



Prüf- und Zertifizierungsstelle

ZELM Ex



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

- (2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**  
(3) EC-TYPE-EXAMINATION CERTIFICATE Number:

**ZELM 03 ATEX 0169 U**

- (4) Equipment: **Cable Connector Type Ex GH - ALAT ... and Ex GHT ALAT ...**  
(5) Manufacturer: **Erich Ott**  
(6) Address: **D-65189 Wiesbaden**  
(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.  
(8) The Prüf- und Zertifizierungsstelle ZELM Ex, notified body No. 0820 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment 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 Nr. ZELM Ex 0460312223.

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

**EN 50 014: 1997+A1+A2**

**EN 50 019: 2000**

**EN 50 028: 1987**

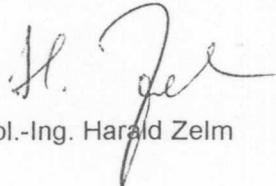
- (10) The sign "U" after the certificate number indicates that this certificate shall not be mistaken for certificates according to equipment or safety systems. This partial certificate shall only be used as basis for the certification of equipment or safety systems.  
(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this Certificate.  
(12) The marking of the equipment shall include the following:



**II 2 G EEx em II**

Zertifizierungsstelle ZELM Ex

Braunschweig, October 20, 2003

  
Dipl.-Ing. Harald Zelm



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EC-type-examination Certificates without signature and stamp are not valid. The certificates may only be circulated without alteration. Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM Ex. This English version is based on the German text. In the case of dispute, the German text shall prevail.



(13)

## SCHEDULE

(14) **EC-TYPE-EXAMINATION CERTIFICATE ZELM 03 ATEX 0169 U**

(15) Description of equipment

The cable connector is used as connector and simultaneously termination of heating conductor loops with connection to the operating voltage.

The cable connector is intended both for connection of mineral insulated (type GH-ALAT...) and of plastic insulated (type GHT ALAT...) resistance heating conductors with coaxial design and a diameter from 3,0 mm up to 5,8 mm.

In case of proper grouting of the cable connector according to the instruction made in the operating guidelines, the applicable requirements of the grouting casing according to EN 50028 are met. A diffusion proof termination according to the requirements of "increased safety" (EN 50019) is achieved, too. It must be secured that the maximum temperature of 70°C at the cable entry based on an ambient temperature of 40°C is never exceeded. The resistance heating conductors are not part of this EC-type-examination certificate. The compliance of the referring requirements shall be proven accordingly.

### Electrical Data

Nominal Voltage 230/400 V – AC or DC  
Nominal Current ≤ 18 A

Power loss/m heating conductor: max. 22 W/m for mineral insulated heating conductors  
max. 15 W/m for plastic insulated heating conductors

### Note:

The operating instructions have to be observed in particular the instructions for installation, grouting of the connection and the power limitation with dedicated controller unit must be considered.

When the heating conductor is layed loosely and dependent on the diameter of the heating conductor the following maximum power (see data sheet) for temperatur classes T4 and T6 are obtained:

Diameter	Power rating	Temperatur class
Φ = 3,2 mm	up to 7 W/m	T6
Φ = 3,2 mm	up to 15 W/m	T4
Φ = 5,8 mm	up to 11 W/m	T6
Φ = 5,8 mm	up to 22 W/m	T4

(16) Report No.

ZELM Ex 0460312223



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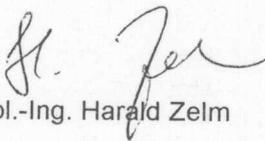
ZELM Ex



Schedule to EC-TYPE-EXAMINATION CERTIFICATE ZELM 03 ATEX 0169 U

- (17) Special conditions for safe use  
not applicable
- (18) Essential Health and Safety Requirements  
met by standards

Zertifizierungsstelle ZELM Ex

  
Dipl.-Ing. Harald Zelm



Braunschweig, October 20, 2003



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## 1. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

**to EC-type-examination Certificate**

**ZELM 03 ATEX 0169 U**

Equipment: **Line Connection Unit type Ex GH - ALAT . . . . and Ex GHT ALAT . .**  
Manufacturer: **Erich Ott**  
Address: **D-65189 Wiesbaden**

Description of supplement

The Line Connection Unit type Ex GH - ALAT . . . . and Ex GHT ALAT . . are extended by an alternative version in future. The modifications refer to the inner construction. All technical data remain unchanged.

Reference:

The instruction manual has to be observed

Report No.

ZELM Ex 1180315252

Special conditions for safe use

not applicable

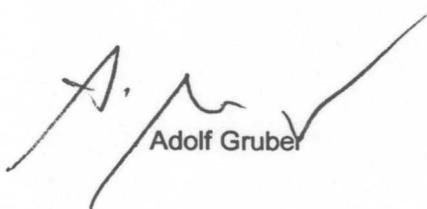
Essential Health and Safety Requirements

The essential Health and Safety Requirements are further met by concordance with the standards scheduled in the EC-Type-Examination Certificate.

