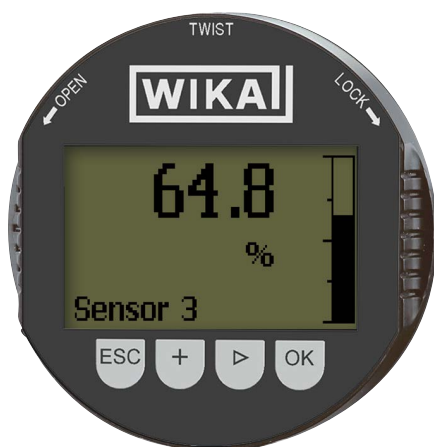


Operating Instructions

Display and adjustment module

GB



Display and adjustment module



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Safety instructions for Ex areas



Take note of the Ex specific safety instructions for Ex applications. These instructions are attached as documents to each instrument with Ex approval and are part of the operating instructions.

Editing status: 2020-10-07

1 About this document

1.1 Function

This instruction 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.

1.3 Symbols used



Information, note, tip: This symbol indicates helpful additional information and tips for successful work.



Note: This symbol indicates notes to prevent failures, malfunctions, damage to devices or plants.



Caution: Non-observance of the information marked with this symbol may result in personal injury.



Warning: Non-observance of the information marked with this symbol may result in serious or fatal personal injury.



Danger: Non-observance of the information marked with this symbol results in serious or fatal personal injury.



Ex applications

This symbol indicates special instructions for Ex applications.



List

The dot set in front indicates a list with no implied sequence.



Sequence of actions

Numbers set in front indicate successive steps in a procedure.



Battery disposal

This symbol indicates special information about the disposal of batteries and accumulators.

2 For your safety

2.1 Authorised personnel

All operations described in this documentation must be carried out only by trained, qualified 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 pluggable display and adjustment module is used for measured value indication, adjustment and diagnoses with continuously measuring sensors.

You can find detailed information about the area of application in chapter "*Product description*".

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.

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 reasons, only the accessory specified by the manufacturer must be used.

To avoid any danger, the safety approval markings and safety tips on the device must also be observed.

2.5 EU conformity

The device fulfils the legal requirements of the applicable EU directives. By affixing the CE marking, we confirm the conformity of the instrument with these directives.

The EU conformity declaration can be found on our homepage.

2.6 NAMUR recommendations

NAMUR is the automation technology user association in the process industry in Germany. The published NAMUR recommendations are accepted as the standard in field instrumentation.

The device fulfils the requirements of the following NAMUR recommendations:

- NE 21 – Electromagnetic compatibility of equipment
- NE 53 – Compatibility of field devices and display/adjustment components

For further information see www.namur.de.

3 Product description

3.1 Configuration

Scope of delivery

The scope of delivery encompasses:

- Display and adjustment module
- Documentation
 - This operating instructions manual

Scope of this operating instructions

This operating instructions manual applies to the following hardware and software versions of the display and adjustment module:

- Hardware from 1.12.1
- Software from 1.13.1

Instrument versions

The indicating/adjustment module consists of a display with full dot matrix as well as four keys for adjustment.

An LED background lighting is integrated in the display. It can be switched off or on via the adjustment menu.

3.2 Principle of operation

Application area

The pluggable display and adjustment module is used for measured value indication, adjustment and diagnosis for the following WIKA® sensors:

- IPT-10 vers. 2.0 (ceramic sensor)
- IPT-1* vers. 3.0 (metallic sensor)
- IPT-11 vers. 4.0 (ceramic sensor)
- CPT-2x (ceramic sensor)
- IPT-2x (metallic sensor)
- DPT-10 (metallic sensor)

Installation in the sensor housing

The display and adjustment module is mounted into the respective sensor housing.

The electrical connection is carried out via spring contacts in the sensor and contact surfaces in the display and adjustment module. After mounting, the sensor and display and adjustment module are splash-water protected even without housing lid.

Mounting in the external display and adjustment

The external display and adjustment unit is another installation option.

