



Translation

(1) **EC-Type Examination Certificate**

- (2) **- Directive 94/9/EC -**
Equipment and protective systems intended for use
in potentially explosive atmospheres

(3) **DMT 02 ATEX E 121 X**

(4) **Equipment: I/P-converter type Doc. 900771**

(5) **Manufacturer: ABB Automation Products GmbH**

(6) **Address: D 32425 Minden**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of Deutsche Montan Technologie GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in the test and assessment report BVS PP 02.2067 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 50014: 1997+A1-A2 General requirements
EN 50018: 2000 Flameproof enclosure

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate

(12) The marking of the equipment shall include the following:

II 2G EEx d IIC T4/T5/T6

Deutsche Montan Technologie GmbH

Essen, dated 28. June 2002

Signed: Jockers

Signed: Eickhoff

DMT-Certification body

Head of special services unit



(13)

Appendix to

(14)

EC-Type Examination Certificate

DMT 02 ATEX E 121 X

(15) 15.1 Subject and type

I/P-converter type Doc. 900771

15.2 Description

The 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.

Optionally, a control unit, type of protection Intrinsic Safety (Ex ia IIC T6/T5/T4; TÜV 99 ATEX 1487 X), may be used.

15.3 Parameters

15.3.1 Electrical data (non intrinsically safe supply)

Nominal current ≤ 50 mA

15.3.2 Electrical data (intrinsically safe supply)

As per TÜV 99 ATEX 1487 X

15.3.3 Pneumatic data

Supply (compressed air) ≤ 10 barOutput signal ≤ 1 bar

15.3.4 Thermal data (non intrinsically safe supply)

Maximum input current 50 50 50 mAAmbient temperature range - 40 °C up to 55 70 85 °CTemperature class T6 T5 T4

15.3.5 Thermal data (intrinsically safe)

Maximum input current 50 60 60 60 100 100 120 120 150 mAAmbient temperature range - 40 °C up to 60 55 70 85 55 85 45 80 70 °CTemperature class T6 T6 T5 T4 T5 T4 T5 T4 T4(16) Test and assessment report

BVS PP 02.2067 EG as of 28.06.02

(17) Special conditions for safe use

17.1 The I/P Converter is designed for use at an ambient temperature range of -40 °C up to 85 °C at maximum.

17.2 If the I/P Converter is used at an ambient temperature above 60 °C or below -20 °C, cable entries and cable approved for a service temperature corresponding to the maximum ambient temperature increased by 10 K respectively corresponding to the minimum ambient temperature shall be used.



17.3.1 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.

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.

45307 Essen, 28. June 2002
BVS-We/Ar A 20010773

Deutsche Montan Technologie GmbH


DMT-Certification body


Head of special services unit



Translation

EC-Type Examination Certificate

- Directive 94/9/EC -

Equipment and protective systems intended for use
in potentially explosive atmospheres

- 3) **BVS 03 ATEX E 157 X**
- (4) **Equipment:** I/P-CONVERTER Type Doc. 900771
- 5) **Manufacturer:** PMV Palmstiernas Instrument AB
- (6) **Address:** SE 7154 Solna / Schweden
- 7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

The certification body of Deutsche Montan Technologie GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the test and assessment report BVS PP 03.2102 EG.

- (9) The Essential Health and Safety Requirements are assured by compliance with:
- EN 50014: 1997+A1-A2 General requirements
EN 50018: 2000 Flameproof enclosure
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- 1) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate
- 12) The marking of the equipment shall include the following:

II 2G EEx d IIC T4/T5/T6

Deutsche Montan Technologie GmbH

Essen, dated 19. Mai 2003

Signed: Dr. Eickhoff

DMT-Certification body

Signed: Schumann

Head of special services unit



(13) Appendix to

(14) **EC-Type Examination Certificate**

BVS 03 ATEX E 157 X

(15) 15.1 Subject and type

I/P-CONVERTER type Doc. 900771

15.2 Description

The 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.

Optionally, a control unit, type of protection Intrinsic Safety (EEx ia IIC T6/T5/T4; TÜV 99 ATEX 1487 X), may be used.

15.3 Parameters

Electrical data (non intrinsically safe supply)

Nominal current ≤ 50 mA

15.3.2 Electrical data (intrinsically safe supply)

As per TÜV 99 ATEX 1487 X

15.3.3 Pneumatic data

Supply (compressed air) ≤ 10 bar

Output signal ≤ 1 bar

15.3.4 Thermal data (non intrinsically safe supply)

Maximum input current 50 50 50 mA

Ambient temperature range - 40 °C up to 55 70 85 °C

Temperature class T6 T5 T4

15.3.5 Thermal data (intrinsically safe)

Maximum input current 50 60 60 60 100 100 120 120 150 mA

Ambient temperature range - 40 °C up to 60 55 70 85 55 85 45 80 70 °C

Temperature class T6 T6 T5 T4 T5 T4 T5 T4 T4

(16) Test and assessment report

BVS PP 03.2102 EG as of 19. Mai 2003

(17) Special conditions for safe use

The I/P CONVERTER is designed for use at an ambient temperature range of -40 °C up to 85 °C at maximum.

If the I/P CONVERTER is used at an ambient temperature above 60 °C or below -20 °C, cable entries and cable approved for a service temperature corresponding to the maximum ambient temperature increased by 10 K respectively corresponding to the minimum ambient temperature shall be used.

17.3.1 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.

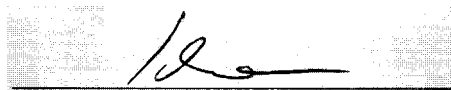
We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

45307 Essen, 19. Mai 2003
BVS-Kem/Kw A 20030216

Deutsche Montan Technologie GmbH



DMT-Certification body



Head of special services unit