

# **GEMÜ 1205**

**Electrical position indicator ATEX** 



# **Operating instructions**







All rights including copyrights or industrial property rights are expressly reserved.

Keep the document for future reference.

© GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG 16.03.2023

# **Contents**

1	General information			
	1.1	Information	4	
	1.2	Symbols used	4	
	1.3	Warning notes	4	
2	Safety	information	4	
3	Produc	ct description	5	
	3.1	Construction	5	
	3.2	Description	5	
	3.3	Function	5	
	3.4	Product label	5	
4		t use	6	
5		data	7	
6	Techni	ical data	8	
7	Dimen	sions	9	
8	Manuf	acturer's information	10	
	8.1	Delivery	10	
	8.2	Packaging	10	
	8.3	Transport	10	
	8.4	Storage	10	
9	Assem	bly and installation	10	
	9.2	Information on use in damp conditions	11	
	9.3	Assembly of mounting kit with thread	11	
		9.3.1 Assembly of mounting kit without		
		stroke limiter	11	
		9.3.2 Assembly of mounting kit with stroke limiter	11	
	9.4	Assembly of mounting kit without thread	11 11	
	9.4	Assembly and installation of the electrical	- ''	
	5.0	position indicator	12	
10	Flectri	cal connection	14	
	10.1	Terminals, microswitch (code 104)	14	
11	Troubl	eshooting	15	
		etion and maintenance	15	
	12.1	Spare parts	15	
	12.2	Setting the limit switches	15	
	12.3	Cleaning the product	15	
13	Disass	sembly	15	
14	Disposal			
	Returns 1			
16	5 EU Declaration of Conformity in accordance with			
-		34/EU (ATEX)	17	
17	EU typ	e examination certificate	18	

#### 1 General information

#### 1.1 Information

- The descriptions and instructions apply to the standard versions. For special versions not described in this document the basic information contained herein applies in combination with any additional special documentation.
- Correct installation, operation, maintenance and repair work ensure faultless operation of the product.
- Should there be any doubts or misunderstandings, the German version is the authoritative document.
- Contact us at the address on the last page for staff training information.

# 1.2 Symbols used

The following symbols are used in this document:

Symbol	Meaning		
•	Tasks to be performed		
•	Response(s) to tasks		
_	Lists		

# 1.3 Warning notes

Wherever possible, warning notes are organised according to the following scheme:

SIGNAL WORD			
Possible symbol for the specific danger	Type and source of the danger  ▶ Possible consequences of non-observance.  ● Measures for avoiding danger.		

Warning notes are always marked with a signal word and sometimes also with a symbol for the specific danger.

The following signal words and danger levels are used:

# **A** DANGER



#### Imminent danger!

 Non-observance can cause death or severe injury.

# **MARNING**



#### Potentially dangerous situation!

 Non-observance can cause death or severe injury.

# **A** CAUTION



#### Potentially dangerous situation!

Non-observance can cause moderate to light injury.

### **NOTICE**



#### Potentially dangerous situation!

 Non-observance can cause damage to property.

The following symbols for the specific dangers can be used within a warning note:

Symbol	Meaning
4	Danger – high voltage

# 2 Safety information

The safety information in this document refers only to an individual product. Potentially dangerous conditions can arise in combination with other plant components, which need to be considered on the basis of a risk analysis. The operator is responsible for the production of the risk analysis and for compliance with the resulting precautionary measures and regional safety regulations.

The document contains fundamental safety information that must be observed during commissioning, operation and maintenance. Non-compliance with these instructions may cause:

- Personal hazard due to electrical, mechanical and chemical effects.
- Hazard to nearby equipment.
- Failure of important functions.
- Hazard to the environment due to the leakage of dangerous substances.

The safety information does not take into account:

- Unexpected incidents and events, which may occur during installation, operation and maintenance.
- Local safety regulations which must be adhered to by the operator and by any additional installation personnel.

