



Safety instructions

VEGAMET 624, 625

VEGASCAN 693

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



CE 0044



Document ID: 35123



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Supplementary documentation:

- Operating Instructions VEGAMET 624, 625
- Operating Instructions VEGASCAN 693
- EG-type approval certificate TÜV 03 ATEX 2269 (Document ID: 33584)

Editing status: 2021-09-13

DE	Sicherheitshinweise für den Einsatz in explosionsgefährdeten Bereichen
EN	Safety instructions for the use in hazardous areas
FR	Consignes de sécurité pour une application en atmosphères explosibles
IT	Normative di sicurezza per l'impiego in luoghi con pericolo di esplosione
ES	Instrucciones de seguridad para el empleo en áreas con riesgo de explosión
PT	Normas de segurança para utilização em zonas sujeitas a explosão
NL	Veiligheidsaanwijzingen voor gebruik op plaatsen waar ontploffingsgevaar kan heersen
SV	Säkerhetsanvisningar för användning i explosionsfarliga områden
DA	Sikkerhedsforskrifter til anvendelse i explosionsfarlig atmosfære
FI	Turvallisuusohjeet räjähdysvaarallisissa tiloissa käyttöä varten
EL	Υποδείξεις ασφαλείας για τη χρησιμοποίηση σε περιοχές που υπάρχει κίνδυνος έκρηξης

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1 Area of applicability

These safety instructions apply to the controllers VEGAMET 624, 625 and VEGASCAN 693 according to EC type approval certificate TÜV 03 ATEX 2269 (certificate number on the type label) and to all instruments with the safety instruction 35123.

2 General information

The controllers VEGAMET 624, 625 and VEGASCAN 693 are accessory electrical devices used to process intrinsically safe 4 ... 20 mA/HART signals as well as to supply intrinsically safe sensors with power. They are also used to galvanically isolate intrinsically safe circuits from non-intrinsically safe circuits.

If the controllers VEGAMET 624, 625 and VEGASCAN 693 are used for powering intrinsically safe sensors that are installed and operated in hazardous areas, the general Ex mounting instructions EN 60079-14 as well as these safety instructions must be observed.

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.

3 Technical data

The VEGAMET 624, 625 and VEGASCAN 693 includes non-intrinsically safe circuits and an intrinsically safe circuit.

Non-intrinsically safe circuits

Power supply: (terminals 17/ 18)

Operating voltage	24 ... 65 V DC (-15 ... +10 %)
	24 ... 230 V AC (-15 ... +10 %)
	50/60 Hz
Reference voltage U_m	253 V AC

Relay outputs: (terminals 6/7/8, 20/21/22, 23/24/25, 26/27/28)

Switching voltage	min. 10 mV DC, max. 250 V AC/DC
Switching current	min. 10 μ A DC, max. 3 A AC, 1 A DC
Breaking capacity	min. 50 mW, max. 750 VA, 18 W at $U = 60$ V DC, 40 W at $U \leq 40$ V DC

Current outputs: (terminals 11/12, 13/14, 15/16)

Range	0/4 ... 20 mA
Reference voltage U_m	253 V AC/DC

Ethernet interface

Reference voltage U_m	50 V AC/DC
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RS232 interface

Reference voltage U_m	50 V AC/DC
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I²C bus interface

For connection of VEGACONNECT PTB 01 ATEX 2007 X, PTB 07 ATEX 2013 X versions

3.1 Intrinsically safe circuit

Sensor input (terminals 1/2)

Input type

– Active Sensor is powered by the controller

Max. terminal voltage U_o : 23.9 V

Max. current I_o : 108 mA

Max. power P_o : 645 mW

Characteristics Linear

Effective internal capacitance C_i 0 nF

Effective internal inductance L_i 0 mH

Permissible external inductance/capacitance Ex ia IIC

– External inductance L_o 0.5 mH, 0.3 mH, 0.2 mH

– External capacitance C_o 84 nF, 100 nF, 120 nF

Permissible external inductance/capacitance Ex ia IIB

– External inductance L_o 2 mH, 1 mH, 0.5 mH

– External capacitance C_o 430 nF, 470 nF, 560 nF

Separation of intrinsically safe - non intrinsically safe circuits

– Peak value of nominal voltage 375 V



Note:

In case of failure the maximum voltage on the non-intrinsically safe circuits may not exceed 253 V resp. 50 V.

Application conditions

Ambient conditions

Ambient temperature -20 ... +60 °C (-4 ... +140 °F)

Electrical protective measures

Protection rating

– Instrument IP30

– Terminal socket IP20

4 Installation

The controllers VEGAMET 624, 625 and VEGASCAN 693 must be operated outside the hazardous area. The separating wall included in the shipment should be mounted prior to setup and the instrument coding should be carried out. Please observe the notes in the operating instructions.

The controllers VEGAMET 624, 625 and VEGASCAN 693 must only be operated in areas that allow protection class IP20. Otherwise, they must be mounted in a housing with the required protection class.

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:

VEGA

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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35123-EN-210913

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