



Translation

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

(2) **- Directive 94/9/EC -**

**Equipment and protective systems intended for use  
in potentially explosive atmospheres**

(3) **BVS 03 ATEX E 206 X**

(4) **Equipment: Inductive Sensor type IF\*-\*-\*-\***

(5) **Manufacturer: KEM Küppers Elektromechanik GmbH**

(6) **Address: D 85757 Karlsfeld**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of EXAM BBG 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 03.2155 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 50014:1997+A1-A2    General requirements  
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 schedule 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 ia IIC T6**

**EXAM BBG Prüf- und Zertifizier GmbH**

Bochum, dated 22. July 2003

Signed: Jockers

\_\_\_\_\_  
Certification body

Signed: Eickhoff

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Special services unit

(13) Appendix to

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

**BVS 03 ATEX E 206 X**

(15) 15.1 Subject and type

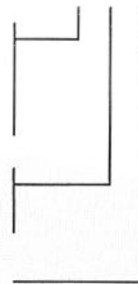
Inductive Sensor

Type IF\* - \*\*-\*

short, for ZHM02-ZHM04 and HM-series = K  
 long, for ZHM02-ZHM04 and HM-series = L  
 short, for ZHM01 and SRZ-series = R  
 long, for ZHM01 and SRZ-series = S

with cable gland and cable length 3 m = PG  
 high temperature version up to +240°C = HT

Ex-protected version = Ex



15.2 Description

The Inductive Sensor Type IF\* - \*\*-\* is an intrinsically safe apparatus generating r.p.m./ flow measuring signals of metallic mechanical turbine-, spindle- or gear wheel flow meters without contacting the measuring medium.

The Inductive Sensor comprises a tubular stainless steel enclosure containing a pulse capture inductor in its front part. The inductor, an iron bolt used as core and a permanent magnet are fixed mechanically and by means of casting compound in the stainless steel enclosure.

The intrinsically safe signal circuit is interconnected to a plug or a fixed cable (length 3 m).

15.3 Parameters

Signal circuit

Voltage	$U_o$	AC	2,6 V
Current	$I_o$		35 mA
Power	$P_o, P_i$		25 mW
Internal resistance	$R_i$		75 $\Omega$
Effective internal capacitance	$C_i$		negligible
Effective internal inductance	$L_i$		30 mH

(16) Test and assessment report  
BVS PP 03.2155 EG as of 22.07.2003

(17) Special conditions for safe use

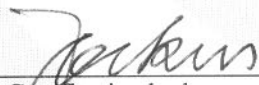
For temperature class of the inductive sensor in relation to ambient temperature the following table applies.

Temperature class	Surface temperature of the inductive sensor due to external sources of temperature
T6	$\leq 85^{\circ}\text{C}$
T5	$\leq 100^{\circ}\text{C}$
T4	$\leq 135^{\circ}\text{C}$
T3	$\leq 200^{\circ}\text{C}$
T2	$\leq 240^{\circ}\text{C}$

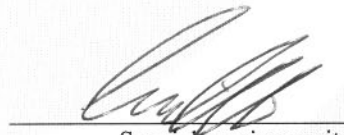
We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 22.07.2003  
BVS-Scha/Mi A 20030135

**EXAM BBG Prüf- und Zertifizier GmbH**



\_\_\_\_\_  
Certification body



\_\_\_\_\_  
Special services unit