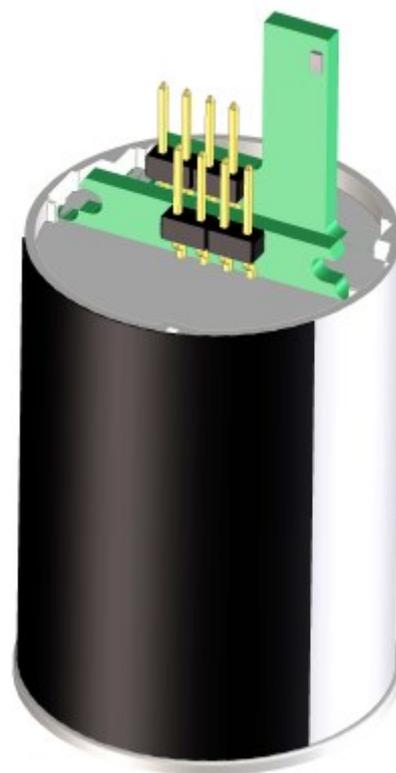


Operating Instructions

Radio electronics

PTA



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1 About this document

1.1 Function

This operating instructions manual provides all the information you need for mounting, connection and setup as well as important instructions for maintenance, fault rectification, the exchange of parts and the safety of the user. Please read this information before putting the instrument into operation and keep this manual accessible in the immediate vicinity of the device.

1.2 Target group

This operating instructions manual is directed to trained personnel. The contents of this manual must be made available to the qualified personnel and implemented.

2 For your safety

2.1 Authorised personnel

All operations described in this documentation must be carried out only by trained specialist personnel authorised by the plant operator.

During work on and with the device the required personal protective equipment must always be worn.

2.2 Appropriate use

The PTA is the processing electronics and Bluetooth unit for PTAC-1 and PTAM-1.

With this instrument PTAC-1/PTAM-1 can be adjusted on site or wirelessly via Bluetooth.

The instruments of PTAC-1/PTAM-1 are universal pressure switches for industrial automation. Operational reliability is ensured only if the instrument is properly used according to the specifications in the operating instructions manual as well as possible supplementary instructions.

For safety and warranty reasons, any invasive work on the device beyond that described in the operating instructions manual may be carried out only by personnel authorised by the manufacturer. Arbitrary conversions or modifications are explicitly forbidden.

2.3 Warning about incorrect use

Inappropriate or incorrect use of this product can give rise to application-specific hazards, e.g. vessel overfill through incorrect mounting or adjustment. Damage to property and persons or environmental contamination can result. Also, the protective characteristics of the instrument can be impaired.

2.4 General safety instructions

This is a state-of-the-art instrument complying with all prevailing regulations and directives. The instrument must only be operated in a technically flawless and reliable condition.

The operator is responsible for the trouble-free operation of the instrument. When measuring aggressive or corrosive media that can cause a dangerous situation if the instrument malfunctions, the operator has to implement suitable measures to make sure the instrument is functioning properly. During the entire duration of use, the user is obliged to determine the compliance of the necessary occupational safety measures with the current valid rules and regulations and also take note of new regulations.

The safety instructions in this operating instructions manual, the national installation standards as well as the valid safety regulations and accident prevention rules must be observed by the user.

For safety and warranty reasons, any invasive work on the device beyond that described in the operating instructions manual may be carried out only by personnel authorised by the manufacturer. Arbitrary conversions or modifications are explicitly forbidden. For safety reason, only the accessory specified by the manufacturer must be used.

3 Product description

3.1 Configuration

The type label contains the most important data for identification.

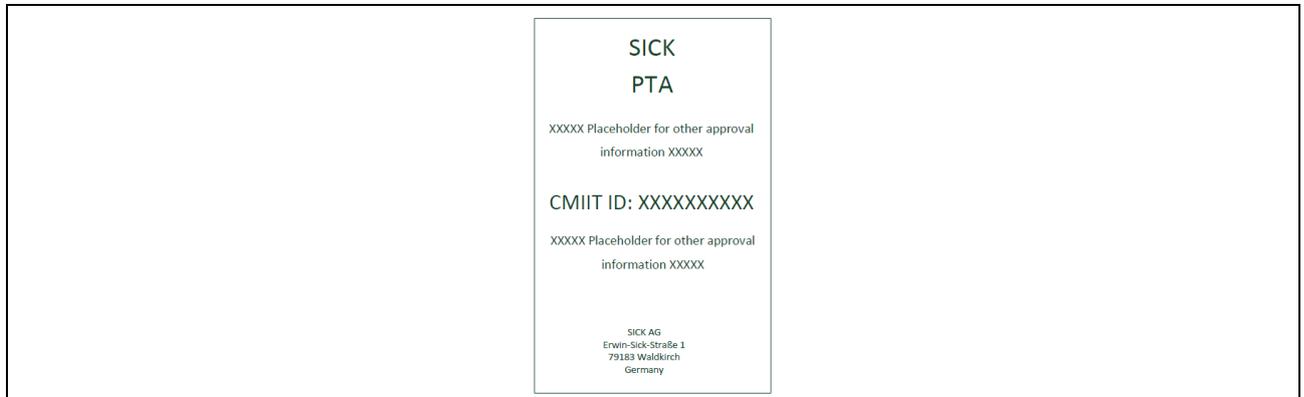


Fig. 1: Layout of the type label (example)

3.2 Instrument information

The radio electronics PTA of PTAC-1/PTAM-1 consists of the electronics cup as well as the encapsulated circuit board and is equipped with Bluetooth functionality.

