Safety instructions

VEGAMIP MPR61(*).AX****R/T***
VEGAMIP MPT61(*).AX****T***

IECEx BVS 11.0037
Ex nAmc IIC T4 ... T1 Gc
Ex nA IIC T4 ... T1 Gc

0044

41656

Contents

Please note:

These safety instructions are part of the documentation:

- 35786 - VEGAMIP 61
- 41657 - Certificate of Conformity IECEx BVS 11.0037

41656-EN-120201

1 Area of applicability

These safety instructions apply to the microwave barrier VEGAMIP MPR/T61(*).AX****R/T*** according to the Certificate of Conformity IECEx BVS 11.0037 with the 1st supplement (certificate number on the type label) and to all instruments with the number of the safety instruction (41656) on the type label.

2 General information

The radar-based level switch VEGAMIP MPR/T61(*).AX****R/T*** is used to detect the limit value of a product surface between an emitting unit VEGAMIP MPT61(*).AX****T*** and a receiving unit VEGAMIP MPR61(*).AX****R/T*** by means of high frequency electromagnetic waves in the GHz range.

The VEGAMIP MPR/T61(*).AX****R/T*** are used for monitoring and control of levels in areas with hazardous atmosphere requiring category EPL-Gc instruments.

The VEGAMIP MPR/T61(*).AX****R/T*** consist of an emitting and a receiving unit, a metal housing and a process connection element.

As an option, a housing cover with inspection window can be used.

If the VEGAMIP MPR/T61(*).AX****R/T*** are installed and operated in hazardous areas, the general Ex installation regulations, IEC 60079-14 as well as these safety instructions must be observed.

The operating instructions as well as the corresponding valid Ex installation regulations and/or standards for electrical equipment must be observed.

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

3 Technical data

3.1 Electrical data

VEGAMIP MPT61(*).AX**T***

Voltage supply: (terminals 1, 2 in the connection compartment)	U = 20 … 253 V AC, 50/60 Hz, U = 20 … 72 V DC
Power consumption	1.8 VA (AC), approx. 1.3 W (DC)

VEGAMIP MPR61(*).AX**R***

Voltage supply: (terminals 1, 2 in the connection compartment)	U = 20 … 253 V AC, 50/60 Hz, U = 20 … 72 V DC
Power consumption	1,8 VA, 1,6 W

Relay circuit, contact set 1: (terminals 3, 4, 5), contact set 2: (terminals 6, 7, 8)

– Turn-on voltage	253 V AC, 253 V DC
– Breaking capacity	min. 50 mW, 750 VA AC, cosϕ > 0.5; 40 W DC, cosϕ = 1
– Switching current	5 A AC, 1 A DC

VEGAMIP MPR61(*).AX*****T***	
Voltage supply: (terminals 1, 2 in the connection compartment)	U = 20 … 55 V DC
Power consumption	max. 1 W
Signal circuit: (terminals 4, 5)	Maximum values: U_{Load} = 20 … 55 V DC I_{Load} ≤ 400 mA AC

Emitting/Receiving frequency	
Radiation power (normal operation)	P_{EIRP} = 0.1 W

4 Application conditions

The max. permissible ambient temperatures depending on the temperature class are specified in the following table:

Temperature class	Temperature on the sensor	Ambient temperature on the electronics
T4	-60 … +135 °C	-40 … +60 °C
T3	-60 … +200 °C	-40 … +60 °C
T2	-60 … +300 °C	-40 … +60 °C
T1	-60 … +450 °C	-40 … +60 °C

The permissible temperatures and pressures for operation are specified in the respective manufacturer specifications, for example, the operating instructions manual.

5 Cable entries

Cable entries must only be replaced by the same types or suitable separately certified cable entries/ glands.

The cable entry sent with the delivery is suitable for the housing temperature range specified in the VEGAMIP MPR/T61(*).AX****R/T*** certificate. If a different cable entry is used, the separately certified cable entry determines the max. permissible ambient temperature on the electronics housing (max. values: -40 °C, +70 °C).

Unused openings for cable entries have to be sealed tightly.

6 Grounding

The VEGAMIP MPR/T61(*).AX****R/T*** must be electrostatically (transition resistor ≤ 1 MΩ) grounded. For this purpose the internal or external ground terminal on the housing can be used.

7 Installation/mounting

The VEGAMIP MPR/T61(*).AX****R/T*** must be mounted in a way that sufficiently ensures that the antenna extensions cannot bend or touch the vessel wall due to the influence of vessel installations and measured product.

8 Material resistance

The VEGAMIP MPR/T61(*).AX****R/T*** must only be used in media against which the materials of the wetted parts are sufficiently resistant.

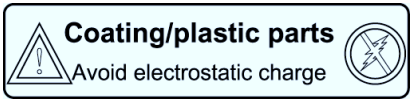
9 Opening the housing

The electronics compartment may be opened during operation or for parameter adjustment (setup) only when there is no explosive atmosphere present.

After the required parameter adjustments are carried out, the cover must be fastened tightly with the screws so that IP 54 is maintained.

10 Protection against static electricity

The VEGAMIP MPR/T61(*).AX****R/T*** in the version with chargeable plastic parts, as e.g. metal housing with inspection window ("Ex-i" compartment) or plastic antennas, is provided with a caution label referring to the safety measures that must be taken with regard to electrostatic charges during operation.



Caution: Plastic parts! Danger of static charge!

- Avoid friction
- No dry cleaning
- Do not mount in areas with flowing, non-conductive products

11 Versions with rinsing connection

For the VEGAMIP MPR/T61(*).AX****R/T*** in the version with rinsing connection, please make sure that protection IP 66 is ensured at the connection to the reflux valve. After removal of the reflux valve or the rinsing connection on the reflux valve, the opening must be closed with a suitable plug screw in order to maintain protection IP 66.

Please make sure that there is no explosive atmosphere present during rinsing processes in the antenna or sensor cleaning.

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