

Multi Code Reader V400-R2 Series

The Ultra-small Multi-code Reader That Can Handle Speed

- Improves Machine Takt Time with the Fastest Reading in the Class:
Reads Moving Objects at Up to 500 m/min*
 - Distance Variations
 - Stable Reading of Imperfect Codes
- * Performance may depend on the code that is read and the printing conditions.



Refer to *Safety Precautions* on page 4.

Ordering Information

Type		Model
Multi Code Reader	Working distance 65mm	V400-R2CF65
	Working distance 125mm	V400-R2CF125
OMRON PLC connecting cable	D-sub 9-pin, 0.8M	V509-W011
	D-sub 9-pin, 5M	V509-W016
PC/AT Connecting cable	D-sub 9-pin, 0.8M	V509-W011D
	D-sub 9-pin, 5M	V509-W016D

Ratings and Performance

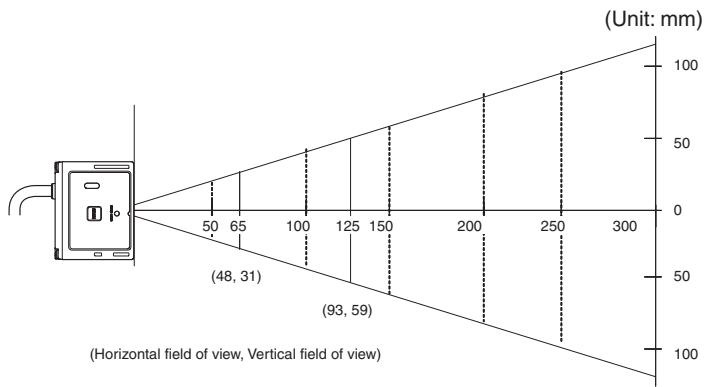
Model		V400-R2CF65	V400-R2CF125
Direction of view		Front view	
Applicable codes	Bar code	WPC(JAN/EAN/UPC), Codabar(NW-7), ITF, Industrial 2 of 5, Code39, Code93, Code128, GS1-128(EAN-128), GS1-Databar(RSS-14), GS1-Databar Limited(RSS Limited), GS1-Databar Expanded (RSS Expanded), GS1-Databar Composite(RSS Composite)	
	2D code	QR code, DataMatrix(ECC200), MicroQR code, PDF417, MicroPDF417, AztecCode, MaxiCode, Codablock-F	
Reading performance (*)	Number of reading digits	No upper limit (depends on bar width and reading distance)	
	Light source	Two red LEDs (wave length: 617 nm)	
	Aiming light	One green LED (wave length: 528 nm)	
	Minimum resolution	Bar code: 0.076 mm 2D code: 0.169 mm	Bar code: 0.127 mm 2D code: 0.212 mm
	Image capture device	Monochrome CMOS	
	Effective number of pixels	754 × 480 pixels	
	Working distance (WD)	65mm	125mm
	Field of view	Approximately 48 × 31(for WD = 65 mm)	Approximately 93 × 59(for WD = 125 mm)
	Pitch angle (α)	±50°	
	Skew angle (β)	±50°	
Tilt angle (γ)	±180°		
Reading of bar codes on curved surfaces (R)	R ≥ 20mm (UPC 12 line)		
Interface	Communication specification	RS-232C	
	OK/NG outputs	NPN open collector output (cable work required)	
Function setting method		Menu sheet reading method or host command method	
Functional specifications	Reading trigger	External trigger (Transistor input) Trigger by command (RS-232C) Trigger a test reading by pressing the SCAN button on the product	
	OK/NG signals	OK signal is turned on to indicate a successful read OK signal is turned on to indicate a successful read of registered label NG signal is turned on to indicate a successful read of a non-registered label	
	Indication LED	OK LED (green) illuminates to indicate a successful read	
	Buzzer	Notifies a successful reading with a buzzer sound (Muting available)	
Power supply specification	Power voltage	4.5 to 5.5 VDC	
	Consumption current	During operation: 265 mA or less; during standby: 70 mA or less	
Environmental specifications	Ambient temperature range	At operation: 0 to + 45°C; At storage: -10 to + 60°C	
	Ambient humidity range	At operation and storage: 20 to 85% RH (with no icing or condensation)	
	Ambient atmosphere	No corrosive gases	
	Ambient light	Fluorescent lamp: 10,000lx or less, Sunlight: 100,000lx or less	
	Vibration resistance	10 to 150 Hz, half amplitude 0.35 mm, 3 directions (X/Y/Z), 8 minutes each 10 times	
Degree of protection		IP54 (IEC60529)	
Weight	Main unit only	Approximately 90 g	
	Including accessories	Approximately 200 g (including mounting bracket and screws)	
	Packaged weight	Approximately 280 g (including packing carton)	
Dimensions	Main unit	Approximately 41(W) × 33(D) × 24(H) mm	
	Packing carton	Approximately 240(W) × 110(D) × 40(H) mm	
Input/output connector		Round DIN connector	
Code length		Approximately 1.5 m	
Minimum bending radius of cord		Approximately 23 mm	
Accessories		Operation manual, menu sheet, mounting bracket, M2 × 6 screws (two), M5 × 10 screws (two)	
Material, Color	Case	PC, PET, black	
	Reading window	PMMA, transparent	
	Cable	Polyvinyl chloride (PVC), black	
	Mounting bracket	SUS304, silver	

