## Model Number

**VB14N-600**

Barcode scanner

## Features

- Line scanner

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

- ACB<sup>TM</sup> (Advanced Code Builder) reconstructor

- 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-600 is a line scanner for 1D barcodes and offers a high reliability when reading hard to detect 1D barcodes due to its high performance optics and the ACB<sup>TM</sup> reconstruction technology implemented.

A function key and several LEDs on the barcode scanner give support with parameterization, teaching barcodes and testing. In Live-mode the LEDs give information on the respective read status.

You have the option to network the VB14N-600 with up to 32 barcode scanners with each other via a high speed connection. This enables a faster and more efficient data collection, without the necessity of an external multiplexer.

Simple parameterization using PC software is possible.

## 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 | | 1.5 ms |
| Repetition rate | | 200 Hz |
| max. pulse energy | | 3.26 µJ |
| Scan rate | | $600 ... 1000 \ s^{-1}$ |
| Read distance | | 190 ... 600 mm |
| Angle of divergence | | 50 ° |
| Optical face | | front or on side (with deviation mirror) |
| Resolution | | 0.35 mm ( 14 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. 5 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 |

## Dimensions
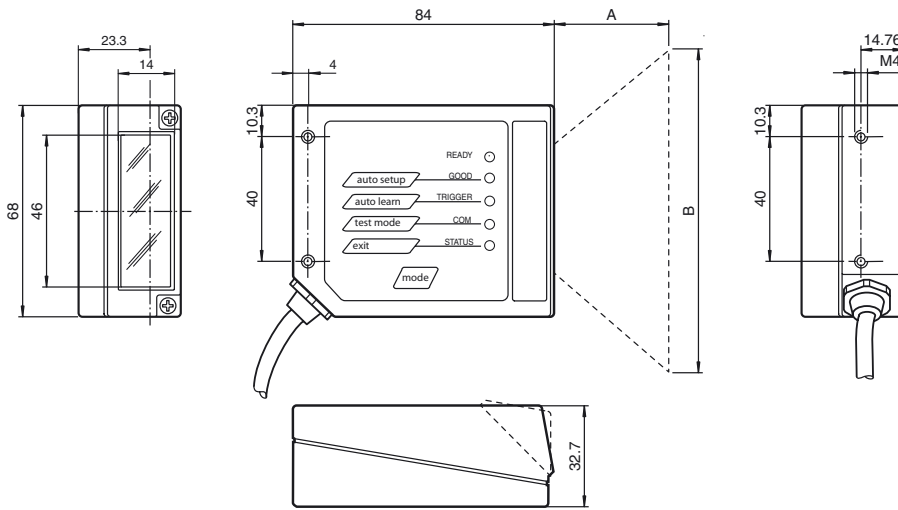


## Electrical connection
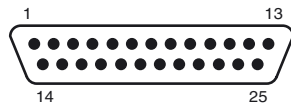


**25-pin D-sub connector pinout**

| 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-600
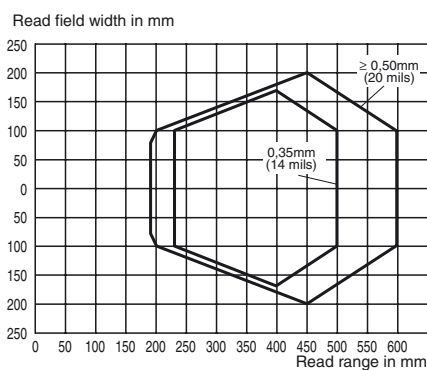


## Accessories

**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.