



**English**



## **User Manual**

**Hand-Held Scanner BCS 3800<sup>ex</sup>**  
**17-21BA-0024**



# User Manual

## Handheld Scanner BCS 3800<sup>ex</sup>

Type 17-21BA-0024

### ATEX

### Zone 1 and Zone 21

Version 1.00

Dokumenten-Nr. 11-21BA-7D0001

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Technical data subject to change!

Contents	Page
English	1 - 21
Appendix	EC-Declaration of Conformity

## Notes on this manual



**Read carefully  
before putting  
the devices  
into operation.**

The user manual is a constituent part of the product and must be kept in the direct vicinity of the device and accessible at all times to installation, operating and maintenance personnel.

It contains important notes, safety instructions and test certificates which are necessary for perfect functioning when the devices are being operated and handled. It is written for technically qualified personnel.

Familiarity with and the technically perfect implementation of the safety instructions and warnings described in this manual are preconditions for safe installation and commissioning. The safety notes and warnings given in this documentation are given in a general way and only qualified personnel will have the necessary specialised know-how to interpret and implement them correctly in specific cases.

### **Qualifications of the personnel working with the devices**

The user manual is written for all people who carry out assembly, installation, commissioning and service work on the product, whereby the directives and standards 99/92/EC, EN 60079-17, EN 60079-19 for the gas area and EN 61241-17 and EN 61241-19 for the dust area must be observed.

### **Changes to the document**

BARTEC reserves the right to alter the contents of this document without notice. No guarantee is given for the correctness of the information. In case of doubt the German safety instructions shall apply because it is not possible to rule out errors in translation or in printing. In the event of a legal dispute, the "General Terms and Conditions" of the BARTEC group shall apply in addition.

The respective up-to-date versions of data sheets, manuals, certificates, EC Declaration of Conformity may be downloaded from the "Ex Visualisation and Communication Systems" product page at [www.bartec-group.com](http://www.bartec-group.com) or ordered directly from BARTEC GmbH.

## Handling the Product

The documents are currently available in English.

The product described in this manual has been tested and left the factory in perfect condition as regards meeting safety requirements.

To maintain this condition and ensure that this product operates perfectly and safely, it may be used only in the manner described by the manufacturer. Appropriate transportation, suitable storage and careful operation are also essential for the perfect and safe operation of this product.

## Use for the Intended Purpose

The handheld scanner is a hand-guided electrical device used for the mobile acquisition and direct cable-bound transmission of data within hazardous areas. The handheld scanner is used in areas in which the utilisation of devices from Device Group II, Categories 2G and 2D is intended.

It is used exclusively in combination with operating equipment which conforms to the requirements for overvoltage category i.

## Safety Instructions



**Read carefully  
before putting  
the devices  
into operation.**

Safety instructions and warnings are specially highlighted in this manual and marked by symbols.

The safety instructions and warnings are assigned to the individual work steps. Careful handling and consistent observation of the instructions will prevent accidents, personal injuries and damage to property.

The adherence to all directions and safety instructions in this manual is a precondition for safe working and the correct handling of the device.

The graphic representations in these instructions serve to show the information being described and are not necessarily true to scale and they may deviate slightly from the actual construction of the device.

## Marking

Particularly important points in these instructions are marked with a symbol:



**Danger!**

**Non-observance leads to death or serious physical injury. The necessary safety measures must be taken.**



**Caution!**

**Warning of damage to property and financial and penal disadvantages (e.g. loss of guarantee rights, liability etc.).**



**Attention**

**Important instructions and information on preventing disadvantageous behaviour.**



**Note**

**Important instructions and information on effective, economical and environmentally compatible handling.**



<b>1</b>	<b>System Description .....</b>	<b>1</b>
1.1	Definition.....	1
1.2	Areas of Application.....	2
<b>2</b>	<b>Technical Data.....</b>	<b>3</b>
2.1	Ex protection type.....	3
2.2	General Data .....	3
2.3	Electrical Data .....	4
2.4	Scan Engine, Decoding Range and Bar Code Specification .....	4
2.5	Product Marking .....	5
2.6	Laser Marking.....	6
<b>3</b>	<b>Mounting.....</b>	<b>7</b>
3.1	Notes of Handling .....	7
3.2	Laser Devices .....	8
3.3	Electromagnetic Fields .....	8
3.3.1	International.....	8
3.3.2	Hand-held Devices .....	8
3.4	Health and Safety Recommendations .....	8
<b>4</b>	<b>Connection Assignment.....</b>	<b>9</b>
4.1	Connection to Power Pack Types 17-21BB-1700, 17-21BB-1701 and 17-21BB-1702.....	9
4.2	Connection to Power Pack Types 17-21BB-0217 and 17-21BB-0018 .....	13
4.3	Connection to Power Pack Types 17-21BB-0219 and 17-21BB-0020 .....	13
4.4	Connection to Supply Module Type 05-0080-0378 .....	14
<b>5</b>	<b>Installation.....</b>	<b>15</b>
5.1	Scanning Technology .....	16
5.2	Software Settings.....	17
5.3	Resetting to Factory Settings.....	17
<b>6</b>	<b>Commissioning.....</b>	<b>18</b>
6.1	Hand-Held Bar Code Scanner .....	18
6.2	Connection to the power pack .....	18
6.2.1	Approved power packs and supply modules .....	19
<b>7</b>	<b>Maintenance, Inspection, Repair.....</b>	<b>20</b>
<b>8</b>	<b>Dispatch and Packaging Instructions.....</b>	<b>21</b>

<b>Appendix</b>	<b>EC-Declaration of Conformity</b>
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# 1 System Description

## 1.1 Definition

The bar code scanning systems from BARTEC are complete systems consisting of the BCS 3800<sup>ex</sup> handheld scanner and the power pack that goes with it.

