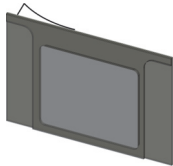# MicroHAWK V330-F
Multicode Reader

Compact Ethernet barcode reader.

- Simple configuration with WebLink.
- 5 megapixel sensor available.
- Smallest in class.
- IP40.
- Single snap-in RJ45 connector and cable.
- Ethernet TCP/IP.
- Power over Ethernet.

MicroHAWK V330-F

Optics Options

Appearance	Type	Model
	Diffuser Kit – Peel and Stick Accessory. Exterior to unit.	**V330-AF1**
	Polarizer Kit – Peel and Stick Accessory. Exterior to unit.	**V330-AF2**

Direct Wiring Options

Appearance	Type	Length	Model
	Power Over Ethernet (PoE) Single Port Injector	N/A	**V330-AP1**
	Standard Ethernet Cables, In-Cabinet Use; Standard RJ45 Connectors on Both Ends; Green	1 Meter	**XS6W-5PUR8SS100CM-G**
		3 Meters	**XS6W-5PUR8SS300CM-G**
		5 Meters	**XS6W-5PUR8SS500CM-G**
		10 Meters	**XS6W-5PUR8SS1000CM-G**
		15 Meters	**XS6W-5PUR8SS1500CM-G**
	Standard Ethernet Cables, Out-of-Cabinet Use; Rugged RJ45 Connectors on Both Ends; Light Blue	1 Meter	**XS5W-T421-CMD-K**
		3 Meters	**XS5W-T421-EMD-K**
		5 Meters	**XS5W-T421-GMD-K**
		10 Meters	**XS5W-T421-JMD-K**
		15 Meters	**XS5W-T421-KMD-K**

Appearance	Type	Length	Model
	High Flex Ethernet Cables for Robot and Cable Tray Use; Rugged RJ45 Connectors on Both Ends; Light Blue	1 Meter	**XS5W-T421-CMD-KR**
		3 Meters	**XS5W-T421-EMD-KR**
		5 Meters	**XS5W-T421-GMD-KR**
		10 Meters	**XS5W-T421-JMD-KR**
		15 Meters	**XS5W-T421-KMD-KR**

V330-F Model Number Structure

Use this legend when defining product part numbers. Please note that not all combinations of parameters are valid. For instance, fixed focus distance of 50 mm is not available with Narrow Lens. When ordering, use valid model numbers from the tables in the Ordering Information section only.

V330-F[XXX][Y][ZZZ]-**NN**[P]

Key	Classification	Code	Meaning
XXX	Focus Distance (mm)	050	Fixed Focus at 50 mm
		064	Fixed Focus at 64 mm
		081	Fixed Focus at 81 mm
		102	Fixed Focus at 102 mm
		133	Fixed Focus at 133 mm
		190	Fixed Focus at 190 mm
		300	Fixed Focus at 300 mm
Y	Lens	W	Wide Field of View - 5.2 mm Focal Length Lens
		M	Medium Field of View – 7.7 mm Focal Length Lens
		N	Narrow Field of View – 16 mm Focal Length Lens
ZZZ	Sensor	03M	752 x 480 (0.3 MP) Pixel, Mono Sensor, Global Shutter
		12M	1280 x 960 (1.2 MP) Pixel, Mono Sensor, Global Shutter
		50C	2592 x 1944 (5 MP) Pixel, Color Sensor, Rolling Shutter
L	Light Type	N	No Outer Light
C	Light Color	N	No Outer Light
P	Software License	P	High Speed, Plus Mode
		X	High Speed, X-Mode

Example Part Number:
- V330-F064N50C-NNX: Fixed Focus at 64 mm, Narrow Lens, 5 MP Color – No Light, High Speed, X-Mode

V330-F Valid Product Matrix

Model	Category	Focus Type	Sensor	Lens	Focus Distance (mm)	Light	License
V330-F	Monochrome	Fixed Focus	03M, 12M	W, M	50, 64, 81, 102, 133, 190, 300	None	P, X
	Color	Fixed Focus	50C	W, M	50, 64, 81, 102, 133, 190, 300	None	P, X
	Monochrome	Fixed Focus	03M, 12M	N	64, 81, 102, 133, 190, 300	None	P, X
	Color	Fixed Focus	50C	N	64, 81, 102, 133, 190, 300	None	P, X

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V330-F Ordering Information

Categories:

1. Fixed Focus Cameras

　　a) V330-F Monochrome and Color Fixed Focus Camera with Standard Lens

　　b) V330-F Monochrome and Color Fixed Focus Camera with Narrow Lens

1a) V330-F Mono and Color Camera with Standard Lens: Valid Combinations

V330-F[XXX][Y][ZZZ]-NN[P]

