BALLUFF

sensors worldwide

Balluff BVS HS-PB
Industrial Cordless Handheld Barcode Reader

Quick Guide



english

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1 END USER SOFTWARE LICENSE AGREEMENT (EULA)

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1 END USER SOFTWARE LICENSE AGREEMENT (EULA)

FOR THE BVS HS-P Series

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2 Description

2 Description

The Balluff BVS HS-PB reader is a feature-rich and rugged area imager. It is offered in several different models to better fit the different needs of each customer.

The table below shows the unique features of each model:

Model P/N	Optical feature
BVS HS-PB-HDW-MZ-01	Autofocus optic, High, standard and low density codes, wide angle
BVS HS-PB-DPW-MZ-01	High Density optic, high and medium density codes, DPM (laser, ink jet and dot peen)

2.1 General Features

Omni-directional Operating	To read a symbol or capture an image, you simply aim the reader and pull the trigger. Since the Balluff BVS HS-PB reader is a powerful omni-directional reader, the orientation of the symbol is not important.
Decoding	Thanks to powerful algorithms, Balluff BVS HS-PT reader reliably decodes all major 1D (linear) barcodes, 2D stacked codes (such as PDF417), 2D matrix symbols (such as DataMatrix), postal codes (such as POSTNET, PLANET). The data stream — acquired from decoding a symbol — is rapidly sent to the host. The reader is immediately available to read another symbol.
Formatting and Concatenating	The string of a decoded code may be processed according to either a simple or advanced data formatting and be concatenated.
Imaging	Balluff BVS HS-PB reader can also function as a camera by capturing entire images (valid only for RS-232 and USB-COM on the Base Station).
Autoscanning	An autoscan command causes the reader to scan continuously and to monitor the central zone of its reading area.
Flash Memory	Flash technology allows you to upgrade the Balluff BVS HS-PB reader as new symbologies are supported or as new features become available.

3 Using the Balluff BVS HS-PB reader

The Balluff BVS HS-PB reader normally functions by capturing and decoding barcodes. The reader is equipped with an internal motion-sensing function which activates the aiming system on device motion. The intelligent aiming system indicates the field of view which should be positioned over the barcode:

Aiming System

Model P/N	Aimer pattern
BVS HS-PB-DPW-MZ-04	
BVS HS-PB-HDW-MZ-03	

The field of view indicated by the aiming system will be smaller when the reader is closer to the barcode and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit.

If the entire barcode is within the aiming field, you will get a good read. Successful reading is signaled by an audible tone plus a good-read green spot LED indicator which is backprojected at the read code.

Reference the BVS HS-P series operation manual (OPM) for more information about this feature and other programmable settings.

4 Installing the Battery Pack

4 Installing the Battery Pack

To install, charge and/or do any other action on the battery, follow the instructions in this manual.



NOTE

To charge the Battery Pack, See “Charging the Batteries” on page 12.
Balluff recommends annual replacement of rechargeable battery packs to ensure maximum performance.



WARNING

Do not discharge the battery using any device except for the scanner. When the battery is used in devices other than the designated product, it may damage the battery or reduce its life expectancy. If the device causes an abnormal current to flow, it may cause the battery to become hot, explode or ignite and cause serious injury.
Lithium-ion battery packs may get hot, explode or ignite and cause serious injury if exposed to abusive conditions. Be sure to follow the safety warnings that follow:

- Do not place the battery pack in fire or heat.
- Do not connect the positive terminal and negative terminal of the battery pack to each other with any metal object (such as wire).
- Do not carry or store the battery pack together with metal objects.



WARNING

- Do not pierce the battery pack with nails, strike it with a hammer, step on it or otherwise subject it to strong impacts or shocks.
- Do not solder directly onto the battery pack.
- Do not expose the battery pack to liquids, or allow the battery to get wet.
- Do not apply voltages to the battery pack contacts.

In the event the battery pack leaks and the fluid gets into your eye, do not rub the eye. Rinse well with water and immediately seek medical care. If left untreated, the battery fluid could cause damage to the eye.

4 Installing the Battery Pack



CAUTION

Always charge the battery at 0° - 45°C temperature range.
Use only the authorized power supplies, battery pack, chargers, and docks supplied by your Balluff reseller. The use of any other power supplies can damage the device and void your warranty.
Do not disassemble or modify the battery. The battery contains safety and protection devices, which, if damaged, may cause the battery to generate heat, explode or ignite.
Do not place the battery in or near fire, on stoves or other high temperature locations.
Do not place the battery in direct sunlight, or use or store the battery inside cars in hot weather. Doing so may cause the battery to generate heat, explode or ignite. Using the battery in this manner may also result in a loss of performance and a shortened life expectancy.
Do not place the battery in microwave ovens, high-pressure containers or on induction cookware.
Immediately discontinue use of the battery if, while using, charging or storing the battery, the battery emits an unusual smell, feels hot, changes color or shape, or appears abnormal in any other way.



CAUTION

Do not replace the battery pack when the device is turned on.
Do not remove or damage the battery pack's label.
Do not use the battery pack if it is damaged in any part. Battery pack usage by children should be supervised.

As with other types of batteries, Lithium-Ion (LI) batteries will lose capacity over time. Capacity deterioration is noticeable after one year of service whether the battery is in use or not. It is difficult to precisely predict the finite life of a LI battery, but cell manufacturers rate them at 500 charge cycles. In other words, the batteries should be expected to take 500 full discharge / charge cycles before needing replacement. This number is higher if partial discharging / recharging is adhered to rather than full / deep discharging.