The handheld scanner was developed specially for use in hazardous (potentially explosive) areas and it is ATEX-certified:

**BCS 3800<sup>ex</sup> Handheld Scanner** Type 17-21BA-0024  
for **Zone 1** in the intrinsic safety type of protection and **Zone 21**.

The type 17-21BA-0024 bar code scanning system for use in Zone 1 and Zone 21 consists of the following components:

### BCS 3800<sup>ex</sup> Handheld Scanner and Power Pack



Illustration 1-1: BCS 3800<sup>ex</sup> and Power Pack

Power Pack	
with AC 100 V to AC 240 V	Type 17-21BB-1700
with DC 24 V	Type 17-21BB-1701
with DC 12 V	Type 17-21BB-1702

## 1.2 Areas of Application

Hand-guided application in industrial and commercial areas.

The type 17-21BA-0024 BCS 3800<sup>ex</sup> handheld scanner is the successor model to the BCS 302<sup>ex</sup> handheld scanner. This generation of explosion-proof handheld scanners works within the visible red light range. Almost all types of bar code labels can be read, e.g. coloured labels, labels made of heat-sensitive paper, etc. The handheld scanner allows data acquisition even under extreme conditions.

The handheld scanner reads bar code labels reliably on awkward, round or rough surfaces too. It can even read partially soiled labels properly. The data is acquired without contact. The non-contact data acquisition means that the labels will not be destroyed even if the scanner is used constantly.

The handheld scanner was developed specially for use in hazardous areas:





**Note**

**See operating instruction for instructions for the Power Pack.**

## 2 Technical Data

### 2.1 Ex protection type

Typ	17-21BA-0024/....	
Ex protection type (Zone 1)	 II 2G Ex ib IIC T4 -20 °C ≤ Ta ≤ +50 °C	
Ex protection type (Zone 21)	 II 2D ibD 21 T135 °C -20 °C ≤ Ta ≤ +50 °C	
Certification	IBExU 09 ATEX 1060 for more data see EC Type Examination Certificate	
Supply circuit and signal circuit	Ex ib IIC	
Safety Data		
Maximum input voltage	Ui	= 5.6 V
Maximum input current	Ii	= 440 mA
Maximum input wattage	Pi	= 1.25 W
Maximum internal capacitance	Ci	= 52.0 µF
Maximum internal Inductance	Li	= negligible
Standards	EN 60 079-0: 2006 EN 61 241-0: 2006 EN 61 000-6-2: 2005 EN 60 950-1:2001	EN 60 079-11: 2007 EN 61 241-11: 2006 EN 61 000-6-4: 2007 EN 60 825-1
Directives	94/9/EC 2002/95/EC	2004/108/EC

### 2.2 General Data

<b>Dimensions (L x W x H)</b>	135 x 81 x 163 mm	5.3 x 3.2 x 6.4 inches
<b>Length of connection cable</b>	2.1 m	6.89 ft.
<b>Maximum length of cable/conductor</b>	10 m (up to the handheld scanner's power pack or supply module)	
<b>Ambient temperature</b>	-20 °C to +50 °C	-4 °F to 122 °F
<b>Storage temperature</b>	-40 °C to +60 °C	-40 °F to 140 °F
<b>Air humidity</b>	0 % to 95 % (non-condensing)	
<b>Protection class (EN 60529)</b>	IP 54	
<b>Weight without connection cable</b>	approx. 213 g	approx. 7.5 oz.
<b>Enclosure material (UL 94V0)</b>	Polycarbonate	

## 2.3 Electrical Data

Current consumption max. in standby mode	approx. 60 mA
Current consumption max. in scanning mode	approx. 210 mA

## 2.4 Scan Engine, Decoding Range and Bar Code Specification

Laser diode	visible red light 630 Nm
Opt. radiation power	< 35 mW
Laser safety	Laser class 2
Scan rate	270 scans/second
Angular scanning angle	± 65°
Tilted scanning angle	± 65°
Scanning contrast	20 % minimum

