



Instruction Manual UVA-Ex-d VADi or VA40 with transducer electronics in pressure-proof enclosure



Equipment

Vortex flow sensors VA designed as probe VA40 or measuring tube VA Di with transducer electronics in pressure-proof enclosure with optional LCD display.

Ex-version sensors UVA-Ex-d VA Di and VA40 are intrinsically safe components for measuring the flow velocity and flow rate of gases with non-intrinsically safe transducer electronics in a pressure-proof enclosure. They are designed for application in areas in which Category 1 electrical apparatus is required. Installation is carried out with flange or probe guide piece in the zone separation wall. The enclosure for the electronics is in areas which require Category 2 equipment.



Safety tips

Read the Instruction Manual carefully before initial operation! Non-observance of the Instruction Manual can lead to explosion of the installation.

The electrical apparatus UVA-Ex-d VA Di or VA40 in Ex is to be used only in Category 1/2G and 2G or 1/2D and 2D areas in which the ambient temperature of -20°C to $+60^{\circ}\text{C}$ or rather -40°C to $+60^{\circ}\text{C}$ for the TT version **for the enclosure of the electronics** is not exceeded. See also details on the type plate of the sensor as well as the relevant technical data.

The **temperature of the medium** in areas of Category 1/2G must not exceed $+60^{\circ}\text{C}$ under atmospheric pressure. The maximum admissible temperature of the medium in Category 2G locations corresponds to the temperature class. See also details on the type plate of the sensor as well as the relevant technical data. In the case of TT version the connection clamps must not be operated at temperatures under -20°C !

In Category 1/2D and 2D locations self-heating does not need to be taken into account. For maximum permissible medium temperatures: see type plate and relevant technical data.

The container for the gases is to be insulated in such a way as to guarantee that the electronics enclosure does not absorb temperatures exceeding the above mentioned maximum ambient temperatures of the respective temperature class; at the same time radiant and convective heat must be taken into consideration.

Ex-sensors UVA-Ex-d VA Di or VA40 are to be used solely in areas in which the temperature for gas noted on the type plate, the ambient temperature and the maximum permissible pressure above atmospheric are not exceeded.

Sensors UVA-Ex-d VA Di or VA 40 for application in pressurized pipelines are to be inserted or retracted in depressurized conditions only. Non-observance can result in serious harm to personnel.

The cover of the pressure-resistant electronics enclosure, which is furthest away from both cable glands, may only be opened in the safe zone or when the unit is not electrically connected.

A standardised process connection ($>$ or $=$ IP67) guarantees the tightness of the zone separation during installation.



Conformity with Standards

The electrical apparatus meets the requirements of the European Standards:

EN 60079-0: 2010	General Requirements
EN 60079-1: 2008	Flameproof Enclosures "d"
EN 60079-7: 2007	Increased Safety "e"
EN 60079-26: 2012	Special Requirements Category 1G EPL Ga
EN 60079-11: 2012	Intrinsic Safety "i"
EN 60079-31: 2010	Equipment Dust Ignition Protection by Enclosure "t"

Technical Data

EC-type Examination Certificate: **IBExU 06 ATEX 1103 X**

Explosion protection: **Ex ia/d e [ia] IIC T6 Ga/Gb**
Marking

CE 0637 **Ex** II 1/2 G

Explosion protection: **Ex ia/tb IIIC TX Da/Db**
Marking

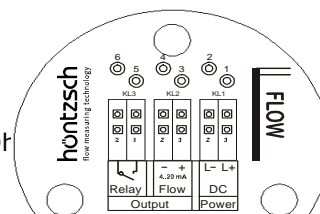
CE 0637 **Ex** II 1/2 D

Electrical Data

Power supply : 24 V DC (20...27 V DC) < 5 W
Current consumption : < 150 mA
Terminals KL1 : +24 V DC = Power DC L+
 : 0 V DC = Power DC L-

Analog output : 4...20 mA, working resistance max. 500 Ohm
Terminals KL2 : + = Output Flow + 4..20mA
 : - = Output Flow - 4..20mA

Relay output : potential-free, max. 30 V DC, 100 mA
Terminals KL3 : output relay, normally open contact



Terminal connections



Installation

The European Specifications for Assembly EN 60079-14: 2009 + Cor.: 2012, as well as the general rules of technology and this Instruction Manual are authoritative when installing the measuring equipment.

The equipment is to incorporate the local equipotential bonding system PA according to EN 60 079-14:2009 + Cor.: 2012. A PA binder on the exterior of the flameproof enclosure serves this purpose.

The connector cables are fed through 2 screwed cable glands with increased safety "e" in the connection chamber and connected to the terminals with increased safety "e".

For the power supply we recommend a regular mains adapter with 24V DC ±10% output and rating > 6 W, current >250 mA.



