



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	IECEX DEK 14.0071X	Issue No: 1	Certificate history: Issue No. 1 (2016-07-12) Issue No. 0 (2015-01-12)
Status:	Current	Page 1 of 4	
Date of Issue:	2016-07-12		
Applicant:	PR Electronics A/S Lerbakken 10 8410 Rønde Denmark		
Equipment:	Profibus PA / Foundation Fieldbus transmitter, Type 6350B2A , 6350B2B, 6350A2A and 6350A2B		
Optional accessory:			
Type of Protection:	Ex i, Ex n		
Marking:	For Type 6350B2A and Type 6350B2B: Ex ia IIC T6 ... T4 Ga Ex ia IIIC Da Ex ib [ia Ga] IIC T6 ... T4 Gb Ex ia I Ma For Type 6350A2A and Type 6350A2B: Ex nA [ic] IIC T6 ... T4 Gc or Ex ic IIC T6 ... T4 Gc or Ex ic IIIC Dc		

Approved for issue on behalf of the IECEx  
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:  
(for printed version)

Date:

2016-07-12

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

DEKRA Certification B.V.  
Meander 1051,  
6825 MJ Arnhem  
The Netherlands





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Manufacturer: **PR Electronics A/S**  
Lerbakken 10  
8410 Rønne  
Denmark

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

#### Test Report:

NL/DEK/ExTR14.0078/00      NL/DEK/ExTR14.0078/01

#### Quality Assessment Report:

NL/DEK/QAR13.0017/02



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Profibus PA / Foundation Fieldbus Transmitter, Type 6350B2A , 6350B2B, 6350A2A and Type 6350A2B, for rail mounting, with one or two independent channels, converts the measurement signals of temperature sensors, mV signals or mA signals into a Profibus PA fieldbus or a Foundation Fieldbus.

For electrical and thermal data, refer to the attachment to this certificate.

### CONDITIONS OF CERTIFICATION: YES as shown below:

For electrical and thermal data, refer to the attachment to this certificate.

The transmitter shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.

If the transmitter is applied in type of protection "Ex nA", it shall be installed in an enclosure that is Ex nA certified according to IEC 60079-15 or "Ex e" certified and suitable for the application and correctly installed.  
Cable entry devices and blanking elements shall fulfill the same requirements.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ga, Gb, Da, Db, Ma or Mb, and if the enclosure is made of aluminium, it must be installed such, that ignition sources due to impact and friction sparks are excluded.

Electrostatic charges on the transmitters enclosure shall be avoided.



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

- Minor change in the technical documents.
- The IEC 60079-26 removed, per edition 3 no longer required for this equipment.

**Annex:**

219392300 - Annex 1 IECEX DEK 14.0071X.pdf

**Annex 1 to Certificate of Conformity IECEx DEK 14.0071 X, issue 1**  
**Annex 1 to NL/DEK/ExTR/14.0078/01**  
**Annex 1 to KEMA 03ATEX1012 X, issue 4**

**General product information:**

Profibus PA / Foundation Fieldbus Transmitter Type 6350, for rail mounting, with one or two independent channels, converts the measurement signals of temperature sensors, mV signals or mA signals into a Profibus PA fieldbus or to a Foundation Fieldbus.

For marking Ex ia IIC T6 ... T4 Ga and Ex ic IIC T6 ... T4 Gc

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to EN/IEC 60529 and that is suitable for the application and correctly installed.  
Ambient temperature range is specified under chapter "Electrical and thermal data".

For marking Ex ia IIIC Da and Ex ic IIIC Dc

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP6X according to EN/IEC 60529, and that is suitable for the application and correctly installed.  
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.  
Ambient temperature range: -40 °C to +85 °C

For marking Ex ia I Ma

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP6X according to EN/IEC 60529, and that is suitable for the application and correctly installed.  
Ambient temperature range: -40 °C to +85 °C

For marking Ex nA [ic] IIC T6 ... T4 Gc

If the transmitter is applied in type of protection "Ex nA", it shall be installed in an enclosure that is Ex nA certified according to IEC-EN 60079-15 or "Ex e" certified and suitable for the application and correctly installed.  
Ambient temperature range: -40 °C to +85 °C for temperature class T4,  
-40 °C to +75 °C for temperature class T5,  
-40 °C to +60 °C for temperature class T6.

