



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

Certificate No.: **IECEX BVS 09.0048X** issue No.: **0** Certificate history:

Status: **Current**

Date of Issue: **2009-08-13** Page 1 of 3

Applicant: **FHF Funke + Huster Fernsig GmbH**
Gewerbeallee 15-19,
45478 Mülheim an der Ruhr
Germany

Electrical Apparatus: **Signal lamp type Expertline-LED**
Optional accessory:


Type of Protection: **intrinsic safety "i", encapsulation 'm', increased safety "e", enclosures "tD",
encapsulation "mD"**

Marking: **Ex e mb [ib] IIC T4 Gb**
Ex mb t IIIC IP66 T130°C Db

Approved for issue on behalf of the IECEx Certification Body: **Dr. F. Eickhoff**

Position: **Deputy Head of Certification Body**

Signature:
(for printed version)



2009-08-13

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.

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

 **DEKRA**
DEKRA EXAM GmbH



IECEX Certificate of Conformity

Certificate No.: IECEX BVS 09.0048X

Date of Issue: 2009-08-13

Issue No.: 0

Page 2 of 3

Manufacturer: **FHF Funke + Huster Fernsig GmbH**
Gewerbeallee 15-19,
45478 Mülheim an der Ruhr
Germany

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 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-18 : 2004 Edition: 2.0	Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation 'm' electrical apparatus
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "ID"
IEC 61241-18 : 2004 Edition: 1.0	Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation "mD"

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:

DE/BVS/ExTR09.0044/00

Quality Assessment Report:
DE/BVS/QAR07.0004/02



IECEX Certificate of Conformity

Certificate No.: IECEX BVS 09.0048X

Date of Issue: 2009-08-13

Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

The signal lamp consists of a plastic enclosure with lamp cap.
The electrical connection of the signal lamp takes place in a connection box (IP66) in the type of protection increased safety. In this connection box also a DIP-switch (4-fold) and a program plug in the type of protection intrinsic safety are fixed.

Ratings:

Electrical data:

Terminals X100 and X101

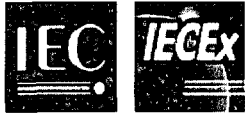
Nominal voltage UN	24	V d.c.
Input voltage range	19.2 ... 28.8	V d.c.
Prospective short-circuit fault current IK of the external power supply	100	A

Thermal data:

Ambient temperature range -40 °C up to +65 °C resp. -20 °C up to +65 °C

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The maximum prospective short-circuit fault current of the external power supply shall not exceed 100 A.
2. Within the hazardous area, the signal lamp type Expertline-LED shall only be cleaned by a wet cloth.



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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Certificate No.: **IECEX BVS 09.0048X** issue No.:1

Status: **Current**

Date of Issue: **2010-11-17** Page 1 of 4

Certificate history:
Issue No. 1 (2010-11-17)
Issue No. 0 (2009-8-13)

Applicant: **FHF Funke + Huster Fernsig GmbH**
Gewerbeallee 15-19
45478 Mülheim an der Ruhr
Germany

Electrical Apparatus: **Signal lamp type Expertline-LED AC**
Optional accessory:


Type of Protection: **intrinsic safety "i", encapsulation 'm', increased safety "e", enclosures "ID", encapsulation "mD"**

Marking: **Ex e mb [ib] IIC T4 Gb**
Ex mb t IIIC IP66 T130°C Db

Approved for issue on behalf of the IECEx Certification Body: **Dr. F. Eickhoff**

Position: **Deputy Head of Certification Body**

Signature:
(for printed version)


2010-11-17

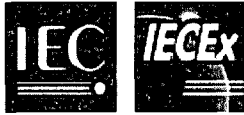
Date:

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Certificate issued by:

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44809 Bochum
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DEKRA EXAM GmbH



IECEX Certificate of Conformity

Certificate No.: IECEx BVS 09.0048X

Date of Issue: 2010-11-17

Issue No.: 1

Page 2 of 4

Manufacturer: **FHF Funke + Huster Fernsig GmbH**
Gewerbeallee 15-19
45478 Mülheim an der Ruhr
Germany

