



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

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|---------------------|---|-------------|-----------------------------|
| Certificate No.: | IECEX KEM 10.0083X | Page 1 of 4 | <u>Certificate history:</u> |
| Status: | Current | Issue No: 4 | Issue 3 (2014-05-29) |
| Date of Issue: | 2019-10-25 | | Issue 2 (2012-12-19) |
| Applicant: | PR Electronics A/S Lerbakken 10 8410 Rønede Denmark | | Issue 1 (2011-12-16) |
| Equipment: | 2-Wire Transmitter with HART Protocol, Types 5335A, 5335D, 5337A and 5337D | | |
| Optional accessory: | | | |
| Type of Protection: | Ex i, Ex n | | |
| Marking: | Ex ia IIC T6 ... T4 Ga Ex ia IIIC Da Ex ia I Ma Ex nA [ic] IIC T6 ... T4 Gc or Ex ic IIC T6 ... T4 Gc or Ex ic IIIC Dc | | |

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:

2019-10-25

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.
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Certificate issued by:

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





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Manufacturer: **PR electronics A/S**
Lerbakken 10
8410 Rønne
Denmark

Additional
manufacturing
locations:

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 equipment 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 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-15:2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

This Certificate **does not** indicate compliance with 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/KEM/ExTR10.0074/04

Quality Assessment Report:

NL/DEK/QAR13.0017/04



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

2-Wire Transmitters Type 5335A and Type 5335D with HART 5 protocol, Type 5337A and Type 5337D with HART 7 protocol, are used to convert temperature measurement signals from a temperature sensor or a mV signal into a 4 ... 20 mA current signal with digital communication (HART).

For further information, refer to the Attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:

If the transmitter is applied in type of protection "Ex nA", it shall be installed in an enclosure, providing a degree of protection of at least IP54 according to IEC60529, that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere where equipment protection level Ga is required, and if the enclosure is made of aluminum, it must be installed such, that even in the event of rare incidents, ignition sources due to impact and friction, sparks are excluded.

If the enclosure is made of non-metallic materials, or of painted metal, electrostatic charging shall be avoided.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Minor constructional changes
Removal of IEC 60079-26

Annex:

Annex1 to IECEx KEM 10.0083 X.pdf

Annex 1 to Certificate of Conformity IECEx KEM 10.0083
Annex 1 to NL/KEM/ExTR10.0074/04

General product information:

The 2-Wire Transmitter Type 5335A and Type 5335D with HART 5 protocol, Type 5337A and Type 5337D with HART 7 protocol, are used to convert temperature measurement signals from a temperature sensor or a mV signal into a 4 ... 20 mA current signal with digital communication (HART).
The transmitter is suitable for mounting in an enclosure form B according to DIN 43729, or equivalent.

Type of protection Ex ia IIC Ga and Ex ic IIC Gc

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to IEC 60529 and that is suitable for the application and correctly installed.

Ambient temperature range: -40 °C to +45 °C for temperature class T6
-40 °C to +85 °C for temperature class T4

Type of protection Ex ia I Ma

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP54 according to IEC 60529, that is suitable for the application and is correctly installed.

Ambient temperature range: -40 °C to +85 °C

Type of protection Ex nA

The Transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP54 according to IEC 60529, and that is suitable for the application and correctly installed.

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

Type of protection Ex ia IIIC Da and Ex ic IIIC Dc

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP6X according to IEC 60529 eg. a form B enclosure according to DIN 43729, and that is suitable for the application and correctly installed. The surface temperature of the enclosure is equal to the ambient temperature +20 K for a dust layer with a maximum thickness of 5 mm.

Ambient temperature range: -40 °C to +85 °C

Electrical data

Type of protection Ex ia:

Supply and output circuit (terminals 1 and 2):

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I Ma, 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 ... 6):

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

$U_o = 9.6 \text{ V}$; $I_o = 28 \text{ mA}$; $P_o = 67 \text{ mW}$; $C_o = 3.5 \text{ } \mu\text{F}$; $L_o = 35 \text{ mH}$.

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

Types of protection Ex ic and Ex nA

Supply and output circuit, 4 ... 20 mA (terminals 1 and 2), in type of protection non sparking Ex nA, with $U \leq 35 \text{ Vdc}$; or

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, only for connection to a certified intrinsically safe circuit, with the following maximum values: $U_i = 35 \text{ V}$; $C_i = 1 \text{ nF}$; $L_i = 10 \text{ } \mu\text{H}$.

Sensor circuit (terminals 3, 4, 5 and 6) intended for connection to a thermocouple, RTD, resistance or mV-source, in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values:

$U_o = 9.6 \text{ V}$; $I_o = 28 \text{ mA}$; $P_o = 67 \text{ mW}$; $C_o = 28 \text{ } \mu\text{F}$; $L_o = 45 \text{ mH}$.