

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 13 ATEX 131117 X **Issue:** 01
 (4) for the product: Pressure transmitter type VEGABAR
 8(*)*E/Z/Q/J*****(*)Z/H/A/S/T/P/F*****
 8(*)*E/Z/Q/J*****(*)H/AZ*****

- (5) of the manufacturer: **VEGA Grieshaber KG**
 (6) Address: Am Hohenstein 113
 77761 Schiltach
 Germany

Order number: 8000481000
 Date of issue: 2018-04-11

- (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. 18 203 215805.
 (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 + A11:2013
EN 60079-11:2012

EN 60079-1:2014
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 resp. II 2 G Ex db ia IIC T6 ... T1 Ga/Gb resp. 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



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(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 13 ATEX 131117 X Issue 01**

(15) Description of product

The pressure transmitters type VEGABAR

8(*).*E/Z/Q/J*****(*)Z/H/A/S/T/P/F*****

8(*).*E/Z/Q/J*****(*)H/AZ*****

are used for pressure and filling level measurement in explosion hazardous areas.

A display and adjustment module PLICSCOM) can be installed within the equipment with following options:

X without

A installed

F without, cover with display window

B installed on the side

K installed, with Bluetooth, magnetic pen operation

U installed, with Bluetooth, battery, magnetic pen operation

L installed on the side, with Bluetooth, magnetic pen operation

S installed on the side, with Bluetooth, battery, magnetic pen operation

If an explosive atmosphere is not present, the interface adapter VEGACONNECT (PTB 07 ATEX 2013 X) can be installed.

Electrical data

VEGABAR B8*.AE/Z/Q/J, VEGABAR B8*.VE with integrated electronics Z (4 ... 20 mA), H (4 ... 20 mA/HART), A (4 ... 20 mA/HART with SIL qualification), version with single chamber housing A, V

Power supply and signal circuit: (terminals 1[+], 2[-] in the electronics compartment)

Indicating and adjustment circuit: (terminals 5, 6, 7, 8)

$U_i = 9.6 \dots 35 \text{ V DC}$

$U_m = 253 \text{ V AC}$

For connection to the circuit of the corresponding external display unit VEGADIS 81 in ignition protection type flameproof enclosure "d" or for connection of a VEGABAR B80 in ignition protection type flameproof enclosure "Ex-db" with integrated electronics S or T as differential pressure measurement.

Circuit for the display and adjustment module: (spring contacts in the .electronics compartment)

For connection to the display and adjustment module PLICSCOM.

VEGABAR B8*.AE/Z/Q/J, VEGABAR B8*.VE with integrated electronics Z (4 ... 20 mA), H (4 ... 20 mA/HART), A (4 ... 20 mA/HART with SIL qualification), version with double chamber housing D, W

Power supply and signal circuit: (terminals 1[+], 2[-] in the connection compartment)

$U_i = 9,6 \dots 35 \text{ V DC}$
 $U_m = 253 \text{ V AC}$

Indicating and adjustment circuit: (terminals 5, 6, 7, 8)

For connection to the circuit of the corresponding external display unit VEGADIS 81 in ignition protection type flameproof enclosure "d" or for connection of a VEGABAR B80 in ignition protection type flameproof enclosure "Ex-db" with integrated electronics S or T as differential pressure measurement.

Circuit for the display and adjustment module: (spring contacts in the .electronics compartment)

For connection to the display and adjustment module PLICSCOM.

VEGABAR B8*.AE/Z/Q/J, VEGABAR B8*.VE with integrated electronics P (Profibus PA), F (Foundation Fieldbus), version with single chamber housing A, V

Power supply and signal circuit: (terminals 1[+], 2[-] in the electronics compartment)

$U_i = 9 \dots 32 \text{ V DC}$
 $U_m = 253 \text{ V AC}$

Indicating and adjustment circuit: (terminals 5, 6, 7, 8)

For connection to the circuit of the corresponding external display unit VEGADIS 81 in ignition protection type flameproof enclosure "d" or for connection of a VEGABAR B80 in ignition protection type flameproof enclosure "Ex-db" with integrated electronics S or T as differential pressure measurement.

Circuit for the display and adjustment module: (spring contacts in the .electronics compartment)

For connection to the display and adjustment module PLICSCOM.