Range of functions

The range of functions of the display and adjustment module is determined by the sensor and depends on the respective software version of the sensor.

Voltage supply

Power is supplied directly via the respective sensor or the external display and adjustment unit. An additional connection is not required.

The backlight is also powered by the sensor or the external display and adjustment unit. Prerequisite for this is a supply voltage at a certain level. The exact voltage specifications can be found in the operating instructions manual of the respective sensor.

3.3 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 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 %

4 Prepare setup

4.1 Insert display and adjustment module

The display and adjustment module can be inserted into the sensor and removed again at any time. You can choose any one of four different positions - each displaced by 90°. It is not necessary to interrupt the power supply.

Proceed as follows:

1. Unscrew the housing lid
2. Place the display and adjustment module on the electronics in the desired position and turn it to the right until it snaps in.
3. Screw housing lid with inspection window tightly back on

Disassembly is carried out in reverse order.

The display and adjustment module is powered by the sensor, an additional connection is not necessary.



Fig. 1: Installing the display and adjustment module in the electronics compartment of the single chamber housing

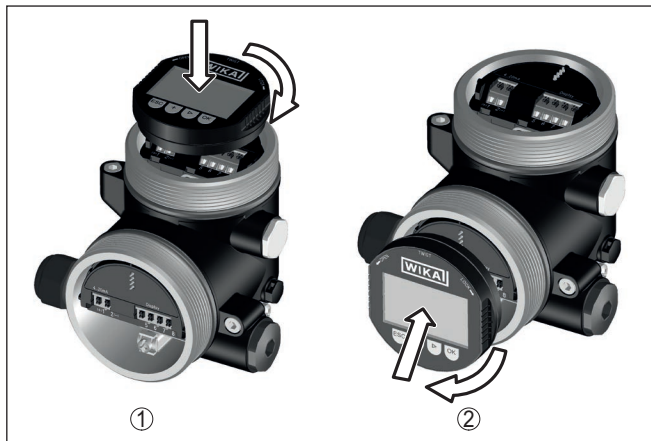


Fig. 2: Installing the display and adjustment module in the double chamber housing

- 1 In the electronics compartment
- 2 In the connection compartment



Note:

If you intend to retrofit the instrument with a display and adjustment module for continuous measured value indication, a higher lid with an inspection glass is required.

4.2 Adjustment system

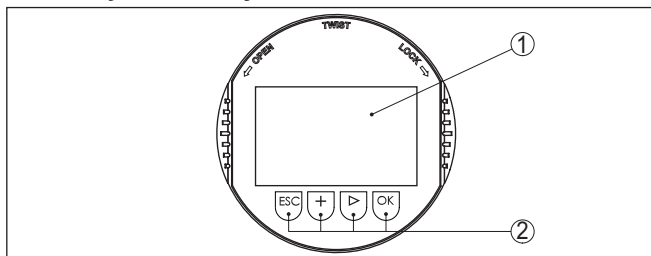


Fig. 3: Display and adjustment elements

- 1 LC display
- 2 Adjustment keys

Key functions

- **[OK]** key:
 - Move to the menu overview
 - Confirm selected menu
 - Edit parameter
 - Save value
- **[>]** key:
 - Change measured value presentation
 - Select list entry
 - Select menu items

- Select editing position
- **[+]** key:
 - Change value of the parameter
- **[ESC]** key:
 - Interrupt input
 - Jump to next higher menu

Adjustment system

The instrument is operated via the four keys of the display and adjustment module. The individual menu items are shown on the LC display. You can find the function of the individual keys in the previous illustration.

Time functions

When the **[+]** and **[->]** keys are pressed quickly, the edited value, or the cursor, changes one value or position at a time. If the key is pressed longer than 1 s, the value or position changes continuously.

When the **[OK]** and **[ESC]** keys are pressed simultaneously for more than 5 s, the display returns to the main menu. The menu language is then switched over to " *English*".

Approx. 60 minutes after the last pressing of a key, an automatic reset to measured value indication is triggered. Any values not confirmed with **[OK]** will not be saved.

