Operating Manual

Digital Gauge DM01, DM01-500, DM01-500HD

CE ROHS REACH Ex c UL us LISTED

READ THOROUGHLY BE FORE USING THE DEVICE
KEEP FOR FUTURE REFERENCE

ID: BA_DM01X_EX_E_SRO | Version: 05.2020.0

1. General and safety-related information on this operating manual

This operating manual enables safe and proper handling of the product, and forms part of the device. It should be kept in close proximity to the place of use, accessible for staff members at any time.

All persons entrusted with the mounting, installation, putting into service, operation, maintenance, removal from service, and disposal of the device must have read and understood the operating manual and in particular the safety-related information.

The following documents are an important part of the operating manual:

- Data sheet
- Type-examination certificate

For specific data on the individual device, please refer to the respective data sheet.

Download this by accessing *www.bdsensors.cz* or request it by e-mail: sale@bdsensors.cz
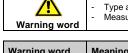or phone: +420 572 411 011

The explosion-proof versions of our products are variants of the standard products.

In addition, the applicable accident prevention regulations, safety requirements, and country-specific installation standards as well as the accepted engineering standards must be observed.

For the installation, maintenance and cleaning of the device, the relevant regulations and provisions on explosion protection (VDE 0160, VDE 0165 and/or EN 60079-14 as amended) as well as the accident prevention regulations must absolutely be observed. The device was designed by applying the following standards:

EN IEC 60079-0:2018
EN 60079-11:2012

1.1 Symbols used

	- Type and source of danger - Measures to avoid the danger
⚠️ **Warning word**	

Warning word	Meaning
⚠️ **DANGER**	- Imminent danger! - Non-compliance **will result in** death or serious injury.
⚠️ **WARNING**	- Possible danger! - Non-compliance **may result in** death or serious injury.
⚠️ **CAUTION**	- Hazardous situation! - Non-compliance **may result in** minor or moderate injury.

NOTE - draws attention to a possibly hazardous situation that may result in property damage in case of non-compliance.

✓ Precondition of an action

1.2 Staff qualification

Qualified persons are persons that are familiar with the mounting, installation, putting into service, operation, maintenance, removal from service, and disposal of the product and have the appropriate qualification for their activity.

This includes persons that meet at least one of the following three requirements:

- They know the safety concepts of metrology and automation technology and are familiar therewith as project staff.
- They are operating staff of the measuring and automation systems and have been instructed in the handling of the systems. They are familiar with the operation of the devices and technologies described in this documentation.
- They are operating staff of the measuring and automation systems and have been instructed in the handling of the systems. They are familiar with the operation of the devices and technologies described in this documentation.

All work with this product must be carried out by qualified persons!

1.3 Intended use

The battery powered digital gauge has been designed for extremely high demands in the sector of calibration and test technology. It can be easily and quickly installed in situ.

This operating manual applies to devices with explosion protection approval and is intended for the use in IS-areas. A device has an explosion-protection approval if this was specified in the purchase order and confirmed in our order acknowledgement. In addition, the manufacturing label includes a ⟨Ex⟩ sign.

The user must check whether the device is suited for the selected use. In case of doubt, please contact our sales department: sale@bdsensors.cz | phone: +420 572 411 011

BD|SENSORS assumes no liability for any wrong selection and the consequences thereof!

Permissible media are gases or liquids, which are compatible with the media wetted parts described in the data sheet. In addition, it has to be ensured, that this medium is compatible with the media wetted parts.

The technical data listed in the current data sheet are engaging and must absolutely be complied with. If the data sheet is not available, please order or download it from our homepage: http://www.bdsensors.cz

⚠️ **WARNING**	**Danger through incorrect use** - In order to avoid accidents, use the device only in accordance with its intended use.

1.4 Limitation of liability and warranty

Failure to observe the instructions or technical regulations, improper use and use not as intended, and alteration of use or damage to the device will result in the forfeiture of warranty and liability claims.

1.5 Safe handling

NOTE - Treat the device with care both in the packed and unpacked condition!

NOTE - The device must not be altered or modified in any way!