VEGABAR B8*.AE/Z/Q/J, VEGABAR B8*.VE with integrated electronics P (Profibus PA), F (Foundation Fieldbus), version with double chamber housing D, W

Power supply and signal circuit: (terminals 1[+], 2[-] in the connection compartment)

$U_i = 9 \dots 32 \text{ V DC}$
 $U_m = 253 \text{ V AC}$

Indicating and adjustment circuit: (terminals 5, 6, 7, 8)

For connection to the circuit of the corresponding external display unit VEGADIS 81 in ignition protection type flameproof enclosure "d" or for connection of a VEGABAR B80 in ignition protection type flameproof enclosure "Ex-db" with integrated electronics S or T as differential pressure measurement.

Circuit for the display and adjustment module: (spring contacts in the .electronics compartment)

For connection to the display and adjustment module PLICSCOM.

VEGABAR B8*.AE/Z/Q/J, VEGABAR B8*.VE with integrated electronics S or T, for differential pressure measurement

Power supply and signal circuit: (terminals 5, 6, 7, 8 in the electronics compartment) For connection to a VEGABAR B8*.E***** with integrated electronics H, A, P, F for differential pressure measurement

VEGABAR B8*.AE/Z/Q/J, VEGABAR B8*.VE with electronics H (4 ... 20 mA/HART), A (4 ... 20 mA/HART with SIL qualification) and with supplementary electronics (Z)

Power supply and signal circuit I: (terminals 1[+], 2[-]) $U_i = 9,6 \dots 35 \text{ V DC}$
 $U_m = 253 \text{ V AC}$

Power supply and signal circuit II: (terminals 7[+], 8[-]) $U_i = 9,6 \dots 35 \text{ V DC}$
 $U_m = 253 \text{ V AC}$

Display and adjustment circuit: (spring contacts in the electronics compartment) For connection to the display and adjustment module PLICSCOM.

VEGABAR B8*.AE/Z/Q/J, VEGABAR B8*.VE Version with separate cable outlet (all electronics)

Circuit between sensor unit and external electronics (terminal 1- yellow, terminal 2 - white, terminal 3 - red, terminal 4 - black) In ignition protection type intrinsic safety Ex ia IIC
With VEGABAR B8*.AC in the version with fix mounted cable on the sensor unit and external electronics, the supplied cable between the external housing and the sensor unit must not exceed a length of 180 m.

The metallic parts of VEGABAR B8*.AE/Z/Q/J, VEGABAR B8*.VE are electrically connected with the earth terminals.

The intrinsically safe circuits to the sensor are galvanically connected to ground potential.

Thermal data:

If the pressure transmitters are used in explosion hazardous areas for EPL Ga/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 (electronics, zone 1)	Medium temperature range (measuring sensor, zone 0)
T6	-50 °C ... +60 °C	-20°C ... +23 °C
T5, T4, T3, T2, T1	-50 °C ... +60 °C	-20°C ... +60 °C

The measuring sensors are allowed to be operated in an explosion hazardous area for EPL Ga applications, only if atmospheric conditions exist (pressure from 0.8 bar to 1.1 bar).

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

If the measuring sensors are operated at higher medium temperatures as listed in the a.m. table, measures have to be taken, that the danger of ignition caused by hot surfaces is excluded. The max. permissible temperature at the electronics/housing must not exceed the values as mentioned in the a.m. table.

For the max. permissible medium temperature ranges, the EN 1127-1:2011, section 6.4.2 was considered.

If the pressure transmitters are used in explosion hazardous areas for EPL 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 (electronics)	Medium temperature range (measuring sensor)
T6	-50 °C ... +60 °C	-50 °C ... +39 °C
T5, T4, T3, T2, T1	-50 °C ... +60 °C	-50 °C ... +60 °C

If the measuring sensors are operated at higher medium temperatures as listed in the a.m. table, measures have to be taken, that the danger of ignition caused by hot surfaces is excluded. The max. permissible temperature at the electronics/housing must not exceed the values as mentioned in the a.m. table.

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

The ambient temperature derating at process temperatures up to +150 °C and up to +200 °C has to be taken from the manual of the manufacturer.