#### **Prior to commissioning:**

- 1. Transport and store the product correctly.
- 2. Do not paint the screws and plastic parts of the product.
- 3. Carry out installation and commissioning using trained personnel.
- 4. Provide adequate training for installation and operating personnel.
- 5. Ensure that the contents of the document have been fully understood by the responsible personnel.
- 6. Define the areas of responsibility.
- 7. Observe the safety data sheets.
- 8. Observe the safety regulations for the media used.

#### **During operation:**

- 9. Keep this document available at the place of use.
- 10. Observe the safety information.
- 11. Operate the product in accordance with this document.
- 12. Operate the product in accordance with the specifications.
- 13. Maintain the product correctly.
- 14. Do not carry out any maintenance work and repairs not described in this document without consulting the manufacturer first.

In cases of uncertainty:

15. Consult the nearest GEMÜ sales office.

# 3 Product description

### 3.1 Construction



Item	Name	Materials
1	Cover	Aluminium diecast- ing
2	Base	Aluminium diecast- ing
3	Operating bush	1.4104
4	Guide piece	1.4305

#### 3.2 Description

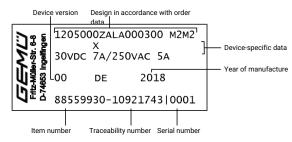
The GEMÜ 1205 electrical position indicator has electromechanical microswitches in a flameproof enclosure. Two valve positions, open and/or closed can be remotely indicated.

#### 3.3 Function

The GEMÜ 1205 electrical position indicator is used to feed back and verify the position of valves operated with pneumatic linear actuators. The spindle of the electrical position indicator is positively connected to the spindle of the linear actuator and is moved with the linear movement of the actuator. The cam attached to the spindle then actuates the built-in microswitches, which are used for electronic signal transmission.

Depending on the version, the electrical position indicator is equipped with 1 to 2 microswitches.

#### 3.4 Product label



The month of manufacture is encoded in the traceability number and can be obtained from GEMÜ. The product was manufactured in Germany.

#### 4 Correct use

# **A** DANGER



# Danger of explosion

- Risk of death or severe injury.
- Do not use the product as a step or foothold.
- Prior to commissioning, ensure that the cover is fully closed and that the housing and the O-ring are not damaged.

# **⚠ WARNING**

#### Improper use of the product!

- ▶ Risk of severe injury or death
- ▶ Manufacturer liability and guarantee will be void
- Only use the product in accordance with the operating conditions specified in the contract documentation and in this document.

The GEMÜ 1205 electrical position indicator is designed for use in potentially explosive atmospheres of zones 1 and 2 with gases, mists or vapours and zones 21 and 22 with flammable dusts.

The product has the following explosion protection marking:

Gas: II 2G Ex db eb IIC T6 Gb
Dust: II 2D Ex tb IIIC T80°C Db
EC type examination certific- IBExU18ATEX1008

For special conditions and operation limits see EC type examination certificate.

Use of the product is permissible in the following ambient temperature ranges: T6/T80  $^{\circ}$ C: -20  $^{\circ}$ C to +60  $^{\circ}$ C

• Use the product in accordance with the technical data.

### 4.1 Use in potentially explosive environments

The product is certified in accordance with ATEX and has an explosion protection approval according to 2014/34/EU (see "Technical data").

The energy supply must be equipped with a switch or an overcurrent protective device in the system.

The product user is responsible for providing connections that comply with standards as well as cable compatibility and warning signs. Only Ex t or Ex e cable glands with properties corresponding to at least those of the housing must be used (IP protection, ambient temperature, explosion protection class, thread type and size). The materials of the cable glands must be compatible with the housing materials. The cable glands must comply with at least IP65. The connection is designed as M20. Installation, operation and maintenance must only be carried out by qualified trained personnel with a strong knowledge of the type of ignition protection "Flameproof enclosure" db, eb and tb. Do not repair the device yourself if it is faulty. Instead, replace it with an equivalent new device. Repairs must only be carried out by the manufacturer! The device must only be used if its materials are resistant against mechanical and/or chemical influences or corrosion under the respective operating conditions to such a sufficient degree that the explosion protection is not impaired or nullified.

