Operating Instructions
Indicating and adjustment module PLICSCOM
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Supplementary documentation

Information:

Supplementary documents appropriate to the ordered version come with the delivery. You can find them listed in chapter “Product description”.
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 and fault rectification. 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, qualified personnel. The contents of this manual should be made available to these personnel and put into practice by them.

1.3 Symbolism used

Information, tip, note
This symbol indicates helpful additional information.

Caution: If this warning is ignored, faults or malfunctions can result.
Warning: If this warning is ignored, injury to persons and/or serious damage to the instrument can result.
Danger: If this warning is ignored, serious injury to persons and/or destruction of the instrument can result.

Ex applications
This symbol indicates special instructions for Ex applications.

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

→ Action
This arrow indicates a single action.

1 Sequence
Numbers set in front indicate successive steps in a procedure.
2 For your safety

2.1 Authorised personnel

All operations described in this operating instructions manual must be carried out only by trained specialist personnel authorised by the operator.

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

2.2 Appropriate use

The pluggable indicating and adjustment module is used for measured value indication, adjustment and diagnoses with level and pressure sensors.

You can find detailed information on the application range in chapter "Product description".

2.3 Warning about misuse

Inappropriate or incorrect use of the instrument can give rise to application-specific hazards, e.g. vessel overfill or damage to system components through incorrect mounting or adjustment.

2.4 General safety instructions

This is a high-tech instrument requiring the strict observance of standard regulations and guidelines. The user must take note of the safety instructions in this operating instructions manual, the country-specific installation standards as well as all prevailing safety regulations and accident prevention rules.

The instrument must only be operated in a technically flawless and reliable condition. The operator is responsible for trouble-free operation of the instrument.

During the entire duration of use, the user is obliged to determine the compliance of the required occupational safety measures with the current valid rules and regulations and also take note of new regulations.

2.5 Safety approval markings and safety tips

The safety approval markings and safety tips on the device must be observed.
2.6 CE conformity

The indicating and adjustment module is in CE conformity to EMC (89/336/EWG) and LVD (73/23/EWG).

Conformity has been judged according to the following standards:

- **EMC:**
  - Emission EN 61326: 1997
- **LVD:** EN 61010-1: 2001

2.7 Compatibility according to NAMUR NE 53

PLICSCOM meets NAMUR recommendation NE 53.

The parameter adjustment of the basic sensor functions is independent of the software version. The range of available functions depends on the respective software version of the individual components.

You can view all software histories on our website www.vega.com. Make use of this advantage and get registered for update information via e-mail.

2.8 Safety instructions for Ex areas

Please note the Ex-specific safety information for installation and operation in Ex areas. These safety instructions are part of the operating instructions manual and come with the Ex-approved instruments.

2.9 Functional range of approved instruments

Instruments with specific approvals are partly supplied with an earlier hardware or software version. For approval-technical reasons, some functions for these instruments will be available only at a later date.

You will find corresponding instructions in the description of the individual functions in this operating instructions manual.
2.10 Environmental instructions

Protection of the environment is one of our most important duties. That is why we have introduced an environment management system with the goal of continuously improving company environmental protection. The environment management system is certified according to DIN EN ISO 14001.

Please help us fulfil this obligation by observing the environmental instructions in this manual:

- Chapter "Packaging, transport and storage"
- Chapter "Disposal"
3 Product description

3.1 Configuration

Scope of delivery

The scope of delivery encompasses:

- Indicating and adjustment module
- Documentation
  - this operating instructions manual
  - Supplementary instructions manual "Heating for indicating and adjustment module" (optional)

Equipment

The indicating and adjustment module is equipped with a display with full dot matrix as well as four keys for adjustment. Depending on the respective version of the indicating and adjustment module as well as the sensor electronics, an integrated background lighting can be switched on via the adjustment menu.

The display can be optionally equipped with heating to ensure good readability at low temperatures down to \(-40^\circ\text{C}\) (-40°F).

Fig. 1: Indicating and adjustment module

1  Display
2  Keys
3.2 Principle of operation

Area of application

The indicating and adjustment module is used for measured value indication, adjustment, and diagnostics for the following VEGA plics® sensors:

- VEGAPULS series 60
- VEGAFLEX series 60
- VEGASON series 60
- VEGABAR series 50 and 60
- VEGACAL series 60

The indicating and adjustment module is integrated in the respective sensor housing or in the external indicating and adjustment unit VEGADIS 61. After mounting, the sensor and the indicating and adjustment module are splash-proof also without housing cover.

