

Operating instructions

Pressure transducer | DS01+ Two-wire version



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1 Introduction

1.1 Notes on operating instructions

These operating instructions are intended to ensure optimum installation, commissioning, operation and maintenance of the device and must be read prior to performing any of these actions. Keep this documentation handy and accessible to all users so that it can be referred to whenever necessary. Pass this documentation on to subsequent users of the product. All necessary settings are described in this manual.

If any difficulties should occur during commissioning or operation, please do not carry out any unauthorized manipulations. Doing so could void your warranty. Instead, please contact us immediately:

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1.2 Explanation of icons and symbols



Danger

Indicates a hazard that could lead to personal injury.



Notice

Indicates important information which, if not observed, may result in damage to property, for example.

1.3 Intended use and foreseeable misuse

The DS01+ differential pressure transmitter is used to detect low pressures and convert them into a pressure-proportional measuring signal. The device may only be used in the specified measuring range. Only differential pressures of non-aggressive gases may be measured with the DS01+.



Notice

Do not use the device in explosive atmospheres or for measurement of aggressive gases.

No liability is accepted for damages resulting from non-intended use. If so, any warranty claims shall be rendered void. Unauthorized modifications, additions or alterations to the instrument are prohibited. Modifications to the device are prohibited.

1.4 Functions

Depending on the selected measuring range, the DS01+ pressure transmitter can be used to record and display positive, negative and differential pressures.

2 Notes for your safety



Danger

In order not to endanger any person involved in the installation and commissioning of the device, such work should only be carried out by qualified and trained personnel.

Persons using the device must also:

- be conscious of the dangers present when working next to live parts.
- take measures to protect themselves against direct contact with live parts.
- have read and understood the operating instructions.

3 Installation and start-up

3.1 Scope of delivery

The scope of delivery includes:

- 1 x DS01+ pressure transducer Two-wire version
- 1 x quick reference guide
- optional: 1 x calibration certificate

3.2 Assembly

The DS01+ pressure transmitter can be attached to the wall via the side lugs using dowels and screws.



Notice

- Mount the device on a vertical, smooth surface
- Do not mount the device in the immediate vicinity of sources of interference or heat