# 5 Order data

The order data provide an overview of standard configurations.

 $\label{thm:please} Please\ check\ the\ availability\ before\ ordering.\ Other\ configurations\ available\ on\ request.$ 

Note: Mounting kit 1205 S01 Z...AT dependent on valve type. Please order separately specifying valve type, DN, control function and actuator size.

#### Order codes

1 Type	Code
Electrical position indicator ATEX for linear actuators	1205
2 Fieldbus	Code
Without	000
3 Accessory	Code
Accessory	Z
4 Housing material	Code
Aluminium diecasting	AL
5 Function	Code
Open / Closed	A00
Open	A01

5 Function	Code
Closed	A02
6 Electrical connection	Code
M20 cable gland	03
7 Options	Code
Without	00
8 Switch	Code
8 Switch Change-over contact, microswitch	Code M2
Change-over contact, microswitch	M2
Change-over contact, microswitch  9 Connection diagram	M2 Code

# Order example

Ordering option	Code	Description
1 Type	1205	Electrical position indicator ATEX for linear actuators
2 Fieldbus	000	Without
3 Accessory	Z	Accessory
4 Housing material	AL	Aluminium diecasting
5 Function	A00	Open / Closed
6 Electrical connection	03	M20 cable gland
7 Options	00	Without
8 Switch	M2	Change-over contact, microswitch
9 Connection diagram	M2	Microswitch PNP
10 Special version	X	ATEX 2014/34/EU

#### 6 Technical data

#### 6.1 Temperature

Ambient temperature: -20 to 60 °C

**Storage temperature:**  $0 - 40 \, ^{\circ}\text{C}$ 

### 6.2 Product compliance

**Explosion protection:** Special version X order code

ATEX marking: Gas: (a) II 2G Ex db eb IIC T6 Gb

Dust: & II 2D Ex tb IIIC T80°C Db

Type examination

certificate:

IBExU18ATEX1008

#### 6.3 Mechanical data

**Weight:** 1146.5 g

Protection class: IP 65 acc. to EN 60529

Range of limit switch: 2 to 70 mm continuous

**Mechanical stability:** 7 Nm, impact energy acc. to EN 60079-0

Max. switching fre-

quency:

≤ 1000 switching cycles/h

### 6.4 Electrical data

Switch type: Microswitch

Switch rating: Switch rating AC

Voltage	Ohmic load	Inductive load (cosφ = 0.6)
250 V	5 A	3 A
30 V	7 A	5 A

### **Switch rating DC**

Voltage	Ohmic load	Inductive load (cosφ = 0.6)
250 V	0.4 A	0.03 A
30 V	7 A	5 A

Information applies to 40 °C ambient temperature

Thermal rated current: 6 A

**Electrical connection** 

type:

M20 cable gland 1 x available (Type Bartec 03-6020-0016)

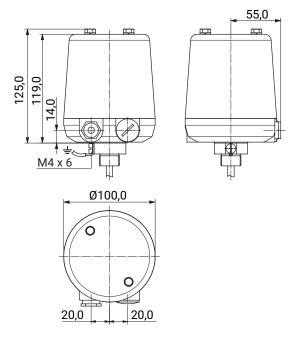
1 x prepared (blanking cover)

 $\begin{array}{lll} \text{Cable diameter:} & 7 \text{ to } 13 \text{ mm} \\ \text{Terminal diameter:} & 2.5 \text{ mm}^2 \\ \text{Earth terminal:} & 4.0 \text{ mm}^2 \\ \end{array}$ 

Potential equalisation: Stranded wire, yellow/green, H 07 V-K 4.0

Tightening torque 10 Nm

# **7 Dimensions**



Dimensions in mm

#### 8 Manufacturer's information

#### 8.1 Delivery

 Check that all parts are present and check for any damage immediately upon receipt.

The product's performance is tested at the factory. The scope of delivery is apparent from the dispatch documents and the design from the order number.