The operation of two indicating and adjustment modules in parallel in the sensor and in VEGADIS 61 is not supported.

Supply

Power is supplied directly by the respective sensor or by VEGADIS 61. An additional connection is not necessary.

The backlight is also powered by the sensor or via VEGADIS 61. 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.
The optional heating requires its own power supply. You can find further details in the supplementary instructions manual "Heating for indicating and adjustment module".

3.3 Operation

The adjustment is carried out via the integrated keys. The entered parameters are generally saved in the respective sensor. A copy function enables loading of the parameters into the indicating and adjustment module.

3.4 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 according to DIN EN 24180.

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 under 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 "Supplement - Technical data - Ambient conditions"
- Relative humidity 20 … 85 %
4 Mounting

4.1 Mounting steps

PLICSCOM can be mounted or dismounted at any time. It is not necessary to interrupt the power supply.

To mount, proceed as follows:

1. Unscrew the housing cover
2. Place PLICSCOM in the required position to the electronics

**Information:**

Four different positions are possible, each displaced by 90°.

![Fig. 3: Installation of PLICSCOM](image)

3. Press PLICSCOM lightly onto the electronics and turn it to the right until it snaps in
4. Screw housing cover with inspection window tightly back on

**Note:**

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

Dismounting is carried out in reverse order.
5 Set up

5.1 Adjustment system

Key functions

- **[OK]** key:
  - move to the menu overview
  - confirm selected menu
  - Edit parameter
  - Save value

- **[->]** key to select:
  - menu change
  - list entry
  - Select editing position

- **[+]** key:
  - Change value of the parameter

- **[ESC]** key:
  - interrupt input
  - jump to the next higher menu

Adjustment system

The sensor is adjusted via the four keys of the indicating and adjustment module. The LC display indicates the individual menu items. The functions of the individual keys are shown in the above illustration. Approx. 10 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.

5.2 Overview

Continuously measuring sensors for level and pressure have various functions. Hence they can be adapted in an optimum way to the respective application. The functions are structured in a clear menu form (see section "Menu schematics").

In this operating instructions manual the following functions are described:

- General functions
- Functions for 4 … 20 mA/HART
- Functions for Profibus PA
- Functions for Foundation Fieldbus

Further, sensor-specific functions are described in the operating instructions manual of the respective sensor.

5.3 General functions

The general functions are described in this paragraph. The functions of the indicating/adjustment module are determined by the sensor and correspond to the respective software version of the sensor.

Information:
The respective menu item number differs depending on the sensor type and signal output.

Measured value indication

The following presentations are available in the measured value display:

- Level as digital value, sensor TAG
- Level as digital value and bar graph, sensor TAG
- Only with pressure transmitters: Level or pressure as digital value, temperature value

With [->] you select the different presentations of the measured value. You can reach the menu overview from any presentation with [OK]. With [ESC] you return from the menu overview to the measured value display.

Menu overview

In the menu overview you select the appropriate menu with [->] and open it with [OK]. Then the individual menu items are available.
Menu section, basic adjustment

Damping

To damp process-dependent measured value fluctuations, you have to set an integration time of 0 … 999 s in this menu item. Depending on the sensor type, the factory setting is 0 s or 1 s.

Linearisation curve

In this menu item you select the linearization curve:

- linear
- Cylindrical tank
- Spherical tank
- User programmable

User programmable means: Switching on a linearization curve programmed via PC and PACTware™

A linearization is necessary for all vessels in which the vessel volume does not increase linearly with the level - e.g. with a cylindrical or spherical tank - and the indication or output of the volume is required. Corresponding linearization curves are preprogrammed for these vessels. They represent the correlation between the level percentage and vessel volume. The linearisation applies to the measured value indication and the current output. By activating the appropriate curve, the volume percentage of the vessel is displayed correctly. If the volume should not be displayed in percent but e.g. in l or kg, a scaling can be also set in the menu item "Display".

Factory setting is linear.

Caution:

Note the following, if the respective sensor is used as part of an overfill protection system according to WHG:
If a linearisation curve is selected, the measuring signal is no longer compulsorily linear proportional to the level. This must be taken into consideration by the user, particularly when adjusting the switching point on the level switch.

