

**GOVERNMENT APPROVED TEST LABORATORY**  
IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

**IA CERTIFICATE**

Date Issued: **12 May 2023**  
\*Expiry date: **12 May 2026**  
**Page 1 of 16**  
**Issue: 9**

**Ex – Type Examination Certificate**

Certificate Number: **S-XPL/091085 X**  
Equipment: **Radar-Sensor**  
Model / Type: **VEGAPULS**  
Applicant: **VEGA Grieshaber KG**  
**Am Hohenstein 113, 77761 Schiltach**  
**Germany**  
Manufacturer: **VEGA Grieshaber KG**  
Serial No: All serial numbers imported between issued- and expire date and all serial numbers covered by a valid report or acceptable product certification mark.

Supplied by  
**VEGA Grieshaber KG**  
Identified by Inspection Authority number  
**S-XPL/091085 X**

And as described in the Explolabs file number **XPL/10701/091085 Issue 9** is hereby certified "Explosion Protected (Refer to clause 1, for Ex Rating)", having been examined and inspected in accordance with the relevant requirements of South African Standards.

**SANS 60079-0: 2019 Ed 6** Explosive atmospheres Part 0: Equipment — General requirements  
**IEC 60079-0: 2017 Ed 7**

**SANS 60079-31: 2014 Ed 2** Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure "t"  
**IEC 60079-31: 2013 Ed 2**

Risk of ignition provided:

Protection afforded	Equipment Protection Level (EPL) Group	Performance of protection	Conditions of operation	T class or Max Surface Temp (°C)
Very high	Da Group III	Two independent means of protection or safe even when two faults occur independently of each other	Equipment remains functioning in zones 20, 21 and 22	See Manual
High	Db Group III	Suitable for normal operation and frequently occurring disturbances or equipment where faults are normally taken into account	Equipment remains functioning in zones 21 and 22	

*This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:*

- i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
  - ii) Any conditions mentioned in the above report;
  - iii) Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
  - iv) Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
- A revision certificate replaces all previous version of the certificate.  
v) \* - Only covers equipment imported between the "Issued" and "Expire" dates.  
vi) If and when your QAN (Quality Assurance Notification) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted the existing IA Certification will then be cancelled. It is thus the client's responsibility to always submit the updated and valid QAN certificate(s) to Explolabs (Pty) Ltd  
vii)

DOCUMENT No: XPL0213    RELEASE DATE: 29/05/2018    REV : 7

This certificate supersedes all previous documents bearing the reference no XPL/10701/091085 Issue 8.



## 1. GENERAL

The marking of the Radar-Sensor shall include the following:

**Ex ta IIIC T see manual Da**

**Ex ta/tb IIIC T see manual Da/Db**

**Ex ta/tc IIIC T see manual Da/Dc**

**Ex tb IIIC T see manual Db**

**Subject and type**

Radar sensor VEGAPULS with type code (Hardware-Version  $\geq$  2.00; Software-Version  $\geq$  4.00)

PS 62(*) . * . * . * . * . *	<ul style="list-style-type: none"> <li>adjustment / indication module           <ul style="list-style-type: none"> <li>X = without</li> <li>A = mounted</li> <li>F = without PLICSCOM, cover with window</li> <li>B = laterally mounted</li> <li>K = mounted, with Bluetooth and magnet pin</li> <li>U = mounted, with Bluetooth and magnet pin (battery)</li> <li>L = laterally mounted, with Bluetooth and magnet pin</li> <li>S = laterally mounted, with Bluetooth and magnet pin (battery)</li> </ul> </li> <li>cable entry           <ul style="list-style-type: none"> <li>M = M20x1.5; N = 1/2"NPT</li> <li>* other certified connection or cable gland suitable for the application</li> </ul> </li> <li>enclosure           <ul style="list-style-type: none"> <li>A = aluminium enclosure IP66</li> <li>H = aluminium enclosure IP66 in special colour</li> <li>D = aluminium double chamber enclosure IP66</li> <li>S = aluminium double chamber enclosure IP66 in special colour</li> <li>V = stainless steel enclosure IP66</li> <li>W = stainless steel double chamber enclosure IP66</li> </ul> </li> <li>electronics           <ul style="list-style-type: none"> <li>H = 4...20 mA + HART</li> <li>P = Profibus PA</li> <li>F = Foundation Fieldbus</li> <li>B,I = 4 wire electronics</li> <li>D = 2 wire electronics 4...20 mA + HART, sensitive version</li> <li>K = Profibus PA, sensitive version</li> <li>L = Foundation Fieldbus, sensitive version</li> <li>G,M = 4 wire electronics, sensitive version</li> </ul> </li> <li>sealing rings/process temperature           <ul style="list-style-type: none"> <li>2 = FKM+ PTFE -40 °C...+130 °C</li> <li>3 = Kalrez 6375 + PTFE -20 °C...+130 °C</li> <li>4 = FKM (SHS FPM 70C3GLT) + PTFE -40 °C...+200 °C</li> <li>not with steam</li> <li>5 = FKM (Kalrez 6375) + PTFE -20 °C...+200 °C</li> <li>7 = FFKM (Kalrez 6230) + PTFE (FDA) -15 °C...+130 °C</li> <li>9 = FFKM (Kalrez 6230) + PTFE -40 °C...+200 °C</li> <li>B = FKM (SHS FPM 70C3GLT) + PP -40 °C...+80 °C</li> <li>max 3 bar</li> <li>D = FKM (Kalrez6375) + PP -20 °C...+80 °C</li> <li>max 3 bar</li> </ul> </li> <li>process connection see manual</li> <li>version / material           <ul style="list-style-type: none"> <li>* = with horn antenna or with parabolic antenna / 316 L (1.4435) or Alloy C22 (2.4602)</li> </ul> </li> <li>certificate           <ul style="list-style-type: none"> <li>RX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db</li> <li>DK = ATEX II 1/2G, 2G Ex d ia IIC T6<sup>1</sup></li> <li>ATEX II 1D, 1/2D, 2D Ex ia, ta/tb IIIC IP66 T... Da, Da/Db, Db</li> <li>CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6... Ga, Ga/Gb, Gb<sup>1</sup></li> <li>ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db</li> </ul> </li> <li>optional version differentiation, without relevance for explosion protection</li> </ul>
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1 The assessment for use in explosive gas atmospheres is **not** part of this test report.

