Safety instructions

VEGACAP CP6*.CK***Z***

VEGACAP CP6*.GX***C/R/T/Z***

BVS 04 ATEX E 224 X

II 1/2D Ex tD A20/21 IP66 T…

II 2D Ex tD A21 IP66 T…

0044

30194

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Please note:

These safety instructions are part of the documentation:

- VEGACAP 62
  - 30004 - Double relay (DPDT)
  - 30005 - Contactless electrical switch
  - 30006 - Transistor (NPN/PNP)
  - 30007 - Two-wire
- VEGACAP 63
  - 30008 - Double relay (DPDT)
  - 30009 - Contactless electrical switch
  - 30010 - Transistor (NPN/PNP)
  - 30011 - Two-wire
- VEGACAP 64
  - 30012 - Double relay (DPDT)
  - 30013 - Contactless electrical switch
  - 30014 - Transistor (NPN/PNP)
  - 30015 - Two-wire
- VEGACAP 65
  - 30016 - Double relay (DPDT)
  - 30017 - Contactless electrical switch
  - 30018 - Transistor (NPN/PNP)
  - 30019 - Two-wire
- VEGACAP 66
  - 30020 - Double relay (DPDT)
  - 30021 - Contactless electrical switch
  - 30022 - Transistor (NPN/PNP)
  - 30023 - Two-wire
- 34028 - EC type approval certificate BVS 04 ATEX E 224 X

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DE	Sicherheitshinweise für den Einsatz in explosionsgefährdeten Bereichen, verfügbar in den Sprachen deutsch, englisch, französisch und spanisch.
EN	Safety instructions for the use in hazardous areas are available in German, English, French and Spanish language.
FR	Consignes de sécurité pour l'utilisation en atmosphère explosible, disponibles dans les langues allemande, anglaise, française et espagnole.
ES	Instrucciones de seguridad para el empleo en áreas con riesgo de explosión, disponible en los siguientes idiomas alemán, ingles, francés y español.
CZ	Pokud nastanou potíže při čtení bezpečnostních upozornění v otištěných jazycích, poskytneme. Vám na základě žádosti k dispozici kopii v jazyce Vaší země.
DA	Hvis De har svært ved at forstå sikkerhedsforskrifterne på de trykte sprog, kan. De få en kopi på Deres sprog, hvis De ønsker det.
EL	Εάν δυσκολεύεστε να διαβάσετε τις υποδείξεις ασφαλείας στις γλώσσες που ήδη έχουν τυπωθεί, τότε σε περίπτωση ζήτησης μπορούμε να θέσουμε στη διάθεσή σας ένα αντίγραφο αυτών στη γλώσσα της χώρας σας.
ET	Kui teil on raskusi trükitud keeltes ohutusnõuete lugemisega, siis saadame me teie järelepärimise peale nende koopia teie riigi keeles.
FI	Laitteen mukana on erikielisiä turvallisuusohjeita. Voit tilata meiltä äidinkieliset turvallisuusohjeet, jos et selviä mukana olevilla kielillä.
HU	Ha a biztonági előírásokat a kinyomtatott nyelveken nem tudja megfelelően elolvasni, akkor lépjen velünk kapcsolatba: azonnal a rendelkezésére bocsátunk egy példányt az Ön országában használt nyelven.
IT	Se le Normative di sicurezza sono stampate in una lingua di difficile comprensione, potete richiederne una copia nella lingua del vostro paese.
LT	Jei Jums sunku suprasti saugos nuorodų tekstą pateiktomis kalbomis, kreipkitės į mus ir mes Jums duosime kopiją Jūsų šalies kalba.
LV	Ja Jums ir problēmas drošības noteikumus lasīt nodrukātajās valodās, tad mēs Jums sniegsim pēc pieprasījuma kopiju Jūsu valsts valodā.
MT	F'kaz li jkollok xi diffikulta` biex tifhem listruzzjonijiet ta' sigurta`kif ipprovduti, infurmana u ahna nibghatulek kopja billingwa tieghek.
NL	Als u moeilijkheden mocht hebben met het lezen van de veiligheidsinstructies in de afgedrukte talen, sturen wij u op aanvraag graag een kopie toe in uw eigen taal.
PL	W przypadku trudności odczytania przepisów bezpieczeństwa pracy w wydrukowanych językach, chętnie udostępnimy Państwu kopię w języku obowiązującym w danym kraju.
PT	Caso tenha dificuldade de ler as instruções de segurança no idioma, no elas foram impressas, poderá solicitar junto a nós uma cópia em seu idioma.
SK	Pokiaľ nastanú problémy pri čítaní bezpečnostných pokynov vo vydaných jazykoch, poskytneme Vám na základe žiadosti k dispozícii kópiu v jazyku Vašej krajiny.
SL	Kadar se pojavijo težave pri branju varnostnih navodil v izdanih jezikih, vam bomo na osnovi zahtevka dali na razpolago kopijo v jeziku vaše države.
SV	Om du har problem att läsa säkerhetsanvisningarna på de här tryckta språken, ställer vi gärna på begäran en kopia på ditt språk till förfogande.