5 Maintenance and fault rectification

5.1 Maintenance

Maintenance

If the device is used properly, no special maintenance is required in normal operation.

Cleaning

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

5.2 Instrument repair

You can find information for a return shipment under "*Service*" on our local website.

If a repair is necessary, please proceed as follows:

- Complete one form for each instrument
- If necessary, state a contamination
- Clean the instrument and pack it damage-proof
- Attach the completed form and possibly also a safety data sheet to the instrument

6 Dismount

6.1 Dismounting steps

**Warning:**

Before dismantling, be aware of dangerous process conditions such as e.g. pressure in the vessel or pipeline, high temperatures, corrosive or toxic media etc.

Take note of chapters "*Mounting*" and "*Connecting to voltage supply*" and carry out the listed steps in reverse order.

6.2 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.

WEEE directive

The instrument does not fall in the scope of the EU WEEE directive. Article 2 of this Directive exempts electrical and electronic equipment from this requirement if it is part of another instrument that does not fall in the scope of the Directive. These include stationary industrial plants.

Pass the instrument directly on to a specialised recycling company and do not use the municipal collecting points.

If you have no way to dispose of the old instrument properly, please contact us concerning return and disposal.

7 Supplement

7.1 Technical data

General data

Weight	approx. 150 g (0.33 lbs)
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Display and adjustment module

Display element	Display with backlight
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Measured value indication	
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– Number of digits	5
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Adjustment elements	
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– 4 keys	<i>[OK], [->], [+], [ESC]</i>
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Protection rating	
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– unassembled	IP20
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– Mounted in the housing without lid	IP40
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Materials	
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– Housing	ABS
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– Inspection window	Polyester foil
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Functional safety	SIL non-reactive
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Ambient conditions

Ambient temperature	-20 ... +70 °C (-4 ... +158 °F)
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Storage and transport temperature	-40 ... +80 °C (-40 ... +176 °F)
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7.2 Dimensions

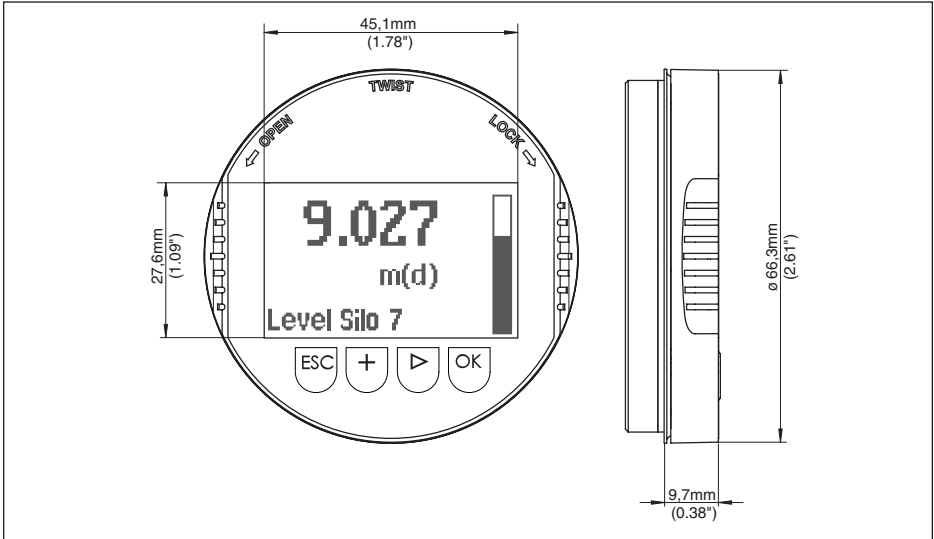


Fig. 4: Dimensions of display and adjustment module

7.3 Trademark

All the brands as well as trade and company names used are property of their lawful proprietor/originator.

Printing date:

All statements concerning scope of delivery, application, practical use and operating conditions of the sensors and processing systems correspond to the information available at the time of printing.



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31549-EN-201008