(16) The test documents are listed in the test report No. 18 203 215805.

(17) Special conditions for safe use

1. At the plastic parts of the pressure transmitter type VEGABAR B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** there is a danger of ignition by electrostatic discharge.
Observe manual of the manufacturer and warning label.
2. For EPL Ga/Gb applications, at the metallic parts of the pressure transmitter type VEGABAR B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
3. For EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the pressure transmitter type VEGABAR B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** have to be secured effectively against these dangers. Observe manual of the manufacturer.
4. For EPL Ga/Gb applications, the medium tangent materials of the pressure transmitter type VEGABAR B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** have to be resistant to the media. Observe manual of the manufacturer.
5. For the execution with separate housing of the pressure transmitter type VEGABAR B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** , potential equalization has to exist in the complete course of the erection of the connecting cable.
6. The flameproof housing of this equipment must be provided with cable entries and filler plugs resp. conduits which are certified according to IEC 60079-0 and IEC 60079-1. The connection cables, the cable entries and filler plugs resp. the conduits have to be suitable for the lowest ambient temperature.

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -

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 13 ATEX 131117 X **Issue:** 00

(4) for the product: Pressure transmitter type VEGABAR
8(*)*E/Z/Q/J*****(*)Z/H/A/S/T/P/F*****
8(*)*E/Z/Q/J*****(*)H/AZ*****

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

(6) Address: Am Hohenstein 113
77761 Schiltach
Germany

Order number: 8000465931

Date of issue: 2017-04-28

- (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 190312.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012 + A11:20
EN 60079-11:2012

EN 60079-1:2014
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 resp. II 2 G Ex d ia IIC T6 ... T1 Ga/Gb resp. Gb

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The head of the notified body



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(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 13 ATEX 131117 X Issue 00**

(15) Description of product

The pressure transmitters type VEGABAR

8(*)*E/Z/Q/J*****(*)Z/H/A/S/T/P/F*****

8(*)*E/Z/Q/J*****(*)H/AZ*****

are used for pressure and filling level measurement in explosion hazardous areas.

A display and adjustment module PLICSCOM (TÜV 15 ATEX 161127 U or schematics SB1497-1-00-0, SB1503-1-02-0 and drawings GE3618-01, GE3626-02, GE3627-02, GE3628) can be installed within the equipment with following options:

X without

A installed

F without, cover with display window

B installed on the side

K installed, with Bluetooth, magnetic pen operation

U installed, with Bluetooth, battery, magnetic pen operation

L installed on the side, with Bluetooth, magnetic pen operation

S installed on the side, with Bluetooth, battery, magnetic pen operation

If an explosive atmosphere is not present, the interface adapter VEGACONNECT (PTB 07 ATEX 2013 X) can be installed.

Electrical data

The specifications in the

- EC-Type Examination Certificate TÜV 13 ATEX 131117 X / Test Report 13 203 131117 and
- 1. Supplement TÜV 13 ATEX 131117 X / Test Report 14 203 144224

are also still valid for the original versions.

(16) The test documents are listed in the test report No. 17 203 190312

(17) Special conditions for safe use

1. At the plastic parts of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.
2. For EPL Ga/Gb applications, at the metallic parts of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
3. For EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** have to be secured effectively against these dangers. Observe manual of the manufacturer.

4. For EPL Ga/Gb applications, the medium tangent materials of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** have to be resistant to the media. Observe manual of the manufacturer.
5. For the execution with separate housing of the pressure transmitter type VEGABAR VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** potential equalization has to exist in the complete course of the erection of the connecting cable.
6. The flameproof housing of this equipment must be provided with cable entries and filler plugs resp. conduits which are certified according to IEC 60079-0 and IEC 60079-1. The connection cables, the cable entries and filler plugs resp. the conduits have to be suitable for the lowest ambient temperature.