NOTE - Do not throw or drop the device!

NOTE - Excessive dust accumulation (over 5 mm) and complete coverage with dust must be prevented!

NOTE - The device is state-of-the-art and is operationally reliable. Residual hazards may originate from the device if it is used or operated improperly!

1.6 Safety technical maximum values

EU-type examination certificate: IBExU12ATEX 1107 X
Device type: AX6-DM01
Identification:
Standard variant for zone 1:
II 2G Ex ia IIB T4 Gb
With conductive front foil for zone 0: II 1G Ex ia IIC T4 Ga
Ambient temperature range:
Display module: -10 ... 55 °C
Transmitter module: -20 … 70 °C (with 1G up to +60 °C)
Power: 3x 1.5 V / AA: DURACELL Plus Power batteries

1.6.1. Specific conditions of use

- The ambient temperature range for the display module is fixed from -10°C to +55 °C. The range is -20°C to +70°C (at 1G to +60 °C) applies to the transmitter module.
- The precision digital manometers type AX6-DM01 and AX6-DL01 may be operated only in combination with the related pressure transmitters with the EC-type examination certificate IBExU10ATEX1026 U.
- Opening the battery compartment cover and the removal of the protective cover of the interface connector must not be done in a hazardous atmosphere.
- The operation of the communication interface in explosive areas is not permitted.
- Only use the batteries specified: 3x 1.5 V/AA Duracell Power Plus.
- For applications in explosion group IIC, the metal case is to ground safely.

1.7 Scope of delivery

Check that all parts listed in the scope of delivery are included free of damage, and have been delivered according to your purchase order:

- digital gauge (display / pressure sensor module)
- this operating manual
- accessories (option)

1.8 UL-approval (for devices with UL-marking)

The UL approval was effected by applying the US standards, which also conform to the applicable Canadian standards on safety.

2. Product identification

The device can be identified by means of the type plate with order code. The most important data can be gathered there from.

manufacturing label for display

BD SENSORS
pressure measurement
Hradistska 817
687 08 Buchlovice, CZ
www.bdsensors.cz

AX16-DM 01	DM01-A2E	SN: 01234567

Battery: 3 x 1,5 V AA
Mandatory Battery: DURACELL Plus Power
Transfer rate: 38400 Baud
Ex IBExU12ATEX1107 X II 2G Ex ia IIC T4 Gb
! battery changing and using interface is not allowed in IS area

CE 0044 2018

manufacturing label for pressure sensor module

BD SENSORS®
pressure measurement
Hradistska 817
687 08 Buchlovice, CZ
Tel.: +420 572 411 011

DM 01	M0K-2503-E-B1-100-1-000	SN: 01234567

Input: 0...250 bar gauge
IBExU12ATEX1107 X

Ex CE 1026 2018

Fig. 1 Example of manufacturing label

NOTE - The type plate must not be removed!

3. Mounting

3.1 Mounting and safety instructions

⚠️ **DANGER**	**Danger of death from explosion, airborne parts, leaking fluid, electric shock** - Always mount the device (pressure transmitter module) in a depressurized condition and apart from the display! - Do not install or open the device (e.g. for changing batteries) while there is a risk of explosion. Furthermore, no communication and connection of the cables is allowed.
⚠️ **WARNING**	- This device may only be installed by qualified technical personnel who has read and understood the operating manual! - Do not use the display to tighten or solve to the mechanical connection of the pressure transmitter module!

NOTE - Operation of the display AX6-DM01 with the EC-Type Examination certificate IBExU12ATEX1107 X is permitted only in combination with the accompanying pressure transmitter with the EC-Type Examination certificate IBExU10ATEX 1026U!

NOTE - If both equipments have not been used in the scheduled combination (display AX6-DM01 / pressure transmitter with certificate IBExU10 ATEX 1026 U), then the complete system has to be put immediately out of operation! A potentially damage of one or both devices could have been occurred! The device(s) consequently lose the IS-certification when using not for intended purpose!

NOTE - Handle the unprotected diaphragm very carefully - it is very sensitive and may be easily damaged.

