



Safety instructions

VEGATRENN 151.*****

VEGATRENN 152.*****

TÜV 15 ATEX 161797

⊕ II (1) G [Ex ia Ga] IIC, II (1) D [Ex ia Da]
IIIC, I(M1) [Ex ia Ma] I

TÜV 15 ATEX 161799 X

II 3G Ex nA IIC T4 Gc



CE 0044



Document ID: 50858



VEGA

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Please note:

These safety instructions are part of the following documentation:

- 50782 - VEGATRENN 151
- 50783 - VEGATRENN 152
- 50859 - EC type approval certificate TÜV 15 ATEX 161797
- 50860 - Conformity statement TÜV 15 ATEX 161799 X

Editing status: 2015-07-29

DE	Sicherheitshinweise für den Einsatz in explosionsgefährdeten Bereichen, verfügbar in den Sprachen deutsch, englisch, französisch und spanisch.
EN	Safety instructions for the use in hazardous areas are available in German, English, French and Spanish language.
FR	Consignes de sécurité pour l'utilisation en atmosphère explosible, disponibles dans les langues allemande, anglaise, française et espagnole.
ES	Instrucciones de seguridad para el empleo en áreas con riesgo de explosión, disponible en los siguientes idiomas alemán, inglés, francés y español.
CZ	Pokud nastanou potíže při čtení bezpečnostních upozornění v otištěných jazycích, poskytneme. Vám na základě žádosti k dispozici kopii v jazyce Vaší země.
DA	Hvis De har svært ved at forstå sikkerhedsforskrifterne på de trykte sprog, kan De få en kopi på Deres sprog, hvis De ønsker det.
EL	Εάν δυσκολεύεστε να διαβάσετε τις υποδείξεις ασφαλείας στις γλώσσες που ήδη έχουν τυπωθεί, τότε σε περίπτωση ζήτησης μπορούμε να θέσουμε στη διάθεσή σας ένα αντίγραφο αυτών στη γλώσσα της χώρας σας.
ET	Kui teil on raskusi trükitud keeltes ohutusnõuete lugemisega, siis saadame me teie järelpärimise peale nende koopia teie riigi keeles.
FI	Laitteen mukana on erikielisiä turvallisuusohjeita. Voit tilata meiltä äidinkielistet turvallisuusohjeet, jos et selviä mukana olevilla kielillä.
HU	Ha a biztonságos elõírásokat a kinyomtatott nyelveken nem tudja megfelelően elolvasni, akkor lépjen velünk kapcsolatba: azonnal a rendelkezésére bocsátunk egy példányt az Ön országában használt nyelven.
IT	Se le Normative di sicurezza sono stampate in una lingua di difficile comprensione, potete richiederne una copia nella lingua del vostro paese.
LT	Jeį Jums sunku suprasti saugos nuorodų tekstą pateiktomis kalbomis, kreipkitės į mus ir mes Jums duosime kopiją Jūsų šalies kalba.
LV	Ja Jums ir problēmas drošības noteikumus lasīt nodrukātajās valodās, tad mēs Jums sniegsim pēc pieprasījuma kopiju Jūsu valsts valodā.
MT	F'kaz li jkollok xi diffikulta' biex tifhem listruzzjonijiet ta' sigurta' kif ipprovduti, infurmana u ahna nibghatulek kopja billingwa tieghek.
NL	Als u moeite heeft met het lezen van de veiligheidsinstructies in de afgedrukte talen, sturen wij u op aanvraag graag een kopie toe in uw eigen taal.
PL	W przypadku trudności odczytania przepisów bezpieczeństwa pracy w wydrukowanych językach, chętnie udostępnimy Państwu kopię w języku obowiązującym w danym kraju.
PT	Caso tenha dificuldade de ler as instruções de segurança no idioma, no elas foram impressas, poderá solicitar junto a nós uma cópia em seu idioma.
SK	Pokiaľ nastanú problémy pri čítaní bezpečnostných pokynov vo vydaných jazykoch, poskytneme Vám na základe žiadosti k dispozícii kópiu v jazyku Vašej krajiny.
SL	Kadar se pojavijo težave pri branju varnostnih navodil v izdanih jeziki, vam bomo na osnovi zahtevka dali na razpolago kopijo v jeziku vaše države.
SV	Om du har problem att läsa säkerhetsanvisningarna på de här tryckta språken, ställer vi gärna på begäran en kopia på ditt språk till förfogande.