**Edit sensor TAG**

In the menu item "Sensor-TAG" you edit a 12-digit measurement loop name. An unambiguous designation can hence be assigned to the sensor, e.g. the measurement loop name or the tank or product designation. In digital systems and in the documentation of larger plants, a singular designation should be entered for exact identification of individual measuring sites.

The available digits comprise:

- Letters from A … Z
- Numbers from 0 … 9
- Special characters +, -, /, -

Factory setting is "Sensor".

**Menu section, display**

An integrated background lighting can be switched via the adjustment menu. The following version is necessary:

- Indicating and adjustment module …- 01 or higher
- Sensor electronics 4 … 20 mA …- 01 or higher
- Sensor electronics pressure transmitter 4 … 20 mA …- 02 or higher
- Sensor electronics Profibus PA or Foundation Fieldbus …- 03 or higher

The version is stated on the type label of the indicating and adjustment module or the sensor electronics. The function depends also on the height of the supply voltage, see operating instructions manual of the respective sensor.

In the default setting, the lightning is switched off.

**Menu section, diagnostics**

Min. and max. measured values are saved in the sensor. The values are displayed in the menu item "Peak values".

- Min. and max. distance in m(d): Radar, guided microwave, ultrasonic sensors
- Min. and max. pressure: pressure transmitter\(^1\)
- Min. and max. temperature: ultrasonic sensors, pressure transmitters

**Meas. reliability**

When non-contact level sensors are used, the measurement can be influenced by the respective process conditions. In this menu item, the measurement reliability of the level echo is displayed as dB value. The measurement reliability equals signal strength minus noise. The higher the value, the more reliable the measurement.

**Sensor status**

In this menu item, the device status is displayed. If the sensor detects a fault, "OK" will be displayed. If a fault is detected, a flashing failure message is outputted sensor-specifically, e.g. "E013". The fault is also displayed in clear text, e.g. "No measurement value".

**Information:**

The fault message as well as the clear text indication are also carried out in the measured value display.

**Curve selection**

With ultrasonic and radar sensors as well as sensors with guided microwave, the "Echo curve" represents the signal strength of the echoes over the measuring range. The units of the signal strength are "dB" (ultrasonic and radar) and "Volt" (guided microwave). The signal strength enables the assessment of the quality of the measurement.

With ultrasonic and radar sensors, the "False echo curve" represents the saved false echoes (see menu "Service") of the empty vessel with signal strength in "dB" over the measuring range.

\(^1\) Pressure: -50 ... +150 % of the nominal pressure range; temperature: -50 ... +150 °C.
Up to 3000 measured values are recorded (depending on the sensor) when starting a "Trend curve". Then the values can be displayed on a time axis. The oldest measured values are always deleted.

In the menu item "Choose curve", the respective curve is selected.

**Information:**
The trend recording is not activated when being shipped. It must be started by the user via the menu item "Start trend curve".

**Curve presentation**
A comparison of echo and false echo curve allows a more detailed specification on the measurement reliability. The selected curve is updated permanently. With the [OK] key, a submenu with zoom functions is opened.

The following functions are available with "Echo and false echo curve"

- "X-Zoom": Zoom function for the meas. distance
- "Y-Zoom": 1, 2, 5 and 10-times signal magnification in "dB"
- "Unzoom": Reset the presentation to the nominal measuring range with single magnification

In the menu item "Trend curve" the following are available:

- "X-Zoom": Resolution
  - 1 minute
  - 1 hour
  - 1 day

- "Stop/Start": Interrupt a recording or start a new recording
- "Unzoom": Reset the resolution to minutes

As default setting, the recording pattern has 1 minute. With the adjustment software PACTware™, this pattern can be also set to 1 hour or 1 day.
**Menu section, service**

In this menu item you simulate a user-defined level or pressure value via the current output. This allows you to test the signal path, e.g. through connected indicating instruments or the input card of the control system.

The following simulation variables are available:

- Percent
- Current
- Pressure (with pressure transmitters)
- Distance (with radar and guided microwave)

With Profibus PA sensors, the selection of the simulated value is made via the "Channel" in the menu "Basic adjustments".

How to start the simulation:

1. Push [OK]
2. Select the requested simulation variable with [->] and confirm with [OK]
3. Set the requested value with [+] and [-].
4. Push [OK]

The simulation is now running, with 4 ... 20 mA/HART a current is outputted and with Profibus PA or Foundation Fieldbus a digital value.