NOTE - To avoid damaging the diaphragm, remove packaging and protective cap only directly before starting up the device. A delivered protective cap must be stored!

NOTE - Place the protective cap on the pressure port again immediately after disassembling.

NOTE - Do not use any force when installing the device to prevent damage of the device and the plant!

NOTE - Take note that no inadmissibly high mechanical stresses occur at the pressure port as a result of the installation, since this may cause a shifting of the characteristic curve or to the demage.

NOTE - In hydraulic systems, position the device in such a way that the pressure port points upward (venting).

NOTE - Provide a cooling line when using the device in steam lines.

NOTE - If the device is installed with the pressure port pointing upwards, ensure that no liquid drains off on the device. This could result in humidity and dirt blocking the gauge reference in the housing, and could lead to malfunctions. If necessary, dust and dirt must be removed from the edge of the screwed joint of the electrical connection.

NOTE - The specified tightening torques must not be exceeded!

NOTES - **for mounting outdoors or in a moist environment:**

- Connect the device electrically straightaway after mounting or prevent moisture penetration, e.g. by a suitable protective cap. (The protection rating specified on the data sheet applies to the connected device.)
- Select the mounting position such that splashed and condensed water can drain off. Stationary liquid on sealing surfaces must be excluded!
- Mount the device such that it is protected from direct solar radiation. In the most unfavourable case, direct solar radiation leads to the exceeding of the permissible operating temperature. This must be excluded if the device is used in any explosion-hazardous area!
- A device with gauge reference in the housing (small hole next to the electrical connection) must be mounted such that the gauge reference is protected against dirt and humidity. If the transducer is exposed to liquid admission, the gauge reference will be blocked, and the equalization of air pressure will be prevented. In this condition, a precise measurement is impossible and damage to the transducer may occur.

3.2 Conditions for oxygen applications

⚠️ **DANGER**	**Danger of death from explosion** - when used improperly

Make sure that your device was ordered for oxygen applications and delivered accordingly. (see type plate – order code ends with the numbers "007")

Unpack the device directly prior to the installation.

Skin contact during unpacking and installation must be avoided to prevent fatty residues remaining on the device. Wear safety gloves!

The entire system must meet the requirements of BAM (DIN 19247)!

For oxygen applications > 25 bar, transducer types without seals are recommended.

Transmitters with o-rings of FKM Vi 567: permissible maximum values: 25 bar / 150° C (BAM approval)

3.3 Mounting steps for connections according to DIN 3852

NOTE - Do not use any additional sealing material such as yarn, hemp or Teflon tape!

✓ The O-ring is undamaged and seated in the designated groove.

✓ The sealing face of the mating component has a flawless surface. (R_z 3.2)

1 Screw the device into the mating thread by hand.
2 Devices equipped with a knurled ring:
only tighten by hand
3 Devices with a wrench flat must be tightened using a suitable open-end wrench.
Wrench flat made of steel:
G1/4": approx. 5 Nm; G1/2": approx. 10 Nm;
G3/4":approx. 15 Nm; G1": approx. 20 Nm

3.4 Mounting steps for connections according to EN 837

✓ A suitable seal for the measured fluid and the pressure to be measured is available. (e.g. a copper seal)

✓ The sealing face of the mating component has a flawless surface. (R_z 6.3)

1 Screw the device into the mating thread by hand.
2 Then tighten it using an open-end wrench:
G1/4": approx. 20 Nm; G1/2": approx. 50 Nm

3.5 Mounting steps for NPT connections

✓ Suitable fluid-compatible sealing material, e.g. PTFE tape, is available.

1 Screw the device into the mating thread by hand
2 Then tighten it using an open-end wrench:
1/4" NPT: approx. 30 Nm; 1/2" NPT: approx. 70 Nm

NOTE - The specified tightening torques must not be exceeded!

3.6 Mounting steps for internal threads M20x1.5 and 9/16" UNF (for DM01-500 HD)

⚠️ **WARNING**	**Danger of injury** - Due to wrong installation - Do not use any seal!

