

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 03ATEX1537**

Issue Number: **9**

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

(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., 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 214349600/1.

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

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

**EN 60079-26 : 2007
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 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 or T4 Ga
II 1 D Ex ia IIIC Da
I M 1 Ex ia I Ma**

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 EC-Type Examination Certificate KEMA 03ATEX1537**

Issue No. 9

(15) **Description**

The 2-Wire Transmitters Type 5335D with HART 5 protocol, Type 5336D with HART 6 protocol 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.

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 IIC Ga

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to EN 60529.

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 EN 60529, that is suitable for the application and is correctly installed.

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

Type of protection Ex ia IIIC Da

The transmitter shall be mounted in a metal enclosure that provides a degree of protection of at least IP6X according to EN 60529. 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 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, 4, 5 and 6):

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I Ma, with the 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 galvanically isolated from the supply and output circuit.

However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500 Vac during 1 minute.

Installation instructions

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

(16) **Test Report**

No. 214349600/1.

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 03ATEX1537**

Issue No. **9**

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

None.

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

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 214349600/1.