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This certificate supersedes all previous documents bearing the reference no XPL/10701/091085 Issue 8.

Radar sensor VEGAPULS with type code (Hardware-Version  $\geq 2.00$ ; Software-Version  $\geq 4.00$ )

PS 63(\*).\*\*\*\*\*

— adjustment / indication module  
 X = without  
 A = mounted  
 F = without PLICSCOM, cover with window  
 B = laterally mounted  
 K = mounted, with Bluetooth and magnet pin  
 U = mounted, with Bluetooth and magnet pin (battery)  
 L = laterally mounted, with Bluetooth and magnet pin  
 S = laterally mounted, with Bluetooth and magnet pin (battery)

— cable entry  
 M = M20x1.5; N = 1/2"NPT  
 \* other certified connection or cable gland suitable for the application

— enclosure  
 A = aluminium enclosure IP66  
 H = aluminium enclosure IP66 in special colour  
 D = aluminium double chamber enclosure IP66  
 S = aluminium double chamber enclosure IP66 in special colour  
 V = stainless steel enclosure IP66  
 W = stainless steel double chamber enclosure IP66

— electronics  
 H = 4...20 mA + HART  
 P = Profibus PA  
 F = Foundation Fieldbus  
 B,I = 4 wire electronics  
 D = 2 wire electronics 4...20 mA + HART, sensitive version  
 K = Profibus PA, sensitive version  
 L = Foundation Fieldbus, sensitive version  
 G,M = 4 wire electronics, sensitive version

— process connection see manual

— version / material  
 \* = with hygienically encapsulated horn antenna

— certificate  
 RX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db  
 DK = ATEX II 1/2G, 2G Ex d ia IIC T6<sup>1</sup>  
     ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db  
 CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6... Ga, Ga/Gb, Gb<sup>1</sup>  
     ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

— optional version differentiation,  
 without relevance for explosion protection

1 The assessment for use in explosive gas atmospheres is **not** part of this test report.

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Radar sensor VEGAPULS with type code (Hardware-Version  $\geq$  2.00; Software-Version  $\geq$  4.00)

PS 66(*).*****	<p>adjustment / indication module  X = without  A = mounted  F = without PLICSCOM, cover with window  B = laterally mounted  K = mounted, with Bluetooth and magnet pin  U = mounted, with Bluetooth and magnet pin (battery)  L = laterally mounted, with Bluetooth and magnet pin  S = laterally mounted, with Bluetooth and magnet pin (battery)</p> <p>cable entry  M = M20x1.5; N = 1/2"NPT  * other certified connection or cable gland suitable for the application</p> <p>enclosure  A = aluminium enclosure IP66  H = aluminium enclosure IP66 in special colour  D = aluminium double chamber enclosure IP66  S = aluminium double chamber enclosure IP66  in special colour  V = stainless steel enclosure IP66  W = stainless steel double chamber enclosure IP66</p> <p>electronics  H = 4...20 mA + HART  P = Profibus PA  F = Foundation Fieldbus  B, I = 4 wire electronics</p> <p>sealing rings/process temperature  5 = EPDM / -40 °C...+150 °C  2 = FKM / -40 °C...+150 °C  3 = Kalrez 6375/ -20 °C...+150 °C  G = graphite and ceramics / -60 °C...+250 °C  with temperature adapter  H = graphite and ceramics/ -60 °C...+400 °C  with temperature adapter</p> <p>process connection see manual</p> <p>version / material  * = with horn antenna or parabolic antenna /  316 L (1.4435) or Alloy C22 (2.4602)</p> <p>certificate  RX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db  DK = ATEX II 1/2G, 2G Ex d ia IIC T6<sup>1</sup>  ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db  CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6... Ga, Ga/Gb, Gb<sup>1</sup>  ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db</p> <p>optional version differentiation,  without relevance for explosion protection</p>
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<sup>1</sup> The assessment for use in explosive gas atmospheres is **not** part of this test report.