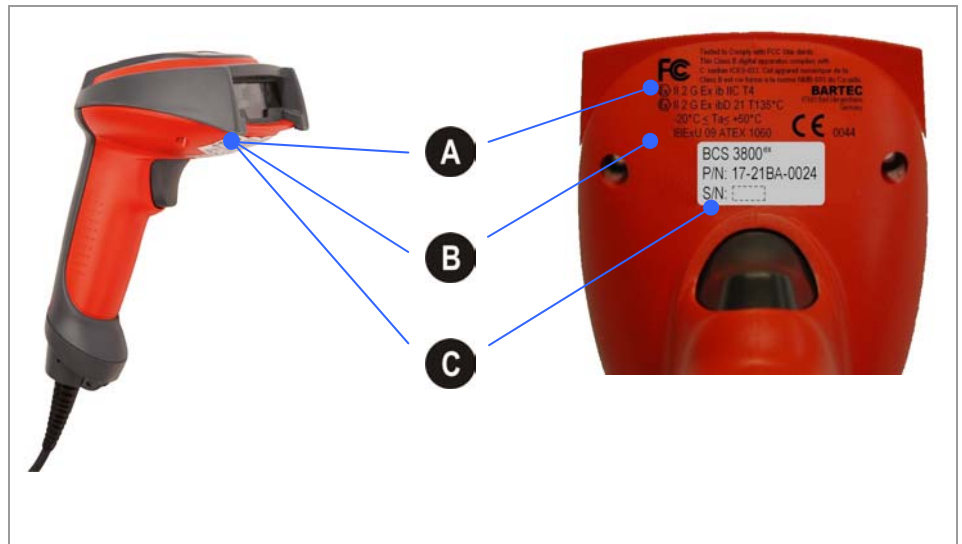
### Decoding range

Minimum bar code width	Maximum near-field areas	Minimum far-field areas (25 lux illumination)	Minimum far-field areas (300 lux illumination)
13.0 mil 100% UPC	6.4 cm (2.5 in)	66.0 cm (26.0 in)	71.0 cm (28 in)
7.5 mil code 39	16.5 cm (6.5 in)	36.0 cm (14.0 in)	38.0 cm (15.0 in)
15.0 mil code 39	6.4 cm (2.5 in)	76.2 cm (30.0 in)	78.7 cm (31.0 in)
20.0 mil code 39	3.8 cm (1.5 in)	99.1 cm (39.0 in)	107.0 cm (42.0 in)
55.0 mil code 39	10.2 cm (4.0 in)	160 cm (63.0 in)	208.0 cm (82 in)

### Bar Code Specifications

China Postal	Codabar	Codablock F
Straight 2 of 5 Industrial	Code 11	Code 16K
Code 39	Code 32 Pharmaceutical (PARAF)	Code 49
Code 93	Code 128	UCC/EAN-128
EAN/JAN-8	EAN/JAN-13	EAN-13 with Extended Coupon Code
Straight 2 of 5 IATA	Interleaved 2 of 5	Korea Post
Matrix 2 of 5	MSI	No Read
Plessey Code	PosiCode	Reduced Space Symbology (RSS-14, RSS Limited, RSS Expanded)
Telepen	Trioptic Code	UPC-A
UPC-A with Extended Coupon Code	UPC-E	

## 2.5 Product Marking



- A** FCC
- B** Ex Protection Type

Tested to Comply with FCC Standards.  
This Class B digital apparatus complies with  
Canadian ICES-033. Cet appareil numérique de la  
Class B est conforme à la norme NMB-003 du Canada.

**FC**

**Ex** II 2 G Ex ib IIC T4  
**Ex** II 2 G Ex ibD 21 T135°C  
-20°C ≤ Ta ≤ +50°C  
IBExU 09 ATEX 1060

**BARTEC**  
97980 Bad Mergentheim  
Germany


**CE** 0044

- C** Type label

BCS 3800<sup>ex</sup>  
P/N: 17-21BA-0024  
S/N:

## 2.6 Laser Marking

The following information is provided in compliance with EN 60825, clause 5:

	<b>DEUTSCH</b>  KLASSE 1                      KLASSE 1 LASER PRODUKT KLASSE 2                      LASERLICHT NICHT IN DEN LASERSTRAHL  SEHEN  KLASSE 2 LASER PRODUKT
<b>ENGLISH</b>  CLASS 1                      CLASS 1 LASER PRODUCT CLASS 2                      LASER LIGHT DO NOT STARE INTO BEAM CLASS 2 LASER PRODUCT	<b>DANISH / DANSK</b>  KLASSE 1                      KLASSE 1 LASERPRODUKT KLASSE 2                      LASERLYF SE IKKE IND I STRÅLEN KLASSE 2 LASERPRODUKT
<b>ITALIAN / ITALIANO</b>  CLASSE 1                      PRODOTTO AL LASER DI CLASSE 1 CLASSE 2                      LUCE LASER NON FISSARE IL RAGGIOPRODOTTO AL LASER DI CLASSE 2	<b>DUTCH / NEDERLANDS</b>  KLASSE 1                      KLASSE-1 LASERPRODUKT KLASSE 2                      LASERLICHT NIET IN STRAAL STAREN KLASSE-2 LASERPRODUKT
<b>NORWEGIAN / NORSK</b>  KLASSE 1                      LASERPRODUKT, KLASSE 1 KLASSE 2                      LASERLYS IKKE STIRR INN I LYSSTRÅLEN LASERPRODUKT, KLASSE 2	<b>FINNISH / SUOMI</b>  LUOKKA 1                      LUOKKA 1 LASERTUOTE LUOKKA 2                      LASERVALO ÄLÄ TUIJOTA SÄDETTÄ LUOKKA 2 LASERTUOTE
<b>PORTUGUESE / PORTUGUÊS</b>  CLASSE 1                      PRODUTO LASER DA CLASSE 1 CLASSE 2                      LUZ DE LASER NÃO FIXAR O RAIO LUMINOSO PRODUTO LASER DA CLASSE 2	<b>FRENCH / FRANÇAIS</b>  CLASSE 1                      PRODUIT LASER DE CLASSE 1 CLASSE 2                      LUMIERE LASER NE PAS REGARDER LE RAYON FIXEMENT PRODUIT LASER DE CLASSE 2

## 3 Mounting

### 3.1 Notes of Handling

**The device is factory-sealed. Do not open it!**  
**The device may be opened in the factory only!**



Protect the device from impact effects! Do not expose the equipment to corrosive/aggressive liquids, vapours or mist! Take the equipment out of the hazardous area immediately if it malfunctions or if the enclosure is damaged and bring it into the safe area to put it out of operation!

