

[1] **EC-TYPE EXAMINATION CERTIFICATE**
according to Directive 94/9/EC, Annex III
(Translation)



[2] Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres, **Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **IBExU09ATEX1091**

[4] Equipment: **Power Pack
for hand scanner BCS 3800^{ex}
Type 17-21BB-17**/******

[5] Manufacturer: **Bartec GmbH**

[6] Address: **Max-Eyth-Straße 16
97980 Bad Mergentheim
GERMANY**

[7] The equipment mentioned in [4] and any acceptable variations thereto are specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that the in [4] mentioned equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of the equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The test results are recorded in the test report IB-09-3-198 of 6 August 2009.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2006, EN 60079-5:2007, EN 60079-7:2007, EN 61241-0:2006, EN 61241-1:2004 and CENELEC-Cor.: 2006 to EN 61241-1:2004.

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in [17] in the schedule to this EC-Type Examination Certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

[12] The marking of the equipment mentioned in [4] shall include the following:

⊕ II 2G Ex e q [ib] IIC T4

⊕ II 2D Ex tD A21 IP64 T 135 °C

-20 °C ≤ Ta ≤ +60 °C

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Authorised for certifications
-Explosion protection-

By order

Wagner

(Dr. Wagner)

Schedule



- Seal -
(ID no. 0637)

Freiberg, 6 August 2009

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.

- [1] **1st Addition to
EC-TYPE EXAMINATION CERTIFICATE IBExU09ATEX1091**
according to Directive 94/9/EC, Annex III
(Translation)



- [2] Equipment: **Power pack
for hand scanner BCS3800^{ex}**
Type 17-21BB-17**/****
- [3] Manufacturer: BARTEC GmbH
- [4] Address: Max-Eyth-Straße 16
97980 Bad Mergentheim
GERMANY

[5] **Addition/Alteration**

The equipment mentioned in [2] can also be marked in accordance with the current standards as specified in [7]. An additional, intrinsically safe USB interface can be provided.

Type numbers:

17-21BB-1703/0000	DC 24 V with RS232 interface
17-21BB-1704/0000	DC 24 V with USB interface
17-21BB-1705/0000	AC 90 V - 253 V with RS232 interface
17-21BB-1706/0000	AC 90 V - 253 V with USB interface
17-21BB-1701/0000	DC 24 V with RS232 interface 5.5 V
17-21BB-1700/0000	AC 90 V - 253 V with RS232 interface 5.5 V

Technical data

Ambient temperature range: -25 °C up to +60 °C
Degree of protection of the enclosure: IP 64 (EN 60529)

Non-intrinsically safe circuits:

Supply circuit	Rated voltage U_m 253 V
X1, X2; X3 (PE)	17-21BB-1703/0000 +24 V ± 25 % 17-21BB-1704/0000 +24 V ± 25 % 17-21BB-1701/0000 +24 V ± 25 %
	17-21BB-1705/0000 90 V ... 253 V AC, 50 - 60 Hz 17-21BB-1706/0000 90 V ... 253 V AC, 50 - 60 Hz 17-21BB-1700/0000 90 V ... 253 V AC, 50 - 60 Hz

Data circuits	17-21BB-1700/0000, 17-21BB-1701/0000, 17-21BB-1703/0000, 17-21BB-1705/0000
X5 (TxD) X4 (GND)	RS232 ±12 V / 4 mA
X7 (T+) X8 (T-) X6 (PE)	RS422 +12 V / -7 V / 4 mA

Data circuits	17-21BB-1704/0000 and 17-21BB-1706/0000
X5 (shield) X4 (GND) X6 (NV)	
X7 (D+ 2MA) X8 (D- 2MA)	USB +5 V / 68 mA

Intrinsically safe circuits:

Supply circuit	in type of protection Ex ib IIC
X13 (+ UB)	$U_o = 5.5$ V 17-21BB-1700/0000 and 17-21BB-1701/0000
X12 (GND)	$I_o = 440$ mA
X11 (GND/PE)	$U_o = 4.9$ V 17-21BB-1703/0000 to 17-21BB-1706/0000
	$I_o = 440$ mA
	$R_i = 25$ Ω

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$C_i = 2.2 \mu\text{F}$
 $P_o = 1.20 \text{ W}$ (trapezoidal characteristic)
 $C_o = 55 \mu\text{F}$ 17-21BB-1700/0000 and 17-21BB-1701/0000
 $C_o = 113 \mu\text{F}$ 17-21BB-1703/0000 to 17-21BB-1706/0000
 $L_o = 0.1 \text{ mH}$

Data circuits	in type of protection Ex ib IIC 17-21BB-1700/0000, 17-21BB-1701/0000, 17-21BB-1703/0000, 17-21BB-1705/0000
X9 (RxD) RS232 X10 (GND)	$U_i = 5.5 \text{ VDC}$
X9 (D+ 2SL) USB X10 (D- 2SL) X11 (GND/PE)	17-21BB-1704/0000 and 17-21BB-1706/0000 $U_{O_{D+/D-}} = 4.9 \text{ V}$ $I_{O_{D+/D-}} = 20 \text{ mA}$ per data line $P_{O_{D+/D-}} = 24 \text{ mW}$ per data line (linear characteristic)

The intrinsically safe circuits are galvanically connected with the supply circuit. A continuous potential bonding within the explosive area has to be guaranteed at the installation.

[6] **Test documents**

The proof of the explosion protection of the equipment mentioned in [2] is documented in the Test Report IB-13-3-103 of 14 August 2013. The test documents are part of the test report.

[7] **Test result**

IBExU certifies that the equipment mentioned in [2] has been found to comply with the Essential Health and Safety Requirements given in Annex II of Directive 94/9/EC by compliance with EN 60079-0:2009, EN 60079-5:2007, EN 60079-7:2007, EN 60079-11:2012 and EN 60079-31:2009.


The equipment mentioned in [2] meets the requirements of the explosion protection for equipment group II, categories 2G or 2D. It can prepare intrinsically safe circuits.

The marking of the equipment mentioned in [2] shall include the following:

 II 2G Ex eb qb [ib Gb] IIC T4

 II 2D Ex tb IIIC T135 °C

or

 II 2G Ex e q [ib] IIC T4 Gb

 II 2D Ex tb IIIC T135 °C Db

$-25 \text{ °C} \leq T_a \leq +60 \text{ °C}$

This addition is only valid in combination with the EC-Type Examination Certificate IBExU09ATEX1091 of 6 August 2009.

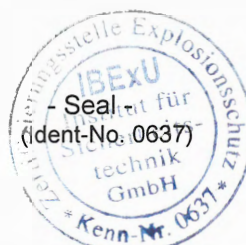
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Freiberg, 14 August 2013

Authorized for certifications
- Explosion protection -

Im Auftrag


(Dipl.-Ing. Willamowski)



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