



Prüf- und Zertifizierungsstelle

ZELM Ex



(1) **EC-TYPE-EXAMINATION CERTIFICATE**

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-TYPE-EXAMINATION CERTIFICATE Number:

ZELM 03 ATEX 0131

(4) Equipment: **2600T Series Pressure Transmitters, Profibus-PA**

(5) Manufacturer: **ABB SACE SpA.**

(6) Address: **Via Statale 113, 22016 Lenno (Como), Italy**

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

(8) The Prüf- und Zertifizierungsstelle ZELM Ex, notified body No. 0820 in accordance with Article 9 of the Council Directive 94/9/EC 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 confidential report ZELM Ex 0020317165.

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

EN 50 014: 1997+A1+A2
EN 50 281-1-1: 1998

EN 50 020: 1994
EN 1127-1: 1997

EN 50 284: 1999

(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 or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this Certificate.

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



II 1 GD T 50°C EEx ia IIC T6 resp. II 1 GD T 95°C EEx ia IIC T4
or

II 1/2 GD T 50°C EEx ia IIC T6 resp. II 1/2 GD T 95°C EEx ia IIC T4

Zertifizierungsstelle ZELM Ex


Dipl.-Ing. Harald Zelm



Braunschweig, April 30, 2003

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EC-type-examination Certificates without signature and stamp are not valid. The certificates may only be circulated without alteration. Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM Ex. This English version is based on the German text. In the case of dispute, the German text shall prevail.

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ZELM Ex



(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE ZELM 03 ATEX 0131

(15) Description of equipment

The 2600T series Pressure Transmitters is used for measurement and conversion of the physical quantities pressure above atmospheric and differential pressure absolute pressure into an electrical standard signal of digital communication in accordance with the PROFIBUS-PA protocol in the hazardous area. It may be equipped containing one or two displays.

The attached pressure works on the ceramic measuring sensor or the silicon measuring sensor or the inductive sensor.

The Pressure Transmitter is mounted into a housing meeting the degree of protection \geq IP 65 according to EN 60529:1991 – for dust including the cable entry fittings.

The Pressure Transmitter is allowed to be directly installed into the hazardous area of category 1G resp. 1D or into the separation wall between the hazardous areas of category 1G or 1D and category 2G or 2D.

The operating conditions for service with flammable measuring mixtures – which are non-explosive - and higher pressures are to be taken from the instruction manual and operation manual respectively.

The maximum permissible ambient temperature is $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$.

The model code will be:

type 262.. / 264.. P or 2

Instead of the points of the model code other letter- or numeral- combinations will be stated, which are describing several variations and versions of the equipment.

Electrical data

Supply and
signal circuit
(terminals signal +,-)

type of protection Intrinsic Safety EEx ib IIC or EEx ia IIC
for connection to supply units with intrinsically safe circuits "ia" and
II 1 GD T 50°C EEx ia IIC T6 resp. II 1 GD T 95°C EEx ia IIC T4
or
for connection to supply units with intrinsically safe circuits "ib" or "ia"
and **II 1/2 GD T 50°C EEx ib or ia IIC T6** respectively
II 1/2 GD T 95°C EEx ib or ia IIC T4

having rectangular or trapezoidal characteristics in accordance with the FISCO model and the following maximum values:

EEx ia IIC T4...T6

$U_i = 17,5\text{ V}$
 $I_i = 360\text{ mA}$
 $P_i = 2,52\text{ W}$

EEx ia IIB T4...T6

$U_i = 17,5\text{ V}$
 $I_i = 380\text{ mA}$
 $P_i = 5,32\text{ W}$

effective internal inductance $\leq 10\text{ }\mu\text{H}$
effective internal capacitance $\leq 5\text{ nF}$

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Schedule to EC-TYPE-EXAMINATION CERTIFICATE_ZELM 03 ATEX 0131

Temperature class	lower limit of ambient temperature	upper limit of ambient temperature
T4 resp. T 95 °C	- 40 °C	+ 85 °C
T5 resp. T 95 °C	- 40 °C	+ 40 °C
T6 resp. T 50 °C	- 40 °C	+ 40 °C

Degree of protection at least IP 65 according to EN 60529:1991

References:

The instruction manual has to be considered, in particular the maximum thickness of dust layers permitted for the hazardous area of category 1D and the sufficient equipotential bonding and grounding and the overvoltage protection.

For the use in dust atmosphere the degree of protection \geq IP 65 must be ensured in regard to the enclosure and the cable entry fitting.

Having the capacitive measuring element type 26.A. or 26.G. (≤ 400 mbar) and a supply with an intrinsically safe circuit EEx ib IIC the use is not permitted for category 1GD or 1/2 GD respectively.