How to interrupt the simulation:

→ Push [ESC]

**Information:**

The simulation is terminated automatically 10 minutes after the last key has been pushed.

**Reset**

With the reset function, modified values are reset. Three subfunctions are available:

- Basic adjustment
  - Reset the values modified with the indicating and adjustment module to the sensor-specific basic setting
- Factory setting
− As basic adjustment, but also reset of special parameters to the default values\(^2\)

- Peak values measured value and temperature\(^3\)
  - Reset of the min./max. values of pressure, level and temperature to the current values

**Information:**
Because the reset values are nearly sensor-specific, they are listed in the operating instructions manual of the respective sensor.

**Unit of measurement**
In this menu item you select the internal arithmetic unit of the sensor.

With radar, guided microwave and ultrasonic sensors this is m(d) or ft(d).

For pressure transmitters more comprehensive units are available. They are described in the operating instructions manual of the respective sensor in the menu "Basic adjustments".

**Language**
The sensor is already set to the ordered national language. In this menu item you can change the language. The following languages are available:

- Deutsch
- English
- Français
- Espanöl
- Pycckuu
- Japanese
- Chinese

\(^2\) Special parameters are parameters which are set customer-specifically on the service level with the adjustment software PACTware\(^\text{TM}\).

\(^3\) Temperature only with pressure transmitters and ultrasonic sensors.
Copy sensor data

With this function

- Load parameter adjustment data from the sensor into the indicating and adjustment module
- Write parameter adjustment data from the indicating and adjustment module into the sensor

The data are permanently saved in an EEPROM memory in the indicating and adjustment module and remain there even in case of power failure. From there, they can be written in one or several sensors or kept as backup for a probable sensor exchange.

Kind and volume of the copied data depend on the respective sensor.

**Information:**

Before writing the data into the sensor, it is checked if the data fit the sensor. If data do not fit, a fault signal is triggered or the function is blocked. When writing data into the sensor, you will see from which instrument type the data originate and which TAG-no. this sensor had.

The following items are checked:

- Software version
- WHG approval
- SIL activated
- Measuring principle
- Radar C-band/K-band
- Radar measuring range <30 m or >30 m
- Signal output
- Pressure measuring range

PIN

In this menu item, the PIN is activated/deactivated permanently. Entering a 4-digit PIN protects the sensor data against unauthorized access and unintentional modifications. If the PIN
is activated permanently, it can be deactivated temporarily (i.e. for approx. 60 min.) in any menu item. The instrument is delivered with the PIN set to 0000.

Only the following functions are permitted with activated PIN:

- Select menu items and show data
- Read data from the sensor into the indicating/adjustment module.

**Menu section, info**

In this menu item the most important sensor information can be displayed:

- Sensor type
- Serial number: 8-digit number, e.g. 12345678

- Date of manufacture: Date of the factory calibration, e.g. 4. July 2007
- Software version: Edition of the sensor software, e.g. 3.50

- Date of last change using PC: Date of the last change of sensor parameters via PC, e.g. 4. July 2007

- Sensor details, e.g. approval, process fitting, seal, measuring cell, measuring range, electronics, housing, cable entry, plug, cable length etc.
5.4 Functions - 4 ... 20 mA/HART

Introduction

The 4 ... 20 mA/HART special functions are briefly described in this paragraph. The respective range of functions of the indicating and adjustment module is determined by the sensor and the sensor software revision.

Display

In the menu item "Display" you can define how the measured value should be presented on the display.

The following indication values are available:

- Height
- Pressure (only with pressure transmitters)
- Distance (only with radar, guided microwave, ultrasonics)
- Current
- Scaled
- Percent
- Lin. percent
- Temperature (only with pressure transmitters).

The selection "scaled" opens the menu items "Display unit" and "Scaling". In "Display unit" there are the following options:

- Height
- Mass
- Flow
- Volume
- Without unit

Depending on selection, the different units are in turn available.

In the menu item "Scaling", the requested numerical value with decimal point is entered for 0 % and 100 % of the measured value.

There is the following relation between the indication value in the menu "Display" and the adjustment unit in the menu "Basic adjustment":

- With radar, guided microwave and ultrasonics, displayed value "Distance" means: presentation of the measured value in the selected adjustment unit, e.g. m(d)
With pressure, displayed value "Pressure" or "Height" means: presentation of the measured value in the selected adjustment unit, e.g. bar or m.

