

CERTIFICATE

(1) Type Examination

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

(3) Type Examination Certificate Number: **KEMA 03ATEX1508 X**

Issue Number: **4**

(4) Equipment: **2-Wire Transmitter with HART Protocol
Type 5335A, Type 5336A and Type 5337A**

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

(6) Address: **Lerbakken 10, 8410 Rønne, 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., 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 no. 214349600/2.

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

**EN 60079-0 : 2009
EN 60079-11 : 2007**

**EN 60079-15 : 2010
EN 61241-11 : 2006**

(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 Type Examination Certificate relates only to the design, examination and tests of the specified equipment and not to the manufacturing process and supply of this equipment.

(12) The marking of the equipment shall include the following:



**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 20 December 2011 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.

C.G. van Es
Certification Manager

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(13) **SCHEDULE**

(14) **to Type Examination Certificate KEMA 03ATEX1508 X**

Issue No. 4

(15) **Description**

The 2-Wire Transmitters Type 5335A with HART 5 protocol, Type 5336A with HART 6 protocol and Type 5537A 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 Transmitters are suitable for mounting in an enclosure form B according to DIN 43729.

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

For use in an explosive dust atmosphere, the transmitter shall be mounted in an enclosure providing a degree of protection of at least IP 6X in accordance with EN 60529, e.g. a form B enclosure according to DIN 43729. 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.

Electrical data

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

Supply and output circuit (terminals 1 and 2), in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values:

$U_i = 35$ V; $C_i = 1$ nF; $L_i = 10$ μ 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:

$U_o = 9,6$ V; $I_o = 28$ mA; $P_o = 67$ mW; $C_o = 28$ μ F; $L_o = 45$ mH.

(16) **Test Report**

No. 214349600/2.

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

1. For use in an explosive gas atmosphere, the transmitter shall be mounted in an enclosure providing a degree of protection of at least IP 54 in accordance with EN 60529.
2. For an ambient temperature ≥ 60 °C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 214349600/2.