The typical manufacturer advertised useful life of LI batteries is one to three years, depending on usage and number of charges, etc., after which they should be removed from service, especially in mission critical applications. Do not continue to use a battery that is showing excessive loss of capacity, it should be properly recycled / disposed of and replaced. For most applications, batteries should be replaced after one year of service to maintain customer satisfaction and minimize safety concerns.

Collect and recycle waste batteries separately from the device in comply with European Directive 2006/66/EC, 2011/65/EU, 2002/96/EC and 2012/19/EU and subsequent modifications, US and China regulatory and others laws and regulations about the environment.

4 Installing the Battery Pack

4.1 Charging the Batteries

Once the BAM MD-VS-001 base station (cradle) is powered, you can charge the reader's batteries. Place the BVS HS-PB reader into the cradle. The Reader LED on the cradle/battery charger turns red.

The battery is completely charged when the Reader LED on the cradle/battery charger turns green.

The battery can also be charged in the spare battery slot (BAM MD-VS-001-0003 models only) or using the Multi Battery Charger accessory.



4 Installing the Battery Pack

4.1.1 Changing the Batteries

1 Push the button at the bottom of the handle as shown to release the battery.

2 Pull down to remove the battery.





WARNING

Do not incinerate, disassemble, short terminals or expose to high temperature. Risk of fire, explosion. Use specified charger only. Risk of explosion if the battery is replaced by an incorrect type. Dispose of the batteries as required by the relevant laws in force.

5 Programming

The reader is factory-configured with a set of standard default features. Customize your reader through use of the programming barcodes available in the BVS HS-PB series. Check the corresponding features section for your interface, and also the Data Editing and Symbologies chapters of the OPM.

5.1 Using Programming Barcodes

This manual contains barcodes which allow you to reconfigure your reader. Some programming barcode labels, like the , require only the scan of that single label to enact the change.

Other barcodes require the reader to be placed in Programming Mode prior to scanning them. Scan an ENTER/EXIT barcode once to enter Programming Mode; scan the desired parameter settings; scan the ENTER/EXIT barcode again to accept your changes, which exits Programming Mode and returns the reader to normal operation.

5.2 Configure Other Settings

Additional programming barcodes are available in the OPM to allow for customizing programming features. If your installation requires different programming than the standard factory default settings, refer to the OPM.

5.3 Resetting Product Defaults

If you aren't sure what programming options are in your reader, or you've changed some options and want your custom factory settings restored, scan the barcode below to reset the reader to initial configuration. See the OPM for other options, and a listing of standard factory settings.



NOTE

Factory defaults are based on the interface type. Be sure your reader is configured for the correct interface before scanning this label.



Reset Default Settings

6 Set Date and Time

6 Set Date and Time

1 Scan the Enter/Exit Programming barcode below to set date and time.



ENTER/EXIT PROGRAMMING MODE

2 Scan the Set Date barcode + six digits for Year, Month and Day (YYMMDD) from the "Hex-Numeric Keypad" on page 53.



Set Date

3 Scan Set Time + six digits for Hours, Minutes and Seconds (HHMMSS) from the "Hex-Numeric Keypad" on page 53.



Set Time

4 Scan the Enter/Exit Programming barcode to complete.

7 Linking the Reader

7.1 Link Balluff RF Devices to Base

For RF devices, before configuring the interface it is necessary to link the handheld with the base.

To link the handheld and the base, press the trigger to wake up the handheld and mount it into the base. If the reader was previously linked to another base, you must first press and hold the button on the base (>5 seconds), then scan the Unlink barcode before re-linking to the new base.



Unlink

7.2 Linking to a Bluetooth Adapter in Serial Port Profile (Slave) Mode

1. Install any drivers provided with the Bluetooth adapter.
2. Scan the Enable RF Link to Server label below to make the scanner visible to the host computer.
3. Use the host computer's Bluetooth manager to "Discover new devices" and select "Balluff Scanner." If you receive an error message, it may be necessary to disable security on the device.
4. Use an RS-232 terminal program to see incoming data on the port designated by the computer's Bluetooth manager.



Enable RF Link to Server

7 Linking the Reader

7.3 Linking to a Bluetooth Adapter in HID mode

1 Install any drivers provided with the Bluetooth adapter.

2 Scan the Link to PC in HID label below.

3 Use the host computer's Bluetooth manager to "Discover new devices" and select "Balluff Scanner." If you receive an error message, it may be necessary to disable security on the device.

4 Use a text editor to see incoming data on the port designated by the computer's Bluetooth manager.

Link to PC in HID



NOTE

The BVS HS-PB reader can be set up to require a PIN code when connecting. If you want to set up a PIN, or when adding new equipment to a system that uses a custom security PIN, please see the OPM for information.

7 Linking the Reader

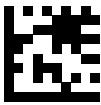
7.4 Variable PIN Code

Some Bluetooth drivers on the Host (such as WIDCOMM and Blue-Soleil 8) require a Variable PIN Code. When attempting connection, the application presents a window that includes a PIN Code which is to be input using the BVS HS-PB reader. Please read the barcode "Variable PIN Code" and restart the sequence from step 2 above.



Variable PIN Code

When you hear the beep and see the Green LED blinking indicating the reader is waiting for an alphanumeric entry, enter the required variable PIN Code by scanning the corresponding barcodes in the "Hex-Numeric Keypad" section at the back of this manual for alphanumeric entry. Finish by scanning the Exit HID Variable PIN Code label.



Exit HID Variable PIN Code

8 HID Country Mode

8 HID Country Mode

When the Reader is connected with a Bluetooth Adapter in HID mode, you may want to set the country for which your PC is localized. In order to do that, read one of the configuration command labels below.

