UNITED KINGDOM CONFORMITY ASSESSMENT

1 **UK TYPE EXAMINATION CERTIFICATE**

2 Equipment Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Certificate Number: **CSAE 22UKEX1193X** Issue: **1**

4 Product: **Radar sensors types VEGAPULS 6X**

5 Manufacturer: **VEGA Grieshaber KG**

6 Address: Am Hohenstein 113
77761 Schiltach
Germany

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations. The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-26:2015 EN 60079-31:2014

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall be in accordance with Regulation 41 and include the following:

II 1/2G Ex db IIC T* Ga/Gb
II 2G Ex db IIC T* Gb
II 1D Ex ta IIIC T* Da
II 1/2D Ex ta/tb IIIC T* Da/Db

Name: Michelle Halliwell
Title: Director of Operations

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 1

13 **DESCRIPTION OF PRODUCT**

The VEGAPULS 6X is a level-measuring device based on microwave technology and used to detect the distance between the product surface and the sensor.
The VEGAPULS 6X can be installed either in zones 0/1, 1 with Ex db (Flameproof) protection or in zones 20, 20/21, 21 with Ex t (Dustproof) protection. It is manufactured from pre-certified enclosures (Ex-db: IECEx KIWA 17.0015 U/ KIWA 17ATEX0032U and Ex-ta: IECEx BVS 14.0077 U/ BVS 14ATEXE121 U) can be assembled with either one of the four different types of antennas versions available.

a. Plastic horn antenna (B)
b. Thread with integrated antenna (T)
c. Flange with plastic plating (F)
d. Flange with lens antenna (C)
e. Hygienic Fittings (H)
f. Horn Antenna (ø19mm) (G)
g. Horn Antenna (ø25mm) (K)
h. Horn Antenna (ø40mm) (L)
i. Horn Antenna (ø48mm) (N)
j. Horn Antenna (ø75mm) (D)

Category 1/2G (EPL Ga/Gb equipment)
Electrical equipment for explosive atmospheres is to be implemented in the boundary wall of the hazardous area separating zone 0 from zone 1. The measuring probe/antenna is mounted in zone 0 (EPL Ga) and the electronic housing is mounted in zone 1 (EPL Gb). These explosive atmospheres are separated by a glass fused metallic pane between enclosure and the antenna system.
Category 2G (EPL Gb equipment)
The electronics housing and the antenna system with the mechanical fixing element are installed in zone 1.
Category 1D (EPL Da equipment)
The electronics housing and the antennas with the mechanical fixing element are installed in explosion-endangered areas of zone 20, in areas requiring instruments of category 1D (EPL Da).
Category 1/2D (EPL Da/Db equipment)
The electronics housing is installed in hazardous areas of zone 21 requiring instruments of category 2D. The process connection element is installed in the separating wall, which separates areas requiring instruments of category 2D with 1D. The antenna system with the mechanical fixing element is installed in hazardous areas of zone 20.
Category 2D (EPL Db equipment)
The electronics housing and the antenna system with the mechanical fixing element are installed in explosion-endangered areas of zone 21, in areas requiring instruments of category 2D (EPL Db).

Model code

PS6X(Z)(*).a-b-c-de-f-g-hi-j-k-l-m-no-p-q-r-s-t-u
(Z) = not used or digit codes (for example SI) for soft labeling, **not relevant for approval**
(*) = 1 or 2 digit code for internal production control, **not relevant for approval**

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 1

a	Sensor Generation #
2	Second Generation
b	**Application #**
*	one digit code for preselection purposes, not relevant for approval
c	**Radar Technology**
W	80 GHz
de	**Process fitting / Material**
XX	universal, plastic horn antenna / PP/PBT
XC	Mounting strap, length: 170mm / 316L/316L
XD	Mounting strap, length: 300 mm / 316/316L
**	other process connection which complies with international or national standards
f	**Antenna version**
B	plastic horn antenna
T	Thread with integrated antenna
F	Flange with plastic plating
C	Flange with lens antenna
H	Hygienic Fittings
G	Horn Antenna (ø19mm)
K	Horn Antenna (ø25mm)
L	Horn Antenna (ø40mm)
N	Horn Antenna (ø48mm)
D	Horn Antenna (ø75mm)
g	**Additional equipment #**
X	without
K	Purging air connection
V	Purging air connection with reflux valve
1	Antenna system DD lacquered
N	Device Norsok lacquered

hi	Material / Seal / Process temperature
AA	PEEK / FKM (SHS FPM 70C3 GLT) / -40…+150°C
AB	PEEK / FKM (SHS FPM 70C3 GLT) / -40…+200°C
AC	PEEK / FFKM (Kalrez 6230) / -15…+150°C
AD	PEEK / FFKM (Kalrez 6230) / -15…+250°C
AE	PEEK / FFKM (Kalrez 6375) / -20…+150°C
AF	PEEK / FFKM (Kalrez 6375) / -20…+250°C
AG	PEEK / FFKM (Perlast G75B) / -15…+150°C
AH	PEEK / FFKM (Perlast G75B) / -15…+250°C
AJ	PEEK / FFKM (Perlast G74S) / -15…+150°C
AK	PEEK / FFKM (Perlast G74S) / -15…+250°C
AL	PEEK / EPDM (AP 302) / -40…+150°C
AL	PEEK / EPDM (A+P 70.10-02) / -55…+150°C

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 1

hi	Material / Seal / Process temperature
AT	PP / PP / -40…+80°C
AU	PP / FKM (SHS FPM 70C3 GLT) / -40…+80°C
AV	PP / EPDM (COG AP310) / -40…+80°C
AW	PTFE / PTFE / -60...+150°C
A4	PTFE / PTFE / -60...+200°C
AX	PTFE / PTFE / -196…+200°C
AY	PTFE (8mm) / PTFE / -60...+150°C
A5	PTFE (8mm) / PTFE / -60...+200°C
AZ	PTFE (8mm) / PTFE / -196…+200°C
A2	PFA (8mm) / PFA / -40...+150°C
A3	PFA (8mm) / PFA / -40…+200°C
AM	PVDF / FKM / -40…+80°C
AN	Ceramic / Graphite / -196…+450°C
AP	Ceramic / FKM (PPE V71 C) / -40…+150°C
AQ	Ceramic / FFKM (Kalrez 6375) / -20…+250°C
AR	Ceramic / FFKM (Perlast xxx) / -15…+250°C
AS	Ceramic / EPDM / -40…+150°C
A8	PEEK / PEEK / -40…+150°C
A6	PEEK / FKM (COG Vi780) / -10°C…+150°C
A7	PEEK / EPDM (Freudenberg 291) / -20°C…+150°C
A1	PTFE/FFKM (Kalrez 6230) -15°C…+150°C
A9	PTFE/EPDM (Freudenberg 291) -20°C…+150°C
j	**Housing / Protection**
A	Aluminium single chamber / IP66/IP68 (0.2bar)
H	Special colour aluminium single chamber / IP66/IP68 (0.2bar)
D	Aluminium double chamber / IP66/IP68 (0.2bar)
S	Special colour aluminium double chamber / IP66/IP68 (0.2bar)
V	Stainless steel single chamber (precision casting) / IP66/IP68 (0.2 bar)
W	Stainless steel double chamber / IP66/IP68 (0.2bar)
k	**Cable entry / Connection**
D	M20x1.5 / Blind plug
1	M20x1.5 / without
N	½NPT / Blind plug
Q	½NPT / without
*	other certified connection or cable gland suitable for the application
l	**Display and operation**
X	without
A	Display/adjustment module PLICSCOM
F	without; lid with inspection window
B	Display/adjustment module PLICSCOM, laterally mounted
K	Display/adjustment module PLICSCOM, with Bluetooth
L	Display/adjustment module PLICSCOM, laterally mounted, with Bluetooth

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 1

hi	Material / Seal / Process temperature
m	Electronics
H	two-wire 4…20 mA/HART
A	two-wire 4…20 mA/HART with overvoltage protection
9	Two-wire 4 ... 20 mA/HART plus second current output 4…20mA
B	Four-wire 4 ... 20 mA/HART 90…253V; 50/60Hz
I	Four-wire 4 ... 20 mA/HART 9,6V…48V DC; 20…42 V AC
W	Four-wire Modbus
no	Explosion Protection
	n =one-digit code for internal production control
*E	Flameproof
*R	Protection by Enclosure
*J	Flameproof + Protection by Enclosure
p	SIL certified; #
X	without
*	with
q	IT security (IEC 62443-4-2); #
X	without
*	with
r	Approved as overfill protection; #
X	without
*	with
s	Foodstuff / Pharmaceutical certificate; #
X	without
*	with (FDA, EG 1935/2004)
t	Ship approval; #
X	without
*	with
u	Second Line of Defense #
X	without
S	with (for Ex-db)

- Not relevant for the type of protection considered under this project.

Ambient/Process Temperature and temperature class

The temperature ratings are amended for the new electronics. Due to the large data, temperature tables are mentioned in the manufacturer's instruction manual as described below.
The ratings shown under the "Thermal Data" section under the report was reviewed and acceptance. Existing temperature tables from the certificates are deleted and are replaced by a Specific Condition of Use.

Type of Protection: Ex-db Electronic for the Electronics "H", "A", and "9"

Number	Details	Pages

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 1

66214	Safety instructions VEGAPULS 6X **Flameproof enclosure "d"** Two-wire 4 … 20 mA/HART (Multilingual) – ATEX Dated: 27.11.2023	1 to 96
66216	Safety instructions VEGAPULS 6X **Dust ignition protection** Two-wire 4 … 20 mA/HART (Multilingual) – ATEX Dated: 27.11.2023	1 to 88

Type of Protection: Ex-db Electronic for the Electronics "B", "I", and "W"

Number	Details	Pages
1017850	Safety instructions VEGAPULS 6X **Flameproof enclosure "d"** Four-wire 4 … 20 mA/HART, Four-wire Modbus – ATEX Dated: 27.11.2023	1 to 28
1017851	Safety instructions VEGAPULS 6X **Dust ignition protection** Four-wire 4 … 20 mA/HART, Four-wire Modbus – ATEX Dated: 27.11.2023	1 to 24

Variation 1 - This variation introduced the following changes:

i. Addition of horn antenna (Type G, K, L, N, D) and hygienic antenna (Type H) versions.
ii. Addition of new seal and focusing lens materials in already certified Thread with integrated antenna (T) version for Ex-t.
iii. Addition of cladding and seal material in already certified plastic plating (F) antenna version for Ex-t.
iv. Addition of seal material in already certified Flange with lens antenna (C) version for Ex-t.
v. Addition of seal material in already certified plastic horn antenna (B) version for Ex-t.
vi. Addition of new electronic modules.
vii. Manufacturing address changed for VEGA Americas Inc.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Reports and Certificate History**

Issue	Date	Report number	Comment
0	20 June 2022	R80129728A	The release of the prime certificate.
1	23 January 2024	R80158410A	The introduction of Variation 1.

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

15.1 Cleaning of the equipment should be done only with a damp cloth.

15.2 Build-up of electrostatic charge on the surface of an equipment shall be avoided.

15.3 The flameproof joints are not intended to be repaired.

15.4 The temperature of cable entry point and branching point can be more than 70°C and 80°C, please see instruction/installation manual before installation.

15.5 The temperature class based on the maximum ambient temperature and the maximum process temperature, and the ambient and process temperature ranges have to be taken from the safety instructions (document number stated on the type/marking plate).

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)**

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

17 **PRODUCTION CONTROL**

17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders

Certificate Annexe

Certificate Number: **CSAE 22UKEX1193X**
Product: **Radar sensors types VEGAPULS 6X**
Manufacturer: **VEGA Grieshaber KG**

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
VEGAZW-6-73841	1 to 81	11	12 Apr 22	VEGAPULS 6X ATEX/IECEx Ex db Ex t Application
GE4341	1 of 1	00	05 Apr 22	PULS 6X Ex d threaded ver. With glass window G/NPT
GE4342	1 of 1	00	05 Apr 22	VEGAPULS 6X pl.-horn antenna Ø75 pl. housing
GE4343	1 of 1	00	05 Apr 22	VEGAPULS 6X pl.-horn antenna Ø75 Ex d / XP
GE4347	1 of 1	00	05 Apr 22	VEGAPULS 6X pl. horn antenna ATS with adapter flange
GE4348	1 of 1	00	05 Apr 22	VEGAPULS 6X glass window Ø24
GE4366	1 of 1	00	05 Apr 22	VEGAPULS 6X flange with plastic plating PTFE / PFA
GE4368	1 of 1	00	05 Apr 22	OVERVIEW VEGAPULS 6X flange with lens antenna PEEK
GE4374	1 of 1	00	05 Apr 22	OVERVIEW VEGAPULS 6X Ex d flange with lens antenna PEEK
GE4367	1 of 1	00	05 Apr 22	PULS 6X ATS DN25, DN50, DN80 Flange painted with plating
GE4370	1 of 1	00	05 Apr 22	VEGAPULS 6X flushing ring universal flange, adapter flange
GE2593	1 of 1	02	05 Apr 22	Feed-trough for KLEMP3 plicsplus
SB1618-1	1 to 3	01	12 Apr 22	PULSP4W-H-SIL (Circuit diagram)
LP1618-1	1 to 8	01	05 Apr 22	PULSP4W-H-SIL (Layout)
BB1618-1	1 to 2	01	05 Apr 22	PULSP4W-H-SIL (Assembly diagram)
SB1627-1	1 of 1	01	05 Apr 22	ZEP4-EMV (Circuit diagram)
LP1627	1 of 1	01	05 Apr 22	ZEP4-EMV (Layout)
BB1627	1 of 1	01	05 Apr 22	ZEP4-EMV (Assembly diagram)
SB1639	1 of 1	01	05 Apr 22	ZEP4-KX (Circuit diagram)
LP1639	1 of 1	01	05 Apr 22	ZEP4-KX (Layout)
BB1639	1 of 1	01	05 Apr 22	ZEP4-KX (Assembly diagram)
SB1503-1-02-0	1 to 2	1-02-0	05 Apr 22	PLICSCOM3 (Circuit diagram)
SB1338-1-01-0	1 of 1	1-01-0	05 Apr 22	PLICSCOM2 (Circuit diagram)
BS275	1 of 1	00	05 Apr 22	VEGAPULS 6X 4..20mA/HART (Block diagram)
BS276	1 of 1	00	05 Apr 22	VEGAPULS 6X, 4 - 20mA/ HART with ZEP4-KX (Block diagram two chamber housing)
BS277	1 of 1	00	05 Apr 22	VEGAPULS 6X, 4 - 20mA/ HART with ZEP4-EMVX (Block diagram two chamber housing)
GE3618-01	1 of 1	01	05 Apr 22	PLICSCOM3 (Complete device)
GE3626-02	1 of 1	02	05 Apr 22	PLICSCOM3 (Component layout)
GE3627-02	1 of 1	02	05 Apr 22	PLICSCOM3 (Trace Layout)
GE3628	1 of 1	00	05 Apr 22	PLICSCOM3 (Component Layout Hall sensor)
VEGAZW-6-80888	1 to 9	00	10 Jun 22	Specification Type plate VEGAPULS 6X

Certificate Annexe

Certificate Number: **CSAE 22UKEX1193X**
Product: **Radar sensors types VEGAPULS 6X**
Manufacturer: **VEGA Grieshaber KG**

Issue 1

Drawing	Sheets	Rev.	Date (Stamp)	Title
1015752	1 of 1	00	19-Dec-23	Approval drawing flange with horn 150 °C/250 °C
1015731	1 of 1	00	19-Dec-23	Approval drawing high temperature 450 °C
1015376	1 of 1	00	19-Dec-23	Antenna PULS6X hygiene LA, LB DN50
1015307	1 of 1	00	19-Dec-23	Approval drawing ATS hygienic connection G1 ½" with adapter
1015311	1 of 1	00	19-Dec-23	Antenna PULS6X hygiene G1" O-ring
1015513	1 of 1	00	19-Dec-23	Antenna PULS6X hygiene G1 cone
1019391	1 of 1	00	19-Dec-23	Antenna PULS6X PVDF G1 ½" Exd
1015344	1 of 1	00	19-Dec-23	Antenna PULS6X PVDF G1 ½"
1019259	1 of 1	00	19-Dec-23	Approval drawing ATS hygienic connection G1 1/2" with adapter ExD.
1019272	1 of 1	00	19-Dec-23	Antenna PULS6X hygiene G1" O-ring Exd
1019383	1 of 1	00	19-Dec-23	Antenna PULS6X hygiene G1" Cone Exd
1019254	1 of 1	00	19-Dec-23	Antenna PULS6X hygiene LA, LB DN50 Exd
1019039	1 of 1	00	19-Dec-23	Approval drawing flange with horn 150 °C/250 °C ExD
GE4317	1 of 1	--	19-Dec-23	VEGAPULS 6X threaded version with/without glass window G/NPT
GE4365	1 of 1	--	19-Dec-23	VEGAPULS 6X flange with plastic plating PTFE/PFA
VEGAZW-6-80328	1 to 41	06	19-Dec-23	Application document for VEGAPULS 6X
GE4368	1 of 1	--	21-Mar-22	Overview VEGAPULS 6X with lens antenna PEEK
GE4342	1 of 1	--	05-Apr-22	VEGAPULS 6X Pl. horn antenna Ø75 pl. housing
VEGAZW-6-73203	1 to 13	07	19-Dec-23	Specification Type Plate VEGAPULS 6X
VEGAZW-6-79518	1 to 13	04	19-Dec-23	Thermal Evaluation VEGAPULS 6X In comparison to VEGAPULS 64 / VEGAPULS 69 Ex db / Ex t

UNITED KINGDOM CONFORMITY ASSESSMENT

1 **UKCA UK TYPE EXAMINATION CERTIFICATE**

2 Equipment Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Certificate Number: **CSAE 22UKEX1193X** Issue: **0**

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II 2G Ex db IIC T* Gb
II 1D Ex ta IIIC T* Da
II 1/2D Ex ta/tb IIIC T* Da/Db

Name: Michelle Halliwell
Title: Director of Operations

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

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b. Thread with integrated antenna (T)
c. Flange with plastic plating (F)
d. Flange with lens antenna (C)

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Category 2G (EPL Gb equipment)

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Category 1D (EPL Da equipment)

The electronics housing and the antennas with the mechanical fixing element are installed in explosion-endangered areas of zone 20, in areas requiring instruments of category 1D (EPL Da).

Category 1/2D (EPL Da/Db equipment)

The electronics housing is installed in hazardous areas of zone 21 requiring instruments of category 2D. The process connection element is installed in the separating wall, which separates areas requiring instruments of category 2D with 1D. The antenna system with the mechanical fixing element is installed in hazardous areas of zone 20.

Category 2D (EPL Db equipment)

The electronics housing and the antenna system with the mechanical fixing element are installed in explosion-endangered areas of zone 21, in areas requiring instruments of category 2D (EPL Db).

Model Code

PS6X(Z)(*).a-b-c-de-f-g-hi-j-k-l-m-no-p-q-r-s-t-u
(Z) = not used or digit codes (for example SI) for soft labeling, ***not relevant for approval***
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SCHEDULE

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Issue 0

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XD	Mounting strap, length: 300 mm / 316/316L
**	other process connection which complies with international or national standards
f	**Antenna version #**
B	plastic horn antenna
T	Thread with integrated antenna
F	Flange with plastic plating
C	Flange with lens antenna
g	**Additional equipment #**
X	without
K	Purging air connection
V	Purging air connection with reflux valve
1	Antenna system DD lacquered
hi	**Material / Seal / Process temperature**
AA	PEEK / FKM (SHS FPM 70C3 GLT) / -40…+150°C #
AB	PEEK / FKM (SHS FPM 70C3 GLT) / -40…+200°C #
AC	PEEK / FFKM (Kalrez 6230) / -15…+150°C #
AD	PEEK / FFKM (Kalrez 6230) / -15…+250°C #
AE	PEEK / FFKM (Kalrez 6375) / -20…+150°C #
AF	PEEK / FFKM (Kalrez 6375) / -20…+250°C #
AG	PEEK / FFKM (Perlast G75B) / -15…+150°C #
AH	PEEK / FFKM (Perlast G75B) / -15…+250°C #
AJ	PEEK / FFKM (Perlast G74S) / -15…+150°C #
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AL	PEEK / EPDM (Ap 302) / -40…+150°C #
AL	PEEK / EPDM (A+P 70.10-02) / -55…+150°C #
AT	PP / PP / -40…+80°C #
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AW	PTFE / PTFE / -60...+150°C #
A4	PTFE / PTFE / -60...+200°C #
AX	PTFE / PTFE / -196…+200°C #
AY	PTFE (8mm) / PTFE / -60...+150°C #
A5	PTFE (8mm) / PTFE / -60...+200°C #
AZ	PTFE (8mm) / PTFE / -196…+200°C #

A2	PFA (8mm) / PFA / -40...+150°C **#**
A3	PFA (8mm) / PFA / -40…+200°C **#**
j	**Housing / Protection**
A	Aluminium single chamber / IP66/IP68 (0.2bar)
H	Special colour aluminium single chamber / IP66/IP68 (0.2bar)
D	Aluminium double chamber / IP66/IP68 (0.2bar)
S	Special colour aluminium double chamber / IP66/IP68 (0.2bar)
V	Stainless steel single chamber (precision casting) / IP66/IP68 (0.2 bar)
W	Stainless steel double chamber / IP66/IP68 (0.2bar)
k	**Cable entry / Connection**
D	M20x1.5 / Blind plug
1	M20x1.5 / without
N	½NPT / Blind plug
Q	½NPT / without
*	other certified connection or cable gland suitable for the application
l	**Display and operation**
X	without
A	Display/adjustment module PLICSCOM
F	without; lid with inspection window
B	Display/adjustment module PLICSCOM, laterally mounted
K	Display/adjustment module PLICSCOM, with Bluetooth
L	Display/adjustment module PLICSCOM, laterally mounted, with Bluetooth
m	**Electronics**
H	two-wire 4…20 mA/HART
A	two-wire 4…20 mA/HART with overvoltage protection
no	**Explosion Protection**
	n =one-digit code for internal production control
*E	Flameproof
*R	Protection by Enclosure
*J	Flameproof + Protection by Enclosure

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

p	SIL certified; #
X	without
*	with
q	**IT security (IEC 62443-4-2); #**
X	without
*	with
r	**Approved as overfill protection; #**
X	without
*	with
s	**Foodstuff / Pharmaceutical certificate; #**
X	without
*	with (FDA, EG 1935/2004)
t	**Ship approval; #**
X	without
*	with
u	**Second Line of Defense #**
X	without
S	with (for Ex-db)

- Not relevant for the type of protection considered under this project.

Ambient/Process Temperature and temperature class

Type of Protection: Ex-d

Antenna Type (Code)	Versions	Process Temperature (Zone 0)	Ambient Temperature (Zone 1)		Temperature Class
			With blind cover -60°C to +80°C	With Window Cover -50°C to +80°C	
Plastic Horn Antenna (B)	**80 °C Only** with glass pane	**Aluminium & Stainless Steel** -40°C to +80°C	**Aluminium & Stainless Steel** -60°C to +75°C	**Aluminium & Stainless Steel** -50°C to +75°C	T6 T5 T4 T3…T1

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

Antenna Type (Code)	Versions	Process Temperature (Zone 0)	Ambient Temperature (Zone 1)		Temperature Class
			With blind cover -60°C to +80°C	With Window Cover -50°C to +80°C	
Thread with integrated antenna (T)	**Only with Glass pane** G3/4" ATS 150 °C 3/4" NPT ATS 150 °C G1" ATS 150 °C 1" NPT ATS 150 °C G1 1/2" ATS 150 °C 1 1/2" NPT ATS 150 °C	**Aluminium** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C **Stainless Steel** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C	**Aluminium** -60°C to +75°C -60°C to +70°C -60°C to +59°C -60°C to +52°C **Stainless Steel** -60°C to +74°C -60°C to +67°C -60°C to +50°C -60°C to +41°C	**Aluminium** -50°C to +75°C -50°C to +70°C -50°C to +59°C -50°C to +52°C **Stainless Steel** -50°C to +75°C -50°C to +67°C -50°C to +50°C -50°C to +41°C	**Aluminium** T6 T5 T4 T3…T1 **Stainless Steel** T6 T5 T4 T3…T1
	Only with Glass pane G1 1/2" ATS 200 °C 1 1/2" NPT ATS 200 °C	**Aluminium** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +195°C **Stainless Steel** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +195°C	**Aluminium** -60°C to +75°C -60°C to +72°C -60°C to +67°C -60°C to +62°C **Stainless Steel** -60°C to +75°C -60°C to +73°C -60°C to +63°C -60°C to +54°C	**Aluminium** -50°C to +75°C -50°C to +72°C -50°C to +67°C -50°C to +62°C **Stainless Steel** -50°C to +75°C -50°C to +73°C -50°C to +63°C -50°C to +54°C	**Aluminium** T6 T5 T4 T3…T1 **Stainless Steel** T6 T5 T4 T3…T1

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

Antenna Type (Code)	Versions	Process Temperature (Zone 0)	Ambient Temperature (Zone 1)		Temperature Class
			With blind cover -60°C to +80°C	With Window Cover -50°C to +80°C	
	Only with Glass pane G3/4" ATS 250 °C 3/4" NPT ATS 250 °C G1" ATS 250 °C 1" NPT ATS 250 °C G1 1/2" ATS 250 °C 1 1/2" NPT ATS 250 °C	**Aluminium** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +195°C -60°C to +250°C **Stainless Steel** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +195°C -60°C to +250°C	**Aluminium** -60°C to +75°C -60°C to +72°C -60°C to +64°C -60°C to +60°C -60°C to +54°C **Stainless Steel** -60°C to +75°C -60°C to +70°C -60°C to +60°C -60°C to +54°C -60°C to +44°C	**Aluminium** -50°C to +75°C -50°C to +72°C -50°C to +64°C -50°C to +60°C -50°C to +54°C **Stainless Steel** -50°C to +75°C -50°C to +70°C -50°C to +60°C -50°C to +54°C -50°C to +44°C	**Aluminium** T6 T5 T4 T3 T2…T1 **Stainless Steel** T6 T5 T4 T3 T2…T1

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

Antenna Type (Code)	Versions	Process Temperature (Zone 0)	Ambient Temperature (Zone 1)		Temperature Class
			With blind cover -60°C to +80°C	With Window Cover -50°C to +80°C	
Flange with plastic plating (F)	**Only with Glass pane** PULS6X ATS DN25 150 °C PULS6X ATS DN50 150 °C PULS6X ATS DN80 150 °C	**Aluminium** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C **Stainless Steel** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C	**Aluminium** -60°C to +75°C -60°C to +70°C -60°C to +59°C -60°C to +53°C **Stainless Steel** -60°C to +74°C -60°C to +70°C -60°C to +58°C -60°C to +51°C	**Aluminium** -50°C to +75°C -50°C to +70°C -50°C to +59°C -50°C to +53°C **Stainless Steel** -50°C to +74°C -50°C to +70°C -50°C to +58°C -50°C to +51°C	**Aluminium** T6 T5 T4 T3…T1 **Stainless Steel** T6 T5 T4 T3…T1
	Only with Glass pane PULS6X ATS DN25 200 °C PULS6X ATS DN50 200 °C PULS6X ATS DN80 200 °C	**Aluminium** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +195°C **Stainless Steel** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +195°C	**Aluminium** -60°C to +75°C -60°C to +71°C -60°C to +62°C -60°C to +62°C **Stainless Steel** -60°C to +75°C -60°C to +70°C -60°C to +61°C -60°C to +54°C	**Aluminium** -50°C to +75°C -50°C to +71°C -50°C to +62°C -50°C to +62°C **Stainless Steel** -50°C to +75°C -50°C to +70°C -50°C to +61°C -50°C to +54°C	**Aluminium** T6 T5 T4 T3…T1 **Stainless Steel** T6 T5 T4 T3…T1

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

Antenna Type (Code)	Versions	Process Temperature (Zone 0)	Ambient Temperature (Zone 1)		Temperature Class
			With blind cover -60°C to +80°C	With Window Cover -50°C to +80°C	
		Aluminium -196°C to +80°C -196°C to +95°C -196°C to +130°C -196°C to +195°C **Stainless Steel** -196°C to +80°C -196°C to +95°C -196°C to +130°C -196°C to +195°C	**Aluminium** -30°C to +75°C -30°C to +71°C -30°C to +62°C -30°C to +62°C **Stainless Steel** -30°C to +75°C -30°C to +70°C -30°C to +61°C -30°C to +54°C	**Aluminium** -20°C to +75°C -20°C to +71°C -20°C to +62°C -20°C to +62°C **Stainless Steel** -20°C to +75°C -20°C to +70°C -20°C to +61°C -20°C to +54°C	**Aluminium** T6 T5 T4 T3…T1 **Stainless Steel** T6 T5 T4 T3…T1

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

Antenna Type (Code)	Versions	Process Temperature (Zone 0)	Ambient Temperature (Zone 1)		Temperature Class
			With blind cover -60°C to +80°C	With Window Cover -50°C to +80°C	
Flange with lens antenna (C)	**Only with glass pane** Flange Version 150 °C Swivel version 150 °C Cam lock version 150 °C	**Aluminium** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C **Stainless Steel** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C	**Aluminium** -60°C to +75°C -60°C to +72°C -60°C to +65°C -60°C to +61°C **Stainless Steel** -60°C to +75°C -60°C to +70°C -60°C to +59°C -60°C to +52°C	**Aluminium** -50°C to +75°C -50°C to +72°C -50°C to +65°C -50°C to +61°C **Stainless Steel** -50°C to +75°C -50°C to +70°C -50°C to +59°C -50°C to +52°C	**Aluminium** T6 T5 T4 T3…T1 **Stainless Steel** T6 T5 T4 T3…T1

