Barcode scanner

VB14N-400-T-R

- Grid scanner
- Version for low temperature applications
- 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

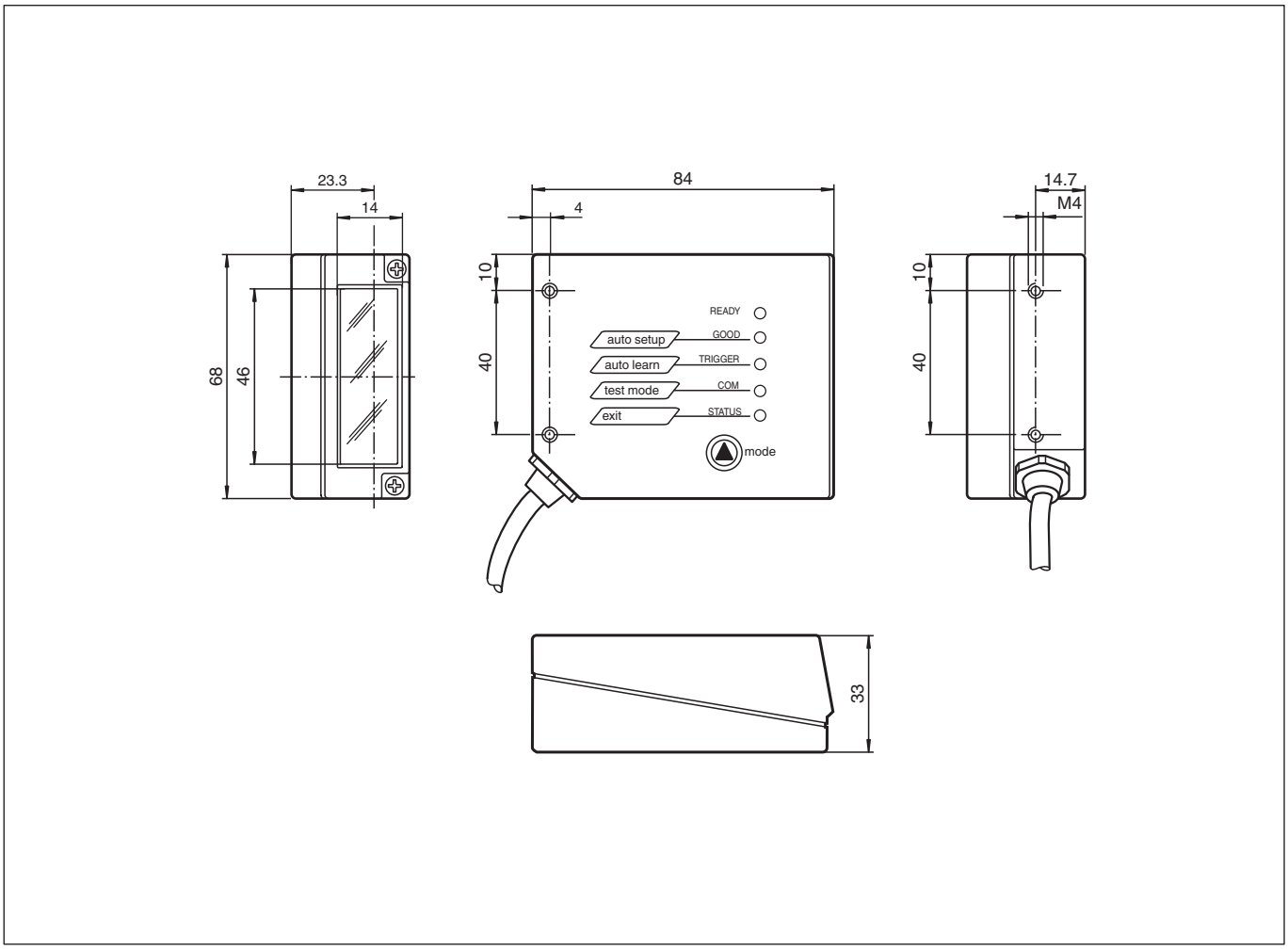
Barcode scanner

Function

The VB14N-***-T-R is a grid scanner for reading 1D barcodes and is specially designed for use at low temperatures. With its high-performance optics and code reconstruction, the barcode scanner offers a high level of reliability when reading 1D barcodes that are difficult to detect.
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.
You can establish a high-speed connection 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.

Release date: 2023-09-05 Date of issue: 2023-09-05 Filename: 253254_eng.pdf

Dimensions



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		600 ... 1000 s^{-1}
Read distance		60 ... 400 mm
Grid		21 mm at 400 mm
Opening angle		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)
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC

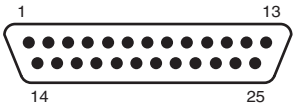
Release date: 2023-09-05 Date of issue: 2023-09-05 Filename: 253254_eng.pdf

Technical Data

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
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		-35 ... 45 °C (-31 ... 113 °F)
Storage temperature		-35 ... 70 °C (-31 ... 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

Release date: 2023-09-05 Date of issue: 2023-09-05 Filename: 253254_eng.pdf

Connection



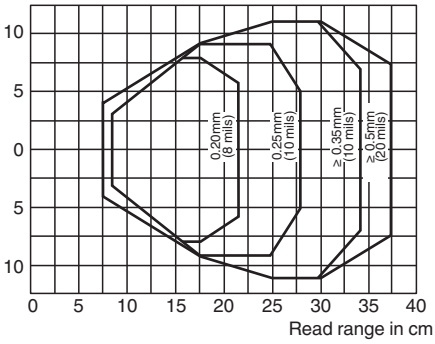
25-pin D-sub connector pinout

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

Characteristic Curve

Reading characteristics

Read field width in cm



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

Release date: 2023-09-05 Date of issue: 2023-09-05 Filename: 253254_eng.pdf

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

Release date: 2023-09-05 Date of issue: 2023-09-05 Filename: 253254_eng.pdf