

# Operating Instruction for Plug-On Display

Model: AUF-2000





# **AUF-2000**



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# Manufactured and sold by:

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### 2. Note

### 2.1. General

Before unpacking and commissioning the device, the operating instructions and the "General Safety Instructions" document must be read and followed carefully. The general safety instructions, the operating instructions, the data sheet as well as approvals and further information can be downloaded via the QR code on the device or under the respective product on <a href="https://www.kobold.com">www.kobold.com</a>.

Due to technical changes, the device documentation available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email (<a href="mailto:info.de@kobold.com">info.de@kobold.com</a>) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form.

Operating instructions, data sheet, approvals and further information via the QR code on the device or via <a href="https://www.kobold.com">www.kobold.com</a>

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the device should be used only when the entire machine fulfils the EU machinery directive.

# 2.2. Hazard warnings

The following instructions are intended to ensure your personal safety and to prevent damage to the product described or connected devices. Safety instructions and warnings to prevent danger to the life and health of users or maintenance personnel, or to prevent damage to property, are highlighted in this documentation using the symbols defined here. The symbols and terms used have the following meaning in the documentation itself:

| Symbol | Explanation  | Symbol  | Explanation  |
|--------|--|---------|--|
| Note   | Is important information about the product, the handling of the product or the respective part of the documentation to which particular attention should be drawn. | Caution | Means that minor personal injury or minor property damage may occur if proper precautions are not taken. |



| Symbol   | Explanation  | Symbol  | Explanation   |
|----------|--|---------|---|
| <u>^</u> | Indicates that serious personal injury or substantial property damage may occur if proper precautions are not taken. |         | Means that death can occur if proper precautions are not taken. |
| Warning  |  | Danger  |   |
| Warning  | Attention: Hot surface!  | Warning | Warning: Dangerous electrical voltage                           |

# 3. Instrument Inspection

Instruments are inspected before shipping and sent out in perfect condition. Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

### Scope of delivery:

The standard delivery includes:

- Plug-On Display model: AUF-2000
- Mounting screw
- Units adhesive label

# 4. Intended Use

The KOBOLD Plug-On Display is to be installed only in the specified applications. Every usage, which exceeds the specifications, is considered to be non-specified. Therefore, any resulting damage is not the responsibility of the manufacturer.

When installing, commissioning and operating these instruments, observe the following: Any applicable national product safety standards (for example VDE 0100), the certificate of conformity specifications for plug-on displays with Ex protection, and the relevant national standards for Ex service (for example: VDE 0165) are to be observed. Only competent personnel should work on the instruments.

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# 5. Operating Principle

The model AUF-2000 Plug-On Display is a universal local display suitable for use with various transmitters. The transmitter must be fitted with an analogue output and a connector in accordance with EN 175 301-803 form A. The plug-on display is simply plugged in between connector and socket; it is then ready for operation. Upon removal of the cover, scaling, the position of the decimal point and damping may be set with two keys. The setup menu steps are displayed in the LED display field.

### 6. Mechanical Connection

The plug-on display is inserted between the plug and the plug socket and is immediately ready for use. The fastening screw must be replaced with the extended screw included in the delivery. The front cover with display can be rotated by 90°.

### 6.1. Rotating the display

In order to adjust the readability in the assembled state to the orientation of the plugged-in display, the electronic module can be rotated in the housing.



The following chapter describes the steps that must be followed to rotate the display unit.



Rotation of the unit must not be carried out if a potentially explosive atmosphere may be present.

Warning



The four screws from the corners of the lid are removed first,



and the lid is carefully removed (so as not to damage any glued lid seal).

Directly behind the cover, the electronic module lies loosely in the housing and can be positioned in the desired orientation by lifting and turning it in 90° increments.



When turning, make sure that the rubber disk glued to the back of the electronic module does not fall out or get caught. Furthermore, make sure that when repositioning the electronic module, the supply wires remain behind the rubber disk and do not slip between the rubber disk and the electronic circuit board.

