



Safety instructions

VEGADIS 82

Non-Incendive "NI"

CSA16CA70048296X



Document ID: 1046526



VEGA

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Supplementary documentation:

- Operating Instructions VEGADIS 82
- Certificate of Conformity CSA16CA70048296X (Document ID: 51679)

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1 Area of applicability

These safety instructions apply to the VEGADIS 82 of type series:

- DIS82(*).CA*****

According to Certificate of Conformity CSA16CA70048296X (certificate number on the type label) and for all instruments with safety instruction 1046526.

The classification as well as the respective standards are stated in the Certificate of Conformity:

- Class I, Division 2, Groups A, B, C, D T6 ... T1; Class II, Division 1, Groups E, F, G; T94 °C;
- Class III;
- Class I, Zone 2 A/Ex ec IIC T6 ... T1 Gc

2 Important specification in the type code

VEGADIS DIS82(*).abcdefghi

Position	Feature	Description
a	Scope	C CSA / Canada
b	Approval	A Class I, Div 2, Groups A, B, C, D; Class II, Div 1, Groups E, F, G; Class III; Class I, Zn 2 A/Ex ec IIC T6 ... T1 Gc
c	Electronics	X 4 ... 20 mA
		H 4 ... 20 mA/HART
d	Housing	A Aluminium
		V Stainless steel (precision casting)
		H Special colour, Aluminium
e	Protection rating	N IP66/IP68 (0.2 bar); NEMA 6P
f	Cable entry / Connection	D M20 x 1.5 / Blind plug
		N ½ NPT / Blind plug
		M M20 x 1.5 / Cable gland PA black (ø 5 ... 9 mm), standard
		* further cable glands, blind plugs, cable leadthroughs, plug connectors, Conduit system
g	Display and adjustment module PLICSCOM	X without
		A mounted
		F without; lid with inspection window
		K mounted; with Bluetooth, magnetic pen operation
h	Mounting type	A for wall mounting with Aluminium or stainless steel housing
		D for carrier rail with Aluminium or stainless steel housing
		E for tube mounting (29 ... 60 mm) incl. mounting material
i	Certificates	X No
		M Yes

In the following, all above mentioned versions are called VEGADIS 82. If parts of these safety instructions refer only to certain versions, then these will be mentioned explicitly with their type code.

3 General information

The VEGADIS 82 in ignition protection type "Non-incendive NI" is used with ignition protection type

"Non-Incendive NI" certified VEGA sensors.

The VEGADIS 82 are suitable for applications in hazardous atmospheres of all combustible materials of explosion groups IIA, IIB and IIC.

The VEGADIS 82 are suitable for applications requiring EPL Gc instruments.

The VEGADIS 82 are suitable for applications in hazardous atmospheres of all combustible materials of Class I Groups A, B, C, D, Class II Groups E, F, G and Class III.

The VEGADIS 82 are suitable for applications for Division 2 in explosive gas atmospheres or Division 1 for explosive dust atmospheres.

4 Application area

EPL Gc instrument

The VEGADIS 82 with the mechanical fixing element are installed in hazardous areas of zone 2 requiring EPL Gc instruments.

Division 2 instruments for explosive gas atmospheres

The VEGADIS 82 with the mechanical fixing element are installed in hazardous areas of Division 2.

Division 1 instruments for explosive dust atmospheres

The VEGADIS 82 with the mechanical fixing element are installed in hazardous areas of Division 1.

5 Special operating conditions

The following overview lists all special features of VEGADIS 82.

Electrostatic charging (ESD)

You can find the details in chapter "*Electrostatic charging (ESD)*" of these safety instructions.

Ambient temperature

You can find the details in chapter "*Thermal data*" of these safety instructions.

Impact and friction sparks

The VEGADIS 82 in light metal versions (e.g. aluminium, titanium, zircon) must be mounted in such a way that sparks from impact and friction between light metals and steel (except stainless steel, if the presence of rust particles can be excluded) cannot occur.

Non-grounded, metallic parts

The resistance between aluminium housing to metal measuring point identification plate is $> 10^9$ Ohm.

The capacitance of the metal measuring point identification plate was measured as follows:

Measurement loop identification label	Capacitance
45 x 23 mm (standard)	21 pF
100 x 30 mm	52 pF
73 x 47 mm	61 pF

6 Important information for mounting and maintenance

General instructions

The following requirements must be fulfilled for mounting, electrical installation, setup and maintenance of the instrument:

