CERTIFICATE OF CONFORMITY

1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** **FM17US0013X**
3. **Equipment:** **5331D3B, 5332D, 5333D, 5343B. Temperature Transmitters.**
   (Type Reference and Name) **5335D, 5337D Temperature Transmitters.**

   6332x1z Temperature Transmitters.
   6331x2z. Temperature Transmitters.
   6333x1z. Temperature Transmitters.
   6335D2z, 6336D2z 6337D2z. Temperature Transmitters.
4. **Name of Listing Company:** **PR electronics A/S**
5. **Address of Listing Company:** **Lerbakken 10**
   DK-8410 Ronde
   Denmark
6. The examination and test results are recorded in confidential report number:

   2D5A7.AX dated 12th November 1999
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

   FM Class 3600:2018, FM Class 3610:2018, FM Class 3611:2018, FM Class 3810:2005, ANSI/ISA 60079-0:2009, ANSI/UL 60079-11:2009
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

Certificate issued by:

J.E. Marquedant
Manager, Electrical Systems

21 September 2018
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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10. Equipment Ratings:
Models **5331D3B, 5332D, 5333D, 5335D, 5337D, 5343B, 6331*B2z, 6332B1z 6333*B1z, 6335D2z, 6336D2z and 6337D2z** are Intrinsically safe for Class I, Division 1, Groups A, B, C and D, and for Class I, Zone 0, IIC hazardous (classified) locations.

Models **5331D3B, 5332D, 5333D, 5335D, 5337D, 5343B, 6331x2z, 6332x1z and 6333x1z** are suitable for Class I, Division 2, Groups A, B, C, and D hazardous (classified) locations.

Models **6331A2z, 6331B2z, 6333A1z, 6333B1z, 6332A1z and 6332B1z** are suitable for Class I, Zone 2, IIC hazardous (classified) locations.

Models **5331D3B, 5332D, 5333D, 5335D, 5337D, 5343B, 6331x2z 6332x1z and 6333x1z** are associated nonincendive for Class 1, Division 2, Groups A, B, C and D hazardous (classified) locations.

All Models are suitable for indoor use with an ambient temperature rating of -40°C to +60°C (T6), and -40°C to +85°C (T4).

*See Model Code Structure

11. The marking of the equipment shall include:
5331D3B, 5332D, 5333D, 5343B, 5335D, 5337D Temperature Transmitters.
Intrinsically Safe for Class I, Division 1, Groups A, B, C, D; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C – 5300Q502; Entity
Intrinsically Safe for Class I, Zone 0, AEx ia, IIC; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C – 5300Q502; Entity
Nonincendive for Class I, Division 2, Groups A, B, C, D; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C
Associated Nonincendive for Class I, Division 2, Groups A, B, C, D – 5300Q502 Nonincendive Field Wiring

6331x2z. Temperature Transmitters.
Intrinsically Safe for Class I, Division 1, Groups A, B, C, D; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C – 6331QF01; Entity
Intrinsically Safe for Class I, Zone 0, AEx ia, IIC; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C – 6331QF01; Entity
Nonincendive for Class I, Division 2, Groups A, B, C, D; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C
Nonincendive for Class 1, Zone 2, IIC; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C
Associated Nonincendive for Class I, Division 2, Groups A, B, C, D – 6331QF01 Nonincendive Field Wiring

6332x1z. Temperature Transmitters.
Intrinsically Safe for Class I, Division 1, Groups A, B, C, D; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C – 6332QF01; Entity
Intrinsically Safe for Class I, Zone 0, AEx ia, IIC; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C – 6332QF01; Entity
Nonincendive for Class I, Division 2, Groups A, B, C, D; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C
Nonincendive for Class 1, Zone 2, IIC; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C
Associated Nonincendive for Class I, Division 2, Groups A, B, C, D – 6332QF01 Nonincendive Field Wiring

6333x1z. Temperature Transmitters.
Intrinsically Safe for Class I, Division 1, Groups A, B, C, D; T6 Ta = -40^{0}C to +60^{0}C; T4 Ta = -40^{0}C to +85^{0}C – 6333QF01; Entity

