

Operating Instructions



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1 General information

This document contains necessary information for the proper installation and use of this device. In addition to this instruction, be sure to observe all statutory requirements, applicable standards, the additional technical specifications on the accompanying data sheet (see www.labom.com) as well as the specifications indicated on the type plate.

1.1 Safety notes

The installation, set up, service or disassembly of this device must only be done by trained, qualified personnel using suitable equipment and authorized to do so.



Warning

Media can escape if unsuitable devices are used or if the installation is not correct.

Danger of severe injury or damage

- Ensure that the device is suitable for the process and undamaged.

If you have purchased a device with EX or SIL approval, please refer to the enclosed EX or SIL instructions for the relevant data and information. These documents are also available on our homepage www.labom.com.

1.2 Intended use

The device is intended to measure pressure of gases, vapors and liquids as specified in the data sheet.

2 Transportation and storage

Store and transport the device only under clean and dry conditions preferably in the original packaging. Avoid exposure to shocks and excessive vibrations.

Permissible storage temperature: -40...70 °C

S3 models with case filling

Permissible storage temperature: -20...60 °C

3 Installation / Commissioning

Ensure that the device is suitable for the intended application with respect to pressure range, overpressure limit, media compatibility, temperature range and process connection.

3.1 Mechanical installation


Use gaskets that are suitable for the process connection and resistant to the media.

Before starting operation, check the process connection carefully for leaks under pressure.

Install safety pressure gauges in the line with DIN EN 837-1 S1 and S3 so that the exhaust equipment can freely discharge to the rear in the event of a fault or malfunction. Provide for corresponding openings if mounting the unit on the wall.

Use the spanner flats to screw in the device.

Measuring devices where oil or grease residues in the measuring element are not permitted are marked accordingly with a label on the packaging.

Measuring devices for use with oxygen are marked on the scale with the oil can  icon and the word “oxygen” directly below this.

Seal cylindrical screw threads by fitting a sealing washer to the front face of the gasket. Seal taper screw threads by screwing tight; typically a gasket material is applied to the male thread. Make sure that the set of gasket you use are correct and in perfect condition when mounting the instrument; non-matching gasket can cause faults.

Vent the pressure gauge after installation using the vent valve (Figure 1).



Figure 1: Vent valve

The devices are supplied with a closed vent valve (CLOSED position). Moving the red lever to the OPEN position equalises the pressure level inside and outside the case (Figure 2).

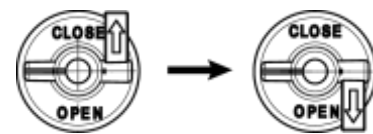


Figure 2: Move valve

3.2 Electrical connection

Complete the mechanical installation before you connect the device electrically. Set up all electrical connections while the voltage supply is switched off.

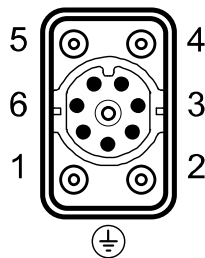


Figure 3: Cable connector

The type of contact, the switch function and the pin connection can be found on a separate label on the measuring device.

You can find further information of switch contacts in the document TA_039 on www.la-bom.com.

3.3 Adjusting of contacts

Setting the contact can be done by using the adjustment lock (a) in the centre of the sight glass. Just press down the mounted key (Figure 4) into the adjustment lock and then push the key down until the pointer of the lock (b) catches the adjusting pin (c) of the set pointer (d) in the middle (Figure 5).

The set pointer can be adjusted over the entire scale range. It must be ensured that the contact will be set in a clockwise direction only. If the contact is accidentally set behind the desired value, turn back the contact at least 5% below the desired value and make the setting again in a clockwise direction.

The key is included in the supplied accessory kit and can be placed in the designated hole in the cable connector after use.



