

CERTIFICATE

(1) EC-Type Examination

(2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC

(3) EC-Type Examination Certificate Number: **KEMA 09ATEX0148 X** Issue Number: **5**

(4) Equipment: **2-Wire Transmitter with HART Protocol Type 6335A**, Type 6335D**, Type 6337A** and Type 6337D****

(5) Manufacturer: **PR electronics A/S**

(6) Address: **Lerbakken 10, 8410 Rønde, Denmark**

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

(8) DEKRA Certification 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 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 test report number NL/KEM/ExTR10.0075/****.

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

EN 60079-0 : 2012
EN 60079-15 : 2010

EN 60079-11 : 2012
EN 60079-26 : 2007

(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 according 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 G Ex ia IIC T6 ... T4 Ga
II 1 D Ex ia IIIC Da
I M 1 Ex ia I Ma
II 3 G Ex nA [ic] IIC T6 ... T4 Gc or
II 3 G Ex ic IIC T6 ... T4 Gc or
II 3 D Ex ic IIIC Dc

This certificate is issued on 3 September 2014 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.

R. H. D. Pommé
Certification Manager

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(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 09ATEX0148 X**

Issue No. 5

(15) **Description**

The 2-Wire Transmitters Type 6335A** and Type 6335D** with HART 5 protocol, and Type 6337A** and Type 6337D** with HART 7 protocol, for rail mounting, with one or two independent channels, are used to convert the measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal with digital communication.

Electrical and thermal data

Refer to the attachment to this certificate.

Installation instructions

The instructions provided with the equipment shall be followed in detail to assure safe operation.

(16) **Test Report**

No. NL/KEM/ExTR10.0075/**.

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

If the transmitter is applied in type of protection "Ex nA", it shall be installed in an enclosure that is Ex nA certified according to EN 60079-15, or Ex e certified in according to EN 60079-7. The enclosure shall be suitable for the application and correctly installed.

Electrostatic charges on the transmitters enclosure shall be avoided.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. NL/KEM/ExTR10.0075/**.

Annex 1 to Certificate of Conformity IECEx KEM 10.0084 X, issue 3
Annex 1 to NL/KEM/ExTR/10.0075/03
Annex 1 to KEMA 09ATEX0148 X, issue 5

General product information:

The 2-Wire Transmitter Type 6335A** and Type 6335D** with HART 5 protocol, Type 6337A** and Type 6337D** with HART 7 protocol, for rail mounting, with one or two independent channels are used to convert the measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal with digital communication.

For marking Ex ia IIC T6 ... T4 Ga

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

Ambient temperature range: -40 °C to +40 °C for temperature class T6
-40 °C to +60 °C for temperature class T5
-40 °C to +85 °C for temperature class T4

For marking 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 EN/IEC 60529, 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

For marking Ex ia I Ma

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP6X according to EN/IEC 60529.

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

For marking Ex nA [ic] IIC T6 ... T4 Gc and Ex ic IIC T6 ... T4 Gc

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP54 according to EN/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

Electrical data

Type of protection Ex ia:

Supply and output circuit (terminals 11 ... 14, respectively 21 ... 24):
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 (per circuit):

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

Sensor circuit (terminals 41 ... 44, respectively 51 ... 54):

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, with following maximum values (per circuit):

$U_o = 9.6 \text{ V}$; $I_o = 28 \text{ mA}$; $P_o = 67.2 \text{ mW}$; $C_o = 3.5 \text{ }\mu\text{F}$; $L_o = 35 \text{ mH}$.

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.

Annex 1 to Certificate of Conformity IECEx KEM 10.0084 X, issue 3
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Types of protection Ex ic and Ex nA

Supply and output circuit (terminals 11 ... 14, respectively 21 ... 24):
in type of protection non sparking Ex nA, with

$U_{max} \leq 35 \text{ Vdc}$, or

supply and output circuit (terminals 11 ... 14, respectively 21 ... 24):

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

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

Sensor circuit, thermocouple, RTD, resistance or mV (terminals 41 ... 44, respectively 51 ... 54), in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

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

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.