

Translation

# EU-Type Examination Certificate

Equipment intended for use in potentially explosive atmospheres  
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 21 ATEX E 013 X**

Product: **Modular electro-pneumatic System type 8650 REV.2**  
**Consisting of the components listed below**

Manufacturer: **Bürkert Werke GmbH & Co. KG**

Address: **Christian-Bürkert-Str.13-17, 74653 Ingelfingen, Germany**

This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.

DEKRA Testing and Certification GmbH, Notified Body number 0158, 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 Report No. BVS PP 22.2027 EU.

The Essential Health and Safety Requirements are assured in consideration of:

**EN IEC 60079-0:2018**                      **General requirements**  
**EN IEC 60079-7:2015 + A1:2018**   **Increased Safety "e"**  
**EN 60079-11:2012**                      **Intrinsic Safety "i"**

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

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.

The marking of the product shall include the following:

 **II 2G Ex eb ib IIC T4 Gb**

DEKRA Testing and Certification GmbH  
Bochum, 2022-02-18

Signed: Jörg-Timm Kilisch

Managing Director



13 **Appendix**  
14 **EU-Type Examination Certificate**  
**BVS 21 ATEX E 013 X**

15 **Product description**

15.1 **Subject and type**

Modular electro-pneumatic System type 8650 REV.2  
Consisting of the components listed below.

15.2 **Description**

The modular electro-pneumatic system type 8650 REV.2 is an electrical and pneumatic automation system for industrial applications. It is optimized for use in the control cabinet or control box. The product is used to control pneumatic components and systems via a fieldbus system. It consists of electrical and pneumatic components and, thanks to its modular design, can be set up in various configurations as required.

The type 8650 REV.2 is intended for operation in combination with a modular electrical I/O system. For the type 8650 REV.2 this provides electrical connections for communication ("back-plane bus") and for feeding in the load voltage. The modular I/O system is the type SIMATIC ET 200iSP from Siemens.

The terminal modules and electronic modules of system type 8650 REV.2 are permitted to be used as a replacement for the terminal modules (KEMA 06ATEX0092) and electronic modules (KEMA 06ATEX0093) system type 8650.

**Components of the system (different combinations possible):**

1. ET 200iSP Power Supply (Module Power Supply type 6ES7 138-7EA01-0AA0)  
KEMA 04ATEX2263 (IECEX KEM 05.0004)
2. ET 200iSP Power Supply (Module Power Supply type 6ES7 138-7EC00-0AA0)  
KEMA 04ATEX0156 (IECEX KEM 09.0070)
3. Terminal modules (Distributed I/O System type ET 200iSP, Base-System formed by TM-PS-., TM-././... and AM)  
KEMA 04ATEX2242 (IECEX KEM 05.0003)
4. Terminal modules for System type 8650  
KEMA 06ATEX0092 (IECEX KEM 07.0033)
5. Interface Module type ET 200iSP (Module IM152, type 6ES7 152-1AA0.-0AB0)  
KEMA 04ATEX1243 (IECEX KEM 05.0005)
6. Electronic modules for System Type 8650  
KEMA 06ATEX0093 (IECEX KEM 07.0032)
7. Solenoid valve type 6106 (Consisting of magnet coil and mechanical body)  
PTB 01ATEX2175 (IECEX PTB 06.0102)
8. Solenoid valve type 6144 (Consisting of magnet coil and mechanical body)  
PTB 07ATEX2048 X (IECEX PTB 07.0063X)
9. Electronic modules of system type 8650 REV.2
10. Terminal modules of system type 8650 REV.2



**15.3 Electrical Parameters**

**15.3.1 Power Supply type 6ES7 138-7EA00-0AA0**  
(From certificate IECEx KEM 05.0004 (KEMA 04ATEX2263))

Maximum input voltage	U <sub>m</sub>	DC/AC	250	V
Nominal voltage range	U	DC	19.2...30	V
Nominal current	I		5	A
Nominal power	P		78.6	W

**15.3.2 Power Supply type 6ES7 138-7EC00-0AA0**  
(From certificate IECEx KEM 09.0007 (KEMA 04ATEX0156))

Maximum input voltage	U <sub>m</sub>	DC/AC	264	V
Nominal voltage range	U	DC	85...264	V
Nominal current	I		1.04	A
Nominal input power	P		82.2	W

**15.3.3 Interface Module type ET 200iSP (Module IM152, type 6ES7 152-1AA0.-0AB0)**  
(From certificate IECEx KEM 05.0005 (KEMA 04ATEX1243))

Power Bus circuit (connected through TM-IM):  
 In type of protection Intrinsic Safety Ex ib IIC, only for connection to the Power Bus circuit of the Distributed I/O System.  
 From the safety point of view the module draws a current of 330 mA.  
 IM Supply circuit (connected through TM-IM): in type of protection Intrinsic Safety Ex ib IIC, only for connection to the IM Supply circuit of the Distributed I/O System.

Data circuit (connected through TM-IM): in type of protection intrinsic safety Ex ib IIC, only for connection to the Data circuit of the Distributed I/O System.

Input-/Output circuit (connector X1 or X2 on TM-IM): in type of protection intrinsic safety Ex ib IIC, with the following maximum values: U<sub>o</sub> = 3.9 V; I<sub>o</sub> = 136 mA; P<sub>o</sub> = 132 mW.

For the cable connected to the Input-/Output circuit, the values L/R = 30 µH/Ohm and C = 500 nF/km shall not be exceeded.

The effective internal capacitance C<sub>i</sub> and inductance L<sub>i</sub> of the certified intrinsically safe equipment additionally connected to this circuit shall be negligibly small. And only for connection to a certified intrinsically safe circuit (for instance a fieldbus system such as RS485-IS), with the following maximum values: U<sub>i</sub> = 4.2 V; C<sub>i</sub> = 0 nF; L<sub>i</sub> = 0 µH.

I<sub>i</sub> and P<sub>i</sub> are not relevant. The Power Bus-, the IM Supply- and the Data circuit are infallibly galvanically isolated from the input/output circuit, when the module is installed in the Distributed I/O System.

**15.4 Thermal Parameter**

Maximum ambient temperature range:  
 Horizontal mounting position      0 °C ≤ T<sub>amb</sub> ≤ 60 °C  
 All other mounting positions      0 °C ≤ T<sub>amb</sub> ≤ 50 °C

**16 Report Number**

BVS PP 22.2027 EU, as of 2022-02-18



17 **Special Conditions for Use**

The equipment shall be operated inside of an enclosure that meets the requirements for IP54 or higher according to IEC 60079-7.

18 **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

19 **Drawings and Documents**

Drawings and documents are listed in the confidential report.

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We confirm the correctness of the translation from the German original.  
In the case of arbitration, only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH  
Bochum, 2022-02-18  
BVS-Scho/Mu A20190440



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Managing Director

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