* Unless otherwise specified, the reading performance is defined with angle $\alpha = 0^\circ$, $\beta = +15^\circ$, $\gamma = 0^\circ$, R = ∞ ; illuminance: 100 to 2001x, reading rate: 90% or more.

•QR code is the registered trademark of DENSO WAVE.

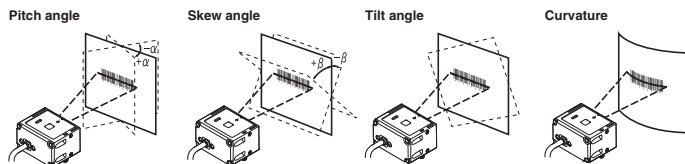
V400-R2 Series

Reading range performance (typical example)



Explained with examples of following conditions:

- Contrast: MRD 63% (PCS = 0.9)
- Installation condition:
Pitch angle $\alpha = 0^\circ$, skew angle $\beta = 15^\circ$
Tilt angle $\gamma = 0^\circ$, curvature $R = \infty$
- Reading rate: 90% or more in 10 tries



V400-R2CF125

2D code (typical example)

Code types	Resolution	Reading distance	Field-of-view size at reading distance
QR Code	0.212	90 to 115	67×42 to 85×54
	0.381	55 to 195	41×26 to 144×91
Data Matrix	0.254	75 to 145	55×33 to 107×68
PDF417	0.169	80 to 140	59×38 to 104×66
	0.254	60 to 195	44×28 to 144×91

Bar code (typical example)

Code types	Resolution	Reading distance	Field-of-view size at reading distance
Code39	0.127	85 to 125	63×47 to 92×59
	0.254	65 to 205	48×31 to 152×96
	0.508	60 to 295	44×28 to 218×138
Code128	0.2	75 to 185	55×35 to 137×87
UPC	0.33	50 to 220	37×23 to 163×103

V400-R2CF65

2D code (typical example)

Code types	Resolution	Reading distance	Field-of-view size at reading distance
QR Code	0.169	60 to 80	44×28 to 59×38
	0.381	35 to 115	26×16 to 85×54
Data Matrix	0.212	55 to 90	41×26 to 67×42
PDF417	0.127	55 to 80	41×26 to 59×38
	0.254	55 to 115	41×26 to 85×54

Bar code (typical example)

Code types	Resolution	Reading distance	Field-of-view size at reading distance
Code39	0.076	60 to 65	44×28 to 48×31
	0.127	55 to 85	41×26 to 63×40
	0.254	50 to 115	37×23 to 85×54
Code128	0.18	45 to 100	33×21 to 74×47
UPC	0.33	45 to 120	33×21 to 89×56

Safety Precautions

WARNING

This product is not designed or rated for ensuring safety of persons either directly or indirectly.