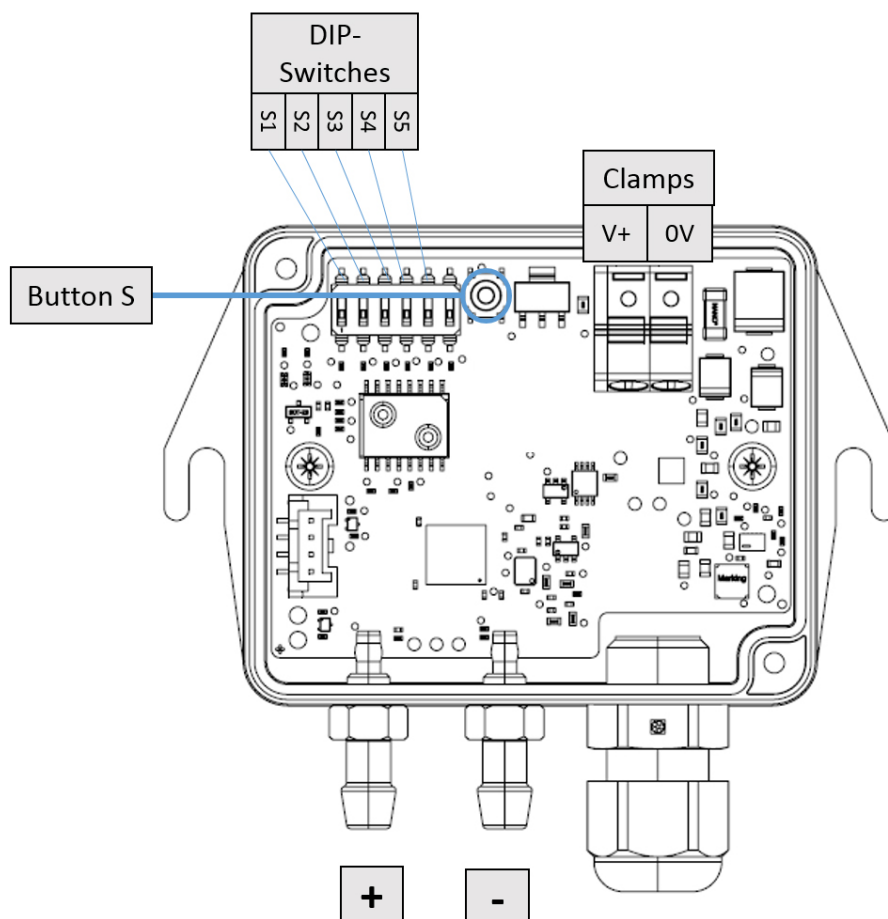
3.3 Start-up

3.3.1 Connection

Connect the supply voltage as well as the output wiring according to the connection diagram. For this purpose run the cables through the cable glands attached to the housing and connect them to the screw terminals provided.

In order to guarantee the specified accuracy, the sensor should only be fully put into operation after a run-in time of one hour. After the run-in time has elapsed, a zero point correction should be carried out to adjust the pressure transmitter to the ambient pressure (see 4.1 Zero point correction).

3.3.2 Setting the measuring range



You can adapt the respective desired measuring range to your application via the DIP switches S1, S2 and S3. The respective setting options can be found in the following table:

Basic measuring range	Measuring range	Position S1	Position S2	Position S3
1 hPa 10 hPa 100 hPa	0... 100 % FS	Off	Off	Off
	0... 75 % FS	On	Off	Off
	0... 50 % FS	Off	On	Off
	0... 25 % FS	On	On	Off
	± 100 % FS	Off	Off	On
	± 75 % FS	On	Off	On
	± 50 % FS	Off	On	On
	± 25 % FS	On	On	On

3.3.3 Setting the time constant

You can adapt the respective desired time constant to your application via the DIP switches S4 and S5. The respective setting options can be found in the following table:

Time constant	Position S4	Position S5
50 ms	Off	Off
500 ms	On	Off
2000 ms / 2 s	Off	On
4000 ms / 4 s	On	On

4 Maintenance and service

4.1 Zero point correction

The zero position of a pressure sensor shifts over time due to external influences and the condition of the piezoresistive sensor element. It is therefore recommended to carry out a zero point correction before commissioning and at annual intervals thereafter. To do this, connect the supply voltage to terminals 1 and 2 and then press the „S“ key for at least 3 to max. 10 seconds. The current measured value is now zeroed.



Danger

When working on the open device, always ensure that either the supply voltage is interrupted or suitable protective measures have been taken against contact with live parts.

4.2 Amplitude correction

In some cases it may still be necessary to adjust the maximum value of the transmitter. To do this, connect the supply voltage to terminals 1 and 2 and generate the nominal pressure with a suitable calibrator (nominal pressure = measuring range end value of the transmitter). Then press the „S“ button twice in quick succession. The end value of the measuring range is now adjusted.



Danger

When working on the open device, always ensure that either the supply voltage is interrupted or suitable protective measures have been taken against contact with live parts.

4.3 Cleaning

Cleaning of the equipment can be done with a damp cloth. Remove external soiling from the housing, the connections and the display.



Notice

Do not use sprays, solvents, alcohol-based cleaners or abrasive cleaners to dampen the cloth.
Remove soiling of the housing, the connectors and the display.

4.4 Repair



Notice

Repairs may only be carried out by the manufacturer or appropriately authorized and qualified personnel.
If changes are made to the device independently, the warranty will expire.

5 Accessories and spare parts

The scope of accessories may vary depending on the order variation. All possible accessories are listed in Chapter 3.1 Scope of delivery. Spare parts are to be obtained exclusively from the manufacturer. The replacement of the spare parts may only be done by the manufacturer or an authorized technician.

6 Technical data

Technical data can be found in the corresponding data sheet, which is available at www.fsm.ag, or can be downloaded using the QR code below.



7 Disposal



Danger

Incorrect disposal can result in hazards for the environment. Device components and packaging materials must be disposed of in an environmentally friendly manner in accordance with the country-specific waste treatment and disposal regulations.