(18) Essential Health and Safety Requirements
no additional ones

- End of Certificate -

Translation

1. SUPPLEMENT

to Certificate No.	TÜV 13 ATEX 131117 X
Equipment:	Pressure transmitters type series VEGABAR B8*(*) .AE/AZ/AQ/AJ/VE *****(*)*****
Manufacturer:	VEGA Grieshaber KG
Address:	Am Hohenstein 113 77761 Schiltach Germany
Order number:	8000436374
Date of issue:	2014-08-12

For the pressure transmitter type VEGABAR, the following changes were performed:

The following new VEGABAR B8*(*) versions are available:

- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)P/FXA/V****: Versions with 1 chamber housing and Pofibus PA/Foundation Fieldbus electronics

- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z/H/AXD/W/S***** : Versions with 2 chamber housing and 2 wire/HART electronics

- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)P/FXD/W/S***** : Versions with 2 chamber housing and Pofibus PA/Foundation Fieldbus electronics

- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)H/AZD/W/S***** : Versions with 2 chamber housing and 2 wire HART electronics, additional current output

The marking reads also as follows:

VEGABAR *8*(*) .AE/AZ/AQ/AJ/VE*****(*)*****

Electrical data

VEGABAR B8*(*) .AE/AZ/AQ/AJ/VE***(*)P/FXA/V with built-in electronics P, F**

1 chamber housing

Supply and signal circuit U = 9 ... 32 V d. c.
(Terminals 1[+], 2[-] in the housing for the U_m = 253 V a. c.
electronics)

Operation and indication circuit Only for connection to the signal circuit of the
(Terminals 5, 6, 7, 8 in the housing for the belonging external passive VEGA indication unit type
electronics) VEGADIS61 or VEGADIS81 in type of protection
flameproof enclosures "d"
or for connection of a VEGABAR B8* with
electronics S or T for differential pressure
measurement in type of protection flameproof
enclosures "d"

Operation and indication module circuit For connection to the VEGA operation and indication
(Spring contacts in the housing for the module PLICSCOM
electronics)

VEGABAR B8*(*)AE/AZ/AQ/AJ/VE***(*)Z/H/AXD/W/S**** with built-in electronics Z, H, A
2 chamber housing**

Supply and signal circuit	U = 9.6 ... 35 V d. c.
(Terminals 1[+], 2[-] in the terminal housing)	U _m = 253 V a. c.
Operation and indication circuit	Only for connection to the signal circuit of the belonging external passive VEGA indication unit type VEGADIS61 or VEGADIS81 in type of protection flameproof enclosures "d"
(Terminals 5, 6, 7, 8 in the terminal housing)	or for connection of a VEGABAR B8* with electronics S or T for differential pressure measurement in type of protection flameproof enclosures "d"
Operation and indication module circuit ...	For connection to the VEGA operation and indication module PLICSCOM
(Spring contacts in the housing for the electronics or in the terminal housing)	

VEGABAR B8*(*)AE/AZ/AQ/AJ/VE***(*)P/FXD/W/S**** with built-in electronics P, F
2 chamber housing**

Supply and signal circuit	U = 9 ... 32 V d. c.
(Terminals 1[+], 2[-] in the terminal housing)	U _m = 253 V a. c.
Operation and indication circuit	Only for connection to the signal circuit of the belonging external passive VEGA indication unit type VEGADIS61 or VEGADIS81 in type of protection flameproof enclosures "d"
(Terminals 5, 6, 7, 8 in the terminal housing)	or for connection of a VEGABAR B8* with electronics S or T for differential pressure measurement in type of protection flameproof enclosures "d"
Operation and indication module circuit ...	For connection to the VEGA operation and indication module PLICSCOM
(Spring contacts in the housing for the electronics or in the terminal housing)	

VEGABAR B8*(*)AE/AZ/AQ/AJ/VE***(*)H/AZD/W/S****
with built-in electronics H, A and additional current output
2 chamber housing**

Supply and signal circuit I.....	U = 9.6 ... 35 V d. c.
(Terminals 1[+], 2[-] in the terminal housing)	U _m = 253 V a. c.
Supply and signal circuit II.....	U = 9.6 ... 35 V d. c.
(Terminals 7[+], 8[-] in the terminal housing)	U _m = 253 V a. c.
Operation and indication module circuit ...	For connection to the VEGA operation and indication module PLICSCOM
(Spring contacts in the housing for the electronics)	

VEGABAR B8* execution with separate cable connection

Measuring sensor circuits in type of protection „Intrinsic Safety“ Ex ia IIC
 (Terminals 1 / yellow, 2 / white, In the execution with cable between housing for the
 3 / red, 4 / black) electronics and measuring sensor housing,
 a length of the cable provided by the manufacturer
 of 180 m is permissible.