### 8.2 Packaging

The product is packaged in a cardboard box which can be recycled as paper.

# 8.3 Transport

- Only transport the product by suitable means. Do not drop. Handle carefully.
- 2. After the installation dispose of transport packaging material according to relevant local or national disposal regulations / environmental protection laws.

#### 8.4 Storage

- 1. Store the product free from dust and moisture in its original packaging.
- 2. Avoid UV rays and direct sunlight.
- 3. Do not exceed the maximum storage temperature (see chapter "Technical data").
- Do not store solvents, chemicals, acids, fuels or similar fluids in the same room as GEMÜ products and their spare parts.

## 9 Assembly and installation

# **⚠** DANGER



#### Risk of electric shock

- Risk of injury or death (if operating voltage is higher than safe extra low voltage).
- Electric shock can cause severe burns and fatal injury.
- Work on electrical connections only by qualified trained personnel.
- Disconnect the cable from the power supply before making the electrical connection.
- Connect the protective earth conductor.

# **⚠** CAUTION



# Danger - high voltage!

- Electric shock.
- Before performing any work on the GEMÜ product switch off power and protect circuit from being switched on again.

# **A** CAUTION

#### Fitted electrical position indicator

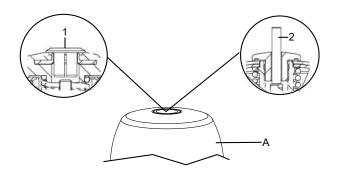
- Destruction of the electrical position indicator when disassembling the valve body
- Disassemble the electrical position indicator before disassembling the valve body

### **NOTICE**

- Pay attention to the information on product labels, in product documentation and EC type examination certificate.
- Connect cable carefully, do not damage individual wires.
- When connecting multiwire or finewire cables, prepare the wire ends.
- Always use suitable pinch tools for pinching wire end ferrules in order to achieve consistent quality.
- Tighten all clamping points, even the ones not being used.

#### 9.1 Preparations for mounting to the valve

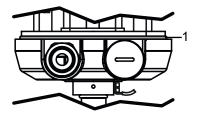
- 1. Move the actuator **A** into zero position (actuator vented).
- 2. Remove optical position indicator **2** and / or protective cap **1** from the actuator top.



# 9.2 Information on use in damp conditions

The following information is intended to help when installing and operating the product in damp conditions.

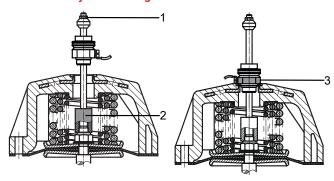
- 1. Lay cables and pipework so that no condensate or rain water that remains on the pipework / cables can enter the cable glands or plugs of the product.
- 2. Check that all cable glands or plugs are positioned correctly
- 3. Check the sealing ring 1 for any damage and correct positioning before tightening the cover.



## 9.3 Assembly of mounting kit with thread

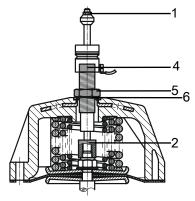
 Before beginning assembly, check the type of mounting kit.

# 9.3.1 Assembly of mounting kit without stroke limiter



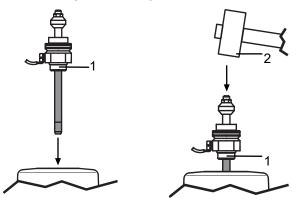
- 1. Screw in adapter 2 using wrench surface 1.
- 2. Screw in guide piece  ${\bf 3}$  using the wrench surface.

### 9.3.2 Assembly of mounting kit with stroke limiter

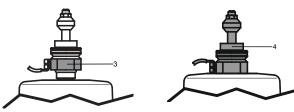


- 1. Screw in adapter 2 using wrench surface 1.
- Set stroke limiter to the desired height using wrench surface 4.
- 3. Secure nut 5 against the actuator top.
- 4. Only use thread sealing ring **6** for installation of stroke limiters in case of control functions 2 and 3

# 9.4 Assembly of mounting kit without thread



- 1. Insert spindle of mounting kit 1 into actuator.
- 2. Carefully knock down the spindle of mounting kit **1** with an appropriate tool **2** until it stops.