Intrinsically Safe for Class I, Zone 0, AEx ia, IIC; T6 Ta = -40°C to +60°C; T4 Ta = -40°C to +85°C – 6333QF01; Entity
Nonincendive for Class I, Division 2, Groups A, B, C, D; T6 Ta = -40°C to +60°C; T4 Ta = -40°C to +85°C
Nonincendive for Class 1, Zone 2, IIC; T6 Ta = -40°C to +60°C; T4 Ta = -40°C to +85°C
Associated Nonincendive for Class I, Division 2, Groups A, B, C, D – 6333QF01 Nonincendive Field Wiring

6335D2z, 6336D2z, 6337D2z. Temperature Transmitters.
Intrinsically Safe for Class I, Division 1, Groups A, B, C, D; T6 Ta = -40°C to +60°C; T4 Ta = -40°C to +85°C – 6335QF01; Entity
Intrinsically Safe for Class I, Zone 0, AEx ia, IIC; T6 Ta = -40°C to +60°C; T4 Ta = -40°C to +85°C – 6335QF01; Entity

12. **Description of Equipment:**

General – The transmitters listed on this certificate are 2-Wire head-mount and DIN rail-mount type temperature transmitters.

Construction – Enclosure and installation requirements for these head-mounted and DIN rail-mounted transmitters are based on the requirements of the ultimate application.

Ratings – Transmitters are rated for use at an ambient temperature of -40°C to +60°C (T6), and -40°C to +85°C (T4).

Entity and Nonincendive Field Circuit Parameters

5331D3B, 5332D, 5333D, 5343B. Temperature Transmitters.
Entity Parameters:
VMax = 30V, IMax = 120 mA, PMax = 0.84W, Ci = 1nF, Li = 10µH.
NI Field Circuit Parameters:
VMax =35 V, Ci =1nF, Li = 10 µH.

5335D, 5337D Temperature Transmitters.
Entity Parameters:
V Max = 30 V, I Max = 120 mA, P Max = 0.84 W, C i =1 nF, L i = 10 µH;
V t = 9.6 V, I t = 28 mA, C a = 3.5 µF, L a = 35 mH, P o = 67.2 mW.
NI Field Circuit Parameters:
VMax =35 V, Ci =1 nF, Li =10 µH.

6331x2z, 6332x1z. Temperature Transmitters.
Entity Parameters:
V Max = 30V, I Max = 120mA, PMax = 0.84W, Ci = 1nF, Li = 10 µH.
NI Field Circuit Parameters:
V Max =35 V, Ci =1nF, Li = 10 µH.

6333x1z. Temperature Transmitters.
Entity Parameters:
VMax = 30V, IMax = 120mA, P Max = 0.84W, Ci = 6.2nF, Li = 10 µH.
NI Field Circuit Parameters:
VMax =35 V, Ci =6.2nF, Li = 10 µH.

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6335D2z, 6336D2z, 6337D2z. Temperature Transmitters.
Entity Parameters:
VMax = 30 V, IMax = 120 mA, Pi = 0.84 W, Ci =1nF, Li = 10 µH;
Vt = 9.6 V, It = 28 mA, Ca = 3.5 µF, La = 35 mH, Po = 67.2 mW.

Model Code Structure

5331D3B, 5332D, 5333D, 5343B Temperature Transmitters.
No Model Code

5335D, 5337D Temperature Transmitters.
No Model Code

6335D2z, 6336D2z, 6337D2z Temperature Transmitters.
z = A (One Channel), B (Two Channels).

6331x2z, 6332x1z, 6333x1z Temperature Transmitters.
x = A (Zone 2 / DIV 2); B (Zone 0 / DIV 1 and Zone 2 / DIV2).
z = A (One Channel); B (Two Channel).

13. **Specific Conditions of Use:**

1. The transmitter shall be installed in compliance with the enclosure, mounting, and spacing, and segregation requirement of the ultimate application.

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
12th November 1999	Original Issue.

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19th February 2017	Supplement 12: Report Reference: – RR207736 dated 19th February 2017 Description of the Change: Reformat of Certificate.
21st September 2018	Supplement 13: Report Reference: – RR215516 dated 21st September 2018 Description of the Change: Addition of models 5332D, 6332A, 6332D.