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The supply wires must lie freely in the housing. Care must be taken to ensure that the wires are not crushed between the electronic module and the connection terminals in the housing.

Finally, the cover is reassembled with the four screws and the device is ready for use again.

| NOTE  | Only screw in the screws until you feel slight resistance, otherwise there is a risk of destroying the fastening thread in the housing. |
|-------|---|
| Notes |   |

# 7. Use in potentially explosive areas

The plug-on display model AUF-2000 is a universal local display that is suitable for use with various converters. Therefore, additional precautions may be required and their effectiveness must be checked periodically.

The AUF-2000 plug-in display is designed and certified for use in potentially explosive atmospheres. This chapter contains important additional information for installation in potentially explosive atmospheres and must be read and understood before installation or maintenance.

### 7.1. Marking

The AUF-2000 model complies with the legal requirements of the ATEX Directive 2014/34/EU. The CE mark indicates that the device complies with this directive. The information in this manual refers to the following type examination certificates for the certified plug-in display:



ATEX (Europa) I

BVS 17 ATEX E 022 II 2G Ex ib IIC T4 Gb



IECEx (Global) IECEX BVS 17.0012X Ex ib IIC T4 Gb

### **Applied Standards**

The following standards were used to demonstrate conformity with the abovementioned approvals:

- EN 60079-0 General Requirements
- EN 60079-11 Intrinsic Safety "i"

Further information can be found in the type examination certificate at the end of this manual.



### **Permitted Use**

The plug-on display can be used as follows, taking into account the marking on the type plate:

- a) Zone 1 (Gas Ex, EPL Gb) in explosion groups IIA, IIB and IIC
- b) Zone 2 (Gas Ex, EPL Gb) in explosion groups IIA, IIB and IIC

The input and output circuit is approved for intrinsic safety Ex ib IIC T4 Gb The device has a minimum protection level of IP65.

### 7.2. Ex ia Electrical Parameters

### 7.2.1. I.S. Circuit Input Connector (Tiller 1 / 2 - Male)

| Maximum input voltage       | Ui: | 30     | V     |
|-----------------------------|-----|--------|-------|
| Maximum Input Current       | li: | 100    | mΑ    |
| Maximum input power         | Pi: | 1.1    | W     |
| Maximum internal capacity   | Ci: | neglig | gible |
| Maximum internal inductance | Li: | neglig | gible |

### 7.2.2. I.S. Circuit Output Connector (Tiller 1/2 - Female)

| Maximum output voltage      | Uo: | 30 V             |
|-----------------------------|-----|------------------|
| Maximum Output Current      | lo: | 100 mA           |
| Maximum Output Power        | Po: | 1.1 W            |
| Maximum Outer Capacity      | Co: | Depends on the   |
|                             |     | power supply     |
| Maximum external inductance | Lo. | depending on the |
|                             |     | power supply     |

### 7.2.3. Thermal parameters

Ambient temperature range -20 °C ≤ tamb ≤ 40 °C

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### 7.3. General safety instructions

The plug-on indicator is state-of-the-art and safe to operate. The plug-in indicator may pose a residual risk if it is used and operated incorrectly by untrained personnel. Anyone who is responsible for installing, commissioning, maintaining or repairing the flow monitor must have read and understood the installation instructions and in particular the safety instructions.

- a) When selecting and operating a product as intended, follow the general rules of technology.
- b) All connected electrical and mechanical equipment must be suitable for the respective application.
- c) Please observe the instructions in this operating manual as well as the conditions of use and permissible data that can be seen from the imprints / type plates of the respective products.
- d) It is important to ensure that only the product types of ignition protection corresponding to the zones are installed!
- e) The product is only approved for proper and intended use in normal industrial atmospheres.
- f) The operator must ensure lightning protection for the entire system in accordance with local regulations.
- g) The intrinsically safe connection must be made via approved/tested evaluation devices, which must be equipped with suitable Zener barriers or switching amplifiers if necessary.

