IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx DEK 13.0035X issue No.:0	Certificate history:
Status:	**Current**	
Date of Issue:	**2013-08-21**	Page 1 of 3
Applicant:	**PR Electronics A/S** Lerbakken 10, 8410 Rønde **Denmark**	
Electrical Apparatus:	**2-wire Programmable Transmitter, Type 5331A, Type 5331D, Type 5334A and Type 5334B**	
Optional accessory:		
Type of Protection:	**Ex ia, Ex ic, Ex nA**	
Marking:	Type 5331D and Type 5334B: Ex ia IIC T4...T6 Ga Ex ia IIIC Da Ex ia I Ma Type 5331A and Type 5334A: Ex nA [ic] IIC T4 ... T6 Gc Ex ic IIC T4...T6 Gc Ex ic IIIC Dc	

Approved for issue on behalf of the IECEx Certification Body: R. Schuller

Position: Certification Manager

Signature:
(for printed version)

Date: 2013-08-21

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA Certification B.V.
Meander 1051,
6825 MJ Arnhem
The Netherlands

DEKRA

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Date of Issue: **2013-08-21** Issue No.: **0**

Manufacturer: **PR Electronics**
Lerbakken 10, 8410 Rønde
Denmark

Additional Manufacturing location (s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
NL/DEK/ExTR13.0037/00

Quality Assessment Report:

NL/DEK/QAR13.0017/00

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The 2-wire Programmable Transmitter, Type 5331A, Type 5331D, Type 5334A and Type 5334B, suitable for mounting in a metal enclosure form B according to DIN 43729, is used to convert the temperature measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal.

For type 5331D, the relation between ambient temperature range and temperature class is as follows:
T4 (Ta: -40 to +85 °C),
T5 (Ta: -40 to +60 °C),
T6 (Ta: -40 to +45 °C).

For type 5331A, the relation between ambient temperature range and temperature class is as follows:
T4 (Ta -40 to +85 °C),
T6 (Ta -40 to +60 °C).

For explosive dust atmospheres, the surface temperature of the outer enclosure is 20 K above the ambient temperature.

For electrical data, refer to annexe.

CONDITIONS OF CERTIFICATION: YES as shown below:

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ga, Ma and Mb, and if the enclosure is made of aluminum, if must be installed such, that ignition sources due to impact and friction sparks are excluded.

For type of protection Ex nA, the transmitter shall be mounted in a metal enclosure providing a degree of protection of at least IP54 according to IEC60529.

Annex 1 to Certificate of Conformity IECEx DEK 13.0035, issue 0
Annex 1 to INMETRO Certificate of Conformity DEKRA 13.0001 X, issue 0
Annex 1 to NL/DEK/ExTR/13.0037/00

General product information:

The 2-wire Programmable Transmitter, Type 5331A, Type 5331D, Type 5334A and Type 5334B, suitable for mounting in a metal enclosure form B according to DIN 43729, is used to convert the temperature measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal.

For type 5331D and type 5334B, the relation between ambient temperature range and temperature class is as follows:

Temperature class	Ambient temperature range
T4	-40 to +85 °C
T5	-40 to +60 °C
T6	-40 to +45 °C

For type 5331A and type 5334A, the relation between ambient temperature range and temperature class is as follows:

Temperature class	Ambient temperature range
T4	-40 to +85 °C
T6	-40 to +60 °C

For explosive dust atmospheres, the surface temperature of the outer enclosure is 20 K above the ambient temperature.

Electrical data

For type 5331D and type 5334B:

Supply / output circuit (terminals 1 and 2):
in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC and Ex ia I, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 30 V; I_i = 120 mA; P_i = 0.84 W; C_i = 1 nF; L_i = 10 µH.

Sensor circuit (terminals 3, 4, 5 and 6):
in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC and Ex ia I, with the following maximum values:
U_o = 9.6 V; I_o = 25 mA; P_o = 60 mW; C_o = 2.4 µF; L_o = 33 mH.

The sensor circuit is not infallibly galvanic isolated from the input circuit. However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500 Vac during 1 minute.

For type 5331A and type 5334A:

Either:
supply / output circuit (terminals 1 and 2):
in type of protection Ex nA: Umax = 35 V,
sensor circuit (terminals 3, 4, 5 and 6):
in type of protection intrinsic safety Ex ic IIC and Ex ic IIIC, with the following maximum values:
U_o = 9.6 V; I_o = 25 mA; P_o = 60 mW; C_o = 2.4 µF; L_o = 33 mH,

or,
supply / output circuit (terminals 1 and 2):
in type of protection intrinsic safety Ex ic IIC and Ex ic IIIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

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U_i = 35 V; I_i = 110 mA; C_i = 1 nF; L_i = 10 µH.
sensor circuit (terminals 3, 4, 5 and 6):
in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values:
U_o = 9.6 V; I_o = 25 mA; P_o = 60 mW; C_o = 2.4 µF; L_o = 33 mH.