(16) Report No.

ZELM Ex 0020317165

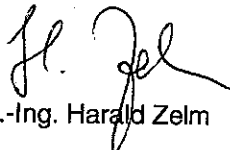
(17) Special conditions for safe use

not applicable

(18) Essential Health and Safety Requirements

met by standards

Zertifizierungsstelle ZELM Ex


Dipl.-Ing. Harald Zelm



Braunschweig, April 30, 2003

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Prüf- und Zertifizierungsstelle ZELM Ex



1. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)
to EC-type-examination Certificate

ZELM 03 ATEX 0131

Equipment: **2600T Series Pressure Transmitter, Profibus-PA**
Manufacturer: **ABB SACE SpA.**
Address: **Via Statale 113, 22016 Lenno (Como), Italien**

Description of supplement

The equipment is extended by an optional version of the housing cover.

The type of protection, the electrical data and all further data of the Pressure Transmitters remain unchanged.

The Pressure Transmitters Series 2600T Profibus-PA may be applied in future in accordance with this supplement.

References:

The instruction manual has to be observed.

Report No.

ZELM Ex 0020417391

Special conditions for safe use

not applicable

Essential Health and Safety Requirements

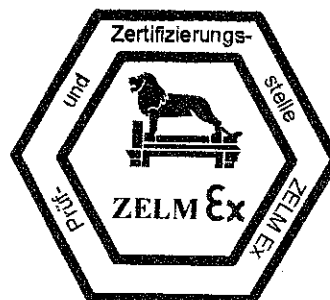
met by adherence to the standards

EN 50 014: 1997+A1+A2
EN 50281-1-1:1998


EN 50 020: 1994
EN 1127-1:1997

EN 50 284: 1999

Zertifizierungsstelle **ZELM Ex**



Braunschweig, April 29, 2005


Dipl.-Ing. Harald Zelm

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2. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

ZELM ex

to EC-type-examination Certificate

ZELM 03 ATEX 0131

Equipment: 2600T Series Pressure Transmitters, Profibus-PA
Manufacturer: ABB SACE SpA.
Address: Via Statale 113, 22016 Lenno (Como), Italy

Description of supplement

The 2. Supplement concerns modifications of the internal layout of the equipment. Furthermore, the name of the manufacturer has been changed and the agreement of the device with requirements of current standards has been checked and the marking has been adapted correspondingly.

The name of the manufacturer is in the future:

ABB SpA

The marking of the device is in the future:



II 1G Ex ia IIC T6 resp. T5 resp. T4 and II 1/2G Ex ia IIC T6 resp. T5 resp. T4
II 1D Ex iaD 20 T95°C and II 1/2D Ex iaD 21 T95°C

The input parameters of the equipment have been adapted to the requirements for FISCO Field devices according to EN 60079-27:2008 and in the future the following electrical data are applicable:

Electrical data

Supply and Signal circuit (terminals signal +,-) type of protection Intrinsic Safety, only for connection to certified power supply device according to FISCO- Concept with following maximum values:

$$U_i = 17,5 \text{ V}$$

$$I_i = 380 \text{ mA}$$

$$P_i = 5,32 \text{ W}$$

maximum unprotected internal capacitance $C_i = 5 \text{ nF}$
maximum unprotected internal inductance $L_i = 10 \text{ µH}$

The maximum ambient temperature range, the temperature class and the maximum surface temperature of the enclosure for "Dust" atmosphere are to be taken from the subsequent table:

Temperature Class	Lower limit of ambient temperature	Upper limit of ambient temperature	Maximum surface temperature for Dust atmosphere
T4	-40°C	+85°C	95°C
T5	-40°C	+40°C	95°C
T6	-40°C	+40°C	50°C

**2. Supplement
to EC-Type-Examination Certificate ZELM 03 ATEX 0131**

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All other technical data and references mentioned in the EC-Type Examination Certificate remain unchanged and are also applicable for the 2. Supplement.

The 2600T Series Pressure Transmitter, Profibus-PA may be manufactured in future also in accordance with this 2. Supplement.

Report No.

ZELM Ex 2090817667

Essential Health and Safety Requirements

Within the scope of this 2. Supplement the agreement of the device with the current standards has been checked.

The essential health and safety requirements are still fulfilled by compliance with the following Standards:

EN 60079-0:2006
EN 61241-0:2006

EN 60079-11:2007
EN 61241-11:2006

EN 60079-26:2007
EN 1127-1:2007

EN 60079-27:2008

ZELM ex

**Zertifizierungs-
stelle**

Braunschweig, January 26, 2009



**Zertifizierungsstelle ZELM ex
Dipl.-Ing. Harald Zelm**

**ZELM
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