



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 PTB 09.0062** issue No.: 0

Certificate history:

Status: **Current**

Date of Issue: **2009-12-18** Page 1 of 3

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

Electrical Apparatus: **Flash Lamp types dSLB20 and dSLB20-LED**
Optional accessory:

Type of Protection: **Flameproof "d", Increased Safety "e", Protection by Enclosures "tD"**

Marking: **Ex d e IIC T5 resp. T6**
Ex tD A21 IP66 T95°C resp. T80°C

Approved for issue on behalf of the IECEx
Certification Body:

Dr. Martin Thedens

Position:

Head of "Flameproof Enclosure"

Signature:
(for printed version)

Date:

2009 12 18

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:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





IECEx Certificate of Conformity

Certificate No.: IECEx PTB 09.0062

Date of Issue: 2009-12-18

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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1 : 2003 Edition: 5	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosure 'd'
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"

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/PTB/ExTR09.0070/00

Quality Assessment Report:

DE/BVS/QAR07.0004/02



IECEx Certificate of Conformity

Certificate No.: IECEx PTB 09.0062

Date of Issue: 2009-12-18

Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

Flash Lamp types dSLB20 and dSLB20-LED is composed of a lamp compartment of type of protection "Flameproof Enclosure" and a terminal compartment of type of protection "Increased Safety". A glass cup, linked with the enclosure through a compound, serves as light-transmitting part.

Please refer to annex for all technical data

CONDITIONS OF CERTIFICATION: NO

Annexe: CoC_Content IECEx PTB 09.0062.pdf



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 PTB 09.0062** issue No.: **1**

Status: **Current**

Certificate history:
Issue No. 1 (2012-2-24)
Issue No. 0 (2009-12-18)

Date of Issue: **2012-02-24** Page 1 of 4

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

Electrical Apparatus: **Flash Lamp types dSLB20 and dSLB20-LED**
Optional accessory:

Type of Protection: **Flameproof "d", Increased Safety "e", Protection by Enclosures "tD"**

Marking: **Ex d e IIC T5 resp. T6 Gb**
Ex tb IIIC T95°C resp. T80°C Db

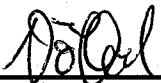
Approved for issue on behalf of the IECEx
Certification Body:

Uwe Völkel

Position:

Section "Flameproof Enclosure"

Signature:
(for printed version)


2012-03-24

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:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany



IECEx Certificate of Conformity

Certificate No.: IECEx PTB 09.0062

Date of Issue: 2012-02-24

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 identifying documents, was found to comply with the following standards:

- | | |
|--|--|
| IEC 60079-0 : 2007-10
Edition: 5 | Explosive atmospheres - Part 0: Equipment - General requirements |
| IEC 60079-1 : 2007-04
Edition: 6 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |
| IEC 60079-31 : 2008
Edition: 1 | Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure 't' |
| IEC 60079-7 : 2006-07
Edition: 4 | Explosive atmospheres - Part 7: Equipment protection by increased safety "e" |

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/PTB/EXTR09.0070/01

Quality Assessment Report:
DE/BVS/QAR07.0004/05

IECEx Certificate



of Conformity

Certificate No.: IECEX PTB 09.0062

Date of Issue: 2012-02-24

Issue No.: 1

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

Flash Lamp types dSLB20 and dSLB20-LED is composed of a lamp compartment of type of protection "Flameproof Enclosure" and a terminal compartment of type of protection "Increased Safety". A glass cup, linked with the enclosure through a compound, serves as light-transmitting part.

Please refer to annex for all technical data

CONDITIONS OF CERTIFICATION: NO

IECEX Certificate



of Conformity

Certificate No.: IECEX PTB 09.0062

Date of Issue: 2012-02-24

Issue No.: 1

Page 4 of 4

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

- Alternative glass cap material accompanied by a protective cage made of stainless steel
- Dust evaluation according to IEC 60079-31 (successor of IEC 60241-0, IEC 60241-1)
- Increase of the LED-range of intensity and partly change of the range of wavelength
- Additional use of a breathing device between "d" and "e" compartment and a pressure compensating element between "e" compartment and surrounding

Annexe: CoC_Content IECEX PTB 09.0062-01.pdf



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 PTB 09.0062** issue No.: **2**

Status: **Current**

Date of Issue: **2012-10-23**

Page 1 of 4

Certificate history:

Issue No. 2 (2012-23)

Issue No. 1 (2012-18)

Issue No. 0 (2009-18)

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

Electrical Apparatus: **Flash Lamp types dSLB20 and dSLB20-LED**
Optional accessory:

Type of Protection: **Flameproof "d", Increased Safety "e", Protection by Enclosures "t"**

Marking: **Ex d e IIC T5 resp. T6 Gb**
Ex tb IIIC T95°C resp. T80°C Db

Approved for issue on behalf of the IECEX
Certification Body:

Uwe Völkel

Position:

Section "Flameproof Enclosure"

Signature:
(for printed version)

Date:

23-10-12

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:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany



IECEX Certificate of Conformity

Certificate No.: IECEX PTB 09.0062

Date of Issue: 2012-10-23

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):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex 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 D as amended.

STANDARDS:

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

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

This Certificate does not indicate compliance with electrical safety and performance requirements other than 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 the reports below.

Test Report:

DE/PTB/ExTR09.0070/02

Quality Assessment Report

DE/BVS/QAR07.0004/05



IECEX Certificate of Conformity

Certificate No.: IECEX PTB 09.0062

Date of Issue: 2012-10-23

Issue No.: 2

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

The Flash Lamp types dSLB20 and dSLB20-LED is composed of a lamp compartment of type of protection "Flan Enclosure" and a terminal compartment of type of protection "Increased Safety". A glass cup, linked with the encl through a compound, serves as light-transmitting part.
Please refer to the annex for all technical data.

CONDITIONS OF CERTIFICATION: NO



IECEx Certificate of Conformity

Certificate No.: IECEx PTB 09.0062

Date of Issue: 2012-10-23

Issue No.: 2

Page 4 of 4

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

Rated voltage and rated current are changed on the name plate and in the operating instructi
Change of the components of the assembly in comparison to the execution 24VDC
Adjustment of the flash capacitor
Additional EMC capacitor