

1 **UNITED KINGDOM CONFORMITY ASSESSMENT**

UK TYPE EXAMINATION CERTIFICATE

2 **Product or Protective System Intended for use in Potentially Explosive Atmospheres**
SI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Type Examination Certificate No.: **EMA22UKEX0029X**

4 Product: **I/P Signal Converter type TEIP11 and TEIP11-PS**

5 Manufacturer: **ABB AG**

6 Address: **Schillerstraße 72, 32425 Minden, Germany**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Element Materials Technology, Approved Body number 0891, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, SI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential report **BVS PP 02.2067 EU**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018 EN 60079-1:2014

Except in respect of those requirements listed at section 18 of the schedule.

10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

 **II 2G Ex db IIC T4/T5/T6 Gb Ta = -40 °C to 85/70/55 °C see section 15**

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.

S.P. Winsor

S P Winsor, Certification Manager

Issue date: 2022-09-05

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13 SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

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15 Description of Product

The I/P signal converter serves for the transformation of an injected DC current into a proportional pressure. As pressure media neither flammable gases nor Oxygen or Oxygen enriched gas mixtures are used. Type TEIP11-PS has a booster stage and type TEIP-11 has no booster stage.

Optionally, a control unit is installed which complies with the type of protection Intrinsic Safety (II 2G Ex ia IIC T6/T4 Gb, TÜV 99 ATEX 1487 X).

15.1 Parameters

15.1.1 Electrical data (Operation as a non-intrinsically safe control unit inside the type of protection Ex d)

Nominal current ≤ 50 mA

Input resistance = 260Ω at $20 \text{ }^\circ\text{C}$ ($68 \text{ }^\circ\text{F}$), $T_k + 0.4 \text{ } \%/K$

15.1.2 Electrical data (Operation as an intrinsically safe control unit inside the type of protection Ex d as per valid certificate TÜV 99 ATEX 1487 X)

Signal circuit

(terminal +,-) only for connection to a certified intrinsically safe circuit.

15.2.1 Pneumatic data

TEIP11 ≤ 10 bar

Supply (compressed air) ≤ 1 bar

Output signal

TEIP11-PS ≤ 2.5 bar

Supply (compressed air) ≤ 2 bar

Output signal

15.3.1 Thermal data (Operation with a non-intrinsically safe control unit inside the type of protection Ex d)

Temperature class	Input Current	Ambient temperature
T6	50 mA	-40 °C to +55 °C
T5	50 mA	-40 °C to +70 °C
T4	50 mA	-40 °C to +85 °C

15.3.2 Thermal data (Operation as an intrinsically safe control unit inside the type of protection Ex d As per TÜV 99 ATEX 1487 X).

Temperature class	Input Current	Ambient temperature
T6	50 mA	-55 °C to +60 °C
T6	60 mA	-55 °C to +55 °C
T5	60 mA	-55 °C to +70 °C
T4	60 mA	-55 °C to +85 °C

16 Test report No. (associated with this certificate issue): BVS PP 02.2067 EU

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17 Specific Conditions of Use

1. The I/P signal converter must not be installed in areas where processes with high electrostatic charges occur.
2. Variants with intrinsically safe control unit shall not be used intrinsically safe once they have been used in type of protection flameproof enclosure from a non-intrinsically safe supply. The Ex marking of the unit must be updated accordingly.
3. The I/P signal converter for Ex d is designed for use at an ambient temperature range of -40 °C up to 85 °C at maximum.
4. The I/P signal converter when used at an ambient temperature above 60 °C or below -20 °C, cable glands and cables approved for service temperature corresponding to the maximum ambient temperature increased by 10 K or corresponding to the minimum ambient temperature shall be used.



Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.

18 Essential Health and Safety Requirements (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant test reports.

The test reports were considered to satisfy the requirements of Schedule 1 with the exception of Essential Health and Safety Requirements 5 and 6, which were separately satisfied by the content of the label drawings and the instructions.

19 Drawings and Documents

The list of controlled technical documentation is given in Appendix A to this schedule.

20 Routine Tests

1. The routine test as specified in 16.1.2 of EN 6007-1:2014 may be omitted as the overpressure test according to 15.2.3.2 of said standard was carried out successfully with a pressure four times the reference pressure.

21 Specific Conditions for Manufacture

1. The manufacturer performs a separate routine test for each enclosure because the wall thickness for a threaded hole is less than 3 mm according to EN 60079-1:2014 clause 11.6. This routine test ensures that the wall thickness does not fall below a minimum of 2.4 mm. Under these conditions, the overpressure test with four times the reference pressure was paused.

22 Photographs



Fig. 1: TEIPL1 (without booster stage)



Fig. 2: TEIPL-PS (with booster stage)

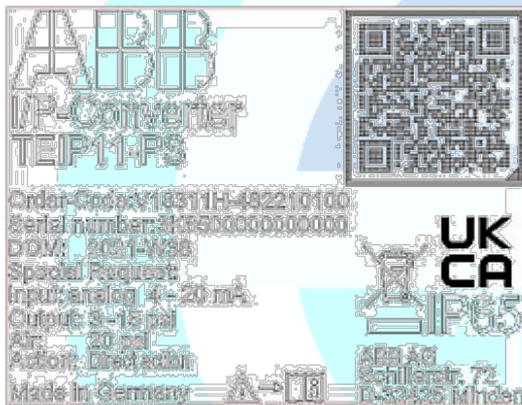


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23 Details of Markings



Field mounting housing



Rail mount housing



24 Certificate History

Original certificate	2022-09-05	First issue based upon ATEX certificate DMT 02 ATEX E121 X
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This certificate is a consolidated certificate and reflects the latest status of the certification, including all variations and amendments.

25 Notes to UKCA marking

In respect of UKCA Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Regulations in all applications.

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26 Notes to this certificate

Element Materials Technology certification reference: TRA-057418-00 i1 (GU-ABBQ-0001)

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Approved Body 0891 is the designation for Element Materials Technology Warwick Ltd.

27 Conditions for the validity of this certificate

This certificate remains valid for so long as:

- (i) The equipment listed in section 4 is manufactured in accordance with the documents listed in Appendix A of this certificate.
- (ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Schedule 1 of the Regulations SI 2016:1107 (as amended by SI 2019:696) and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).

APPENDIX A - TECHNICAL DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
Element list of scheduled drawings for this certificate.	Scheduled drawings list for EMA22UKEX0029X	1	2022-08-31