

Translation

(1) **EU-Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**



(3) **Certificate Number** TÜV 19 ATEX 231186 X **issue:** 00

(4) for the product: Guided radar sensors type  
VEGAFLEX FX8\*(\*)\*/VR/H/I/J\*\*\*\*A/H/P/F/B/I/UX\*\*\*\*  
VEGAFLEX FX8\*(\*)\*/VR/H/I/J\*\*\*\*A/HZ\*\*\*\*

(5) of the manufacturer: **VEGA Grieshaber KG**

(6) Address: Am Hohenstein 113  
77761 Schiltach  
Germany

Order number: 8000489411

Date of issue: 2019-12-17

(7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, 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 Annex II to the Directive.

The examination and test results are recorded in the confidential ATEX Assessment Report No. 19 203 231186.

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

**EN IEC 60079-0:2018**

**EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design, and construction of the specified product. 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 product shall include the following:



**II 1 D Ex ta IIIC T\* Da or II 1/2 D Ex ta/tb IIIC T\* Da/Db or**

**II 1/3 D Ex ta/tc IIIC T\* Da/Dc or II 2 D Ex tb IIIC T\* Db**

T\*: see thermal data

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body

Roder 

Hanover office, Am TÜV 1, 30519 Hannover, Tel. +49 511 998-61455, Fax +49 511 998-61590



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(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00**

(15) **Description of product**

The guided radar sensors type VEGAFLEX FX8\*(\*).\*\VR/H/I/J\*\*\*\*A/H/P/F/B/I/U\*\*\*\* and VEGAFLEX FX8\*(\*).\*\VR/H/I/J\*\*\*\*A/HZ\*\*\*\* as microwave sensors are used for evaluation of the distance between a product surface and the sensor via high-frequency microwave pulses. The microwave sensors emit high-frequency microwave pulses, which are carried along a measuring rod resp. a measuring cable. The electronics evaluate the delay time of the signals reflected by the product surface to calculate the distance to this surface.

Schedule to EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00

Type code

VEGAFLEX FX81(a).bcdefghijklm

Scope

- \* Option not affecting safety, one digit alphanumeric variable referring to geographical area for marketing properties.

Approval

R IECEx Ex ta, ta/tb, ta/tc, tb IIIC T\* Da, Da/Db, Da/Dc, Db

- \* More markings are possible in case the version is separately certified according to an additional certificate.

Version / Material

- \* One digit alphanumeric variable for combination of version and material:  
Coax with single or multiple hole (ø21.3mm or 42.2mm);  
Exchangeable rod (ø 4mm – 16mm);  
Exchangeable cable (ø 1mm – 8mm) without weight, with gravity or centering weight;  
Exchangeable coated cable (ø 4mm) with uncoated centering weight  
Material: 304L, 316, 316L, Alloy 400 (2.4360), Alloy C22 (2.4602), Alloy C276 (2.4819), Duplex (1.4462), PA coated

Process fitting / Material

- \*\* Two digit alphanumeric variable for connections conforming to an international, national or industrial standard with pressure ratings.

Seal / Second line of defense / Process temperature

- A FKM (SHS FPM 70C3 GLT) / without / -40...+80°C
- D FFKM (Kalrez 6375) / without / -20...+150°C
- F FKM (SHS FPM 70C3 GLT) / without / -40...+150°C
- G FFKM (SHS FPM 70C3 GLT) / with / -40...+150°C
- L FFKM (Kalrez 6375) / with / -20...+200°C
- M EPDM (A+P 75.5/KW75F) / with / -40...+150°C
- N Silicone FEP coated (A+P FEP-O-SEAL) / with / -40...+150°C
- P FFKM (Kalrez 6375) / with / -20...+150°C

Electronics

- H Two-wire 4 ... 20 mA/HART
- A Two-wire 4 ... 20 mA/HART with SIL qualification
- P Two-wire Profibus PA
- F Two-wire Foundation Fieldbus
- B Four-wire 4 ... 20 mA/HART; 90 ... 253 V AC; 50/60 Hz
- I Four-wire 4 ... 20 mA/HART; 9.6 ... 48 V DC; 20 ... 42 V AC
- U Four-wire Modbus (converter in second chamber)

Supplementary electronics

- X without
- Z Additional current output 4 ... 20 mA

Housing / Protection

- A Aluminium single chamber / IP66/IP68 (0.2bar)
- D Aluminium double chamber / IP66/IP68 (0.2bar)
- H Special colour aluminium single chamber / IP66/IP68 (0.2 bar)
- S Special colour aluminium double chamber/ IP66/IP68 (0.2bar)
- V StSt single chamber (precision casting) / IP66/IP68 (0.2 bar)
- W Stainless steel double chamber / IP66/IP68 (0.2bar)

Cable entry / Connection

- \* 1 M20x1.5 / without
- D M20x1.5 / Blind plug
- N ½NPT / Blind plug
- Q ½NPT / without

- \* single-digit for Cable entry / Connection according to the type of protection approved cable glands and blind plugs.

Display/Adjustment module PLICSCOM

- A mounted
- B laterally mounted
- F without; lid with inspection window
- K Built-in; with Bluetooth, magnetic pen operation
- L laterally mounted; with Bluetooth, magnetic pen operation
- X without

Certificates

- \* Option not affecting safety, one digit alphanumeric variable for possible certificates

FX81(a). | b | c | d | e | f | g | h | i | j | k | l | m

Configuration: Options not affecting safety, optional one or two digit alphanumeric variable referring to shipping properties

Schedule to EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00

VEGAFLEX FX82(a).bcdefghijklm

Scope

- \* Option not affecting safety, one digit alphanumeric variable referring to geographical area for marketing properties.

Approval

R IECEx Ex ta, ta/tb, ta/tc, tb IIC T\* Da, Da/Db, Da/Dc, Db

- \* More markings are possible in case the version is separately certified according to an additional certificate.

Version / Material

- \* One digit alphanumeric variable for combination of version and material:  
Exchangeable cable (ø 2-8mm) with gravity weight;  
Exchangeable cable (ø4-12mm) with gravity weight / PA coated (gravity weight is uncoated);  
Exchangeable rod (ø 8 -16mm)  
Material: 316, 316L, Alloy C22 (2.4602), PA coated

Process fitting / Material

- \*\* Two digit alphanumeric variable for connections conforming to an international, national or industrial standard with pressure ratings.

Seal / Process temperature

- A FKM (SHS FPM 70C3 GLT) / -40 ... +80 °C
- B EPDM (A+P 70.10-02) / -40 ... +80 °C
- F FKM (SHS FPM 70C3 GLT) / -40...+150°C
- H EPDM (A+P 75.5/KW75F) / -40...+150°C
- K FFKM (Kalrez 6375) / -20...+200°C

Electronics

- H Two-wire 4 ... 20 mA/HART
- A Two-wire 4 ... 20 mA/HART with SIL qualification
- P Two-wire Profibus PA
- F Two-wire Foundation Fieldbus
- B Four-wire 4 ... 20 mA/HART; 90 ... 253 V AC; 50/60 Hz
- I Four-wire 4 ... 20 mA/HART; 9.6 ... 48 V DC; 20 ... 42 V AC
- U Four-wire Modbus (converter in second chamber)

Supplementary electronics

- X without
- Z Additional current output 4 ... 20 mA

Housing / Protection

- A Aluminium single chamber / IP66/IP68 (0.2bar)
- D Aluminium double chamber / IP66/IP68 (0.2bar)
- H Special colour aluminum single chamber / IP66/IP68 (0.2 bar)
- S Special colour aluminium double chamber/ IP66/IP68 (0.2bar)
- V StSt single chamber (precision casting) / IP66/IP68 (0.2 bar).
- W Stainless steel double chamber / IP66/IP68 (0.2bar)

Cable entry / Connection

- \*1 M20x1.5 / without
- D M20x1.5 / Blind plug
- N ½NPT / Blind plug
- Q ½NPT / without
- \* single-digit for Cable entry / Connection according to the type of protection approved cable glands and blind plugs.

Display/Adjustment module PLICSCOM

- A mounted
- B laterally mounted
- F without; lid with inspection window
- K Built-in; with Bluetooth, magnetic pen operation
- L laterally mounted; with Bluetooth, magnetic pen operation
- X without

Certificates

- \* Option not affecting safety, one digit alphanumeric variable for possible certificates

FX82(a). b c d ef g h i j k l m

Configuration: Options not affecting safety, optional one or two digit alphanumeric variable referring to shipping properties

Schedule to EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00

VEGAFLEX FX83(a).bcdefghijklm

**Scope**

- \* Option not affecting safety, one digit alphanumeric variable referring to geographical area for marketing properties.

**Approval**

- R IECEx Ex ta, ta/tb, ta/tc, tb IIIC T\* Da, Da/Db, Da/Dc, Db
- \* More markings are possible in case the version is separately certified according to an additional certificate.

**Version / Material**

- \* One digit alphanumeric variable for combination of version and material:
  - Exchangeable rod (ø 8mm), (Ra<0.76 µm);
  - Exchangeable rod (ø 8mm), can be autoclaved (Ra<0.76µm);
  - Exchangeable rod (ø 8mm), electropolished (Ra<0.38µm);
  - Exchangeable rod (ø 8mm), electropolished, can be autoclaved (Ra<0.38µm)
  - Material: 1.4435 (BN2), 1.4466, Titan, Superduplex, Inconel
  - Coated cable (ø 4mm) with gravity weight / PFA, ECTFE;
  - Coated rod (ø 10mm) / PFA, ECTFE
  - Material: 316, 316L, Process wetted: PFA, ECTFE

**Process fitting / Material**

- \*\* Two digit alphanumeric variable for connections conforming to an international, national or industrial standard with pressure ratings.

**Seal / Process temperature**

- C EPDM (Freudenberg 70, EPDM 291) / -20...+130°C
- E FFKM (Kalrez 6221) / -20...+150°C
- T FEPM (Vi 602 Extreme-ETP, COG) / -10...+150°C
- X without / -40...+150°C

**Electronics**

- H Two-wire 4 ... 20 mA/HART
- A Two-wire 4 ... 20 mA/HART with SIL qualification
- P Two-wire Profibus PA
- F Two-wire Foundation Fieldbus
- B Four-wire 4 ... 20 mA/HART; 90 ... 253 V AC; 50/60 Hz
- I Four-wire 4 ... 20 mA/HART; 9.6 ... 48 V DC; 20 ... 42 V AC
- U Four-wire Modbus (converter in second chamber)

**Supplementary electronics**

- X without
- Z Additional current output 4 ... 20 mA

**Housing / Protection**

- A Aluminium single chamber / IP66/IP68 (0.2bar)
- D Aluminium double chamber / IP66/IP68 (0.2bar)
- H Special colour aluminum single chamber / IP66/IP68 (0.2 bar)
- S Special colour aluminium double chamber/ IP66/IP68 (0.2bar)
- V StSt single chamber (precision casting) / IP66/IP68 (0.2 bar)
- W Stainless steel double chamber / IP66/IP68 (0.2bar)

**Cable entry / Connection**

- \* 1 M20x1.5 / without
- D M20x1.5 / Blind plug
- N ½NPT / Blind plug
- Q ½NPT / without
- \* single-digit for Cable entry / Connection according to the type of protection approved cable glands and blind plugs.

**Display/Adjustment module PLICSCOM**

- A mounted
- B laterally mounted
- F without; lid with inspection window
- K Built-in; with Bluetooth, magnetic pen operation
- L laterally mounted; with Bluetooth, magnetic pen operation
- X without

**Certificates**

- \* Option not affecting safety, one digit alphanumeric variable for possible certificates

FX83(a). b c d ef g h i j k l m

Configuration: Options not affecting safety, optional one or two digit alphanumeric variable referring to shipping properties

Schedule to EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00

VEGAFLEX FX86(a).bcdefghijklm

**Scope**

\* Option not affecting safety, one digit alphanumeric variable referring to geographical area for marketing properties.

**Approval**

R IECEx Ex ta, ta/tb, ta/tc, tb IIIC T\* Da, Da/Db, Da/Dc, Db

\* More markings are possible in case the version is separately certified according to an additional certificate.

**Version / Material**

\* One digit alphanumeric variable for combination of version and material:

Coax with single or multiple hole (ø 21.3mm or 42.2mm), without or with reference distance;

Exchangeable cable (ø 1mm – 8mm) without weight, with gravity or centering weight;

Exchangeable rod (ø 4mm-16mm)

Material: 304L, 316, 316L, Alloy 400 (2.4360), Alloy C22 (2.4602), Alloy C276 (2.4819),

Duplex (1.4462), 1.4435 (BN2), 1.4466, Titan, Superduplex, Inconel, PA coated

**Process fitting / Material**

\*\* Two digit alphanumeric variable for connections conforming to an international, national or industrial standard with pressure ratings.

**Seal / Second line of defense / Process temperature**

#1 Ceramic graphite / with / -196...+280°C

#2 Ceramic graphite / with / -196...+400°C or 450°C

#3 PEEK-FFKM (Kalrez 6375) / with / -20...+250°C

**Electronics**

H Two-wire 4 ... 20 mA/HART

A Two-wire 4 ... 20 mA/HART with SIL qualification

P Two-wire Profibus PA

F Two-wire Foundation Fieldbus

B Four-wire 4 ... 20 mA/HART; 90 ... 253 V AC; 50/60 Hz

I Four-wire 4 ... 20 mA/HART; 9.6 ... 48 V DC; 20 ... 42 V AC

U Four-wire Modbus (converter in second chamber)

**Supplementary electronics**

X without

Z Additional current output 4 ... 20 mA

**Housing / Protection**

A Aluminium single chamber / IP66/IP68 (0.2bar)

D Aluminium double chamber / IP66/IP68 (0.2bar)

H Special colour aluminum single chamber / IP66/IP68 (0.2 bar)

S Special colour aluminium double chamber/ IP66/IP68 (0.2bar)

V StSt single chamber (precision casting) / IP66/IP68 (0.2 bar)

W Stainless steel double chamber / IP66/IP68 (0.2bar)

**Cable entry / Connection**

#1 M20x1.5 / without

D M20x1.5 / Blind plug

N ½NPT / Blind plug

Q ½NPT / without

\* single-digit for Cable entry / Connection according to the type of protection approved cable glands and blind plugs.

**Display/Adjustment module PLICSCOM**

A mounted

B laterally mounted

F without; lid with inspection window

K Built-in; with Bluetooth, magnetic pen operation

L laterally mounted; with Bluetooth, magnetic pen operation

X without

**Certificates**

\* Option not affecting safety, one digit alphanumeric variable for possible certificates

FX86(a). b c d e f g h i j k l m

Configuration: Options not affecting safety, optional one or two digit alphanumeric variable referring to shipping properties

**Schedule to EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00**

**Electrical data**

For the variants FX8\*(\*).\*\VR/H//J\*\*\*\*A/HX\*\*\*\*, FX8\*(\*).\*\VR/H//J \*\*\*\*A/HZ\*\*\*\*, FX8\*(\*).\*\VR/H//J \*\*\*\*P/FX\*\*\*\* and FX8\*(\*).\*\VR/H//J \*\*\*\*UX\*\*\*\* it must be observed, that when installed as EPL Da devices, the maximum power at the sensor must be limited to the  $P_{max} \leq 2 \text{ W}$ .

**VEGAFLEX FX8\*(\*).\*\VR/H//J\*\*\*\*A/HX\*\*\*\* in the electronics and connection compartment, single chamber housing**

Supply and signal circuit	$U = 9.6 \dots 35 \text{ V DC}$
(Terminals 1[+], 2[-])	$U_m = 253 \text{ V AC/DC}$
	$I \leq 3.5 \dots 22.5 \text{ mA}$ (with superimposed HART signal)

**VEGAFLEX FX8\*(\*).\*\VR/H//J\*\*\*\*A/HX\*\*\*\* in the connection compartment, double chamber housing**

Supply and signal circuit	$U = 9.6 \dots 35 \text{ V d.c}$
(Terminals 1[+], 2[-])	$U_m = 253 \text{ V a.c/d.c}$
	$I \leq 3.5 \dots 22.5 \text{ mA}$ (with superimposed HART signal)

**VEGAFLEX FX8\*(\*).\*\VR/H//J\*\*\*\*A/HZ\*\*\*\* in the connection compartment, double chamber housing**

Supply and signal circuit	$U = 9.6 \dots 35 \text{ V d.c}$
(Terminals 1[+], 2[-])	$U_m = 253 \text{ V a.c/d.c}$
	$I \leq 3.5 \dots 22.5 \text{ mA}$ (with superimposed HART signal)

(Terminals 7[+], 8[-])	$U = 9.6 \dots 35 \text{ V d.c}$
	$U_m = 253 \text{ V a.c/d.c}$
	$I \leq 3.5 \dots 22.5 \text{ mA}$ (with superimposed HART signal)

**VEGAFLEX FX8\*(\*).\*\VR/H//J\*\*\*\*BX\*\*\*\* in the connection compartment, double chamber housing**

Supply	$U = 90 \dots 253 \text{ V a.c}$
(Terminals 1[+], 2[-])	$U_m = 253 \text{ V a.c/d.c}$
Aktive 4 ... 20 mA signal circuit	$U_m = 60 \text{ V a.c/d.c}$
(Terminals 5[+], 7[-])	$I \leq 3.5 \dots 22.5 \text{ mA}$ (with superimposed HART signal)

Passive 4 ... 20 mA signal circuit	$U_m = 60 \text{ V a.c/d.c}$
(Terminals 7[+], 8[-])	$I \leq 3.5 \dots 22.5 \text{ mA}$ (with superimposed HART signal)

**Schedule to EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00**

**VEGAFLEX FX8(\*)\*/VR/H//J\*\*\*\*IX\*\*\*\* in the connection compartment, double chamber housing**

Supply  
(Terminals 1[+], 2[-])

$U = 9.6 \dots 48 \text{ V d.c.}; 42 \text{ V a.c}$   
 $U_m = 253 \text{ V a.c}$   
 $I \leq 3.5 \dots 22.5 \text{ mA}$  (with superimposed HART signal)

Aktive 4 ... 20 mA signal circuit  
(Terminals 5[+], 7[-])

$U_m = 60 \text{ V a.c/d.c}$   
 $I \leq 3.5 \dots 22.5 \text{ mA}$  (with superimposed HART signal)

Passive 4 ... 20 mA signal circuit  
(Terminals 7[+], 8[-])

$U_m = 60 \text{ V a.c/d.c}$   
 $I \leq 3.5 \dots 22.5 \text{ mA}$  (with superimposed HART signal)

**VEGAFLEX FX8(\*)\*/VR/H//J\*\*\*\*UX\*\*\*\* in the connection compartment, double chamber housing**

Supply and signal circuit  
(Terminals 1[+], 2[-])

$U = 8 \dots 32 \text{ V d.c}$

Signal circuit  
(Terminals MB[+], MB[-])

$U = 5 \text{ V}$  with Modbus signal (telegram)

USB connection:  
(6-pole mini USB socket)

$U_{max} = 5 \text{ V}$  with USB signal (USB protocol)

**VEGAFLEX FX8(\*)\*/VR/H//J\*\*\*\*P/FX\*\*\*\* in the electronics and connection compartment, single chamber housing**

Supply and signal circuit  
(Terminals 1[+], 2[-])

$U = 9 \dots 32 \text{ V d.c}$   
 $U_m = 253 \text{ V a.c/d.c}$

**VEGAFLEX FX8(\*)\*/VR/H//J\*\*\*\*P/FX\*\*\*\* in the connection compartment, double chamber housing**

Supply and signal circuit  
(Terminals 1[+], 2[-])

$U = 9 \dots 32 \text{ V d.c}$   
 $U_m = 253 \text{ V a.c/d.c}$

Display and adjustment circuit:  
(Terminals 5, 6, 7, 8)

For connection to the circuit of the passive indicating unit VEGADIS 81 in ignition protection type Protection by enclosure "t" (BVS 05 ATEX E 023).

Display and adjustment circuit:  
(Spring contacts in the connection compartment)

Only for connection to the display and adjustment module PLICSCOM or for service purposes the interface adapter VEGACONNECT, if it is ensured that no explosive atmosphere is present.

The circuits of VEGAFLEX FX8(\*)\*/VR/H//J\*\*\*\*A/H/P/F\*\*\*\* are galvanically separated from ground.  
 The circuits of VEGAFLEX FX8(\*)\*/VR/H//J\*\*\*\*B//I\*\*\*\* are galvanically connected to ground potential via the earth terminals.

The metallic parts of VEGAFLEX 81, 82, 83 and 86 are electrically connected with the earth terminals.



**Schedule to EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00**

**Thermal data**

For applications requiring equipment in group III (explosive dust atmospheres), the following ambient temperature ranges and surface temperatures apply:

<b>Permissible process temperature at the sensor:</b>	
VEGAFLEX FX81(*) . *****AA/H/B//I/U/P/F*****	-40 °C ... +80 °C
VEGAFLEX FX81(*) . *****AA/HZ****	-40 °C ... +80 °C
VEGAFLEX FX81(*) . *****D/F/PA/H/B//I/U/P/F*****	-20 °C ... +150 °C
VEGAFLEX FX81(*) . *****D/F/PA/HZ****	-20 °C ... +150 °C
VEGAFLEX FX81(*) . *****G/M/NA/H/B//I/U/P/F*****	-40 °C ... +150 °C
VEGAFLEX FX81(*) . *****G/M/NA/HZ****	-40 °C ... +150 °C
VEGAFLEX FX81(*) . *****LA/H/B//I/U/P/F*****	-20 °C ... +200 °C
VEGAFLEX FX81(*) . *****LA/HZ****	-20 °C ... +200 °C
VEGAFLEX FX82(*) . *****A/BA/H/B//I/U/P/F*****	-40 °C ... +80 °C
VEGAFLEX FX82(*) . *****A/BA/HZ****	-40 °C ... +80 °C
VEGAFLEX FX82(*) . *****F/HA/HZ****	-40 °C ... +150 °C
VEGAFLEX FX82(*) . *****F/HA/H/B//I/U/P/F*****	-40 °C ... +150 °C
VEGAFLEX FX82(*) . *****KA/H/B//I/U/P/F*****	-20 °C ... +200 °C
VEGAFLEX FX82(*) . *****KA/HZ****	-20 °C ... +200 °C
VEGAFLEX FX83(*) . *****XA/H/B//I/U/P/F*****	-40 °C ... +150 °C
VEGAFLEX FX83(*) . *****XA/HZ****	-40 °C ... +150 °C
VEGAFLEX FX83(*) . *****CA/H/B//I/U/P/F*****	-20 °C ... +130 °C
VEGAFLEX FX83(*) . ***** CA/HZ****	-20 °C ... +130 °C
VEGAFLEX FX83(*) . *****EA/H/B//I/U/P/F*****	-20 °C ... +150 °C
VEGAFLEX FX83(*) . *****EA/HZ****	-20 °C ... +150 °C
VEGAFLEX FX83(*) . *****TA/H/B//I/U/P/F*****	-10 °C ... +150 °C
VEGAFLEX FX83(*) . *****TA/HZ****	-10 °C ... +150 °C
VEGAFLEX FX86(*) . *****1A/H/B//I/U/P/F*****	-196 °C ... +280 °C
VEGAFLEX FX86(*) . *****1A/HZ****	-196 °C ... +280 °C
VEGAFLEX FX86(*) . *****2A/H/B//I/U/P/F*****	-196 °C ... +450 °C (+400 °C)
VEGAFLEX FX86(*) . *****2A/HZ****	-196 °C ... +450 °C (+400 °C)
VEGAFLEX FX86(*) . *****3A/H/B//I/U/P/F*****	-20 °C ... +250 °C
VEGAFLEX FX86(*) . *****3A/HZ****	-20 °C ... +250 °C
<b>Permissible ambient temperature at the electronics housing:</b>	-40 °C ≤ Ta ≤ +60 °C

<b>Maximum surface temperature T* on electronics housing for applications requiring EPL Da devices:</b>	
VEGAFLEX FX8(*) . *VR/H//I/J *****A/HX****	Ambient temperature + 86 K
VEGAFLEX FX8(*) . *VR/H//I/J *****A/HZ****	Ambient temperature + 86 K
VEGAFLEX FX8(*) . *VR/H//I/J *****P/FX****	Ambient temperature + 86 K
VEGAFLEX FX8(*) . *VR/H//I/J *****B/IX****	Limited to 102 °C by temperature fuse
VEGAFLEX FX8(*) . *VR/H//I/J *****UX****	Ambient temperature + 86 K

Schedule to EU-Type Examination Certificate No. TÜV 19 ATEX 231186 X issue 00

Maximum surface temperature T* on electronics housing for applications requiring EPL Da/Db, Da/GD and Db devices:	
VEGAFLEX FX8*(*)*/VR/H//J****A/HX****	Ambient temperature + 38 K
VEGAFLEX FX8*(*)*/VR/H//J ****A/HZ****	Ambient temperature + 38 K
VEGAFLEX FX8*(*)*/VR/H//J ****P/FX****	Ambient temperature + 20 K
VEGAFLEX FX8*(*)*/VR/H//J ****B//X****	Limited to 102 °C by temperature fuse
VEGAFLEX FX8*(*)*/VR/H//J ****UX****	Ambient temperature + 24 K

The probes (measuring part, rod) may only be used in EPL Da; Da/Db; Da/Dc and EPL Db applications if atmospheric conditions are present (temperatures: see tables above and pressure from 0.8 bar to 1.1 bar). If no explosive atmosphere is present, the permissible operating temperatures and pressures can be found in the manufacturer's specifications (operating instructions).

If the sensors (measuring part, measuring rod) are operated at higher temperatures than listed in the above table, measures must be taken to prevent the risk of ignition from hot surfaces.

(16) Drawings and documents are listed in the ATEX Assessment Report No. 19 203 231186

(17) Specific Conditions for Use

1. The guided radar sensors type VEGAFLEX FX8\*(\*)\*/VR/H//J\*\*\*\*A/H/P/F/B//U\*\*\*\* and VEGAFLEX FX8\*(\*)\*/VR/H//J\*\*\*\*A/HZ\*\*\*\* have to be installed in such a way, that process-related electrostatical charges, e.g. due to passing media, can be excluded.
2. The permissible process temperature at the sensor resp. the permissible ambient temperature at the electronics housing and the maximum surface temperature T\* at the electronics housing depending on the ambient temperature range can be taken from the operating instructions.
3. The cable glands as well as the blanking elements, if used, have to be separately assessed and certified in accordance with EN 60079-31. In the end-use application the degree of protection min IP6X shall be maintained in accordance with EN 60079-0 and in compliance with EN 60529.
4. For installation in EPL Da areas, the maximum power provided to the guided radar sensors type VEGAFLEX FX8\*(\*)\*/VR/H//J\*\*\*\*A/HX\*\*\*\*, VEGAFLEX FX8\*(\*)\*/VR/H//J \*\*\*\*A/HZ\*\*\*\*, VEGAFLEX FX8\*(\*)\*/VR/H//J \*\*\*\*P/FX\*\*\*\* and VEGAFLEX FX8\*(\*)\*/VR/H//J \*\*\*\*UX\*\*\*\* must be limited to  $P_{max} \leq 2 \text{ W}$ . Where appropriate, an external protective device shall be used.

(18) Essential Health and Safety Requirements  
No additional ones

- End of Certificate -



