

Translation

### 3. SUPPLEMENT

**to Certificate No.** TÜV 04 ATEX 2611 X

Equipment: Capacitive level switch type VEGACAP CP6\*.C\*\*\*\*Z\*\*\*\*

Manufacturer: VEGA Grieshaber KG

Address: Am Hohenstein 113  
D-77761 Schiltach

Order number: 8000555126

Date of issue: 2009-02-03

The capacitive level switches type VEGACAP CP6\*.C\*\*\*\*Z\*\*\*\* are used for monitoring or control of filling levels in explosion hazardous areas.

The measuring media are allowed to be combustible liquids, gases, mists or vapours.

Changes:

The changes refer to the mounting of an additional printed circuit board for shielding and the modification of an internal plug connection.

All other details remain unchanged.

The equipment according to this supplement meets the requirements of these standards:

EN 60079-0:2006

EN 60079-11:2007

EN 60079-26:2004

(16) The test documents are listed in the test report No. 09 203 555126.

(17) Special conditions for safe use

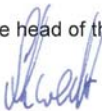
1. At the plastic parts of the capacitive level switches type VEGACAP CP6\*.C\*\*\*\*Z\*\*\*\* there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.
2. For category 1 applications, at the metallic parts of the capacitive level switches type VEGACAP CP6\*.C\*\*\*\*Z\*\*\*\* made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
3. For category 1 resp. category 1/category 2 applications and at the risks by pendulum or vibration the respective parts of the level switches type VEGACAP CP65.C\*\*\*\*Z\*\*\*\* and type VEGACAP CP66.C\*\*\*\*Z\*\*\*\* have to be secured effectively against these dangers.

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body



Schwedt



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Translation  
**2. SUPPLEMENT**

**to Certificate No.** TÜV 04 ATEX 2611 X

Equipment: Capacitive level switch type VEGACAP CP6\*.C\*\*\*\*Z\*\*\*

Manufacturer: VEGA Grieshaber KG

Address: Am Hohenstein 113  
 D-77761 Schiltach

Order number: 8000554575

Date of issue: 2008-07-31

In the future, the capacitive level switches type VEGACAP CP6\*.C\_\*\*Z\*\* are also allowed to be manufactured according to the documents listed in the test report.  
 The changes refer to the mechanical and electrical construction, the table for the use as category 2 apparatus as well as to the type designation.

In the future, this reads VEGACAP CP6\*.C\*\*\*\*Z\*\*\*

Mechanical execution of the Capacitive level switches:

Type	Electrodes
CL62.C****Z***	partly insulated electrode, optionally with screening tube or concentric tube
CL63.C****Z***	fully insulated electrode, optionally plated
CL64.C****Z***	fully insulated electrode, optionally with screening tube, concentric tube or plated
CL65.C****Z***	partly insulated cable electrode optionally with additionally insulated cable
CL66.C****Z***	fully insulated cable electrode
CL69.C****Z***	fully insulated 2-rod electrode

If the capacitive level switches are mounted in explosion hazardous areas which require apparatus of the category 2 the permissible temperature range in the area of the electronics/of the medium dependent on the temperature class has to be taken from the following table:

Temperature class	Ambient temperature range	Medium temperature range for electrodes with PE-insulation	Medium temperature range for other electrodes
T6	-40°C ... +58 °C	- 40°C... + 80°C	-50°C ... +85 °C
T5	-40°C ... +73 °C	- 40°C... + 80°C	-50°C ... +100 °C
T4	-40°C ... +80 °C	- 40°C... + 80°C	-50°C ... +135 °C
T3*, T2*, T1*	-40°C ... +80 °C	- 40°C... + 80°C	-50°C ... +200 °C

\* with temperature adapter for medium temperatures  $\geq 150^{\circ}\text{C}$

All other details apply unchanged for this supplement.

The equipment according to this supplement meets the requirements of these standards:

EN 60079-0:2006

EN 60079-11:2007

EN 60079-26:2004

(16) The test documents are listed in the test report No. 08 203 554575.

(17) Special conditions for safe use

1. At the plastic parts of the capacitive level switches type VEGACAP CP6\*.C\*\*\*\*Z\*\*\* there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.
2. For category 1 applications, at the metallic parts of the capacitive level switches type VEGACAP CP6\*.C\*\*\*\*Z\*\*\* made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
3. For category 1 resp. category 1/category 2 applications and at the risks by pendulum or vibration the respective parts of the level switches type VEGACAP CP65.C\_\*\*Z\*\* and type VEGACAP CP66.C\*\*\*\*Z\*\*\* have to be secured effectively against these dangers.

