CERTIFICATE OF CONFORMITY

1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** **FM16US0259X**
3. **Equipment: (Type Reference and Name)** **Model FDY Programmable Frequency-To-DC Transmitter & Model SFY Functional Safety Frequency-To-DC Transmitter**
4. **Name of Listing Company:** **Moore Industries International, Inc.**
5. **Address of Listing Company:** **16650 Schoenborn street**
   North Hills, CA 91343
   USA
6. The examination and test results are recorded in confidential report number:

   3012093 dated 19th November 2001

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

   FM Class 3600:2011, FM Class 3610:2010, FM Class 3611:2004, 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.
10. Equipment Ratings:

    Model FDY: Intrinsically Safe (entity) for Class I, II, III Division 1, Groups A, B, C, D, E, F and G, T4 Ta = 60°C in accordance with control drawing 100-100-64; Class I, Zone 0, AEx ia IIC T4 Ta = 60° in accordance with control drawing 100-100-64; Nonincendive for Class I, Division 2, Groups A, B, C and D, T4 Ta = 60°.

    Model SFY: Nonincendive for Class I, Division 2, Groups A, B, C and D, T4 Ta = 60°.

Certificate issued by:

J. E. Marquedant
Manager, Electrical Systems

26 August 2016
Date

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

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SCHEDULE

US Certificate Of Conformity No: FM16US0259X

11. The marking of the equipment shall include:

Model FDY:

Intrinsically Safe: Vmax = 30V, Imax = 110 mA

Class I/II/III, Division 1, Gr A - G; entity; Class I, Zone 0, AEx ia IIC T4 Ta = 60°C

Nonincendive: Vmax = 42 Vdc, Imax = 110 mA

Class I, Division 2, GR A-D

Model SFY:

Nonincendive: Vmax = 42 Vdc, Imax = 110 mA

Class I, Division 2, GR A-D

12. **Description of Equipment:**

General - The Model FDY Frequency to DC Transmitter with display monitors frequency, period, high or low pulse width and contact closure signals. It converts the input signal to a proportional, input-to-output isolated 4-20 mA output, ready for direct interface with a readout instrument, recorder, PLY, DCS, SCADA system or other readout instrument. The 2-wire (loop powered) FDY is ideal for use in a wide range of process and factoryautomation monitoring applications.

The Model SFY Functional Safety Frequency to DC Transmitter with display monitors frequency, period, high or low pulse width and contact closure signals. It converts the input signal to a proportional, input-to-output isolated 4-20 mA output, ready for direct interface with a readout instrument, recorder, PLY, DCS, SCADA system or other readout instrument. The 2-wire (loop powered) SFY is ideal for use in a SIS (Safety Instrumented System) or in a wide range of process and factory automation monitoring applications.

Construction - The Model FDY Frequency to dc Transmitter is enclosed in a small round metallic enclosure that consists of four printed circuit boards and a terminal board. The face terminal board has a communication port, which is not for use in hazardous locations.

The Model SFY Functional Safety Frequency to DC Transmitter is enclosed in a small round metallic enclosure that consists of four printed circuit boards and a terminal board. The face terminal board has a communication port, which is not for use in hazardous locations.

SCHEDULE

US Certificate Of Conformity No: FM16US0259X

Ratings - The Model FDY Frequency to dc Transmitter operates at 30 Vdc maximum, 110 mA, Pi = 0.825w. The transmitters are rated for use in an ambient temperature range of -40°C to +60°C.

The model SFY Safety Frequency to dc Transmitter operates at 12-42 Vdc. The transmitters are rated for use in an ambient temperature range of -40°C to +60°C

FDY/a/4-20mA/b/c [d]. PC. Programmable Frequency-To-DC Transmitter
a = Input F1, F2, P1 or P2.
b =Voltage 12-30DC or 12-42DC.
c = Options -ISF or –FMEDA or blank.
d = Housing BH, D-Box, DN, FL, FLD, HP, HPDY, OTH, TW, VDN, WTH

SFY/a/4-20mA/b/c [d]. PC. Safety Frequency-To-DC Transmitter
a = Input F1, F2, P1 or P2.
b = Voltage 12-42DC.
c = Options blank or –FMEDA.
d = Housing BH, D-Box, DN, FL, FLD, HP, HPDY, OTH, TW, VDN, WTH

13. **Specific Conditions of Use:**

Model FDY:
1. The Model FDY shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. No connections shall be made to the communications “COM” port in Hazardous (Classified) Locations.
3. Maximum operating parameters of the “COM” port for use in Non-Hazardous areas shall not exceed 3.0V, 300mA and 240mW.

Model SFY:
1. The Model SFY shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
2. No connections shall be made to the communications “COM” port in Hazardous (Classified) Locations.
3. Maximum operating parameters of the “COM” port for use in Non-Hazardous areas shall not exceed 3.0V, 300mA and 240mW.

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.

SCHEDULE

US Certificate Of Conformity No: FM16US0259X

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
19th November 2001	Original Issue.
15th November 2011	Supplement 1: Report Reference: – 3042210 dated 15th November 2011 Description of the Change: FM3610:2010 recertification.
26th August 2016	Supplement 2: Report Reference: – RR206292 dated 26th August 2016 Description of the Change: Minor edits for model FDY. Added new model SFY which has same electronics as model FDY.