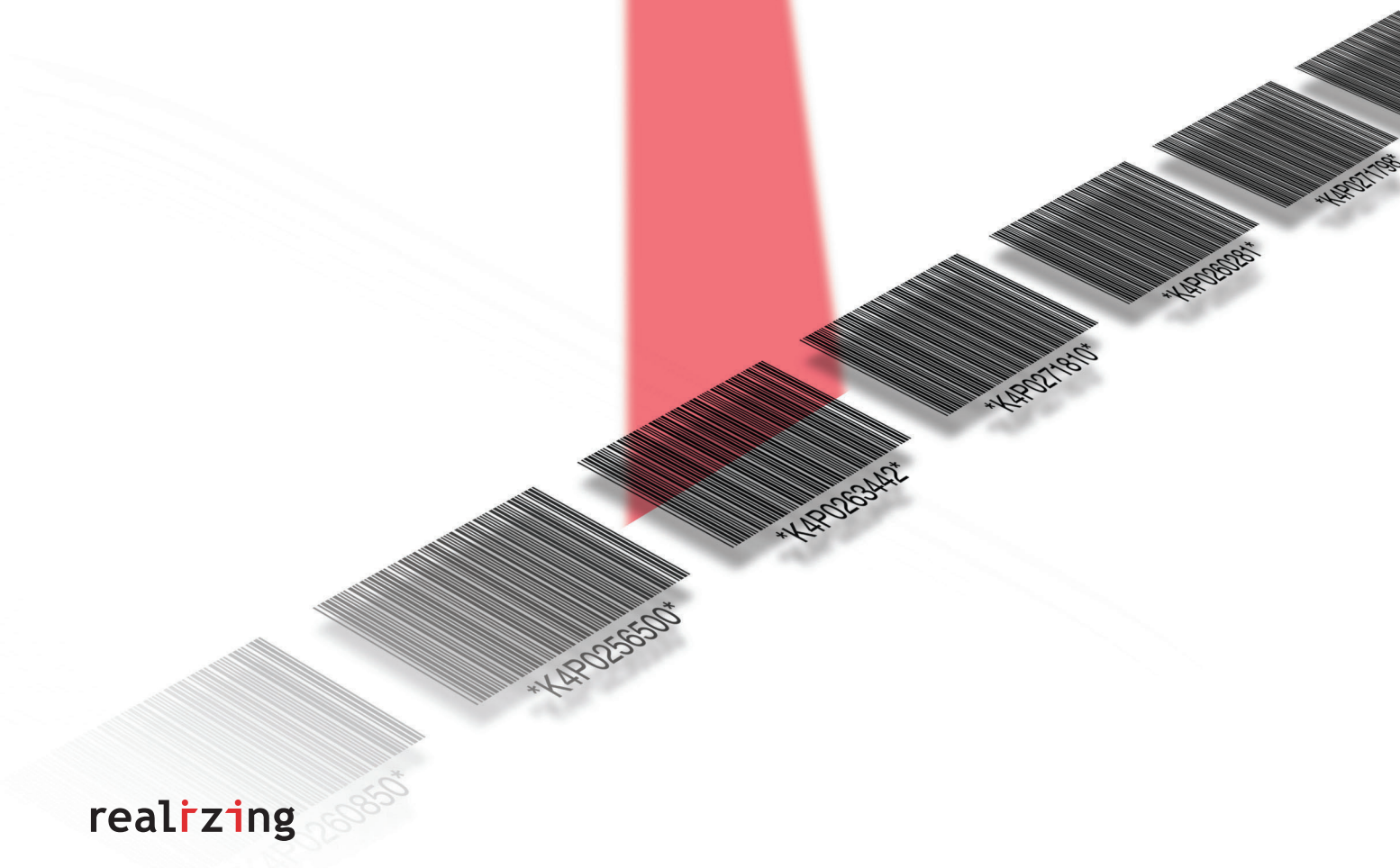
NEW

Compact Laser Bar Code Reader

V500-R521B2/C2

OMRON



realizing

A compact design with easy installation and setup. High-speed reading at 500 scans per second.

