



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: issue No.:

Status:

Date of Issue: **2013-05-23** Page 1 of 4

Applicant: **Bürkert Werke GmbH**
Christian-Bürkert-Straße 13-17
74653 Ingelfingen
Germany

Electrical Apparatus: **Feed back head resp. Control head type 8685-...-PX06 resp. 8686-...-PX06**
Optional accessory:

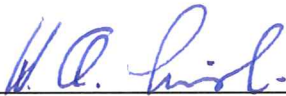
Type of Protection: **Equipment protection by intrinsic safety "i"**

Marking: **Ex ia IIC T4 Gb**

Approved for issue on behalf of the IECEx Certification Body: **H.-CH. Simanski**

Position: **Head of Certification Body**

Signature:
(for printed version)



Date:

23/5/2013

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](http://www.iecex.com).

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany





IECEX Certificate of Conformity

Certificate No.: IECEx BVS 13.0047X

Date of Issue: 2013-05-23

Issue No.: 0

Page 2 of 4

Manufacturer: **Bürkert Werke GmbH**
Christian-Bürkert-Straße 13-17
74653 Ingelfingen
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/ExTR13.0056/00](#)

Quality Assessment Report:

[DE/PTB/QAR07.0002/03](#)



IECEX Certificate of Conformity

Certificate No.: IECEx BVS 13.0047X

Date of Issue: 2013-05-23

Issue No.: 0

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Subject and type

The feed back head is implemented in the variants 8685-...-PX06, the control head in the variants 8686-...-PX06.

In the complete denomination, the dots are replaced by a sequence of numerals and letters which characterizes different, non ex-relevant details of the design.

For simplification, the regarded types will be referred to as feed back head type 8685 and control head type 8686 in the following.

Description

The feed back head type 8685 and the control head type 8686 are intended for mounting on pneumatic actuators with two independent pistons.

The feed back head type 8685 is used for the detection of the piston positions, which are transferred into the feed back head by spindles. On each spindle, a permanent magnet is mounted which activates a reed-sensor in the feed back head when the piston reaches its upper or lower end position. Since different sizes of the actuator may have different strokes, the feed back head includes three reed-sensors to detect the different upper end positions. Via a DIP-switch, the matching reed-sensor for the respective actuator size is selected.

The control head type 8686 additionally contains two magnetic valves type 6144 (individually certified under IECEx PTB 07.0063) to control the pistons.

CONDITIONS OF CERTIFICATION: YES as shown below:

The equipment has to be installed in such a way that electrostatic charging/discharging hazards can be excluded.



IECEx Certificate of Conformity

Certificate No.: IECEx BVS 13.0047X

Date of Issue: 2013-05-23

Issue No.: 0

Page 4 of 4

EQUIPMENT(continued):

Parameters

1. Supply by intrinsically safe circuits; level of protection Ex ia IIC

1.1 Feed back head type 8685

Actuator 1: End positions below and above: Terminals BTM1-/BTM1+, TOP1-/TOP1+,

Actuator 2: End positions below and above: Terminals BTM2-/BTM2+, TOP2-/TOP2+

For each circuit:

Max. input voltage	Ui	DC	12	V
Max. input current	li		20	mA
Max. input power	Pi		60	mW
Internal capacitance	Ci		negligible	
Internal inductance	Li		negligible	

1.2 Control head type 8686

Actuator 1: End positions below and above: Terminals BTM1-/BTM1+, TOP1-/TOP1+,

Actuator 2: End positions below and above: Terminals BTM2-/BTM2+, TOP2-/TOP2+

For each circuit:

Max. input voltage	Ui	DC	12	V
Max. input current	li		20	mA
Max. input power	Pi		60	mW
Internal capacitance	Ci		negligible	
Internal inductance	Li		negligible	

Power supply for valve 1: Terminals Y1+/Y1-,

Power supply for valve 2: Terminals Y2+/Y2-

For each circuit:

Max. input power	Pi		1.1	W
------------------	----	--	-----	---

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

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

Internal capacitance Ci negligible

Internal inductance Li negligible

2. Medium temperature process valve 0 °C up to 130 °C

Ambient temperature Ta 0 °C up to 55 °C