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 131115 X**
(4)	for the equipment:	Pressure transmitters type series VEGABAR B8*(*).AC/AU/AO/AH/AT/VC******(*)Z/H/A/S/T******
(5)	of the manufacturer:	VEGA Grieshaber KG
(6)	Address:	Am Hohenstein 113 77761 Schiltach Germany
	Order number:	8000427167
	Date of issue:	2013-12-16

(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 131115.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012 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:

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

Meyer

(13) SCHEDULE

(14) EC-Type-Examination Certificate No. TÜV 13 ATEX 131115 X

(15) Description of equipment

The pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC******(*)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*(*).AC/AU/AO/AH/AT/VC******(*)**Z****** : 2 wire 4 ... 20 mA transmitters
- B8*(*).AC/AU/AO/AH/AT/VC******(*)**H****** : 2 wire 4 ... 20 mA transmitters with superposed HART signal
- B8*(*).AC/AU/AO/AH/AT/VC******(*)**A****** : 2 wire 4 ... 20 mA transmitters with superposed HART signal and additional SIL qualification
- B8*(*).AC/AU/AO/AH/AT/VC******(*)**S****** : Slave electronics for electronic differential pressure
- B8*(*).AC/AU/AO/AH/AT/VC******(*)**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 ..... (Terminals 1[+], 2[-] in the Ex-i electronics compartment. in the execution with 2 chamber housing in the terminal housing)	in type of protection „Intrinsic Safety" Ex ia IIC Only for connection to a certified intrinsically safe circuit Maximum values: U_i = 30 V I_i = 131 mA P_i = 983 mW The effective internal capacitance is negligibly small. Effective internal inductance: 5 µH In execution with the 2 cell housing: 10 µH In the execution with connection cable mounted fixed, the following values have to be observed additionally: L_i` = 0.62 µH/m $C_i$`$_{wire/wire}$ = 150 pF/m C_i`$_{wire/shield}$ = 270 pF/m
Operation and indication circuit ..... (Terminals 5, 6, 7, 8 in the housing for the electronics resp. in the terminal housing in the execution with 2 cell housing; optionally, connection at the plug connector M12, 2 chamber housing in the version „Housing execution/type of protection P")	in type of protection „Intrinsic Safety" Ex ia IIC Only for connection to the intrinsically safe circuit of the belonging external VEGA indication unit type VEGADIS61 or VEGADIS81 or for connection of a VEGABAR B8* with built-in electronics S or T for differential pressure measurement.

	The rules for the interconnection of intrinsically safe circuits between the VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 or VEGABAR B8* with electronics S or T are adhered to, if the complete inductance and capacitance of the connection cable between VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 or VEGABAR B8* with electronics S or T does not exceed the following values: L_{cable} = 330 µH C_{cable} = 1.98 µF If the connection cable supplied by the manufacturer between the VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 or VEGABAR B8* with electronics S or T is used, the following values have to be observed: L_i` = 0.62 µH/m $C_{i\text{ wire/wire}}$` = 150 pF/m $C_{i\text{ wires/shield}}$` = 270 pF/m
Operation and indication module circuit ..... (Spring contacts in the housing for the electronics and additionally in the terminal housing in the execution with 2 cell housing)	in type of protection „Intrinsic Safety" Ex ia IIC Only for connection to the VEGA operation and indication module PLICSCOM or the interface adapter VEGACONNECT. In the execution with the 2 cell housing, the operation and indication module PLICSCOM or the interface adapter VEGACONNECT may only be implemented in the terminal housing, if here no external VEGA indication unit type VEGADIS61 or VEGADIS81 or VEGABAR B8* with electronics S or T is connected.

