

**EU-Konformitätserklärung Nr. E.010.064**  
**Declaration of Conformity No. E.010.064**

**Wir FlowVision GmbH**

*We (Name des Anbieters / supplier's name)*

**Im Erlet 6**  
**D-90518 Altdorf**  
**Germany**  
*(Anschrift / adress)*

**erklären in alleiniger Verantwortung, dass die Produkte**  
*declare under our sole responsibility that the products*

*Diese Konformitätserklärung entspricht der Europäischen Norm EN 45014 „Allgemeine Kriterien für Konformitätserklärungen von Anbietern“. Die Grundlage der Kriterien sind internationale Dokumente, insbesondere ISO/IEC-Leitfaden 22, 1982, „Information on manufacturer's declaration of conformity with standards or other technical specifications“.*

*This Declaration of Conformity is suitable to the European Standard EN 45014. „General criteria for supplier's declaration of conformity“. The basis for the criteria has been found in international documentation, particularly in: ISO/IEC Guide 22, 1982, „Information on manufacturer's declaration of conformity with standards or other technical specifications“.*

**Auswerteeinheit**

*Control unit*

**PERFLU 5-EX...**

**Sensoren**

*Sensors*

**PIC-EX..., SIC-EX..., VIC-EX...**

*(Bezeichnung, Typ oder Modell, Los-, Chargen- oder Serien-Nr. möglichst Herkunft und Stückzahl / name, type or model, batch or serial number, possibly sources and number of items)*

**auf die sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder normativen Dokument(en) übereinstimmt.**  
*to which this declaration relates is in conformity with the following standard(s) or other normative document(s).*

**EN IEC 60079-0:2018**  
**EN 60079-11:2012**  
**EN 60079-26:2015**

*(Titel und/oder Nr. sowie Ausgabedatum der Norm(en) oder der anderen normativen Dokumente / Title and /or number and date of issue of the standard(s) or other normative document(s))*

**Gemäß den Bestimmungen der Richtlinie(n)**

*Following the provisions of Directive(s) (falls zutreffend / if applicable)*

**2014/34/EU ATEX-Richtlinie**  
**2014/34/EU ATEX directive**

*EU Baumusterprüfbescheinigung Nummer*  
*EU-Type Examination Certificate Number*

*EPS 22 ATEX 1 008 X*                      *Revision 1*

*Benannte Stelle Qualitätssicherung Produktion / Kennnummer*  
*Notified body quality management production / Identification Number*

*TÜV Rheinland / 0035*

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*Altdorf, 25.04.2024*

  
.....  
**Norbert Gliedstein**  
**Geschäftsführer**  
*Managing Director*

  
.....  
**Oliver Amm**  
**Ex-Beauftragter**  
*Ex-Representative*

## EU - Type Examination Certificate

- (1)
- (2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**
- (3) EU - Type Examination Certificate Number

**EPS 22 ATEX 1 008 X**

**Revision 1**

- (4) Equipment: Calorimetric flow meter, consisting of:  
Control unit PERFLU 5-EX  
Sensors PIC-EX, SIC-EX, VIC-EX, PIC-EX-HT, SIC-EX-HT, VIC-EX-HT
- (5) Manufacturer: FlowVision GmbH
- (6) Address: Im Erlet 6  
90518 Altdorf  
Germany
- (7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.
- (8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 21TH0587.
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:

**EN IEC 60079-0:2018**

**EN 60079-11:2012**

**EN 60079-26:2015**

- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.
- (11) This EU - Type Examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.
- (12) The marking of the equipment shall include the following:

(Control unit PERFLU 5-EX)

(Sensors)



II (1)G [Ex ia Ga] IIC

II (1)D [Ex ia Da] IIIC



II 1/2G Ex ia IIC T4...T3 Ga/Gb

II 1/2D Ex ia IIIC T142 °C...T232 °C Da/Db



Certification department of explosion protection

Tuerkheim, 2022-07-26

Certificates without signature and seal are void. This certificate is allowed to be distributed only if not modified. Extracts or modifications must be authorized by Bureau Veritas Consumer Products Services Germany GmbH.