### 7.4. Commissioning, installation, operation

Depending on the degree of IP protection, an interval for cleaning the device (dust deposit) can/must be set. Strict care must be taken to ensure that only devices that correspond to the respective prevailing zones and categories of ignition protection are installed.

When installing the devices, the locally applicable installation regulations, e.g. EN 60079-14, must be observed.

Other important facts to note:

- a) In all zones, the circuits of the plug-on indicator must be operated by an appropriately qualified person, in accordance with TRBS 1203. The information on the nameplate is mandatory for this.
- b) The conditions described in this user manual apply, as well as the conditions of use and permissible data indicated on the nameplates of the respective device.
- c) The plug-on indicator must be properly protected when operating in adverse environmental conditions.
- d) The certificate, including any special conditions defined therein, must be taken into account.
- e) Electrostatic charges must be prevented.
- f) Stuck parts of equipment (e.g. due to frost or corrosion) must not be removed by force if the presence of an explosive atmosphere cannot be ruled out.



- g) A device may only be operated in a fully assembled and intact housing; If the housing is damaged, operation is not permitted.
- h) The device must only be connected when the device is de-energized.
- i) Avoid any contact of the clip-on indicator with corrosive media.
- j) Do not stress the system with vibration, bending or torsion.
- k) The formation of ice on the device must be prevented.
- Within the potentially explosive area, installation may only be carried out in compliance with the regulations applicable on site. Assembly rules must be observed.

The following conditions must be observed:

- Installation and maintenance should only be carried out in explosion-free environments and in compliance with the regulations applicable in the operator's country.
- II. Additional precautions must be taken if hydrogen sulfide, ethylene oxide, and/or carbon monoxide may be present. These substances have a very low ignition energy!

If one of these substances, or another substance of explosion group IIC, is located in an area where a potentially explosive atmosphere is to be expected, only non-sparking tools are to be used!

### 7.5. Servicing, Maintenance

Definition of terms according to IEC 60079-17:

**Maintenance and repair**: A combination of all activities carried out to maintain or restore an object to a condition that meets the requirements of the specification in question and ensures the performance of the required functions.

**Inspection:** An activity that involves the careful examination of an object with the aim of providing a reliable indication of the condition of the object, carried out without dismantling or, if necessary, with partial dismantling, supplemented by measures such as measurements.

**Visual inspection:** A visual inspection is an inspection that detects visible defects, such as missing screws, without the use of access equipment or tools.

**Close inspection:** An inspection in which, in addition to the aspects of visual inspection, such defects are detected, such as loose screws, which can only be detected by using access equipment, such as steps (if necessary), and tools. For close-up inspections, a housing usually does not need to be opened or the equipment de-energized.

Detailed inspection: An inspection that, in addition to the aspects of close inspection, detects defects such as loose connections that can only be detected by opening enclosures and/or, if necessary, using tools and testing equipment.

- a) Maintenance work may only be carried out by qualified persons.
- b) Only accessories that meet all the requirements of European Directives and national legislation may be used in potentially explosive atmospheres.

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- c) Components may only be replaced with original spare parts that are also approved for use in potentially explosive atmospheres. Repairs may only be carried out by the manufacturer or a specialist workshop.
- d) Products in potentially explosive atmospheres must be regularly maintained and cleaned. The intervals are determined by the operator based on the onsite conditions.

|   | Activity   | Visual inspection | Close-up inspection | Detailed examination |
|---|--|-------------------|---------------------|----------------------|
|   |  | monthly           | at 6 Monate         | at 12 Monate         |
| 1 | Visual inspection of the clip-on indicator for damage and removal of dust deposits | •                 |                     |                      |
| 2 | Check the clip-on indicator for proper attachment and/or cracks                    |                   | •                   |                      |
| 3 | Testing for integrity and function   |                   |                     | •                    |
| 4 | Checking the measurement value processing  |                   |                     | •                    |
| 5 | Checking the entire system   | In the area       | of responsibility   | of the operator      |

### 7.6. Troubleshooting

No modifications may be made to products used in potentially explosive atmospheres. Repairs to the product may only be carried out by specially trained and authorized personnel.