Radar sensor VEGAPULS with type code (Hardware-Version  $\geq 2.00$ ; Software-Version  $\geq 4.00$ )

PS 67(\*) \* B \* \* \* \* \*

adjustment / indication module

X = without

A = mounted

F = without PLICSCOM, cover with window

B = laterally mounted

K = mounted, with Bluetooth and magnet pin

U = mounted, with Bluetooth and magnet pin (battery)

L = laterally mounted, with Bluetooth and magnet pin

S = laterally mounted, with Bluetooth and magnet pin (battery)

cable entry

M = M20x1.5; N = 1/2"NPT

\* other certified connection or cable gland suitable for the application

enclosure

A = aluminium enclosure IP66

H = aluminium enclosure IP66 in special colour

D = aluminium double chamber enclosure IP66

S = aluminium double chamber enclosure IP66 in special colour

V = stainless steel enclosure IP66

W = stainless steel double chamber enclosure IP66

electronics

H = 4...20 mA + HART

P = Profibus PA

F = Foundation Fieldbus

B,I = 4 wire electronics

process connection / material see manual

version / material / process temperature

B = with plastic horn antenna  $\varnothing 80$  mm / PP /  $-40$  °C ...  $+80$  °C

certificate

RX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

optional version differentiation,

without relevance for explosion protection

<sup>1</sup> The assessment for use in explosive gas atmospheres is **not** part of this test report.

Radar sensor VEGAPULS with type code (Hardware-Version  $\geq$  2.00; Software-Version  $\geq$  4.00)

P SSR 68(\*) . \*\*\*\*\*

PS 68(\*) . \*\*\*\*\*

adjustment / indication module

X = without

A = mounted

F = without PLICSCOM, cover with window

B = laterally mounted

K = mounted, with Bluetooth and magnet pin

U = mounted, with Bluetooth and magnet pin (battery)

L = laterally mounted, with Bluetooth and magnet pin

S = laterally mounted, with Bluetooth and magnet pin (battery)

cable entry

M = M20x1.5; N = 1/2"NPT

\* other certified connection or cable gland suitable for the application

enclosure

A = aluminium enclosure IP66

H = aluminium enclosure IP66 in special colour

D = aluminium double chamber enclosure IP66

S = aluminium double chamber enclosure IP66 in special

colour

V = stainless steel enclosure IP66

W = stainless steel double chamber enclosure IP66

electronics

H = 4...20 mA + HART

P = Profibus PA

F = Foundation Fieldbus

B,I = 4 wire electronics

sealing rings/process temperature

2 = FKM+ PTFE -40 °C...+130 °C

3 = Kalrez 6375 + PTFE -20 °C...+130 °C

4 = FKM (SHS FPM 70C3GLT) + PTFE -40 °C...+200 °C

not with steam

5 = FKM (Kalrez 6375) + PTFE -20 °C...+200 °C

7 = FFKM (Kalrez 6230) + PTFE (FDA) -15 °C...+130 °C

9 = FFKM (Kalrez 6230) + PTFE -40 °C...+200 °C

process connection see manual

version / material

\* = with horn antenna or parabolic antenna /

316 L (1.4435) or Alloy C22 (2.4602)

certificate

RX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

DK = ATEX II 1/2G, 2G Ex d ia IIC T6<sup>1</sup>

ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6... Ga, Ga/Gb, Gb<sup>1</sup>

ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

optional version differentiation,

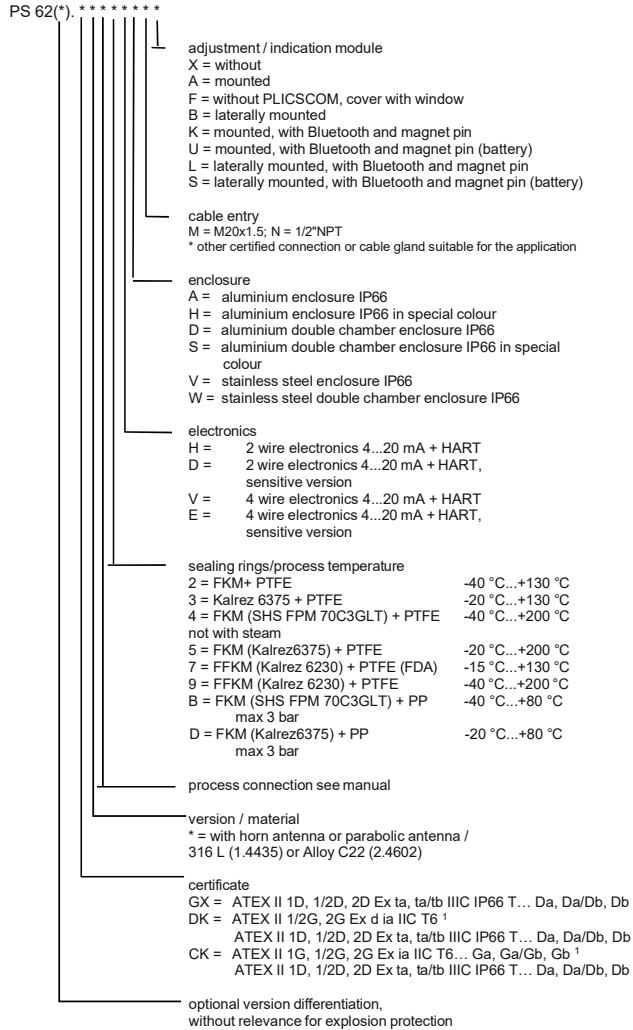
without relevance for explosion protection

<sup>1</sup> The assessment for use in explosive gas atmospheres is **not** part of this test report.

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Radar sensor VEGAPULS with type code (Hardware-Version ≤ 1.10; Software-Version ≤ 3.90)



<sup>1</sup> The assessment for use in explosive gas atmospheres is **not** part of this test report.

Radar sensor VEGAPULS with type code (Hardware-Version ≤ 1.10; Software-Version ≤ 3.90)

PS 63(\*) \* \* \* \* \*

adjustment / indication module

X = without

A = mounted

F = without PLICSCOM, cover with window

B = laterally mounted

K = mounted, with Bluetooth and magnet pin

U = mounted, with Bluetooth and magnet pin (battery)

L = laterally mounted, with Bluetooth and magnet pin

S = laterally mounted, with Bluetooth and magnet pin (battery)

cable entry

M = M20x1.5; N = 1/2"NPT

\* other certified connection or cable gland suitable for the application

enclosure

A = aluminium enclosure IP66

H = aluminium enclosure IP66 in special colour

D = aluminium double chamber enclosure IP66

S = aluminium double chamber enclosure IP66 in special colour

V = stainless steel enclosure IP66

W = stainless steel double chamber enclosure IP66

electronics

H = 2 wire electronics 4...20 mA + HART

D = 2 wire electronics 4...20 mA + HART, sensitive version

V = 4 wire electronics 4...20 mA + HART

E = 4 wire electronics 4...20 mA + HART, sensitive version

sealing rings/process temperature

1 = PTFE -40 °C...+ 150 °C

2 = PPH -40 °C...+ 80 °C

process connection see manual

version / material

\* = with hygienically encapsulated horn antenna

certificate

GX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

DK = ATEX II 1/2G, 2G Ex d ia IIC T6<sup>1</sup>

ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6... Ga, Ga/Gb, Gb<sup>1</sup>

ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

optional version differentiation,

without relevance for explosion protection

<sup>1</sup> The assessment for use in explosive gas atmospheres is **not** part of this test report.



Radar sensor VEGAPULS with type code (Hardware-Version ≤ 1.10; Software-Version ≤ 3.90)

PS 66(\*) . . . . .

adjustment / indication module

X = without

A = mounted

F = without PLICSCOM, cover with window

B = laterally mounted

K = mounted, with Bluetooth and magnet pin

U = mounted, with Bluetooth and magnet pin (battery)

L = laterally mounted, with Bluetooth and magnet pin

S = laterally mounted, with Bluetooth and magnet pin (battery)

cable entry

M = M20x1.5; N = 1/2"NPT

\* other certified connection or cable gland suitable for the application

enclosure

A = aluminium enclosure IP66

H = aluminium enclosure IP66 in special colour

D = aluminium double chamber enclosure IP66

S = aluminium double chamber enclosure IP66 in special colour

V = stainless steel enclosure IP66

W = stainless steel double chamber enclosure IP66

electronics

H = 2 wire electronics 4...20 mA + HART

D = 2 wire electronics 4...20 mA + HART, sensitive version

V = 4 wire electronics 4...20 mA + HART

E = 4 wire electronics 4...20 mA + HART, sensitive version

sealing rings/process temperature

5 = EPDM / -40 °C...+150 °C

2 = FKM / -40 °C...+150 °C

3 = Kalrez 6375/ -20 °C...+150 °C

G = graphite and ceramics / -60 °C...+250 °C

H = graphite and ceramics / -60 °C...+400 °C

process connection see manual

version / material

\* = with horn antenna or parabolic antenna /

316 L (1.4435) or Alloy C22 (2.4602)

certificate

GX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

DK = ATEX II 1/2G, 2G Ex d ia IIC T6<sup>1</sup>

ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6... Ga, Ga/Gb, Gb<sup>1</sup>

ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

optional version differentiation,

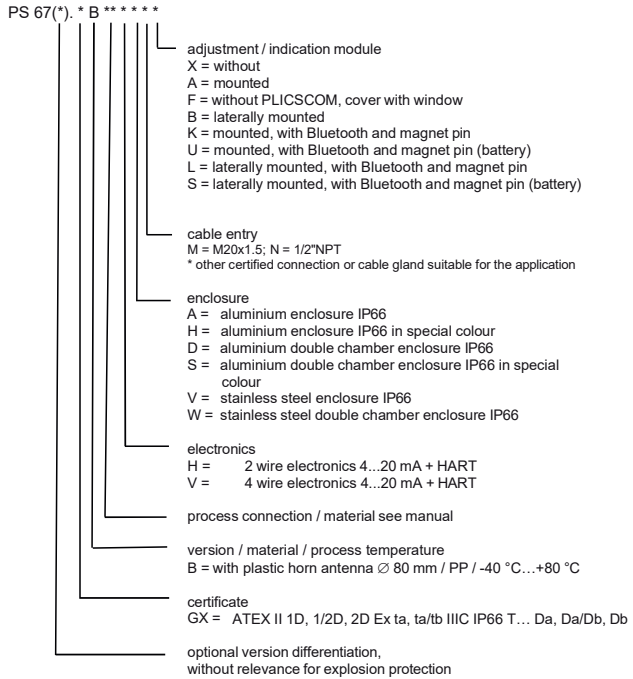
without relevance for explosion protection

<sup>1</sup> The assessment for use in explosive gas atmospheres is **not** part of this test report.



**ANNEX TO CERTIFICATE NO S-XPL/091085 X**

Radar sensor VEGAPULS with type code (Hardware-Version ≤ 1.10; Software-Version ≤ 3.90)



<sup>1</sup> The assessment for use in explosive gas atmospheres is **not** part of this test report.



Radar sensor VEGAPULS with type code (Hardware-Version  $\leq$  1.10; Software-Version  $\leq$  3.90)

PS 68(\*) . \* \* \* \* \*

adjustment / indication module

X = without

A = mounted

F = without PLICSCOM, cover with window

B = laterally mounted

K = mounted, with Bluetooth and magnet pin

U = mounted, with Bluetooth and magnet pin (battery)

L = laterally mounted, with Bluetooth and magnet pin

S = laterally mounted, with Bluetooth and magnet pin (battery)

cable entry

M = M20x1.5; N = 1/2"NPT

\* other certified connection or cable gland suitable for the application

enclosure

A = aluminium enclosure IP66

H = aluminium enclosure IP66 in special colour

D = aluminium double chamber enclosure IP66

S = aluminium double chamber enclosure IP66 in special colour

V = stainless steel enclosure IP66

W = stainless steel double chamber enclosure IP66

electronics

H = 2 wire electronics 4...20 mA + HART

D = 2 wire electronics 4...20 mA + HART,  
sensitive version

V = 4 wire electronics 4...20 mA + HART

E = 4 wire electronics 4...20 mA + HART,  
sensitive version

sealing rings/process temperature

2 = FKM+ PTFE -40 °C...+130 °C

3 = Kalrez 6375 + PTFE -20 °C...+130 °C

4 = FKM (SHS FPM 70C3GLT) + PTFE -40 °C...+200 °C  
not with steam

5 = FKM (Kalrez 6375) + PTFE -20 °C...+200 °C

7 = FFKM (Kalrez 6230) + PTFE (FDA) -15 °C...+130 °C

9 = FFKM (Kalrez 6230) + PTFE -40 °C...+200 °C

process connection see manual

version / material

\* = with horn antenna or parabolic antenna /  
316 L (1.4435) or Alloy C22 (2.4602)

certificate

GX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

DK = ATEX II 1/2G, 2G Ex d ia IIC T6<sup>1</sup>

ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6... Ga, Ga/Gb, Gb<sup>1</sup>

ATEX II 1D, 1/2D, 2D Ex ta, ta/tb IIIC IP66 T... Da, Da/Db, Db

optional version differentiation,

without relevance for explosion protection

<sup>1</sup> The assessment for use in explosive gas atmospheres is **not** part of this test report.

**Description**

The Radar sensor VEGAPULS is used to measure the distance between the surface of combustible dust generating material and the sensor. It can be installed in any zone or partition wall.