HID COUNTRY MODE
 ENTER/EXIT PROGRAMMING MODE
 Country Mode = U.S.
 Country Mode = Belgium
 Country Mode = Britain
 Country Mode = Croatia

8 HID Country Mode

HID COUNTRY MODE (continued)
 Country Mode = Czech Republic
 Country Mode = Denmark
 Country Mode = France
 Country Mode = French Canadian
 Country Mode = Germany
 Country Mode = Hungary

8 HID Country Mode

HID COUNTRY MODE (continued)
 Country Mode = Italy
 Country Mode = Japanese 106-key
 Country Mode = Lithuanian
 Country Mode = Norway
 Country Mode = Poland
 Country Mode = Portugal

8 HID Country Mode

HID COUNTRY MODE (continued)
 Country Mode = Romania
 Country Mode = Spain
 Country Mode = Sweden
 Country Mode = Slovakia
 Country Mode = Switzerland

9 HID Caps Lock State

9 HID Caps Lock State

This option specifies the format in which the reader sends character data.



ENTER/EXIT PROGRAMMING MODE



♦ Caps Lock State = Caps Lock OFF



Caps Lock State = Caps Lock ON



Caps Lock State = AUTO Caps Lock Enable

10 HID Alt Mode

10 HID Alt Mode

Read the configuration command label below for the HID Alt Mode feature.



ENTER/EXIT PROGRAMMING MODE



♦ HID Alt Mode = OFF



HID Alt Mode = ON

11 Power Off

11 Power Off

Scan the barcode below to shut off power to the BT handheld until the next trigger pull.



PowerOff

12 Reading Parameters

12 Reading Parameters

Move the reader toward the target and center the aiming pattern and illumination system to capture and decode the image. See "Using the Balluff BVS HS-PB reader" on page 9 for more information.

The aiming system will briefly switch off after the acquisition time, and if no code is decoded will switch on again before the next acquisition. The illuminator will remain on until the symbol is decoded.

As you read code symbols, adjust the distance at which you are holding the reader.

12.1 Good Read Green Spot Duration

Successful reading can be signaled by a good read green spot. Use the barcodes that follow to specify the duration of the good read pointer beam after a good read.



ENTER/EXIT PROGRAMMING MODE



Disabled



♦ Short (300 ms)



Medium (500 ms)



Long (800 ms)

13 Operating Modes

13.1 Scan Mode

The imager can be set to operate in one of several scanning modes. See the OPM for more information and settings for any of the options:

Trigger Single (Default) — When the trigger is pulled, scanning is activated until one of the following occurs:

- a programmable duration[1] has elapsed
- a label has been read
- the trigger is released

Trigger Hold Multiple — When the trigger is pulled, scanning starts and the product scans until the trigger is released or "maximum scan on time"[1] has elapsed. Reading a label does not disable scanning. Double Read Timeout[1] prevents undesired multiple reads in this mode.

Trigger Pulse Multiple — When the trigger is pulled and released, scanning is activated until programmable duration[1] has elapsed or the trigger has been pulled again to transition to another state. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

Flashing — The reader flashes[1] on and off regardless of the trigger status.

Always On — No trigger pull is required to read a barcode. Scanning is continually on. If the trigger is pulled, the reader acts as if it is in Trigger Single (Default) Mode. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

Stand Mode — No trigger pull is required to read a barcode. Scanning is turned on automatically when an item is placed in reader's field of view. If the trigger is pulled, the reader acts as if it is in Single Read mode. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

1. See the Operational Manual (OPM) for more information

13 Operating Modes



ENTER/EXIT PROGRAMMING MODE



♦ Scan Mode = Trigger Single



Scan Mode = Trigger Pulse Multiple



Scan Mode = Trigger Hold Multiple



Scan Mode = Flashing



Scan Mode = Always On



Scan Mode = Stand Mode

13.2 Motion Aiming Control

This feature configures the ability of the scanner to Enable/Disable the Aiming system when motion is detected. Scan the Enter/Exit Programming barcode above, then either of the barcodes below.



♦ Motion Aiming Control = Enable



Motion Aiming Control = Disable

13 Operating Modes

13.3 Pick Mode

Pick Mode is a Decoding and Transmission process where barcodes that are not within the configurable distance from the center of the aiming pattern are not acknowledged or transmitted to the host. It is active only in Trigger Single mode. If the scanner switches to a different Read Mode, Pick Mode is automatically disabled.



NOTE

This feature is not compatible with Multiple Labels Reading in a Volume. See the OPM for more information.



ENTER/EXIT PROGRAMMING MODE



♦ Pick Mode = Disable



Pick Mode = Enable

13.4 Multiple Label Reading

The reader offers a number of options for multiple label reading. See the OPM or software configuration tool for descriptions of these features and programming labels.

14 Technical Specifications

14 Technical Specifications

The following tables contain Physical and Performance Characteristics, User Environment and Regulatory information.

Item	Description
PHYSICAL CHARACTERISTICS	
Dimensions	Height: 212 mm Length: 110 mm Width: 74 mm
Weight	395 g
ELECTRICAL CHARACTERISTICS	
Battery Type	Li-Ion battery pack, 2150 mAh
Charge time for full charge from full discharge	4 hours with external power supply adapter[a]
	Typical 10 hours with Host power (in this case no supply adapter is needed)[a]
Operating autonomy (continuous reading)	30,000 reads (typical)
Operating voltage cradle	External Power Supply: 10-30 Volt DC USB: 5 Volt DC ±10%
Operating current (cradle)	Charging: 800 mA @10 V DC (Ext. Power) 500 mA @ 5 V DC (USB) Operation: 150 mA @10 V DC

a. Charge Times are much lower when battery is within daily typical operating condition.

