



Model Number

VB14N-300-R

Barcode scanner

Features

- 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

Function

The VB14N-300-R is a grid scanner for 1-D barcodes. With its high-performance optics and code reconstruction, the scanner offers a high level of reliability in reading difficult-to-detect 1-D 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.

A high-speed connection can be established between up to 32 devices. This connection enables data to be recorded in a quicker and more efficient manner, without the need for an additional external multiplexer.

The corresponding PC software makes parameterization simple.

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	50 °
Optical face	front or on side (with deviation mirror)
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)
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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
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Input 1

Input type	External triggering
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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

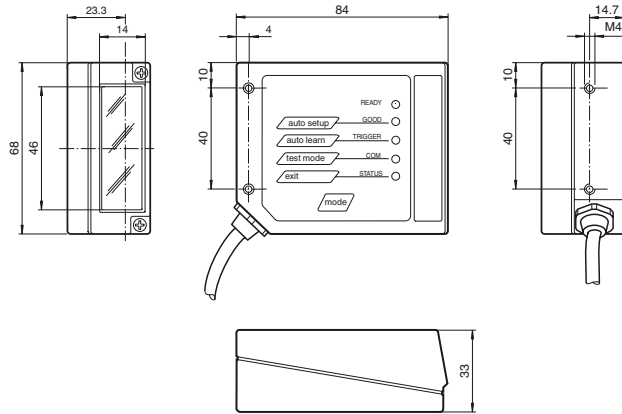
Mechanical specifications

Degree of protection	IP65
Connection	1 m cable with 25-pin Sub-D connector
Material	
Housing	aluminum
Mass	330 g

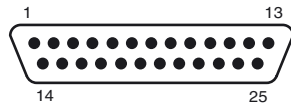
Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Noise immunity	EN 61000-6-2:2005
Emitted interference	EN 55022
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

Dimensions



Electrical connection



25-pin D-sub connector pinout

Pin	Name	Function	RS232	RS485 full-duplex	RS485 half-duplex
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	

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

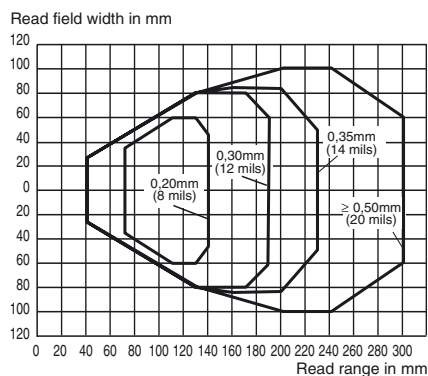
EtherNet/IP Connector box for barcode scanner

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

Curves / diagrams

Reading characteristics

VB14N-300



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.