The Radar sensor can operate with different electronic inserts protected by VA/AL-housing and connected antenna, antenna extensions and rinsing connections are possible. The electronics enclosure is separately approved (BVS 14 ATEX E 121 U).

**Reason for the supplement:**

- Update to current harmonized standards
- Distinction between product name and type code
- Minor adaptation of drawings and documents
- VEGADIS-ADAPT added

**Parameters**

Hardware version  $\geq$  2.00; Software version  $\geq$  4.00

Electrical data

PS62/63(\*).RX\*\*\*D/H/K/L/P/F\*

\*\* PS67(\*).RX\*\*H/P/F\*\*\*

PS66/68(\*).RX\*\*\*H/P/F\*\*\*

PSSR68(\*).RX\*\*\*H/P/F\*\*\*

Supply

terminals 1 [+], 2 [-] in the electronics compartment or in the terminal compartment regarding the two cell enclosure version

U = 9.6.....30 V DC

Um = 30 V DC

PS62/63(\*).RX\*\*\*B/G\*\*\*

PS66/68(\*).RX\*\*\*B\*\*\*

PSSR68(\*).RX\*\*\*B\*\*\*

PS67(\*).RX\*\*\*B\*\*\*

supply

AC

90.. 253 V, 50/60 Hz

(terminals 1, 2 in the terminal compartment)

Um = 253 V AC

output

4.. 20 mA with superposed HART-signal

(terminals 5[+], 7[-] in the terminal compartment)  
passive signal current, input

4.. 20 mA with superposed HART-signal

(terminals 6[+], 7[-] in the terminal compartment)

PS62/63(\*).RX\*\*\*I/M\*\*\*

PS66/68(\*).RX\*\*\*I\*\*\*

PSSR68(\*).RX\*\*\*I\*\*\*

PS67(\*).RX\*\*\*I\*\*\*

supply

AC 20..42 V, 50/60 Hz or

(terminals 1, 2 in the terminal compartment)

DC 9.6 V...48 V

Um = 253 V AC

output

4...20 mA with superposed HART-signal

(terminals 5[+], 7[-] in the terminal compartment)

passive signal current, input

4...20 mA with superposed HART-signal

(terminals 6[+], 7[-] in the terminal compartment)

PS62/63(\*).RX\*\*\*D/H/K/L/P/F\*\*\*

PS66/68(\*).RX\*\*\*H/P/F\*\*\*

PSSR68(\*).RX\*\*\*H/P/F\*\*\*

PS67(\*).RX\*\*H/P/F\*\*\*

adjustment and indication circuit

in type of protection Intrinsic Safety Ex ia IIC

(terminals 5, 6, 7, 8 in the electronics compartment only for connection to the intrinsically safe circuit of the compartment via DIS-ADAPT) associated VEGA adjustment and indication unit VEGADIS81

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adjustment and indication circuit  
(spring contacts in the electronics compartment)

according to  
PTB 02 ATEX 2136X and BVS 05 ATEX E 023  
L<sub>Kabel</sub> - cable ≤ 310 μH  
C<sub>Kabel</sub> - cable ≤ 2,0 μF

in type of protection Intrinsic Safety Ex ia IIC  
only for connection to the intrinsically safe VEGA  
adjustment and indication unit (PLICSCOM) or  
VEGACONNECT4 (PTB 07 ATEX 2013X).

PS62/63(\*).RX\*\*\*G/M/B/I\*\*\*

PS66/68(\*).RX\*\*\*B/I\*\*\*

PSSR68(\*).RX\*\*\*B/I\*\*\*

PS67(\*).RX\*\*B/I\*\*\*

adjustment and indication circuit  
(spring contacts in the electronics  
compartment)

in type of protection Intrinsic Safety Ex ia IIC  
only for connection to the intrinsically safe VEGA  
adjustment and indication unit (PLICSCOM) or  
VEGACONNECT4 (PTB 07 ATEX 2013X).

Thermal data

Permitted process temperature at the probe:

PS62(*).***X***	X:	2 = FKM(SHS FPM 70C3 GLT) + PTFE /	-40 °C...+130 °C
		3 = Kalrez 6375 + PTFE /	-20 °C...+130 °C
		6 = Kalrez 2035 + PTFE /	-15 °C...+130 °C
		7 = Kalrez 6230 + PTFE /	-15 °C...+130 °C
		A = FKM(SHS FPM 70C3 GLT)+PEEK /	-40 °C... +200 °C
		C = Kalrez 2035 + PEEK /	-15 °C... +210 °C
		E = Kalrez 6230 + PEEK /	-15 °C... +250 °C
		F = Kalrez 6375 + PEEK /	-20 °C... +250 °C
		H = graphite and ceramics /	-196 °C... +450 °C
PS63(*).*X****	X:	N = PTFE /	-40 °C...+200 °C
		J = PTFE	-196 °C...+200 °C
		R = PTFE (8mm)	-40 °C...+200 °C
		L = PFA	-40 °C...+200 °C
		M = PFA (8mm)	-40 °C...+200 °C
		V = PTFE + FKM	-20 °C...+130 °C
		E = PTFE + EPDM	-40 °C...+130 °C
		U = PTFE (8mm)	-196 °C...+200 °C
PS66(*).****X***	X:	2 = FKM (A+P GLT FPM 70.16-06) /	-40 °C to+150 °C
		3 = Kalrez 6375 /	-20 °C to+150 °C
		5 = EPDM /	-40 °C to+150 °C
		G = graphite and ceramics / with temperature adapter	-60 °C to+250 °C
		H = graphite and ceramics / with temperature adapter	-60 °C to+400 °C
PS67(*).*X****	X:	B = PP /	-40 °C to +80 °C
PS68.***X***	X:	2 = FKM (SHS FPM 70C3 GLT) + PTFE /	-40 °C to+130 °C
PSSR68(*).***X***	X:	3 = Kalrez 6375 + PTFE /	-20 °C to+130 °C
		7 = Kalrez 6230 + PTFE /	-15 °C to+130 °C
		A = FKM (SHS FPM 70C3 GLT) + PEEK /	-40 °C to+200 °C
		C = Kalrez 2035 + PEEK /	-15 °C to+210 °C
		E = Kalrez 6230 + PEEK /	-20 °C to+250 °C
		F = Kalrez 6375 + PEEK /	-20 °C to+250 °C
		H = graphite and ceramics /	-196 °C to+450 °C

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Permitted ambient temperature at the electronics enclosure -40 °C to+ 60 °C

Maximum surface temperature

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

Maximum surface temperature at the probe

process temperature + 2 K

Maximum surface temperature at the electronics enclosure for installation in zone 20

PS62/63(\*).RX \*\*\*D/K/L\*\*\* ambient temperature + 86 K

PS62/63/66(\*).RX \*\*\*H/P/F\*\*\* ambient temperature + 86 K

PS/PSSR68(\*).RX \*\*\*H/P/F\*\*\* ambient temperature + 86 K

PS67(\*).RX\*\*H/P/F\*\*\* ambient temperature + 86 K

PS62/63(\*).RX\*\*\*G/M\*\*\* with thermo fuse limited to 102 °C

PS62/63/66(\*).RX\*\*\*B/I\*\*\* with thermo fuse limited to 102 °C

PS/PSSR68(\*).RX\*\*\*B/I\*\*\* with thermo fuse limited to 102 °C

PS67(\*).RX\*\*B/I\*\*\* with thermo fuse limited to 102 °C

Maximum surface temperature at the electronics enclosure for installation in zone 20/21, 20/22, 21

PS62/63(\*).RX \*\*\*D/K/L\*\*\* ambient temperature + 36 K

PS62/63/66(\*).RX \*\*\*H/P/F\*\*\* ambient temperature + 36 K

PS/PSSR68(\*).RX \*\*\*H/P/F\*\*\* ambient temperature + 36 K

PS67(\*).RX\*\*H/P/F\*\*\* ambient temperature + 36 K

PS62/63(\*).RX\*\*\*G/M\*\*\* with thermo fuse limited to 102 °C

PS62/63/66(\*).RX\*\*\*B/I\*\*\* with thermo fuse limited to 102 °C

PS/PSSR68(\*).RX\*\*\*B/I\*\*\* with thermo fuse limited to 102 °C

PS67(\*).RX\*\*B/I\*\*\* with thermo fuse limited to 102 °C

Degrees of protection according to IEC/SANS 60529 IP66

Hardware version ≤ 1.10; Software version ≤ 3.90

#### Electrical data

PS66/68.GX \*\*\*V\*\*\*

PS62/63.GX \*\*\*E/V\*\*\*

PS67.GX\*\*V\*\*\*

supply AC 20...253 V, 50/60 Hz or  
(terminals 1, 2 in the terminal compartment)

DC 20...253 V

$P_{max} \leq 1$  W

output 4...20 mA with superposed HART-signal  
(terminals 3, 4 in the terminal compartment)

PS66/68(\*).GK\*\*\*H\*\*\*

PS62/63(\*).GK\*\*\*D/H\*\*\*

Supply and signal circuit

2 [-] in the electronics  
compartment or in the terminal  
compartment regarding the  
two cell enclosure version

in type of protection Intrinsic Safety Ex ia IIC terminals 1 [+],  
only for connection to a certified intrinsically safe circuit  
with the following maximum values:

$U_i = 30$  V

$I_i = 131$  mA

$P_i = 983$  mW

linear characteristics

$L_i \cong 5$   $\mu$ H

$C_i$  negligible

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This certificate supersedes all previous documents bearing the reference no XPL/10701/091085 Issue 8.