Put the device out of operation immediately also if you suspect that the operating equipment can no longer be operated safely after harmful effects or general irregularities (e.g. penetration of water, fluids, effect of temperatures outside the specified range etc.).



Recommendation: Don't dry-wipe and clean the device in the hazardous area.

The user may not open the device.

The user may not modify the device in any way. Components may not be changed or replaced. If components other than those specified are used, the explosion-proofness can no longer be assured.

Ensure safe handling of the equipment during operation by making sure the device is in a steady position and the user has sufficient space to move!

After use, the equipment must be placed where it will be sheltered from falling objects and out of danger of falling itself. This must also be ensured even if it is only put down for a short time during a break from work.

## 3.2 Laser Devices

Laser-equipped device products from HAND-HELD Products conform to the US 21 CFR 1040.10 standards as well as EN 60825-1.. The classification of the laser device is specified on a label attached to the device. Class 1 laser devices are classified as not hazardous if used in the manner intended. The following declaration is required to comply with American and international legislation:



**The use of controls, adaptations or the application of procedures that do not agree with the instructions described here can lead to a hazardous exposure to radiation.**

Class 2 laser devices operate with a visible low-voltage light diode. As with any bright source of light, for example the sun, the user should avoid looking directly into the light beam. However, momentary or brief exposure to a Class 2 laser is not considered harmful.

## 3.3 Electromagnetic Fields

### 3.3.1 International

The device meets internationally recognised standards for the exposure of people to electromagnetic fields from radio equipment.

Reduction of high frequency energy - use in accordance with the intended purpose

Use the device only in accordance with the provided instructions.

### 3.3.2 Handheld Devices

To conform to the FCC RF Directives, the cable that is connected to the handheld scanner must be produced with shielding. The cable label must be attached to the housing on the connector or socket.

## 3.4 Health and Safety Recommendations



**Use only accessories approved by BARTEC. All components must be dry before they may be connected to an external power supply.**

## 4 Connection Assignment

### 4.1 Connection to Power Pack Types 17-21BB-1700, 17-21BB-1701 and 17-21BB-1702

In terms of construction the junction box for the type 17-21BB-17xx power pack is identical in all three variants. It consists of an Ex e section (increased safety) and an Ex i section (intrinsic safety). The voltage supply and the data line in the Ex i section of the handheld scanner are connected in the Ex e section.



Attention

**Always disconnect the terminal connection chamber from the voltage supply before opening!**



Danger!

**Ensure disconnection from the voltage supply.**

- (1) Open the junction box
- (2) Run the voltage supply cable and data line into the power pack.
- (3) Run the 4-core shielded cable for the BCS 3800<sup>ex</sup> handheld scanner into the power pack.
- (4) Connect the 4-pin socket to the 4-core shielded end of the cable in accordance with the wiring diagram.
- (5) Lay the 4-core shielded cable for the handheld scanner in the power pack in accordance with the wiring diagram.
- (6) Connect the data line in the power pack in accordance with the wiring diagram.
- (7) Connect the voltage supply cable in the power pack in accordance with the wiring diagram.
- (8) Integrate the power pack in the equipotential bonding in accordance with the installation guideline.
- (9) Connect the handheld scanner to the power pack.
- (10) Check the connections and terminal assignment.
- (11) Close the junction box and hand-tighten the screws.
- (12) Connect the data line to the host system.

- (13) Connect the voltage supply cable to the all-pole mains disconnecting switch and/or fuse.
- (14) Switch on the voltage supply.
- (15) Check if the laser beam comes from the handheld scanner when the trigger is actuated.
- (16) Program the handheld scanner to the interface parameters by means of the bar codes in the programming manual.



**Note**

The maximum length of the connection cable from the power pack to the handheld scanner is 7.9 m

The shielded connection cable from the handheld scanner is 2.1 m long and is included in the scope of supply.

