



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.: issue No.: Certificate history:

Status:

Date of Issue: **2013-08-21** Page 1 of 3

Applicant: **PR Electronics**
Lerbakken 10
8410 Rønne
Denmark

Electrical Apparatus: **2-Wire Programmable Transmitters Type 5333A and type 5333D and 2-Wire Level Transmitters Type 5343A and Type 5343B**
Optional accessory:

Type of Protection: **Ex ia, Ex ic, Ex nA**

Marking: For Type 5333D and Type 5343B:
Ex ia IIC T4 ... T6 Ga
Ex ia IIIC Da
Ex ia I Ma
For Type 5333A and Type 5343A:
Ex nA [ic] IIC T4 ... T6 Gc
Ex ic IIC T4 ... T6 Gc
Ex ic IIIC Gc


Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification manager

Signature:
(for printed version)



2013-08-21

Date:

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





IECEX Certificate of Conformity

Certificate No.: IECEx DEK 13.0036X

Date of Issue: 2013-08-21

Issue No.: 0

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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/ExTR13.0034/00](#)

Quality Assessment Report:
[NL/DEK/QAR13.0017/00](#)



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Certificate No.: IECEx DEK 13.0036X

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The 2-Wire Programmable Transmitter, Type 5333A and Type 5333D, suitable for mounting in an enclosure form B according to DIN 43729, is used to convert the temperature measurement signal of a resistive temperature sensor into a 4 ... 20 mA current signal with digital communication.

The 2-Wire Level Transmitter, Type 5343A and Type 5343B, suitable for mounting in an enclosure form B according to DIN 43729, is used to convert the signal of a resistive level sensor into a 4 ... 20 mA current signal with digital communication.

For Type 5333D and Type 5343B, the relation between temperature class 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 5333A and Type 5343A, 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 annex.

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, it 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 13.0036, issue 0
Annex 1 to INMETRO Certificate of Conformity DEKRA 13.0002 X, issue 0
Annex 1 to NL/DEK/ExTR/13.0034/00

General product information:

The 2-Wire Programmable Transmitter, Type 5333A and Type 5333D, suitable for mounting in an enclosure form B according to DIN 43729, is used to convert the temperature measurement signal of a resistive temperature sensor into a 4 ... 20 mA current signal with digital communication.

The 2-Wire Level Transmitter, Type 5343A and Type 5343B, suitable for mounting in an enclosure form B according to DIN 43729, is used to convert the signal of a resistive level sensor into a 4 ... 20 mA current signal with digital communication.

For Type 5333D and Type 5343B, 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 5333A and Type 5343A, 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.

Electrical data

Type 5333D and Type 5343B:

Supply / output circuit (terminals 1 and 2):

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 30 \text{ V}$; $I_i = 120 \text{ mA}$; $P_i = 0.84 \text{ W}$; $C_i = 1 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$.

Sensor circuit (terminals 3, 4 and 6):

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, with the following maximum values:

$U_o = 30 \text{ V}$; $I_o = 8 \text{ mA}$; $P_o = 60 \text{ mW}$; $C_o = 66 \text{ nF}$; $L_o = 35 \text{ mH}$.

Type 5333A and Type 5343A:

Either:

supply / output circuit (terminals 1 and 2):

in type of protection Ex nA: $U_{\max} = 35 \text{ V}$,

sensor circuit (terminals 3, 4 and 6):

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values:

$U_o = 5 \text{ V}$; $I_o = 4 \text{ mA}$; $P_o = 20 \text{ mW}$; $C_o = 1000 \text{ }\mu\text{F}$; $L_o = 900 \text{ mH}$,

or

supply / output circuit (terminals 1 and 2):

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, only for connection to an intrinsically safe circuit, with the following maximum values:

$U_i = 35 \text{ V}$; $I_i = 110 \text{ mA}$; $C_i = 1 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$.

sensor circuit (terminals 3, 4 and 6):

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values:

$U_o = 5 \text{ V}$; $I_o = 4 \text{ mA}$; $P_o = 20 \text{ mW}$; $C_o = 1000 \text{ }\mu\text{F}$; $L_o = 900 \text{ mH}$.