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 11 ATEX E 169**

(4) Equipment: **Microwave barrier type VEGAMIP MPR61(*).D*****R/T*** and VEGAMIP MPT61(*).D******T*****

(5) Manufacturer: **VEGA Grieshaber KG**

(6) Address: **77757 Schiltach, 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 11.2270 EG.

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

IEC 60079-0:2011	**General requirements**
EN 60079-1:2007	**Flameproof enclosure 'd'**
EN 60079-26:2007	**EPL Ga**

(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 1/2 G Ex d IIC T1...T6 Ga/Gb
II 2 G Ex d IIC T1...T6 Gb

DEKRA EXAM GmbH
Bochum, dated 08.12.2011

Signed: Dr. Eickhoff
Certification body

Signed: Dr. Wittler
Special services unit

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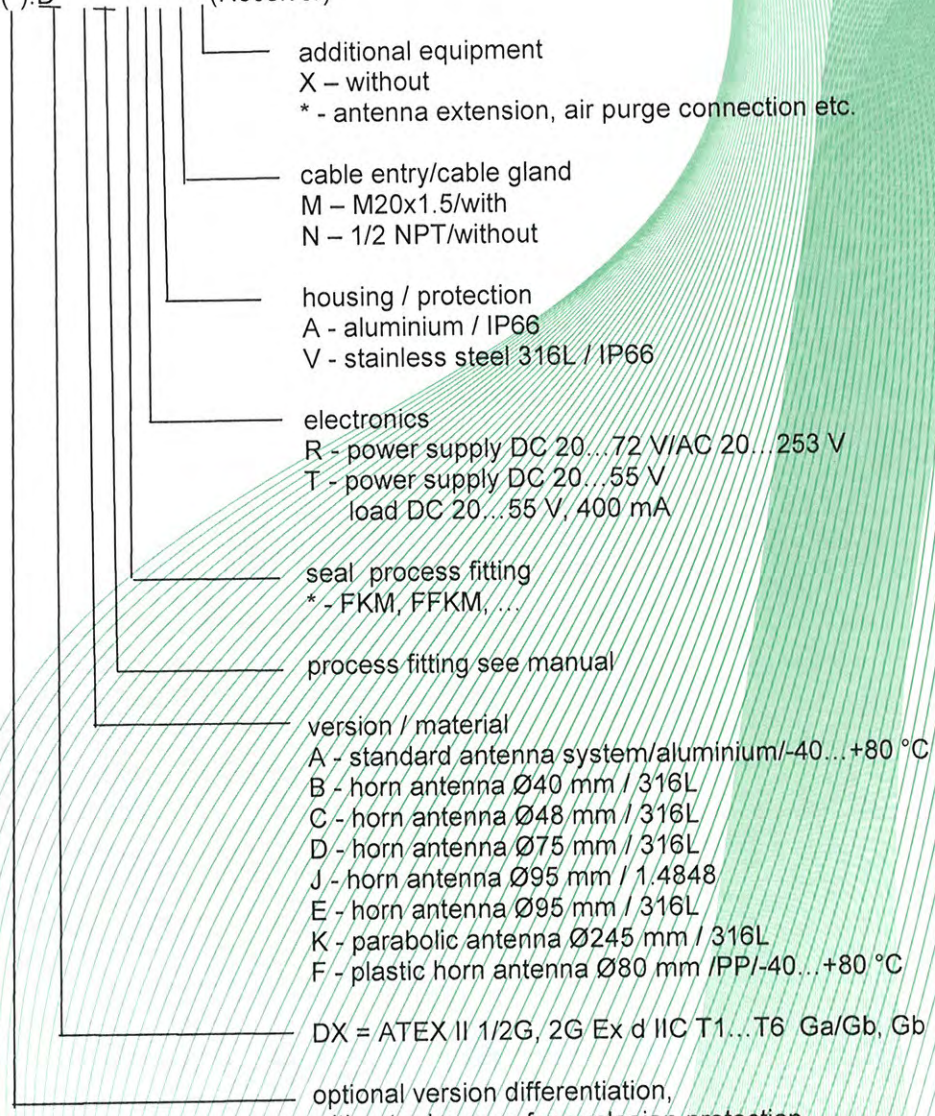
(13) Appendix to

(14) **EC-Type Examination Certificate**
BVS 11 ATEX E 169

(15) 15.1 Subject and type

Microwave barrier type
VEGAMIP MPR61(*).D* * ** * * * * * (Receiver)