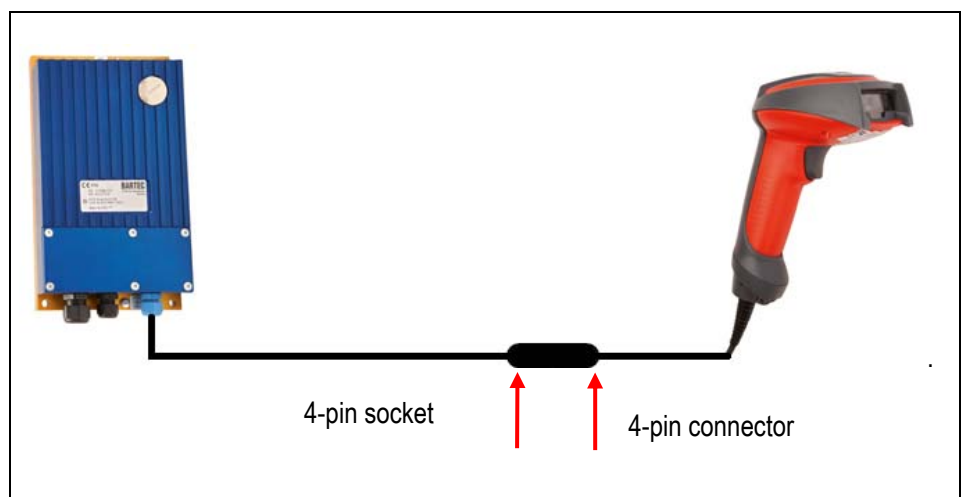


Illustration 4-1: Connection Power Pack to BCS 3800<sup>ex</sup>

#### Permissible connection cable diameters

	Type	Ex protection type	Cable diameter
Cable gland Ex e M20 x 1.5 (black)	ESKE-e20	II 2GD Ex e II	6 – 13 mm
Cable gland Ex e M16 x 1.5 (black)	ESKE-e16	II 2GD Ex e II	4 – 9 mm
Cable gland Ex i M16 x 1.5 (blue)	ESKE-i16	II 2GD Ex e II	4 – 9 mm

## Permissible stripping length and core cross-section for terminals X1 to X13

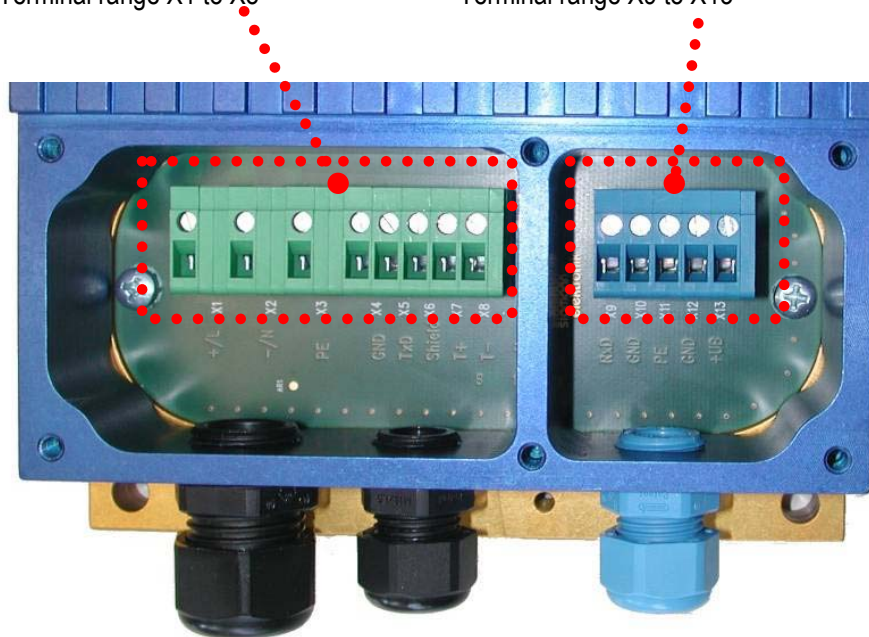
	Stripping length	Cross section min. to max.
Conductor cross-section rigid	9 mm	0.2 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
Conductor cross-section flexible	9 mm	0.2 mm <sup>2</sup> to 2.5 mm <sup>2</sup>
Conductor cross-section flexible with wire end ferrule without plastic cover	9 mm	0.25 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
Conductor cross-section flexible with wire end ferrule with plastic cover	9 mm	0.25 mm <sup>2</sup> to 1.5 mm <sup>2</sup>
Conductor cross-section AWG/kcmil	9 mm	24 to 14

Ex e junction box for connecting the voltage supply and data line

Ex i junction box for connecting the handheld scanner.

Terminal range X1 to X8

Terminal range X9 to X13



Cable glands:

Ex e M20 x 1.5  
Type ESKE-e20

Ex e M16 x 1.5  
Type ESKE-e16

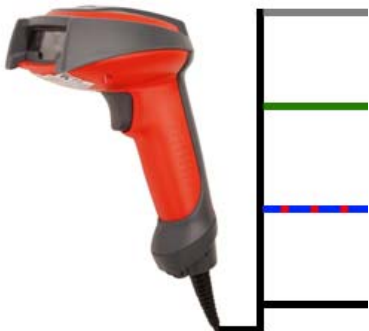
Ex i M16 x 1.5  
Type ESKE-i16

### Ex e junction box

Terminal		Designation
X1	+/L	L = AC 100V to 250 V + = DC 24 V + = DC 12 V
X2	-/N	N = neutral conductor - = minus - = minus internally connected to PE
X3	PE	PE
X4	GND	GND RS-232 internally connected to PE
X5	TxD	TxD RS-232
X6	Shield	Shield RS-232/RS-422 internally connected to PE
X7	T+	T+ RS-422
X8	T-	T- RS-422