Compact Design

At 48 × 38 × 23 mm, the V500-R521 is the smallest class of Laser Bar Code Reader in the Industry. It fits essentially anywhere and is ideal for building into a variety of equipment.

Easy Installation

Just press the TEST Button on the Reader to easily read a bar code. Installation and maintenance work is also reduced.

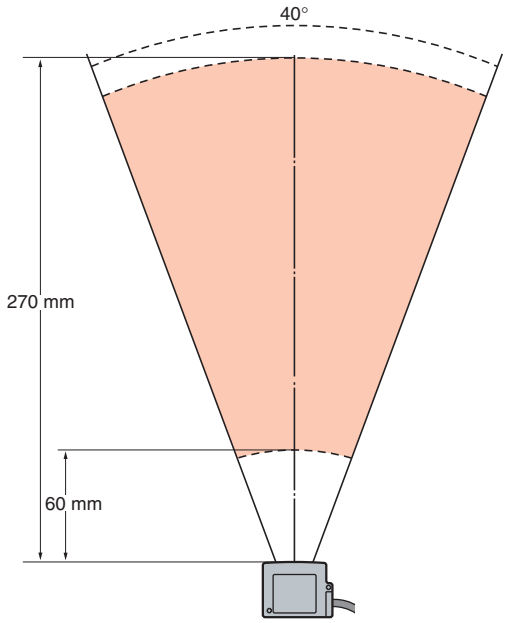
Meets EAN128 Standards

Easy Function Setup

Functions can be set either by sending command communications from a personal computer or by reading menu sheets.

Superior Read Performance

High-speed reading at 500 scans per second over a wide working distance from 60 to 270 mm (with a narrow bar width of 1.0 mm).

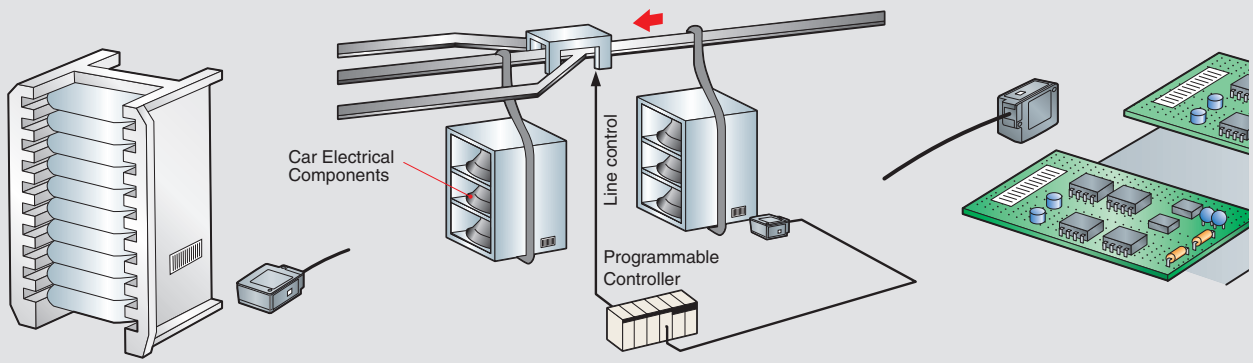


APPLICATIONS

Reading Control Bar Codes on Wafer Cassettes

Quality Control When Sorting

PCB Quality Control in Electronic Device Manufacturing



Ordering information

Product		Model
Bar Code Readers	Cable output	**V500-R521B2**
	Round DIN connector	**V500-R521C2**
ID Link Unit (sold separately)		**V700-L12**
Cables (sold separately)	SYSMAC D-sub 9-pin cable, 0.8 m	**V509-W011**
	SYSMAC D-sub 9-pin cable, 5 m	**V509-W016**
	IBM PC/AT or compatible D-sub 9-pin cable, 0.8 m	**V509-W011D**
	IBM PC/AT or compatible D-sub 9-pin cable, 5 m	**V509-W016D**