PERFORMANCE CHARACTERISTICS	
Light Source	Aiming: Laser, Class 2, Red Illumination: LED, white
Roll (Tilt) Tolerance	± 180°
Pitch Tolerance	± 40°
Skew (Yaw) Tolerance	± 40°
Print Contrast Minimum	15% minimum reflectance
Reading Indications	Beeper, 2x LED green; green light projection on the code

14 Technical Specifications

Item	Description
Resolution	1D 2.5 mil 2D 4 mil
Reading distances[a]	
Code 39	2.5 mils: 2-6 cm 20 mils: 3-70 cm 40 mils: 3-110 cm
EAN 13	13 mils: 3-60 cm
PDF-417	10 mils: 2-30 cm
DataMatrix	4 mil: 2-6 cm 10 mil: 2-20 cm

a. All labels grade A,300 lux ambient light, 20°C, label inclination 10°
The following specs represent standard barcodes that are traditionally printed black on white on paper labels. Reading distances for DPM may vary depending from the printing technology , the code type and the surface material the DPM is used on

14 Technical Specifications

Decode Capability	
1D Barcodes GS1 Databar linear codes, UPC/EAN (A,E,13,8), UPC/EAN with P2/P5 Addons, UPC/EAN Coupons, ISBN, Code128, EAN128, ISBT128, Code39, Code39 Full ASCII, Code39 CIP, Code 32, Codabar, Interleaved 2 of 5, IATA, Industrial 2 of 5, Standard 2 of 5, Code11, MSI, Plessey, Code 93, Follet 2/5	
2D / Stacked Codes DataMatrix, MaxiCode and QR Codes (QR, Micro QR and Multiple QR codes), Aztec	
Postal codes including: Australian Post, China Post, Japanese Post, KIX Post, Planet Code, Postnet, Royal Mail Code(RM45CC), IMB	
Stacked Codes EAN/JAN Composites; GS1 Databar Composites, GS1 Databar Expanded Stacked; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; MacroPDF; Micro PDF417; PDF417; UPC A/E Composites, French CIP13, Grid Matrix(Chinese) code	
2D Codes DataMatrix, MaxiCode and QR Codes (QR, Micro QR and Multiple QR codes), Aztec Code, China Han Xin Code	
DIRECT PART MARKING (DPM) CAPABILITY: BVS HS-PB-DPW: Codes are generally readable when marked by laser or chemical etching or ink jet printed; Data Matrix codes are also readable when marked by dot peening on flat materials. Any codes needs to be tested for reliable reading. BVS HS-PB-HDW: NONE	
Interfaces Supported	RS-232, USB and Bluetooth.
USER ENVIRONMENT	
Operating Temperature	-20° to +50° C
Storage Temperature	-40° to +70° C
Humidity	0 to 95% non-condensing
Drop Specifications	Scanner withstands >50 times 2 m drops to concrete
Ambient Light Immunity	100,000 Lux
Contaminants: Spray/rain, Dust/particulates	IP65
ESD Level	20 KV
Beeper/Speaker volume	>= 80 dB @ 10 cm

14 Technical Specifications

REGULATORY	
Electrical Safety	UL 60950, CSA C22.2 No. 60950, IEC 60950
EMI/RFI	North America (FCC) : Canada (IC); Russia (Gost); European Union R&TTE Directive; Japan; Korean KCC; Taiwan; Australia; Mexico
Laser Class Safety	IEC Class 2 Radiation 1 mW Avg., Emitted wavelength 650 nm, 12ms pulse, Beam Divergence 8.4 deg x 8.1 deg (“plus” pattern)
LED Classification	IEC 62471 Class 1 LED
BLUETOOTH FEATURES	
Protocol	Bluetooth 3.0 Compliant, Class 1
Frequency working center	2400 to 2483.5 MHz
Range (in open air)	up to 100m[a]
Max number of devices per base station	4

a. Range distances are measured using the base station. Range with connection to other Bluetooth peripherals may show different results.

15 LED and Beeper Indications

15 LED and Beeper Indications

The reader's beeper sounds and its LED illuminates to indicate various functions or errors on the reader. The green LED Spot backprojected on the code provides a reliable feedback to the user. The following tables list these indications. One exception to the behaviors listed in the tables is that the reader's functions are programmable, and so may or may not be turned on. For example, certain indications such as the power-up beep can be disabled using programming barcode labels.

Normal Operating Indicators

INDICATION	DESCRIPTION	LED	BEEPER
Power-up Beep	The reader is in the process of powering-up.	N/A	Reader beeps four times at highest frequency and volume upon power-up.
Good Read Beep	A label has been successfully scanned by the reader.	LED behavior is configurable via the feature "Good Read: When to Indicate" (see the OPM for information.)	The reader will beep once at current frequency, volume, tonal setting and duration upon a successful label scan.
Green LED Spot[a] flashes momentarily	Upon successful read of a label, the software turns the green spot on for the time specified	N/A	N/A
Image Capture	When ready to capture image	Blue light flashes 2 times when updating	N/A

a Except when in sleep mode or when a Good Read LED Duration other than 00 is selected

15 LED and Beeper Indications

Error Indicators

INDICATION	DESCRIPTION	LED	BEEPER
Link Attempt	The reader is trying to link to the base	Slow Flashes	N/A
Configuration Alignment	Reader and Base are aligning the parameters' configuration	Fast Flashes	N/A
Link	The reader has successfully linked to the base	N/A	3 beeps of ascending frequency
Unlink	The reader has unlinked from the base	N/A	3 beeps of descending frequency
ROM Failure	There is an error in the reader's software/programming	Flashes	Reader sounds one error beep at highest volume.
Limited Scanning Label Read	Indicates that a host connection is not established.	N/A	Reader 'chirps' six times at the highest frequency and current volume.
Reader Disabled	The reader has been disabled by the host.	The LED blinks continuously	N/A

15 LED and Beeper Indications

Programming Mode - The following indications ONLY occur when the reader is in Programming Mode.