1 Area of applicability

These safety instructions apply for single channel and double channel Ex-separators VEGATRENN 151/152 according to EC type approval certificate TÜV 15 ATEX 161797 (certificate number on the type label) and conformity statement TÜV 15 ATEX 161799 X (certificate number on the type label) and for all instruments with the number of the safety instructions (50858) on the type label.

Object and type

The single channel separators VEGATRENN 151.*****

Scope

- A** Europe
- I** worldwide

Approval

- X** For EX-free area
- A** ATEX II3GExnAIICT4Gc+II(1)G/D[ExiaGa/Da]IIC/IIIC, I(M1)[ExiaMa]I
- C** ATEX II(1)G/D[ExiaGa/Da]IIC/IIIC, I(M1)[ExiaMa]I
- O** ATEX II(1)G/D[ExiaGa/Da]IIC/IIIC, I(M1)[ExiaMa]I+Ship
- U** ATEX II(1)G/D[ExiaGa/Da]IIC/IIIC, I(M1)[ExiaMa]I+WHG
- A** IEC Ex nA IICT4Gc+[ExiaGa/Da]IIC/IIIC,[ExiaMa]I
- C** IEC [ExiaGa/Da]IIC/IIIC,[ExiaMa]I
- O** IEC[ExiaGa/Da]IIC/IIIC,[ExiaMa]I+ Ship
- U** IEC[ExiaGa/Da]IIC/IIIC,[ExiaMa]I+WHG

Version / Angle

- X** Single channel separator for 4 .. 20mA sensors

SIL qualification

- X** without
- S** with, incl. Safety Manual

Housing / Protection

- K** Plastic / IP20
- U** Plastic IP66/IP67

Terminal blocks / Connection

- X** 2,5mm² detachable terminal blocks 1 x black / 2 x black
- B** 2,5mm² detachable terminal blocks 1 x blue / 2 x black

Certificate

- M** yes
- X** no

The double channel separators VEGATRENN 152.*****

Scope

- A** Europe
- I** worldwide

Approval

- X** For EX-free area
- A** ATEX II3GExnAIICT4Gc+II(1)G/D[ExiaGa/Da]IIC/IIIC, I(M1)[ExiaMa]I
- C** ATEX II(1)G/D[ExiaGa/Da]IIC/IIIC, I(M1)[ExiaMa]I
- O** ATEX II(1)G/D[ExiaGa/Da]IIC/IIIC, I(M1)[ExiaMa]I + Ship
- U** ATEX II(1)G/D[ExiaGa/Da]IIC/IIIC, I(M1)[ExiaMa]I+WHG
- A** IEC Ex nA IICT4+[ExiaGa/Da]IIC/IIIC,[ExiaMa]I
- C** IEC[ExiaGa/Da]IIC/IIIC,[ExiaMa]I
- O** IEC[ExiaGa/Da]IIC/IIIC,[ExiaMa]I+Ship
- U** IEC[ExiaGa/Da]IIC/IIIC,[ExiaMa]I+WHG

Version / Angle

- X** Double channel separator for 4 .. 20mA sensors

SIL qualification

- X** without
- S** with, incl. Safety Manual

Housing / Protection

- K** Plastic / IP20
- U** Plastic / IP66/IP67

Terminal blocks / Connection

- X** 2,5mm² detachable terminal blocks 1 x black / 2 x black
- B** 2,5mm² detachable terminal blocks 1 x blue / 2 x black

Certificate

- M** yes
- X** no

2 General information

The single channel separators VEGATRENN 151 and the double channel separators VEGATRENN 152 are used for galvanic separation, intrinsically safe power supply as well as signal transmission of Ex approved 4 ... 20 mA sensors in hazardous areas.

