Safety instructions
CCOE approval
VEGATOR 111, 112

Associated apparatus
Installation in non-Ex area

Document ID: 62526

Contents

Supplementary documentation:

- Operating Instructions VEGATOR 111, 112
- Letter P454161 By Government of India (Document ID: 62527)

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1 Area of applicability

These safety instructions apply to the controllers VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** according to the Letter P454161 By Government of India (certificate number on the type label) and to all instruments with the number of the safety instruction (62487) on the type label.

2 General information

The controllers VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** are used for intrinsically safe power supply of two-wire transmitters, the reliable galvanic separation from all other circuits and the processing of analoguously transmitted measured data. The controllers VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** depending on limit values are used for generation of binary output signals on the floating, non-contact relay output.

The controllers VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** work in conjunction with 1.2 mA/2.1 mA (NAMUR) limit switches and are mainly used for level detection or pump control for VEGASWING, VEGAVIB and VEGAWAVE vibrating level switches with electronics version "Two-wire". Hence simple control tasks can be solved.

Typical applications are monitoring functions such as overfill and dry run protections. The 1.2 mA/2.1 mA input signals and relay outputs are used for control and monitoring of levels. The single channel controllers VEGATOR 111.**X****, VEGATOR 111.**S**** (with additional fail safe relay in the output) are for connection of a 1.2 mA/2.1 mA sensor and the double channel controller VEGATOR 112 for connection of two 1.2 mA/2.1 mA sensors.

Controllers VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** must be mounted and operated outside hazardous areas.

The operating instructions as well as the installation regulations or standards that apply for explosion protection of electrical systems must generally be observed.

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

Type of protection marking
[Ex ia Ga] IIC

3 Technical data

The VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** include non-intrinsically safe circuits and one intrinsically safe circuit.

Non-intrinsically safe circuits

Voltage supply: (connections 16/17)	U = 24 … 230 V AC (-15 … +10 %)
	U = 24 … 65 V DC (-15 … +10 %)
	U_m = 253 V
Relay outputs: (10/11/12, 13/14/15)	Maximum values:
	253 V AC, 3 A
	50 V DC, 1 A

Intrinsically safe circuit

Signal circuit: (connections 1/2, 4/5)

In type of protection intrinsic safety Ex ia IIC, I

Max. values per circuit:

$U_o \leq 10.8$ V

$I_o \leq 19.6$ mA

$P_o \leq 52.8$ mW

Characteristics: Linear

The effective internal inductance L_i and capacity C_i are negligibly small.

The max. values of the table can also be used as concentrated capacitances and concentrated inductances.

The values for IIC are also permitted for explosive dust atmosheres.

Ex ia	IIC	I
Max. permissible external inductance L_o	5 mH	10 mH
Max. permissible external capacitance C_o	0.65 µF	5.5 µF

Application conditions
Permissible ambient temperatures

The permissible ambient temperature range at the installation location of an instrument

-20 … +60 °C (-4 … +140 °F)

4 Installation

Controllers VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** must be mounted and operated outside hazardous areas and inside hazardous areas zone 2. The protection rating of VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** corresponds to IP 20.

If the controllers VEGATOR TOR111.DC/OX/S****, TOR112.DC/OX**** are not set up in dry and clean environments, they must be mounted in a housing with the required protection rating.

Confirmation

Hereby the company VEGA Grieshaber KG declares that the approved CCOE devices have been manufactured in accordance with the IECEx approval mentioned in the attached CCOE certificate.

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