

# 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: **DEKRA 11ATEX0247 X** Issue Number: **3**

(4) Product: **HART-Transparent Driver, Types 9107BA, 9107BB and Types 9107AA, 9107AB**

(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/DEK/ExTR11.0102/02.

(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 60079-15 : 2019**

**EN 60079-7 : 2015 + A1 : 2018**

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 Ga] IIC/IIB/IIA  
II (1) D [Ex ia Da] IIIC  
I (M1) [Ex ia Ma] I**

Date of certification: 23 June 2020

DEKRA Certification B.V.

R. Schuller  
Certification Manager



(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 11ATEX0247 X**

Issue No. 3

(15) **Description**

HART-Transparent Drivers, Types 9107BA, 9107BB and Types 9107AA, 9107AB for rail mounting, are 24 V powered isolating barriers that serve as current output isolators for 4 - 20 mA signals with HART communication.

The HART-Transparent Driver, Types 9107BA, 9107AA are one channel version and Types 9107BB, 9107AB are two channel version.

The Driver provides a potential free contact for status indication.

The Driver is supplied via terminals at the front of the module, or via Power Rail Type 9400. Removable display module 4501 can be used for programming of the Driver.

Ambient temperature range -20 °C to +60 °C.

**Marking**

The equipment marking may additionally include the code II 3 G Ex ec nC IIC T4 Gc

**Electrical data**

All Repeater Types

Supply (terminals 31, 32 and rear contacts):  $U = 19,2 \dots 31,2$  Vdc.

Status-Relay output (terminals 33, 34):

$U \leq 32$  Vac or 32 Vdc,  $I \leq 0,5$  Aac or  $I \leq 1$  Adc respectively.

If the Driver is installed outside the hazardous area, the following data for the relay contacts apply:

$U \leq 110$  Vdc or 125 Vac,  $I \leq 0,3$  Adc or  $I \leq 0,5$  Aac respectively.

Inputs (terminals 11, 12 resp. 13, 14):  $I = 4 \dots 20$  mA.

For all circuits above:  $U_m = 253$  Vac (max. frequency 400 Hz).

Repeater Types 9107BA, 9107BB

Outputs (terminals 41, 42 resp. terminals 51, 52):

in type of protection intrinsic safety Ex ia IIC/IIB/IIA/IIIC/I, with following maximum values:

$U_o = 28$  V;  $I_o = 93$  mA;  $P_o = 0,65$  W;

$C_o = 0,08$   $\mu$ F (IIC) or 0,65  $\mu$ F (IIB) or 2,15  $\mu$ F (IIA) or 3,76  $\mu$ F (I);

$L_o = 4$  mH (IIC) or 16 mH (IIB) or 32 mH (IIA) or 25 mH (I).

For group IIIC, the parameters of group IIB apply.

Both channels (terminals 41...44 and terminals 51...54) are infallibly galvanically isolated from each other and from the non-intrinsically safe supply and output circuits.

**Installation instructions**

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



