

## Translation

# EC-Type Examination Certificate

- (1) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC
- (2) No. of EC-Type Examination Certificate: **BVS 11 ATEX E 091**
- (3) Equipment: **Flow Meter type ANNOVEX WGA 15.15.\*\*\***
- (4) Manufacturer: **WOELKE Industrieelektronik GmbH**
- (5) Address: **45239 Essen**
- (6) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.
- (7) 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 11.1051 EG.
- (8) The Essential Health and Safety Requirements are assured by compliance with:
- EN 60079-0:2009      General requirements
- EN 60079-11:2007      Intrinsic safety I
- EN 50303:2000      Equipment Group I Category M1
- (9) 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.
- (10) 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.
- (11) The marking of the equipment shall include the following:



**I M1 Ex ia I Ma**

DEKRA EXAM GmbH  
Bochum, dated 09.02.2012

Signed: Simanski

Certification body

Signed: Dr. Wittler

Special services unit





The flow sensor comprises a metallic tube of various length according to the diameter of the gas pipe. The metallic tube is fitted at the bottom end with an adapter and with a flow probe.

For medium temperature measuring purpose, the adapter is fitted with a PT100 temperature sensor embedded in a metallic protective tube.

Holes in the flow probe serving for differential pressure recording are connected to pressure sensors located on the valve assembly PCB and to the valves by means of flexible PU-gas-tubes.

The PU-gas-tubes and the electrical connection wires of the temperature sensor are located inside the metallic tube and lead into the electronics unit.

The metallic tube of the flow sensor is designed to be intruded in suitable flanges of the gas pipe and is fixed by means of a screwed mounting facility.

### 15.3 Parameters

Connection facilities: 16-pin connector X1

15.3.1	Power supply circuit Connector pins No. 1 (GND) and 2 (+)	Voltage Current consumption Effective internal capacitance Effective internal inductance	$U_i$ $I_i$ $C_i$ $L_i$	DC $\leq$ $\leq$ $\leq$	16 100 110 5	V mA nF $\mu$ H
15.3.2	Frequency-signal output (opto-coupler output) Connector pins No 4 (-) and 5 (+)	Voltage Current Power Effective internal capacitance Effective internal inductance	$U_i$ $I_i$ $P_i$ $C_i$ $L_i$	DC $\leq$ $\leq$ $\leq$	30 100 100 negligible negligible	V mA mW
15.3.3	Current output (alternative to 15.3.2) Connector pins No. 4 (-) and 5 (+)	Voltage Current Power Voltage Power Effective internal capacitance Effective internal inductance	$U_o$ $I_o$ $P_o$ $U_i$ $P_i$ $C_i$ $L_i$	DC $\leq$ $\leq$ $\leq$	9.55 85 405 2.2 333 negligible 5	V mA mW V mW $\mu$ H
15.3.4	Serial interface Connector pins No 12 (output) / 13 (input) and 1 (GND)	Voltage Current Power Effective internal capacitance Effective internal inductance	$U_o$ $I_o$ $P_o$ $C_i$ $L_i$	DC $\leq$ $\leq$ $\leq$	9.55 10 24 negligible negligible	V mA mW
15.3.5	Alarm-signal circuits providing relay-contacts Alarm 1: Connector pins No 7(-) and 15(+) Alarm 2: Connector pins No 9(-) and 10(+)	Voltage Current Power Effective internal capacitance Effective internal inductance	$U_i$ $I_i$ $P_i$ $C_i$ $L_i$	DC $\leq$ $\leq$ $\leq$	30 1 30 negligible negligible	V A W



## 15.3.6 Alarm-signal circuits providing opto-couplers (alternative to 15.3.5)

Alarm 1: Connector pins No 7(-) and 15(+)

Alarm 2: Connector pins No 9(-) and 10(+)

Voltage	$U_i$	DC	30	V
Current	$I_i$		100	mA
Power	$P_i$		100	mW
Effective internal capacitance	$C_i$		negligible	
Effective internal inductance	$L_i$		negligible	

15.3.7 Ambient temperature range  $-20^\circ\text{C} \leq T_a \leq +60^\circ\text{C}$ (16) Test and Assessment Report

BVS PP 11.1051 EG as of 09.02.2012

(17) Special conditions for safe use

None

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, 09.02.2012  
BVS-Scha/Sch A 20110040

Certification body

Special services unit