- 3. Screw in guide piece 3 using the wrench surface.
- 4. Mounting kit 1 is correctly assembled.

# 9.5 Assembly and installation of the electrical position indicator

# DANGER



#### **Danger of explosion**

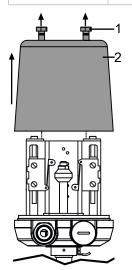
- Risk of death or severe injury.
- Do not use the product as a step or foothold.
- Prior to commissioning, ensure that the cover is fully closed and that the housing and the O-ring are not damaged.

# DANGER

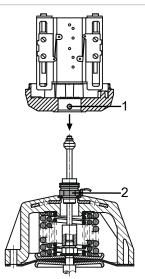


#### Risk of electric shock

- Risk of injury or death (if operating voltage is higher than safe extra low voltage).
- Electric shock can cause severe burns and fatal injury.
- Work on electrical connections only by qualified trained personnel.
- Disconnect the cable from the power supply before making the electrical connection.
- Connect the protective earth conductor.

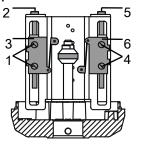


- 1. Disconnect the power sup- 4. Undo grub screw 1 (do not ply and secure against recommissioning.
- 2. Undo nuts 1 and leave them in cover 2.
- 3. Remove cover 2.



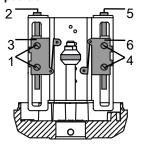
- unscrew completely).
- 5. Put the base of the electrical position indicator onto guide piece 2 (taking care that the trip cams do not damage the switches!
- 6. Turn the electrical position indicator into the desired connection direction and fix the position with grub screw 1.

### Setting the upper switching position:



- 7. Move the valve to the OPEN position.
- 8. Undo screws 1.
- 9. Use the left screw 2 to move switch 3 to the desired position.
- 10. Tighten screws 1.
  - ⇒ The upper switching position is set.

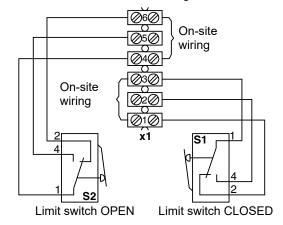
### Setting the lower switching position:

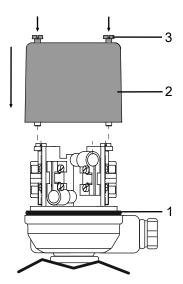


- 11. Move the valve to the CLOSED position.
- 12. Undo screws 4.
- 13. Use the right screw 5 to move switch 6 to the desired position.
- 14. Tighten screws 4.
  - ⇒ The lower switching position is set.

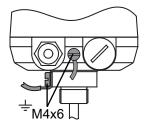
PLEASE NOTE: For reasons of electrical safety, it is mandatory to connect a protective earth conductor to the terminal point in the housing marked with the protective earth sym-

- 15. Insert the connection cable through the cable gland.
- 16. Only strip the connection cable directly before the switch mounting plate.
- 17. Guide the individual wires to the terminals.
- 18. Cut the individual wires to the appropriate length in order to avoid having unnecessarily long cable loops.
- 19. Compress the individual wires with wire end ferrules.
- 20. Connect the individual wires to the terminals in accordance with the connection diagram.





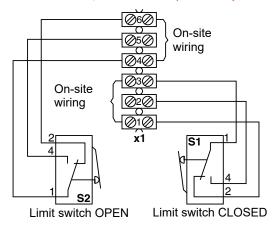
- 21. After completing the electrical connection, carefully pull the connection cable taut.
  - ⇒ Avoid pulling too hard!
- 22. Make sure that the O-ring is properly mounted and not damaged.
- 23. Attach the cover 2 with the nuts 3.
- 24. Screw in and tighten nuts 3.
  - ⇒ Ensure all seals and threaded connections are correctly installed.
- 25. Supply power to the electrical position indicator.
- 26. For function control, open and close the valve and pay attention to signalling.
- 27. If the settings need to be readjusted, disconnect the electrical position indicator from the power supply and repeat step 7 to step 26.