The separator is ideal in conjunction with signal conditioning instruments, having no own Ex-approval and have to allow bidirectional HART transmission.

The instruments are used for separation of intrinsically safe and non-intrinsically safe circuits.

The VEGATRENN 151/152 is a passive safety barrier, detecting the intrinsically safe current of a sensor in Ex area and making it available to a non-intrinsically safe, passive output.

Since the VEGATRENN 151/152 has no internal voltage supply, only voltage limitations are necessary. Possible undervoltages on the sensor side must be monitored by the sensor.

The operating instructions as well as the installation regulations or standards that apply for explosion protection of electrical systems must generally be observed.

The installation of explosion-protected systems must always be carried out by qualified personnel.

The Ex separators of the series VEGATRENN 151 / 152.*A/C/O/U**** were tested and issued on the basis of standard EN60079-0: 2012, EN60079-11: 2012, EN60079-15: 2010.

3 Technical data

The VEGATRENN 151/152 include non-intrinsically safe circuits and one intrinsically safe circuit.

Non-intrinsically safe circuits

Voltage supply:	Passive, no extra voltage supply U = 15 ... 35 V d.c., 4 ... 20 mA U _m = 253 V a.c.
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Intrinsically safe circuit

Signal circuit: (connections KI1, KI2)	Ignition protection type intrinsic safety [Ex ia] IIC/IIB Max. values of the intrinsically safe circuit: U _o ≤ 18 V I _o ≤ 32 mA P _o ≤ 569 mW Characteristics: rectangular Effective internal capacitance C _i = 0 Effective internal inductance L _i = 0 The permissible values for the external capacitances C _o and inductances L _o which result from the combination of C _o and L _o , can be found in the following chart.
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Ex ia	IIC	IIB	I
Max. permissible external inductance L _o	2 mH	5 mH	10 mH
Max. permissible external capacitance C _o	0.15 µF	1.3 µF	1.5 µF

The intrinsically safe signal circuit and power supply is separated from the non-intrinsically safe circuits up to a peak value of the nominal voltage of 375 V.

Application conditions

Permissible ambient temperatures

Permissible ambient temperature at the installation location of an instrument -20 ... +60 °C (-4 ... +140 °F)

4 Installation

The single chamber separators VEGATRENN 151 and double chamber separators VEGATRENN 152 can be installed and operated outside hazardous areas and inside hazardous areas Zone 2. The protection rating of VEGATRENN 151/152 corresponds to IP 20.

If the separators VEGATRENN 151/152 are not set up in dry and clean environments, they must be mounted in a housing with the required protection rating.

With zone 2 applications, the following special conditions must be noted:

According to EN/IEC 60079-15, paragraph 6.3.1 the following applies for this instrument:

- The instrument must be installed in a housing tested according to IEC 60079-0 meeting the requirements of protection rating IP 54.

or

- The instrument must be installed in a housing tested according to IEC 60079-0 meeting the requirements of protection rating IP 4X. The instrument must then be exclusively installed in areas offering also a suitable protection against penetration of impurities or liquids.

The degree of pollution of the area where the instrument is used must not exceed 2.

With zone 2 applications, the torque of the terminals should be between 0.4 Nm and 0.5 Nm.

The wire cross-section can be used between 0.25 mm² and 2.5 mm².

If the intrinsically safe circuit is led into dust-explosive areas of zone 20 or 21, please make sure that the instruments connected to these circuits meet the requirements of category 1D or 2D and are certified respectively.

Printing date:

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All statements concerning scope of delivery, application, practical use and operating conditions of the sensors and processing systems correspond to the information available at the time of printing.

Subject to change without prior notice

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