(18) Essential Health and Safety Requirements

no additional ones

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**Translation**  
**1. SUPPLEMENT**

**to Certificate No.** TÜV 04 ATEX 2611 X  
**Equipment:** Capacitive level switch type VEGACAP CP6\*.C\_\*\*Z\*\*  
**Manufacturer:** VEGA Grieshaber KG  
**Address:** Am Hohenstein 113  
D-77761 Schiltach  
**Order number:** 8000553200  
**Date of issue:** 2007-07-11

The capacitive level switches type VEGACAP CP6\*.C\_\*\*Z\*\* are used for monitoring or control of filling levels in explosion hazardous areas.  
The measuring media are allowed to be combustible liquids, gases or vapours.

The changes regarding refer to:

- the electronic insert
- the electrical data regarding the fixed cable tail for types VEGACAP CP6\*.C\_\*\*Z3/4/5/9\*\*
- the mechanical design of the housings and the electrodes
- the new type VEGACAP CP69.C\_\*\*Z\*\* with 2 rod electrode

Mechanical execution of the capacitive level switches:

type	electrodes
CP62.C_**Z**	partly insulated electrode, optionally with screening tube or concentric tube
CP63.C_**Z**	fully insulated electrode, optionally plated
CP64.C_**Z**	fully insulated electrode, optionally with screening tube, concentric tube or plated
CP65.C_**Z**	partly insulated cable electrode, optionally with additionally insulated cable
CP66.C_**Z**	insulated cable electrode
CP69.C_**Z**	fully insulated 2-rod electrode

Supply and signal circuit ..... in type of protection „Intrinsic Safety“ Ex ia IIC  
(Terminals KI1[+], KI2[-] in the housing  
for the electronics resp., in the  
execution with the 2 cell housing, in the  
terminal housing)

only for connection to a certified intrinsically safe circuit

maximum values:

U<sub>i</sub> = 30 V  
I<sub>i</sub> = 131 mA  
P<sub>i</sub> = 983 mW

The effective internal capacitances and inductances are negligibly small.

Additionally, in the execution VEGACAP CP6\*.C\_\*\*Z3/4/5/9\* the following values for  $L'$  and  $C_i'$  of the connection cable mounted fixed have to be observed:

$L'$  = 0.55  $\mu$ H/m  
 $C'$ wire/wire = 58 pF/m  
 $C'$ wires/shield = 270 pF/m

The intrinsically safe signal circuit is safe galvanically separated from the parts which can be earthed.

All other details remain unchanged.

The equipment incl. of this supplement meets the requirements of these standards:

EN 60079-0:2004    EN 50 020:2002    EN 60079-26:2004

(16) The test documents are listed in the test report No. 07203553200.

(17) Special conditions for safe use

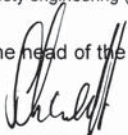
no changes

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

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Translation

(1) **EC-TYPE EXAMINATION CERTIFICATE**

- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 94/9/EC**
- (3) EC-Type Examination Certificate Number



**TÜV 04 ATEX 2611 X**

- (4) Equipment: Capacitive level switch type VEGACAP CP6\*.C\_\*\*Z\*\*
- (5) Manufacturer: VEGA Grieshaber KG
- (6) Address: Am Hohenstein 113  
D-77761 Schiltach

- (7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Certification Body, notified body number N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report N° 04 YEX 551591.

- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 50 014:1997 + A1 + A2    EN 50 020:2002    EN 50 284:1999**

- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment or protective system must include the following:



**II 1 G or II 1/2 G or II 2 G    EEx ia IIC T6**

TÜV NORD CERT GmbH & Co. KG  
TÜV CERT-Certification Body  
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Tel.: 0511 986-1470  
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Hanover, 2004-08-26

Head of the  
Certification Body



**TÜV NORD CERT**

This certificate may only be reproduced without any change, schedule included.  
Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH & Co. KG

(13)

## SCHEDULE

(14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 04 ATEX 2611 X**

(15) Description of equipment

The capacitive level switches type VEGACAP CP6\*.C\_\*\*Z\*\* are used for monitoring or control of filling levels in explosion hazardous areas.

