



Model Number

VB34-2500-P

Barcode scanner with PROFIBUS interface

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 , PROFIBUS |
|----------------|--|

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 |

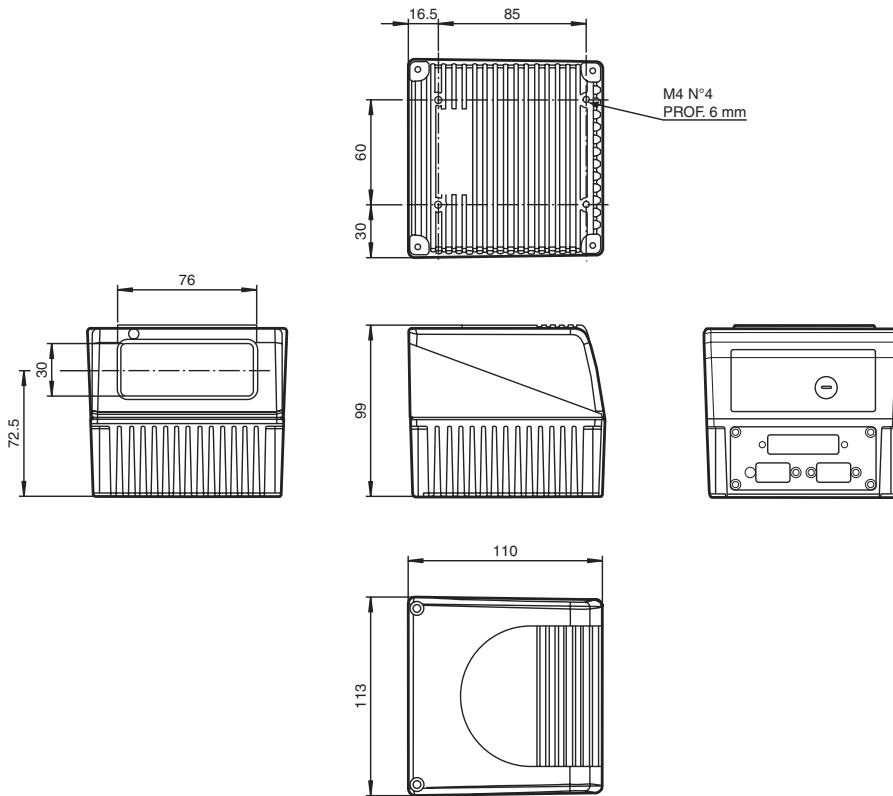
Mechanical specifications

| | |
|-------------------|---|
| Protection degree | IP64 |
| Connection | Interface (primary, secondary) : 26-pin Sub-D connector , Lonworks: 9-pin Sub-D socket , PROFIBUS: 9-pin Sub-D socket |
| 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 |

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, 26 | GND | Supply voltage - minus (earth) |

Electrical connections of the connector for primary interface

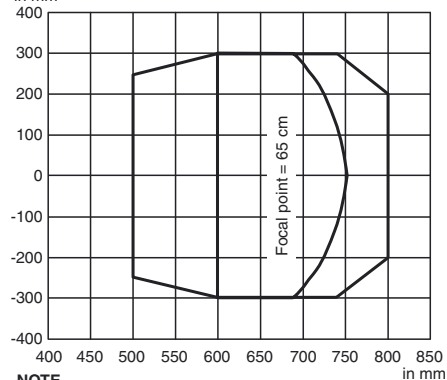
| Pin | RS232 | RS485 full-duplex | RS485 half-duplex |
|-----|---------|-------------------|-------------------|
| 2 | TX | TX485 + | RTX485 + |
| 3 | RX | RX485 + | |
| 4 | RTS | TX485 - | RTX485 - |
| 5 | CTS | RX485 - | |
| 7 | GND_ISO | GND_ISO | GND_ISO |

Curves / diagrams

Reading characteristics

VB34

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

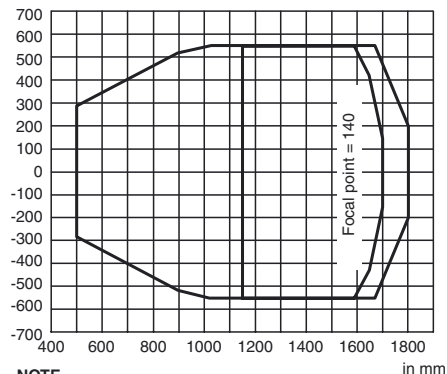


NOTE
(0.0) is the center of the laser beam output window.

Reading characteristics

VB34

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

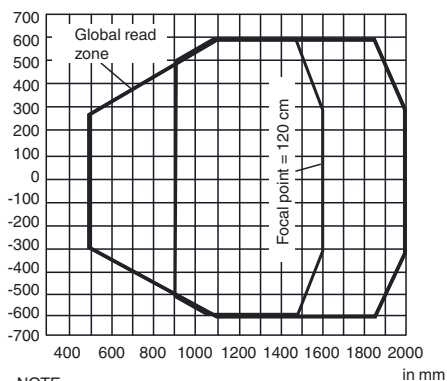


NOTE
(0.0) is the center of the laser beam output window.

Reading characteristics

VB34

read characteristics at resolution: 0.50 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.