Zertifizierungsstelle **ZELM Ex**



Braunschweig, November 24, 2003

  
Adolf Gruber

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Prüf- und Zertifizierungsstelle

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## 2. Supplement

(Supplement according to EC-Directive 94/9 Annex III letter 6)

to EC-type-examination Certificate

**ZELM 03 ATEX 0169 U**

Equipment: **Cable Connector type Ex GH - ALAT ... and Ex GHT ALAT ...**  
Manufacturer: **Erich Ott**  
Address: **D-65189 Wiesbaden**

### Description of supplement

The 2. Supplement concerns an additional version of the product and the approval for use in hazardous locations in the presence of combustible dust.

The type designation of the additional version is:

**Ex GHP ALAT ...**

This version is intended to the connection with self-regulating parallel heating cables and is specified only by the maximum surface temperature of 70°C.

The future marking of the equipment is:

**II 2G Ex em II and**

**II 2D Ex mbD 21**

All further data remain unchanged and apply also to this 2. Supplement.  
The equipment may be manufactured in future also in consideration of this Supplement.

### References:

The operating instructions have to be observed, in particular the instructions for installation and potting of the cable connector.

The open ends of the cable must be connected to the adequate certified terminal box as far as this occurs within the hazardous location.

The conductor cross-section and the material of the feed cable must be chosen equitable to the power rating and to the application.

It is to be considered, that the maximum surface temperature at the heating cable entry referring to a maximum ambient temperature of 40°C may not exceed the temperature of 70°C.



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## 2. Supplement to EC-Type examination Certificate ZELM 03 ATEX 0169 U

Report No.

ZELM Ex 1450512482

### Essential Health and Safety Requirements

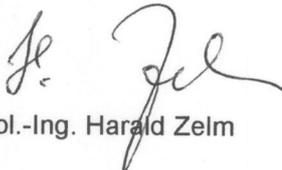
The essential Health and Safety Requirements are met by compliance with following standards:

EN 60079-0:2006  
EN 61241-0:2006

EN 60079-7:2003  
EN 61241-18:2004

EN 60079-18:2004

Zertifizierungsstelle ZELM Ex

  
Dipl.-Ing. Harald Zelm



Braunschweig, July 24, 2007



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## 2. Ergänzung

(Ergänzung gemäß EG-Richtlinie 94/9 Anhang III Ziffer 6)

zur EG-Baumusterprüfbescheinigung

**ZELM 03 ATEX 0169 U**

Gerät: **Leitungsverbinder Typ Ex GH - ALAT ... und Ex GHT ALAT ...**  
Hersteller: **Erich Ott**  
Anschrift: **D-65189 Wiesbaden**

### Beschreibung der Ergänzung

Die 2. Ergänzung betrifft eine zusätzliche Ausführung des Betriebsmittels sowie die Zulassung für die Verwendung in explosionsgefährdeten Bereichen mit brennbarem Staub.

Die Typenkennzeichnung der zusätzlichen Ausführung lautet:

**Ex GHP ALAT ...**

Diese Variante ist zum Anschluss von selbstregulierenden Parallelheizbändern bestimmt und ist nur durch die maximale Oberflächentemperatur von 70°C festgelegt.

Die künftige Kennzeichnung des Betriebsmittels lautet:

**II 2G Ex em II und**

**II 2D Ex mbD 21**

Alle übrigen Daten bleiben unverändert und gelten auch für diese 2. Ergänzung.  
Das Betriebsmittel darf künftig auch unter Berücksichtigung dieser Ergänzung gefertigt werden.

### Hinweise

Die Betriebsanleitung ist zu beachten, insbesondere bei der Montage und dem Vergießen des Leitungsverbinders.

Der Anschluss der offenen Leiterenden muss in einem entsprechend bescheinigtem Klemmkasten erfolgen soweit dieser innerhalb des explosionsgefährdeten Bereiches erfolgt.

Der Leiterquerschnitt, als auch das Material der Zuleitung, muss leistungs-, und anwendungsgerecht gewählt werden.

Es ist zu beachten, dass die maximale Oberflächentemperatur des Heizleiters an der Muffe bezogen auf eine maximale Umgebungstemperatur von 40°C nicht mehr als 70°C betragen darf.



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## 2. Ergänzung zur EG-Baumusterprüfbescheinigung ZELM 03 ATEX 0169 U

Prüfbericht Nr.

ZELM Ex 1450512482

### Grundlegende Sicherheits- und Gesundheitsanforderungen

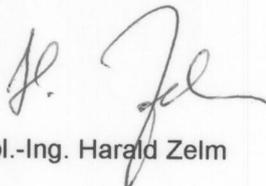
Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit den folgenden Normen:

EN 60079-0:2006  
EN 61241-0:2006

EN 60079-7:2003  
EN 61241-18:2004

EN 60079-18:2004

Zertifizierungsstelle ZELM Ex

  
Dipl.-Ing. Harald Zelm



Braunschweig, 24.07.2007