Technical Data

General specifications

Light source	laser diode
Light type	modulated visible red light
Laser nominal ratings	
Note	LASER LIGHT , DO NOT STARE INTO BEAM
Laser class	2
Wave length	650 nm
Beam divergence	< 1.5 mrad
Pulse length	1.3 ms
Repetition rate	200 Hz
max. pulse energy	1.19 µJ
Scan rate	500 ... 800 s^{-1}
Read distance	40 ... 300 mm
Angle of divergence	60 °
Optical face	front or on side (with deviation mirror)
Resolution	0.2 mm (8 mils)

Indicators/operating means

Operating display	LED blue: Power on, LED green: Ready to read (READY), LED green: Read successfully (GOOD), LED yellow: External trigger signal pending (TRIGGER), LED yellow: Communication active (COM), LED red: "no read" (STATUS)

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC
Power consumption	P_0	max. 3 W

Interface

Interface type	serial , RS 232 and RS 485 up to 115.2 kBit/s ID-NET™ up to 1 Mbit/s

Input 1

Input type	External triggering

Output

Signal output		2, programmable, optocoupled
Switching voltage		max. 40 V DC
Switching current		max. 40 mA
Voltage drop	U_d	1 V at load current ≤ 10 mA

Ambient conditions

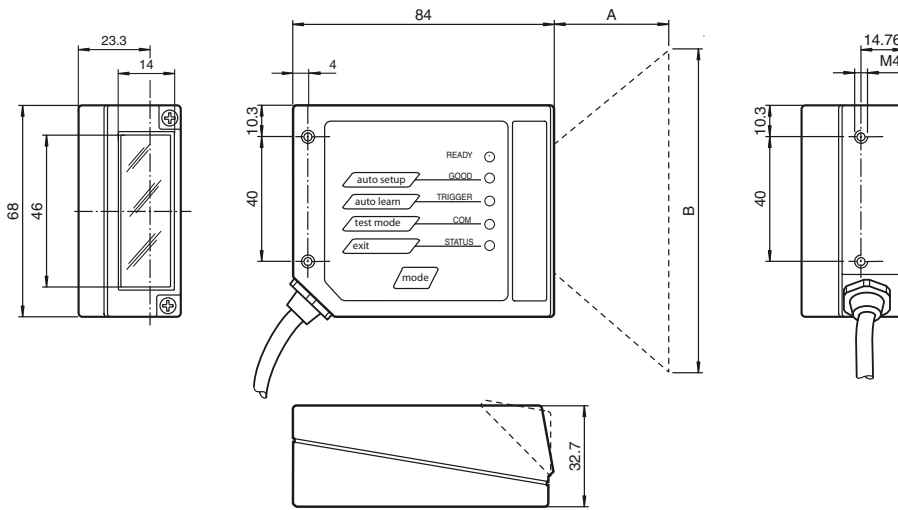|	
Ambient temperature	0 ... 45 °C (32 ... 113 °F)
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)
Relative humidity	90 % , noncondensing
Shock resistance	IEC 68-2-27 Test EA 30G; 11 ms; 3 impacts on each axis
Vibration resistance	IEC 68-2-6 Test FC 1.5 mm ; 10 ... 55 Hz ; 2 hours on each axis

Mechanical specifications

Protection degree	IP65
Connection	1 m cable with 25-pin Sub-D connector
Material	
Housing	aluminum
Mass	330 g

Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Noise immunity	EN 61000-6-2:2005
Emitted interference	EN 55022
Protection degree	EN 60529
Laser class	IEC 60825-1:2007 Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007

Model Number

VB14N-300

Barcode scanner

Features

- Line scanner

- Simple operation via function keys: test mode, code teaching and code optimization

- ACB^{TM} (Advanced Code Builder) re-constructor

- Connect up to 32 scanners

- Sturdy aluminum housing

- Two serial interfaces RS 232 / RS 485

- Engine control (On/Off) possible

- Protection degree IP65

Function

The VB14N-300 is a line scanner for 1D barcodes. It grants high reliability when reading difficult to detect 1D barcodes thanks to its high performance optics and the use of ACB^{TM} reconstruction technology.

A function key and multiple LEDs on the reader assist you in setting parameters, teaching in barcodes and performing tests. In live mode, the LEDs provide information on the respective reading status.

The VB14N-300 can be networked with up to 32 readers among each other via a high speed connection. This enables faster and more efficient data acquisition without the need for an external Multiplexer.

Setting parameters is easy by means of PC software.

Dimensions

Electrical connection
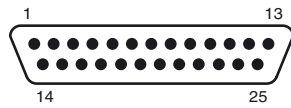
25-pin D-sub connector pinout

Pin	Name	Function
9, 13	+UB	Power supply input voltage +
25	GND	Power supply input voltage -
1	GND Chassis	Cable shield connected to chassis
18	IN TRG + (A)	External Trigger A +
19	IN TRG - (B)	External Trigger B -
6	IN 2 + (A)	Input 2 A +
10	IN 2 - (B)	Input 2 B -
8	OUT 1 +	Output 1 +
22	OUT 1 -	Output 1 -
11	OUT 2 +	Output 2 +
12	OUT 2 -	Output 2 -
20	RX RS232	Auxiliary RS232
21	TX RS232	Auxiliary RS232
23	ID +	High speed internal network ID-NET +
24	ID -	High speed internal network ID-NET -
14, 15, 16, 17	NC	Not connected

Pin		RS232	RS485 full-duplex	RS485 half-duplex
2		TX	TX +	RTX +
3	Main	RX	RX +	
4	interface	RTS	TX -	RTX -
5	signals	CTS	RX -	
7		SGND	SGND	SGND

Curves / diagrams

Reading characteristics   VB14N-300

Read field width in mm
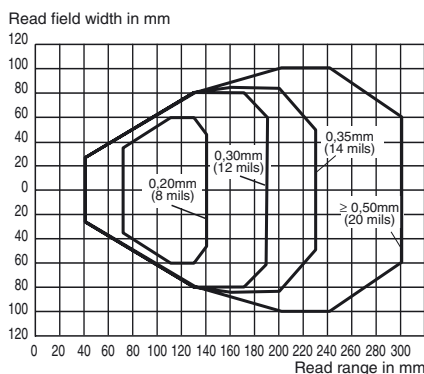
Accessories

CBX500
Connector box for barcode scanner

CBX500-KIT-B6
Connector box for barcode scanner

CBX500-KIT-B19-IP65
Connector box for barcode scanner

CBX100
Connector box for barcode scanner

OM-VB14N
oscillating mirror for the VB14N barcode scanner series

DM-VB14N-90
Deflection mirror for barcode scanner series VB14

DM-VB14N-102
Deflection mirror for barcode scanner series VB14

Other suitable accessories can be found at www.pepperl-fuchs.com

Laser notice laser class 2

- The irradiation can lead to irritation especially in a dark environment. Do not point at people!
- Caution: Do not look into the beam!
- Maintenance and repairs should only be carried out by authorized service personnel!
- Attach the device so that the warning is clearly visible and readable.
- Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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