INDICATION	DESCRIPTION	LED	BEEPER
Label Programming Mode Entry	A valid programming label has been scanned.	LED blinks continuously	Reader sounds four low frequency beeps.
Label Programming Mode Rejection of Label	A label has been rejected.	N/A	Reader sounds three times at lowest frequency and current volume.
Label Programming Mode Acceptance of Partial Label	In cases where multiple labels must be scanned to program one feature, this indication acknowledges each portion as it is successfully scanned.	N/A	Reader sounds one short beep at highest frequency and current volume.
Label Programming Mode Acceptance of Programming	Configuration option(s) have been successfully programmed via labels and the reader has exited Programming Mode.	N/A	Reader sounds one high frequency beep and 4 low frequency beeps followed by reset beeps.
Label Programming Mode Cancel Item Entry	Cancel label has been scanned.	N/A	Reader sounds two times at low frequency and current volume.

16 Error Codes

16 Error Codes

Upon startup, if the reader sounds a long tone, this means the reader has not passed its automatic Selftest and has entered FRU (Field Replaceable Unit) isolation mode. If the reader is reset, the sequence will be repeated. Press and release the trigger to hear the FRU indication code.

The following table describes the LED flashes/beep codes associated with an error found.

Number of LED Flashes/Beeps	Error	Corrective Action
1	Configuration	Contact Helpdesk for assistance
2	Interface PCB	
6	Digital PCB	
11	Imager	

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850012614 Rev. A June 2015

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All contact should be to us.

Disclaimer

Datalogic has taken reasonable measures to provide information in this manual that is complete and accurate, however, Datalogic reserves the right to change any specification at any time without prior notice.

Datalogic and the Datalogic logo are registered trademarks of Datalogic S.p.A. in many countries, including the U.S.A. and the E.U. All other brand and product names may be trademarks of their respective owners.

Patents

See www.patents.datalogic.com for patent list.

This product is covered by one or more of the following patents:

Design patents: AU344427, AU344428, AU344429, EP001970237, EP002109371, TWD159476, TWD159477, TWD160254, TWD160255, USD682277, USD702238, ZL201230284676.X, ZL201330082835.2

Utility patents: EP0996284B1, EP0999514B1, EP1128315B1, EP1172756B1, EP1396811B1, EP1413971B1, EP1828957B1, EP1873886B1, JP4435343B2, US6478224, US6512218, US6513714, US6561427, US6808114, US6877664, US6997385, US7053954, US7234641, US7387246, US7721966, US7948214, US8245926, US8561906, US8743263, ZL200780030808.2.

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17.1 Regulatory Information

All models are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Any changes or modifications to equipment, not expressly approved by Datalogic could void the user's authority to operate the equipment.

Statement of Agency Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Class B Compliance Statement



Exposure to Radio-Frequency Radiation

CAUTION

To comply with FCC RF exposure compliance requirements, for mobile configurations, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.



The PowerScan™ Handheld Reader is not user-serviceable. Opening the case of the unit can cause internal damage and will void the warranty.

CAUTION

Cofetel Mexico Update

Este Producto es usable en México
Certificado Nr. RCPDADL09-1251 (COFETEL)

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

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Customs Union

The CU conformity certification has been achieved; this allows the Product to bear the Eurasian mark of conformity.

EAC

NCC Statement:

根據 NCC 低功率電波輻射性電機管理辦法 規定：	
第十二條	經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者 均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條	低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有 干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項 合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須 忍受合法通信或工業、科學及醫療用電波輻射性電 機設備之干擾。

本模組於取得認證後，將依規定於模組本體標示審驗合格標籤，並要求平台廠商 於平台上標示 『本產品內含發射器模組：

CCAJ14LP0060T3

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Korean Statement

전기안전관리법의 의한 표기사항

YU12254-14002

1. 제품명칭 : 전지(리튬이온전지)
2. 모델명 : BT-1
3. 정 격 : 3.7 Vdc, 2 100 mAh
4. 제조자딩 : Shenzhen Bak Technology Co., Ltd
5. 신고 인 : Shenzhen Bak Technology Co., Ltd
6. 제조국 : 중국
7. 제조년월 : 2014-04
8. 아프터서비스연락처 : 데이터로직에이디씨싱가포르피티이엘티디 한국사무소

02-3281-9296

Anatel (Brazil conformity)

Modelo PBT9500
Base carregadora BC9030-BT, BC9130-BT, BC9180-BT

ANATEL
Agência Nacional de Telecomunicações
0322-14-4727
(01)07898916345079

"Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário."

