

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

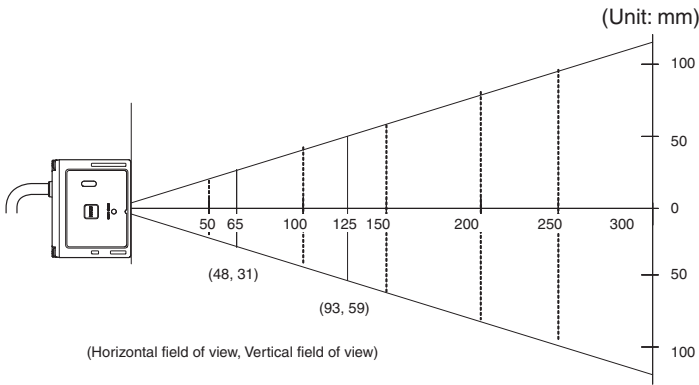
Model		V400-R2CF65	V400-R2CF125
Direction of view		Front view	
Applicable codes	Bar code	WPC(JAN/EAN/UPC), Codabar(NW-7), ITF, Industrial 2 of 5, Code39, Code93, Code128, GS1-128(EAN-128), GS1-Databar(RSS-14), GS1-Databar Limited(RSS Limited), GS1-Databar Expanded (RSS Expanded), GS1-Databar Composite(RSS 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 $\alpha = 0^\circ$, $\beta = +15^\circ$, $\gamma = 0^\circ$, $R = \infty$; illuminance: 100 to 2001x, reading rate: 90% or more.

•QR code is the registered trademark of DENSO WAVE.

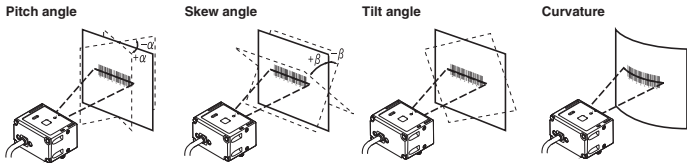
V400-R2 Series

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.

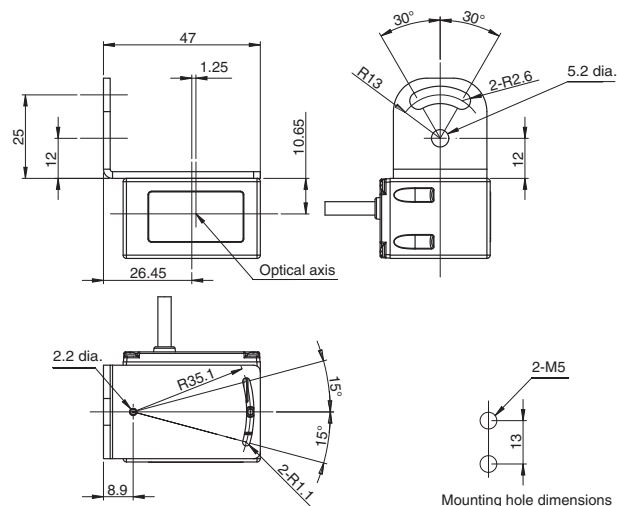
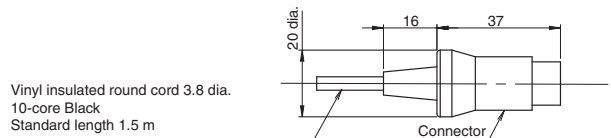
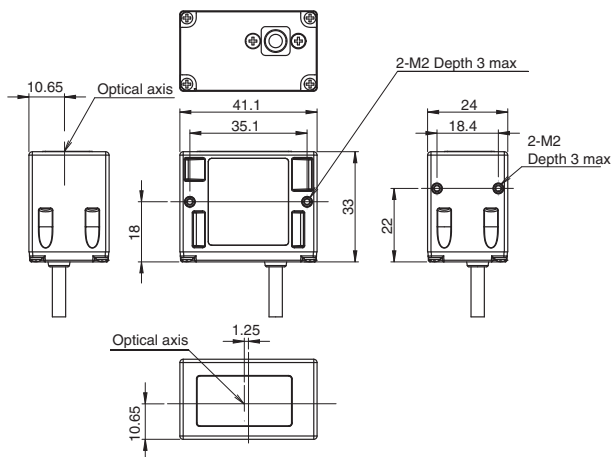
Refer to the Service & Support on your OMRON website for technical descriptions and FAQs on the product.

Dimensions

(Unit: mm)

Multi Code Reader

V400-R2CF65/R2CF125



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