

## Translation

# (1) EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC
- (3) No. of EC-Type Examination Certificate: **BVS 13 ATEX E 137**
- (4) Equipment: **Carrier-Frequency Amplifier / Inductive Amplifier with Dual Pickup type V\*D03-\*\*-\*-Ex or type A13256-\*2-Ex**
- (5) Manufacturer: **KEM Küppers Elektromechanik GmbH**
- (6) Address: **Liebigstr. 5, 85757 Karlsfeld, 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 13.2240 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- EN 60079-0:2012 General requirements**  
**EN 60079-11:2012 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 Ex ia IIC T4 Gb**

DEKRA EXAM GmbH  
Bochum, dated 2013-12-18

Signed: Simanski

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

Signed: Dr. Wittler

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Special services unit

- (13) Appendix to
- (14) **EC-Type Examination Certificate  
BVS 13 ATEX E 137**
- (15) 15.1 Subject and type

Carrier-Frequency Amplifier / Inductive Amplifier with Dual Pickup type V\*D03'-\*\*-\*  
abcd-ef-g-h

Position	Feature	Code letter(s) / -number(s)
a	Amplifier	V
bcd	Carrier frequency	TD03
	Inductive	ID03
ef	Flow meter type	10 = ZHM01
		11 = ZHM1/1
		20 = ZHM02
		nn = other meter sizes
g	Signal-output / connector	A = switchable output / M12
		P = switchable output / M16
		x = switchable output / M12
h	ATEX approval	Ex

Carrier-Frequency and Inductive Amplifier with Dual Pickup  
type A13256-\*2-Ex (special model)

Modifications not affecting intrinsic safety parameters  
 0 = Carrier frequency pick up for JVM02/1 or ZHM02/1  
 1 to 9 = Versions adapted to other size and forms

### 15.2 Description

The Carrier-Frequency Amplifier / Inductive Amplifier with Dual Pickup comprises a light alloy or stainless steel enclosure mountable to mechanical flow meters containing a printed circuit board with electronic components.

The two pulse-pickup coils or oscillator coils embedded in casting compound are located on top of threaded bolts extruding from the bottom part of the enclosure.

The intrinsically safe supply- and signal circuit (4-wire configuration) is connected to a plug.

The special model 'Carrier-Frequency Amplifier / Inductive Amplifier with Dual Pickup type A13256-\*2-Ex' is identical with model type VTD03-20-P-Ex with the exception of connector pinning.

### 15.3 Parameters

#### 15.3.1 Supply- and signal circuit; 4-wire configuration

##### 15.3.1.1 Power supply

Connector-pins 1 and 3, model V\*D03'-\*\*-\*  
 Connector-pins 1 and 3, model V\*D03'-\*\*-\*  
 Connector-pins 5 and 1, model A13256-\*2-Ex

Voltage	$U_i$	DC	30	V
Current	$I_i$		120	mA
Power	$P_i$		850	mW
Effective internal capacitance	$C_i$		8	nF
Effective internal inductance	$L_i$		10	$\mu$ H

15.3.1.2 Signal-output circuit 'push pull' or 'open collector' configuration (two channels)  
 Connector-pins 4 ( $f_{out}$ ) and 2 (fB/DIR), model V\*D03-\*\*-A-Ex  
 Connector-pins 2 ( $f_{out}$ ) and 4 (fB/DIR), model V\*D03-\*\*-P-Ex  
 Connector-pins 2 (OUT A) and 4 (OUT B), model A13256-\*2-Ex

('open collector' and 'push pull' configuration)

Voltage	$U_i$	DC	30	V
Current	$I_i$		24.6	mA
Power	$P_i$		185	mW

('push pull' configuration only)

Voltage	$U_o = U_i$	DC	30	V
Current	$I_o$		23	mA
Power	$P_o$		17	mW
Effective internal capacitance	$C_i$		8	nF ) <sup>1</sup>
Effective internal inductance	$L_i$		10	$\mu$ H ) <sup>2</sup>

)<sup>1</sup> identical with  $C_i$  in the supply circuit

)<sup>2</sup> each channel

15.3.2 Ambient temperature range:  $-40\text{ °C} \leq T_a \leq +60\text{ °C}$

(16) Test and assessment report  
 BVS PP 13.2240 EG as of 2013-12-18

(17) Special conditions for safe use

None

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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, 2013-12-18  
 BVS-Scha/Sch A 20130668



Certification body



Special services unit