Model Number

VB34-2500

Barcode scanner

Features

- Optimized for the requirements of the automobile industry
- Dynamic focusing system
- Fast Lonworks interface for master/slave configurations
- Display and keypad for parameter settings

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		0.097 ms
Repetition rate		500 Hz
max. pulse energy		0.39 µJ
Scan rate		600 ... 1200 s^{-1} , programmable
Read distance		500 ... 2500 mm
Resolution		max: 0.2 mm (8 mils)
Indicators/operating means		
Operating display		LED green: Power on , LED yellow: Trigger phase active (PHASE ON)
Data flow display		LED green flashing: Data transfer carried out (TX-DATA)
Controls		Keypad (3 membrane keys) for parameter settings on the LCD display
Parameterization display		LC display
Electrical specifications		
Operating voltage	U_B	15 ... 30 V DC
Power consumption	P_0	max. 20 W
Interface		
Interface type		serial , RS 232 and RS 485 up to 115.2 kBit/s
Input 1		
Input type		3 digital inputs and external trigger
Output		
Switching voltage		max. 30 V DC
Switching current		max. 50 mA
Voltage drop	U_d	0.3 V at load current ≤ 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		IP64
Connection		Interface (primary, secondary) : 25-pin Sub-D connector , Lonworks: : 9-pin Sub-D socket , 9-pin Sub-D connector
Material		
Housing		aluminium
Mass		1500 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
Electrical safety		EN 60950-1:2006
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

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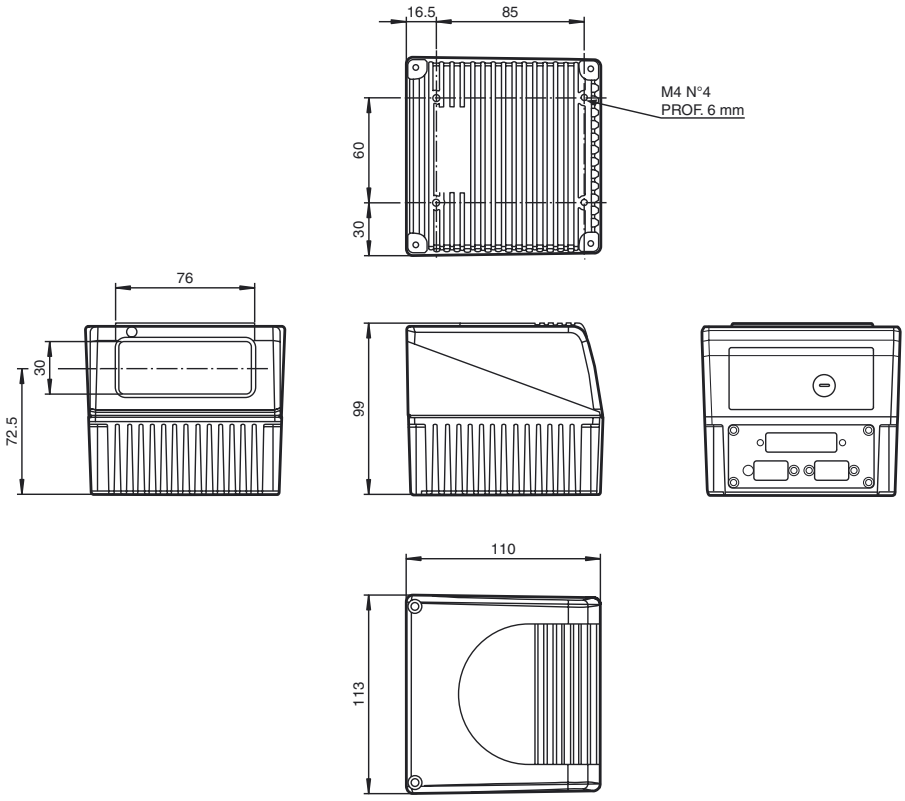
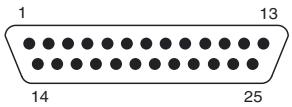
Dimensions



Electrical connection



Pin	Name	Function
1	Schirm	The shield is interfaced with chassis ground via a capacitor internally.
20	RXAUX	Receive data of RS232 interface (earth-related)
21	TXAUX	Transmission data of RS232 interface (earth-related)
8	Out1+	Plus lead of digital output 1
22	Out1-	Minus lead of digital output 1
11	Out2+	Plus lead of digital output 2
12	Out2-	Minus lead of digital output 2
16	Out3A	Digital output 3 - polarity commutable
17	Out3B	Digital output 3 - polarity commutable
18	Ext_TRIG. A	External trigger (polarity commutable)
19	Ext_TRIG. B	External trigger (polarity commutable)
6	IN 2A	Input signal 2 (polarity commutable)
10	IN 2B	Input signal 2 (polarity commutable)
14	IN 3A	Input signal 3 (polarity commutable)
15	IN 4A	Input signal 4 (polarity commutable)
24	IN_REF	Common earth reference for IN3 and IN4 (polarity commutable)
9, 13	VS	Supply voltage - plus
23, 25	GND	Supply voltage - minus (earth)

Electrical connections of the connector for primary interface

Pin	RS232	RS485 full-duplex	RS485 half-duplex
2	TX	TX485 +	RTX485 +
3	RX	RX485 +	
4	RTS	TX485 -	RTX485 -
5	CTS	RX485 -	
7	GND_ISO	GND_ISO	GND_ISO

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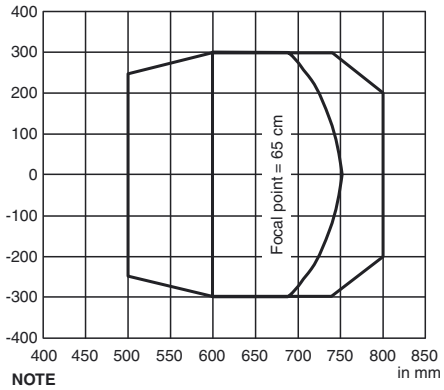
Curves / diagrams

Reading characteristics

VB34

read characteristics at resolution: 0.20 mm (8 mils)

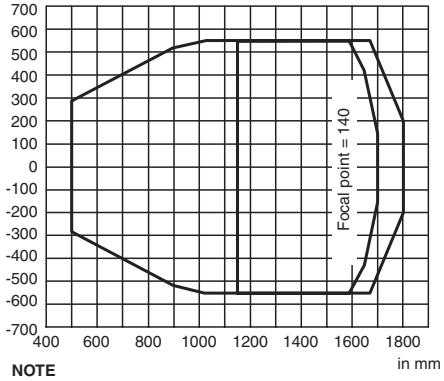


NOTE
(0.0) is the center of the laser beam output window.

Reading characteristics

VB34

read characteristics at resolution: 0.375 mm (15 mils)

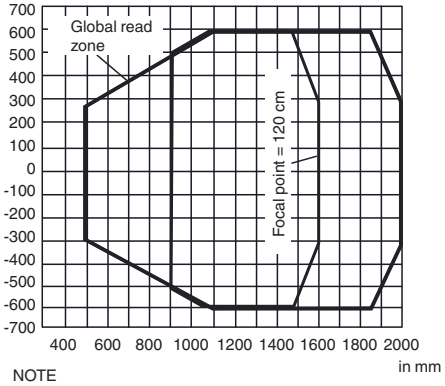


NOTE
(0.0) is the center of the laser beam output window.

Reading characteristics

VB34

read characteristics at resolution: 0.50 mm (20 mils)



NOTE
(0.0) is the center of the laser beam output window.

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.

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