



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	Certificate history:
Status:	Current	Page 1 of 4	Issue No. 2 (2012-10-23)
Date of Issue:	2012-10-23		Issue No. 1 (2012-02-24)
Applicant:	Issue No. 0 (2009-12-18)		
Electrical Apparatus:	FHF Funke + Huster Fernsig GmbH		
Optional accessory:	Gewerbeallee 15-19		
Type of Protection:	45478 Mülheim an der Ruhr		
Marking:	Germany		
	Flash Lamp types dSLB20 and dSLB20-LED		
	Flameproof "d", Increased Safety "e", Protection by Enclosures "t"		
	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:

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:



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Manufacturer: **FHF Funke + Huster Fernsig GmbH**
Gewerbeallee 15-19
45478 Mülheim an der Ruhr
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 : 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/ExTR09.0070/02](#)

Quality Assessment Report:

[DE/BVS/QAR07.0004/05](#)



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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 "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 the annex for all technical data.

CONDITIONS OF CERTIFICATION: NO



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

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

Annex:

[CoC_Content IECEx PTB 09.0062_02.pdf](#)



Applicant: FHF Funke + Huster Fernsig GmbH
Electrical Apparatus: Flash Light type dSLB20 and type dSLB20-LED

Description of equipment

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.

Issue 1: Alternate 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

Issue 2: The rated voltage and rated current is changed on the name plate and in the operating instructions

Change the components of the assembly in comparison to the execution 24VDC

Adjustment of the flash capacitor

Additional EMC capacitor

Technical data

Thermal data

Type	T _a Temperature ambient	T _s Temperature surface (Dust)	Temperature class
dSLB20	-55°C ≤ T _a ≤ +55°C	T95°C	T5
dSLB20	-55°C ≤ T _a ≤ +40°C	T80°C	T6
dSLB20-LED	-55°C ≤ T _a ≤ +55°C	T80°C	T6

Electrical ratings

Flash Light dSLB20

Typ Type	Nennspannung Rated voltage	Blitzleistung Flash energy	Stromaufnahme Rated current I _{max}	Protection	
				F1	F2
dSLB20	24 VDC	15J	1A	T 2A	Rated cut-off temperature 102°C
dSLB20	48 VDC	15J	500 mA	T 1A	
dSLB20	80 VDC	15 J	250 mA	T 1A	
dSLB20	115 VDC	15J	200mA	T 1A	
dSLB20	230 VAC	15J	200mA	T 2A	
dSLB20	115 VAC	15J	250mA	T 1A	
dSLB20	12 VDC	5J	600mA	T 2A	
dSLB20	24 VDC	5J	280mA	T 1A	
dSLB20	80 VDC	5J	90mA	T 0,315A	
dSLB20	115 VAC	5J	135mA	T 0,315A	
dSLB20	230 VAC	5J	130mA	T 1A	

Flash Light dSLB20-LED

Typ Type	Nennspannung Rated voltage	Stromaufnahme Rated current I _{max}	Protection	
			F1	F2; F3
dSLB20-LED	24 VDC	1,6 A	T 2A	Rated cut-off temperature 136°C
dSLB20-LED	48 VDC	0,8 A	T 1A	
dSLB20-LED	230 VAC	0,230 A	T 1A	
dSLB20-LED	120 VAC	0,420 A	T 1A	

Additional notes for safe operation:

Components attached or installed (terminal compartments, bushings, cable entry fittings, connectors) must be of a technical standard that complies with the specifications on the cover sheet as a minimum, and must be separately certified. The operating conditions specified in the component certificates must be followed.