NOTE - The high-pressure tube will seal metal-to-metal in the chamfer of the pressure port. (sealing cone 60°)

1 Screw the high-pressure fitting into the internal thread of the pressure transmitter.

2 Then tighten it using an open-end wrench. The required tightening torque depends on the manufacturer's specifications for the high-pressure pipe you are using. (permissible tightening torque for pressure transmitter: max 120 Nm)

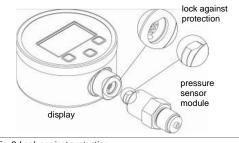# 4. Connecting display / pressure sensor module

Fig. 2 Lock against protection

Connect display with pressure transmitter module as follows:

- bring together carefully the display with pressure transmitter module
- press the display sturdy pressure transmitter module to this engages

NOTE - Before disconnecting display and pressure sensor module make sure that the device is switched off.

NOTE - While the data logger is active, display and pressure sensor module must not be disconnected!

5. Supply / changing the batteries

⚠️ **DANGER**	**Danger of death from explosion** - Do not open the housing (e.g. for changing batteries) while an explosion hazard exists!

Before initial start-up the insulation foil has to be removed. Carry out steps 1 - 3 and 5 in this regard.

As soon as in the display the announcement of "battery" is shown, a battery change is required. Follow steps 1, 2, 4, and 5 in this regard.

1 unscrew three fixing screws with a suitable screwdriver
2 take the battery case cap
3 remove the insulation foil before initial start-up
4 exchange the batteries (3 x 1.5 V AA)
5 lock the device after that properly

NOTE - An incorrect usage may cause a leak out of batteries and so a damage the device!

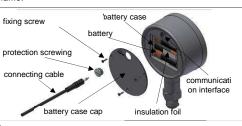**NOTE** - Use only the following batteries that have Ex and UL approvals: 1.5V / AA DURACELL Plus Power Battery

NOTE - Never combine batteries of different types or old with new ones!

NOTE - Make sure that the batteries are connected correctly with the corresponding contacts in the battery tray.

NOTE - Never try to charge batteries, demount them, or short-circuit them.

NOTE - Keep the batteries away from heat and unshielded flame.

Fig. 3 Battery case and communication interface

6. Initial start-up

⚠️ **DANGER**	**Danger of death from explosion** - Operate the device only within the specification! (according to data sheet and EC-type-examination certificate) - Do not install or open the device (e.g. for changing batteries) while there is a risk of explosion. Furthermore, no communication and connection of the cables is allowed.

✓ The device has been installed properly.

✓ The device does not have any visible defect.

✓ The insulation foil was removed from the battery case

6.1 Data logger

The battery powered digital gauge disposes of an integrated data logger. The measuring values stored away in the device can be selected above the communication interface by means of software BD|DAQ (optionally included in delivery). Free version BD|DAQ software is available via homepage https://www.bdsensors.cz.

6.2 PC-connection

Connect device with a computer as follows:
- Unscrew the protective screwing of the communication interface with a suitable slit screwdriver.
- Connect the handle plug of the connecting cable (included in delivery) with the interface socket of the device. Connect the USB plug with a free USB connection on the computer.
- Install COM driver and data logger software BD|DAQ.
- After the use, disconnect the connection and lock the protection screwing again properly.

7. Operation

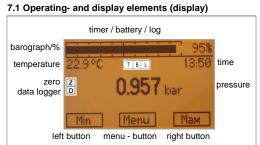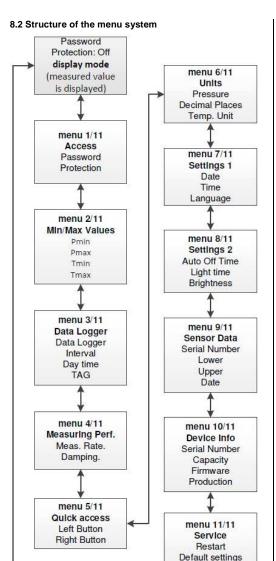## 7.1 Operating- and display elements (display)

Fig.4 Display and operating foil

The display of the measuring value as well as configuring the single parameters occurs menu-steered about a LC display capable of graphic arts. The single functions are regulated on the basis of three-front-sided arranged push buttons.

