



1 TYPE EXAMINATION CERTIFICATE

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

3 **Type Examination Certificate No: FM13ATEX0013X**

4 **Equipment or protective system: Model SDY Signal Isolator and Model TDY
(Type Reference and Name) 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. 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:

3045718 dated 05th July 2013

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 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 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 3 G Ex nA IIC T4 Gc Tamb = -40 to +85°C

Damien McArdle

Damien Mc Ardle
Certification Manager, FM Approvals Europe Ltd.

Issue date: 22nd December 2020

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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

SCHEDULE

to Type Examination Certificate No. FM13ATEX0013X

13 Description of Equipment or Protective System:

The Model TDY is a two wire loop temperature transmitter. The sensor terminals receive input from simple apparatus such as a thermocouple, RTD, direct resistance, potentiometer etc. The electronics convert the sensor signal input to a 4-20mA current signal which is transferred to control room equipment.

The Model SDY is a two wire loop transmitter signal isolator/converter. The sensor terminals receive input from a certified millivolt or current source. The electronics convert the millivolt or current sensor input to a 4-20mA current signal which is transferred to control room equipment.

The electronics of the Model TDY Temperature Transmitter and the Model SDY Signal Isolator are almost identical. The electronics are located on two circuit boards consisting of a main board and a display board. Both the Model TDY Temperature Transmitter and the Model SDY Signal Isolator have a communication port for programming by the end user. The programming port is not for use in hazardous locations. The programming port is required to be used in accordance with control drawing 100-100-54.

The electronics for the Model TDY Temperature Transmitter and SDY Signal isolator are located inside of an oval aluminum enclosure approximately 3" in diameter with an approximate height of 1.75". The enclosure has exposed power and sensor terminals as well as a window display. The enclosure is required to be mounted inside of a final housing.

Operation Temperature Ranges:

The ambient operating temperature range of the transmitter is -40°C to 85°C.

Electrical data:

The electronic connection has the following values:

$U \leq 42\text{Vdc}$; $I = 4\text{-}20\text{mA}$.

Listing Options:

Model SDY/a/4-20mA/10-42VDC/-b [c]. Signal Isolator.

a = Sensor Input: PRG, 0-10V, 0-50mA

b = Options: -ISF, ISC, ISE, TROP and/or VTD.

c = Housings and options: DN, FL, FLD, HP, TW and/or VDN.

Model TDY/PRG/4-20mA/10-42VDC/-a [b]. Temperature Transmitter.

a = Options: -ISF, ISC, ISE, TROP and/or VTD.

b = Housings and options: DN, FL, FLD, HP, TW and/or VDN.

14 Specific Conditions of Use:

1. When installed as Category 3 equipment, the Model SDY Signal Isolator and Model TDY Temperature Transmitter 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.

2. On installation, the Model SDY Signal Isolator and Model TDY Temperature Transmitter shall be provided with supply transient protection external to the apparatus such that the voltage at the supply terminals of the Model SDY Signal Isolator and Model TDY Temperature Transmitter does not exceed 119V peak or 119Vdc.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

SCHEDULE

to Type Examination Certificate No. FM13ATEX0013X

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 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 FM Approvals Europe Ltd.

18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
10 th July 2013	Original Issue.
30 th June 2017	<u>Supplement 1:</u> Report Reference: RR210001 dated 22 nd June 2017. Description of the Change: Minor documentation updates and updated certificate to reference 2014/34/EU.
21 st March 2019	<u>Supplement 2:</u> Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.
22 nd December 2020	<u>Supplement 3:</u> Report Reference: RR225761 dated 22 nd December 2020. Description of the Change: Marking and instruction updates including update of identification number of Notified Body performing quality assessment.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE