



**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 17 ATEX 207593 X **Issue:** 01

(4) for the product: Differential pressure measuring device type VEGADIF DF85(\*) \*E\*\*\*\*\*Z/H/A/U/P/F\*\*\*\*\*

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

(6) Address: Am Hohenstein 113, 77761 Schiltach, Germany

Order number: 8003026473

Date of issue: 2021-07-01

(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. 20 203 284687.

(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 60079-11:2012**

**EN 60079-26:2015**

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 1/2 G Ex ia/db IIC T6 ... T1 Ga/Gb or  
II 2 G Ex db ia IIC T6 ... T1 Gb**

TÜV NORD CERT GmbH, Langemarkstraße 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 deputy of the head of the notified body



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(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X**

**Issue 01**

(15) **Description of product:**

The differential pressure measuring devices type VEGADIF DF85(\*).\*E/\*Z\*/H/A/U/P/F\*\*\*\*\* are used for differential pressure measurement of liquids and gases.

The differential pressure measuring devices type VEGADIF DF85(\*).\*E/\*Z\*/H/A/U/P/F\*\*\*\*\* consist of an electronics housing, a differential pressure measuring element and the process connections.

Optionally, also the indication and operation module may be installed.

List of all used components:

Product and type	Certificate	Standards
Enclosures, Models GEH-1K, GEH-2K and GEH-DIS	KIWA 17 ATEX 0032 U issue 02	EN IEC 60079-0:2018 EN 60079-1:2014
Differential pressure meter body and Pressure meter body	BVS 13 ATEX E 100 U issue 04	EN IEC 60079-0:2018 EN 60079-11:2012 IEC 60079-26:2021
Electronic assemblies type AWE-**(*) .P/F and type AWE-**(*) .H/A (with 2nd current output)	TÜV 14 ATEX 137402 U issue 00	EN IEC 60079-0:2018 EN 60079-11:2012
Electronic barrier type P3 MODBUS	TÜV 11 ATEX 090404 U issue 01	EN IEC 60079-0:2018 EN 60079-11:2012
Display and adjustment module PLICSCOM and PLICSCOM(*) .B/W*	TÜV 15 ATEX 161127 U issue 01	EN IEC 60079-0:2018 EN 60079-11:2012

**Type code:**

VEGADIF DF85(\*).\*E/\*Z\*\*\*\*\*: 2 wire 4 ... 20 mA transmitters

VEGADIF DF85(\*).\*E/\*H\*\*\*\*\*: 2 wire 4 ... 20 mA transmitters with superposed HART signal

VEGADIF DF85(\*).\*E/\*A\*\*\*\*\*: 2 wire 4 ... 20 mA transmitters with superposed HART signal and additional SIL qualification

VEGADIF DF85(\*).\*E/\*U\*\*\*\*\*: With electronics for MODBUS

VEGADIF DF85(\*).\*E/\*P\*\*\*\*\*: With electronics for Profibus PA

VEGADIF DF85(\*).\*E/\*F\*\*\*\*\*: With electronics for Foundation Fieldbus

**Schedule to EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X Issue 01**

**Electrical data:**

**VEGADIF DF85(\*).\*\*\*\*\*Z/H/A/U/P/F\*\*\*\*\***

Supply and signal circuit U = 9.6 ... 35 V d. c.

VEGADIF DF85(\*).\*\*\*\*\*Z/H/AXA/V\*\*\*\*\*

U<sub>m</sub> = 253 V a. c.

(Terminals 1[+], 2[-] in the electronics compartment of the 1 chamber housing)

VEGADIF DF85(\*).\*\*\*\*\*Z/H/AXD/W\*\*\*\*\*

(Terminals 1[+], 2[-] in the terminal compartment of the 2 chamber housing)

VEGADIF DF85(\*).\*\*\*\*\*Z/H/AZD/W\*\*\*\*\*

Supply and signal circuit I

U = 9.6 ... 35 V d. c.

(Terminals 1[+], 2[-] in the terminal compartment of the 2 chamber housing)

U<sub>m</sub> = 253 V a. c.

Supply and signal circuit II

U = 9.6 ... 35 V d. c.

(Terminals 17[+], 18[-] in the terminal compartment of the 2 chamber housing)

U<sub>m</sub> = 253 V a. c.

VEGADIF DF85(\*).\*\*\*\*\*UXD/W\*\*\*\*\*

Supply and signal circuit I

U = 8 ... 32 V d. c.

(Terminals 1[+], 2[-] in the terminal compartment of the 2 chamber housing)

U<sub>m</sub> = 253 V a. c.

Supply and signal circuit II

U = 5 V

(Terminals MB[+], MB[-] in the terminal compartment of the 2 chamber housing)

MODBUS telegram

U<sub>m</sub> = 253 V a. c.

Supply and signal circuit III

U = 5 V

(6-pole USB mini plug connector in the terminal compartment of the 2 chamber housing)

USB protocol

U<sub>m</sub> = 253 V a. c.

Supply and signal circuit

U = 9 ... 32 V d. c.

VEGADIF DF85(\*).\*\*\*\*\*P/FXA/V\*\*\*\*\*

U<sub>m</sub> = 253 V a. c.

(Terminals 1[+], 2[-] in the electronics compartment of the 1 chamber housing)

VEGADIF DF85(\*).\*\*\*\*\*P/FXD/W\*\*\*\*\*

(Terminals 1[+], 2[-] in the terminal compartment of the 2 chamber housing)

Operation and indication circuit

Only for connection to the belonging external

VEGADIF DF85(\*).\*\*\*\*\*Z/H/A/U/P/F\*A/V\*\*\*\*\*

VEGA indication unit type VEGADIS61/81

(Terminals 5, 6, 7, 8 in the electronics compartment of the 1 chamber housing)

according to IECEx BVS 13.0069

VEGADIF DF85(\*).\*\*\*\*\*Z/H/A/P/F\*D/W\*\*\*\*\*

(Terminals 5, 6, 7, 8 in the terminal compartment of the 2 chamber housing)

Operation and indication module circuit

For connection to the VEGA operation and indication module PLICSCOM

**Schedule to EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X Issue 01**

(Spring contacts in the electronics compartment / terminal compartment of the 1 / 2 chamber housing)

**VEGADIF DF85(\*).\*\*\*\*\*A/S/K/L\*\*\***

Measuring sensor circuits  
(Terminals in the external housing  
1 l yellow, 2 l white, 3 l red, 4 l black)

In the execution with a cable between the electronics housing and the measuring sensor housing, a length of the provided cable of max. 180 m is permissible.

The intrinsically safe circuits to the measuring sensor are galvanically connected with earth potential.

**Thermal data:**

**VEGADIF DF85(\*).\*\*\*\*\*D\*\*\* (compact version)**

If the differential pressure measuring devices are used in explosion hazardous areas for EPL Ga/Gb or Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

Temperature class	Ambient temperature range Ta or medium temperature range Tp at the sensor housing and measuring probe
T6	-40 °C ... +55°C
T5	
T4	-40 °C ... +60°C
T3	
T2	
T1	

**VEGADIF DF85(\*).\*\*\*\*\*U\*\*A/S/K/L\*A/K/F/B/L/S\* (version with external housing, with MODBUS-barrier and / or with PLICSCOM)**

If the differential pressure measuring devices are used in explosion hazardous areas for EPL Ga/Gb or Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

Temperature class	Ambient temperature range Ta at the sensor housing	Ambient temperature range Ta or medium temperature range Tp at the measuring probe
T6	-40 °C ... +60 °C	-40°C ... +55 °C
T5		-40 °C ... +85 °C
T4		
T3		
T2		
T1		

**Schedule to EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X Issue 01**

**VEGADIF DF85(\*)..\*\*\*\*\*Z/H/A/P/F\*\*A/S/K/L\*X\* (version with external housing, without MODBUS-barrier and / or without PLICSCOM)**

If the differential pressure measuring devices are used in explosion hazardous areas for EPL Ga/Gb or Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

Temperature class	Ambient temperature Ta at the sensor housing	Ambient temperature Ta or medium temperature Tp at the measuring probe
T6	-50 °C ... +60 °C	-40°C ... +55 °C
T5		
T4		
T3		-40 °C ... +85 °C
T2		
T1		

The measuring sensors and the electronics are allowed to be operated in an explosion hazardous area, only if atmospheric conditions exist (temperature: -20 °C to +60 °C, pressure: 0.8 bar to 1.1 bar, air with normal oxygen content: typically 21 % v/v).

If no explosion hazardous atmospheres exist, the permissible operating temperatures and pressures have to be taken from the manufacturer's data (manual).

(16) Drawings and documents are listed in the ATEX Assessment Report No. 20 203 284687

**(17) Specific Conditions for Use:**

1. For use as Ga/Gb-apparatus:  
 For functional reasons, the partition wall (membrane) to the wetted area has a wall thickness < 1 mm. In the application, it has to be ensured, that an impairment of the separation wall e.g. by aggressive media or mechanical hazards is excluded.  
 For variants with standard process connections:  
 The installation of the meter bodies shall provide as a minimum degree of protection IP67 according to EN 60529 for the process connections and vents.  
 For variants with capillary connections:  
 The capillary connections are designed to be connected to a capillary with diaphragm seal.  
 The filling holes are intended to bring in a fill fluid.  
 To prevent a zone entrainment from Zone 0, the diaphragm seal resp. the diaphragm seal and capillary have to be suitably designed. The pressure transfer system has to be technically tight. The filling hole has to be tightly sealed.
2. At the plastic parts there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.
3. At the metallic parts made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
4. For the execution with separate housing, potential equalization has to exist in the complete course of the erection of the connecting cable between the electronics housing and the measuring sensor housing.

**Schedule to EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X Issue 01**

5. The flameproof terminal box of this equipment must be provided with cable entries and filler plugs resp. conduits which are suitably certified according to EN 60079-0 and EN 60079-1.

**(18) Essential Health and Safety Requirements:**

No additional ones.

- End of EU-Type Examination Certificate -



Translation

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

**TUV NORD**

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



(3) **Certificate Number** TÜV 17 ATEX 207593 X **issue:** 00

(4) for the product: Differential pressure measuring device type VEGADIF DF85(\*) \*E/\*\*\*\*\*Z/H/A/U/P/F\*\*\*\*\*

(5) of the manufacturer: VEGA Grieshaber KG

(6) Address: Am Hohenstein 113, 77761 Schiltach

Order number: 8000476232

Date of issue: 2017-12-13

(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. 17 203 207593.

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

EN 60079-0:2012+A11:2013    EN 60079-1:2014    EN 60079-11:2012  
EN 60079-26:2015

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 1/2G Ex ia/db IIC T6 ... T1 Ga/Gb  
II 2G Ex db ia IIC T6 ... T1 Gb

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

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This certificate may only be reproduced without any change, schedule included. Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH



(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 17 ATEX 2799 X issue 00**

(15) Description of product

The differential pressure measuring devices type VEGADIF DF85(\*).\*E/\*\*\*\*\*Z/H/A/U/P/F\*\*\*\*\* are used for differential pressure measurement of liquids and gases.

The differential pressure measuring devices type VEGADIF DF85(\*).\*E/\*\*\*\*\*Z/H/A/U/P/F\*\*\*\*\* consist of an electronics housing, a differential pressure measuring element and the process connections. Optionally, also the indication and operation module may be installed.

The following electronic versions are available:

VEGADIF DF85(\*).\*E/\*\*\*\*\*Z\*\*\*\*\*: 2 wire 4 ... 20 mA transmitters

VEGADIF DF85(\*).\*E/\*\*\*\*\*H\*\*\*\*\*: 2 wire 4 ... 20 mA transmitters with superposed HART signal

VEGADIF DF85(\*).\*E/\*\*\*\*\*A\*\*\*\*\*: 2 wire 4 ... 20 mA transmitters with superposed HART signal and additional SIL qualification

VEGADIF DF85(\*).\*E/\*\*\*\*\*U\*\*\*\*\*: With electronics for MODBUS

VEGADIF DF85(\*).\*E/\*\*\*\*\*P\*\*\*\*\*: With electronics for Profibus PA

VEGADIF DF85(\*).\*E/\*\*\*\*\*F\*\*\*\*\*: With electronics for Foundation Fieldbus

Electrical data

**VEGADIF DF85(\*).\*E/\*\*\*\*\*Z/H/A/U/P/F\*\*\*\*\***

Supply and signal circuit ..... U = 9.6 ... 35 V d. c.  
VEGADIF DF85(\*).\*E/\*\*\*\*\*Z/H/AXA/V\*\*\*\* U<sub>m</sub> = 253 V a. c.

(Terminals 1[+], 2[-] in the electronics compartment of the 1 chamber housing)

VEGADIF DF85(\*).\*E/\*\*\*\*\*Z/H/AXD/W\*\*\*\*  
 (Terminals 1[+], 2[-] in the terminal compartment of the 2 chamber housing)

VEGADIF DF85(\*).\*E/\*\*\*\*\*Z/H/AZD/W\*\*\*\*  
 Supply and signal circuit I ..... U = 9.6 ... 35 V d. c.  
 (Terminals 1[+], 2[-] in the terminal compartment of the 2 chamber housing) U<sub>m</sub> = 253 V a. c.

Supply and signal circuit II ..... U = 9.6 ... 35 V d. c.  
 (Terminals 17[+], 18[-] in the terminal compartment of the 2 chamber housing) U<sub>m</sub> = 253 V a. c.



Schedule to EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X issue 00

VEGADIF DF85(\*) \*\*\*\*\*UXD/W\*\*\*\*

Supply and signal circuit I ..... U = 8 ... 32 V d. c.  
(Terminals 1[+], 2[-] in the terminal compartment Um = 253 V a. c.  
of the 2 chamber housing)

Supply and signal circuit II ..... U = 5 V  
(Terminals MB[+], MB[-] in the terminal MODBUS telegram  
compartment of the 2 chamber housing) Um = 253 V a. c.

Supply and signal circuit III ..... U = 5 V  
(6-pole USB mini plug connector in the terminal USB protocol  
compartment of the 2 chamber housing) Um = 253 V a. c.

Supply and signal circuit ..... U = 9 ... 32 V d. c.  
Um = 253 V a. c.

VEGADIF DF85(\*) \*\*\*\*\*P/FXAN/V\*\*\*\*  
(Terminals 1[+], 2[-] in the electronics  
compartment of the 1 chamber housing)

VEGADIF DF85(\*) \*\*\*\*\*P/FXD/W\*\*\*\*  
(Terminals 1[+], 2[-] in the terminal compartment  
of the 2 chamber housing)

Operation and indication circuit ..... Only for connection to the belonging external  
VEGA indication unit type VEGADIS61/81  
VEGADIF DF85(\*) \*\*\*\*\*Z/H/A/U/P/F\*A/V\*\*\*\* according to IECEx BVS 13.0069  
(Terminals 5, 6, 7, 8 in the electronics  
compartment of the 1 chamber housing)

VEGADIF DF85(\*) \*\*\*\*\*Z/H/A/P/F\*D/W\*\*\*\*  
(Terminals 5, 6, 7, 8 in the terminal compartment  
of the 2 chamber housing)

Operation and indication module circuit ..... For connection to the VEGA operation and  
(Spring contacts in the electronics compartment / indication module PLICSCOM  
terminal compartment of the 1 / 2 chamber  
housing)

VEGADIF DF85(\*) \*\*\*\*\*A/S/K/L\*\*\*  
Measuring sensor circuits..... In the execution with a cable between the  
(Terminals in the external housing electronics housing and the measuring sensor  
1 | yellow, 2 | white, 3 | red, 4 | black) housing, a length of the provided cable of max.  
180 m is permissible.

The intrinsically safe circuits to the measuring  
sensor are galvanically connected with earth  
potential.

Schedule to EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X issue 00

Thermal data:

**VEGADIF DF85(\*).\*\*\*\*\*D\*\*\* (compact version)**

If the differential pressure measuring devices are used in explosion hazardous areas for EPL Ga/Gb or Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

Temperature class	Ambient temperature range Ta or medium temperature range Tp at the sensor housing and measuring probe
T6	-40...+55°C
T5	
T4	-40...+60°C
T3	
T2	
T1	

**VEGADIF DF85(\*).\*\*\*\*\*U\*\*A/S/K/L\*A/K/F/B/L/S\* (version with external housing, with MODBUS-barrier and / or with PLICSCOM)**

If the differential pressure measuring devices are used in explosion hazardous areas for EPL Ga/Gb or Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

Temperature class	Ambient temperature range Ta at the sensor housing	Ambient temperature range Ta or medium temperature range Tp at the measuring probe
T6	-40 °C ... +60 °C	-40°C ... +55 °C
T5		
T4	-40 °C ... +60 °C	-40 °C ... +85 °C
T3		
T2		
T1		

Schedule to EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X issue 00

VEGADIF DF85(\*),\*\*\*\*\*Z/H/A/P/F\*\*A/S/K/L\*X\* (version with external housing, without MODBUS-barrier and without PLICSCOM)

If the differential pressure measuring devices are used in explosion hazardous areas for EPL Ga/Gb or Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

Temperature class	Ambient temperature Ta at the sensor housing	Ambient temperature Ta or medium temperature Tp at the measuring probe
T6	-50 °C ... +60 °C	-40 °C ... +55 °C
T5		
T4		-40 °C ... +85 °C
T3		
T2		
T1		

The measuring sensors and the electronics are allowed to be operated in an explosion hazardous area, only if atmospheric conditions exist (temperature: -20 °C to +60 °C, pressure: 0.8 bar to 1.1 bar, air with normal oxygen content: typically 21 % v/v).

If no explosion hazardous atmospheres exist, the permissible operating temperatures and pressures have to be taken from the manufacturer's data (manual).

(16) Drawings and documents are listed in the ATEX Assessment Report No. 17 203 207593

**Schedule to EU-Type Examination Certificate No. TÜV 17 ATEX 207593 X issue 00**

**(17) Specific Conditions for Use**

1. For use as Ga/Gb-apparatus:  
For functional reasons, the partition wall (membrane) to the wetted area has a wall thickness <1 mm. In the application, it has to be ensured, that an impairment of the separation wall e.g. by aggressive media or mechanical hazards is excluded.  
For variants with standard process connections:  
The installation of the meter bodies shall provide as a minimum degree of protection IP67 according to IEC 60529 for the process connections and vents.  
For variants with capillary connections:  
The capillary connections are designed to be connected to a capillary with diaphragm seal.  
The filling holes are intended to bring in a fill fluid.  
To prevent a zone entrainment from Zone 0, the diaphragm seal resp. the diaphragm seal and capillary have to be suitably designed. The pressure transfer system has to be technically tight. The filling hole has to be tightly sealed.
2. At the plastic parts there is a danger of ignition by electrostatic discharge.  
Observe manual of the manufacturer and warning label.
3. At the metallic parts made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
4. For the execution with separate housing, potential equalization has to exist in the complete course of the erection of the connecting cable between the electronics housing and the measuring sensor housing.
5. The flameproof terminal box of this equipment must be provided with cable entries and filler plugs resp. conduits which are suitably certified according to IEC 60079-0 and IEC 60079-1.

**(18) Essential Health and Safety Requirements**

no additional ones

- End of Certificate -



