Physical Technical Testing Institute

Ostrava-Radvanice

EC-Type Examination Certificate

(1)

(2) **Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres Directive 94/9/EC**

(3) EC-Type Examination Certificate Number:

FTZÚ 11 ATEX 0023X

(4) Equipment or protective system: **TX5861 Ultrasonic Level Sensor**

(5) Manufacturer: **Trolex Limited**

(6) Address: **Hewby Road, Hazel Grove, Stockport, Cheshire, SK7 5DY, United Kingdom**

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

(8) The Physical Technical Testing Institute, notified body number 1026 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report N°

11/0023 dated 03.06.2011

(9) Compliance with Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2009, EN 60079-11:2007, EN 60079-26:2007

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and testing of the specified equipment or protective system in accordance to the directive 94/9/EC. 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 following:

II 1/2G Ex ia IIB/IIA T5 Ga/Gb
II 2G Ex ia IIA T5 Gb

This EC-Type Examination Certificate is valid till: **03.06.2016**

Responsible person:

Date of issue: 03.06.2011

Dipl. Ing. Šindler Jaroslav
Head of certification body

PHYSICAL-TECHNICAL TESTING INSTITUTE FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV FTZÚ Ex AO 210 NB 1026

This certificate is granted subject to the general conditions of the Physical Technical Testing Institute.
This certificate may only be reproduced in its entirety and without any change, schedule included.

FTZÚ, Pikartská 7, 716 07 Ostrava Radvanice, tel +420 595 223 111, fax +420 596 232 672, e-mail: ftzu@ftzu.cz

(13) **Schedule**

(14) EC-Type Examination Certificate N° FTZÚ 11 ATEX 0023X

(15) Description of Equipment or Protective System:

The equpment consists of an electro-acoustic converter and processing electronics. It is designed to be screwed into the cover of a vessel so only the electro-acoustic converter is installed inside the vessel (zone 0 or 1 depending on model) and the upper part containing the encapsulated processing electronics is outside the vessel (zone 1). The equpment provides a 4 - 20mA output signal.

Equipment types TX5861.02.2M and TX5861.02.6M are apparatus subgroup IIB.

Equipment types TX5861.02.10M and TX5861.02.20M are apparatus subgroup IIA.

Equipment types TX5861.02.2M, TX5861.02.6M and TX5861.02.10M are designed to have the electro-acoustic converter installed inside a zone 0 vessel.

Equipment type TX5861.02.20M is designed to have the electro-acoustic converter installed inside a zone 1 vessel only.

Input parameters: Ui = 30V; Ii = 132mA; Pi = 0.99W; Ci = 370nF; Li = 0.9mH

Ambient temperature: -30°C ≤ Ta ≤ 70°C

(16) Report No. : 11/0023 dated 03.06.2011

(17) Special conditions for safe use:

17.1 It is necessary for the power supply to have galvanic separation or, if a supply without galvanic separation is used (Zener barriers), it is necessary to provide potential equalisation between sensor and the point of barrier earthing.

17.2 For zone 0 applications the explosive atmospheres present (mixture of air with flammable gases, vapour or mists) must comply with the conditions: -20°C ≤ Ta ≤ +60°C and 0.8 bar ≤ p ≤ 1.1 bar.

17.3 The equipment must be installed in such a way as to prevent mechanical damage to the sensor face.

(18) Essential Health and Safety Requirements:

Essential health and safety requirement of Directive 94/9/EC are covered by the standard mentioned in (9), according which the product was verified and in the manufacturer's instruction for use.

(19) List of Documentation:

[1] Installation and operating data TX5861, Issue A, Date: 03.2011 - 12 sheets

[2] Certification marking No.: P5574.02, Issue A, Date: 19.01.2011 - 1 sheet

The documentation was verified by FTZÚ dated 03.06.2011.

Responsible person:

Date of issue: 03.06.2011

Dipl. Ing. Šindler Jaroslav

Head of certification body

PHYSICAL-TECHNICAL TESTING INSTITUTE FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV FTZÚ Ex AO 210 NB 1026

This certificate is granted subject to the general conditions of the Physical Technical Testing Institute.
This certificate may only be reproduced in its entirety and without any change, schedule included.

FTZÚ, Pikartská 7, 716 07 Ostrava Radvanice, tel +420 595 223 111, fax +420 596 232 672, e-mail: ftzu@ftzu.cz