The menu system is closed, thereby one can "browse" forward as well as backward by the single setting menus to reach to the desired setting point.

8.2 Structure of the menu system

```
Password
Protection: Off
display mode
(measured value
is displayed)
      ↕
menu 1/11
Access
Password
Protection
      ↕
menu 2/11
Min/Max Values
Pmin
Pmax
Tmin
Tmax
      ↕
menu 3/11
Data Logger
Data Logger
Interval
Day time
TAG
      ↕
menu 4/11
Measuring Perf.
Meas. Rate.
Damping.
      ↕
menu 5/11
Quick access
Left Button
Right Button
```

```
menu 6/11
Units
Pressure
Decimal Places
Temp. Unit
      ↕
menu 7/11
Settings 1
Date
Time
Language
      ↕
menu 8/11
Settings 2
Auto Off Time
Light time
Brightness
      ↕
menu 9/11
Sensor Data
Serial Number
Lower
Upper
Date
      ↕
menu 10/11
Device Info
Serial Number
Capacity
Firmware
Production
      ↕
menu 11/11
Service
Restart
Default settings
```

8.3 Menu description

Switching on	**Switching on without status message**, with "Left button" and "Right button" key possible. **Switching on with status message**, only possible with button "Menu key" (middle button). Status message (appears in the display for approx. 2 seconds): - Memory usage: in percent - TAG: Measuring point designation in text form - Battery: Status of the battery charge - Firmware: installed version
Menu 1/11 Access	**Password**: **** (a four-digit, freely combinable statement consisting of numbers, letters and special characters) - Protection [Off]: unrestricted operation - Protection [On]: operation only possible after password input (Select menu item "Password" with "Edit" → Press "<<" or ">>" → Set value → continue with "Next". Set password and remember! → Press "Next" to "Protection" sub-item → Press "<<" or ">>" → Activate protection [On] or deactivate protection [Select] → confirm with "Next" and continue to menu bar.) **NOTE** - No connection to the evaluation software BD ⏐DAQ, if password is active! **NOTE** - If you have forgotten your password, contact the manufacturer!
Menu 2/11 Min/Max Values	**Display of min / max values** P$_{min}$ - Minimum pressure display: The minimum pressure applied during measuring is shown in the display. P$_{max}$ - Maximum pressure display: The maximum pressure applied during measuring is shown in the display. T$_{min}$ - Minimum temperature display: The minimum temperature applied during measuring is shown in the display. T$_{max}$ - Maximum temperature display: The maximum pressure applied during measuring is shown in the display. Possible options: reset value [Reset? Sure?] (Resetting of a value: select the menu point with "Edit" → button ">>" operate. There appears the question "Reset?" → once more operate the button ">>". It seems "Sure?" additional confirmation whether the value should be put back → repeated confirming with the button ">>" takes over topically adjoining pressure as a minimum value.)
Menu 3/11 Data Logger	**Data Logger configuration** the following settings are possible: linearly [Linear] (value admission to the counter level 600798 is reached), cyclically ([Loop] (after the value is reached in 600798, the data logger automatically begins the values once more to grasp and, besides, overwrite the old values) or [Off] (in the display appears "**D**", if the data logger is activated and goes out if the data logger is off). Intervals to the memory of the measuring values (pressure / temperature): Interval: second [1-99 sec.]; minute [1-99 min]; hour [1-99 h]; or day [1-99 days], the time of day is to be set additionally; Milliseconds [20 msec.], only possible if the sampling rate is set to 50 / sec. in menu 4/11 (measuring performance). Time of day: Measured value recording: at what time the value should be recorded (only effective for the interval setting "day"). TAG: Measuring point inscription, factory set BD⏐Sensors. The setting can be changed by the user. **NOTE** - While the data logger is active, the display and pressure sensor module must not be disconnected!
Menu 4/11 Measuring Perf.	**Sample rate**: Possible settings [1 / sec.], [2 / sec.] or [50 / sec.] only if the interval is set to [20 msec.] in menu 3/11 (Data Logger). **Damping:** Damping can be set in one-second increments between [1 sec.] and [10 sec.], or disabled by selecting [Off].
Menu 5/11 Quick access	**Button configuration: Left button / Right button** Left / Right button: configuration of functions: [Min], [Max], [Light], [Zero], [Reset], [Single], [Off] Description of the functions: - [Min] / [Max] minimum / maximum pressure value is shown in the display - [Light] The backlight will turn on only when the illumination time in the 8/11 menu is set to 1-10 s. - [Zero] the zero point is set automatically, the display shows "**Z**" - [Reset] the set zero point is reset, goes out - [Single] the measured values are recorded individually after pressing the button - [Off] switches off the display (standby), provided the data logger is deactivated.