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

Thermal data:

If the pressure transmitters are used in explosion hazardous areas for EPL Ga/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 (electronics, zone 1)	Medium temperature range (measuring sensor, zone 0)
T6	-50 °C ... +60 °C	-20°C ... +23 °C
T5, T4, T3, T2, T1	-50 °C ... +60 °C	-20°C ... +60 °C

The measuring sensors are allowed to be operated in an explosion hazardous area for EPL Ga applications, only if atmospheric conditions exist (pressure from 0.8 bar to 1.1 bar).

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

If the measuring sensors are operated at higher medium temperatures as listed in the a.m. table, measures have to be taken, that the danger of ignition caused by hot surfaces is excluded. The max. permissible temperature at the electronics/housing must not exceed the values as mentioned in the a.m. table.

For the max. permissible medium temperature ranges, the EN 1127-1:2011, section 6.4.2 was considered.

If the pressure transmitters are used in explosion hazardous areas for EPL 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 (electronics)	Medium temperature range (measuring sensor)
T6	-50 °C ... +60 °C	-50 °C ... +39 °C
T5, T4, T3, T2, T1	-50 °C ... +60 °C	-50 °C ... +60 °C

If the measuring sensors are operated at higher medium temperatures as listed in the a.m. table, measures have to be taken, that the danger of ignition caused by hot surfaces is excluded. The max. permissible temperature at the electronics/housing must not exceed the values as mentioned in the a.m. table.

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

The ambient temperature derating at process temperatures up to +150 °C and up to +200 °C has to be taken from the manual of the manufacturer.

The equipment according to this supplement meets the requirements of these standards:

EN 60079-0:2012
EN 60079-26:2007

EN 60079-1:2007

EN 60079-11:2012

(16) The test documents are listed in the test report no. 14 203 144224.

(17) Special conditions for safe use

1. At the plastic parts of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.
2. For EPL Ga/Gb applications, at the metallic parts of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
3. For EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** have to be secured effectively against these dangers. Observe manual of the manufacturer.
4. For EPL Ga/Gb applications, the medium tangent materials of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** have to be resistant to the media. Observe manual of the manufacturer.
5. For the execution with separate housing of the pressure transmitter type VEGABAR *8*(*) AE/AZ/AQ/AJ/VE *****(*)***** , potential equalization has to exist in the complete course of the erection of the connecting cable.
6. The flameproof housing of this equipment must be provided with cable entries and filler plugs resp. conduits which are certified according to IEC 60079-0 and IEC 60079-1. The connection cables, the cable entries and filler plugs resp. the conduits have to be suitable for the lowest ambient temperature.

(18) Essential Health and Safety Requirements

no additional ones

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



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Translation


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

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**



- (3) **Certificate Number** TÜV 13 ATEX 131117 X
- (4) for the equipment: Pressure transmitters
type series VEGABAR
B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T*****
- (5) of the manufacturer: VEGA Grieshaber KG
- (6) Address: Am Hohenstein 113
77761 Schiltach
Germany
- Order number: 8000427170
- Date of issue: 2013-12-18

- (7) The design of this equipment or protective system and any acceptable variation thereto are specified in the schedule to this EC-Type-Examination Certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, notified body No. 0044 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive. The examination and test results are recorded in the confidential report No. 13 203 131117.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 EN 60079-1:2007 EN 60079-11:2012
EN 60079-26:2007
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-type-examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. 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 equipment or protective system must include the following:

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

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The head of the notified body



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Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH

(13) **SCHEDULE**

(14) **EC-Type-Examination Certificate No. TÜV 13 ATEX 131117 X**

(15) Description of equipment

The pressure transmitter type VEGABAR

B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** are used for pressure and filling level measurement in explosion hazardous areas.

