



(1) TYPE EXAMINATION CERTIFICATE

(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: **2**

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

(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) KEMA Quality 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. 212919900/1.

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

EN 60079-0 : 2006

EN 60079-11 : 2007

EN 60079-15 : 2005

(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 GD

II 3 GD

II 3 GD

II 3 GD

Ex nA[nL] IIC T4 ... T6 or

Ex nL IIC T4 ... T6 or

Ex nA[ic] IIC T4 ... T6 or

Ex ic IIC T4 ... T6

This certificate is issued on October 16, 2009 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.

KEMA Quality B.V.

C.G. van Es
Certification Manager

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(13) **SCHEDULE**

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

Issue No. 2

(15) **Description**

The 2-Wire Transmitter with HART Protocol Type 5335 A for mounting in an enclosure (e.g. form B according to DIN43729), is used to convert the temperature measurement signal of a temperature sensor or a mV signal into a current signal (4 ... 20 mA) with digital communication (HART).

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

Electrical data

Supply and output circuit (terminals 1 and 2), in type of protection non sparking Ex nA, with the following maximum values:

$U \leq 35 \text{ Vdc}$; $I = 4 \dots 20 \text{ mA}$;

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

$U_o = 9,6 \text{ V}$; $I_o = 28 \text{ mA}$; $P_o = 67 \text{ mW}$; $C_o = 28 \text{ }\mu\text{F}$; $L_o = 45 \text{ mH}$.

(16) **Test Report**

KEMA No. 212919900/1.

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

1. For use in potentially explosive atmospheres of flammable gasses, vapours or mists, 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 use in the presence of combustible dusts, the transmitter shall be mounted in an enclosure providing a degree of protection of at least IP 6X in accordance with EN 60529. The surface temperature of the enclosure shall be determined after installation of the transmitter.
3. For an ambient temperature $\geq 60 \text{ }^\circ\text{C}$, 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. 212919900/1.