



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 FME 07.0003X** issue No.:1

Status: **Current**

Certificate history:
Issue No. 1 (2013-1-30)
Issue No. 0 (2008-3-10)

Date of Issue: **2013-01-30** Page 1 of 6

Applicant: **Moore Industries International**
16650 Schoeborn Street
Noth Hills, CA 91343
United States of America

Electrical Apparatus: **Model TFZ and Model TPZ Temperature Transmitters**
Optional accessory:

Type of Protection: **Intrinsic Safety 'i' & Type "n" Electrical Apparatus**

Marking: TFZ Temperature Transmitter
Ex ia IIC T4 Ga Ta = -40°C to 85°C
Ex nA nL IIC T4 Ta = -40°C to 85°C
TPZ Temperature Transmitter
Ex ia IIC T4 Ga Ta = -40°C to 85°C
Ex nA IIC T4 Ta = -40°C to 85°C

Approved for issue on behalf of the IECEX Mick Gower
Certification Body:

Position: Certification Manager

Signature:
(for printed version)

Date:

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:

FM Approvals Ltd
1 Windsor Dials
SL4 1RS Windsor
United Kingdom





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Manufacturer: **Moore Industries International**
16650 Schoeborn Street
Noth Hills, CA 91343
United States of America

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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2005-03 Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
IEC 60079-27 : 2005-04 Edition: 1.0	Electrical apparatus for explosive atmospheres- Part 27: Fieldbus intrinsically safe concept (FISCO) and Fieldbus non-incendive concept (FNICO)

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:
GB/FME/ExTR08.0001/00

Quality Assessment Report:
GB/SIR/QAR12.0007/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

TFZ/a/H1/b/-c [d]. Temperature Transmitter.

Energy Limitation Parameters:

Ui = 30Vdc, Ii = 300mA, Pi = 1.3W, Ci = 0μF, Li = 7.15μH.

FISCO Parameters:

Ui = 24Vdc, Ii = 380mA, Pi = 5.32W, Ci = 0μF, Li = 7.15μH.

Field Sensor Energy Limitation Parameters:

Uo = 6.51Vdc, Io = 34.75mA, Po = 55.97mW, Co = 20.53μF, Lo = 25mH (Group IIC)

Uo = 6.51Vdc, Io = 34.75mA, Po = 55.97mW, Co = 498.53μF, Lo = 100mH (Group IIB)

Uo = 6.51Vdc, Io = 34.75mA, Po = 55.97mW, Co = 998.53μF, Lo = 200mH (Group IIA).

a= Input: TPRG, J-, K-, E-, T-, R-, S-, N-, B-, C-, MV, R1-, R2-, R3-, R4-, R5-, R6-, R7-, R8, R9, R10-, R11-, R12-, R13-, R14-, RO- or POT-.

b= Power: 9-30Vdc (Intrinsically Safe), 9-24Vdc (FISCO).

c= Options: VTB or VTD.

d= Housing options: DN, FL, HP, TW or VDN.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. For Zone 0 installations the Model TPZ and TFZ Temperature Transmitters shall be installed in an enclosure which maintains an ingress protection rating of at least IP20.
2. For Zone 0 installations, the final enclosure shall not contain more than 10% in total of aluminum, magnesium, titanium and zirconium, or 7.5% in total of magnesium, titanium and zirconium; For Zone 1 installations, the final enclosure shall not contain 7.5% in total of magnesium.
3. Using the box provided on the nameplate, the user shall permanently mark the protection type chosen for the specific installation. Once the type of protection has been marked it shall not be changed.
4. The COM port shall not be used in the hazardous area.
5. If the Model TPZ and TFZ Temperature Transmitters are installed in Zone 2, they shall be installed in an enclosure which maintains an ingress protection rating of at least IP54 and meets the enclosure requirements of IEC 60079-0 and IEC 60079-15.

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EQUIPMENT(continued):

TFZ/a/H1/b/-c [d]. Temperature Transmitter.

a= Input: TPRG, J-, K-, E-, T-, R-, S-, N-, B-, C-, MV, R1-, R2-, R3-, R4-, R5-, R6-, R7-, R8-, R9-, R10-, R11-, R12-, R13-, R14-, RO- or POT-.

b= Power: 9-32Vdc

c= Options: VTB or VTD.

d= Housing options: DN, FL, HP, TW or VDN.

TPZ/a/PA/b/-c [d]. Temperature Transmitter.

Energy Limitation Parameters:

Ui = 30Vdc, Ii = 300mA, Pi = 1.3W, Ci = 0μF, Li = 7.15μH.

FISCO Parameters:

Ui = 24Vdc, Ii = 380mA, Pi = 5.32W, Ci = 0μF, Li = 7.15μH.

Field Sensor Energy Limitation Parameters:

Uo = 6.51Vdc, Io = 34.75mA, Po = 55.97mW, Co = 20.53μF, Lo = 25mH (Group IIC)

Uo = 6.51Vdc, Io = 34.75mA, Po = 55.97mW, Co = 498.53μF, Lo = 100mH (Group IIB)

Uo = 6.51Vdc, Io = 34.75mA, Po = 55.97mW, Co = 998.53μF, Lo = 200mH (Group IIA).

a= Input: TPRG, J-, K-, E-, T-, R-, S-, N-, B-, C-, MV, R1-, R2-, R3-, R4-, R5-, R6-, R7-, R8-, R9-, R10-, R11-, R12-, R13-, R14-, RO- or POT-.

b= Power: 9-30Vdc (Intrinsically Safe), 9-24Vdc (FISCO).

c= Options: VTB or VTD.

d= Housing options: DN, FL, HP, TW or VDN.

TPZ/a/PA/b/-c [d]. Temperature Transmitter.

a= Input: TPRG, J-, K-, E-, T-, R-, S-, N-, B-, C-, MV, R1-, R2-, R3-, R4-, R5-, R6-, R7-, R8-, R9-, R10-, R11-, R12-, R13-, R14-, RO- or POT-.

b= Power: 9-32Vdc. (Type n)

c= Options: VTB or VTD.

d= Housing options: DN, FL, HP, TW or VDN.



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

1. Updated QAR



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Additional information:

Conditions of certification (continued)

6. For Zone 2 installations the Model TPZ and TFZ Temperature Transmitters shall contain external transient protection to prevent the supply voltage from exceeding 46.2V including tolerance.