Do not use it for such purposes.

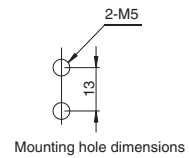
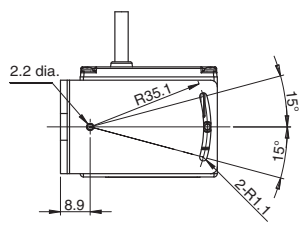
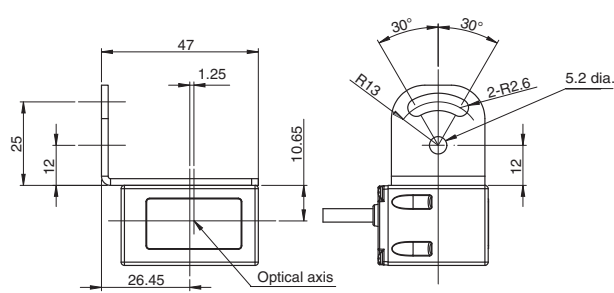
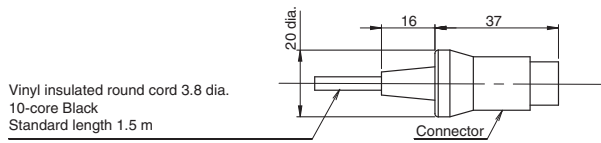
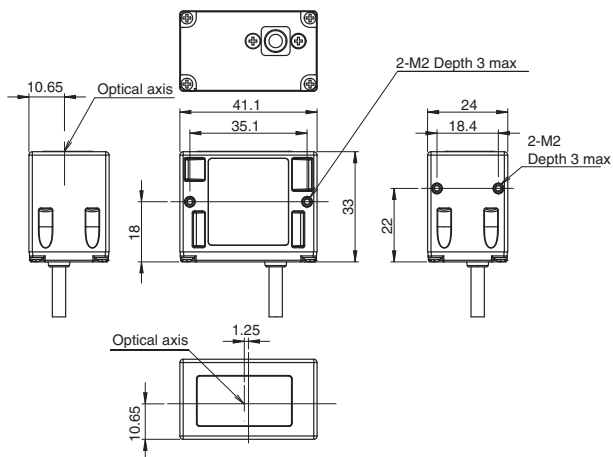


- For details, including precautions for correct use, refer to the "Multi Code Reader V400-R2 Series User's Manual" (Cat. No. Z333) and on your OMRON website.

Refer to the Service & Support on your OMRON website for technical descriptions and FAQs on the product.