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

Antenna Type (Code)	Versions	Process Temperature (Zone 0)	Ambient Temperature (Zone 1)		Temperature Class
			With blind cover -60°C to +80°C	With Window Cover -50°C to +80°C	
	Only with glass pane Flange Version 200 °C Swivel version 200 °C Cam lock version 200 °C	**Aluminium** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C -60°C to +195°C **Stainless Steel** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C -60°C to +195°C	**Aluminium** -60°C to +75°C -60°C to +72°C -60°C to +67°C -60°C to +65°C -60°C to +61°C **Stainless Steel** -60°C to +75°C -60°C to +73°C -60°C to +66°C -60°C to +61°C -60°C to +54°C	**Aluminium** -50°C to +75°C -50°C to +72°C -50°C to +67°C -50°C to +65°C -50°C to +61°C **Stainless Steel** -50°C to +75°C -50°C to +73°C -50°C to +66°C -50°C to +61°C -50°C to +54°C	**Aluminium** T6 T5 T4 T3 T2…T1 **Stainless Steel** T6 T5 T4 T3 T2…T1

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

Antenna Type (Code)	Versions	Process Temperature (Zone 0)	Ambient Temperature (Zone 1)		Temperature Class
			With blind cover -60°C to +80°C	With Window Cover -50°C to +80°C	
	Only with glass pane Flange Version 250 °C Swivel version 250 °C Cam lock version 250 °C	**Aluminium** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C -60°C to +250°C **Stainless Steel** -60°C to +80°C -60°C to +95°C -60°C to +130°C -60°C to +150°C -60°C to +250°C	**Aluminium** -60°C to +75°C -60°C to +72°C -60°C to +67°C -60°C to +65°C -60°C to +61°C **Stainless Steel** -60°C to +75°C -60°C to +73°C -60°C to +66°C -60°C to +61°C -60°C to +54°C	**Aluminium** -50°C to +75°C -50°C to +72°C -50°C to +67°C -50°C to +65°C -50°C to +61°C **Stainless Steel** -50°C to +75°C -50°C to +73°C -50°C to +66°C -50°C to +61°C -50°C to +54°C	**Aluminium** T6 T5 T4 T3 T2…T1 **Stainless Steel** T6 T5 T4 T3 T2…T1

Type of Protection: Ex-t

EPL Da equipment - Complete equipment (antenna and enclosure) installed in zone 20 (surrounded by 200mm dust):

- Maximum permitted ambient/process temperature **65ºC**
- Maximum temperature rise considered on the internal component with the fault condition: **+35 K**
- Maximum surface temperature = 65 °C +35 K = **T100ºC**

EPL Db equipment - Complete equipment (antenna and enclosure) in zone 21 (without dust layer):

- Maximum permitted ambient/process temperature **65 °C**
- Surface temperature = ambient/process temperature **+35 K**
- Maximum surface temperature = 65 °C +35 K = **T100 °C**

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 22UKEX1193X**
Issue 0

EPL Da/Db equipment – Enclosure installed in zone 21 without a layer of dust, antenna installed in zone 20:

Temperature rise: +35 K

Electronic Enclosure Material	Permitted process temperature range in Zone 20 at the antenna side	Permitted ambient temperature range in zone 21 at the electronic enclosure	Maximum surface temperature
Plastic Horn Antenna (B)			
Aluminium	-40°C to 76°C	-40°C to 65°C	+100°C
Stainless Steel	-40°C to 76°C	-40°C to 65°C	+100°C
Thread with Integrated Antenna (T)			
Aluminium	-60°C to 130°C	-40°C to 57°C	+132°C
	-60°C to 130°C	-40°C to 65°C	+132°C
	-60°C to 150°C	-40°C to 48°C	+152°C
	-60°C to 195°C	-40°C to 62°C	+197°C
	-60°C to 195°C	-40°C to 63°C	+197°C
	-60°C to 250°C	-40°C to 55°C	+252°C
Stainless Steel	-60°C to 130°C	-40°C to 47°C	+132°C
	-60°C to 130°C	-40°C to 65°C	+132°C
	-60°C to 150°C	-40°C to 34°C	+152°C
	-60°C to 195°C	-40°C to 49°C	+197°C
	-60°C to 195°C	-40°C to 56°C	+197°C
	-60°C to 250°C	-40°C to 45°C	+252°C
Flange with plastic plating (F)			
Aluminium	-60°C to 130°C	-40°C to 57°C	+132°C
	-60°C to 130°C	-40°C to 65°C	+132°C
	-60°C to 150°C	-40°C to 48°C	+152°C
	-60°C to 195°C	-40°C to 62°C	+197°C
Stainless Steel	-60°C to 130°C	-40°C to 47°C	+132°C
	-60°C to 130°C	-40°C to 65°C	+132°C
	-60°C to 150°C	-40°C to 34°C	+152°C
	-60°C to 195°C	-40°C to 49°C	+197°C
Flange with lens antenna (C)			
Aluminium	-40°C to 130°C	-40°C to 65°C	+132°C
	-40°C to 150°C	-40°C to 58°C	+152°C
	-40°C to 195°C	-40°C to 62°C	+197°C
	-40°C to 195°C	-40°C to 63°C	+197°C
	-40°C to 250°C	-40°C to 55°C	+252°C
Stainless Steel	-40°C to 130°C	-40°C to 57°C	+132°C
	-40°C to 130°C	-40°C to 65°C	+132°C
	-40°C to 150°C	-40°C to 48°C	+152°C
	-40°C to 195°C	-40°C to 49°C	+197°C

Stainless Steel	Flange with lens antenna (C)		
	-40°C to 195°C	-40°C to 56°C	+197°C
	-40°C to 250°C	-40°C to 45°C	+252°C

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Reports and Certificate History**

Issue	Date	Report number	Comment
0	20 June 2022	R80129728A	The release of the prime certificate.

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

15.1 Cleaning of the equipment should be done only with a damp cloth.

15.2 Build-up of electrostatic charge on the surface of an equipment shall be avoided.

15.3 The flameproof joints are not intended to be repaired.

15.4 The temperature of cable entry point and branching point can be more than 70ºC and 80ºC, please see instruction/installation manual before installation.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)**

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

17 **PRODUCTION CONTROL**

17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders

Certificate Annexe

Certificate Number: **CSAE 22UKEX1193X**

Product: **Radar sensors types VEGAPULS 6X**

Manufacturer: **VEGA Grieshaber KG**

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
VEGAZW-6-73841	1 to 81	11	12 Apr 22	VEGAPULS 6X ATEX/IECEx Ex db Ex t Application
GE4341	1 of 1	00	05 Apr 22	PULS 6X Ex d threaded ver. With glass window G/NPT
GE4342	1 of 1	00	05 Apr 22	VEGAPULS 6X pl.-horn antenna Ø75 pl. housing
GE4343	1 of 1	00	05 Apr 22	VEGAPULS 6X pl.-horn antenna Ø75 Ex d / XP
GE4347	1 of 1	00	05 Apr 22	VEGAPULS 6X pl. horn antenna ATS with adapter flange
GE4348	1 of 1	00	05 Apr 22	VEGAPULS 6X glass window Ø24
GE4366	1 of 1	00	05 Apr 22	VEGAPULS 6X flange with plastic plating PTFE / PFA
GE4368	1 of 1	00	05 Apr 22	OVERVIEW VEGAPULS 6X flange with lens antenna PEEK
GE4374	1 of 1	00	05 Apr 22	OVERVIEW VEGAPULS 6X Ex d flange with lens antenna PEEK
GE4367	1 of 1	00	05 Apr 22	PULS 6X ATS DN25, DN50, DN80 Flange painted with plating
GE4370	1 of 1	00	05 Apr 22	VEGAPULS 6X flushing ring universal flange, adapter flange
GE2593	1 of 1	02	05 Apr 22	Feed-trough for KLEMP3 plicsplus
SB1618-1	1 to 3	01	12 Apr 22	PULSP4W-H-SIL (Circuit diagram)
LP1618-1	1 to 8	01	05 Apr 22	PULSP4W-H-SIL (Layout)
BB1618-1	1 to 2	01	05 Apr 22	PULSP4W-H-SIL (Assembly diagram)
SB1627-1	1 of 1	01	05 Apr 22	ZEP4-EMV (Circuit diagram)
LP1627	1 of 1	01	05 Apr 22	ZEP4-EMV (Layout)
BB1627	1 of 1	01	05 Apr 22	ZEP4-EMV (Assembly diagram)
SB1639	1 of 1	01	05 Apr 22	ZEP4-KX (Circuit diagram)
LP1639	1 of 1	01	05 Apr 22	ZEP4-KX (Layout)
BB1639	1 of 1	01	05 Apr 22	ZEP4-KX (Assembly diagram)
SB1503-1-02-0	1 to 2	1-02-0	05 Apr 22	PLICSCOM3 (Circuit diagram)
SB1338-1-01-0	1 of 1	1-01-0	05 Apr 22	PLICSCOM2 (Circuit diagram)
BS275	1 of 1	00	05 Apr 22	VEGAPULS 6X 4..20mA/HART (Block diagram)
BS276	1 of 1	00	05 Apr 22	VEGAPULS 6X, 4 - 20mA/ HART with ZEP4-KX (Block diagram two chamber housing)
BS277	1 of 1	00	05 Apr 22	VEGAPULS 6X, 4 - 20mA/ HART with ZEP4-EMVX (Block diagram two chamber housing)
GE3618-01	1 of 1	01	05 Apr 22	PLICSCOM3 (Complete device)
GE3626-02	1 of 1	02	05 Apr 22	PLICSCOM3 (Component layout)
GE3627-02	1 of 1	02	05 Apr 22	PLICSCOM3 (Trace Layout)
GE3628	1 of 1	00	05 Apr 22	PLICSCOM3 (Component Layout Hall sensor)
VEGAZW-6-80888	1 to 9	00	10 Jun 22	Specification Type plate VEGAPULS 6X