Cleaning / Maintenance

The sensor should be cleaned at regular intervals, especially in cases of operation in which the sensor can become soiled.

The threads on the enclosure cover have been treated with graphite to protect against corrosion.

Maintenance and repair of the electrical apparatus is to be carried out solely by Höntzsch GmbH.



**European Declaration of Conformity
for UVA-Ex-d measuring tubes VADi, probes VA40
with ATEX approval**

We, Höntzsch GmbH
Gottlieb-Daimler-Str. 37
D-71334 Waiblingen

declare under our sole responsibility that the product

flow measuring instrument
UVA-Ex-d measuring tubes VADi, probes VA40

with EC-type Examination Certificate IBExU 06 ATEX 1103 X

to which this declaration relates is in conformity with the provisions of the following standards or normative documents:

Provisions of the Directive	Reference no. and date of issue
94/9/EG: Equipment and Protective Systems in Potentially Explosive Atmospheres	EN 60079-0: 2010 EN 60079-1: 2008 EN 60079-7: 2007 EN 60079-26: 2012 EN 60079-11: 2012 EN 60079-31: 2010
89/336 EWG: Electromagnetic Compatibility	EN 61000-6-4: 2011 EN 61000-6-2: 2006 + Cor.: 2011
97/23/EG: Pressure Equipment Directive	29.05.1997

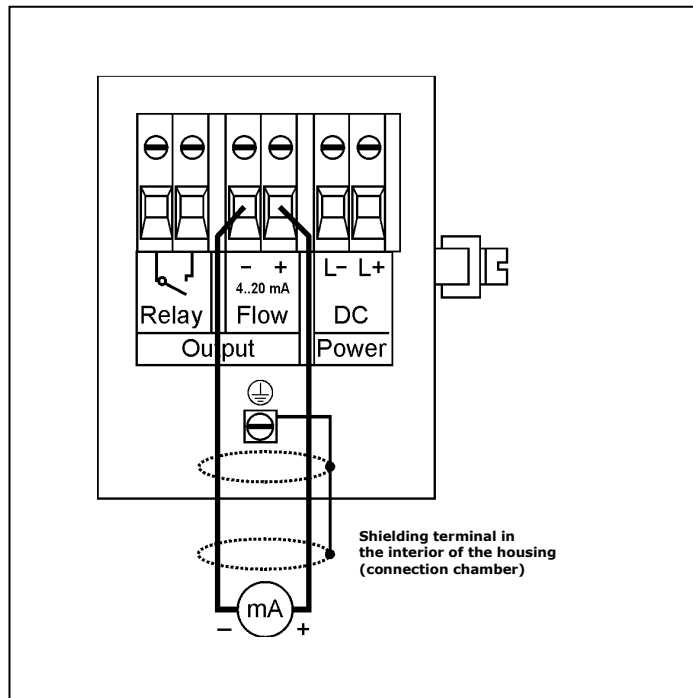
One or more of the standards referred to the EC type examination certificate have been replaced by new versions. We declare that we are also in agreement with these new versions.

Waiblingen, 20.04.2012

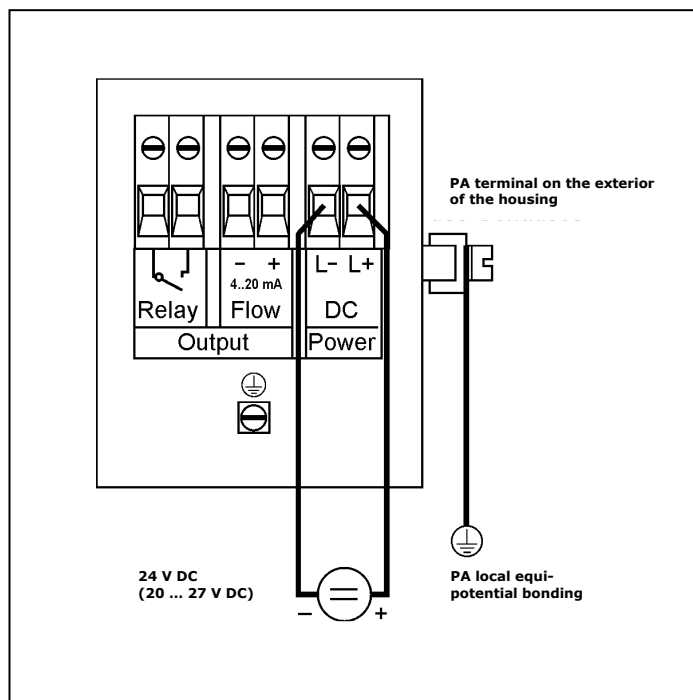
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Information on electrical connection



Analog output connection



Power supply connection