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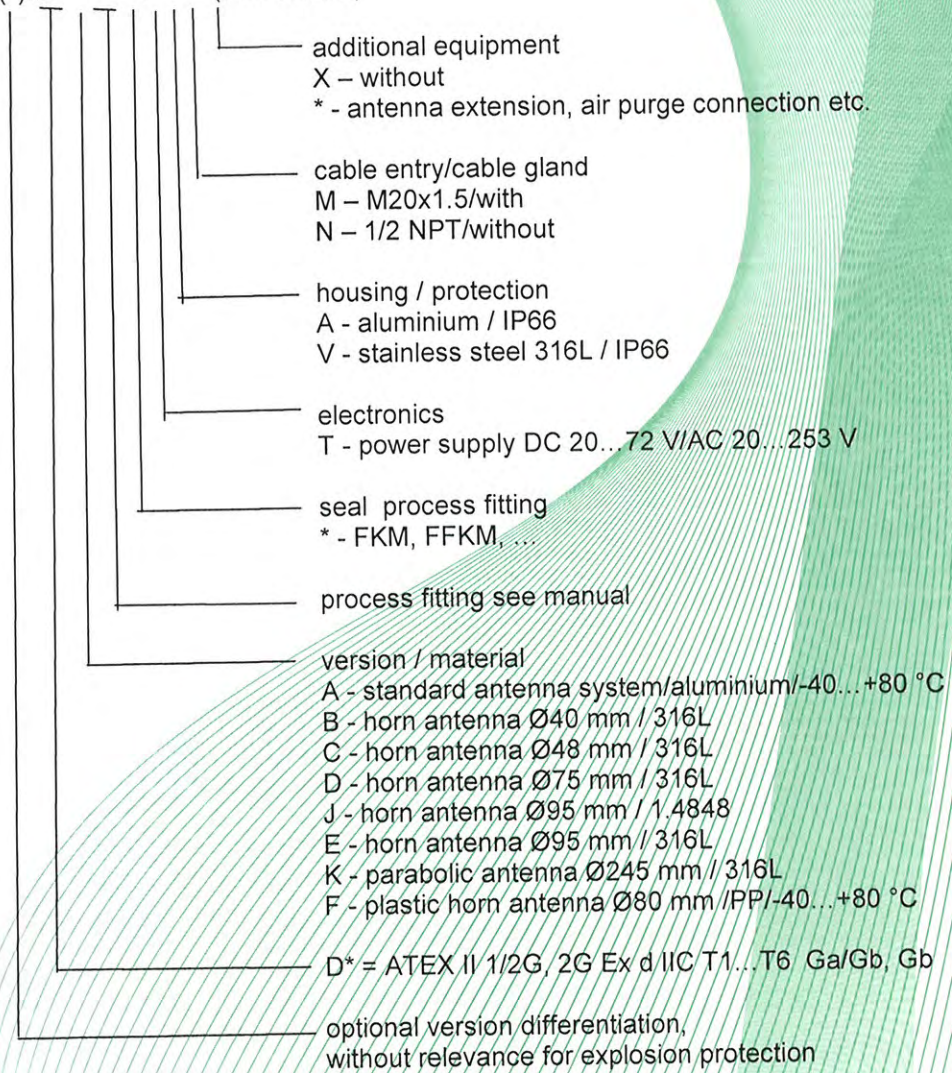
Microwave barrier type
VEGAMIP MPT61(*).D* * ** * T * * * (Transmitter)



15.2 Description

The microwave barrier type VEGAMIP MP*61(*).D********* is used to measure a level limit. It is based on radar and uses microwaves in GHz range.
It consists of a transmitting and a receiving unit which are mounted separately.
The electronics enclosure is separately tested and meets the requirements of the standards IEC 60079-0:2011 and EN 60079-1:2007 (see BVS PP 11.2198 EG).
The termination of the 1-chamber housing to the side of the process is built by a glass feedthrough which fulfils the requirements for flameproof enclosure as well as the mechanical requirements for an equipment which is mounted through the boundary wall to an area requiring EPL Ga.

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15.3 Parameters

15.3.1 Electrical data

15.3.1.1 VEGAMIP MPT61(*).D*****T***

input
supply voltage
(terminals 1, 2 in the terminal compartment)

	AC	20...	253	V, 50/60 Hz
	DC	20...	72	V
power consumption	AC		1.8	VA
	DC	ca.	1.3	W

15.3.1.2 VEGAMIP MPR61(*).D*********

15.3.1.2.1 VEGAMIP MPR61(*).D*****R***

input
supply voltage
(terminals 1, 2 in the terminal compartment)

	AC	20...	253	V, 50/60 Hz
	DC	20...	72	V
power consumption	AC		1.8	VA
	DC	ca.	1.6	W

relay circuit (maximal data)
contact set 1 (terminals 3, 4, 5)

AC		253	V, 5 A

contact set 2 (terminals 6, 7, 8)

DC		30	V, 4 A
DC		125	V, 0.2 A

15.3.1.2.2 VEGAMIP MPR61(*).D*****T***

input
supply voltage
terminals 1, 2 in the terminal compartment)

	DC	20...	55	V
power consumption		<	1	W

signal circuit (maximal data)
terminals 4, 5 in the terminal compartment)

U_{Load} =	DC	20...	55	V
I_{Load}	≤		400	mA

15.3.1.3 High frequency parameters

transmitting-/emitting frequency K-Band		ca. 24	GHz
output radiating power (normal operation)	P_{EIRP}	0.1	W
max. output radiating power (2 faults)	P_{EIRP}	0.2	W

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15.3.2 Thermal data

15.3.2.1 Equipment EPL Ga/Gb

Temperature classes T6,T5, T4, T3, T2, T1

permitted process temperature at the sensor -20 °C...+60 °C

permitted ambient temperature at the electronics -20 °C...+60 °C

15.3.2.1 Equipment EPL Gb

temperature class	T6	T5	T4	T3	T2	T1
permitted process temperature at the sensor	-60 °C... +85 °C	-60 °C... +100 °C	-60 °C... +135 °C	-60 °C... +200 °C	-60 °C... +300 °C	-60 °C... +450 °C
permitted ambient temperature at the electronics	-50 °C...+60 °C					

(16) Test and assessment report

BVS PP 11.2270 EG as of 08.12.2011

(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, 08.12.2011
BVS-Hk/Her A 20110898

Certification body

Special services unit

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