



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 09 ATEX 0022X

(4) Equipment or protective system: **Module GSM, type EMGSM 1.x**

(5) Manufacturer: **ORI-Abwassertechnik GmbH & Co. KG**

(6) Address: **Bollacken 2, D-32479 Hille, Germany**

(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°

09/0022 dated February 2009

(9) Compliance with Essential Health and safety requirements has been assured by compliance with:

EN 60079-0:2006 EN 60079-1:2007 EN 60079-11:2007

(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 2G Ex d ib IIB T4**

This EC-Type Examination Certificate is valid till: **28 February 2014**

Responsible person:


Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 18.02.2009

Number of pages: 3

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Physical Technical Testing Institute
Ostrava-Radvanice

(13)

Schedule

(14) **EC-Type Examination Certificate N° FTZÚ 09 ATEX 0022X**

(15) Description of Equipment or Protective System:

The EMGSM 1.x module is designed for communication in hazardous areas with flammable gases and vapour.

The modem consists from two parts. The first is cylindrical enclosure designed as flameproof construction Ex d IIB inside with battery pack 2,4 V, type L1X2-2,4 and a PCB plate with fuse.

The supply cable (intrinsic safe circuit) going into electronic part is tightened in certified cable gland.

The second part of the modem consist electronic circuits, moulded in plastic tube and a part with SIM card type RS232 or RS422/485 or 1 wire interface regarding to the used interface. This part is full intrinsic safe inclusive the SIM card circuit.

Technical specification:

Battery pack voltage: 2,4 V DC type L1X2-2,4V

Capacity of the battery pack: 9 Ah

Output in quiet position: 300 μ A ; 2,4 V DC GSM modem is switch off. Alarm is activated

Stand by: 11 mA ; 2,4 V DC GSM modem is switch on in „safe“ mode

Max. output: 1,2 A; 2,4 V DC during broadcast GPRS.

Max. input/output/ parameters:

RS232

$U_o = 11,2$ V ; $i_o = 17$ mA ; $P_o = 48$ mW ; $L_o = 250$ mH ; $C_o = 6,3$ μ F

$U_i = 16$ V ; $i_i = 24$ mA ; $P_i = 400$ mW ; $L_i = 5$ μ H ; $C_i \sim 0$

RS422/485

$U_o = 5$ V ; $i_o = 34$ mA ; $P_o = 42$ mW ; $L_o = 60$ mH ; $C_o = 250$ μ F

$U_i = 7,5$ V ; $i_i = 50$ mA ; $P_i = 400$ mW ; $L_i = 5$ μ H ; $C_i \sim 0$

ISM

$U_o = 6,6$ V ; $i_o = 8$ mA ; $P_o = 14$ mW ; $L_o = 1000$ mH ; $C_o = 250$ μ F

(16) Report No. : 09/0022; 08/0208, Certificate No. FTZU 08 ATEX 0208X

(17) Special conditions for safe use:

17.1 Maximum design gaps of flameproof joints are smaller than maximum permitted gaps according to standard. Verified values of design gaps are mentioned in documentation, list of which is given in clause (19) of this certificate.

17.2 There on the enclosure has to be installed warning label acc .to EN 60079-1, cl.29.2.

(18) Essential Health and Safety Requirements:

Covered by standard mentioned in (9) of this certificate.

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(13) **Schedule**

(14) **EC-Type Examination Certificate N° FTZÚ 09 ATEX 0022X**

(19) **LIST OF DOCUMENTATION**

- o Declaration document dated 08 .01.2009
- o Cooperation & company's licence agreement, dated 17.01.2009
- o Labels, drawing No. Ex 02611-00-06Y dated 29.01.2009, version 1, revision D

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