(13)

## Annex

(14) **EU - Type Examination Certificate EPS 22 ATEX 1 008 X**

**Revision 1**

(15) Description of equipment:

The control unit PERFLU 5-EX of the calorimetric flow meter is operated with one of the following sensors: PIC-EX, SIC-EX, VIC-EX, PIC-EX-HT, SIC-EX-HT or VIC-EX-HT. Each of the sensors is an intrinsically safe apparatus while the control unit PERFLU 5-EX is an associated apparatus that powers the sensors with an intrinsically safe electronic circuit which is separated via a safety barrier from the non-intrinsically safe circuits. The calorimetric flow meter is used for stationary measuring, control and indication of volume flow or mass flow.

Control unit and sensors are electrically connected by one 8-core cable. This cable may be replaced accordingly by an electrically equivalent cable, whereby the user documentation and in particular the regulations of EN 60079-14 must be observed.

The sensors completely comply with the requirements for EPL Ga and EPL Da, and are also designed to be gas-tight towards the process medium and meet the applicable requirements of EN 60079-26 regarding the separation of the areas EPL Ga/Gb and EPL Da/Db. During installation, special attention must be paid to the tightness of the corresponding process connection to prevent leakage of explosive gases.

Electrical data:

Electrical values of intrinsically safe outputs (channels)								
Channel	1	2	3	4	5	6	7	8
$U_o$	15.8 V	5.4 V	15.8 V	15.8 V	15.8 V	15.8 V	15.8 V	5.4 V
$I_o$	1 mA	273 mA	1 mA	19 mA	1 mA	1 mA	222 mA	27 mA
$P_o$	3 mW	368 mW	3 mW	76 mW	3 mW	3 mW	876 mW	37 mW

Maximum external inductances and capacitances to be connected to the control unit PERFLU 5-EX								
$L_o$ (mH)	0.5	0.2	0.1	0.05	0.02	0.01	0.005	0.002
$C_o$ (µF)	0.21	0.24	0.28	0.35	0.46	0.478	0.478	0.478

Sensors:  $C_i$  and  $L_i$  negligible

(16) Reference number: 21TH0587

(17) Special conditions for safe use:

The intrinsically safe circuit must be considered as not isolated from the metallic housing. Therefore, equipotential bonding must be ensured along the entire cable run.

Only such devices may be connected to the non-intrinsically safe interfaces of the control unit PERFLU 5-EX which are supplied by an appropriately limited voltage (SELV/PELV),  $U_m = 60$  V.

The sensors PIC-EX, SIC-EX, VIC-EX, PIC-EX-HT, SIC-EX-HT and VIC-EX-HT may only be operated in combination with the certified control unit PERFLU 5-EX.

If the housing is made of titanium grade 7 (3.7235), the possibility of occurrence of impact and friction sparks must be excluded by suitable mounting.

(continuation see next page)

(14) **EU - Type Examination Certificate EPS 22 ATEX 1 008 X**

**Revision 1**

(17) Special conditions for safe use (continuation):

Permissible ambient temperature range control unit PERFLU 5-EX (associated apparatus):

-25 °C ... + 55 °C

The permissible fluid and ambient temperature ranges for the sensors and cables differ. The installation must always take both limitations into account.

