



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

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



(3) EC-type-examination Certificate Number:

PTB 05 ATEX 2032

(4) Equipment: Pressure transducer, type 261*. with order option EH or EL

(5) Manufacturer: ABB Automation Products GmbH

(6) Address: Schillerstraße 72, 32425 Minden, Germany

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

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 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 PTB Ex 05-25024 .

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

EN 50014:1997 + A1 + A2

EN 50020:2002

EN 50284:1999

EN 1127-1:1997

EN 50281-1-1:1998

31H/171/CDV (IEC 61241-11)

(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 the 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 1/2 G EEx ia IIC T6

or



II 1/2 D IP65 T 95°C Ex iaD

Zertifizierungsstelle Explosionsschutz

Braunschweig, June 30, 2005

By order:

Dr.-Ing. U. Johannsmeyer
Direktor und Professor



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(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2032

(15) Description of equipment

The pressure transducers of type series 261* with order option EH or EL are used in the hazardous area for the detection of the physical quantities overpressure (type 261G.) or absolute pressure (type 261A.) and transform these quantities into an analog electrical standard signal of 4 ... 20 mA.

The pressure transducers of type series 261* with order option EH or EL may be equipped optionally with the indicator, type HMI-type A.

The pressure transducer, type 261* with order option ..EH.. .. is intended for application in potentially explosive gas-atmospheres.

For relationship between permissible ambient temperature range and temperature class for the pressure transducer, type 261* with order option ..EH.. .., reference is made to the following table.

temperature class	T6	T5	T4, T3, T2, T1
permissible ambient temperature range	-40 °C...+56 °C	-40 °C...+71 °C	-40 °C...+85°C

The marking of the pressure transducer, type 261* with order option ..EH.. .. reads as follows:

II 1/2 G EEx ia IIC T6

resp.

II 2 G EEx ib IIC T6

The pressure transducer, type 261* with order option ..EL.. .. is intended for application in potentially explosive dust-atmospheres.

The permissible ambient temperature range for the pressure transducer, type 261* with order option ..EL.. .. is -40 °C up to +85 °C.

The marking of the pressure transducer, type 261* with order option ..EL.. .. reads as follows:

II 1/2 D IP65 T 95°C Ex iaD

resp.

II 2 D IP65 T 95°C Ex ibD

The pressure transducer, type 261*. with order option EH or EL may be mounted into the partition separating hazardous areas where normally category-1-equipment is applied, from less hazardous areas where normally category-2-equipment is used.

The application of the pressure transducers of type series 261*. with order option EH or EL at the partition to hazardous areas requiring category-1-equipment is restricted to the general atmospheric conditions for the gas/air- resp. dust/air-mixture in this area (temperature = -20 °C up to +60 °C, pressure = 0.8 bar up to 1.1 bar).

For operating conditions for the operation without explosive mixtures, reference is made to the manufacturer's specifications.

The associated pressure sensors as well as the appropriate capillary tube connectors may be used in accordance with the manufacturer's specifications.

Electrical data

Application as II 1/2G- or II 1/2 D-equipment:

Supply circuit type of protection Intrinsic Safety EEx ia IIC/IIB resp. Ex iaD
(terminals „+“ and „-“)

for connection to certified intrinsically safe circuits

maximum input values:

$$U_i = 30 \text{ V}$$

$$I_i = 130 \text{ mA}$$

$$P_i = 0.8 \text{ W}$$

$$C_i = 10 \text{ nF}$$

$$L_i = 10 \text{ }\mu\text{H}$$

Application as II 2G- or II 2 D-equipment:

Supply circuit type of protection Intrinsic Safety EEx ia IIC/IIB resp. Ex iaD
(terminals „+“ and „-“) or EEx ib IIC/IIB resp. Ex IbD

for connection to certified intrinsically safe circuits

maximum input values:

$$U_i = 30 \text{ V}$$

$$I_i = 130 \text{ mA}$$

$$P_i = 0.8 \text{ W}$$

$$C_i = 10 \text{ nF}$$

$$L_i = 10 \text{ }\mu\text{H}$$

(16) Test report PTB Ex 05-25024

(17) Special conditions for safe use

none

(18) Essential health and safety requirements

met by compliance with the standards mentioned above

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Johannsmeier
Direktor und Professor



Braunschweig, June 30, 2005


1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2032

(Translation)

Equipment: Pressure transducer, type 261*. with order option EH or EL

Marking:  II 1/2 G EEx ia IIC T6

resp.  II 1/2 D IP65 T 95°C Ex iaD

Manufacturer: ABB Automation Products GmbH

Address: Schillerstraße 72, 32425 Minden, Germany

Description of supplements and modifications

The pressure transducer, type 261*. with order option ..EL.. .., which is primarily intended for application in potentially explosive dust-atmospheres may also be used in potentially explosive gas-atmospheres.

The marking of the pressure transducer, type 261*. with order option ..EL.. .. may be extended as follows:

 II 1/2 G EEx ia IIC T6

resp.