### Current output

**Menu section, service**

In the menu item "Current output" you determine the behaviour of the current output during operation and in case of failure. The following options are available:

**Current output**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>4 ... 20 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20 ... 4 mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Failure mode(^4)</th>
<th>Hold value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20.5 mA</td>
</tr>
<tr>
<td></td>
<td>22 mA</td>
</tr>
<tr>
<td></td>
<td>&lt;3.6 mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Min. current(^5)</th>
<th>3.8 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. current(^6)</th>
<th>20 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20.5 mA</td>
</tr>
</tbody>
</table>

The values in bold font represent the data of the factory setting.

In HART multidrop mode, the current is constantly 4 mA. This value does not change even in case of failure.

---

\(^4\) Value of the current output in case of failure, e.g. if no valid measured value is delivered.

\(^5\) This value is not underrun during operation.

\(^6\) This value is not exceeded during operation.
Functional safety (SIL)

Certain sensors are suitable for use according to IEC 61508. For this use, you have to activate the menu item "SIL". This influences the following menu items:

- Menu items "Current output" in "Failure mode", "Hold value" and "20.5 mA" blocked
- "HART mode", "Multidrop" blocked

The default setting for "SIL" is "deactivated".

Note:
For such applications, take note of "Safety Manual".

HART mode

HART offers standard and multidrop mode.

The mode standard with the fixed address 0 means output of the measured value as 4 ... 20 mA signal.

In Multidrop mode, up to 15 sensors can be operated on one two-wire cable. An address between 1 and 126 must be assigned to each sensor.7)

In this menu item you determine the HART mode and enter the address for multidrop.

The default setting is standard with address 0.

5.5 Functions - Profibus PA

Introduction

The Profibus PA special functions are briefly described in this paragraph. The respective range of functions of the indicating and adjustment module is determined by the sensor and the sensor software revision.

---

7) The 4 ... 20 mA signal of the HART sensor is switched off. The sensor consumes a constant current of 4 mA. The measuring signal is transmitted exclusively as digital HART signal.
Menu section, basic adjustment

Level and pressure sensors operate as slaves on the Profibus PA. To be identified as a bus participant, each sensor must have a unique address. Each instrument is delivered with address 126. With this address, it can at first be connected to an existing bus. However, the address must be changed. This can be done in this menu item.

Sensor address

126

Channel

The channel is the input selector switch for function block (FB) of the sensor. Within the function block, additional scalings (Out-Scale) are carried out. In this menu item, the value for the function block is selected:

- SV1 (Secondary Value 1):
  - Percent with radar, guided microwave and ultrasonic sensors
  - Pressure or height with pressure transmitters
- SV2 (Secondary Value 2):
  - Distance with radar, guided microwave and ultrasonic sensors
  - Percent with pressure transmitters
- PV (Primary Value):
  - Linearised percentage value

Menu section, display

Display

Radar, guided microwave and ultrasonic sensors deliver the following measured values:

- SV1 (Secondary Value 1): Percentage value after the adjustment
- SV2 (Secondary Value 2): Distance value before the adjustment
- PV (Primary Value): Linearised percentage value
- PA-Out (value after passing the function block): PA output

A pressure transmitter delivers the following measured values:
- SV1 (Secondary Value 1): Pressure or height value before adjustment
- SV2 (Secondary Value 2): Percentage value after the adjustment
- PV (Primary Value): Linearised percentage value
- PA-Out (value after passing the function block): PA output
- Temperature

In the menu item "Display" you can define which measured value should be presented on the display.

### Menu section, service

**Additional PA value**

Profibus transmits two values cyclically. The first value is determined in the menu item "Channel". The selection of the additional cyclical value is made in the menu item "Additional PA value".

The following values are available with radar, guided microwave and ultrasonic sensors:

- SV1 (Secondary Value 1): Percentage value after the adjustment
- SV2 (Secondary Value 2): Distance value before the adjustment
- PV (Primary Value): Linearised percentage value

With pressure transmitters the following values are available:

- SV1 (Secondary Value 1): Pressure or height value before adjustment
- SV2 (Secondary Value 2): Percentage value after the adjustment
- PV (Primary Value): Linearised percentage value

**Determine Out-Scale**

Here, you determine the unit and scaling for PA-Out. These settings also apply to the values displayed on the indicating and adjustment module if in the menu item "Displayed value" PA-Out was selected.
The following displayed values are available in "Out-Scale unit":

- Pressure (only with pressure transmitters)
- Height
- Mass
- Flow
- Volume
- Others (no unit, %, mA)

In the menu item "PV-Out-Scale", the requested numerical value with decimal point is entered for 0 % and 100 % of the measured value.