	<b>temperature class T4</b>	
	permissible fluid temperature	permissible ambient temperature
PIC-EX / SIC-EX / VIC-EX	-30 °C ... +60 °C	-30 °C ... +60 °C
PIC-EX-HT / SIC-EX-HT / VIC-EX-HT	-40 °C ... +60 °C	-40 °C ... +60 °C
Do+Ka type 41	-10 °C ... +60 °C	-10 °C ... +70 °C
Do+Ka type 42	-30 °C ... +60 °C	-30 °C ... +80 °C
Do+Ka type 51	-10 °C ... +60 °C	-10 °C ... +70 °C
Do+Ka type 52	-40 °C ... +60 °C	-40 °C ... +115 °C

	<b>temperature class T3</b>	
	permissible fluid temperature	permissible ambient temperature
PIC-EX / SIC-EX / VIC-EX	-30 °C ... +100 °C	-30 °C ... +80 °C
PIC-EX-HT / SIC-EX-HT / VIC-EX-HT	-40 °C ... +130 °C	-40 °C ... +115 °C
Do+Ka type 41	-10 °C ... +70 °C	-10 °C ... +70 °C
Do+Ka type 42	-30 °C ... +100 °C	-30 °C ... +80 °C
Do+Ka type 51	-10 °C ... +70 °C	-10 °C ... +70 °C
Do+Ka type 52	-40 °C ... +130 °C	-40 °C ... +115 °C

	<b>temperature ranges for dust</b> (maximum surface temperatures see separate table below)	
	permissible fluid temperature	permissible ambient temperature
PIC-EX / SIC-EX / VIC-EX	-30 °C ... +100 °C	-30 °C ... +80 °C
PIC-EX-HT / SIC-EX-HT / VIC-EX-HT	-40 °C ... +130 °C	-40 °C ... +115 °C
Do+Ka type 41	-10 °C ... +70 °C	-10 °C ... +70 °C
Do+Ka type 42	-30 °C ... +100 °C	-30 °C ... +80 °C
Do+Ka type 51	-10 °C ... +70 °C	-10 °C ... +70 °C
Do+Ka type 52	-40 °C ... +130 °C	-40 °C ... +115 °C

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(14) **EU - Type Examination Certificate EPS 22 ATEX 1 008 X**

**Revision 1**

(17) Special conditions for safe use (continuation):

For dust, the following must be taken into account in addition to the table above: The maximum fluid temperature depends on the maximum permissible surface temperature, which is determined by the dust used.

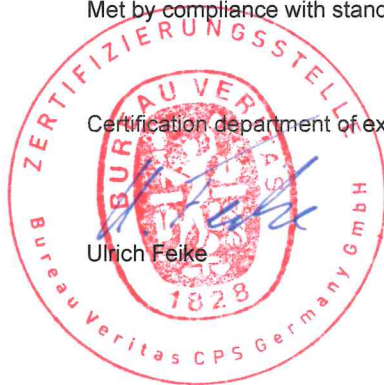
surface temperatures of the sensors for dust (with dust layer according to Da)	
max. fluid temperature	max. surface temperature
40 °C	142 °C
50 °C	152 °C
60 °C	162 °C
70 °C	172 °C
80 °C	182 °C
90 °C	192 °C
100 °C	202 °C
110 °C	212 °C
120 °C	222 °C
130 °C	232 °C

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Tuerkheim, 2022-07-26



# Certificate

Quality Assurance Notification



**Directive 2014/34/EU**

Registration No.: **01 220 186517**

The Certification Body for Explosion Protection  
of TÜV Rheinland Industrie Service GmbH  
Reported under no. 0035  
certifies:

Certificate Holder:



**FlowVision GmbH**  
Im Erlet 6  
90518 Altdorf  
Germany

Scope:

Production, final equipment inspection and testing of  
sensors and devices for signal processing

Types of protection: d, ia, t

An audit was performed, Report No. 186517. Proof has  
been furnished that the requirements according to  
Directive 2014/34/EU Annex IV are fulfilled.

The due date for all future audits is 10<sup>th</sup> of February

Validity:

The certificate is valid from 2024-02-16 until 2027-02-15  
First certification 2009



Köln, 2024-02-08

TÜV Rheinland Industrie Service GmbH  
Am Grauen Stein, D-51105 Köln  
Dipl.-Ing. (FH) Ralf Biegalla

File: Dokument1