

**Model Number****VB10-220-R**

Barcode scanner

**Features**

- Grid scanner
- Small, compact design
- Large reading angle
- High resolution

**Accessories****CBX100**

Connector box for barcode scanner

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

**Technical Data****General specifications**

Light source	laser diode
Light type	modulated visible red light
<b>Laser nominal ratings</b>	
Note	LASER LIGHT , DO NOT STARE INTO BEAM
Laser class	2
Wave length	650 nm
Beam divergence	< 1.5 mrad
Pulse length	0.56 ms
Repetition rate	100 Hz
max. pulse energy	0.56 $\mu$ J
Scan rate	500 s <sup>-1</sup>
Reading angle	52 °
Read distance	50 ... 220 mm
Optical face	frontal
Resolution	0.15 mm ( 6 mils )

**Indicators/operating means**

Operating display	LED red: Power on (POWER ON) , LED yellow: external trigger signal applied (EXT. TRIG.)
Data flow display	LED green flashing: Data transfer carried out (TX-DATA)
Function display	LED red: signals the successful read-in of a barcode (GOOD READ)

**Electrical specifications**

Operating voltage	$U_B$	10 ... 30 V DC
Power consumption	$P_0$	2 W

**Interface**

Interface type	serial RS 232 and RS 485 up to 115.2 kbit/s
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**Input**

Input type	External triggering
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**Output**

Signal output	2 outputs programmable
Switching voltage	max. 50 V DC
Switching current	max. 50 mA
Voltage drop	$U_d$ 0.3 V at load current $\leq$ 10 mA

**Ambient conditions**

Ambient temperature	0 ... 40 °C (32 ... 104 °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

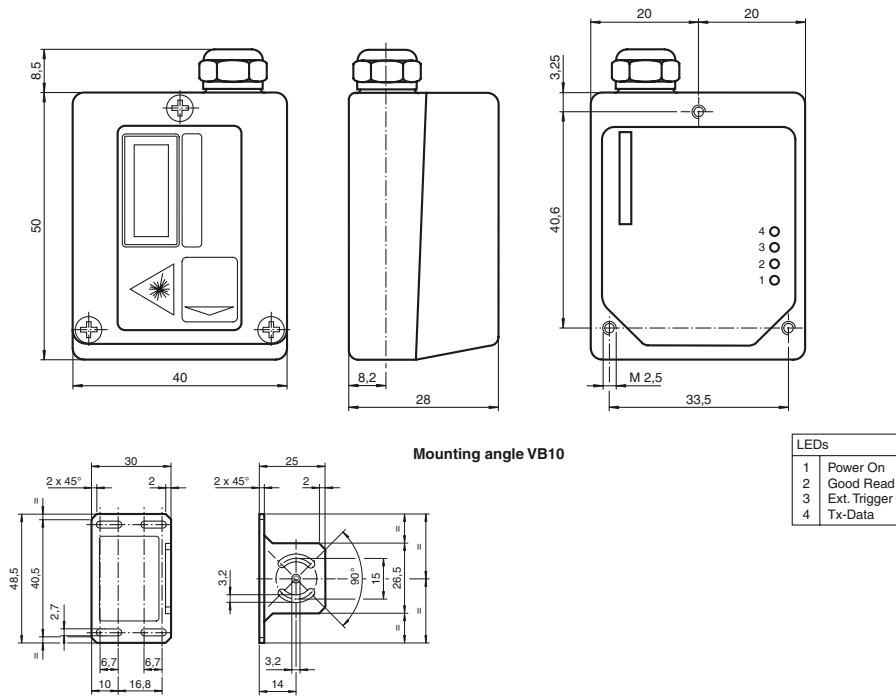
**Mechanical specifications**

Protection degree	IP65
Connection	25-pin Sub-D socket
<b>Material</b>	
Housing	Diecast zinc
Mass	150 g

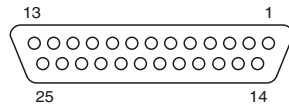
**Compliance with standards and directives**

Directive conformity	EMC Directive 2004/108/EC
<b>Standard conformity</b>	
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

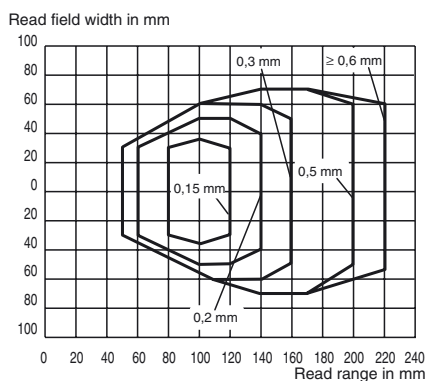
Pin	Name	Function
9, 13	10 V ... 30 V DC	Power supply input voltage +
25	GND	Power supply input voltage -
1*	CHASSIS	Chassis ground
2, 21	TX232	TX RS232 aux. Interface
3, 20	RX232	RX RS232 aux. Interface
4	RTX485-	RTX- RS485 main Interface
5	RTX485+	RTX+RS485 main Interface
7	SGND	Signal ground
8	OUT1+	Output 1 +
11	OUT2+	Output 2 +
19	Ext. TRIG. -	External trigger -
12, 22	GND	Input/Output reference (Mass)
18	IN1-	Input 1 -
6, 10, 14, 15, 16, 17, 23, 24	NC	Not connected

\* Pin 1 and pin 25 are internally interconnected.

## Curves / diagrams

## Reading characteristics

VB10-220



## 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.