



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEx IBE 15.0016** Page 1 of 4 [Certificate history:](#)  
Issue 0 (2015-10-14)

Status: **Current** Issue No: 1

Date of Issue: 2019-10-22

Applicant: **Sigmann DELTA GmbH**  
Hauptstraße 53  
74928 Hüffenhardt  
Germany

Equipment: **Hand scanner SD160ex, SD260ex and SD260ex 3rd Type SD.112.XXX0.XX, SD.115.XXX0.XX, SD11A.XXXX.XX**

Optional accessory:

Type of Protection: **Intrinsic safety 'i'**

Marking: type SD160<sup>ex</sup> SD.112.XXX0.XX  
Ex ib IIC T4 Gb  
Ex ib IIIC T135 °C Db

type SD260<sup>ex</sup> SD.115.XXX0.XX  
Ex ib IIB T4 Gb  
Ex ib IIIC T135 °C Db

type SD260<sup>ex</sup> 3rd SD.11A.XXXX.XX  
Ex ib op is IIB T4 Gb  
Ex ib op is IIIC T135 °C Db

Approved for issue on behalf of the IECEx  
Certification Body:

**Alexander Henker**

Position:

**Deputy Head of department Certification Body**

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 [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**IBExU Institut für Sicherheitstechnik GmbH**  
Fuchsmühlenweg 7  
09599 Freiberg  
Germany





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Manufacturer: **Sigmann DELTA GmbH**  
Hauptstraße 53  
74928 Hüffenhardt  
Germany

Additional  
manufacturing  
locations:

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 equipment 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 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

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

**IEC 60079-28:2015** Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation  
Edition:2

This Certificate **does not** indicate compliance with 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 Reports:

[DE/IBE/ExTR15.0006/00](#)

[DE/IBE/ExTR15.0006/01](#)

Quality Assessment Report:

[DE/IBE/QAR15.0005/01](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The hand scanners are used as a hand-held unit in hazardous areas of Zone 1 and Zone 2 and 21 or 22. They are intended to capture 1D codes (barcodes) and 2D codes (stacked-codes).

The hand scanners consist of a housing made of plastic including window. The housing contains the electronic circuits and the light sources.

The hand scanner is connected by means of supply cable SD.Z10.000X.XX with an intrinsically safe power supply.

For technical data see Annex.

**SPECIFIC CONDITIONS OF USE: NO**



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

The hand scanners comply with the requirements of IEC 60079-0, Ed. 7

A new type SD260<sup>EX</sup>3rd has been added.

**Annex:**

[Annex\\_IBE15.0016\\_01\\_1.pdf](#)



# IECEx Certificate of Conformity - Annex



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## Technical data:

### Technical Data

- Ambient temperature range -20 °C to +50 °C
- Light Source; Target laser: visible red light, Popt. < 35 mW or 5 mW/mm<sup>2</sup>;  
wave length 630/1310 nm;
- Current consumption: ≤ 420 mA (standby 220 mA; scan 420 mA)



# IECEx Certificate of Conformity - Annex



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## Electrical data:

	<b>SD160<sup>ex</sup></b> <b>SD.112.XXX0.</b> <b>XX</b>	<b>SD160<sup>ex</sup></b> <b>SD.112.XXX0.</b> <b>XX</b>	<b>SD160<sup>ex</sup></b> <b>SD.112.XXX0.</b> <b>XX</b>	<b>SD260<sup>ex</sup></b> <b>SD.115.XXX0.</b> <b>XX</b>	<b>SD260<sup>ex</sup></b> <b>SD.115.XXX0.</b> <b>XX</b>	<b>SD260<sup>ex</sup> 3rd</b> <b>SD.11A.XXXX.</b> <b>XX</b>	<b>SD260<sup>ex</sup> 3rd</b> <b>SD.11A.XXXX.</b> <b>XX</b>
con- nec- ting cable	SD.Z10.0007. XX	SD.Z10.0008. XX	SD.Z10.0009. XX	SD.Z10.0008. XX	SD.Z10.0008. XX	SD.Z10.0008.X X	SD.Z10.0009.X X
maxi- mum input volta- ge $U_i$	5.6 V	4.9 V	4.9 V	4.9 V	4.9 V	5.6 V	5.6 V
maxi- mum input cur- rent $I_i$	480 mA	480 mA	480 mA	750 mA	780 mA	1140 mA	1180 mA
maxi- mum input po- wer $P_i$	1.25 W	1.25 W	1.25 W	2 W	2 W	4.5 W	4.5 W
maxi- mum inter- nal indu- ctan- ce $L_i$	negligible	negligible	negligible	negligible	negligible	negligible	negligible
maxi- mum intern al capa- citan- ce $C_i$	46 $\mu$ F	112.4 $\mu$ F	112.4 $\mu$ F	202 $\mu$ F	202 $\mu$ F	869 $\mu$ F	869 $\mu$ F