



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 PTB 16.0014X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 1 [Issue 0 \(2016-07-07\)](#)
Date of Issue: 2022-12-23
Applicant: **Bürkert Werke GmbH**
Christian-Bürkert-Str. 13-17
74653 Ingelfingen
Germany
Germany
Equipment: **Valve terminal Type 8644**
Optional accessory:
Type of Protection: **type "ec"**
Marking: Ex ec IIC T4 Gc

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Martin Thedens

Position:

**Head of Department "Explosion Protection in Sensor Technology
and Instrumentation"**

Signature:
(for printed version)

Date:
(for printed version)

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.
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Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





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Date of issue: 2022-12-23

Issue No: 1

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

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 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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/PTB/ExTR16.0024/01](#)

Quality Assessment Report:

[DE/PTB/QAR07.0002/11](#)



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Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The valve island type 8644 is an electrical and pneumatic automation system which was optimized for use in a control cabinet or switch box. It is used to control pneumatic systems with the specified fieldbus system. It consists of electrical and pneumatic components and can be set up in various modular configurations as required.

The control of the pneumatic system via a field bus system as well as implementation of the interface to the control unit (e.g. PLC) is realized by a so-called system integration. The following system integrations are provided for use in combination with the valve island type 8644:

- "I/O System 750" supplied by Wago
- "ET200S" supplied by Siemens
- "Inline System" supplied by Phoenix Contact
- "Point I/O" supplied by Rockwell / Allen Bradley

The system integration modules are not part of the scope of certification. For safe operation with the valve island, all components shall have a certificate of conformity as II 3 G Ex ec IIC T4 Gc device in the respective permissible ambient temperature range.

Optionally, a control cabinet base adapter can be used to operate the valve island.

The permitted ambient temperature range for the valve island type 8644 is 0°C up to 55°C.

For the valve island type 8644 in the version with system integration "ET200S" from Siemens with the valve type 6524 and the pilot valve 144 (2 x 0.8 W) and a max. number of valves / number of functions of 24 / 48 at 100% duty cycle, the permissible ambient temperature range is reduced to 0°C up to 50°C.

For more information refer to attachment below.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The valve terminal type 8644 shall be used in an area with a pollution degree not greater than 2 in accordance with IEC 60664-1.

The device shall only be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with IEC 60079-0.

Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Added option control cabinet base adapter
- Application of the type of protection increased safety with protection level 'ec'.
- Type of protection non-sparking equipment 'nA' omitted
- state of standards applied
- Adaption of the Special Conditions
- Marking changed
- Documentation revised
- Operating instructions revised

Annex:

[COCA160014-01_1.pdf](#)



Applicant: Bürkert Werke GmbH & Co. KG
Electrical Apparatus: Valve Island
type 8644

Description of equipment

The valve island type 8644 is an electrical and pneumatic automation system which was optimized for use in a control cabinet or switch box. It is used to control pneumatic systems with the specified fieldbus system. It consists of electrical and pneumatic components and can be set up in various modular configurations as required.

The control of the pneumatic system via a field bus system as well as implementation of the interface to the control unit (e.g. PLC) is realized by a so-called system integration. The following system integrations are provided for use in combination with the valve island type 8644:

- "I/O System 750" supplied by Wago
- "ET200S" supplied by Siemens
- "Inline System" supplied by Phoenix Contact
- "Point I/O" supplied by Rockwell / Allen Bradley

The system integration modules are not part of the scope of certification. For safe operation with the valve island, all components shall have a certificate of conformity as II 3 G Ex ec IIC T4 Gc device in the respective permissible ambient temperature range.

Optionally, a control cabinet base adapter can be used to operate the valve island.

The permitted ambient temperature range for the valve island type 8644 is 0°C up to 55°C.

For the valve island type 8644 in the version with system integration "ET200S" from Siemens with the valve type 6524 and the pilot valve 6144 (2 x 0.8 W) and a max. number of valves / number of functions of 24 / 48 at 100% duty cycle, the permissible ambient temperature range is reduced to 0°C up to 50°C.

Manufacturer of the control unit		ambient temperature (for assembly with max. 48 valves)
WAGO Kontakttechnik		Max. 55°C
PHOENIX CONTACT		
Rockwell Automation, Allen-Bradley		
Siemens	Doppelventile	Max. 50°C
	Einfachventile	Max. 55°C



Technical data

The rated voltage of the valve island is $U_B = 24 \text{ V DC}$.

64-fold valve island:

Solenoid valve type	6525
Max. number of solenoid valves	64
Number of solenoid valves without restrictions	48
Pilot control for stated valve type	6144
Rated voltage	24 V DC
Nominal power per solenoid valve	0.8 W

32-fold valve island:

Solenoid valve type	6524 (double valve includes 2 pilot controls)
Max. number of solenoid valves	32
Number of solenoid valves without restrictions	32 (64 valve functions)
Pilot control for stated valve type	6144
Rated voltage	24 V DC
Nominal power per solenoid valve	0.8 W

32-fold valve island:

Solenoid valve type	6526
Max. number of solenoid valves	32
Number of solenoid valves without restrictions	8 or 16 with intermediate feed to 8 solenoid valves
Pilot control for stated valve type	6106
Rated voltage	24 V DC
Nominal power per solenoid valve	2 W

64-fold valve island:

Solenoid valve type	6526
Max. number of solenoid valves	32
Number of solenoid valves without restrictions	32
Pilot control for stated valve type	6106
Rated voltage	24 V DC
Nominal power per solenoid valve	1 W



Special conditions for safe use

The valve terminal type 8644 shall be used in an area with a pollution degree not greater than 2 in accordance with IEC 60664-1.

The device shall only be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with IEC 60079-0.

Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.