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EG-Konformitätserklärung
EC declaration of conformity
Déclaration CE de conformité

VEGA Grieshaber KG
Am Hohenstein 113
77761 Schiltach
Deutschland

erklärt in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that our product
déclare sous sa seule responsabilité que le produit

VEGACAP CP62/63/64/65/66.CK*Z***
VEGACAP CP62/63/64/65/66.GX*C/R/T/Z***

auf das sich diese Erklärung bezieht, mit den folgenden Normen übereinstimmt
to which this declaration relates is in conformity with the following standards
auquel se réfère cette déclaration est conforme aux normes

EN 60079-0: 2006
EN 60079-11: 2007
EN 60079-26: 2004
EN 61241-0: 2006
EN 61241-1: 2004
EN 61326-1: 2006, Emmission: Class B,
Immission: Industrial area
EN 61010-1: 2001

gemäß den Bestimmungen der Richtlinien
following the provision of Directives
conformément aux dispositions des Directives

94/9/EG
2006/95/EG
2004/108/EG

EG Baumusterprüfbescheinigung Nummer EC-Type Examiniation Certificate Number Numéro du certificat d'examen CE de type	**BVS 04 ATEX E 224 X** **1. supplement**
Benannte Stelle/Kennnummer Notified Body/Itdentification number Organisme notifié/Numéro d'identification	TÜV Nord Cert./0044

Schiltach, 08.07.08

J. Fehrenbach

ppa. J. Fehrenbach
Entwicklungsleitung
Development Management
Directeur du service recherche et développement

i.V. Frühauf
Leiter Zertifizierung
Certification Manager
Directeur du service de certification

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1 Area of applicability

These safety instructions apply to the capacitive level switches VEGACAP CP62.***, VEGACAP CP63.***, VEGACAP CP64.***, VEGACAP CP65.*** and VEGACAP CP66.*** of type series VEGACAP CP6*.GX**R/C/T/Z* and VEGACAP CP6*.CK**Z* according to the EC type approval certificate BVS 04 ATEX E 224 X with the first supplement (certification number on the type label).

2 General information

The VEGACAP CP6*.*** are used for monitoring or control of levels also in areas with combustible, dust generating bulk solids.

The VEGACAP CP6*.*** consist of a sensor, which is also called electrode rod or measuring cable, a process fitting element and an evaluation electronics in a stainless steel housing or powder-coated aluminium housing.

The VEGACAP CP6*.*** are suitable for use in hazardous atmospheres of combustible dusts, for applications requiring instruments of category 1/2D or 2D.

If the VEGACAP CP6*.*** are installed and operated in hazardous areas, the general Ex installation regulations EN 60079-14 as well as these safety instructions must be observed.

The operating instructions as well as the valid Ex mounting regulations and standards for electrical equipment must be observed.

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

The requirements of EN 61241-1 e.g. with respect to dust deposits and temperatures must be fulfilled.

2.1 Category 1/2D instruments

The electronics housing is installed in hazardous areas requiring instruments of category 2D. The process connection element is installed in the separating wall, which separates areas requiring instruments of category 2D or 1D. The sensor with the mechanical fixing element is installed in hazardous areas requiring instruments of category 1D.

2.2 Category 2D instruments

The electronics housing and the sensor with the mechanical fixing element are installed in explosion-endangered areas, in areas requiring instruments of category 2D.

