



Translation

EC-Type Examination Certificate

- (1) **EC-Type Examination Certificate**
- (2) **- Directive 94/9/EC -**
Equipment and protective systems intended for use
in potentially explosive atmospheres
- (3) **BVS 05 ATEX E 010 X**
- (4) **Equipment:** Pressure and gas measurement device type HMG-EX-P and HMG-EX-G
- (5) **Manufacturer:** Esders Ingenieurbüro GmbH
- (6) **Address:** 49740 Haselünne, 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 BBG Exam Prüf- und Zertifizier 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 05.2002 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- | | |
|-------------------------|--------------------------|
| EN 50014:1997 + A1 – A2 | General Requirements |
| EN 50018:2000 + A1 | Flameproof Enclosure 'd' |
| EN 50020:2002 | Intrinsic Safety 'i' |
- (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 2G EEx ib IIB T4 für Typ HMG-EX-P

II 2G EEx ib d IIB T4 für Typ HMG-EX-G

BBG EXAM Prüf- und Zertifizier GmbH

Bochum, dated 17. January 2005

Signed: Dr. Jockers

Signed: Dr. Eickhoff

Certification body

Special services unit

(13) Appendix to

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

BVS 05 ATEX E 010 X

(15) 15.1 Subject and type

Pressure and gas measurement device type HMG-EX-P and HMG-EX-G

15.2 Description

The portable pressure and gas measurement device type HMG-EX-P and HMG-EX-G serves the purpose of gauging pressures and measuring gas concentrations.

The measurement device is fed by a power supply battery which can be either primary cells or a rechargeable battery.

The power supply battery may only be recharged or replaced outside the explosive atmosphere (for further details, see manual).

The measurement device is suitable for use in an ambient temperature range of -10°C up to + 40°C.

There are three different equipment variants allocated to the two types of equipment:

Variant	Type of protection	Type of equipment	Device name
1	EEx ib IIB T4	HMG-EX-P	DruckTest 2000 EX
2	EEx ib IIB T4	HMG-EX-P	DruckTest GaWa EX
3	EEx ib d IIB T4	HMG-EX-G	GasTest 100 or GasTest 100 P for option with pressure sensor

For the first variant listed, an internal pressure sensor with a gauging range of 2 bar is used.

The second variant contains an additional high pressure sensor to gauge pressures of up to 200 bar which is also mounted into the equipment.

The third variant stated is the gas measuring device which is equipped with a gas sensor of type of protection Flameproof Enclosure (VQ 500 series, Sira 01ATEX1073U). The gas sensor is permanently fixed to the equipment by means of a gooseneck and cannot be separated. As an option, this variant can also be equipped with an internal pressure sensor.

15.3 Parameters

15.3.1 Power supply battery (4 primary cells alkali/manganese in battery holder)

Rated voltage 6 V

The battery type permitted has been defined by Esders Ingenieurbüro GmbH in the manual.

15.3.2 Power supply battery (4 secondary cells NiMH as battery back)

Rated voltage 4.8 V

Rated capacity 1500 mAh

15.3.3 Ambient temperature range

-10°C up to +40°C

(16) Test and assessment report

BVS PP 05.2002 EG, as of 17.01.2005

(17) Special conditions for safe use

The measuring functionality regarding explosion protection is not subject of this EC-type examination 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, 08.12.2008
BVS-Rip/Ar E 1745/08

DEKRA EXAM GmbH



Certification body



Special services unit



Translation

1st Supplement

(Supplement in accordance with Directive 94/9/EC Annex III number 6)

to the EC-Type Examination Certificate BVS 05 ATEX E 010 X

- (4) **Equipment:** Pressure and gas measurement device type HMG-EX-P and HMG-EX-G
- (5) **Manufacturer:** Esders Ingenieurbüro GmbH
- (6) **Address:** 49740 Haselünne, Germany

Description

The pressure and gas measurement device type HMG-EX-P and HMG-EX-G also be modified according to the descriptive documents as mentioned in the pertinent test and assessment report.

As an option, sensor HL-2 may be used instead of the gas sensor of type Flameproof Enclosure (VQ 500 series, Sira 01ATEX1073U) for the pressure and gas measurement device type HMG-EX-P and HMG-EX-G.

There still remain three different equipment variants allocated to the two types of equipment:



Variant	Type of protection	Type of equipment	Device name
1	EEx ib IIB T4	HMG-EX-P	DruckTest 2000 EX
2	EEx ib IIB T4	HMG-EX-P	DruckTest GaWa EX
3	EEx ib d IIB T4	HMG-EX-G	with gas sensor VQ 500 series: GasTest 100 or GasTest 100 P for option with pressure sensor with gas sensor HL-2: Vibragas EX or LeckOmiO EX for option with pressure sensor

The Essential Health and Safety Requirements of the modified version are assured by compliance with:

EN 50014:1997 + A1 – A2
EN 50018:2000 + A1
EN 50020:2002

General Requirements
Flameproof Enclosure 'd'
Intrinsic Safety 'i'

The marking of the equipment still shall include the following:

 II 2G EEx ib IIB T4 for type HMG-EX-P
 II 2G EEx ib d IIB T4 for type HMG-EX-G

Parameters

unchanged

Special conditions for safe use

The measuring functionality regarding explosion protection is not subject of this EC-type examination certificate.

Test and assessment report

BVS PP 05.2002 EG, as of 13.09.2005

EXAM BBG Prüf- und Zertifizier GmbH

Bochum, dated 13. September 2006

Signed: Dr. Jockers

Signed: Dr. Eickhoff

Certification body

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44809 Bochum, 08.12.2008
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