 °C for filling fluid of food compatible oil environment: -20 ... 70 °C storage: -30 ... 80 °C |

³ max temperature of the medium for nominal pressure gauge > 0 bar: 150 °C for 60 minutes with a max. environmental temperature of 50 °C

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

| Materials / Filling fluids | |
|----------------------------|---|
| Housing | stainless steel 1.4404 (316 L) |
| Pressure port | stainless steel 1.4435 (316 L) other on request |
| Display housing | PA 6.6, polycarbonate |
| Seals (media wetted) | standard: FKM clamp and dairy pipe: none |
| Diaphragm | stainless steel 1.4435 (316 L) |
| Media wetted parts | pressure port, seals, diaphragm |
| Filling fluids | standard: silicone oil option: food compatible oil with FDA-certificate (mobile SHC Cibus 32; class code: H1; NFS registration no.: 141500) other on request |

| 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 (standard: the device is calibrated in a vertical position with the pressure connection down; other than the given position for P _N ≤ 2 bar have to be declared at ordering) |
| Weight | min. 350 g (pendent on the pressure connection) |
| AD-converter solution | 14 Bit |
| Operational life of battery | standby mode: approx. 5 years |
| Mech. operational life | 100 million load cycles |
| CE-conformity | EMV Directive: 2014/30/EU |

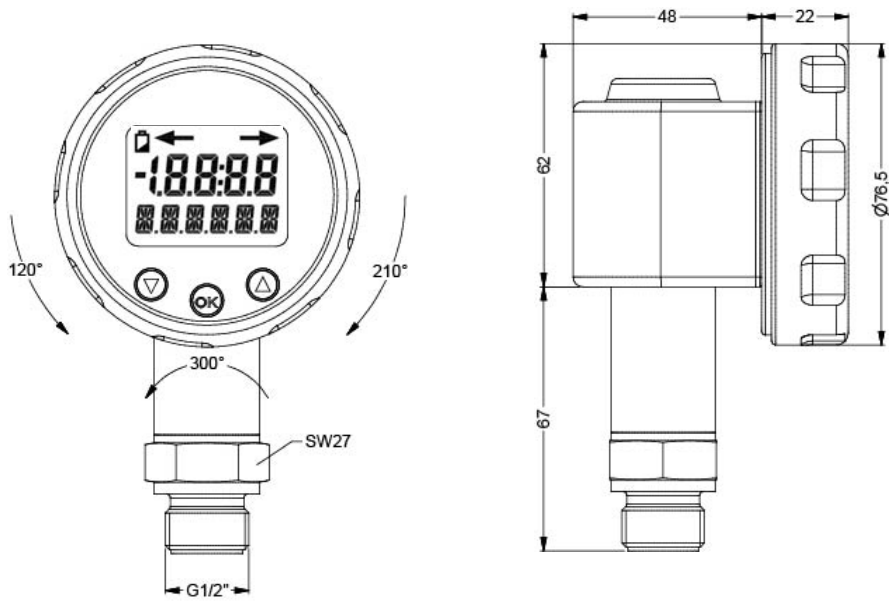
BAROLI 02P

Digital Pressure Gauge

Technical Data

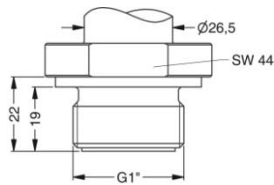
Dimensions (in mm)

standard

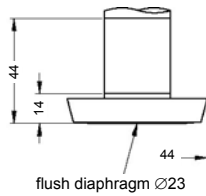


G1/2" flush DIN 3852
 $P_N \geq 1 \text{ bar}$

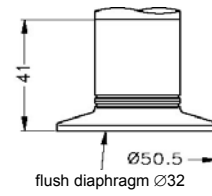
option



G1" flush DIN 3852



dairy pipe DN25 DIN 11851
 $(P_N \geq 0.25 \text{ bar})$



clamp 1 1/2" ISO 2852
 $(P_N \leq 16 \text{ bar})$

© 2018 BD|SENSORS GmbH – 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.

Ordering code BAROLI 02P

BAROLI 02P

[] [] [] - [] [] [] [] - [0] - [] [] - [0] [K] [0] - [] [] [] [] - [] - [] - [] - [] - [] [] [] [] []

| | | | | | | | | | | | | | |
|-------------------------------------|----------|--|--|---|---|---|-------|--|--|---|---|---|---------|
| Pressure | | | | | | | | | | | | | |
| gauge | M 0 G | | | | | | | | | | | | |
| absolute | M 0 H | | | | | | | | | | | | |
| 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 | | | | | | |
| -1 ... 0 | | | | X | 1 | 0 | 2 | | | | | | |
| customer | | | | 9 | 9 | 9 | 9 | | | | | | consult |
| Accuracy | | | | | | | | | | | | | |
| [BFSL] | | | | | | | | | | | | | |
| standard for $P_N \geq 0.4$ bar | 0.125 % | | | | | | B 2 | | | | | | |
| standard for $P_N < 0.4$ bar | 0.25 % | | | | | | B 5 | | | | | | |
| customer | | | | | | | 9 9 | | | | | | consult |
| Mechanical connection | | | | | | | | | | | | | |
| G1/2" DIN 3852 with flush diaphragm | 2 | | | | | | Z 0 0 | | | | | | |
| G1" DIN 3852 with flush diaphragm | | | | | | | Z 3 1 | | | | | | |
| Clamp 1 1/2" | 3 | | | | | | C 6 2 | | | | | | |
| Dairy pipe DN 25 (DIN 11851) | 4 | | | | | | M 7 3 | | | | | | |
| customer | | | | | | | 9 9 9 | | | | | | consult |
| Seals | | | | | | | | | | | | | |
| for clamp or dairy pipe: | without | | | | | | 0 | | | | | | |
| | FKM | | | | | | 1 | | | | | | |
| | customer | | | | | | 9 | | | | | | consult |
| Diaphragm | | | | | | | | | | | | | |
| Stainless steel 1.4435 (316L) | | | | | | | 1 | | | | | | |
| customer | | | | | | | 9 | | | | | | consult |
| Front foil | | | | | | | | | | | | | |
| standard | | | | | | | | | | 1 | | | |
| neutral | | | | | | | | | | N | | | |
| customer | | | | | | | | | | 9 | | | consult |
| Filling fluids | | | | | | | | | | | | | |
| Silicone oil | | | | | | | | | | | 1 | | |
| food compatible oil | | | | | | | | | | | 2 | | |
| customer | | | | | | | | | | | 9 | | consult |
| Special version | | | | | | | | | | | | | |
| standard | | | | | | | | | | | 0 | 0 | 0 |
| customer | | | | | | | | | | | 9 | 9 | 9 |
| | | | | | | | | | | | | | consult |

¹ absolute pressure possible from 0.4 bar

² possible only for $P_N \geq 1$ bar

³ possible only for $P_N \leq 16$ bar

⁴ possible only for $P_N \geq 0.25$ bar; cup nut for dairy pipe included and pre-assembled

© 2018 BD|SENSORS GmbH - 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.

15.02.2018



BD|SENSORS GmbH
BD-Sensors-Straße 1
D - 95199 Thierstein

Tel. +49 (0) 9235 / 98 11 - 0
Fax +49 (0) 9235 / 98 11 - 11

www.bdsensors.de
www.bdsensors.com
info@bdsensors.de