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CHINA ROHS TABLE OF RESTRICTED ELEMENTS (SCANNER)

		Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
		有毒有害物质或元素					
PART	部件名称	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
Printed Circuit Board Assembly	电路板组件	X	O	O	O	O	O
Assy, Optics Block	光学组件	X	O	O	O	O	O
Assy, Module	光学组件	X	O	O	O	O	O

O：代表此种部件的所有均质材料中所含的该种有毒有害物质均低于中华人民共和国信息产业部所颁布的《电子信息产品中有毒有害物质的限量要求》(SJ/T 11363-2006) 规定的限量。

X：代表此种部件所用的均质材料中，至少有一类材料其所含的有毒有害物质高于中华人民共和国信息产业部所颁布的《电子信息产品中有毒有害物质的限量要求》(SJ/T 11363-2006) 规定的限量

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CHINA ROHS TABLE OF RESTRICTED ELEMENTS (BASE)

PART	部件名称	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
		有毒有害物质或元素					
		铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
Printed Circuit Board Assembly	电路板组件	X	O	O	O	O	O
Assy, Module	光学组件	X	O	O	O	O	O

O：代表此种部件的所有均质材料中所含的该种有毒有害物质均低于中华人民共和国信息产业部所颁布的《电子信息产品中有毒有害物质的限量要求》(SJ/T 11363-2006) 规定的限量。

X：代表此种部件所用的均质材料中，至少有一类材料其所含的有毒有害物质高于中华人民共和国信息产业部所颁布的《电子信息产品中有毒有害物质的限量要求》(SJ/T 11363-2006) 规定的限量

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17.2 WEEE Statement



Waste Electrical and Electronic Equipment (WEEE) Statement

English

Our BVS HS-P and BVS HS-Q series handheld readers are only intended for commercial use as B2B devices as per the WEEE Directive. The WEEE Directive, valid across the EU, is a standard defining how waste electrical equipment has to be handled.

For you, this means that the handheld readers must not be disposed of in normal household waste or taken to a collection point of public waste disposal authorities.

In the event of disposal, you can return the handheld reader to us. We will then ensure it is recycled in accordance with the applicable legal requirements.

For your return shipment, please use our RMA process, which you will find on our website.

We are unable to reimburse costs for shipping/packaging.

If the handheld reader to be returned is type BVS HS-QB or BVS HS-PB, the internationally valid shipping regulations for lithium-ion batteries must be observed.

German

Unsere Handheld Reader der BVS HS-P bzw. BVS HS-Q Baureihe sind ausschließlich für den gewerblichen Gebrauch vorgesehen als sog. B2B-Geräte gemäß der WEEE-Richtlinie.

Die EU-weit gültige WEEE-Richtlinie definiert einheitlich wie Elektro-Altgeräten behandelt werden müssen.

Für Sie bedeutet das, dass die Handheld Reader weder über den normalen Hausmüll entsorgt, noch bei einer Sammelstelle eines öffentlich-rechtlichen Entsorgungsträger abgeben werden dürfen. Im Falle einer Entsorgung können Sie die Handheld Reader an uns zurücksenden.

Wir stellen dann die Verwertung nach den jeweils geltenden gesetzlichen Vorschriften sicher.

Für die Rücksendung verwenden Sie bitte unseren RMA-Prozess, den Sie auf unserer Webseite finden.

Die Kosten für Versand/Verpackung können wir nicht erstatten. Falls der zurückzusendende Handheld Reader vom Typ BVS HS-QB oder BVS HS-PB ist, sind die international gültigen Versandvorschriften für Lithium-Ionen-Batterien zu beachten.

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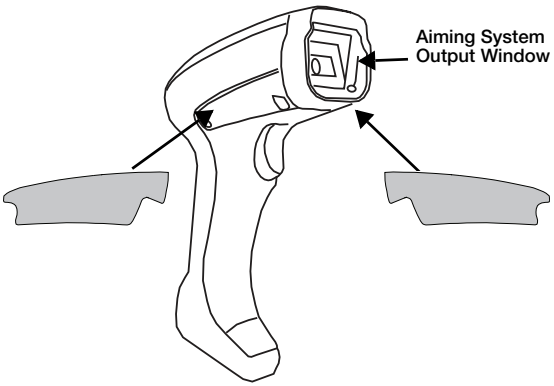
17.3 Imager Labeling

17.3.1 Aiming System

The PowerScan™ aiming system meets the Class 2 requirements for laser safety. The laser information is located on the sides of the Scanner as shown below.

Sample labels are shown here to illustrate their location only. Please view the labels on your product for actual details, as they may vary from those depicted.

Scanner Regulatory Labels



I	D	F	E
LA LUCE LASER È VISIBILE ALL'OCCHIO UMANO E VIENE EMESSA DALLA FINESTRA INDICATA NELLA FIGURA.	DIE LASERSTRAHLUNG IST FÜR DAS MENSCHLICHE AUGE SICHTBAR UND WIRD AM STRAHLAUS TRITTSFENSTER AUSGESENDET (SIEHE BILD)	LE RAYON LASER EST VISIBLE À L'OEIL NU ET IL EST ÉMIS PAR LA FENÊTRE DÉSIGNÉE SUR L'ILLUSTRATION DANS LA FIGURE	A LUZ LÁSER ES VISIBLE AL OJO HUMANO Y ES EMITIDA POR LA VENTANA INDICADA EN LA FIGURA.
LUCE LASER NON FISSARE IL FASCIO APPARECCHIO LASER DI CLASSE 2 MASSIMA POTENZA D'USCITA: LUNGHEZZA D'ONDA EMESSA: CONFORME A EN 60825-1 (2007)	LASERSTRAHLUNG NICHT IN DEN STRAHL BLICKEN PRODUKT DER LASERKLASSE 2 MAXIMALE AUSGANGSLEISTUNG: WELLENLÄGE: ENTSPR. EN 60825-1 (2007)	RAYON LASER EVITER DE REGARDER LE RAYON APPAREIL LASER DE CLASSE 2 PUISSANCE DE SORTIE: LONGUEUR D'ONDE EMISE: CONFORME A EN 60825-1 (2007)	RAYO LÁSER NO MIRAR FIJO EL RAYO APARATO LÁSER DE CLASE 2 MÁXIMA POTENCIA DE SALIDA: LONGITUD DE ONDA EMITIDA: CONFORME A EN 60825-1 (2007)

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ENGLISH

The following information is provided to comply with the rules imposed by international authorities and refers to the correct use of your terminal.