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 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
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IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"
IEC 61241-18 : 2004 Edition: 1.0	Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation "mD"

*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:

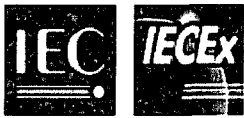
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DE/BVS/ExTR09.0044/01

Quality Assessment Report:

DE/BVS/QAR07.0004/03



IECEX Certificate of Conformity

Certificate No.: IECEx BVS 09.0048X

Date of Issue: 2010-11-17

Issue No.: 1

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

The signal lamp consists of a plastic enclosure with lamp cap.
The electrical connection of the signal lamp takes place in a connection box (IP66) in the type of protection increased safety. In this connection box also a DIP-switch (4-fold) and a program plug in the type of protection intrinsic safety are fixed.

Ratings:

Electrical data for type Expertline-LED AC:

Terminals L and N

Nominal voltage UN	AC	230	V
Voltage range	AC	175 V to 253	V
resp.			
Nominal voltage UN	AC	115	V
Voltage range	AC	85 V to 127	V

Loop through current 8 A

Thermal data:

Ambient temperature range -40 °C up to +60 °C

CONDITIONS OF CERTIFICATION: YES as shown below:

1. For type ExpertLine-LED
Not changed.

2. For type ExpertLine-LED AC

Within the hazardous area, the signal lamp type Expertline-LED AC shall only be cleaned by a wet cloth.



IECEx Certificate of Conformity

Certificate No.: IECEx BVS 09.0048X

Date of Issue: 2010-11-17

Issue No.: 1

Page 4 of 4

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

The circuitry of the signal lamp will be modified and the lamp can now be used with a nominal voltage of AC 115 V resp. AC 230 V and gets the denomination:

type Expertline-LED AC



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INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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Certificate No.: IECEx BVS 09.0048X issue No.: 2

Status: **Current**

Date of Issue: 2011-07-08 Page 1 of 4

Certificate history:
Issue No. 2 (2011-7-8)
Issue No. 1 (2010-11-17)
Issue No. 0 (2009-8-13)

Applicant: **FHF Funke + Huster Fernsig GmbH**
Gewerbeallee 15-19
45478 Mülheim an der Ruhr
Germany

Electrical Apparatus: **Signal lamp type Expertline-LED AC**
Optional accessory:


Type of Protection: **intrinsic safety "i", encapsulation 'm', increased safety "e", enclosures "tD",
encapsulation "mD"**

Marking: **Ex e mb [ib] IIC T4 Gb
Ex mb t IIIC IP66 T130°C Db**

Approved for issue on behalf of the IECEx Certification Body: H.-CH. Simanski

Position: Head of Certification Body

Signature:
(for printed version)


8/7/2011

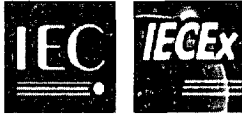
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DEKRA EXAM GmbH



IECEX Certificate of Conformity

Certificate No.: IECEx BVS 09.0048X

Date of Issue: 2011-07-08

Issue No.: 2

Page 2 of 4

Manufacturer: **FHF Funke + Huster Fernsig GmbH**
Gewerbeallee 15-19
45478 Mülheim an der Ruhr
Germany

Manufacturing location(s):

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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:

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Test Report:

DE/BVS/ExTR09.0044/02

Quality Assessment Report:

DE/BVS/QAR07.0004/04



IECEX Certificate of Conformity

Certificate No.: IECEx BVS 09.0048X

Date of Issue: 2011-07-08

Issue No.: 2

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

The signal lamp consists of a plastic enclosure with lamp cap.
The electrical connection of the signal lamp takes place in a connection box (IP66) in the type of protection increased safety. In this connection box also a DIP-switch (4-fold) and a program plug in the type of protection intrinsic safety are fixed.

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Loop through current		8	A
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CONDITIONS OF CERTIFICATION: YES as shown below:

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Not changed.

2. For type ExpertLine-LED AC

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Certificate No.: IECEx BVS 09.0048X

Date of Issue: 2011-07-08

Issue No.: 2

Page 4 of 4

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

The circuitry of the signal lamp type Expertline-LED AC has been modified.