CERTIFICATE

(1) Type Examination

(2) **Product intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) Type Examination Certificate Number: **DEKRA 20ATEX0096 X** Issue Number: **0**

(4) Product: **2-wire Programmable Transmitter**
Type 5331A, 5332A, 5334A** and Type 6331A**, 6334A****

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

(6) Address: **Lerbakken 10, 8410 Rønde, 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., 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 Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential test report no. NL/DEK/ExTR20.0063/00.

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

EN IEC 60079-0 : 2018
EN 60079-11 : 2012
EN 60079-7 : 2015 + A1:2018
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 Type Examination Certificate relates only to the design and construction of the specified product and not to the manufacturing process and its monitoring.

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

II 3 G Ex nA [ic] IIC T6 … T4 Gc
II 3 G Ex ec [ic] IIC T6 … T4 Gc
II 3 G Ex ic IIC T6 … T4 Gc
II 3 D Ex ic IIIC Dc

Date of certification: 14 April 2021

DEKRA Certification B.V.

R. Schuller
Certification Manager

DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
T +31 88 96 83000 F +31 88 96 83100 www.dekra-product-safety.com Registered Arnhem 09085396

(13) # SCHEDULE

(14) **to Type Examination Certificate DEKRA 20ATEX0096 X** Issue No. **0**

(15) **Description**

The 2-wire Programmable Transmitter, head mounted Type 5331A**, 5332A, 5334A** and rail mounted Type 6331A**, 6334A**, is used to convert the temperature measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal.

The 5000 series transmitter is suitable for mounting in a metal enclosure form B according to DIN 43729 and consists of one channel.
The 6000 transmitter is suitable for rail mounting, with one or two independent channels.

Type designation

Following models numbers are applicable depending on the Equipment Protection Level (EPL), mounting type and number of channels:

EPL	Head mounted	Rail mounted	
	1 channel	1 channel	2 channels
Gc, Dc	5331A** 5332A 5334A**	6331A*A 6334A*A	6331A*B 6334A*B

Thermal data

For EPL Gc (Ex ic):
The relation between ambient temperature range and temperature class:

Temperature class	U_i = 35 V	U_i = 24 V
	Ambient temperature range	Ambient temperature range
T6	-40 °C to +54 °C	-40 °C to +63 °C
T5	-40 °C to +69 °C	-40 °C to +78 °C
T4	-40 °C to +85 °C	-40 °C to +85 °C

For EPL Gc (Ex ec, Ex nA):
The relation between ambient temperature range and temperature class:

Temperature class	U_{max} = 35 V	U_{max} = 24 V
	Ambient temperature range	Ambient temperature range
T6	-40 °C to +43 °C	-40 °C to +55 °C
T5	-40 °C to +85 °C	-40 °C to +85 °C
T4	-40 °C to +85 °C	-40 °C to +85 °C

For EPL Dc:
The surface temperature of the outer enclosure is +20 K above the ambient temperature, determined without a dust layer.
Ambient temperature range: -40 °C to +85 °C

(13) # SCHEDULE

(14) **to Type Examination Certificate DEKRA 20ATEX0096 X** Issue No. **0**

Electrical data

Type of protection Ex ic

Supply / output circuit (terminals 1 and 2, for head mounted):
Supply and output circuit (terminals 11 - 13, respectively 21 - 23, for rail mounted):
in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):
U_i = 35 V; I_i = 110 mA; C_i = 1 nF; L_i = 10 µH.
or
U_i = 24 V; I_i = 260 mA; C_i = 1 nF; L_i = 10 µH.

Sensor circuit (terminals 3, 4, 5 and 6, for head mounted):
Sensor circuit (terminals 41 ... 44, respectively 51 … 54, for rail mounted):
in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):
U_o = 9,6 V; I_o = 25 mA; P_o = 60 mW; C_o = 2,4 µF; L_o = 33 mH.

Type of protection Ex nA, Ex ec

Supply / output circuit (terminals 1 and 2, for head mounted):
Supply and output circuit (terminals 11 - 13, respectively 21 - 23, for rail mounted):
in type of protection non sparking Ex nA or Ex ec:
U_{max} ≤ 35 Vdc
or
U_{max} ≤ 24 Vdc

Sensor circuit (terminals 3, 4, 5 and 6, for head mounted):
Sensor circuit (terminals 41 ... 44, respectively 51 … 54, for rail mounted):
in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):
U_o = 9,6 V; I_o = 25 mA; P_o = 60 mW; C_o = 2,4 µF; L_o = 33 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 500 Vac during 1 minute.

Installation instructions

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

(16) **Report Number**

No. NL/DEK/ExTR20.0063/00.

(13) # SCHEDULE

(14) **to Type Examination Certificate DEKRA 20ATEX0096 X** Issue No. **0**

(17) **Specific conditions of use**

For ambient temperature range see (15).

If the enclosure is made of non-metallic plastic materials, electrostatic charges on the transmitter enclosure shall be avoided.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex ic, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP20 according to IEC 60259, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Dc, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP5X according to IEC 60079-0, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex nA or Ex ec, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP54 according to IEC 60079-0, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex nA or Ex ec, the equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.

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

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/DEK/ExTR20.0063/00.

(20) **Certificate history**

Issue 0 - 224097400 initial certificate