 II 2 G EEx ib IIC T6

For ambient temperature conditions for the application of the pressure transducer, type 261*. with order option ..EL.. .. in potentially explosive gas-atmospheres, reference is made to the table specified for pressure transducer, type 261*. with order option ..EH.. ..

All other specifications apply without changes.

Braunschweig und Berlin

1. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2032

Applied standards

EN 50014:1997 + A1 + A2
EN 1127-1:1997

EN 50020:2002
EN 50281-1-1:1998

EN 50284:1999
31H/171/CDV (IEC 61241-11)

Test report: PTB Ex 05-25225

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. H. Wehinger
Direktor und Professor



Braunschweig, August 1, 2005


2. SUPPLEMENT


according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2032

(Translation)

Equipment: Pressure transducer, type 261*. with order option EH or EL

Marking:  II 1/2 G EEx ia IIC T6

resp.  II 1/2 D IP65 T 95°C Ex iaD

Manufacturer: ABB Automation Products GmbH

Address: Schillerstraße 72
32425 Minden, Germany

Description of supplements and modifications

In the future the pressure transducer, type 261*. with order option EH or EL may also be manufactured and operated as described in the test documents to test report PTB Ex 06-26064.

The modifications concern the internal construction as well as the "Electrical data".

All other specifications apply without changes.

Electrical data

Application as II 1/2 G- or II 1/2 D-equipment:

Supply circuit type of protection Intrinsic Safety EEx ia IIC/IIB
(terminals "+" and "-")

for connection to certified intrinsically safe circuits
maximum input values:

$$U_i = 30 \text{ V}$$

$$I_i = 130 \text{ mA}$$

$$P_i = 0.8 \text{ W}$$

$$C_i = 10 \text{ nF}$$

$$L_i = 0.5 \text{ mH}$$

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2032

Display- / service interface type of protection Intrinsic Safety EEx ia IIB/IIC
(plug connector) with the following maximum values:

$U_o = 6.2 \text{ V}$
 $I_o = 65.2 \text{ mA}$
 $P_o = 101 \text{ mW}$
 linear characteristic
 $C_i \approx 0$
 $L_i \approx 0$

type of protection	EEx ia	
	IIC	IIB
L_o	5 mH	5 mH
C_o	1.4 μF	8.9 μF

Application as II 2 G- or II 2 D-equipment:

Supply circuit type of protection Intrinsic Safety EEx ia IIC/IIB
(terminals "+" and "-") or EEx ib IIC/IIB
for connection to certified intrinsically safe circuits
maximum input values:

$U_i = 30 \text{ V}$
 $I_i = 130 \text{ mA}$
 $P_i = 0.8 \text{ W}$

 $C_i = 10 \text{ nF}$
 $L_i = 0.5 \text{ mH}$

Display- / service interface type of protection Intrinsic Safety EEx ia IIB/IIC
(plug connector) or EEx ib IIC/IIB
with the following maximum values:

$U_o = 6.2 \text{ V}$
 $I_o = 65.2 \text{ mA}$
 $P_o = 101 \text{ mW}$
 linear characteristic
 $C_i \approx 0$
 $L_i \approx 0$

type of protection	EEx ia	
	IIC	IIB
L_o	5 mH	5 mH
C_o	1.4 μF	8.9 μF

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2032

Applied standards

EN 50014:1997 + A1 + A2
EN 1127-1:1997

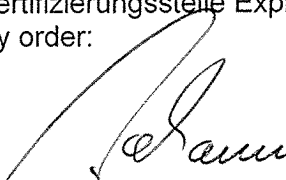
EN 50020:2002
EN 50281-1-1:1998

EN 50284:1999
IEC 61241-11:2005

Test report: PTB Ex 06-26064

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, July 13, 2006


Dr.-Ing. U. Johannsmeyer
Direktor und Professor



3. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 05 ATEX 2032

(Translation)

Equipment: Pressure transducer, type 261*. with order option EH or EL

Marking:  II 1/2 G EEx ia IIC T6

resp.  II 1/2 D IP65 T 95 °C Ex iaD

Manufacturer: ABB Automation Products GmbH

Address: Schillerstraße 72, 32425 Minden, Germany

Description of supplements and modifications

In the future the pressure transducer, type 261*. with order option EH or EL may also be manufactured and operated as described in the test documents to test report PTB Ex 06-26312.

The modifications concern the internal construction of the indicating device Common HMI-type A which may be mounted optionally into the pressure transducers of type 261*. with order option EH or EL.

The "Electrical data" as well as all other specifications apply without changes.

Applied standards

EN 50014:1997 + A1 + A2

EN 50020:2002

EN 50284:1999

EN 1127-1:1997

EN 50281-1-1:1998

31H/171/CDV (IEC 61241-11)

Test report: PTB Ex 07-26312

Zertifizierungsstelle Explosionsschutz
By order:


Dr.-Ing. U. Johannsmeyer
Direktor und Professor



Braunschweig, January 16, 2007

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