The following VEGABAR B8*(*) electronic versions are available:

- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)Z***** : 2 wire 4 ... 20 mA transmitters
- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)H***** : 2 wire 4 ... 20 mA transmitters with superposed HART signal
- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)A***** : 2 wire 4 ... 20 mA transmitters with superposed HART signal and additional SIL qualification
- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)S***** : Slave electronics for electronic differential pressure
- B8*(*) .AE/AZ/AQ/AJ/VE*****(*)T***** : Slave electronics for electronic differential pressure and additional SIL qualification

Electrical data

VEGABAR B8* with built-in electronics Z,H,A

Supply and signal circuit U = 9.6 ... 35 V d. c.
(Terminals 1[+], 2[-]) U_m = 253 V a. c.

Operation and indication circuit Only for connection to the signal circuit of the
(Terminals 5, 6, 7, 8) belonging external passive VEGA indication unit type VEGADIS61 or VEGADIS81 in type of protection flameproof enclosures "d".

Operation and indication module circuit For connection to the VEGA operation and indication
(Spring contacts in the housing for the electronics) module PLICSCOM

VEGABAR B8* with built-in electronics S or T

Supply and signal circuit Only for connection to a VEGABAR B8* .E*****
..... with built-in electronics H, A for differential pressure
(Terminals 5, 6, 7, 8 in the housing for the electronics) measurement

VEGABAR B8* execution with separate cable connection

Measuring sensor circuits in type of protection „Intrinsic Safety“ Ex ia IIC
(Terminals 1 / yellow, 2 / white, In the execution with cable between housing for the electronics and measuring sensor housing, 3 / red, 4 / black) a length of the cable provided by the manufacturer of 180 m is permissible.

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

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Thermal data:

If the pressure transmitters are used in explosion hazardous areas for EPL Ga/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 (electronics, zone 1)	Medium temperature range (measuring sensor, zone 0)
T6	-50 °C ... +60 °C	-20°C ... +23 °C
T5, T4, T3, T2, T1	-50 °C ... +60 °C	-20°C ... +60 °C

The measuring sensors are allowed to be operated in an explosion hazardous area for EPL Ga applications, only if atmospheric conditions exist (pressure from 0.8 bar to 1.1 bar).

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

If the measuring sensors are operated at higher medium temperatures as listed in the a.m. table, measures have to be taken, that the danger of ignition caused by hot surfaces is excluded. The max. permissible temperature at the electronics/housing must not exceed the values as mentioned in the a.m. table.

For the max. permissible medium temperature ranges, the EN 1127-1:2011, section 6.4.2 was considered.

If the pressure transmitters are used in explosion hazardous areas for EPL 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 (electronics)	Medium temperature range (measuring sensor)
T6	-50 °C ... +60 °C	-50 °C ... +39 °C
T5, T4, T3, T2, T1	-50 °C ... +60 °C	-50 °C ... +60 °C

If the measuring sensors are operated at higher medium temperatures as listed in the a.m. table, measures have to be taken, that the danger of ignition caused by hot surfaces is excluded. The max. permissible temperature at the electronics/housing must not exceed the values as mentioned in the a.m. table.

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

The ambient temperature derating at process temperatures up to +150 °C and up to +200 °C has to be taken from the manual of the manufacturer.

(16) The test documents are listed in the test report No. 13 203 131117

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(17) Special conditions for safe use

1. At the plastic parts of the pressure transmitter type VEGABAR B8*(*)AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.
2. For EPL Ga/Gb applications, at the metallic parts of the pressure transmitter type VEGABAR B8*(*)AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
3. For EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the pressure transmitter type VEGABAR B8*(*)AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** have to be secured effectively against these dangers. Observe manual of the manufacturer.
4. For EPL Ga/Gb applications, the medium tangent materials of the pressure transmitter type VEGABAR B8*(*)AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** have to be resistant to the media. Observe manual of the manufacturer.
5. For the execution with separate housing of the pressure transmitter type VEGABAR B8*(*)AE/AZ/AQ/AJ/VE*****(*)Z/H/A/S/T***** , potential equalization has to exist in the complete course of the erection of the connecting cable.
6. The flameproof housing of this equipment must be provided with cable entries and filler plugs resp. conduits which are certified according to IEC 60079-0 and IEC 60079-1. The connection cables, the cable entries and filler plugs resp. the conduits have to be suitable for the lowest ambient temperature.

(18) Essential Health and Safety Requirements

no additional ones

