



Translation

EC-Type Examination Certificate

- Directive 94/9/EC -

Equipment and protective systems intended for use
in potentially explosive atmospheres

BVS 09 ATEX E 144 X

- (4) **Equipment:** Gasanalysator type Thermo-FID * Ex pz
- (5) **Manufacturer:** SK-Elektronik GmbH
- (6) **Address:** 51381 Leverkusen, Germany
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.
- (8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment 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 the test and assessment report BVS PP 09.2178 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- EN 60079-0:2006 General requirements
EN 60079-2:2007 Pressurized enclosure
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.
- (11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate
- (12) The marking of the equipment shall include the following:

II 2/3G Ex pz II T2 – T4

DEKRA EXAM GmbH

Bochum, dated 06. November 2009

Signed: Dr. Franz Eickhoff

Certification body

Signed: Stephan Ruhnau

Special services unit

(13) Appendix to

(14) **EC-Type Examination Certificate**

BVS 09 ATEX E 144 X

(15) 15.1 Subject and type

Gas analyser type Thermo-FID FE Ex pz
 Thermo-FID MK Ex pz
 Thermo-FID FE-MSU Ex pz

15.2 Description

The gas analysers type Thermo-FID * Ex pz serve the purpose of measuring the level of hydrocarbons in gas mixtures and are intended for use in Zone 2, whereas the area to which the equipment is connected may be certified up to Zone 1. The equipment is manufactured to meet the requirements of the type of protection Pressurization 'Ex pz' and comply with category 3G, whereas the connection for the measuring gas may comply with category 2G. In order to control the minimum overpressure and the pre-purge the system type F 840, TÜV 03 ATEX 2095 X is used.

The equipment is mostly identical with the analysers type Thermo-FID-* (BVS PP 04.2059 EG) which, unlike the ones tested here, fully comply with category 2G.

15.3 Parameters

15.3.1 Electrical data

Supply voltage	AC	230/115 V
Max. power input	Thermo-FID FE Ex pz	500 W
	Thermo-FID MK Ex pz	1100 W
	Thermo FID FE-MSU Ex pz	500 W

15.3.2 Pneumatic parameters

Thermo-FID FE Ex pz and Thermo FID MK Ex pz		
Inside volume	65	l
Minimum pre-purge time	25	min
Minimum volume flow when operating	800	l/h
Minimum overpressure	1	mbar
Maximum overpressure	15	mbar
Thermo-FID FE-MSU Ex pz		
Inside volume	80	l
Minimum pre-purge time	30	min
Minimum volume flow when operating	800	l/h
Minimum overpressure	1	mbar
Maximum overpressure	15	mbar

(16) Test and assessment report

BVS PP 09.2178 EG as of 06.11.2009

(17) Special conditions for safe use

The measuring function concerning the explosion protection according to EN 61779-1 and EN 61779-4 is not subject of this EC-type test certificate.


We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 06. November 2009
BVS-Kr/Ld/Her A 20090634

DEKRA EXAM GmbH

A blue ink signature, likely of a representative of the certification body, written over a horizontal line.

Certification body

A blue ink signature, likely of a representative of the special services unit, written over a horizontal line.

Special services unit

Translation

(1) 1. Supplement to the EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use
in potentially explosive atmospheres - Directive 94/9/EC
Supplement accordant with Annex III number 6
- (3) No. of EC-Type Examination Certificate: **BVS 09 ATEX E 144 X**
- (4) Equipment: **Gas Analyser type Thermo-FID * Ex pz**
- (5) Manufacturer: **SK-Elektronik GmbH**
- (6) Address: **Benzstraße 23-25, 51381 Leverkusen, Germany**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this supplement.
- (8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment 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 the test and assessment report BVS PP 09.2178 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- EN 60079-0:2009 General requirements**
EN 60079-2:2007 Pressurized enclosure „p“
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.
- (11) This supplement to the EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:

 **II 2/3G Ex pz IIC T2 – T4 Gc**

DEKRA EXAM GmbH
Bochum, dated 24. January 2013

Signed: Simanski

Certification body

Signed: Dr. Eickhoff

Special services unit

(13) Appendix to

(14) **1. Supplement to the EC-Type Examination Certificate
BVS 09 ATEX E 144 X**

(15) 15.1 Subject and type

Gas Analyser type Thermo-FID FE Ex pz
Thermo-FID MK Ex pz
Thermo-FID FE-MSU Ex pz

15.2 Description

The gas analysers type Thermo-FID * Ex pz serve the purpose of measuring the level of hydrocarbons in gas mixtures and are intended for use in Zone 2, whereas the process to which the equipment is connected may be classified up to Zone 1. The equipment is manufactured to meet the requirements of the type of protection Pressurization 'Ex pz' and comply with category 3G, whereas the connection for the measuring gas complies with category 2G. Due to the construction of the analyser the internal pressure is always below the pressure inside the pressurized enclosure so that the analyser does not form a containment system according to EN 60079-2:2007.

Reason for the supplement is the optional use of the pressurization system F-321T, TÜV 03 ATEX 2017, and the upgrading to the current standards.

15.3 Parameters

Unchanged

(16) Test and assessment report

BVS PP 09.2178 EG as of 24.01.2013

(17) Special conditions for safe use

The measuring function concerning the explosion protection is not subject of this EC-type test certificate.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH
44809 Bochum, 24. January 2013
BVS-Wit/Sp A 20121157



Certification body



Special services unit