Ratings and Performance

General Specifications

Applicable bar codes	**Type of bar code**	Code 39, NW-7, ITF, STF (2 of 5 bars), Code 93, Code 128 (including EAN128), EAN/UPC (A and E)
	Number of read digits	32 digits max. (depends on bar width and read size)
Reading performance (See note 1.)	**Resolution**	0.15 mm (for PCS0.9)
	Contrast (PCS value)	0.45 min. (70% white reflectance min.)
	Reading distance	60 to 270 mm (with 1.0-mm thin bar)
	Reading angle	Within 40° (including left and right margins)
	Skew angle	±50° (excluding the upper 10° and lower 5° ranges)
	Pitch angle	±25° (25° right and left)
	Light source	Red laser diode (wavelength: 650 nm)
	Optical output	1.0 mW max.
	Scan type	Raster scan
	Number of scans	500 scans/s
	Number of read repetitions	2 to 6 times
	Reading verification	Buzzer and LED indicators
Interfaces	**Communications specifications**	RS-232C
	OK/NG output (V500-R521B2 only)	30 mA at 24 VDC, NPN open-collector output
Function setting method		Menu sheet reading or host commands
Read trigger		• External trigger (transistor input) • Trigger by command (RS-232C) • Test read trigger with the TEST Button on the Reader
Read results output	**RS-232C output**	Read data is output.
	OK/NG signal (V500-R521B2 only)	The OK signal turns ON when reading is successful. The NG signal turns ON when reading fails.
	LED indicators	The OK indicator lights when reading is successful. The NG indicator lights when reading fails.
	Buzzer	The buzzer sounds when reading is successful. (The buzzer can be muted.)
Power supply specifications	**Power supply voltage**	5 VDC ±10% (See note 2.)
	Current consumption	220 mA typ. (330 mA max.)
	Inrush current	2.5 A max.
Environment	**Ambient temperature**	Operating: 0 to 45°C, Storage: −10°C to 60°C (with no icing or condensation)
	Ambient humidity	Operating and storage: 30% to 85% (with no icing or condensation)
	Vibration resistance	12 to 100 Hz, 19.6 m/s^2 acceleration in X, Y, and Z directions for 3 hours each
	Allowable ambient light	3,000 lx max. (fluorescent light; excluding inverter fluorescent lighting)
Enclosure rating		IP54 (IEC 60529 standard)
Weight		80 g (excluding cable and connector)
I/O connector		V500-R521B2: Cable output
		V500-R521C2: DIN 8-pin connector
Cable length		2 m

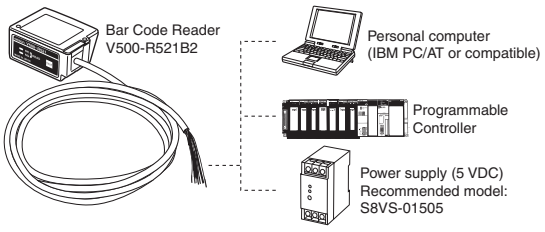
Note **1.** Unless otherwise specified, specifications are for a bar code set to JAN 1× with an MRD of 63% or higher (a PCS value of 0.9 or higher) is used with the pitch angle (α) set to 0°, the skew angle (β) set to 15°, the tilt angle (γ) set to 0°, and the curvature (R) set to infinity.

2. The power supply voltage is specified at the I/O connector of the Bar Code Reader

System Configuration

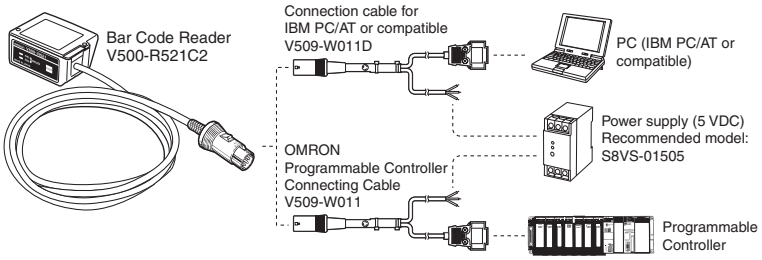
V500-R521B2 (Cable Output)

The cable end has loose wires.



V500-R521C2 (Connector Output)

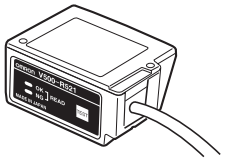
The cable end has a connector.
Prepare a connecting cable suitable for the host.

