



Barcode scanner

VB14N-300-R-6102



- Grid scanner
- Simple operation via function keys: test mode, code teaching and code optimization
- Code reconstructor
- Connect up to 32 scanners
- Sturdy aluminum housing
- Two serial interfaces RS 232 / RS 485
- Engine control (On/Off) possible
- Degree of protection IP65

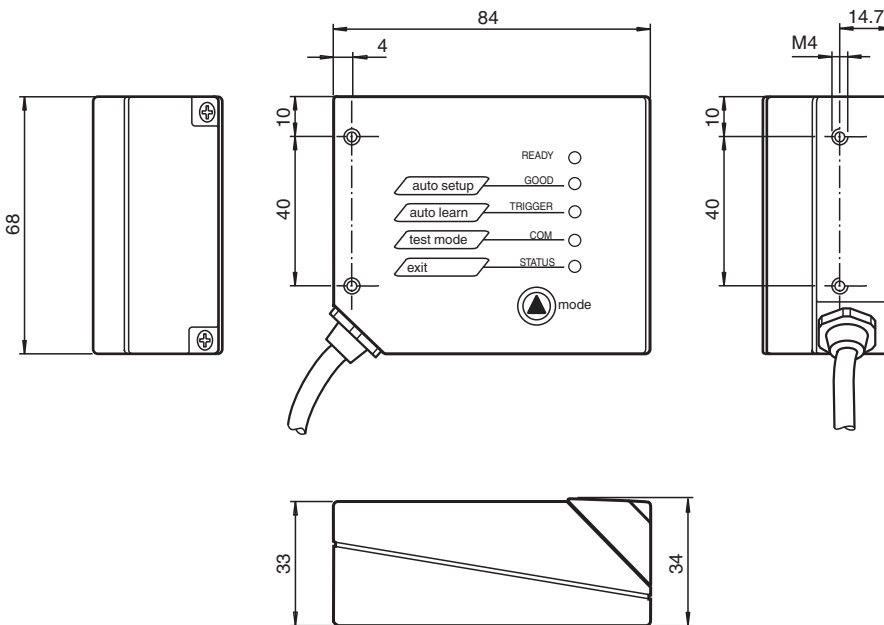
Barcode scanner



Function

The barcode scanner is a line scanner for 1D barcodes. With its high-performance optics and code reconstruction, the scanner offers a high level of reliability in reading difficult-to-detect 1D barcodes. A function key and several LEDs on the barcode scanner provide support when parameterizing, teaching in barcodes, and testing. In live operation, the LEDs provide information about the relevant read status. The corresponding PC software makes parameterization simple.

Dimensions



Technical Data

General specifications

| | |
|------------------------|-----------------------------|
| Light source | laser diode |
| Light type | modulated visible red light |
| Lasers nominal ratings | |

Release date: 2023-09-05 Date of issue: 2023-09-05 Filename: 261434_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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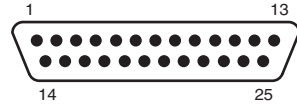
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Technical Data

| | | |
|---|---|----------------------------------|
| 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 μ J | |
| Scan rate | 500 ... 800 s ⁻¹ | |
| Read distance | 40 ... 300 mm | |
| Grid | 18 mm at 300 mm | |
| Opening angle | 50 ° | |
| Optical face | lateral (angle 102°) | |
| Resolution | 0.2 mm (8 mils) | |
| Indicators/operating means | | |
| Operation indicator | 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 \leq 10 mA |
| 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 | |
| Degree of protection | 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 | |
| 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 | | |
| Degree of protection | IP65 | |
| Connection | 2 m cable with 25-pin Sub-D connector | |
| Material | | |
| Housing | Aluminum | |
| Mass | 330 g | |

Connection



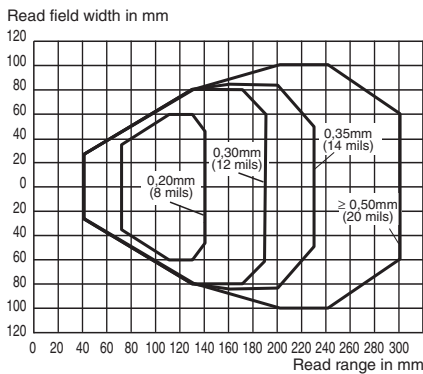
25-pin D-sub connector pinout

| 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 | Main interface signals | TX | TX + | RTX + |
| 3 | | RX | RX + | |
| 4 | | RTS | TX - | RTX - |
| 5 | | CTS | RX - | |
| 7 | | SGND | SGND | SGND |

Characteristic Curve

Reading characteristics VB14N-300



Safety Information



**LASERLICHT
LASER LIGHT
LUMIÈRE LASER**

**NICHT IN DEN STRAHL BLICKEN
DO NOT STARE INTO BEAM
NE PAS REGARDER LE FAISCEAU**

**LASER KLASSE 2
CLASS 2 LASER PRODUCT
PRODUIT LASER CLASSE 2**

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Safety Information

Laser Class 2 Information

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.

Accessories

| | | |
|---|----------------------------|---|
|  | CBX100 | Connector box for barcode scanner |
|  | OM-VB14N | oscillating mirror for the VB14N barcode scanner series |
|  | DM-VB14N-90 | Deviation mirror for barcode scanner series VB14 |
|  | DM-VB14N-102 | Deviation mirror for barcode scanner series VB14 |
|  | CBX500-KIT-B6 | PROFIBUS Connector box for barcode scanner |
|  | CBX500-KIT-B17 | PROFINET Connector box for barcode scanner |
|  | CBX500-KIT-B19-IP54 | EtherNet/IP Connector box for barcode scanner |
|  | CBX500-KIT-B19-IP65 | EtherNet/IP Connector box for barcode scanner |