1 EU-TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No:** **FM17ATEX0037X**

4 **Equipment or protective system: (Type Reference and Name)** **Model THZ^3 Temperature Transmitter**
Model STZ Temperature Transmitter

5 **Name of Applicant:** **Moore Industries-International, Inc.**

6 **Address of Applicant:** **16650 Schoenborn Street**
North Hills, CA 91343
United States of America

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26th February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3058468 dated 06th September 2017

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN 60079-0:2012+A11:2013, EN 60079-11:2012 and EN 60079-15:2010

10 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.

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:

II (1) G [Ex ia Ga] IIC; Tamb = -40°C to +85°C

II 3 (1) G Ex nA [ia Ga] IIC T4 Gc; Tamb = -40°C to +85°C

Damien Mc Ardle

Damien Mc Ardle
Certification Manager, FM Approvals Europe Ltd.

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FM Approvals Europe Ltd. One Georges Quay Plaza, Dublin. Ireland. D02 E440
T: +353 (0) 1761 4200 E-mail: atex@fmapprovals.com www.fmapprovals.com

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13 **Description of Equipment or Protective System:**

General - The Moore Industries Models THZ³ and Model STZ Temperature Transmitters accept one or two sensor inputs for measuring process temperatures. Simple apparatus sensors are meant to be connected to the temperature transmitters. A 4-20mA signal provides the information back to the control equipment.

The Temperature Transmitters are for installation in the non-hazardous location or for installation as Equipment Group II, Category 3G equipment location with Intrinsically Safe connections of simple apparatus sensors.

The electronics of the Models THZ³ and Model STZ Temperature Transmitters are installed in an aluminum DIN mount housing. The is housing approximately 135mm in length by 97.5mm in height by 28mm wide. The front side of the housing contains an exposed pluggable connector for the power wires and also an exposed fixed connector for sensor wire connections. The DIN mount housing is required to be installed in a final enclosure to complete the installation.

The Model STZ Temperature Transmitter has the same electronics as the THZ³ Temperature Transmitter and is offered with the same housing options. The STZ Temperature Transmitter is a "Safety Transmitter with HART" and includes a third party assessment to the IEC 61508 standard. This assessment was not included under the FM Approvals scope of work and the product was not assessed by FM to this standard. Software related to SIL levels and FMEDA differentiate the Model STZ transmitter from the Model THZ³ transmitter.

Ratings - The nominal power input of the Models THZ³ and Model STZ Temperature Transmitters is 12-42Vdc, 4-20mA. The ambient operating temperature range of the Model THZ³ and Model STZ Temperature Transmitters is -40°C to +85°C.

The following Intrinsically Safe (Sensor) Energy Limitation Parameters are
Uo = 7.94V, Io = 71.43mA, Po = 141.8mW
Group IIC, Co = 8.32µF, Lo = 6.96mH
Group IIB, Co = 99.92µF, Lo = 27.87mH
Group IIA, Co = 999.92µF, Lo = 55.74mH

THZ³**/a/b/c/-AIS d [e]. Dual Sensor Smart Hart Temperature Transmitter.**
a= Input: PRG, J-, K-, E-, T-, R-, S-, N-, B-, C-, MV, R1-, R2-, R3-, R4-, R5-, R6-, R7-, R8-, R9-, R10-, R11-, R12-, R13-, R14-, R0-, or POT-.
b= Output: 4-20mA.
c =Power: 12-42Vdc.
d = Options: -RF, -VTD, or -VTB.
e = DIN or FLB.

STZ/a/b/c/-AIS d [e]. Dual Sensor Smart Hart Temperature Transmitter.
a= Input: PRG, J-, K-, E-, T-, R-, S-, N-, B-, C-, MV, R1-, R2-, R3-, R4-, R5-, R6-, R7-, R8-, R9-, R10-, R11-, R12-, R13-, R14-, R0-, or POT-.
b= Output: 4-20mA.
c =Power: 12-42Vdc.
d = Options: -EMP, -VTD, or -VTB.
e = DIN or FLB.

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14 **Specific Conditions of Use:**

1. When installed in the non-hazardous area, the Model THZ[3] and STZ Temperature Transmitters shall be mounted within a tool-secured enclosure capable of accepting the applicable wiring methods specified in EN 60079-14. The enclosure shall, at a minimum, meet the requirements of IP20.
2. When installed as Category 3 equipment, the Model THZ[3] and STZ Temperature Transmitters shall be mounted within a tool-secured enclosure which meets the requirements of EN 60079-0 and EN 60079-15 and is capable of accepting the applicable wiring methods specified in EN 60079-14. The enclosure shall, at a minimum, meet the requirements of IP54.
3. Programming of the Model THZ[3] and STZ Temperature Transmitters through the communication port shall only be done in the unclassified location using the Moore Industries USB cable, Part Number 804-030-26.
4. The non-metallic parts incorporated in the Model THZ[3] and STZ Temperature Transmitter's DIN mount housing may generate an ignition-capable level of electrostatic charge. When installed as Category 3 equipment, the Model THZ[3] and STZ Temperature Transmitters shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. Additionally, the equipment shall only be cleaned with a damp cloth.
5. Using the box provided on the nameplate, the user shall permanently mark the type of protection chosen for the specific installation. Once the type of protection has been marked it shall not be changed.
6. When installed in Zone 2, the Model THZ[3] and STZ Temperature Transmitters shall be provided with supply transient protection external to the apparatus such that the voltage at the supply terminals does not exceed 119Vac peak or 119Vdc.

15 **Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 **Test and Assessment Procedure and Conditions:**

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
08th September 2017	Original Issue.

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Date	Description
15th April 2020	Supplement 1: Report Reference: – RR223093 dated 14th April 2020. Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809. Update labels and manuals

FM Approvals Europe Ltd. One Georges Quay Plaza, Dublin. Ireland. D02 E440
T: +353 (0) 1761 4200 E-mail: atex@fmapprovals.com www.fmapprovals.com