- The staff must be qualified according the respective tasks

- The staff must be trained in explosion protection
- The staff must be familiar with the respectively valid regulations, e.g. planning and installation acc. to CEC or NEC
- Make sure when working on the instrument (mounting, installation, maintenance) that there is no explosive atmosphere present, the supply circuits should be voltage-free, if possible
- The instrument has to be mounted according to the manufacturer specifications, the Certificate of Conformity and the valid regulations and standards
- Modifications on the instrument can influence the explosion protection and hence the safety, therefore repairs are not permitted to be conducted by the end user
- Modifications must only be carried out by employees authorized by VEGA company
- Use only approved spare parts
- Components for installation and connection not included in the approval documents are only permitted if these correspond technically to the latest standard mentioned on the cover sheet. They must be suitable for the application conditions and have a separate certificate. The special conditions of the components must be noted and if necessary, the components must be integrated in the type test. This applies also to the components already mentioned in the technical description.
- Vessel installations and probable flow must be taken into account

Mounting

Keep in mind for instrument mounting

- Mechanical damage on the instrument must be avoided
- Mechanical friction must be avoided
- Close the housing lid (s) up to the stop before starting operating, to ensure the IP protection rating specified on the type label

Maintenance

To ensure the functionality of the device, periodic visual inspection is recommended for:

- Secure mounting
- No mechanical damages or corrosion
- Worn or otherwise damaged cables
- No loose connections of the line connections, equipotential bonding connections
- Correct and clearly marked cable connections

Cable and wire entries

- Unused openings must be covered according to the standards. The red thread or/dust covers screwed in when the instruments are shipped (depending on the version) must be removed before setup and replaced by cable entries or closing screws suitable for the respective ignition protection type and IP protection.
- With surface temperatures > 60 °C, the cables must be suitable for the higher application conditions (≥ 90 °C)
- SEAL REQUIRED WITHIN 18 INCHES - JOINT REQUIS À MOINS DE 18 POUNCES

7 Safe operating mode

General operating conditions

- Do not operate the instrument outside the electrical, thermal and mechanical specifications of the manufacturer
- Use the instrument only in media against which the wetted parts are sufficiently resistant
- Refer to the relevant temperature tables for permissible temperatures. See chapter "*Thermal data*".
- If necessary, a suitable overvoltage arrester can be connected in front of the VEGADIS 82

- Lids must not be opened if there is a hazardous atmosphere. The housing lids are marked with the warning label:

WARNING -- DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

AVERTISSEMENT -- NE PAS OUVRIR SI UNE ATMOSPHERE EXPLOSIVE PEUT ÊTRE PRÉSENTE

8 Potential equalization/Grounding

- Integrate the instruments into the local potential equalisation, e.g. via the internal or external earth terminal
- The potential equalization terminal must be secured against loosening and twisting
- If grounding of the cable screening is necessary, this must be carried out acc. to the valid standards and regulations

9 Electrostatic charging (ESD)

In case of instrument versions with electrostatically chargeable plastic parts, the danger of electrostatic charging and discharging must be taken into account!

The following parts can charge and discharge:

- Lacquered housing version or alternative special lacquering
- Metal housing with inspection window
- Plastic process fittings
- Plastic-coated process fittings and/or plastic-coated sensors
- Connection cable for separate versions
- Type label
- Isolated metallic labels (measuring point identification plate)

Take note in case of danger of electrostatic charges:

- Avoid friction on the surfaces
- Do not dry clean the surfaces

The instruments must be mounted/installed in such a way that the following can be ruled out:

- electrostatic charges during operation, maintenance and cleaning.
- process-related electrostatic charges, e.g. by measuring media flowing past

The warning on the type label indicates danger:

- WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
- AVERTISSEMENT – DANGER POTENTIEL DE CHARGES ELECTROSTATIQUES – VOIR INSTRUCTION

10 Electrical data

VEGADIS DIS82.CA*****

Supply and signal circuit:	
Supply and signal circuit: (terminals 1, 2, 3, 4)	$U \leq 35 \text{ V DC}$ $I = 3.5 \dots 22.5 \text{ mA}$ with superimposed HART signal Connection to 4 ... 20 mA(HART) sensors

Display and adjustment circuit:	
Spring contacts in the connection compartment	Only for connection to the display and adjustment module PLICSCOM.

- The power to this equipment must be supplied by a source that is categorized as “CLASS 2” and “SELV” as specified in the Canadian Electrical Code, C22.1 and the National Electrical Code NFPA 70.
- Environmental conditions: pollution degree 2; overvoltage category: II; altitude: 2000 m above sea level.

11 Thermal data

The following temperature tables are valid for all housing and electronics versions.

The relationship between the permissible ambient temperature for the electronics housing depending on the area of application and the maximum surface temperatures, temperature classes, can be seen in the following tables.

Division 2/EPL Gc instruments

Temperature class	Ambient temperature (Ta)
T6	-40 ... +42 °C
T5	-40 ... +57 °C
T4, T3, T2, T1	-40 ... +60 °C

The application conditions during operation without explosion-endangered atmosphere are mentioned in the respective manufacturer instructions, e.g. operating instructions manuals.

Division 2 instruments for explosive dust atmospheres

Max. permissible ambient temperature	-40 °C ... +60 °C (-40 ... 140 °F)
Max. surface temperature increase	Ambient temperature +34 K

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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