



### Model Number

**VB34-2500-OM**

Barcode scanner

### Features

- Version with integrated oscillating mirror
- 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 <sup>-1</sup> , programmable
Read distance	450 ... 2000 mm
Oscillating mirror	Deflection: -2.5° ... 37.5°, parameterizable Oscillation frequency: 0 ... 19 Hz, programmable
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
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### Input 1

Input type	3 digital inputs and external trigger
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### 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

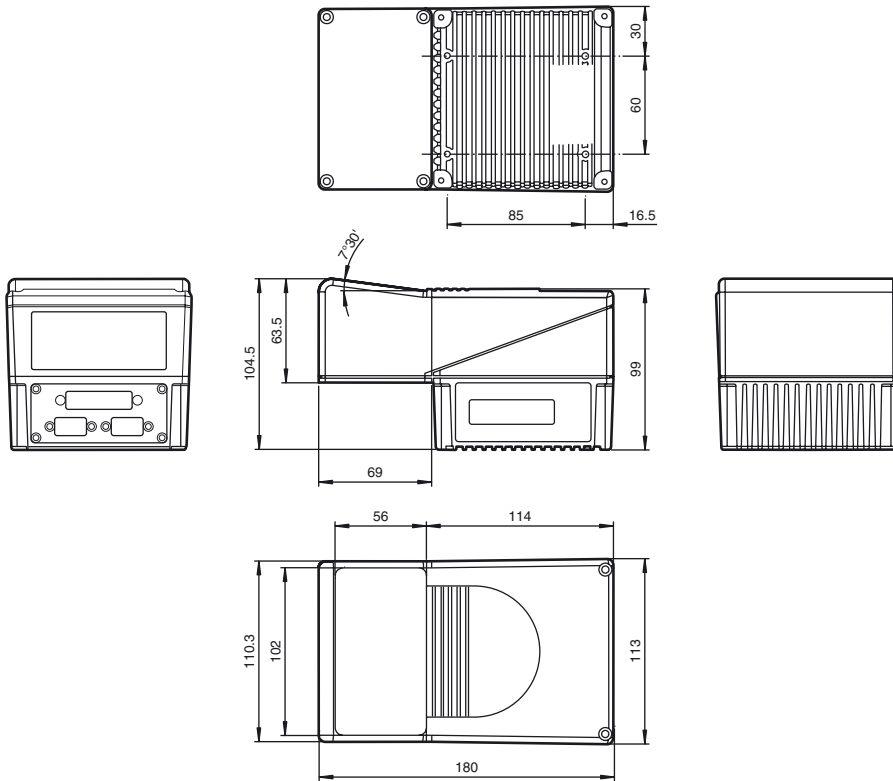
### Mechanical specifications

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	2000 g

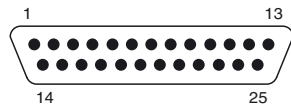
### Compliance with standards and directives

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

## 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)

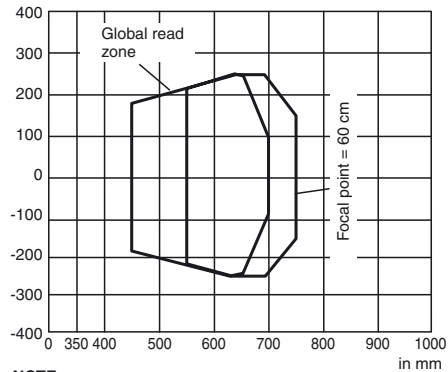
## Electrical connections of the connector for primary interface

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

## Curves / diagrams

## Reading characteristics VB34\*OM\*

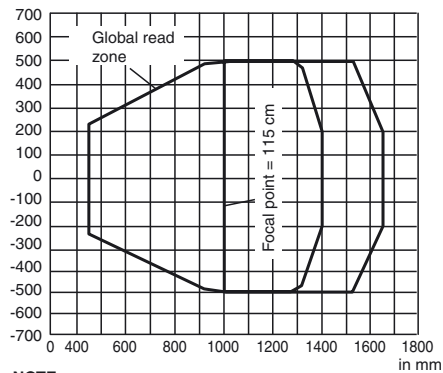
read characteristics at resolution: 0.20 mm (8 mils)  
in mm



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

## Reading characteristics VB34\*OM\*

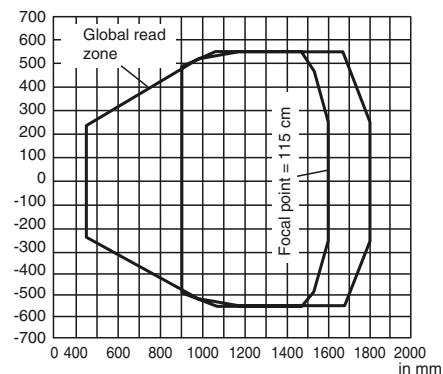
read characteristics at resolution: 0.375 mm (15 mils)  
in mm



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

## Reading characteristics VB34\*OM\*

read characteristics at resolution: 0.5 mm (20 mils)  
in mm



**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.