Dimensions

Multi Code Reader V400-R2CF65/R2CF125



Terms and Conditions of Sale

1. **Offer; Acceptance.** These terms and conditions (these "Terms") are deemed part of all quotes, agreements, purchase orders, acknowledgments, price lists, catalogs, manuals, brochures and other documents, whether electronic or in writing, relating to the sale of products or services (collectively, the "Products") by Omron Electronics LLC and its subsidiary companies ("Omron"). Omron objects to any terms or conditions proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
2. **Prices; Payment Terms.** All prices stated are current, subject to change without notice by Omron. Omron reserves the right to increase or decrease prices on any unshipped portions of outstanding orders. Payments for Products are due net 30 days unless otherwise stated in the invoice.
3. **Discounts.** Cash discounts, if any, will apply only on the net amount of invoices sent to Buyer after deducting transportation charges, taxes and duties, and will be allowed only if (i) the invoice is paid according to Omron's payment terms and (ii) Buyer has no past due amounts.
4. **Interest.** Omron, at its option, may charge Buyer 1-1/2% interest per month or the maximum legal rate, whichever is less, on any balance not paid within the stated terms.
5. **Orders.** Omron will accept no order less than \$200 net billing.
6. **Governmental Approvals.** Buyer shall be responsible for, and shall bear all costs involved in, obtaining any government approvals required for the importation or sale of the Products.
7. **Taxes.** All taxes, duties and other governmental charges (other than general real property and income taxes), including any interest or penalties thereon, imposed directly or indirectly on Omron or required to be collected directly or indirectly by Omron for the manufacture, production, sale, delivery, importation, consumption or use of the Products sold hereunder (including customs duties and sales, excise, use, turnover and license taxes) shall be charged to and remitted by Buyer to Omron.
8. **Financial.** If the financial position of Buyer at any time becomes unsatisfactory to Omron, Omron reserves the right to stop shipments or require satisfactory security or payment in advance. If Buyer fails to make payment or otherwise comply with these Terms or any related agreement, Omron may (without liability and in addition to other remedies) cancel any unshipped portion of Products sold hereunder and stop any Products in transit until Buyer pays all amounts, including amounts payable hereunder, whether or not then due, which are owing to it by Buyer. Buyer shall in any event remain liable for all unpaid accounts.
9. **Cancellation; Etc.** Orders are not subject to rescheduling or cancellation unless Buyer indemnifies Omron against all related costs or expenses.
10. **Force Majeure.** Omron shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
11. **Shipping; Delivery.** Unless otherwise expressly agreed in writing by Omron:
 - a. Shipments shall be by a carrier selected by Omron; Omron will not drop ship except in "break down" situations.
 - b. Such carrier shall act as the agent of Buyer and delivery to such carrier shall constitute delivery to Buyer;
 - c. All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Omron), at which point title and risk of loss shall pass from Omron to Buyer; provided that Omron shall retain a security interest in the Products until the full purchase price is paid;
 - d. Delivery and shipping dates are estimates only; and
 - e. Omron will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
12. **Claims.** Any claim by Buyer against Omron for shortage or damage to the Products occurring before delivery to the carrier must be presented in writing to Omron within 30 days of receipt of shipment and include the original transportation bill signed by the carrier noting that the carrier received the Products from Omron in the condition claimed.
13. **Warranties.** (a) **Exclusive Warranty.** Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied. (b) **Limitations.** OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) **Buyer Remedy.** Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty. See <http://www.omron247.com> or contact your Omron representative for published information.
14. **Limitation on Liability; Etc.** OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY. Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.
15. **Indemnities.** Buyer shall indemnify and hold harmless Omron Companies and their employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not Omron is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Products. Without limiting the foregoing, Buyer (at its own expense) shall indemnify and hold harmless Omron and defend or settle any action brought against such Companies to the extent based on a claim that any Product made to Buyer specifications infringed intellectual property rights of another party.
16. **Property; Confidentiality.** Any intellectual property in the Products is the exclusive property of Omron Companies and Buyer shall not attempt to duplicate it in any way without the written permission of Omron. Notwithstanding any charges to Buyer for engineering or tooling, all engineering and tooling shall remain the exclusive property of Omron. All information and materials supplied by Omron to Buyer relating to the Products are confidential and proprietary, and Buyer shall limit distribution thereof to its trusted employees and strictly prevent disclosure to any third party.
17. **Export Controls.** Buyer shall comply with all applicable laws, regulations and licenses regarding (i) export of products or information; (ii) sale of products to "forbidden" or other proscribed persons; and (iii) disclosure to non-citizens of regulated technology or information.
18. **Miscellaneous.** (a) **Waiver.** No failure or delay by Omron in exercising any right and no course of dealing between Buyer and Omron shall operate as a waiver of rights by Omron. (b) **Assignment.** Buyer may not assign its rights hereunder without Omron's written consent. (c) **Law.** These Terms are governed by the law of the jurisdiction of the home office of the Omron company from which Buyer is purchasing the Products (without regard to conflict of law principles). (d) **Amendment.** These Terms constitute the entire agreement between Buyer and Omron relating to the Products, and no provision may be changed or waived unless in writing signed by the parties. (e) **Severability.** If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision. (f) **Setoff.** Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice. (g) **Definitions.** As used herein, "including" means "including without limitation"; and "Omron Companies" (or similar words) mean Omron Corporation and any direct or indirect subsidiary or affiliate thereof.