VEGABAR B8* with built-in electronics S or T / only execution one chamber housing

Supply and signal circuit ..... (Terminals 5, 6, 7, 8 in the housing for the electronics)	in type of protection „Intrinsic Safety" Ex ia IIC Only for connection to the intrinsically safe circuit of a VEGABAR B8*.*C******** with built-in electronics H, A for differential pressure measurement The rules for the interconnection of intrinsically safe circuits between the VEGABAR B8* with electronics S or T and the VEGABAR B8*.*C******** are adhered to, if the complete inductance and capacitance of the connection cable between VEGABAR B8* with electronics S or T and the VEGABAR B8*.*C******** does not exceed the following values: L_{cable} = 330 µH C_{cable} = 2 µF If the connection cable supplied by the manufacturer between the VEGABAR B8* with electronics S or T and the VEGABAR B8*.*C******** is used, the following values have to be observed: L_i` = 0.62 µH/m $C_{i\ wire/wire}$` = 150 pF/m $C_{i\ wires/shield}$` = 270 pF/m

VEGABAR B8* Execution with separate cable connection

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

The intrinsically safe circuits for external connections are safe galvanically separated from the parts which can be earthed.
The intrinsically safe circuits to the measuring sensor galvanically connected with earth potential

Thermal data:

If the pressure transmitters are used in explosion hazardous areas for EPL Ga 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) and medium temperature range (measuring sensor)
T6	-20 °C ... +23 °C
T5	-20 °C ... +60 °C
T4	-20 °C ... +60 °C
T3	-20 °C ... +60 °C
T2	-20 °C ... +60 °C
T1	-20 °C ... +60 °C

The measuring sensors and the electronics 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).
For the max. permissible ambient and 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 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 ... +39 °C	-20°C ... +23 °C
T5	-50 °C ... +70 °C	-20°C ... +60 °C
T4	-50 °C ... +70 °C	-20°C ... +60 °C
T3	-50 °C ... +70 °C	-20°C ... +60 °C
T2	-50 °C ... +70 °C	-20°C ... +60 °C
T1	-50 °C ... +70 °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).
For the max. permissible ambient and medium temperature ranges, the EN 1127-1:2011, section 6.4.2 was considered.

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 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) and medium temperature range (measuring sensor)
T6	-50 °C ... +39 °C
T5	-50 °C ... +70 °C
T4	-50 °C ... +70 °C
T3	-50 °C ... +70 °C
T2	-50 °C ... +70 °C
T1	-50 °C ... +70 °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 131115

(17) Special conditions for safe use

1. At the plastic parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC ******(*)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 resp. EPL Ga/Gb applications, at the metallic parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC ******(*)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 resp. EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC ******(*) (*)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*(*).AC/AU/AO/AH/AT/VC ******(*)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*(*).AC/AU/AO/AH/AT/VC ******(*)Z/H/A/S/T******, 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.

(18) Essential Health and Safety Requirements

no additional ones

Translation

1. SUPPLEMENT

to Certificate No.	**TÜV 13 ATEX 131115 X**
Equipment:	Pressure transmitter type series VEGABAR B8*(*).AC/AU/AO/AH/AT/VC(*)******H/AZ*****
Manufacturer:	VEGA Grieshaber KG
Address:	Am Hohenstein 113 77761 Schiltach Germany
Order number:	8000432107
Date of issue:	2014-05-12

In the future, the pressure transmitter type VEGABAR may be manufactured with a 2nd current output, available with a 2 chamber housing.

For this new execution, the following VEGABAR B8*(*) electronic versions are available:

- B8*(*).AC/AU/AO/AH/AT/VC(*)******HZ***** : 2 wire 4 ... 20 mA transmitters with superposed HART signal and 2nd current output

- B8*(*).AC/AU/AO/AH/AT/VC(*)******AZ***** : 2 wire 4 ... 20 mA transmitters with superposed HART signal and additional SIL qualification and 2nd current output

Electrical data

VEGABAR B8* with 2nd current output

Supply and signal circuit I.....
(Terminals 1[+], 2[-] in terminal housing)

in type of protection „Intrinsic Safety" Ex ia IIC
Only for connection to a certified intrinsically safe circuit

Maximum values:
U_i = 30 V
I_i = 131 mA
P_i = 983 mW
The effective internal capacitance is negligibly small.
Effective internal inductance: 5 µH

In the execution with connection cable mounted fixed, the following values have to be observed additionally:
L_i' = 0.62 µH/m
$C_i'_{\text{wire/wire}}$ = 150 pF/m
$C_i'_{\text{wire/shield}}$ = 270 pF/m

Supply and signal circuit II.....
(Terminals 7[+], 8[-] in terminal housing)

in type of protection „Intrinsic Safety" Ex ia IIC
Only for connection to a certified intrinsically safe circuit