5.6 Saving the parameter adjustment data

It is recommended noting the adjusted data, e.g. in this operating instructions manual and archive them afterwards. They are hence available for multiple use or service purposes.

Alternatively the data can be loaded from the sensor into the indicating and adjustment module. The procedure is described in the menu item "Copy sensor data". The data remain there even the power supply fails.

If it is necessary to exchange the sensor, the indicating and adjustment module is inserted into the replacement instrument and the data are written into the sensor under the menu item "Copy sensor data".
5.7 Menu schematic for a 4 ... 20 mA/HART sensor (example: radar sensor)

**Information:**
Depending on the version and application, the highlighted menu windows are not always available.

**Basic adjustment**
- Min. adjustment
  - 0.00 % = 10,000 m(d)
  - 8,000 m(d)
- Max. adjustment
  - 100.00 % = 1,000 m(d)
  - 2,000 m(d)
- Medium
  - Liquid
  - Water based (DK>10)
- Vessel form
  - Storage tank
- Damping
  - 0 s
- Linearisation curve
  - Linear
- Sensor-TAG
  - Sensor

**Display**
- Displayed value
  - Scaled
- Display unit
  - Volume
  - m³
- Scaling
  - 0 % = 0.0 m³
  - 100 % = 100 m³
- Lighting
  - Switched off ▼

**Diagnostics**
- Basic adjustment
  - Display
  - Diagnostics
  - Service
  - Info
**Service**

- **Basic adjustment**
- **Display**
- **Diagnostics**
- **Service**
- **Info**

- **Gating out of false signals**
- **Extended setting**
- **Current output**
- **Simulation**

- **HART mode**
- **Unit of measurement**
- **Language**
- **Not activated**

- **Copy sensor data**
- **PIN**
- **SIL**

- **Sensor type**
- **Date of manufacture**
- **Last change using PC**
- **Sensor characteristics**

**Pointers**
- **Distance min.**: 0.234 m (d)
- **Distance max.**: 5.385 m (d)

**Meas. reliability**
- **8 db**
- **Sensor status**: OK

**Curve selection**
- **Echo curve**

**Echo curve**
- **Presentation of the echo curve**

**Service**

- **Basic adjustment**
- **Display**
- **Diagnostics**
- **Service**
- **Info**

- **Gating out of false signals**
- **Extended setting**
- **Current output**
- **Simulation**

- **HART mode**
- **Unit of measurement**
- **Language**
- **Not activated**

- **Copy sensor data**
- **PIN**
- **SIL**

- **Sensor type**
- **Date of manufacture**
- **Last change using PC**
- **Sensor characteristics**

**Information**

- **Basic adjustment**
- **Display**
- **Diagnostics**
- **Service**
- **Info**

- **Sensor type**
- **Date of manufacture**
- **Last change using PC**
- **Sensor characteristics**
5.8 Menu schematic for a Profibus PA instrument (example: sensor with guided microwave)

**Information:**
Depending on the version and application, the highlighted menu windows are not always available.

**Basic adjustment**
- **Sensor address**
  - Sensor address
  - 000

**Display**
- **Displayed value**
  - Displayed value
  - Primary Value

**Diagnostics**
- **Min. adjustment**
  - Min. adjustment
  - 0.00 %
  - 10,000 m(d)
  - 8,000 m(d)

- **Max. adjustment**
  - Max. adjustment
  - 100.00 %
  - 1,000 m(d)
  - 2,000 m(d)

- **Linearisation curve**
  - Linearisation curve
  - linear
5.9 Menu schematic for a Foundation Fieldbus instrument (example: pressure transmitter)

