IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BVS 11.0098 issue No.:1	Certificate history: Issue No. 1 (2018-1-15) Issue No. 0 (2011-12-19)
Status:	**Current**	
Date of Issue:	**2018-01-15** Page 1 of 4	
Applicant:	**VEGA Grieshaber KG** Am Hohenstein 113 77761 Schiltach **Germany**	
Equipment: *Optional accessory:*	**Microwave barrier type VEGAMIP MP*61(*).DXA*********	
Type of Protection:	**Equipment protection by flameproof enclosures "d", Equipment with equipment protection level (EPL) Ga**	
Marking:	Ex db IIC T6 Ga/Gb Ex db IIC T6 Gb	
Approved for issue on behalf of the IECEx Certification Body:	Jörg Koch	
Position:	Head of Certification Body	
Signature: *(for printed version)*		
Date:	25. 1. 18	

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Manufacturer: **VEGA Grieshaber KG**
Am Hohenstein 113
77761 Schiltach
Germany

Additional Manufacturing location(s):
VEGA Americas, Inc.
4241 Allendorf
Drive,Cincinnati, Ohio 45209
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-26 : 2014-10 Edition: 3.0	Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/BVS/ExTR11.0128/01

Quality Assessment Report:

DE/TUN/QAR06.0002/08

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Description

The microwave barrier type VEGAMIP MP*61(*).DX******** 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 identical to the 1-chamber housing which was separately tested and meets the requirements of the standards IEC 60079-0:2011 and IEC 60079-1:2014 (see DE/BVS/ExTR11.0095/02).
The termination of the 1-chamber housing to the side of the process is built by welded construction in combination with a flameproof joint and 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.

Model/type reference

See Annex

Rating and Code

See Annex

SPECIFIC CONDITIONS OF USE: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

- Updating to current version of standard
- New manufacturing location
- Adjustment of type code
- Light revision of electronics
- Mechanical changes

Annex: BVS_11_0098_VEGA_Annex_issue1.pdf

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Annex

Model/type reference:

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

additional equipment
X – without

cable entry
* - M20x1.5 and ½NPT thread for the use of certified cable glands and blind plugs

housing / protection

A - aluminium / IP66/IP68 0.2 bar

H - special colour aluminium IP 66/IP68 0.2 bar

V - stainless steel 316L / IP66/IP68 0.2 bar

electronics
R - power supply DC 20…72 V/AC 20…253 V
T - power supply DC 20…55 V
load DC 20…55 V, 400 mA

seal process fitting
* - FKM, FFKM, …

process fitting see manual

version / material
A - inside horn antenna (ø1½") / 316L with PTFE cover

DX = IECEx Ex db IIC T6 Ga/Gb, Gb
DK = IECEx Ex db IIC T6 Ga/Gb, Gb +
IECEx Ex ta, ta/tb, ta/tc, tb IIIC T* Da, Da/Db, Da/Dc, Db IP66 [1]

optional version differentiation,
without relevance for explosion protection

[1] The assessment for use in explosive dust atmospheres is not part of this test report.

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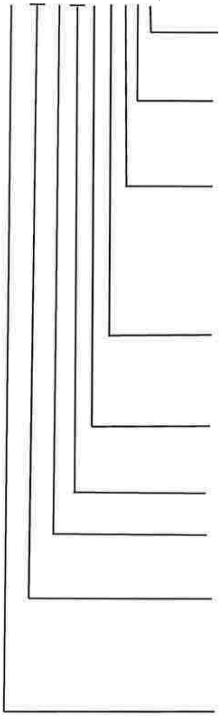
Microwave barrier type
VEGAMIP MPT61(*).D* * ** * T * * * (Transmitter)



additional equipment
X – without

cable entry
* - M20x1.5 and ½NPT thread for the use of certified cable glands and blind plugs

housing / protection

A - aluminium / IP66/IP68 0.2 bar

H – Special color aluminium IP 66/IP68 0.2 bar

V - stainless steel 316L / IP66/IP68 0.2 bar

electronics
T - power supply DC 20…55 V
load DC 20…55 V, 400 mA

seal process fitting
* - FKM, FFKM, …

process fitting see manual

version / material
A - Inside horn antenna (ø1½") / 316L with PTFE cover

DX = IECEx Ex db IIC T6 Ga/Gb, Gb
DK = IECEx Ex db IIC T6 Ga/Gb, Gb +
IECEx Ex ta, ta/tb, ta/tc, tb IIIC T* Da, Da/Db, Da/Dc, Db IP66 [1]

optional version differentiation,
without relevance for explosion protection

[1] The assessment for use in explosive dust atmospheres is not part of this test report.

Rating and Code:

Parameters

Electrical data

VEGAMIP MPT61(*).DXA***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

VEGAMIP MPR61(*).DXA*******
VEGAMIP MPR61(*).DXA***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

VEGAMIP MPR61(*).DXA***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

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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Thermal data

Permitted ambient temperature range
at the sensor (in Zone 0)

VEGAMIP MPR/T6*(*).DXA***R/T***	-20 °C...+60 °C

at the sensor (in Zone 1)

VEGAMIP MPR/T6*(*).DXA***R/T***	-40 °C...+80 °C

at the electronics enclosure (in Zone 1)

VEGAMIP MPR/T6*(*).DXA***R/T***	-50 °C...+60 °C

Max. surface temperature T

The max. surface temperature is the higher one of the following:

At the sensor process temperature	+3	K
At the electronics enclosure limited by thermo fuse to	102	°C

Degrees of protection according to IEC 60529	IP66/68	0.2 bar