	Maximum values: U_i = 30 V I_i = 131 mA P_i = 983 mW The effective internal capacitance is negligibly small. Effective internal inductance: 5 µH In the execution with connection cable mounted fixed, the following values have to be observed additionally: L_i` = 0.62 µH/m $C_i$`$_{wire/wire}$ = 150 pF/m C_i`$_{wire/shield}$ = 270 pF/m
Operation and indication module circuit ..... (Spring contacts in the housing for the electronics)	in type of protection „Intrinsic Safety" Ex ia IIC Only for connection to the VEGA operation and indication module PLICSCOM or the interface adapter VEGACONNECT.
Operation and indication circuit ..... (Connection at the plug connector M12, 2 chamber housing in the version „Housing execution/type of protection P")	in type of protection „Intrinsic Safety" Ex ia IIC Only for connection to the intrinsically safe circuit of the belonging external VEGA indication unit type VEGADIS61 or VEGADIS81 The rules for the interconnection of intrinsically safe circuits between the VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 are adhered to, if the complete inductance and capacitance of the connection cable between VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 does not exceed the following values: L_{cable} = 330 µH C_{cable} = 1.98 µF If the connection cable supplied by the manufacturer between the VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 is used, the following values have to be observed: L_i` = 0.62 µH/m $C_i$`$_{wire/wire}$ = 150 pF/m C_i`$_{wires/shield}$ = 270 pF/m

VEGABAR B8* execution with separate cable connection

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

The intrinsically safe circuits for external connections are safe galvanically separated from the parts which can be earthed.
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 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) and medium temperature range (measuring sensor)
T6	-20 °C ... +23 °C
T5	-20 °C ... +60 °C
T4	-20 °C ... +60 °C
T3	-20 °C ... +60 °C
T2	-20 °C ... +60 °C
T1	-20 °C ... +60 °C

The measuring sensors and the electronics 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).
For the max. permissible ambient and 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 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 ... +39 °C	-20°C ... +23 °C
T5	-50 °C ... +70 °C	-20°C ... +60 °C
T4	-50 °C ... +70 °C	-20°C ... +60 °C
T3	-50 °C ... +70 °C	-20°C ... +60 °C
T2	-50 °C ... +70 °C	-20°C ... +60 °C
T1	-50 °C ... +70 °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) and medium temperature range (measuring sensor)
T6	-50 °C ... +39 °C
T5	-50 °C ... +70 °C
T4	-50 °C ... +70 °C
T3	-50 °C ... +70 °C
T2	-50 °C ... +70 °C
T1	-50 °C ... +70 °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 60079-11:2012 EN 60079-26:2007

(16) The test documents are listed in the test report No. 13 203 138413.

(17) Special conditions for safe use

1. At the plastic parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC(*)******H/AZ***** there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.

2. For EPL Ga resp. EPL Ga/Gb applications, at the metallic parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC(*)******H/AZ***** made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.

3. For EPL Ga resp. EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC(*)******H/AZ***** 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*(*).AC/AU/AO/AH/AT/VC(*)******H/AZ***** 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*(*).AC/AU/AO/AH/AT/VC(*)******H/AZ*****, 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.

(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

2. SUPPLEMENT

to Certificate No.	**TÜV 13 ATEX 131115 X**
Equipment:	Pressure transmitter type series VEGABAR B8*(*).AC/AU/AO/AH/AT/VC(*)******P/F******
Manufacturer:	VEGA Grieshaber KG
Address:	Am Hohenstein 113 77761 Schiltach Germany
Order number:	8000434841
Date of issue:	2014-06-03

In the future, the pressure transmitter type VEGABAR may be manufactured in the version with electronics for Profibus PA and Foundation Fieldbus, available with a 1 chamber or a 2 chamber housing.

