



Translation

EC-TYPE EXAMINATION CERTIFICATE

(1)

(2) Equipment or Protective System intended for use in potentially explosive atmospheres - **Directive 94/9/EC**

(3) EC-Type Examination Certificate Number



TÜV 99 ATEX 1487 X

(4) Equipment or Protective System: I/P transformer type Doc 901068 and 901069

(5) Manufacturer: Hartmann & Braun GmbH & Co. KG
Geschäftsbereich Gerätetechnik

(6) Address: D-30179 Hannover, Hackethalstr. 7

(7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The TÜV Hannover/Sachsen-Anhalt e.V., TÜV Certification Body N° 0032 in accordance with Article 9 of the Council Directive 94/9/EC of March 23, 1994, certifies that this equipment or protective system 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 confidential report N° 99/PX23890.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50 014:1997

EN 50 020:1994

(10) If the sign "X" is placed after the certification number, it indicates that the equipment or protective system 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 and construction of the specified equipment or protective system. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment or protective system.

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

 II 2 G EEx ia IIC T6

TÜV Hannover/Sachsen-Anhalt e.V.
TÜV CERT-Zertifizierungsstelle
Am TÜV 1
D-30519 Hannover

Hannover, 1999-10-29

Head of the
Certification Body



TÜV NORD CERT

(13)

SCHEDULE

(14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 99 ATEX 1487 X**

(15) Description of equipment or protective system

The I/P transformer type Doc 901068 and 901069 is used for the transformation of an impressed direct current of the range of 0 ... 20 mA into a proportional pressure. The proportional pressure can be used for the control of pneumatically adjustable devices resp. mechanisms of every manner.

Electrical data

Supply circuit
(terminal +,-)

in type of protection "Intrinsic Safety" EEx ia IIC
only for the connection to certified intrinsically safe
circuits

The permissible ambient temperature range in dependence of the temperature class and of the input current has to be taken from the following table:

temperature class	input current	ambient temperature range
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
T5	100 mA	-55°C to +55°C
T4	100 mA	-55°C to +85°C
T5	120 mA	-55°C to +45°C
T4	120 mA	-55°C to +80°C
T4	150 mA	-55°C to +70°C

The effective internal inductance and capacitance is negligibly small.

(16) Test documents are listed in the test report N° 99/PX23890.

(17) Special condition for safe use

1. When using combustible gas as auxiliary energy the I/P transformer type Doc 901069 has to erected outdoors.
2. The feeded gas has to be kept free of air or oxygen in such a way that it is ensured that no potentially explosive atmosphere can occur.
3. The gas must always be purged outwards.

(18) Essential Health and Safety Requirements

no additional ones



Translation

2. SUPPLEMENT to

EC-TYPE EXAMINATION CERTIFICATE No. TÜV 99 ATEX 1487 X

of the company: ABB Automation Products GmbH
Schillerstraße 72
D-32425 Minden

When operated with combustible gases the I/P transformer type DOC 901069 as pneumatic auxiliary power may be installed outdoors resp. indoors when sufficient ventilation is given (see 17 „Special conditions for safe use“).

All other data apply unchanged.

(16) The test documents are listed in the test report N° 04YEX551065-1.

(17) Special conditions for safe use

When operated with combustible gases the I/P transformer type DOC 901069 as pneumatic auxiliary power has to be installed outdoors resp. indoors when sufficient ventilation is given.

The supplied gas has to be kept free of air or oxygen so that it cannot form an explosive atmosphere.

The exhaust gases must always be exhausted outside.

(18) Essential Health and Safety Requirements
no additional ones

TÜV NORD CERT GmbH & Co. KG
TÜV CERT-Certification Body
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hanover, 2004-07-08

Head of the
Certification Body

Ex Grenzwerte für TEIP11 und TZIM
Ex limit values for TEIP11 and TZIM

I_i	U_i	P_i
50 mA	42,5 V	2,125 W
60 mA	38,8 V	2,328 W
100 mA	30 V	3,0 W
120 mA	28 V	3,36 W
150 mA	25,5 V	3,825 W

Innere Induktivität und Kapazität vernachlässigbar.
The effective internal inductance and capacitance is negligibly small.

Die Werte wurden ermittelt aus:
The values are determined from:

Ex-Zertifikat TÜV 99 ATEX 1487 X
Ex certification TÜV 99 ATEX 1487 X

EN 50020 Teil 7, Anhang A, Tabelle A.1
EN 50020 part 7, annex A, table A.1

Zulässiger Kurzschlussstrom entsprechend der Spannung und der Gerätegruppe, für Betriebsmittel der Gruppe IIC mit einem Sicherheitsfaktor von 1,5.

Permissible short circuit current according to the voltage and device group for devices of group IIC with a safety factor of 1.5.

I/P-Umformer/Converter
TEIP 11

Doc. 901068 Ri = 260Ω



 Schutzart/Protection:
II 2 G EEx ia II CT6 
TÜV 99 ATEX 1487 X
li u. Tu siehe Zertifikat 0032

ABB Automation
D 32425 Minden, Made in Germany

ABB

I/P-Umformer/Converter
TEIP 11

Doc. 901069 Ri = 260Ω



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