3 Technical data

3.1 Electrical data

VEGACAP CP6*.GX_C_* with integrated electronics module CP60C:**

Voltage supply: (terminals 1, 2)	U = 20 … 253 V AC, 50/60 Hz or U = 20 … 253 V DC, max. 1 W U_m = 253 V AC
Output	Contactless electronic switch

Domestic current requirement	<3 mA (via load circuit)
Load current	
– Min.	10 mA
– Max.	400 mA

VEGACAP CP6*.GX_R_* with integrated electronics module CP60R:**

Voltage supply: (terminals 1, 2)	U = 20 … 253 V AC, 50/60 Hz U = 20 … 72 V DC U_m = 253 V AC
Power consumption	1 … 8 VA, max. 1.6 W
Relay circuit, contact set 1: (terminals 3, 4, 5), contact set 2: (terminals 6, 7, 8)	Maximum values: 253 V AC, 3 A, 500 VA 253 V DC, 1 A, 41 W

VEGACAP CP6*.GX_T_* with integrated electronics module CP60T:**

Voltage supply: (terminals 1, 4)	U = 10 … 55 V DC U_m = 253 V AC
Power consumption	max. 0.5 W
Load currrent, floating transistor output (terminals 2, 3)	Maximum values: 400 mA 55 V DC

VEGACAP CP6*.GX/CK_Z_* with integrated electronics module CP60Z:**

Power supply and signal circuit: (terminals 1[+], 2[-] in electronics compartment; with double chamber housing version in connection compartment)	Ignition protection type intrinsic safety Ex ia IIC For connection to a certified, intrinsically safe circuit. Maximum values: U_i = 30 V I_i = 131 mA P_i = 983 mW The effective internal capacitance C_i is negligible. The effective inner inductance L_i is negligible.

The intrinsically safe circuit is electrically isolated from parts which can be grounded. The metallic parts of VEGACAP CP6*.*** are electrically connected with the internal and external ground terminal.

4 Thermal characteristics

4.1 Permissible ambient temperatures

On the sensor, category 1D or 2D

VEGACAP CP6*.******	
– with PTFE insulation	-50 … +150 °C
– with PE/PA insulation	-40 … +80 °C

– with PTFE insulation in the high temperature version	-50 … +200 °C

On the electronics housing, category 2D	
VEGACAP CP6*.******	-40 … +60 °C

4.2 Surface temperature increases

On the sensor, category 1D or 2D	
VEGACAP CP6*.******	Process temperature +3 K

On the electronics housing, category 2D	
VEGACAP CP6*.GX/CK**Z**	Ambient temperature +15 K
VEGACAP CP6*.GX**C/T/R** with thermal fuse restricted to	+98 °C

4.3 Permissible operating pressure on the sensor

For operation under hazardous atmosphere the process pressure must be between 0.8 … 1.1 bar.

The prerequisites for operation in the absence of explosive mixtures can be found in the manufacturer specifications.

4.4 Protection according to EN 60529

Protection on the electronics housing, category 2D: IP 66

5 Grounding

The VEGACAP CP6*.*** must be grounded.

6 Cable entries

Cable entries must only be replaced by the same types or suitable cable entries/glands certified according to ATEX with at least IP 67.

The cable entry sent with the delivery is suitable for the housing temperature range specified in the EC type approval certificate of VEGACAP CP6*.***. If a different cable entry is used, the separately certified cable entry/gland determines the max. permissible ambient temperature on the housing (max. values: -40 °C, +98 °C).

7 Installation/mounting

Mount VEGACAP CP6*.*** as category 1/2D instruments in a way that adequately ensures that the measuring rod or cable will not touch the vessel wall due to the movements of other vessel installations and medium.

8 Material resistance

For applications requiring instruments of category 1/2D or 2D the VEGACAP CP6*.*** must only be used in products against which the wetted materials are sufficiently resistant.

9 Locking mechanism of housing cover

With single chamber housing versions before setup and use of the VEGACAP CP6*.*** in hazardous atmospheres of category 2D, the lid has to be screwed into the stop. It has to be secured with the lid locking. With double chamber housing version before setup and use of the VEGACAP CP6*.*** in hazardous atmospheres of category 2D, the lid has to be screwed into the stop. They have to be secured with the respective lid locking.

10 Tensile force on the measuring cable/ rod

The permissible tensile force on the measuring cable or rod of VEGACAP CP6*.*** is: F = 7.7 kN.

11 Mounting, separate version

For VEGACAP CP6*.*** in the cable version, separate version with remote electronics, make sure that the connection cable between electronics housing and sensor housing is wired so that it is protected against damage.

VEGA Grieshaber KG
Am Hohenstein 113
77761 Schiltach
Germany
Phone +49 7836 50-0
Fax +49 7836 50-201
E-mail: info@de.vega.com
www.vega.com

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