STANDARD LASER SAFETY REGULATIONS

This product conforms to the applicable requirements of both CDRH 21 CFR 1040 and EN 60825-1 at the date of manufacture.

For installation, use and maintenance, it is not necessary to open the device.



WARNING

Use of controls or adjustments or performance of procedures other than those specified herein may result in exposure to hazardous visible laser light.

The product utilizes a low-power laser diode. Although staring directly at the laser beam momentarily causes no known biological damage, avoid staring at the beam as one would with any very strong light source, such as the sun. Avoid that the laser beam hits the eye of an observer, even through reflective surfaces such as mirrors, etc.

ITALIANO

Le seguenti informazioni vengono fornite dietro direttive delle autorità internazionali e si riferiscono all'uso corretto del terminale.

NORMATIVE STANDARD PER LA SICUREZZA LASER

Questo prodotto risulta conforme alle normative vigenti sulla sicurezza laser alla data di produzione: CDRH 21 CFR 1040 e EN 60825-1.

Non si rende mai necessario aprire l'appa-recchio per motivi di installazione, utilizzo o manutenzione.



ATTENZIONE

L'utilizzo di procedure o regolazioni differenti da quelle descritte nella documentazione può provocare un'esposizione pericolosa a luce laser visibile.

Il prodotto utilizza un diodo laser a bassa potenza. Sebbene non siano noti danni riportati dall'occhio umano in seguito ad una esposizione di breve durata, evitare di fissare il raggio laser così come si eviterebbe qualsiasi altra sorgente di luminosità intensa, ad esempio il sole. Evitare inoltre di dirigere il raggio laser negli occhi di un osservatore, anche attraverso superfici riflettenti come gli specchi.

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DEUTSCH

Die folgenden Informationen stimmen mit den von international Behörden festgelegten Sicherheitshinweisen überein, und beziehen sich auf den korrekten Gebrauch des Scanners

NORM FÜR DIE LASERSICHERHEIT

Am Tag der Herstellung entspricht dieses Gerät den gültigen Lasersicherheitsnormen EN 60825-1 und CDRH 21 CFR 1040.

Das Gerät muss für den Betrieb oder Installations- und Wartungsarbeiten nicht geöffnet werden.

Es ist nicht notwendig, das Gerät wegen Betrieb oder Installations-, und Wartungs-Arbeiten zu öffnen.



Jegliche Änderungen am Gerät sowie jegliche Benutzung, die nicht in dieser Betriebsanleitung beschreiben ist, können gefährliches Laserlicht verursachen

ACHTUNG

Das Produkt verfügt über eine Laserdiode. Obwohl zur Zeit nicht bekannt ist, dass durch kurze Einstrahlung von Laserlicht ins Auge Augenschäden entstehen können, sollten Sie es vermeiden für längere Zeit in den Laserstrahl zu schauen. Richten Sie den Laserstrahl nicht auf die Augen eines Beobachters, noch auf reflektierende Oberflächen.

FRANÇAIS

Les informations suivantes sont fournies selon les règles fixées par les autorités internationales et se réfèrent à une correcte utilisation du terminal.

NORMES DE SECURITE LASER

Ce produit est conforme aux normes de sécurité laser en vigueur à sa date de fabrication: CDRH 21 CFR 1040 et EN 60825-1.

Il n'est pas nécessaire d'ouvrir l'appareil pour l'installation, l'utilisation ou l'entretien.



L'utilisation de procédures ou réglages différents de ceux donnés ici peut entraîner une dangereuse exposition à lumière laser visible.

ATTENTION

Le produit utilise une diode laser. Aucun dommage aux yeux humains n'a été constaté à la suite d'une exposition au rayon laser. Eviter de regarder fixement le rayon, comme toute autre source lumineuse intense telle que le soleil. Eviter aussi de diriger le rayon vers les yeux d'un observateur, même à travers des surfaces réfléchissantes (miroirs, par exemple).

17 Regulatory Addendum

ESPAÑOL

Las informaciones siguientes son presentadas en conformidad con las disposiciones de las autoridades internacionales y se refieren al uso correcto del terminal.

NORMATIVAS ESTÁNDAR PARA LA SEGURIDAD LÁSER

Este aparato resulta conforme a las normativas vigentes de seguridad láser a la fecha de producción: CDRH 21 CFR 1040 y EN 60825-1.

No es necesario abrir el aparato para la instalación, la utilización o la manutención.



ATENCIÓN

La utilización de procedimientos o regulaciones diferentes de aquellas describidas en la documentación puede causar una exposición peligrosa a la luz láser visible.

El aparato utiliza un diodo láser a baja potencia. No son notorios daños a los ojos humanos a consecuencia de una exposición de corta duración. Eviten de mirar fijo el rayo láser así como evitarían cualquiera otra fuente de luminosidad intensa, por ejemplo el sol. Además, eviten de dirigir el rayo láser hacia los ojos de un observador, también a través de superficies reflectantes como los espejos.

