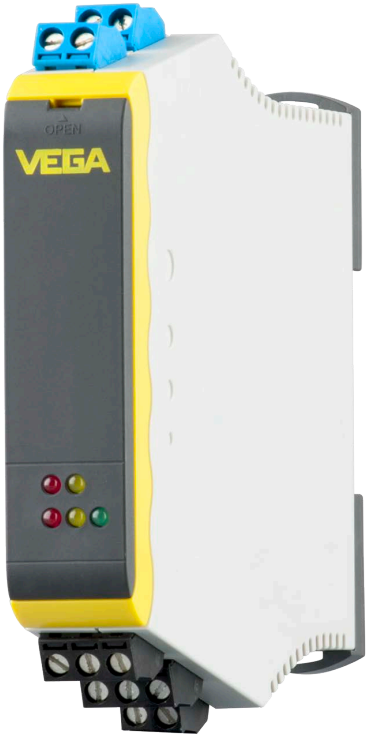
Safety instructions
VEGATOR 131, 132

Appropriate instrument

Zone 2

IECEx TUN 16.0021 X



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Contents

Please note:

These safety instructions are part of the following documentation:

- 46836 - VEGATOR 131
- 46837 - VEGATOR 132
- 53599 - Certificate of Conformity IECEx TUN 16.0021 X

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1 Area of applicability

These safety instructions apply to the conductive signal conditioning instruments VEGATOR 131**S/X****, 132 according to the Certificate of Conformity IECEx TUN 16.0021 X (certificate number on the type label) and to all instruments with the number of the safety instruction (53598) on the type label.

Object and type

Single channel signal conditioning instruments VEGATOR 131.*****

Scope
A Europe
I Worldwide
Approval
X for Ex-free area
M Ship approval (DNV GL, LR)
A ATEX II 3G Ex ec nC ic IIC T4 Gc + II (1) G/D [Ex ia Ga/Da] IIC/IIIC, I (M1) [Ex ia Ma] I
C ATEX II (1) G/D [Ex ia Ga/Da] IIC/IIIC, I (M1) [Ex ia Ma] I
U ATEX II (1) G/D [Ex ia Ga/Da] IIC/IIIC, I (M1) [Ex ia Ma] I + WHG
O ATEX II (1) G/D [Ex ia Ga/Da] IIC/IIIC, I (M1) [Ex ia Ma] I + Ship approval (DNV GL, LR)
A IEC Ex ec nC ic IIC T4 Gc + [Ex ia Ga/Da] IIC/IIIC, [Ex ia Ma] I
C IEC [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
U IEC [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I + WHG
O IEC [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I + Schiffzulassung (DNV GL, LR)
Version
X Double channel for conductive probes
S Single channel for conductive probes with fail safe relay
SIL qualification
X without
S with, incl. Safety Manual
Housing / Protection
K Plastic / IP20
Terminal blocks / Connection
X 2.5mm² detachable terminal blocks 1x black / 2x black
B 2.5mm² detachable terminal blocks 1x blue / 2x black
Certificates
X no
M yes, further add. prices possible

Double channel signal conditioning instruments VEGATOR 132.*****

Scope
A Europe
I Worldwide
Approval
X for Ex-free area
M Ship approval (DNV GL, LR)
A ATEX II 3G Ex ec nC ic IIC T4 Gc + II (1) G/D [Ex ia Ga/Da] IIC/IIIC, I (M1) [Ex ia Ma] I
C ATEX II (1) G/D [Ex ia Ga/Da] IIC/IIIC, I (M1) [Ex ia Ma] I
U ATEX II (1) G/D [Ex ia Ga/Da] IIC/IIIC, I (M1) [Ex ia Ma] I + WHG
O ATEX II (1) G/D [Ex ia Ga/Da] IIC/IIIC, I (M1) [Ex ia Ma] I + Ship approval (DNV GL, LR)
A IEC Ex ec nC ic IIC T4 Gc + [Ex ia Ga/Da] IIC/IIIC, [Ex ia Ma] I
C IEC [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
U IEC [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I + WHG
O IEC [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I + Schiffzulassung (DNV GL, LR)
Version
X Double-channel (8/16mA) for level detection
SIL qualification
X without
S with, incl. Safety Manual
Housing / Protection
K Plastic / IP20
Terminal blocks / Connection
X 2.5mm² detachable terminal blocks 2x black / 2x black
B 2.5mm² detachable terminal blocks 2x blue / 2x black
Certificates
X no
M yes, further add. prices possible

2 General information

The conductive signal conditioning instruments VEGATOR 131**S/X****, 132 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 signal conditioning instruments VEGATOR 131**S/X****, 132 depending on limit values are used for generation of binary output signals on the floating, non-contact relay output.

The VEGATOR 131**S/X****, 132 are single or double channel signal conditioning instruments for conductive probes type EL. Applications are level detections and pump controls. In conjunction with multiple rod or cable probes, several VEGATOR 131/132 can be combined with a probe.

Signal conditioning instruments VEGATOR 131**S/X****, 132 must be mounted and operated outside hazardous areas and inside hazardous areas zone 2.

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.

Ignition protection label
[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I

Ex ec nC ic IIC T4 Gc

3 Technical data

The VEGATOR 131**S/X****, 132 include non-intrinsically safe circuits and one intrinsically safe circuit.

Non-intrinsically safe circuits

Voltage supply: (connections KL16/17)	U = 24 … 230 V AC (-15 … +10 %) U = 24 … 65 V DC (-15 … +10 %) U_m = 253 V AC
Relay outputs: (KL10/11/12, 13/14/15)	Maximum values: 253 V AC, 3 A 50 V DC, 1 A

Intrinsically safe circuit

Signal circuit: (connections KL1/2/3, 4/5)	In ignition protection type intrinsic safety Ex ia IIC, IIB, I Max. total values per two circuits: $U_o \leq 12.6$ V $I_o \leq 7.7$ mA $P_o \leq 24.3$ 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 and IIB are also permitted for explosive dust atmosheres.

Ex ia	IIC	IIB	I
Max. permissible outer inductance L_o (total values for both circuits)	1 mH	5 mH	10 mH
Max. permissible outer capacitance C_o (total values for both circuits)	0.730 µF	2.7 µF	4.3 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

Signal conditioning instruments VEGATOR 131**S/X****, 132 must be mounted and operated outside hazardous areas and inside hazardous areas zone 2. The protection rating of VEGATOR 131**S/X****, 132 corresponds to IP 20.

If the signal conditioning instruments VEGATOR 131**S/X****, 132 are not set up in dry and clean environments, they must be mounted in a housing with the required protection rating.

With zone 2 applications, the following special conditions must be noted:

According to IEC 60079-7, paragraph 4.10.1 and paragraph 4.2.2.1 the following applies for this instrument:

The instrument must be installed in a housing tested according to IEC 60079-0 meeting the require-

ments of protection rating IP 54.

The degree of pollution of the area where the instrument is used must not exceed 2.

With zone 2 applications, the torque of the terminals should be between 0.4 Nm and 0.5 Nm.

The terminal is suitable for rigid cables with wire cross-section 0.2 to 2.5 mm^2 and for flexible cables with end sleeve with wire cross-section from 0.25 to 2.5 mm^2

Max. two cables per connection with the same cross-section are permitted.

If the intrinsically safe circuit is led into dust-explosive areas of zone 20 or 21, please make sure that the instruments connected to these circuits meet the requirements of category 1D or 2D and are certified respectively.

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