Certain Precautions on Specifications and Use

1. **Suitability of Use.** Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases but the following is a non-exhaustive list of applications for which particular attention must be given: (i) Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this document. (ii) Use in consumer products or any use in significant quantities. (iii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations. (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this Product. NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON'S PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
2. **Programmable Products.** Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.
3. **Performance Data.** Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.
4. **Change in Specifications.** Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.
5. **Errors and Omissions.** Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.

OMRON AUTOMATION AND SAFETY • THE AMERICAS HEADQUARTERS • Chicago, IL USA • 847.843.7900 • 800.556.6766 • www.omron247.com

OMRON CANADA, INC. • HEAD OFFICE

Toronto, ON, Canada • 416.286.6465 • 866.986.6766 • www.omron247.com

OMRON ELECTRONICS DE MEXICO • HEAD OFFICE

México DF • 52.55.59.01.43.00 • 01-800-226-6766 • mela@omron.com

OMRON ELECTRONICS DE MEXICO • SALES OFFICE

Apodaca, N.L. • 52.81.11.56.99.20 • 01-800-226-6766 • mela@omron.com

OMRON ELETRÔNICA DO BRASIL LTDA • HEAD OFFICE

São Paulo, SP, Brasil • 55.11.2101.6300 • www.omron.com.br

OMRON ARGENTINA • SALES OFFICE

Cono Sur • 54.11.4783.5300

OMRON CHILE • SALES OFFICE

Santiago • 56.9.9917.3920

OTHER OMRON LATIN AMERICA SALES

54.11.4783.5300

OMRON EUROPE B.V. • Wegalaan 67-69, NL-2132 JD, Hoofddorp, The Netherlands. • +31 (0) 23 568 13 00 • www.industrial.omron.eu

Authorized Distributor:

Automation Control Systems

- Machine Automation Controllers (MAC) • Programmable Controllers (PLC)
- Operator interfaces (HMI) • Distributed I/O • Software

Drives & Motion Controls

- Servo & AC Drives • Motion Controllers & Encoders

Temperature & Process Controllers

- Single and Multi-loop Controllers

Sensors & Vision

- Proximity Sensors • Photoelectric Sensors • Fiber-Optic Sensors
- Amplified Photomicrosensors • Measurement Sensors
- Ultrasonic Sensors • Vision Sensors

Industrial Components

- RFID/Code Readers • Relays • Pushbuttons & Indicators
- Limit and Basic Switches • Timers • Counters • Metering Devices
- Power Supplies

Safety

- Laser Scanners • Safety Mats • Edges and Bumpers • Programmable Safety Controllers • Light Curtains • Safety Relays • Safety Interlock Switches

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Input Devices](#) category:

Click to view products by [Omron](#) manufacturer:

Other Similar products are found below :

[80260-00](#) [81485-28](#) [81521-08](#) [FKB4720-103](#) [84250-26](#) [84980-04](#) [84S-AC1-000](#) [JD-0700EU-2](#) [JM-0800-2](#) [JW-T0100](#) [89498-13](#) [89758-05](#)
[89886-26](#) [89941-00](#) [G80-3000LSCEU-2](#) [MJ0FGGRY](#) [JM-0800-0](#) [84S-BB1-004](#) [81601-26](#) [UL21KMZQ](#) [G8011900LPMUS0](#) [G84-](#)
[4700LUCUS-0](#) [81485-26](#) [84105-13](#) [V400-W24 5M](#) [V400-W23 5M](#) [G84-5200LCMEU-2](#) [DT2257X20V00GRY](#) [V400-W23P 5M](#)
[VW3A8151R20U](#) [V400-W24 15M](#) [LT1332D](#) [V400-W24 10M](#) [V400-W24P 15M](#) [V400-WM0 1M](#) [V400-W24P 10M](#) [V400-W23P 10M](#)
[TCS-1492OP](#) [V400-W23 3M](#) [LT1372D](#) [LP1007EXXH00R](#) [DT2253X20V00BLK](#) [100133BX](#) [EZ08-230013](#) [81248-04](#) [89887-26](#) [90215-00](#)
[HB110C3NWBNA](#) [9700001201](#) [80260-08](#)