**Information:**
Depending on the version and application, the highlighted menu windows are not always available.

### Basic adjustment

- **Unit of measurement**
  - 1.1 bar

- **Position correction**
  - 1.2 Offset
    - 53 mbar

- **Zero**
  - 1.3 000.0 %
    - 53 mbar

- **Span**
  - 1.4 100.0 %
    - 1000 mbar

- **Damping**
  - 1.5 1 s

- **Linearisation curve**
  - 1.6 linear

### Display

- **Displayed value**
  - 2.1 AI-Out

- **Lighting**
  - 2.4 Switched off ▼

### Diagnostics

- **Basic adjustment**
  - 3
  - **Display**
  - 3
  - **Diagnostics**
  - 3
  - **Service**
  - 3
  - **Info**
  - 3
### Set up

#### Service

- **Basic adjustment**
  - Display
  - Diagnostics
  - Service
  - Info

#### Simulation

- **Start simulation?**

#### Reset

- **Select reset?**

#### Copy sensor data

- **Copy sensor data?**

#### PIN

- **Enable?**

#### Info

- **Basic adjustment**
  - Display
  - Diagnostics
  - Service
  - Info

#### Device-ID

- **Sensor-TAG**

#### Sensor characteristics

- **Display now?**

### Indicating and adjustment module PLICSCOM

- **Pointer**
  - **Tmin.**: -12.5 °C
  - **Tmax.**: +85.5 °C
  - **p-min.**: -0.58 bar
  - **p-max.**: 16.765 bar

- **Sensor status**
  - **OK**

- **Trend recording**

- **Language**
  - **Deutsch**

- **Date of manufacture**
  - 4. July 2007
  - **Software version**
  - 3.50

- **Last change using PC**
  - 4. July 2007

- **Sensor type**
  - **Serial number**
    - 12345678

- **Copy sensor data**

- **Sensor characteristics**

- **Display now?**
6 Maintenance and fault rectification

6.1 Maintenance

When used as directed in normal condition, the indicating and adjustment module is maintenance-free.

6.2 Instrument repair

If a repair is necessary, please proceed as follows:

You can download a return form (23 KB) from the Internet on our homepage www.vega.com under: "Downloads - Forms and certificates - Repair form".

By doing this you help us carry out the repair quickly and without having to call for needed information.

- Print and fill out one form per instrument
- Clean the instrument and pack it damage-proof
- Attach the completed form and, if need be, also a safety data sheet outside on the packaging
- Please ask the agency serving you for the address of your return shipment. You can find the respective agency on our website www.vega.com under: "Company - VEGA worldwide"
7 Dismounting

7.1 Dismounting steps

Warning:
Before dismounting, be aware of dangerous process conditions such as e.g. pressure in the vessel, high temperatures, corrosive or toxic products etc.

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

7.2 Disposal

The indicating and adjustment module consists of materials which can recycled by specialised recycling companies. We have purposely designed the components to be easily separable.

WEEE directive 2002/96/EG
This indicating and adjustment module is not subject to the WEEE directive 2002/96/EG and the respective national laws (in Germany, e.g. ElektroG). Pass the indicating and adjustment module directly on to a specialised recycling company and do not use the municipal collecting points. They may only be used for privately used products according to the WEEE directive.

Correct disposal avoids negative effects to persons and environment and ensures recycling of useful raw materials.

Materials: see chapter "Technical data"

If you cannot dispose of the instrument properly, please contact us about disposal methods or return.
8 Supplement

8.1 Technical data

General data

| Weight                  | approx. 150 g (0.33 lbs) |

Ambient conditions

| Ambient temperature | -15 ... +70 °C (+5 ... +158 °F) |
| Storage and transport temperature | -40 ... +80 °C (-40 ... +176 °F) |

Indicating and adjustment module

| Power supply and data transmission | through the sensor |
| Indication                         | LC display in Dot matrix |
| Adjustment elements                | 4 keys |
| Protection                         | |
| – unassembled                      | IP 20 |
| – mounted into the sensor without cover | IP 40 |

Materials

| Housing       | ABS |
| Inspection window | Polyester foil |

Display light

| Supply | through the sensor, voltage range see sensor operating instructions manual |
8.2 Dimensions

PLICSCOM

![Diagram of PLICSCOM indicating and adjustment module]

Fig. 5: PLICSCOM
8.3 Industrial property rights

VEGA product lines are global protected by industrial property rights. Further information see http://www.vega.com. Only in U.S.A.: Further information see patent label at the sensor housing.


Les lignes de produits VEGA sont globalement protégées par des droits de propriété intellectuelle. Pour plus d'informations, on pourra se référer au site http://www.vega.com.


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进一步信息请参见网站<http://www.vega.com>。

8.4 Trademark

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