### Ex i junction box

Terminal		Designation
X9	RxD	RxD RS-232
X10	GND	GND RS-232 internally connected to PE
X11	PE	Shield internally connected to PE
X12	GND	GND internally connected to PE
X13	+UB	Intrinsically safe output voltage

Handheld scanner with 2.1 m shielded 4-pin connection cable	Core colour	Connector/ socket pin	Designation
	Shield	4	Shield
	Green	3	TxD
	Blue/red	1	+UB
	Black	2	GND

## 4.2 Connection to Power Pack Types 17-21BB-0217 and 17-21BB-0018

The BCS 3800<sup>ex</sup> handheld scanner is the successor to the BCS 302<sup>ex</sup>. The BCS 3800<sup>ex</sup> is constructed to be 1:1 interchangeable with the BCS 3800<sup>ex</sup> in terms of connection to its power packs types 17-21BB-0217 and 17-21BB-0218.

The BCS 3800<sup>ex</sup> programming must still be adapted to the system's interface parameters with the aid of the programming manual.

**Example:** Power pack types 17-21BB-0217 and 17-21BB-0018

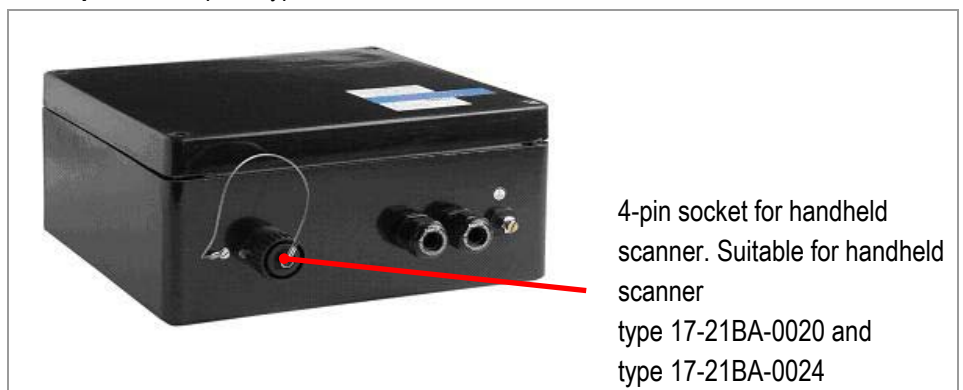


Illustration 4-2: Connection Power Pack to BCS 3800<sup>ex</sup>

## 4.3 Connection to Power Pack Types 17-21BB-0219 and 17-21BB-0020

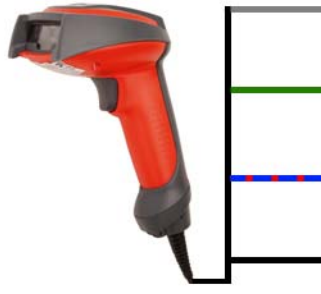
The BCS 3800<sup>ex</sup> handheld scanner is the successor to the BCS 302 Dust<sup>ex</sup>. The construction of the BCS 3800<sup>ex</sup> is such that it is 1 to 1 interchangeable with the BCS 302 Dust<sup>ex</sup> in terms of connection to its power packs types 17-21BB-0219 and 17-21BB-0220.

The BCS 3800<sup>ex</sup> programming must still be adapted to the system's interface parameters with the aid of the programming manual.

**Example:** Power pack types 17-21BB-0217 and 17-21BB-0018



Illustration 4-3: Connection Power Pack to BCS 3800<sup>ex</sup>

Handheld scanner with 2.1 m shielded 4-pin connection cable	Core colour	Connect or socket pin	Terminal no. in the power pack (terminals are blue)	Designation
	Shield	4	Apply equipotential bonding to terminal	Shield
	Green	3	3	TxD
	Blue/red	1	1	+UB
	Black	2	2	GND

#### 4.4 Connection to Supply Module Type 05-0080-0378

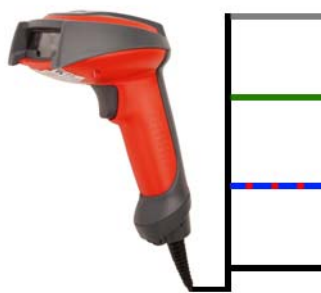
The type 05-0080-0378 supply module is used in the POLARIS series to connect a handheld scanner. The module is suitable for supplying power to the following handheld barcode scanners.

Type 17-21BA-0024/... BCS3800<sup>ex</sup>

Type 17-21BA-0020/.... BCS302<sup>ex</sup>

Type 17-21BA-0022/.... BCS302 Dust<sup>ex</sup>

See the user manual for the POLARIS series for further details on the connection.

Handheld scanner with 2.1 m shielded 4-pin connection cable	Core colour	Connect or socket pin	Terminal no. in POLARIS (terminals are in the Ex i junction box)	Designation
	Shield	4	Apply equipotential bonding to terminal	PA
	Green	3	X2	RxD-I
	Blue/red	1	X1	+UB
	Black	2	X3	GND

## 5 Installation

For electrical systems the relevant installation and operating specifications (e.g. Directives 99/92/EC and 94/9/EC, BetrSichV and the applicable national ordinances, IEC 60 079-14 and the DIN VDE 0100 series) must be observed.

