

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

(2) Equipment or protective system intended for use in potentially explosive atmospheres – Directive 94/9/EC

(3) EC-Type Examination Certificate Number: **KEMA 04ATEX1081 X**

(4) Equipment or protective system: **Absolute, Relative and Differential Pressure Transmitters Type 33X Ei, Type 35X Ei, Type 36XW Ei and Type PD-33X Ei**

(5) Manufacturer: **Keller AG**

(6) Address: **St. Galler Strasse 119, 8404 Winterthur, Switzerland**

(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) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 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 no. 2060706.

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

EN 50014 : 1997

EN 50020 : 2002

EN 50284 : 1999

(10) If the sign "X" is placed after the certificate 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, examination and tests of the specified equipment or protective system according 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 or protective system shall include the following:



II 1 G EEx ia IIC T4 ... T6

Arnhem, 23 April 2004
KEMA Quality B.V.



C.G. van Es
Certification Manager

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(13) **SCHEDULE**
(14) **to EC-Type Examination Certificate KEMA 04ATEX1081 X**

(15) **Description**

The piezoresistive Pressure Transmitters Type 33X Ei, Type 35X Ei, Type 36XW and Type PD-33X Ei are used for the measurement of absolute, relative or differential pressure.

The output is a 4 - 20 mA current signal or a 0 - 10 V voltage signal and RS 485 serial communication signals.

The transmitter is provided with a fixed cable or with a connector for the electrical connections.

Ambient temperature range: -40 °C ... +80 °C, if an explosive atmosphere may be present continuously, frequently or for long periods;
-40 °C ... +100 °C, for other applications.

The temperature class in relation to the maximum ambient temperature is as follows:

T4 for $T_a \leq 100$ °C;

T5 for $T_a \leq 85$ °C;

T6 for $T_a \leq 70$ °C.

Electrical data

Supply and output circuits
and RS 485 interface in type of explosion protection intrinsic safety EEx ia IIC,
only for connection to certified intrinsically safe circuits,
with following maximum values:

U_i	=	30 V
I_i	=	100 mA
P_i	=	1,2 W
L_i	=	0 mH
C_i	=	0 nF (supply and current output)
		50 nF (RS 485 interface and voltage output)

Installation instructions

The intrinsically safe supply and output circuits and the RS 485 interface are galvanically connected. The maximum values of voltage and current may not be exceeded for any combination of electrical circuits connected to the transmitter.

(16) **Report**

KEMA No. 2060706.

(17) **Special conditions for safe use**

Pressure Transmitter Type 35X Ei may only be used for pressure measurement of a process medium that is not an explosive gas/air mixture, unless the sensor membrane is effectively protected from mechanical damage.

(13)

SCHEDULE

(14)

to EC-Type Examination Certificate KEMA 04ATEX1081 X

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

1. EC-Type Examination Certificate LCIE 03 ATEX 6131 X

signed

2. Description, rev. 0 (4 pages)

15.10.2003

3. Drawing No. 81870)
 81871)
 81874)
 81875)
 81876)
 81877)
 81880)
 81881)
 81882)
 81883)
 81884)

19.12.2003

 9I105-0)
 9I105-1)
 9I105-2 (3 sheets))
 9I105-3)
 9I106-0)
 9I106-1)
 9I106-2 (3 sheets))
 9I106-3)

09.12.2003

 9U054-0)
 9U054-1)
 9U054-2)
 9U054-3)

17.03.2004



Amendment 1

to EC-Type Examination Certificate KEMA 04ATEX1081 X

Issue No. 1

Manufacturer: **Keller AG**

Address: **St. Galler-strasse 119, 8404 Winterthur, Switzerland**

Description

Absolute, Relative and Differential Pressure Transmitters Type 33X Ei, Type 35X Ei, Type 36XW Ei and Type PD-33X Ei may also be manufactured in accordance with the documentation listed below. The modifications concern the mechanical and the electrical construction.

The range of Pressure Transmitters is extended with Differential Pressure Transmitter Type PD-39X Ei. The ambient temperature range and the relation between temperature class and maximum ambient temperature is also applicable for this Transmitter.

Electrical data

For all models of the Pressure Transmitters:

Supply and output circuit
and RS 485 interface in type of protection intrinsic safety EEx ia IIC, only for
connection to certified intrinsically safe circuits, with following
maximum values:

U_i	=	30	V	
I_i	=	200	mA	
P_i	=	1,2	W	
L_i	=	0	mH	
C_i	=	1	nF	(supply and current output)
		50	nF	(RS 485 interface and voltage output)

Installation instructions

Unchanged.

Test Report

KEMA No. 2092668.

Special conditions for safe use

Unchanged.

Essential Health and Safety Requirements

Unchanged.



Amendment 1

to EC-Type Examination Certificate KEMA 04ATEX1081 X

Issue No. 1

Test documentation

dated

Technical Dossier No. DT151003, rev. 2 (2 pages),
including the documentation listed therein

30.05.2006

Arnhem, 21 August 2006
KEMA Quality B.V.

A handwritten signature in blue ink, appearing to read "C.G. van Es". The signature is stylized and fluid, with a prominent loop at the end.

C.G. van Es
Certification Manager