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:** **FM20ATEX0048X**

4 **Equipment or protective system: (Type Reference and Name)** **Model MTL831C Analog Transmitter**

5 **Name of Applicant:** **Relcom Incorporated**

6 **Address of Applicant:** **2221 Yew Street, Forest Grove, OR 97116 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 26 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:

PR457637 dated 12th January 2021

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 IEC 60079-0:2018 and EN 60079-11:2012

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 IIC T4 Ga; -40°C ≤ Tamb ≤ +70°C

Martin Crowe
Certification Manager, FM Approvals Europe Ltd.

Issue date: 03rd March 2023

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SCHEDULE

to EU-Type Examination Certificate No. FM20ATEX0048X

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

General - The Model MTL831C Series Analog Transmitters convert temperature measurements to an electrical signal or accept mV input signals for delivery to the control room. Each transmitter contains up to 16 sensor inputs.

Mechanical - The Model MTL831C Series Transmitter's enclosure is constructed from polymeric materials. Each transmitter is a rectangular block approximately 188mm (7.4") in length by 74mm (2.9") in width by 48mm (1.9") in depth. The top side has rows of terminal on each side for accepting power and up to 16 analog inputs. The Model MTL831C Transmitter contains fixed recessed screw clamp type terminals and the Model MTL831C-PS Transmitter contains pluggable recessed screw clamp type terminals.

Ratings - For type of protection intrinsic safety, connections can only made by connecting certified associated apparatus having energy limitation parameters. The output of the associated apparatus shall not exceed the energy limitation parameters for the Model MTL831C Series Transmitter as shown below.

Intrinsic Safety Energy Limitation Parameters:
Ui = 24V, Ii = 250mA, Pi = 1.2W, Ci = 0, Li = 0.

Nominal Operation: 10-24VDC, 25-35mA

The Model MTL831C Series Transmitters are rated for an ambient temperature range of -40°C to +70°C.

MTL831Ca Analog Transmitter.
a = Terminals: Blank or -PS

Energy Limitation Parameters:
Ui = 24V, Ii = 250mA, Pi = 1.2W, Ci = 0, Li = 0.
Sensor Terminals (Connection to Intrinsically Safe Equipment):
Group IIC; Uo = 5.88V, Io = 48.1mA, Po = 71mW, Co = 9.4µF, Lo = 7.68mH.
Group IIB; Uo = 5.88V, Io = 48.1mA, Po = 71mW, Co = 487µF, Lo = 30.73mH.
Group IIA; Uo = 5.88V, Io = 48.1mA, Po = 71mW, Co = 487µF, Lo = 61.47mH.
Sensor Terminals (Connection of Simple Apparatus):
Group IIC; Uo = 5.88V, Io = 48.1mA, Po = 71mW, Co = 30µF, Lo = 15.36mH.
Group IIB; Uo = 5.88V, Io = 48.1mA, Po = 71mW, Co = 987µF, Lo = 61.47mH.
Group IIA; Uo = 5.88V, Io = 48.1mA, Po = 71mW, Co = 987µF, Lo = 122.8mH.

14 **Specific Conditions of Use:**

1. The surface of the equipment may cause risk of electrostatic discharge. Avoid installation that could cause electrostatic build-up, and only clean with a damp cloth.

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.

SCHEDULE

to EU-Type Examination Certificate No. FM20ATEX0048X

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
13th January 2021	Original Issue.
13th July 2021	Supplement 1: Report Reference: – RR228941 dated 12th July 2021. Description of the Change: Corrected Lo values for energy limitation parameters.
03rd March 2023	Supplement 2: Report Reference: – RR235962 dated 23rd February 2023. Description of the Change: Drawing update to include circuit modifications for EMI Improvement

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Blueprint Report

Relcom Inc (1000006875)

Class No 3610

Original Project I.D. 457637

Certificate I.D. FM20ATEX0048X

Drawing No.	Revision Level	Drawing Title	Last Report
503-214	E.0	MTL831C[-xx] Analog Transmitter Ex Certification Package	RR235962
503-215	E.0	MTL831C[-xx] Analog Transmitter Ex Safety Instructions	RR228941