Menu 6/11 Units	**Adjustment of pressure unit** adjustable units: [bar], [PSI], [mbar], [mH2O], [inHg], [cmHg], [mmHg], [hPa], [kPa], [MPa], [kg/cm2], [inH2O], [mmH2O] or [User] (the user-defined unit [User] can only be programmed using the software BD | DAQ), all pressure-related parameters are converted **Setting the decimal places** settable decimal places: standard [Std], one decimal place [+1] or two decimal places [+2] **Setting the temperature unit** adjustable units: degrees Celsius [°C], degrees Fahrenheit [°F] or Kelvin [K] set (factory setting [°C])
Menu 7/11 Settings 1	**Setting the date, time and language** Adjustable options: The date in the format [T.M.JJJJ], the time in the format [hh: mm] and the language [German] or [English].
Menu 8/11 Settings 2	**Setting the switch-off time, the lighting and the brightness** Off time: Setting the automatic switch-off in minutes. The automatic shut-off can be configured in increments of [1 min], [2 min], [3 min], [4 min] or [5 min] (the timer is activated 30 sec. before switching it off) or disabled by the [Off] option. After deactivation, the precision digital pressure gauge is in continuous operation. Illumination: the illumination duration can be set in one-second increments between [1 s] and [10 s] and in ten-second increments between [20 s] and [120 s], or disabled by selecting [Off] and enabling [On]. Note: For continuous lighting [On] increased consumption of the battery charge. Brightness: The brightness can be adjusted in 10% increments between [0%] and [100%].
Menu 9/11 Sensor Data	**Overview of sensor data (pressure sensor module)** [SN:] Serial number (ten-digit number) [Lower:] Start of measuring range (value and unit) [Upper:] Measuring range end (value and unit) [Date:] Date of manufacture (dd.mm.yyyy) The values are set by the factory and cannot be changed. Automatic detection after connecting the sensor to the display
Menu 10/11 Device Info	**Overview of device information (display)** [SN:] Serial number (eight-digit number) [Cap:] Data logger capacity (occupied range 0-600798 / maximum acceptance 600798) [Firmware:] The installed firmware version is displayed. [Production:] Date of Manufacture (TT.MM.JJJJ) Note: The values are set by the factory and cannot be changed. The recorded value in the data logger can be reset. (Reset counter reading: menu point [Cap:] with "Edit" select → button "<<" or ">>" press. There appears the question "Reset?" → once more operate the button "<<" or ">>". It seems "Sure?" additional confirmation whether the value should be reset → repeated confirming with the button "<<" or ">>" reset the grasped measuring values. Display announcement "Counter: 0/600798")
Menu 11/11 Service	**Setting the service options** Device restart: [No] or [Yes] Switching off and switching on the device is carried out automatically. Required before firmware upgrade. Presets: Reset [No] or [Yes] to factory defaults
Error	Display "No sensor": Display and pressure sensor modules are disconnected. Indication "Inappropriate sensor": Sensor is not suitable for the sampling rate 50 / s and the interval of 20 ms.
Firmware update	Download current firmware (https://www.bdsensors.cz), switch on the device, connect the display to the computer (see 5.2), start the firmware update tool. Device (display) restart (automatic detection), select update file with Select File, press Start Update button and execute update. **NOTE** - the update may not be interrupted!
Left button:	is a function button and can be configured in menu 5. Off, Min, Max, Light, Zero, Reset or Single function can be assigned to the button. The configured function is active in display mode. Hold the button for about 2 seconds to activate the preset function. In operating mode, move backwards in the menu system "<<" or reduce the setting value.
Right button:	is a function key and can be configured in menu 5. Off, Min, Max, Light, Zero, Reset or Single functions can be assigned to the key. Hold the button for about 2 seconds to activate the preset function. In operating mode, move forward in the menu system ">>" or increase the setting.
Menu-button:	pressing this "Menu" button will enter the operating mode; It also serves to select the individual menu items "Edit" or to confirm the set values "Next". When pressing the button for approx. 4 seconds, the operating mode is exited.