The operator of an electrical system in a hazardous environment must keep the operating equipment in an orderly condition, operate it correctly, monitor it and do the required maintenance and repairs.

Before commissioning the devices, check that all components and documents are there.

(Scope: 1 x BCS 3800<sup>ex</sup>, 1 x Connection cable, 1 x User manual and a CD with the programming manual for the BCS 3800<sup>ex</sup>).

### Software installations

and adjustment possibilities: see HANDHELD Products Manual/User Guide for "3800i Industrial Handheld Linear Imager"



**Caution!**

**Only trained and qualified personnel may commission and do maintenance work on the Handheld Scanner! Trained qualified personnel are people who are familiar with the installation, assembly, commissioning and operation of the Handheld Scanner, have been instructed about the risks and have the appropriate qualifications by virtue of the work they do.**

**The following conditions must be met before the device may be commissioned:**

The device may not be damaged in any way.

Evidence must be furnished on the reliability of the interconnection of the devices with all other operating equipment.

It must be ensured that the device is configured to suit the connected periphery.

**Caution!**

Make sure the handheld scanner is placed on a secure supporting surface. If the possible supporting surface such as e.g. table, trolley, stand or holder is not stable, don't use it.

Take care when laying the connection cable that it will not cause anyone to trip and the handheld scanner to be pulled down as a consequence.

## 5.1 Scanning Technology

The scanner has a red laser beam for aiming at the bar code, which corresponds to its horizontal field of vision. The laser beam should be centred horizontally over the bar code. It will not be able to read the code if the laser beam is pointing in any other direction.

	Correct reading
	Incorrect reading
	Incorrect reading

## 5.2 Software Settings

The scanner is set by means of pre-defined programmable codes. The original manual from HAND-HELD Products for the "Industrial Hand-Held Linear Imager 3800i" can be used for these settings.

Diverse parameters can be set with the programmable codes in this manual

e.g.

the interface parameters for RS-232 or RS-422.

enable, disable and settings for the different bar code types

settings for the scanner such as volume, trigger mode, time out

RESET for resetting the scanner to the factory settings

data editing e.g. prefix and suffix

data format

## 5.3 Resetting to Factory Settings

See Chapter 5.2

The handheld scanner is reset with the aid of the pre-defined HAND-HELD Products programming manual for the "Industrial Hand-Held Linear Imager 3800i".

You will find the default settings in this manual too.

## 6 Commissioning

### 6.1 Handheld Scanner

To ensure that the devices will function perfectly with a long service life, they must be handled carefully. Chapter 5 "Installation" describes how to avoid inappropriate handling (e.g. device falling down, being damaged by objects).



**Danger!**

**The devices may be used only if they are in a technically perfect condition.**

Before you use the handheld scanner for the first time, the system must be installed perfectly and the scanner must be connected to the power pack intended for it (in accordance with chapter 4.1 "Connection to the Power Pack").

### 6.2 Connection to the power pack

Use only power packs and supply modules approved by BARTEC to supply power to the handheld scanner.



**Danger!**

**The use of another power pack invalidates the permit(s) granted for this device, if the Ex technology data is not complied with, and can be dangerous.**

## 6.2.1 Approved power packs and supply modules

Power pack(s) for BCS3800 <sup>ex</sup> :	Connection information:	Interface:	Type number/ certification:
Power pack for BCS3800 <sup>ex</sup> with AC 100 V to 250 V in the version for Zones 1/21	Connected to the socket in the power pack by means of a 4-pin connector. See chapter 4.1 Connection to type 17-21BB-17 0x power packs	RS232 or RS422	17-21BB-1700 IBExU09ATEX1091
Power pack for BCS3800 <sup>ex</sup> with DC 24V in the version for Zones 1/21	Connected to the socket in the power pack by means of a 4-pin connector. See chapter 4.1 Connection to type 17-21BB-17 0x power packs	RS232 or RS422	17-21BB-1701 IBExU09ATEX1091
Power pack for BCS3800 <sup>ex</sup> with DC 12 V in the version for Zones 1/21	Connected to the socket in the power pack by means of a 4-pin connector. See chapter 4.1 Connection to type 17-21BB-17 0x power packs	RS232 or RS422	17-21BB-1702 IBExU09ATEX1091
<b>Compatible power pack(s) of predecessor models for BCS3800<sup>ex</sup>:</b>			
TTY power pack (polyester enclosure) for the BCS302 <sup>ex</sup> in the version for Zone 1	Connected to the socket in the power pack by means of a 4-pin connector. See chapter 4.2 Connection to power pack types 17-21BB-0217 and 17-21BB-0018	TTY	17-21BB-0217 PTB 97 ATEX 1068 U PTB 02 ATEX 1159 PTB 01 ATEX 1014 U
Power pack RS232 (polyester enclosure) for the BCS302 <sup>ex</sup> in the version for Zone 1	Connected to the socket in the power pack by means of a 4-pin connector. See chapter 4.2 Connection to power pack types 17-21BB-0217 and 17-21BB-0018	RS232	17-21BB-0218 PTB 97 ATEX 1068 U PTB 02 ATEX 1159 PTB 01 ATEX 1014 U
TTY power pack (polyester enclosure) for the BCS302 <sup>ex</sup> in the version for Zones 1/21. Caution: Scanner is permanently connected!	Remove the 4-pin connector and connect it directly to the terminals in the power pack. See chapter 4.3 Connection to power pack types 17-21BB-0219 and 17-21BB-0020	TTY	17-21BB-0219 PTB 97 ATEX 1068 U IBExU00ATEX1079 PTB 01 ATEX 1014 U
TTY power pack (polyester enclosure) for the BCS302 <sup>ex</sup> in the version for Zones 1/21 Caution: Scanner is permanently connected!	Remove the 4-pin connector and connect it directly to the terminals in the power pack. See chapter 4.3 Connection to power pack types 17-21BB-0219 and 17-21BB-0020	RS232	17-21BB-0220 PTB 97 ATEX 1068 U IBExU00ATEX1079 PTB 01 ATEX 1014 U
<b>Supply module for Polaris and BAT series:</b>			
Interface converter installation module for connecting the BCS302 <sup>ex</sup> and BCS3800 <sup>ex</sup> to the Polaris series.	Remove the 4-pin connector and connect it directly to the terminals in the power pack. See chapter 4.4 Connection to supply module type 05-0080-0378	RS232 (internally occupies a COM interface in the Polaris)	05-0080-0378 IBExU03ATEX1148 U