For this new execution, the following VEGABAR B8*(*) electronic versions are available:

- B8*(*).AC/AU/AO/AH/AT/VC******(*)**P****** : With electronics for Profibus PA

- B8*(*).AC/AU/AO/AH/AT/VC******(*)**F******: With electronics for Foundation Fieldbus

Electrical data

Supply and signal circuit ..... (Terminals 1[+], 2[-] in the Ex-i electronics compartment, in the execution with 2 chamber housing in the terminal housing)	in type of protection „Intrinsic Safety" Ex ia IIC Only for connection to a certified intrinsically safe circuit Maximum values: U_i = 17.5 V I_i = 500 mA P_i = 5.5 W The apparatus is suitable for connection to a field bus system according to the FISCO model (EN 60079-11) or U_i = 24 V I_i = 250 mA P_i = 1.2 W The effective internal capacitance is negligibly small. The effective internal inductance, 1 chamber housing, is negligibly small. In execution with the 2 chamber housing: 5 µH In the execution with connection cable mounted fixed, the following values have to be observed additionally: L_i` = 0.62 µH/m $C_{i\ wire/wire}$` = 150 pF/m $C_{i\ wire/shield}$` = 270 pF/m

Operation and indication circuit	in type of protection „Intrinsic Safety" Ex ia IIC
(Terminals 5, 6, 7, 8 in the housing for the electronics resp. in the terminal housing in the execution with 2 cell housing; optionally, connection at the plug connector M12, 2 chamber housing in the version „Housing execution/type of protection P")	Only for connection to the intrinsically safe circuit of the belonging external VEGA indication unit type VEGADIS61 or VEGADIS81 or for connection of a VEGABAR B8* with built-in electronics S or T for differential pressure measurement. The rules for the interconnection of intrinsically safe circuits between the VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 or VEGABAR B8* with electronics S or T are adhered to, if the complete inductance and capacitance of the connection cable between VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 or VEGABAR B8* with electronics S or T does not exceed the following values: L_{cable} = 212 µH C_{cable} = 1.98 µF If the connection cable supplied by the manufacturer between the VEGABAR B8*.*C******** and the VEGADIS 61/ VEGADIS 81 or VEGABAR B8* with electronics S or T is used, the following values have to be observed: L_i` = 0.62 µH/m $C_i$`$_{wire/wire}$ = 150 pF/m C_i`$_{wires/shield}$ = 270 pF/m
Operation and indication module circuit	in type of protection „Intrinsic Safety" Ex ia IIC
(Spring contacts in the housing for the electronics and additionally in the terminal housing in the execution with 2 cell housing)	Only for connection to the VEGA operation and indication module PLICSCOM or the interface adapter VEGACONNECT. In the execution with the 2 cell housing, the operation and indication module PLICSCOM or the interface adapter VEGACONNECT may only be implemented in the terminal housing, if here no external VEGA indication unit type VEGADIS61 or VEGADIS81 or VEGABAR B8* with electronics S or T is connected.

VEGABAR B8* execution with separate cable connection

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

The intrinsically safe circuits for external connections are safe galvanically separated from the parts which can be earthed.
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 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) and medium temperature range (measuring sensor)
T6	-20 °C ... +23 °C
T5	-20 °C ... +60 °C
T4	-20 °C ... +60 °C
T3	-20 °C ... +60 °C
T2	-20 °C ... +60 °C
T1	-20 °C ... +60 °C

The measuring sensors and the electronics 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).
For the max. permissible ambient and 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 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 ... +39 °C	-20°C ... +23 °C
T5	-50 °C ... +70 °C	-20°C ... +60 °C
T4	-50 °C ... +70 °C	-20°C ... +60 °C
T3	-50 °C ... +70 °C	-20°C ... +60 °C
T2	-50 °C ... +70 °C	-20°C ... +60 °C
T1	-50 °C ... +70 °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) and medium temperature range (measuring sensor)
T6	-50 °C ... +39 °C
T5	-50 °C ... +70 °C
T4	-50 °C ... +70 °C
T3	-50 °C ... +70 °C
T2	-50 °C ... +70 °C
T1	-50 °C ... +70 °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 higher process temperatures 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 60079-11:2012 EN 60079-26:2007

(16) The test documents are listed in the test report No. 14 203 142057.

(17) Special conditions for safe use

1. At the plastic parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC******(*)P/F****** there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.

2. For EPL Ga resp. EPL Ga/Gb applications, at the metallic parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC******(*)P/F****** made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.

3. For EPL Ga resp. EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the pressure transmitter type VEGABAR B8*(*).AC/AU/AO/AH/AT/VC******(*)P/F****** 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*(*).AC/AU/AO/AH/AT/VC******(*)P/F****** 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*(*).AC/AU/AO/AH/AT/VC******(*)P/F******, 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.

(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

Schwedt

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