Application Area

The pluggable radio electronics PTA is used in conjunction with PTAC-1 or PTAM-1.

3.3 Principle of operation

The radio electronics BPP2 is used together with the instruments PTAC-1 and PTAM-1 for measurement of process pressures.

The PTA can be adjusted wirelessly via Bluetooth.

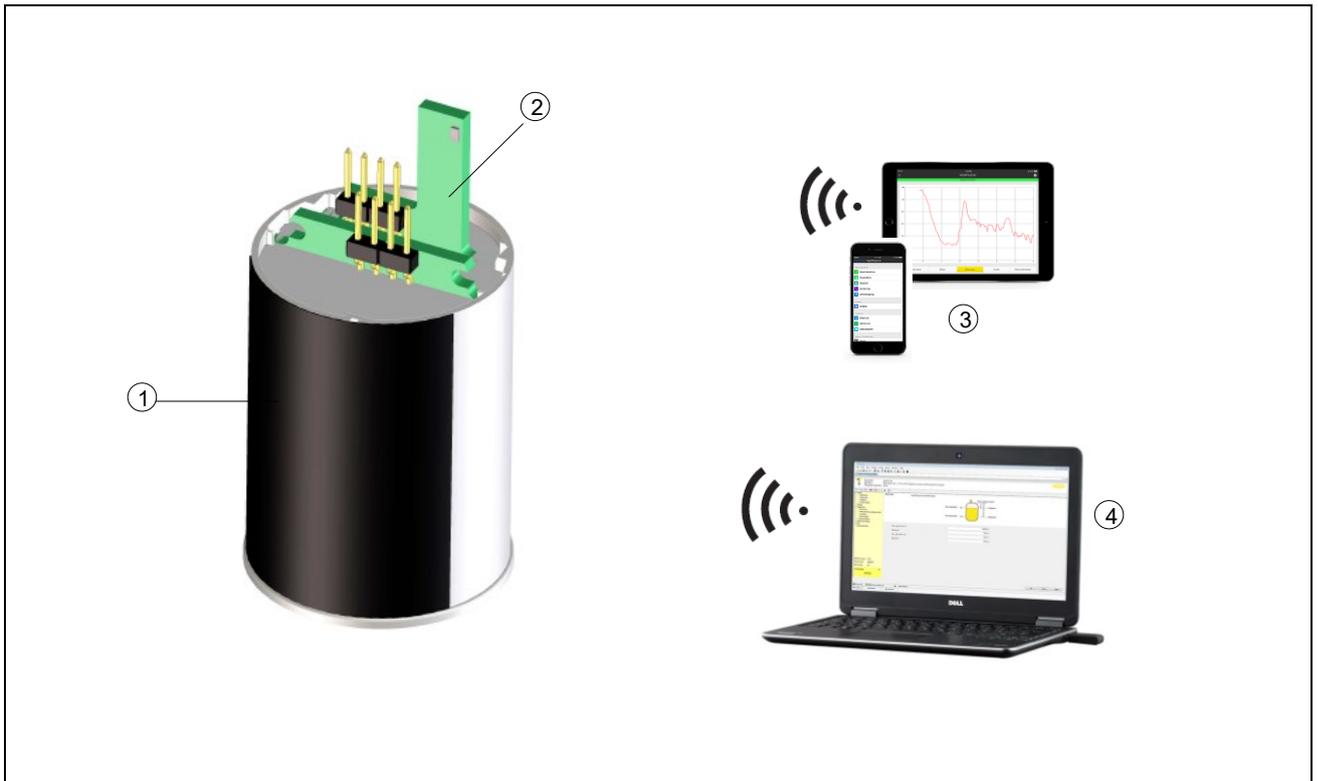


Fig. 2: Wireless connection to standard operating devices

- 1) *Radioelectronic PTA*
- 2) *Antenna*
- 3) *Smartphone/Tablet*
- 4) *PC/Notebook*

3.4 Scope of delivery

The scope of delivery encompasses:

- Radio electronics PTA
- Documentation

3.5 Packaging, transport and storage

Packaging

Your instrument was protected by packaging during transport. Its capacity to handle normal loads during transport is assured by a test based on ISO 4180.

The packaging of standard instruments consists of environment-friendly, recyclable cardboard. For special versions, PE foam or PE foil is also used. Dispose of the packaging material via specialised recycling companies.

Transport

Transport must be carried out in due consideration of the notes on the transport packaging. Nonobservance of these instructions can cause damage to the device.

Transport inspection

The delivery must be checked for completeness and possible transit damage immediately at receipt. Ascertained transit damage or concealed defects must be appropriately dealt with.