### 7.7. Marking of the plug-in display

### 7.7.1. ATEX type plate on the device

The device is provided with a type plate on which all relevant information is printed.



The QR code automatically takes you to the product page on the Kobold website, where you can download the operating instructions and other product-related documents.

### 7.7.2. Label on the packaging

For identification purposes, the device is also marked on the packaging.



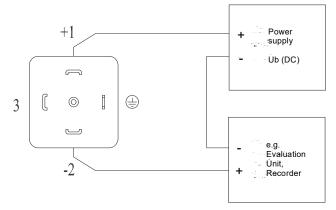
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# 8. Electrical Connection

Connect the plug-on display as shown in the wiring diagram.

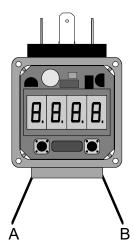
### Connector pin assignment



### **Power Supply Requirements**

The power supply voltage *(Ub)*, typically 24 VDC, must be greater than the sum of the: voltage drop across the sensor *(Us)*, the voltage drops across the display *(5V)* and any other voltage losses *(Ua)* (evaluation units, cable losses, etc.). Commissioning Ub > Us + 5V + Ua

### 8.1. Adjusting the Display



To adjust settings: Loosen and remove the four Phillips screws on the display and then remove the display cover hood.

- A Downward and selection of menu items
- B Upward and selection menu items
- A+B Enter menu selection for adjustment or to exit adjustment mode



# 8.2. Decimal Point

| Press key <b>B</b> until: dP is displayed.                                   |
|--|
| Press <b>A+B</b> to enter adjustment menu:                                   |
| Press <b>B</b> or <b>A</b> for up and down:                                  |
| Press <b>A+B to</b> acknowledge setting and return to menu item "dP"         |
|  |
| 8.3. Zero-Point  |
| (value to be displayed for 4 mA.)  |
| Press key <b>B</b> until: Z P 4 is displayed.                                |
| Press <b>A+B</b> to enter adjustment menu: 0.00 for example: (0 bar)         |
| Press <b>B</b> or <b>A</b> for up and down                                   |
| Press <b>A+B</b> to acknowledge setting and return to menu item "ZP 4"       |
|  |
| 8.4. Span  |
| (value to be displayed for 20 mA, "End Point")                               |
| Press key <b>B</b> until: E P 2 0 is displayed.                              |
| Press <b>A+B</b> to enter adjustment: menu: 0.00                             |
| Press <b>B or A</b> for up and down: 6 0 0 0 (for example: 60 bar)           |
| Press <b>A+B</b> to acknowledge setting and return to menu item "EP20"       |
| 8.5. Damping   |
| o.o. Damping   |
| Press key <b>B</b> until: FILt is displayed.                                 |
| Press <b>A+B</b> to enter adjustment menu: 0.3 (min. = 0.3 s; max. = 20.0 s) |
| Press <b>B</b> or <b>A</b> for up and down: 1.5 (for example: 1,5 sec)       |
| Press <b>A+B</b> to acknowledge setting and return to menu item "FILt"       |

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### 8.6. Range Exceeded

(An indication of less than 4 mA or greater than 20 mA)

Indicates "HI" if the upper limit or "LO" if the lower limit is exceeded

Press key B until: HILO is displayed.

Press A+B to enter adjustment menu: OFF message disabled

Press B or A for up and down: Message enabled

Press A+B to acknowledge setting and return to menu item "HILO"

Indication: "HI" = Upper range exceeded, "LO" = Lower range exceeded

Caution: When the "HILO" indication is disabled, error code "Er06" is displayed if the scale range (-1999 to +9999) is exceeded.

### 8.7. Return to Measuring Mode

Depending on the selected menu point, press key A or B from one to eight times.