**Use only power packs and supply modules approved by BARTEC to supply power to the handheld scanner.**

## 7 Maintenance, Inspection, Repair



Caution!

Only trained and qualified personnel may commission and do maintenance work on the Handheld Scanner! Trained qualified personnel are people who are familiar with the installation, assembly, commissioning and operation of the Handheld Scanner, have been instructed about the risks and have the appropriate qualifications by virtue of the work they do.

### Maintenance intervals

The mechanical status of the devices should be checked at regular intervals. The length of the maintenance intervals depends on the ambient conditions. We recommend checking at least once a year. Regular maintenance is not necessary if operated appropriately in conformance with the installation instructions and with due consideration to the ambient conditions.

### Inspektion

Under IEC 60079-19 and EN 60079-17, the owner/managing operator of electrical installations in hazardous areas is obliged to have these installations checked by a qualified electrician to ensure that they are in a proper condition.

### Servicing

Adhere to the applicable regulations under Directive 99/92/EC, IEC 60079-19 and IEC 60079-17 when servicing, doing maintenance work on and testing associated operating equipment!

Assembly/disassembly, operating and maintenance work may be done only by trained specialists. The statutory rules and other binding directives on workplace safety, accident prevention and environmental protection must be observed.

Observe the national waste disposal regulations when disposing of the equipment.

**Instructions for Repairs**

If you wish to send in a defective device for repair, please read the RMA procedure guidance first. Then fill in and sign the RMA (Return Merchandise Authorisation) form and send it to our "Retouren Center".

Email: [services@bartec.de](mailto:services@bartec.de)

Fax: +49 7931 597-119

We cannot guarantee any contractually agreed processing times for devices that are sent in without an RMA number.

The RMA guide and the RMA form are available on our homepage for downloading.

<http://www.bartec-group.de>

Quality and culture

RMA form

Have you any questions? Write us an e-mail or call us.

E-mail: [services@bartec.de](mailto:services@bartec.de)

Phone: +49 7931 597-444

## 8 Dispatch and Packaging Instructions

**Important information regarding transport and dispatch****! Sensitive Devices!**

**It is essential to send in the device in the original packaging to prevent damage to the device.**

Erklärung der Konformität  
Declaration of Conformity  
Attestation de conformité

N° 11-21BA-7C0006

**BARTEC**

BARTEC GmbH  
Max-Eyth-Straße 16  
97980 Bad Mergentheim  
Germany



Wir

**BARTEC GmbH,**

erklären in alleiniger Verantwortung, dass das Produkt

We

declare under our sole responsibility that the product

Nous

attestons sous notre seule responsabilité que le produit

Handscanner  
BCS 3800<sup>ex</sup>

Hand scanner  
BCS 3800<sup>ex</sup>

Lecteur de codebarres  
BCS 3800<sup>ex</sup>

Typ-Nr.: 17-21BA-0024/....

auf das sich diese Erklärung bezieht den Anforderungen der folgenden Richtlinien (RL) entspricht

**ATEX-Richtlinie  
94/9/EG**

**RoHS-Richtlinie  
2002/95/EG**

**Kennzeichnung**



II 2G Ex ib IIC T4



II 2D Ex ibD21 T135 °C  
-20°C ≤ Ta ≤ +50°C

**Verfahren der EG-Baumusterprüfbescheinigung**

**IBExU 09 ATEX 1060**

**CE0044**

to which this declaration relates is in accordance with the provision of the following directives (D)

**ATEX-Directive  
94/9/EC**

**RoHS-Directive  
2002/95/EC**

**Marking**

se référant à cette attestation correspond aux dispositions des directives (D) suivantes

**ATEX-Directive  
94/9/CE**

**RoHS-Directive  
2002/95/CE**

**Marquage**

**Procédure d'examen  
CE de type**

Bad Mergentheim, den 22.07.2009

ppa. Ewald Warmuth  
Geschäftsleitung / General Manager