Storage

Up to the time of installation, the packages must be left closed and stored according to the orientation and storage markings on the outside.

Unless otherwise indicated, the packages must be stored only under the following conditions:

- Not in the open
- Dry and dust free
- Not exposed to corrosive media
- Protected against solar radiation
- Avoiding mechanical shock and vibration

Storage and transport temperature

- Storage and transport temperature see chapter "*Supplement - Technical data - Ambient conditions*"
- Relative humidity 20 ... 85 %

Lifting and carrying

With instrument weights of more than 18 kg (39.68 lbs) suitable and approved equipment must be used for lifting and carrying.

4 Mounting / Installation

4.1 Installation

Mounting is carried out exclusively in combination with PTAC-1 or PTAM-1. The exact mounting instructions can be found in the operating instructions manual of the respective instrument.

Warning:

Before starting mounting, make sure that no voltage supply is connected to PTAC-1 or PTAM-1!

5 Prepare setup

5.1 Connection procedure

All connections are made via the connections of PTAC-1 or PTAM-1. The power supply for PTA is carried out directly via PTAC-1 or PTAM-1.

The detailed procedure is described in the operating instructions manual of the instrument PTAC-1 or PTAM-1.

5.2 Adjustment system – Bluetooth



Fig. 8: Bluetooth connection to standard operating devices

- 1) *Radioelectronic PTA*
- 2) *Antenna*
- 3) *Smartphone/Tablet*
- 4) *PC/Notebook*

Systems requirements

Make sure that your smartphone/tablet meets the following system requirements:

- Operating system: iOS 13 or newer
- Operating system: Android 5.1 or newer
- Bluetooth 4.0 LE or newer

Download the adjustment app (SICK Smart Assistant) from the "Apple App Store" or "Google Play Store" to your smartphone or tablet.

The detailed description of the functionality is described in the corresponding Operating Instructions.

6 Maintenance and fault rectification

6.1 Maintenance

If the instrument is used correctly, no maintenance is required in normal operation. The cleaning helps that the type label and markings on the instrument are visible.

Take note of the following:

- Use only cleaning agents which do not corrode the housings, type label and seals
- Use only cleaning methods corresponding to the housing protection rating

6.2 How to proceed if a repair is necessary

Do not return devices without consulting SICK service.

Note:

For efficient processing and a quick determination of the cause, please enclose the following with the return:

- Details of a contact person
- Description of the application
- Description of the error that has occurred

Please use the document "Return form and declaration of no objection", which you can find under the downloads on the corresponding product website.

7 Dismount

7.1 Dismounting steps

Warning:

Before dismounting, be aware that the power supply is disconnected.

Take note of chapters "Mounting" and carry out the listed steps in reverse order.

7.2 Disposal

The instrument consists of materials which can be recycled by specialised recycling companies. We use recyclable materials and have designed the electronics to be easily separable.

Materials: see chapter "Technical data"

For disposal or recycling within the European Union proceed according to the "Electronics recycling" and "Battery/Accumulator recycling" below. Outside the European Union you should take note of the valid national regulations.

Electronics recycling

This instrument is not subject to the WEEE directive 2012/19/EU and the respective national laws. Hence pass the instrument directly on to a specialised recycling company and do not use the municipal collecting points. These may be used only for privately used products according to the WEEE directive.

8 Dismounting and disposal

8.1 Dismount device

1. Switch off operating voltage for the device.
2. Disconnect all connection cables from the device.
3. If the device is to be replaced, mark the position and orientation on the bracket or the surrounding area.
4. Detach the device from the holder.

8.2 Dispose device

A device that has become unusable must be disposed of in an environmentally friendly manner in accordance with the applicable country-specific waste disposal regulations.

Note:

Disposal of batteries, electrical and electronic devices

- In accordance with international regulations, batteries, rechargeable batteries and electrical and electronic devices must not be disposed of with household waste.
- The owner is legally obliged to return these devices to the appropriate public collection centres at the end of their service life.

9 Supplement

9.1 Technical data

General data	
Weight	Max. 40 g
Dimensions	Max. 60 x 29 x 29 mm
Electrical interface	
Operating voltage	12...35VDC
Bluetooth Interface	
BT-Module	Nordic nRF52832
Bluetooth	V5.0 – Single mode
Frequency	2.402 – 2.480 GHz
Maximum Transmit Power Setting	+4 dBm
Minimum Transmit Power Setting	-20 dBm (in 4db steps) -16 dBm, -12 dBm, -8 dBm, -4 dBm, 0 dBm (default)
Receive Sensitivity (0,1% BER)	-96 dBm (min.)
Link Budget	100 dB (@ 1Mbps)
Range	Up to 100 m for in free field
Antenna	Ceramic chip SMD antenna ANT016008LCS2442MA2 – on pcb
Ambient conditions	
Ambient temperature	-40 ... +70 °C (-40 ... +158 °F)
Storage and transport temperature	-40 ... +80 °C (-40 ... +176 °F)
Manufacturer	
Manufacturer	VEGA Grieshaber KG Am Hohenstein 113 77761 Schiltach Germany

9.2 Licences

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9.3 Trademarks

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