# 9. Technical Information

Operating instructions, data sheet, approvals and further information via the QR code on the device or via <a href="https://www.kobold.com">www.kobold.com</a>

# 10. Order Codes

Operating instructions, data sheet, approvals and further information via the QR code on the device or via <a href="https://www.kobold.com">www.kobold.com</a>

# 11. Dimensions

Operating instructions, data sheet, approvals and further information via the QR code on the device or via <a href="https://www.kobold.com">www.kobold.com</a>

# 12. Disposal

See "General Safety Instructions" - via the QR code on the device or via www.kobold.com

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# 13. EU Declaration of Conformance

We, KOBOLD Messring GmbH, Nordring 22-24, 65719 Hofheim, Germany, declare under our sole responsibility that the product:

Plug-On Display Model: AUF-2000

to which this declaration relates is in conformity with the following EU directives stated below:

2014/35/EU Low Voltage Directive 2011/65/EU RoHS (category 9)

**2015/863/EU** Delegated Directive (RoHS III)

Also, the following standards are fulfilled:

**EN 61010-1:2010 + A1:2019 + A1:2019/AC:2019** Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements

### EN IEC 61326-1:2021

Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements, industrial area, immunity to RF field in the range 80 to 120 MHz: 3 V/m

**EN IEC 63000:2018** Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Hofheim, 07 March 2024

H. Volz J. Burke General Manager Compliance Manager



# 14. EU declaration of conformity (ATEX)

We, Kobold Messring GmbH, Nordring 22-24, 65719 Hofheim, Germany, hereby declare under our sole responsibility and with the aim of traceability that the product

Product type: Plug-On Display

Model: AUF-2000

EU type examination certificate: BVS 17ATEX E022

Complies with all relevant requirements of the following directive(s):

**2014/34/EU** Equipment and Protective systems intended for use in potentially Explosive Atmospheres

The following harmonized standards were applied for conformity assessment:

**EN IEC 60079-0:2018** Equipment – General requirements

**EN 60079-11:2012** Device protection through intrinsic safety "i"

According to the type test certificate, the device marking is:

⟨Ex⟩ II 2G Ex ib IIC T4 Gb

The above-mentioned product complies with Directive 2014/34/EU. New editions may have already replaced one or more of the standards mentioned in the EU type examination certificates. Kobold Messring declares that the product mentioned in this declaration of conformity either meets the requirements of the new editions or is not affected by the changes.

The notified body DEKRA Testing and Certification GmbH, identification number: 0158, was activated, in accordance with Article 17 of Directive 2014/34/EU, to monitor quality assurance related to the production process.

Certificate: BVS 24 ATEX ZQS/E110

Hofheim, 27 March 2024

H. Volz J. Burke General Manager Compliance Manager

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# 15. EU Type Examination Certificate

EKRA D

A D DEKRA D

RA D DEKRA D

RA D DEKRA D

RA D DEKRA

KRA D D

DEKRA





**Translation** 

# EU-Type Examination Certificate

- 2 Equipment intended for use in potentially explosive atmospheres Directive 2014/34/EU
- 3 EU-Type Examination Certificate Number: BVS 17 ATEX E 022
- 4 Product: Plug-on Display type AUF-2000
- 5 Manufacturer: KOBOLD Messring GmbH
- 6 Address: Nordring 22-24, 65719 Hofheim/Ts., Germany
- 7 This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.
- DEKRA EXAM GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential Report No. BVS PP 17.2040 EU.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 + A11:2013 General requirements EN 60079-11:2012 Intrinsic Safety "i"

- If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.
- This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- 12 The marking of the product shall include the following:



II 2G Ex ib IIC T4 Gb

DEKRA EXAM GmbH Bochum, 2017-03-10

Signed: Dr Franz Eickhoff

Certifier

Signed: Dr Michael Wittler

Approver

DAKKS
Destructe
Automotive requirement
10.281.12000-021.00

Page 1 of 3 of BVS 17 ATEX E 022

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AUF-2000 K10/0225



# EKRA DIEKRA DEKRA DEKRA

# DEKRA



13 Appendix

14 EU-Type Examination Certificate BVS 17 ATEX E 022

15 Product description

15.1 Subject and type

Plug-on Display type AUF-2000

15.2 Description

The display device type AUF-2000 is used in intrinsically safe 4-20 mA circuits for the visualization of parameters.

