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

Certificate No.:	IECEx BVS 12.0035X issue No.:0	Certificate history:
Status:	Current	
Date of Issue:	2012-05-29	Page 1 of 3

Applicant: **PR electronics A/S**
Lerbakken 10
8410 Rønde
Denmark

Electrical Apparatus: **Fieldbus transmitter, type 5350 B**
Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "i", Equipment protection by type of protection "n"**

Marking:
Ex ia IIC T4 ... T6 Ga
Ex ib [ia Ga] IIC T4 ... T6 Gb
Ex ia IIIC T 135°C Da
Ex ia I Ma
Ex nA [ic] T4 ... T6 Gc
Ex ic IIC t4 ... T6 Gc

Approved for issue on behalf of the IECEx Certification Body: Head of Certification Body

Position: H.-Ch. Simanski

Signature: (for printed version)

Date: 29/5/2012

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.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

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Certificate No.: IECEx BVS 12.0035X

Date of Issue: **2012-05-29** Issue No.: **0**

Manufacturer: **PR electronics A/S**
Lerbakken 10
8410 Rønde
Denmark

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 : 2011-06 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:
DE/BVS/ExTR12.0038/00

Quality Assessment Report:

NL/KEM/QAR07.0004/03

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Schedule

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

The transmitter is used to convert a temperature measuring signal of a temperature sensor into an electrical signal.

Parameters

see Annex

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The sensor circuit is not infallibly galvanic isolated from the input circuit. However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500 Vac during 1 minute.

2. For an ambient temperature ≥60 °C, suitable cables shall be used with a rating of at least 20 K above the ambient temperature.

3. For installation in a potentially explosive gas atmosphere, requiring EPL Ga or EPL Gb, the following instructions apply: the transmitter shall be mounted in an enclosure that is providing a degree of protection of at least IP54 according to IEC 60529 that is suitable for the application and correctly installed.

4. For installation in a potentially explosive gas atmosphere, requiring EPL Gc, the following instructions apply: The transmitter shall be mounted in an enclosure that is according to IEC 60079-15, that is suitable for the application and correctly installed.

5. For installation in a potentially explosive dust atmosphere, requiring EPL Da or EPL Db, the following instructions apply: The transmitter shall be mounted in an enclosure, that is providing a degree of protection of at least IP6X according to IEC 60079-0 and IEC 60079-31 "Equipment dust ignition protection by enclosure tD", that is suitable for the application and correctly installed. Cable entries and blanking elements shall be used that are suitable for the application and correctly installed.

6. For installation in mines, requiring EPL Ma or EPL Mb the following instructions apply: The transmitter shall be mounted in an enclosure that is providing a degree of protection of at least IP54, and is suitable for the application and correctly installed. Cable entries and blanking elements shall be used that are suitable for the application and correctly installed.

Annexe: BVS_12_0035X_PR_Electronics_Annex.pdf

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Annex

Parameters

1 Fieldbus supply circuit (terminals 1 and 2)

1.1 For connection to a certified intrinsically safe circuit type of protection Ex ia IIC or Ex ia IIIC or Ex ia I

Voltage	Ui	DC	30	V
Current	Ii		120	mA
Power	Pi		840	mW

Ambient temperature range	Ta	
for use in temperature class T1 to T4		-40 °C to +85 °C
for use in temperature class T1 to T5		-40 °C to +70 °C
for use in temperature class T1 to T6		-40 °C to +60 °C
for use in Group I		-40 °C to +85 °C

Max. surface temperature for DUST application (without dust layer) 135 °C

or

Voltage	Ui	DC	30	V
Current	Ii		300	mA
Power	Pi		1.3	W

Ambient temperature range	Ta	
for use in temperature class T1 to T4		-40 °C to +75 °C
for use in temperature class T1 to T5		-40 °C to +65 °C
for use in temperature class T1 to T6		-40 °C to +45 °C
for use in Group I		-40 °C to +85 °C

Max. surface temperature for DUST application (without dust layer) 135 °C

1.2 For connection to a certified intrinsically safe fieldbus circuit in acc. with FISCO type of protection Ex ia, used as FISCO Field device

Voltage	Ui	DC	17.5	V
Current	Ii		250	mA
Power	Pi		2	W
or				
Voltage	Ui	DC	15	V
Current	Ii		900	mA
Power	Pi		5.32	W

Ambient temperature range	Ta	
for use in temperature class T1 to T4		-40 °C to +85 °C
for use in temperature class T1 to T5		-40 °C to +60 °C
for use in temperature class T1 to T6		-40 °C to +45 °C
for use in Group I		-40 °C to +85 °C

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1.3 For connection to a certified intrinsically safe circuit type of protection Ex ib IIC

Voltage	Ui	DC	30	V
Current	Ii		250	mA
Power	Pi		5.32	W

Ambient temperature range	Ta
for use in temperature class T1 to T4	-40 °C to +85 °C
for use in temperature class T1 to T5	-40 °C to +75 °C
for use in temperature class T1 to T6	-40 °C to +60 °C
for use in Group I	-40 °C to +85 °C

1.4 For connection to a certified intrinsically safe fieldbus circuit in acc. with FISCO type of protection Ex ib IIC, used as FISCO Field device

Voltage	Ui	DC	17.5	V
Current	Ii			any
Power	Pi			any

Ambient temperature range	Ta
for use in temperature class T1 to T4	-40 °C to +85 °C
for use in temperature class T1 to T5	-40 °C to +75 °C
for use in temperature class T1 to T6	-40 °C to +60 °C
for use in Group I	-40 °C to +85 °C

1.5 For connection to a certified intrinsically safe circuit type of protection Ex ic IIC

Voltage	Ui	DC	32	V
Current	Ii			any
Power	Pi			any

Ambient temperature range	Ta
for use in temperature class T1 to T4	-40 °C to +85 °C
for use in temperature class T1 to T5	-40 °C to +75 °C
for use in temperature class T1 to T6	-40 °C to +60 °C
for use in Group I	-40 °C to +85 °C

In all cases the internal capacitance and inductance of that circuit is:

Internal capacitance	Ci	2	nF
Internal inductance	Li	1	µH

2 Sensor circuit (terminals 3, 4, 5 and 6) type of protection Ex ia

Voltage	Uo	DC	5.7	V
Current	Io		8.4	mA
Power	Po		12	mW
External capacitance	Co		40	µF
External inductance	Lo		200	mH