

Electronical angle-of-rotation sensor 81.4

Type series PL110x

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 General 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.

1.2 Intended Use

The electronical angle-of-rotation sensor is used for the remote electronic monitoring of pressure and temperature values and can be integrated in mechanical pressure and temperature measuring devices as specified in the data sheet.

1.3 Conformity with EU Regulations

The CE-marking on the device certifies its compliance with the applicable EU Directives for placing products on the market within the European Union.

1.4 ATEX Approval

Devices of the type PL1101 are certified for use in explosive environments.

If you purchased a device with ATEX approval, please refer to the accompanying document XA_009 for ATEX-relevant information.

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.

Please refer to the measuring device's operating instructions to determine the permissible storage temperatures.

3 Installation and 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.

After the mechanical installation and electrical connection is completed, the device is ready for operation as soon as the power supply is switched on.

3.1 Mechanical Installation

Please pay attention to the measuring device operating instructions.

If the device is opened there is a risk of influencing the signals by touching the electronic connections. This can be avoided by switching off the supply voltage or disconnecting the signal circuit.

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.

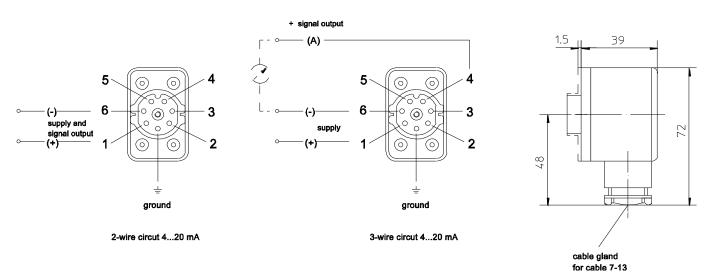


Figure 1: Versions of the electrical connection

4 Operation

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

4.1 Zero-point setting

Set the zero-point of the measuring device and the angle-of-rotation sensor separately.

4.1.1 Zero-point correction

Small measuring errors or deviations caused by difference in level between pressure gauge and point of measurement can be corrected on measuring devices with micro control position pointers. To do so turn the adjusting screw on the pointer hub (see figure 2).

Similarly, a displacement of the zero point caused by use and long service life can be corrected if necessary.



Figure 2: Zero-point correction

4.1.2 Adjusting the angle-of-rotation sensor

For adjustable devices the adjustment requires to apply the lower limit pressure respectively the upper limit pressure to the device. Bring the enclosed or another magnet in the alignment position (see picture) to adjust accordingly. After approx. 2 seconds a light signal in the scale acknowledges the adjustment of the measurement range begin and/or the adjusted range. The adjustment is possible within a tolerance of approx. ± 5 % F.S. Any settings that differ from this will not be accepted.



Picture 3: Alignment position

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.

In the event of any damage or defect the customer cannot replace or repair any components or assemblies.

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 pressurized 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.