The display device type AUF-2000 is inserted between the plug and the socket of a compatible 4-20 mA device.

### 15.3 Parameters

15.3.1 Electrical data

15.3.1.1 I.S. circuit input connector (1 / 2 - plug)

| Maximum input voltage        | Ui             | 30         | V   |
|------------------------------|----------------|------------|---|
| Maximum input current        | 1 <sub>i</sub> | 100        | mA  |
| Maximum input power          | Pi             | 1.1        | W   |
| Maximum internal capacitance | Ci             | negligible | //// <b>/////////////////////////////////</b> |
| Maximum internal inductance  | L <sub>i</sub> | negligible | ///###  |
|                              |                |            |   |

15.3.1.2 I.S. circuit output connector (1/2 - socket)

| Maximum output voltage       | ////U <sub>0</sub> /////                            | ///////30/////           | /// V             |
|------------------------------|---|--------------------------|-------------------|
| Maximum output current       | l <sub>o</sub> //////////////////////////////////// | /////100                 | mA                |
| Maximum output power         | ////P <sub>6</sub> /////                            | //////// <b>1/1</b> //// | /// w             |
| Maximum external capacitance | ////C <sub>9</sub> /////                            | depending                | g on power supply |
| Maximum external inductance  | //////\/  | //// depending           | g on power supply |
|                              |   |                          |                   |

15.3.2 Thermal Parameters

Ambient temperature  $-20 \, ^{\circ}\text{C} \le T_{\text{amb}} \le 40 \, ^{\circ}\text{C}$ 



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DEKRA EXAM GmbH, Dinnendahlstrasse 9, 44809 Bochum, Germany, telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com





16 **Report Number** 

BVS PP 17.2040 EU, as of 2017-03-10

17 **Special Conditions for Use** 

None

18 **Essential Health and Safety Requirements** 

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

19 **Drawings and Documents** 

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original. In the case of arbitration only the German wording shall be valid and binding.

> **DEKRA EXAM GmbH** Bochum, dated 2017-03-10 BVS-Scho/Rip/Nu A 20161103

> > Certifier

Approver



Page 3 of 3 of BVS 17 ATEX E 022
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DEKRA EXAM GmbH, Dinnendahlstrasse 9, 44809 Bochum, Germany, telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com