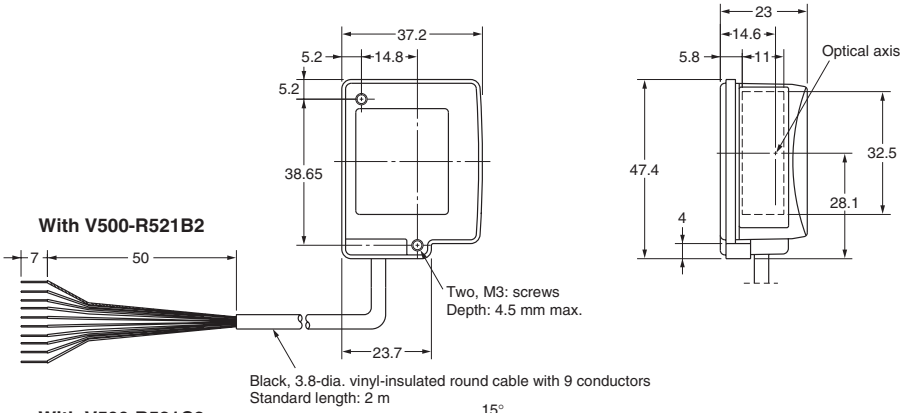


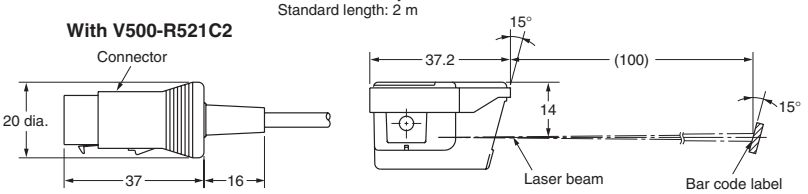
Dimensions

Bar Code Reader

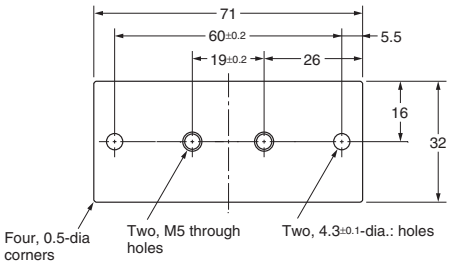
V500-R521B2
V500-R521C2





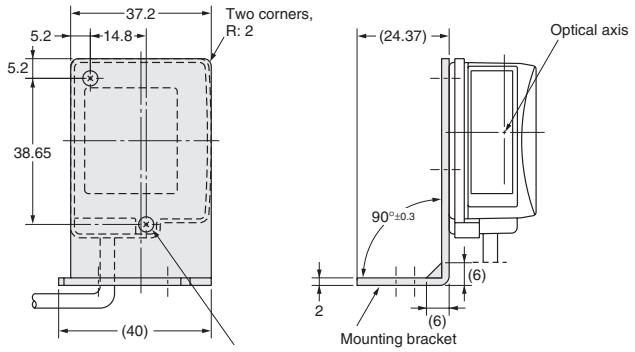


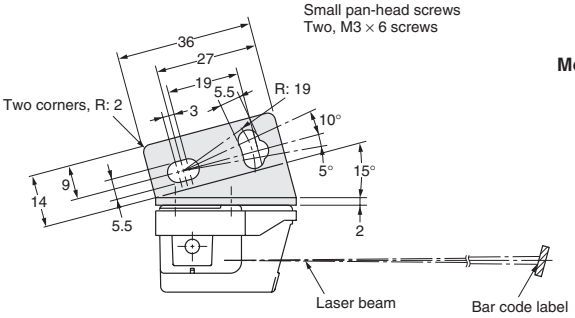
Supplied Insulation Plate



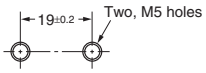
Note: The insulation plate has a thickness of 8 mm.

Mounting Bracket Attached





Mounting hole dimensions



This document provides information mainly for selecting suitable models. Please read the *Instruction Sheet* carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

Note: Do not use this document to operate the Unit.

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Note: Specifications subject to change without notice.

Cat. No. Q153-E1-01
Printed in Japan
0307-0.1M (0307) (M)