

# VEGA

## Safety instructions

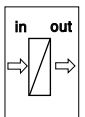
**VEGAMET MET624.CI\***

**VEGAMET MET625.CI\***

**VEGASCAN SCAN693.CI\***

IECEX TUN 04.0013

[Zone 0] [Ex ia] IIC, [Zone 20] [Ex ia D]



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Please note:

These safety instructions are part of the following documentation:

- 28969 - VEGAMET 624 Ex
- 28970 - VEGAMET 625 Ex
- 28971 - VEGASCAN 693 Ex
- 29651 - certificate IECEX TUN 04.0013

## 1 Area of applicability

These safety instructions apply to the signal conditioning instruments VEGAMET MET624.CI\*, VEGAMET MET625.CI\* and VEGASCAN SCAN693.CI\* according to the IECEx certificate IECEx TUN 04.0013 with the second supplement (certification number on the type label).

## 2 General information

The VEGAMET MET624.CI\*, VEGAMET MET625.CI\* and VEGASCAN SCAN693.CI\* signal conditioning instruments 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 signal conditioning instruments VEGAMET MET624.CI\*, VEGAMET MET625.CI\* and VEGASCAN SCAN693.CI\* are used for powering intrinsically safe sensors that are installed and operated in hazardous areas, the general Ex mounting instructions IEC 60079-14 as well as these safety instructions must be observed.

The operating instructions as well as the valid Ex mounting regulations and standards for electrical equipment must be observed.

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

## 3 Technical data

The VEGAMET MET624.CI\*, VEGAMET MET625.CI\* and VEGASCAN SCAN693.CI\* includes non-intrinsically safe circuits and an intrinsically safe circuit.

### 3.1 Non-intrinsically safe circuits

#### **Voltage supply: (terminals 17/ 18)**

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Supply voltage	20 ... 253 V AC/DC, 50/60 Hz
Maximum voltage Um	253 V AC

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

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Turn-on voltage	min. 10 mV DC, max. 250 V AC/DC
Switching current	min. 10 $\mu$ 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

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

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Range	0/4 ... 20 mA
Maximum voltage Um	253 V AC/DC

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### Ethernet interface

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Maximum voltage $U_m$	50 V AC/DC
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### RS232 interface

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Maximum voltage $U_m$	50 V AC/DC
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### I<sup>2</sup>C bus interface

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

## 3.2 Intrinsically safe circuit

### Sensor input (terminals 1/2)

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Type of input

- active	Sensor is powered by the signal conditioning instrument
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Max. terminal voltage $U_o$	23.9 V
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Max. current $I_o$	108 mA
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Max. power $P_o$	645 mW
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Characteristics	linear
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Effective internal capacitance $C_i$	0 nF
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Effective internal inductance $L_i$	0 mH
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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
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#### Note:

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

## 3.3 Application conditions

### Ambient conditions

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Ambient temperature	-20 ... +60 °C (-4 ... +140 °F)
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## Electrical protective measures

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Protection class

- Instrument IP 30
- Terminal socket IP 20

## 4 Mounting

The signal conditioning instruments VEGAMET MET624.CI\*, VEGAMET MET625.CI\* and VEGASCAN SCAN693.CI\* 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 signal conditioning instruments VEGAMET MET624.CI\*, VEGAMET MET625.CI\* and VEGASCAN SCAN693.CI\* must only be operated in areas that allow protection class IP 20. Otherwise, they must be mounted in a housing with the required protection class.

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







VEGA Grieshaber KG  
Am Hohenstein 113  
77761 Schiltach  
Germany  
Phone +49 7836 50-0  
Fax +49 7836 50-201  
E-mail: [info@de.vega.com](mailto:info@de.vega.com)  
[www.vega.com](http://www.vega.com)



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