

CERTIFICATE

(1) **EU-Type Examination**

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **KEMA 09ATEX0148 X** Issue Number: **6**

(4) Product: **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 Rønne, Denmark**

(7) This product 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 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products 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/ExTR10.0075/04.

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

EN 60079-0 : 2012 + A11 :2013

EN 60079-11 : 2012

EN 60079-15 : 2010

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product 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

Date of certification: 12 July 2016

DEKRA Certification B.V.



R. Schuller
Certification Manager

(13) **SCHEDULE**

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

Issue No. 6

(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 data

Refer to the attachment to this certificate

Installation instructions

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

(16) **Report Number**

No. NL/KEM/ExTR10.0075/04.

(17) **Specific conditions of 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/IEC 60079-15 or "Ex e" certified and 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 item (9).

(19) **Test documentation**

As listed in Report No. NL/KEM/ExTR10.0075/04.

(20) **Certificate history**

Issue 1 - project no. 212575100: Initial assessment

Issue 2 - project no. 213583500: Addition of type 6336D with new firmware that enables it to communicate with HART 6 protocol. The hardware is identical to existing type 6335D

Issue 3 - project no. 214349600: Addition of Type 6337D with new firmware that enables it to communicate with HART 7
Upgrade to newer standards

Issue 4 - project no. 217207300: Type code corrected from 5335B** resp. 5337B** to 5335D** resp. 5337D**.

Issue 5 - project no. 217207300: Editorial corrections

Issue 6 - project no. 219392300: Minor technical change and EN 60079-26 removed

Annex 1 to Certificate of Conformity IECEx KEM 10.0084 X, issue 4
Annex 1 to NL/KEM/ExTR/10.0075/04
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

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 IEC-EN 60079-15 or "Ex e" certified and 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 4
Annex 1 to NL/KEM/ExTR/10.0075/04
Annex 1 to KEMA 09ATEX0148 X, issue 5

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.