



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx KEM 09.0018X Issue No: 1 Certificate history:  
Status: **Current** Page 1 of 4 Issue No. 1 (2014-03-07)  
Date of Issue: **2014-03-07** Issue No. 0 (2009-04-15)  
Applicant: **PHOENIX CONTACT GmbH & Co. KG**  
Flachsmarktstraße 8  
D-32825 Blomberg  
**Germany**  
Electrical Apparatus: **Surge Voltage Protection Unit, Type LINETRAB LIT 1x2-24, Type  
LINETRAB LIT 2x2-24, Type LINETRAB LIT 2-12, Type LINETRAB LIT 4-  
12, Type LINETRAB LIT 2-24, Type LINETRAB LIT 4-24.**  
*Optional accessory:*  
Type of Protection: **Ex ia**  
Marking: **Ex ia IIC T4 ... T6 Ga  
Ex ia IIIC T85 °C ... T135 °C Da**

Approved for issue on behalf of the IECEx  
Certification Body:

R. Schuller

Position:

Certification manager

Signature:  
(for printed version)

  

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2014-03-07

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Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**DEKRA Certification B.V.**  
Meander 1051  
6825 MJ Arnhem  
The Netherlands





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Certificate No: IECEX KEM 09.0018X

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Page 2 of 4

Manufacturer: **PHOENIX CONTACT GmbH & Co. KG**  
Flachsmarktstraße 8  
D-32825 Blomberg.  
**Germany**

Additional Manufacturing  
location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

**IEC 60079-0 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-11 : 2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-26 : 2006** Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga  
Edition:2

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[NL/KEM/ExTR09.0012/00](#)

[NL/KEM/ExTR09.0012/01](#)

Quality Assessment Report:

[NL/DEK/QAR11.0009/02](#)



# IECEx Certificate of Conformity

Certificate No: IECEx KEM 09.0018X

Issue No: 1

Date of Issue: 2014-03-07

Page 3 of 4

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

### General product information:

The Surge Voltage Protection Units, type LINETRAB LIT 1x2-24, type LINETRAB LIT 2x2-24, type LINETRAB LIT 2-12, type LINETRAB LIT 4-12, type LINETRAB LIT 2-24 and type LINETRAB LIT 4-24, for rail-mounting, serve to limit surge voltages in intrinsically safe circuits.

Some Units conform to the requirements for a FISCO Field Device, for temperature class T4.  
For details, refer to the attachment to this certificate.

### Electrical and thermal data:

Refer to the attachment of this certificate.

### CONDITIONS OF CERTIFICATION: YES as shown below:

The insulation between the intrinsically safe circuits and earth is not capable of withstanding a 500 Vac test voltage, however this is only caused by the 90 V gas discharge tubes.

The relation between temperature class, maximum surface temperature, ambient temperature,  $P_i$  and  $I_i$  is, as listed in the attachment to this certificate.



# IECEX Certificate of Conformity

Certificate No: IECEX KEM 09.0018X

Issue No: 1

Date of Issue: 2014-03-07

Page 4 of 4

**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

- upgrade to the latest standards
- addition of FISCO

**Annex:**

[Attachment to IECEX DEK 09.0018 X issue 1.pdf](#)

## Annex 1 to Certificate of Conformity IECEx DEK 09.0018 X, issue 1

### Electrical and thermal data

Input circuit (terminals 1, 3, 5 and 7):

in type of protection intrinsic safety Ex ia IIC or Ex ia IIIC, only for connection a certified intrinsically safe circuit with the maximum values as listed in the following table:

LINETRAB Type	$U_i$	$I_i$	$P_i$	$C_i$	$L_i$	Ambient temperature range	Temperature - class / Maximum surface temperature
LIT 2-12	18 V	500 mA	635 mW	3 nF	1 $\mu$ H	-40 ... +40 °C	T6 / T85 °C
						-40 ... +50 °C	T5 / T100 °C
						-40 ... +80 °C	T4 / T135 °C
LIT 4-12	18 V	500 mA	550 mW	6 nF	1 $\mu$ H	-40 ... +40 °C	T6 / T85 °C
						-40 ... +50 °C	T5 / T100 °C
						-40 ... +80 °C	T4 / T135 °C
LIT 2-24	36 V	50 mA	635 mW	1.3 nF	1 $\mu$ H	-40 ... +40 °C	T6 / T85 °C
						-40 ... +50 °C	T5 / T100 °C
						-40 ... +80 °C	T4 / T135 °C
	$U_i$ , $I_i$ , $P_i$ , $C_i$ , and $L_i$ are in accordance with FISCO <sup>(2)</sup>					-40 ... +80 °C	T4 / T135 °C
LIT 4-24	36 V	500 mA	550 mW	2.5 nF	1 $\mu$ H	-40 ... +40 °C	T6 / T85 °C
						-40 ... +50 °C	T5 / T100 °C
						-40 ... +80 °C	T4 / T135 °C
	$U_i$ , $I_i$ , $P_i$ , $C_i$ , and $L_i$ are in accordance with FISCO <sup>(2)</sup>					-40 ... +80 °C	T4 / T135 °C
LIT 1x2-24, LIT 2x2-24 <sup>(1)</sup>	36 V	150 mA	3 W	1.3 nF	1 $\mu$ H	-40 ... +40 °C	T6 / T85 °C
		200 mA				-40 ... +50 °C	T5 / T100 °C
		350 mA				-40 ... +80 °C	T4 / T135 °C

<sup>(1)</sup> Type LINETRAB LIT 2x2-24 contains two separate intrinsically safe circuits (terminals 1, 3 and terminals 5, 7), which are infallibly separated from each other. The input parameters, as mentioned above, apply to each circuit.

<sup>(2)</sup> Suitable for connection to an intrinsically safe circuit in accordance with FISCO.

Output circuits (terminals 2, 4, 6 and 8):

in type of protection intrinsic safety Ex ia IIC or Ex ia IIIC or accordance with FISCO. The output parameters are equal to the parameters of the external intrinsically safe circuits connected to the input circuit. For the determination of the maximum allowed external capacitance ( $C_o$ ) and inductance ( $L_o$ ), the values of the internal capacitance ( $C_i$ ) and inductance ( $L_i$ ) shall be taken into account.