



[1] **EU-TYPE EXAMINATION CERTIFICATE - Translation**

[2] Equipment or protective systems intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU12ATEX1162** | Issue 2

[4] Product: **Bluetooth hand scanner and Bluetooth base station**

Bluetooth Handscanner type	Type number
SD160BT^{ex}	SD.113.****.**
SD261BT^{ex}	SD.116.****.**
SD161BT^{ex}	SD.118.****.**
SD261BT^{ex}3rd	SD.11B.****.**
SD164BT^{ex}	SD.11F.****.**
SD264BT^{ex}	SD.11G.****.**
Bluetooth base station	Type number
SD160BT^{ex}Basis	SD.114.****.**
SD261BT^{ex}Basis	SD.117.****.**
SDx61BT^{ex}Basis	SD.119.****.**
SDx61BT^{ex}Basis 3rd	SD.11C.****.**
SDx64BT^{ex}Basis	SD.11H.****.**

[5] Manufacturer: Sigmann Delta GmbH

[6] Address: Beim Braunstall 4
97980 Bad Mergentheim
GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-22-3-0185.



[9] Compliance with the essential health and safety requirements has been assured by compliance with: EN IEC 60079-0:2018, EN 60079-11:2012 and EN 60079-28:2015 except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:



Types SD160BT^{ex}, SD261BT^{ex}, SD161BT^{ex}, SD164BT^{ex} as well as SDx61BT^{ex}Basis 3rd and SDx64BT^{ex}Basis:

 II 2G Ex ib IIB T4 Gb
 II 2D Ex ib IIIC T135 °C Db
 -20 °C ≤ T_{amb} ≤ +50 °C

Type SD261BT^{ex} 3rd and SD264BT^{ex}:

 II 2G Ex ib op is IIB T4 Gb
 II 2D Ex ib op is IIIC T135 °C Db
-20 °C ≤ T_{amb} ≤ +50 °C

Types SD160BT^{ex}Basis, SD261BT^{ex}Basis and SDx61BT^{ex}Basis

 II 2G Ex ib IIC T4 Gb
 II 2D Ex ib IIIC T135 °C Db
-20 °C ≤ T_{amb} ≤ +50 °C

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By order



Dr.-Ing. P. Cimalla



(notified body number 0637)

Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 2023-05-26

[13]

Schedule

[14]

Certificate number IBExU12ATEX1162 | Issue 2

[15] **Description of product**

The Bluetooth hand scanner is used as a hand-held unit in hazardous areas of which require equipment for category 2G and 2D. It is used to capture 1D codes (barcodes) and 2D codes (stacked-codes). The handheld scanner is supplied by an internal lithium-ion rechargeable battery.

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

The data transfer is carried out via Bluetooth short-range radio to the Bluetooth base charging station standing in the non-hazardous area or to Bluetooth base station with charging function, which is located in the hazardous area.

The intrinsically safe Bluetooth base station contains the data interface and a charging circuit for the Bluetooth hand scanner. It can be supplied in a hazardous area with the supply unit SDVM125^{ex}.

By means of the supply unit the non - intrinsically safe data signals (USB, RS232, RS422) are converted in intrinsically safe data signals.

The rechargeable battery may be charged outside the hazardous area with a separate base charging station and power supply or in hazardous areas with the Bluetooth base station in connection with an intrinsically safe power supply.

Technical Data

- Ambient temperature range: -20 °C to +50 °C
- Light Source; Target laser: visible red light,
P_{opt.} < 35 mW;
- Interface: Bluetooth V2.1/4.0 EDR; Bluetooth class 2/1
2.402 – 2.4830 GHz; max. distance 30 m / 100 m
serial communication RS-232/422 /USB
- Current consumption: 330 mA (standby 80/130 mA; peak 500 mA)
- permitted battery: Type SD.Z10.0017.XX 3.6 V; 1500 mAh
Type SD.Z10.0018.XX 3.6 V; 2250 mAh

Electrical data:

	Bluetooth Handscanner Type SD261BT ^{ex} 3 rd SD.11B.****.**	Bluetooth Handscanner Type SD160BT ^{ex} SD.113.****.**	Bluetooth Handscanner Type SD161BT ^{ex} SD.118.****.**	Bluetooth Handscanner Type SD261BT ^{ex} SD.116.****.**	Bluetooth Handscanner Type SD164BT ^{ex} SD.11F****.**	Bluetooth Handscanner Type SD264BT ^{ex} SD.11G****.**
maximum input voltage U _i	4.2 V	4.2 V	4.2 V	4.2 V	4.2 V	4.2 V
maximum input current I _i	1071 mA	1071 mA	1071 mA	1071 mA	1071 mA	1071 mA
maximum input power P _i	4.5 W	4.5 W	4.5 W	4.5 W	4.5 W	4.5 W
maximum internal inductance L _i	negligible	negligible	negligible	negligible	negligible	negligible
maximum internal capacitance C _i	1180 µF	407 µF	401 µF	415 µF	278 µF	521 µF

Remark: Input voltage of the handheld scanner is the maximum voltage provided by the battery.

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	Bluetooth Basisstation Type SD160BT ^{ex} Basis SD.114.****.**	Bluetooth Basisstation Type SDx61BT ^{ex} Basis 3rd SD.11C.****.**	Bluetooth Basisstation Type SDx641BT ^{ex} Basis SD.11H.****.**
	Bluetooth Basisstation Type SD261BT ^{ex} Basis SD.117.****.**		
	Bluetooth Basisstation Type SDx61BT ^{ex} Basis SD.119.****.**		
maximum input voltage U_i	4.9 V	5.5 V	5.5 V
maximum input current I_i	480 mA	480 mA	480 mA
maximum input power P_i	1.25 W	1.25 W	1.25 W
maximum internal inductance L_i	negligible	negligible	Negligible
maximum internal capacitance C_i	112 μ F	190,3 μ F	831 μ F
<u>with connecting cable SD.Z10.0007.**</u>			
maximum input voltage U_i	5.6 V	5.6 V	5,6 V
maximum input current I_i	480 mA	480 mA	480 mA
maximum input power P_i	1.25 W	1.25 W	1.25 W
maximum internal inductance L_i	negligible	negligible	Negligible
maximum internal capacitance C_i	46 μ F	46 μ F	46 μ F

Remark: Input voltage to the Bluetooth base station itself is reduced on this type associated connecting cable SD.Z10.0007.** of 5.6 V to 4.9 V.

Accessories:

Separate charging box and Base charging station outside the hazardous area with power supply type SD.Z10.0016.**

Type: SD.Z10.0014.**, SD.Z10.0015.**, SD.Z10.0025.**, SD.Z10.0026.**
SD.Z10.0027.**, SD.Z10.0028.**, SD.Z10.0034.**, SD.Z10.0035.**, SD.Z10.0041.**
and base station SDx61BTII^{ex} Basis 3rd (type SD.127.****.***) as well as SDx64BTII^{ex}Basis
(type SD.12H.****.***) with intrinsically safe power supply (type SD.121.***1.**,
SD.121.***2.**)

for Bluetooth Scanner:

Type: SD.113.****.**, SD.116.****.**, SD.118.****.**, SD.11B.****.**, SD.11F.****.**, SD.11G.****.**

U_m : 253 V AC

Rated voltage: 5 V

Rated current: 85 mA

Variations compared to issue 1 of this certificate:

Variation 1

The manufacturer's address has been changed.

Variation 2

New types SD164BT^{ex} and SD264BT^{ex} as well as SDx64BT^{ex}Basis have been added.

Variation x

The circuits have been changed without affecting the intrinsically safe parameters.

[16] Test report

The test results are recorded in the confidential test report IB-22-3-0185 of 2023-05-26.
The test documents are part of the test report and they are listed there.

Summary of the test results

The Bluetooth hand scanner and Bluetooth base station mentioned under [4] further comply with the requirements of explosion protection for electrical equipment of Group II and category 2G and 2D in type of protection intrinsic safety in combination with inherently safe optical radiation.

[17] Specific conditions of use

None

[18] Essential health and safety requirements

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

None

[19] Drawings and Documents

The documents are listed in the test report.

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