The measuring media are allowed to be combustible liquids, gases, mists or vapours.

Mechanical execution of the capacitive level switches:

type	electrodes
CP62.C_**Z**	partly insulated electrode, optionally with screening tube or concentric tube
CP63.C_**Z**	fully insulated electrode, optionally plated
CP64.C_**Z**	fully insulated electrode, optionally with screening tube, concentric tube or plated
CP65.C_**Z**	partly insulated cable electrode
CP66.C_**Z**	insulated cable electrode

If the capacitive level switches are used in explosion hazardous areas requiring apparatus of category 1, the permissible temperature range in the area of the electronics/of the medium dependent on the temperature class has to be taken from the following table:

Temperature class	ambient temperature range	medium temperature range
T6	-20°C ... +42 °C	-20°C ... +42 °C
T5, T4, T3, T2, T1	-20°C ... +60 °C	-20°C ... +60 °C

The capacitive level switches are allowed to be operated in an explosion hazardous area, that requires apparatus of the category 1, only if atmospheric conditions exist (pressure from 0.8 bar to 1.1 bar).

If no explosion hazardous atmospheres exist, the permissible operating temperatures and pressures have to be taken from the manufacturer's data (manual).

At the maximum permissible ambient and medium temperatures the EN 1127-1:1999, section 6.4.2 was taken into account.

If the capacitive level switches are mounted in the partition wall between explosion hazardous areas which require apparatus of the category 1 (electrode) and category 2 (electronics), the permissible temperature range in the area of the electronics/of the medium dependent on the temperature class has to be taken from the following table:

Temperature class	ambient temperature range	medium temperature range
T6	-40°C ... +58 °C	-20°C ... +60 °C
T5	-40°C ... +73 °C	-20°C ... +60 °C
T4, T3, T2, T1	-40°C ... +80 °C	-20°C ... +60 °C

The electrodes of the capacitive level switches are allowed to be operated in an explosion hazardous area, that requires apparatus of the category 1, only if atmospheric conditions exist (pressure from 0.8 bar to 1.1 bar).

If no explosion hazardous atmospheres exist, the permissible operating temperatures and pressures have to be taken from the manufacturer's data (manual).

If the capacitive level switches are mounted in explosion hazardous areas which require apparatus of the category 2 the permissible temperature range in the area of the electronics/of the medium dependent on the temperature class has to be taken from the following table:

Temperature class	ambient temperature range	medium temperature range
T6	-40°C ... +58 °C	-50°C ... +85 °C
T5	-40°C ... +73 °C	-50°C ... +100 °C
T4	-40°C ... +80 °C	-50°C ... +135 °C
T3*, T2*, T1*	-40°C ... +80 °C	-50°C ... +200 °C

\* with temperature adapter for medium temperatures  $\geq 150^{\circ}\text{C}$

#### Electrical data

Supply and signal circuit .....	in type of protection „Intrinsic Safety“	EEx ia IIC
(Terminals K1[+], K2[-] in the housing for the electronics resp., in the execution with the 2 cell housing, in the terminal housing)	only for connection to a certified intrinsically safe circuit maximum values: U <sub>i</sub> = 30 V I <sub>i</sub> = 131 mA P <sub>i</sub> = 983 mW	

The effective internal capacitances and inductances are negligibly small.

The max. length of the triax cable resp. coax cable between the housing for the electronics and the terminal housing (2 cell housing) is 28 m.

The intrinsically safe supply and signal circuit is safe galvanically separated from the parts which can be earthed.

(16) The Test documents are listed in the test report no. 04YEX551591.





(17) Special condition for safe use

1. At the plastic parts of the capacitive level switches type VEGACAP CP6\*.C\_\*\*Z\*\* there is a danger of ignition by electrostatic discharge. Observe manual of the manufacturer and warning label.
2. For category 1 applications, at the metallic parts of the capacitive level switches type VEGACAP CP6\*.C\_\*\*Z\*\* made of light metal there is a danger of ignition by impact or friction. Observe manual of the manufacturer.
3. For category 1 resp. category 1/category 2 applications and at the risks by pendulum or vibration the respective parts of the level switches type VEGACAP CP65.C\_\*\*Z\*\* and type VEGACAP CP66.C\_\*\*Z\*\* have to be secured effectively against these dangers.

(18) Essential Health and Safety Requirements

no additional ones