**Electrical and thermal data**

Fieldbus input circuit (terminals 11 and 12, respectively 21 and 22):

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, only for connection to a certified intrinsically safe circuit, with the following maximum values (per circuit):

$U_i = 30 \text{ V}$ ;  $I_i = 120 \text{ mA}$ ;  $P_i = 0,84 \text{ W}$ .  
 $T_a \leq 85 \text{ °C}$ : Temperature class T4  
 $T_a \leq 70 \text{ °C}$ : Temperature class T5  
 $T_a \leq 60 \text{ °C}$ : Temperature class T6 or

$U_i = 30 \text{ V}$ ;  $I_i = 300 \text{ mA}$ ;  $P_i = 1,3 \text{ W}$ .  
 $T_a \leq 75 \text{ °C}$ : Temperature class T4  
 $T_a \leq 65 \text{ °C}$ : Temperature class T5  
 $T_a \leq 45 \text{ °C}$ : Temperature class T6

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or for connection to a certified intrinsically safe circuit in accordance with FISCO, with following maximum values:

$U_i = 17,5 \text{ V}$ ;  $I_i = 250 \text{ mA}$ ;  $P_i = 2,0 \text{ W}$ .  
 $T_a \leq 85 \text{ °C}$ : Temperature class T4  
 $T_a \leq 60 \text{ °C}$ : Temperature class T5  
 $T_a \leq 45 \text{ °C}$ : Temperature class T6 or

$U_i = 15 \text{ V}$ ;  $I_i = 900 \text{ mA}$ ;  $P_i = 5,32 \text{ W}$ .  
 $T_a \leq 85 \text{ °C}$ : Temperature class T4  
 $T_a \leq 60 \text{ °C}$ : Temperature class T5  
 $T_a \leq 45 \text{ °C}$ : Temperature class T6

or in type of protection intrinsic safety Ex ib IIC, only for connection to a certified intrinsically safe fieldbus, with following maximum values:

$U_i = 30 \text{ V}$ ;  $I_i = 250 \text{ mA}$ ;  $P_i = 5,32 \text{ W}$ .  
 $T_a \leq 85 \text{ °C}$ : Temperature class T4  
 $T_a \leq 75 \text{ °C}$ : Temperature class T5  
 $T_a \leq 60 \text{ °C}$ : Temperature class T6

or for connection to a certified intrinsically safe circuit in accordance with FISCO, with following maximum values:

$U_i = 17,5 \text{ V}$ ;  $I_i = \text{any}$   $P_i = \text{any}$ .  
 $T_a \leq 85 \text{ °C}$ : Temperature class T4  
 $T_a \leq 75 \text{ °C}$ : Temperature class T5  
 $T_a \leq 60 \text{ °C}$ : Temperature class T6

The effective internal capacitance and the effective internal inductance of the Fieldbus input circuit are:  
 $C_i = 2 \text{ nF}$ ;  $L_i = 1 \text{ }\mu\text{H}$ .

**Sensor Circuit (terminals 41...44, respectively 51...54):**

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, with following maximum values:  
 $U_o = 5,7 \text{ V}$ ;  $I_o = 8,4 \text{ mA}$ ;  $P_o = 12 \text{ mW}$ ;  $C_o = 40 \text{ }\mu\text{F}$ ;  $L_o = 200 \text{ mH}$ .

**Current Measurement Input Circuit (terminals 13 and 14, respectively 23 and 24):**

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, only for connection to a certified intrinsically safe circuit, with the following maximum values (per circuit):  
 $U_i = 30 \text{ V}$ ,  $I_i = 140 \text{ mA}$ ,  $P_i = 1 \text{ W}$ ,  $C_i = 0 \text{ nF}$ ,  $L_i = 0 \text{ mH}$

The Sensor Circuit and the Current Measurement Input Circuit are not infallibly galvanic isolated from the Fieldbus input circuit. However, the galvanic isolation is capable of withstanding a test voltage of 500Vac during 1 minute.

The Sensor Circuit is galvanically connected to the Current Measurement Input Circuit and only one circuit can be connected at a time.

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Types of protection Ex ic and Ex nA

Ambient temperature range: -40 °C to +85 °C for temperature class T4,  
-40 °C to +75 °C for temperature class T5,  
-40 °C to +60 °C for temperature class T6.

Fieldbus Input Circuits (terminals 11 and 12, respectively 21 and 22):

in type of protection non sparking Ex nA, with

$U_{max} \leq 32$  Vdc, or

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, for connection to an intrinsically safe circuit, with the following maximum values (per circuit):

$U_i = 32$  V;  $C_i = 2$  nF;  $L_i = 1$   $\mu$ H;

or for connection to a intrinsically safe circuit in accordance with FISCO, with following maximum values:

$U_i = 17,5$  V;  $C_i = 2$  nF;  $L_i = 1$   $\mu$ H;

Sensor Circuit (terminals 41 ... 44, respectively 51 ... 54), in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

$U_o = 5,7$  V;  $I_o = 8,4$  mA;  $P_o = 12$  mW;  $C_o = 40$   $\mu$ F;  $L_o = 200$  mH.

Current Measurement Input Circuits (terminals 13 and 14 , respectively 23 and 24):

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

$I_i = -100$  mA to +100 mA;

The Sensor Circuit and the Current Measurement Input Circuit are not infallibly galvanic isolated from the Fieldbus input circuit. However, the galvanic isolation is capable of withstanding a test voltage of 500Vac during 1 minute.

The Sensor Circuit is galvanically connected to the Current Measurement Input Circuit and only one circuit can be connected at a time.