Thermal data

Permitted process temperature at the probe

PS62.**X****	X:		
		2 = Viton	-30 °C...+130 °C
		3 = Kalrez 6375	-20 °C...+150 °C
		4 = Viton with temperature adapter	-40 °C...+200 °C
		5 = Kalrez 6375	-20 °C...+200 °C
		with temperature adapter	
		7 = Kalrez 6230 + PTFE (FDA)	-15 °C...+130 °C
		9 = Kalrez 6230 + PTFE	-15 °C...+200 °C
		with temperature adapter	
		B = FKM(SHS FPM 70C3 GLT)+PP	-40 °C...+80 °C
			max. 3 bar
		D = Kalrez 6375 + PP	-40 °C...+80 °C
			max. 3 bar
PS63.**X****	X:	N = PTFE /	-40 °C...+200 °C
PS63(*)**X****		J = PTFE	-196 °C...+200 °C
		R = PTFE (8 mm)	-40 °C...+200 °C
		U = PTFE (8 mm)	-196 °C...+200 °C
		A = TFM-PTFE(8 mm)	-40 °C...+150 °C
		P = TFM-PTFE	-40 °C...+150 °C
		G = Alloy 400 (2.4360),	
		TFM-PTFE(8 mm)	-10 °C...+150 °C
		W = PCTFE(8 mm)	-40 °C...+200 °C
		* other horn antennas	
PS67.*X*****	X:	B = PP	-40 °C...+80 °C
PS67(*)*X*****		* other horn antennas	
PS66.**X****	X:	2 = Viton	-30 °C...+130 °C
PS66(*)**X****		3 = Kalrez 6375	-20 °C...+150 °C
		5 = EPDM (A+P 75.5/KW75F)	-40 °C...+150 °C
		G = graphite and ceramics with temperature adapter	-60 °C...+250 °C
		H = graphite and ceramics with temperature adapter	-60 °C...+400 °C
PS68.**X****	X:	2 = Viton	-40 °C...+130 °C
PS68(*)**X****		3 = Kalrez 6375	-20 °C...+150 °C
		4 = Viton with temperature adapter	-40 °C...+200 °C
		5 = Kalrez 6375 with temperature adapter	-20 °C...+200 °C
		7 = Kalrez 6230 + PTFE (FDA)	-15 °C...+130 °C
		9 = Kalrez 6230 + PTFE with temperature adapter	-15 °C...+200 °C

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

Permitted process temperature at the probe

process temperature +2 K

Permitted ambient temperature at the electronics enclosure

PS62/63/66/67/68.GX \*\*\*\*H\*\*\*\* ambient temperature + 43 K

PS62/63.GX \*\*\*\*D\*\*\*\* ambient temperature + 43 K

PS62/63/66/67/68.GX\*\*\*\*V\*\*\*\* with thermo fuse limited to 98 °C

PS62/63.GX\*\*\*\*E\*\*\*\* with thermo fuse limited to 98 °C

Degrees of protection according to EN 60529 IP66

Based on the following documentation: BVS 04 ATEX E 080 X Supplement 12

**2. INSTALLATION INSTRUCTIONS**

It is the manufacturer's responsibility to supply installation instructions with each unit offered for sale as required by IEC/SANS 60079-0 Clause 30.

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**3. SPECIAL CONDITIONS FOR SAFE USE** (denoted by "X" after certificate number)

Variants of the radar sensor VEGAPULS for which aluminium is used shall be installed in such a way that sparking as a result of impact or friction between aluminium and steel (with the exception of stainless steel if the presence of rust particles can be excluded) is excluded.

The radar sensor VEGAPULS shall be installed in such a way that contact between the measuring sensor and the tank wall will be excluded with sufficient safety considering the tank installations and the flow conditions inside the tank. This applies, in particular, to the measuring sensors which are more than 3 m long.

**4. SCHEDULE OF LIMITATIONS** (denoted by "U" after certificate number)

None.

**5. CONDITIONS OF CERTIFICATION**

All production units must be covered by a QAN (Quality Assurance Notification), Product Mark Scheme or batch evaluation.

**6. MARKING**

The following (or similar) information have to be clearly and permanently marked on all units:

Supplier : VEGA Grieshaber KG  
 Manufacturer : VEGA Grieshaber KG  
 Equipment : Radar-Sensor  
 Model/Type : VEGAPULS  
 Serial No. : ---  
 Ex Rating : Ex ta IIIC T see manual Da  
                   Ex ta/tb IIIC T see manual Da/Db  
                   Ex ta/tc IIIC T see manual Da/Dc  
                   Ex tb IIIC T see manual Db  
 IA Certificate No : S-XPL/091085 X

**Responsible Testing Officer:**


**D Maree**

**Technical Specialist**

**EXPLOLABS EXPLOSION PREVENTION SERVICES**

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