- 28. Use a screw M4x6 to attach the potential equalization device to the electrical position indicator.
  - ⇒ Potential equalization for metal housings in potentially explosive areas: Minimum 4 mm².
- 29. Secure the connection against working itself loose.

# 10 Electrical connection

# 10.1 Terminals, microswitch (code 104)



## 11 Troubleshooting

Error	Error cause	Error clearance
No stroke	No mounting kit available	Check mounting kit
	Process valve faulty	Replace process valve
	Wrong mounting kit installed	Replace mounting kit
No feedback	Incorrect assembly	Check assembly, wiring and connec- tion
	Switch not set	Set switch
	Wrong mounting kit installed	Replace mounting kit
	Voltage is not con- nected	Connect voltage
Cover cannot be attached	Sealing ring inserted incorrectly	Insert sealing ring correctly
	Sealing ring damaged	Replace sealing ring
	Cables protruding over the edge of the base	Check the cable routing and shorten the cables if necessary
Grub screw not working	Grub screw un- screwed too far, nut fell out	Reinsert the nut, screw in the grub screw (during as- sembly, only undo the grub screw, do not unscrew it com- pletely)

# 12 Inspection and maintenance

# **A** CAUTION

# Use of incorrect spare parts!

- ▶ Damage to the GEMÜ product
- ▶ Manufacturer liability and guarantee will be void
- Use only genuine parts from GEMÜ.

#### **NOTICE**

### **Exceptional maintenance work!**

- ► Damage to the GEMÜ product
- Any maintenance work and repairs not described in these operating instructions must not be performed without consulting the manufacturer first.

The operator must carry out regular visual examination of the products dependent on the operating conditions and the potential danger in order to prevent leakage and damage.

- 1. Have servicing and maintenance work performed by trained personnel.
- 2. Wear appropriate protective gear as specified in plant operator's guidelines.
- 3. Shut off plant or plant component.
- 4. Secure the plant or plant component against recommissioning.
- 5. Depressurize the plant or plant component.
- 6. Actuate products which are always in the same position four times a year.

#### 12.1 Spare parts

No spare parts are available for this product. If it is faulty, please return it to GEMÜ for repair.

#### 12.2 Setting the limit switches

For limit switch setting see chapter "Assembly and installation of the electrical position indicator" steps 1 to 14.

# 12.3 Cleaning the product

- Do **not** clean the product with a high pressure cleaning device.

# 13 Disassembly

- 1. Switch off power to the product.
- 2. Remove the potential equalisation device.
- 3. Remove the cover 2.
- 4. Remove the individual wires from the terminal strip.
- 5. Remove the connection cable.
- 6. Dismantle the mounting kit/product in the opposite order to that described in the Assembly (see "Assembly and installation", page 10) chapter.

#### 14 Disposal

- 1. Pay attention to adhered residual material and gas diffusion from penetrated media.
- 2. Dispose of all parts in accordance with the disposal regulations/environmental protection laws.
- 3. Dispose of electronic components separately.

#### 15 Returns

Legal regulations for the protection of the environment and personnel require that the completed and signed return delivery note is included with the dispatch documents. Returned goods can be processed only when this note is completed. If

no return delivery note is included with the product, GEMÜ cannot process credits or repair work but will dispose of the goods at the operator's expense.

- 1. Clean the product.
- 2. Request a return delivery note from GEMÜ.
- 3. Complete the return delivery note.
- 4. Send the product with a completed return delivery note to GEMÜ.

# 16 EU Declaration of Conformity in accordance with 2014/34/EU (ATEX)

# **EU Declaration of Conformity**

# in accordance with 2014/34/EU (ATEX)

We, the company GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG

Fritz-Müller-Strasse 6-8

74653 Ingelfingen-Criesbach, Germany

declare that the product listed below complies with the requirements of directive 2014/34/EU for intended use in potentially explosive areas.

