



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 13.0105X** Page 1 of 6 Certificate history:
Status: **Current** Issue No: 1 Issue 0 (2013-10-08)
Date of Issue: 2022-01-21
Applicant: **Bürkert Werke GmbH & Co. KG**
Christian Bürkert Str. 13 - 17
74653 Ingelfingen
Germany
Equipment: **Pneumatic control units type 8697 PE51, type 8697 PE99**
Optional accessory:
Type of Protection: **Intrinsic Safety "i"**
Marking: For type 8697 PE 51 Ex ia IIC T4 Gb
For type 8697 PE 99 Ex ia IIC T4 Gb
Ex ia III C T135°C Db IP64

Approved for issue on behalf of the IECEx
Certification Body:

Dr Franz Eickhoff

Position:

Lead Auditor and officially recognised expert

Signature:
(for printed version)

Date:

2022-01-21

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 www.iecex.com or use of this QR Code.



Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

 **DEKRA**
On the safe side.



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Manufacturer: **Bürkert Werke GmbH & Co. KG**
Christian Bürkert Str. 13 - 17
74653 Ingelfingen
Germany

Additional manufacturing locations:

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with 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/ExTR13.0113/01](#)

Quality Assessment Report:

[DE/PTB/QAR07.0002/10](#)

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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Subject and Type

Pneumatic control units type 8697 PE51 and type 8697 PE99

The pneumatic control units are available as feedback devices or with included valve system (included pilot valve). The variations with pilot valve are designated by the suffix

"single act Pilot 0.6"

on the type label.

Description

The pneumatic control units type 8697 PE51 and type 8697 PE99 are used for position indication and control of pneumatic actuated process valves.

They are mounted to a process valve via special assembly kits; the air outputs are connected to the pneumatic actuator chambers. The position of the actuator is detected by 2 inductive proximity switches which indicate the upper and lower end position.

In the variation "single act Pilot 0.6", the pneumatic control units type 8697 PE51 and type 8697 PE99 contain a pilot valve type 6144 (IECEX PTB 07.0063); the other variation without this suffix is used as pure feedback.

The pneumatic control units type 8697 PE51 and type 8697 PE99 are intended for use in gas-explosive areas Zone 1, type 8697 PE99 can additionally be used in dust-explosive areas Zone 21.

The pneumatic control units consist of a plastic enclosure with transparent cap. The units are supplied via a cable gland and terminals. The enclosures of the pneumatic control units are open at the bottom. Only by mounting the devices to the assembly kits FA03 or FA05, the degree of protection IP64 (for type 8697 PE99) resp. IP20 (for type 8697 PE51) is ensured.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1 The pneumatic control units have to be installed in such a way that electrostatic charges/discharges are avoided.
- 2 The pneumatic control units shall be installed in combination with the assembly kits FA03 resp. FA05 only. The combination of control units and assembly kits has to ensure a minimum degree of protection IP64 according to IEC 60529 for type 8697 PE99. For type 8697 PE51, the combination has to ensure a minimum degree of protection IP20 according to IEC 60529.
- 3 The pneumatic connections have to be fitted with suitable connection elements.
- 4 For type 8697 PE99 only suitable and separately certified cable glands or blanking elements shall be used.



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Equipment (continued):

Parameters

1 Electrical parameters

1.1 Intrinsically safe circuits TOP and BTM

Terminals + (TOP), - (INI) resp. + (BTM), - (INI)

For each circuit:

Max. input voltage	U_i	DC	20	V
Max. input current	I_i		60	mA
Max. input power	P_i		200	mW
Internal capacitance	C_i		178	nF
Internal inductance	L_i		66	μ H

1.2 **Only for variant "single act Pilot 0.6"**

Intrinsically safe power supply circuit for pilot valve

Max. input voltage and max. input current in accordance with the following table:

U_i [V]	15	18	20	22	25	28	30	35
I_i [mA]	900	440	309	224	158	120	101	73

Internal capacitance C_i negligible

Internal inductance L_i negligible

Max. input power depending on the ambient temperature:

For ambient temperatures up to 55 °C, the valve can be supplied with maximum input power $P_i = 0.7$ W.

For ambient temperatures up to 50 °C, the valve can be supplied with an increased input power $P_i = 1.1$ W.

Ambient temperature range

T_a

Type 8697 PE99

->Variant without valve

0 °C ... 55 °C

->Variant with valve: "single act Pilot 0.6"

$P_i = 0.7$ W

0 °C ... 55 °C

$P_i = 1.1$ W

0 °C ... 50 °C

Type 8697 PE51

->Variant without valve

-20 °C ... 60 °C

-> Variant with valve: "single act Pilot 0.6"

$P_i = 0.7$ W

-10 °C ... 55 °C

$P_i = 1.1$ W

-10 °C ... 50 °C



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Updating to the current version of IEC 60079-0:2017, Ed.7.0