17 Regulatory Addendum

17.4 Letter of Conformity

CE 14

Datalogic ADC Srl, Via S. Vitalino, 13
Lippo di Calderara di Reno (BO) 40012 Italy

EC-100
Rev.: 1
Pag.: 1 di 1

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva di Datalogic ADC Srl per:
This Declaration of Conformity is issued under the sole responsibility of Datalogic ADC Srl for:
Cette déclaration de conformité est établie sous la seule responsabilité de Datalogic Srl pour:
Diese Konformitätserklärung wird unter der alleinigen Verantwortung des Datalogic ADC Srl erteilt für:
Esta declaración de conformidad se expide bajo la exclusiva responsabilidad de Datalogic ADC Srl para:

PowerScan PBT9500 ; Cordless Barcode Reader
BC9XY0-BT ; Cordless Base Station/Charger

e tutti i suoi modelli
and all its models
et tous ses modèles
und seine Modelle
y todos sus modelos

sono conformi alle Direttive del Consiglio Europeo sottoelencate:
are in conformity with the requirements of the European Council Directives listed below:
sont conformes aux spécifications des Directives de l'Union Européenne ci-dessous:
den nachstehenden angeführten Direktiven des Europäischen Rats:
cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

1999/5/EC - R&TTE Directive
2011/65/EU RoHS Directive

Questa dichiarazione è basata sulla conformità dei prodotti alle norme seguenti:
This declaration is based upon compliance of the products to the following standards:
Cette déclaration repose sur la conformité des produits aux normes suivantes:
Diese Erklärung basiert darauf, dass das Produkt den folgenden Normen entspricht:
Esta declaración se basa en el cumplimiento de los productos con las siguientes normas:

ETSI EN 301 489-17 v2.2.1, September 2012 :	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment ; Part 17: Specific conditions for Broadband Data Transmission Systems
ETSI EN 300 328 v1.8.1, June 2012 :	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission Systems; data Transmission Equipment Operating In The 2,4 GHz ISM B and and Using Wide Band Modulation Techniques ; Harmonized EN Covering Essential requirements under article 3.2 of the R&TTE Directive
En 60950-1, December 2006 + Amendment A11:2009 + Amendment A1:2010 + Amendment A12:2011	Information Technology Equipment - Safety - Part 1 : General Requirements
EN 50581, September 2012 :	*Technical Documentation for the Assessment of Electrical and Electronic Products with Respect to the Restriction of Hazardous Substances*

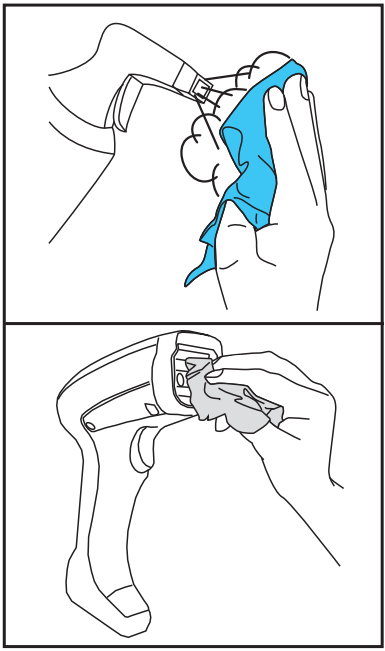
Lippo di Calderara,
December 9th, 2014

Ruggero Bacchilega

18 Cleaning

18 Cleaning

Exterior surfaces and scan windows exposed to spills, smudges or debris require periodic cleaning to ensure best performance during scanning.



Use a soft, dry cloth to clean the product. If the product is very soiled, clean it with a soft cloth moistened with a diluted non-aggressive cleaning solution or diluted ethyl alcohol.



CAUTION

Do not use abrasive or aggressive cleansing agents or abrasive pads to clean scan windows or plastics.
Do not spray or pour liquids directly onto the unit.

19 Ergonomic Recommendations

19 Ergonomic Recommendations



CAUTION

In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

19.1 Services and Support

Balluff provides several services as well as technical support through its website. Log on to **www.Balluff.com**, choose your country and then click on the links indicated for further information.

Products

Search through the links to arrive at your product page where you can download specific **Manuals, Data Sheets, List of Accessories etc**. Alternatively you can search for our Balluff Order code, for instance BVS001T, for fast access to the product page.

Service

- **Contact us:** Here you find your service addresses

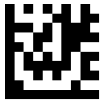
RMA Return Shipment

- Information and form for Return Material Authorization (RMA) Repairs

20 Hex-Numeric Keypad

20 Hex-Numeric Keypad

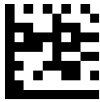
Use the barcodes that follow to enter numbers as you would select digits/characters from a keypad.



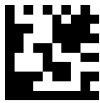
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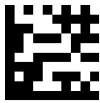
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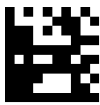
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3



4

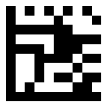


5

20 Hex-Numeric Keypad



6



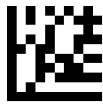
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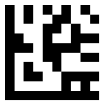


A



B

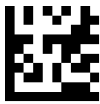
20 Hex-Numeric Keypad



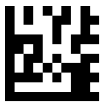
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D



E



F

20.1 For HID Variable Pin Code only

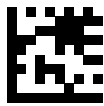
If you make a mistake, scan the CANCEL barcode below to abort and not save the entry string. You can then restart.



Cancel an incomplete HID Variable PIN Code

Finish by scanning the Exit HID Variable PIN Code label.

Exit HID Variable PIN Code



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