

## Instruction Manual Probes VA40 for explosive atmospheres



### Apparatus

Vortex flow sensors VA40



These are intrinsically safe sensors for measuring the flow velocity of gases and designed for use in areas in which an explosive gas atmosphere is likely to occur in normal operation occasionally.

Probes VA40 ZG2, ZG4, ZG5



### 1. Safety Precautions

Please read this Instruction Manual carefully before initial operation!  
Non-compliance can cause an explosion!

The apparatus may be used only in areas in which the ambient temperature for temperature classes T6 + 40 °C, T5 +55 °C and T4 +90 °C and the gas temperature, ambient temperature and maximal permissible overpressure of 3 bar/300 kPa, as marked on the type plate, are not exceeded.

Sensors for applications in pressurized pipelines are to be inserted or retracted in depressurized conditions only, unless a probe guide piece with chain guard is being used. Non-observance can result in serious harm to personnel.

VA40 for explosive atmospheres may be connected to auxiliary electrical equipment with intrinsically safe isolation/supply unit only, so that the ratings in 2.1 are not exceeded.

### 2. Technical Data

EC type examination certificate: **ZELM 01 ATEX 0054**

Marking



Explosion protection: **Ex ia IIC T6 Gb**

## 2.1 Electrical Data

Operation range concerning safety specifications:

$U_i \leq 11 \text{ V}$ ,  $I_i \leq 40 \text{ mA}$ ,  $P_i \leq 224 \text{ mW}$



## 3. Installation

The current European Specifications for Assembly, the recognised standards of good practice and this Instruction Manual apply.

VA40 for explosive atmospheres may be connected to auxiliary electrical apparatus with intrinsically safe isolation/supply unit only, so that the ratings in 2.1 are not exceeded.

Refer to the currently valid regulations to ensure localized potential equalization.

Probes VA40 ZG4 and ZG5 have an equipotential bonding terminal on the terminal box of the apparatus. The earth terminal is designed for cross-sections of 1.5 ... 10 mm<sup>2</sup>. Use a cable lug. The torque for fixture to the earth terminal must amount to 2 ... 3 Nm.

Probes VA40 ZG2 connection is either on the probe guide piece or with a standard grounding clamp on the probe shaft.

For Probes VA40 ZG4 and ZG5, cable glands with M16 thread for cables with an exterior diameter of 5 ... 10 mm are used. The cable gland is to be tightened with a torque of 4 Nm.

The terminals are for wires with a cross-section of 0.5 ... 2.5 mm<sup>2</sup>, AWG 20 to 16. Wire end sleeves must be used. Bare wires must not be visible after installation. The connection cables used must be usable for the temperature range of -25 ... +80 °C.



## 4. Cleaning / Maintenance

Sensors should be cleaned at regular intervals (see User Information VA Probes).

For Probes VA40 ZG4 and ZG5, any covering of dust on the electronic housing may not exceed 5 mm.

Any other maintenance or repair work is to be carried out solely by Höntzsch GmbH & Co. KG.

**Declaration of conformity, Declaration of incorporation  
Déclaration de conformité**

**We,** Höntzsch GmbH & Co. KG  
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bearing sole responsibility, hereby declare that the product

**Instrument for flow measurement**

**VA40**

**with EC-Type-Examination certificate ZELM 01 ATEX 0054**

referred to by this declaration is in conformity with the following standards or normative documents:

<b>Provisions of the directive</b>	<b>No. and date of issue of the standards</b>
<b>2014/34/EU:</b> Equipment and protective systems for use in potentially explosive atmospheres	EN 60079-0: 2018 EN 60079-11: 2012
<b>2014/30/EU:</b> Electromagnetic compatibility	EN 61000-6-4: 2007 + A1: 2011 EN 61000-6-2: 2006 + Ber1: 2011
<b>2014/68/EU:</b> Pressure equipment directive	

One or more of the standards referred to in the EC type examination certificate have been replaced by new versions. We declare that we are also in agreement with these new versions.



Waiblingen, 25.06.2021

Jürgen Lempp / Managing Director

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Subject to alteration