**Description of the product:** Electrical position indicator GEMÜ 1205

Marking - 1205 000 Z AL A00 03 00 M2 M2 X

> - 1205 000 Z AL A01 03 00 M2 M2 X 1205 000 Z AL A02 03 00 M2 M2 X

EC type examination certificate IBExU18ATEX1008.

The notified body IBEXU, No. 0637 has certified the above mentioned product and issued the following certificate: IBExU18ATEX1008.

The Essential Safety and Health Requirements are met by compliance with the standards listed below that are applicable for the above mentioned product:

- EN 60079-0:2012+A11:2013
- EN 60079-1:2014
- EN 60079-7:2015
- EN 60079-31:2014

2023-03-10

Joachim Brien **Head of Technical Department** 

www.gemu-group.com 17 / 20 **GEMÜ 1205**  [2]

## 17 EU type examination certificate

### IBExU Institut für Sicherheitstechnik GmbH

An-Institut der TU Bergakademie Freiberg

### [1] **EU-TYPE EXAMINATION CERTIFICATE** - TRANSLATION

Equipment and protective systems intended for use in potentially explosive atmospheres, directive 2014/34/EU



[3] EU-Type Examination Certificate Number IBExU18ATEX1008 | Issue 0

[4] Equipment:

Electrical position indicator

Type: 1205

[5] Manufacturer:

GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG

[6] Address:

Fritz-Müller-Straße 6 - 8 74653 Ingelfingen

GERMANY

- [7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 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 test report IB-17-3-0041.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-7:2015 EN 60079-31:2014

Except in respect of those requirements listed at item [18] of the annex.

- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.
- [11] 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 db eb IIC T6 Gb

Ex II 2D Ex tb IIIC T80°C Db -20 °C  $\leq$  T<sub>a</sub>  $\leq$  +60 °C

IBExU Institut für Sicherheitstechnik GmbH Fuchsmühlenweg 7 09599 Freiberg, GERMANY

By order

Dipl.-Ing. (FH) Henker

IBEXU Institut für Sicherheits-technik GmbH

(Notified Body number 0637)

Phone: +49 (0)3731 3805-0 Fax: +49 (0)3731 3805-10

Certificates without seal and signature are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall newail.

Freiberg, 27 March 2018

FB106100 | 1

Page 1/2 IBExU18ATEX1008 | 0

#### IBExU Institut für Sicherheitstechnik GmbH

An-Institut der TU Bergakademie Freiberg

[13] Schedule

[14] Certificate Number IBExU18ATEX1008 | Issue 0

#### [15] Description of product

The Electrical position indicator type 1205 is used to detect the "open" and "closed" positions of pneumatic actuators. It consists of an aluminium enclosure in type of protection increased safety with built-in flameproof limit switches.

#### Technical data:

Rated voltage: up to 400 V

- Rated operating voltage: 250 V AC 30 V AC 250 V DC 30 V DC - Rated operating current: 5/3 A 7/5 A 0.4/0.03 A 7/5 A

Ambient temperature range: -20 °C up to +60 °C

- Degree of protection acc. to EN 60529: IP65

#### [16] Test report

The test results are recorded in the confidential test report IB-17-3-0041 of 27 March 2018. The test documents are part of the test report and they are listed there.

#### Summary of the test results

The Electrical position indicator type 1205 fulfils the requirements of explosion protection for equipment of Group II, Category 2G, type of protection Increased safety "eb" in combination with Flameproof enclosure "db" and Category 2D, type of protection dust ignition protection by enclosure "tb".

#### [17] Special conditions for use

none

# [18] Essential health and safety requirements

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

- not applicable -

#### [19] Drawings and documents

The documents are listed in the test report.

By order

Freiberg, 27 March 2018

Dipl.-Ing. (FH) Henker

Page 2/2 IBExU18ATEX1008 | 0

FB106100 | 1