To configure the individual menu items, the desired menu item must be set with the help of the left key "<<" or the right key ">>". Then confirm this with the menu button "Edit". Menu item is highlighted and configuration can begin.
To save a set value the menu key "Next" must be pressed. To exit the menu, press the menu button for approx. 4 seconds. The operating mode is also left automatically after approx. 1 min.

☞ Changes are only effective after pressing the menu button "Next" and after leaving the menu item. When leaving the entire menu system, the set parameters are checked again in relation to each other and in relation to the characteristics of the device. When configuring the unit, the measuring range is converted into the new unit only after leaving the menu system. Depending on the pressure range, not all units may be used.
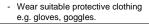
8. Removal from Service

⚠ DANGER	**Danger of death from airborne parts, leaking fluids, electric shock** - Disassemble the device in a depressurized and switched-off condition!
⚠ WARNING	**Danger of injury from aggressive media or pollutants** - Depending on the measured medium, this may constitute a danger to the operator. - Wear suitable protective clothing e.g. gloves, goggles.

NOTE - After dismounting, mechanical connections must be fitted with protective caps.

9. Service/Repair

Information on service / repair:
- www.bdsensors.cz
- servis@bdsensors.cz
- Phone: +420 572 411 011

9.1 Recalibration

During the life-time of a transmitter, the value of offset and span may shift. As a consequence, a deviating signal value in reference to the nominal pressure range starting point or end point may be transmitted. If one of these two phenomena occurs after prolonged use, a recalibration is recommended to ensure furthermore high accuracy.

9.2 Return

⚠ WARNING	**Danger of injury from aggressive media or pollutants** - Depending on the measured medium, this may constitute a danger to the operator. - Wear suitable protective clothing e.g. gloves, goggles.

Before every return of your device, whether for recalibration, decalcification, modifications or repair, it has to be cleaned carefully and packed shatter-proofed. You have to enclose a notice of return with detailed defect description when sending the device. If your device came in contact with harmful substances, a declaration of decontamination is additionally required.

Appropriate forms can be downloaded from our homepage. Download these by accessing www.bdsensors.cz or request them:

sale@bdsensors.cz | phone: +420 572 411 011

In case of doubt regarding the fluid used, devices without a declaration of decontamination will only be examined after receipt of an appropriate declaration!

10. Disposal

⚠ WARNING	**Danger of injury from aggressive media or pollutants** - Depending on the measured medium, this may constitute a danger to the operator. - Wear suitable protective clothing e.g. gloves, goggles.

The device must be disposed of according to the European Directive 2012/19/EU (waste electrical and electronic equipment). Waste equipment must not be disposed of in household waste!

NOTE - Dispose of the device properly!

11. Warranty Terms

The warranty terms are subject to the legal warranty period of 24 months, valid from the date of delivery. If the device is used improperly, modified or damaged, we will rule out any warranty claim. A damaged diaphragm will not be accepted as a warranty case. Likewise, there shall be no entitlement to services or parts provided under warranty if the defects have arisen due to normal wear and tear.

12. EU Declaration of conformity / CE

The delivered device fulfils all legal requirements. The applied directives, harmonised standards and documents are listed in the EC declaration of conformity, which is available online at: http://www.bdsensors.cz.
Additionally, the operational safety is confirmed by the CE sign on the manufacturing label.