Figure 4: Key

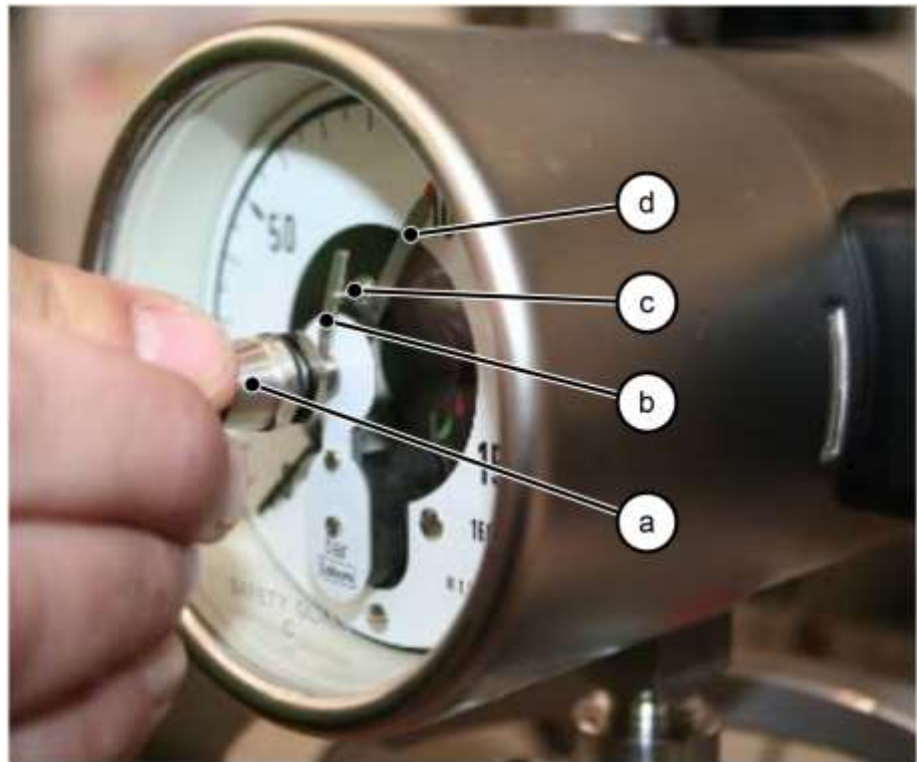


Figure 5: Setting the contact

The functionality and thus the switching reliability of the built-in switch contacts is guaranteed within the entire nominal range. Following valid standards though the accuracy stated in the data sheet is assured for switching points that are set between 10% and 90% of the nominal range only.

Operating the contact outside of the scale range is not permitted.

You can find further information on contacts in the document TA_039 on www.labom.com.

3.4 Pressure switches BN4xxx / Pressure limiters BP4xxx

The evaluation unit and downstream control current circuit are not part of our scope of supply. The following evaluation units conform to the requirements of the Association of Technical Inspection Agencies (VdTÜV) Fact Sheet No. 100.

Pepperl+Fuchs, switching amplifier:

- Type KHA6-SH-Ex1, PTB 00 ATEX 2043
- Type KFD2-SH-Ex1, PTB 00 ATEX 2042

The use of alternative evaluation units is within the responsibility of the operator. The operator is also responsible for the control current circuit and the locking switch required with pressure limiters, that comply with the Association of Technical Inspection Agencies (VdTÜV) Fact Sheet No. 100.

The maximum number of load cycles is 2 million.

Please also note the information provided in data sheet D3-038 (type BN4xxx) or D3-040 (type BP4xxx).

4 Operation

During operation, take care that the device remains within its intended pressure and temperature ranges. No other monitoring is necessary.

The permissible ambient and media temperature depends on the type of device and its design. This information can be found in the relevant data sheet.

Restricted ambient conditions may apply in explosion protected environments (see enclosed EX instructions).

4.1 Zero-point correction

Zero point deviations can occur due to the mounting, the installation position or due to the type and duration of use. Measuring devices with micro adjustment pointer can be corrected in a depressurised state by means of the adjusting screw on the pointer hub (Figure 6).



Figure 6: Zero-point correction

4.2 Maintenance / Service

When properly installed in accordance with applicable specifications, this device is maintenance-free. However, we recommend an annual recalibration of the device.

5 Disassembly

When measuring hot media, make sure that the device has cooled down prior to any dismounting or wear appropriate protective clothing to avoid burns.

Switch off the power supply to the device before disconnecting the electrical connections. Once this is done, the device may be mechanically removed.



Warning

Opening pressurised lines might cause severe injuries.

Danger of severe injuries or damage

- Relieve the process pressure before attempting to remove the device. Shut off the pressure supply for all feed lines to the device and relieve the pressure in them.



Warning

Hazardous deposits and residues might remain on opened process connections and removed devices.

Danger of injury

- After the device has been removed, seal off the measuring point and mark the open process connection accordingly. Consider a possible danger due to residues when handling the removed device.