# 16. IECEx Certificate

| INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres for rules and details of the IECEx Scheme visit www.iecex.com  Certificate No.:  IECEX BVS 17.0012 issue No.:0  Certificate history:  Certificate No.:  IECEX BVS 17.0012 issue No.:0  Certificate history:  Current  Date of Issue:  2017-03-15 Page 1 of 3  KOBOLD Messring GmbH Nordring 22-24, 65719 Hofheim/Ts Germany  Plug-on display type AUF-2000  Equipment: Optional accessory:  Type of Protection:  Equipment protection by intrinsic safety ";"  Marking:  Ex ib IIC T4 Gb Approved for issue on behalf of the IECEX Certification Body: Position:  Deputy Head of Certification Body  Signature: (for printed version) Date:  1. This certificate and schedule may only be reproduced in full. 2. This certificate is not transferable and remains the property of the issuing body. 3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.  DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany  On the sofe side. | <b>IEC</b>                | IECEX                               | A STATE OF THE PARTY OF THE PAR | ertificate<br>formity |
|--|---------------------------|-------------------------------------|--|-----------------------|
| Status:  Current  Date of Issue:  2017-03-15  Page 1 of 3  Applicant:  KOBOLD Messring GmbH Nordring 22-24, 85719 Hoffneim/Ts Germany  Equipment: Optional accessory:  Type of Protection:  Equipment protection by intrinsic safety "i"  Marking:  Ex ib IIC T4 Gb  Approved for issue on behalf of the IECEx Certification Body:  Position:  Deputy Head of Certification Body  Signature: (for printed version)  Date:  1. This certificate and schedule may only be reproduced in full. 2. This certificate is not transferable and remains the property of the issuing body. 3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.  DEKRA EXAM GmbH Dinnendahistrasse 9 44809 Bochum Carrenary  Applicant:  DEKRA EXAM GmbH Dinnendahistrasse 9 44809 Bochum Carrenary  Applicant:  DEKRA EXAM GmbH Dinnendahistrasse 9 44809 Bochum Carrenary   |                           | ertification Sc                     | heme for Explosive A   | tmospheres            |
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| Nordring 22-24, 65719 Hofheim/Ts Germany  Equipment: Optional accessory:  Type of Protection: Equipment protection by intrinsic safety "!"  Marking: Ex ib IIC T4 Gb  Approved for issue on behalf of the IECEx Certification Body:  Position: Deputy Head of Certification Body  Signature: (for printed version)  Date:  1. This certificate and schedule may only be reproduced in full. 2. This certificate is not transferable and remains the property of the issuing body. 3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.  DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany   | Date of Issue:            | 2017-03-15                          | Page 1 of 3  |                       |
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| Signature: (for printed version)  Date:  1. This certificate and schedule may only be reproduced in full. 2. This certificate is not transferable and remains the property of the issuing body. 3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.  PEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany   |                           | behalf of the IECEx                 | Dr Franz Eickhoff  |                       |
| 26.12 - 03 - 15  1. This certificate and schedule may only be reproduced in full. 2. This certificate is not transferable and remains the property of the issuing body. 3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.  PEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany   | Position:                 |                                     | Deputy Head of Certification Body  |                       |
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| DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany   | 2 This certificate is not | t transferable and remains          | the property of the issuing body.  | I IECEx Website.      |
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| On the safe side.  |                           | innendahlstrasse 9<br>44809 Bochum  |  | DEKRA                 |
|  |                           | Germany                             |  | On the safe side.     |
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# **IECEx Certificate** of Conformity

Certificate No.:

IECEx BVS 17.0012

Date of Issue:

2017-03-15

Issue No.: 0

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Manufacturer:

**KOBOLD Messring GmbH** Nordring 22-24, 65719 Hofheim/Ts. Germany

### Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011

Explosive atmospheres - Part 0: General requirements

Edition: 6.0

IEC 60079-11: 2011

Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

Edition: 6.0

This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

### TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report: DE/BVS/ExTR17.0019/00

### Quality Assessment Report:

DE/BVS/OAR09 0001/07



| IEC ®  | IECEX TM                           | of Conformity   |
|--|------------------------------------|---|
| Certificate No.:                                     | IECEx BVS 17.0012                  |   |
| Date of Issue:                                       | 2017-03-15                         | Issue No.: 0  |
|  |                                    | Page 3 of 3   |
|  | S                                  | chedule   |
| QUIPMENT:  | 11 11: 117                         | 6.11  |
|  | vered by this certificate are as t | ollows:   |
| eneral product informat<br>he display device type AU | JF-2000 is used in intrinsically s | afe 4-20 mA circuits for the visualization of parameters. |
| he display device type AL                            | JF-2000 is inserted between the    | e plug and the socket of a compatible 4-20 mA device.     |
| ype:<br>UF-2000                                      |                                    |   |
| atings:  |                                    |   |
| ee Annex   |                                    |   |
| CO AIRICA  |                                    |   |
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| PECIFIC CONDITIONS O                                 | OF USE: NO                         |   |
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Annex: BVS\_17\_0012\_Kobold\_Annex.pdf

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