Key	Classification	Code	Meaning
XXX	Focus Distance (mm)	050	Fixed Focus at 50 mm
		064	Fixed Focus at 64 mm
		081	Fixed Focus at 81 mm
		102	Fixed Focus at 102 mm
		133	Fixed Focus at 133 mm
		190	Fixed Focus at 190 mm
		300	Fixed Focus at 300 mm
Y	Lens	W	Wide Field of View - 5.2 mm Focal Length Lens
		M	Medium Field of View – 7.7 mm Focal Length Lens
ZZZ	Sensor	03M	752 x 480 (0.3 MP) Pixel, Mono Sensor, Global Shutter
		12M	1280 x 960 (1.2 MP) Pixel, Mono Sensor, Global Shutter
		50C	2592 x 1944 (5 MP) Pixel, Color Sensor, Rolling Shutter
P	Software License	P	High Speed, Plus Mode
		X	High Speed, X-Mode

1b) V330-F Mono and Color Camera with Narrow Lens: Valid Combinations

**Note:** 50 mm Fixed Focus option not available with Narrow Lens.

V330-F[XXX]N[ZZZ]-NN[P]

Key	Classification	Code	Meaning
XXX	Focus Distance (mm)	064	Fixed Focus at 64 mm
		081	Fixed Focus at 81 mm
		102	Fixed Focus at 102 mm
		133	Fixed Focus at 133 mm
		190	Fixed Focus at 190 mm
		300	Fixed Focus at 300 mm
ZZZ	Sensor	03M	752 x 480 (0.3 MP) Pixel, Mono Sensor, Global Shutter
		12M	1280 x 960 (1.2 MP) Pixel, Mono Sensor, Global Shutter
		50C	2592 x 1944 (5 MP) Pixel, Color Sensor, Rolling Shutter
P	Software License	P	High Speed, Plus Mode
		X	High Speed, X-Mode

V330-F

Read Ranges

Read range specifications are subject to change.
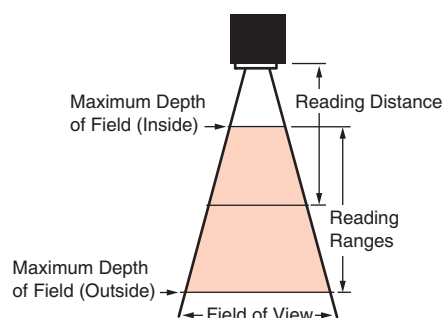
Fixed Focus Field of View (mm) - Wide Lens

Distance (mm)	0.3 MP		1.2 MP		5 MP	
	Width	Height	Width	Height	Width	Height
50	49	32	53	39	50	38
64	62	39	66	49	63	47
81	76	49	81	61	78	58
102	95	60	101	75	96	72
133	121	78	129	97	124	92
190	171	109	182	136	174	130
300	266	170	283	213	271	202
400	353	225	376	282	359	268

Fixed Focus Field of View (mm) - Medium Lens

Distance (mm)	0.3 MP		1.2 MP		5 MP	
	Width	Height	Width	Height	Width	Height
50	34	22	36	27	35	26
64	43	27	45	34	43	32
81	53	34	56	42	54	40
102	66	42	70	52	67	50
133	84	54	90	67	86	64
190	119	76	126	95	121	90
300	185	118	196	147	188	140
400	245	156	260	195	249	186

Fixed Focus Field of View (mm) - Narrow Lens

Distance (mm)	0.3 MP		1.2 MP		5 MP	
	Width	Height	Width	Height	Width	Height
50	15	10	16	12	16	12
64	19	12	21	15	20	15
81	24	15	25	19	24	18
102	30	19	32	24	30	22
133	38	24	40	30	39	29
190	54	34	57	43	54	41
300	83	53	89	67	85	63
400	111	71	118	88	113	84

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Ratings and Specifications

V330-F		V330-F□□□□03M-□□□	V330-F□□□□12M-□□□	V330-F□□□□50C-□□□
Symbologies ✱1	1D Symbologies	Code 39, Code 128, BC412, Interleaved 2 of 5, UPC/EAN, Codabar, Code 93, Pharmacode, PLANET, Postnet, Japanese Post, Australian Post, Royal Mail, Intelligent Mail, KIX		
	2D Symbologies	Data Matrix (ECC 0-200), QR Code, Micro QR Code, Aztec Code, DotCode		
	Stacked Symbologies	PDF417, MicroPDF417, GS1 Databar (Composite and Stacked)		
Reading Performance ✱2	Number of Reading Digits	No Upper Limit (depending on bar width and reading distance)		
	Aiming Light	Two Blue LEDs		
	Illumination	Inner LEDs: Four White and Four Red (Wavelength: 625 nm)		
		Outer LEDs: None	Outer LEDs: None	Outer LEDs: None
	Reading Distance / Field of View	Refer to *Read Ranges* section for detail.		
	Pitch Angle (α) ✱3	±30°		
	Skew Angle (β) ✱3	±30°		
	Tilt Angle (γ) ✱3	±180°		
Image Capture	Focus	Fixed Focus (Wide = 5.2 mm, Medium = 7.7 mm, Narrow = 16 mm)		
	Resolution	752 (H) x 480 (V)	1280 (H) x 960 (V)	2592 (H) x 1944 (V)
	Color / Monochrome	Monochrome CMOS	Monochrome CMOS	Color CMOS
	Shutter	Global Shutter	Global Shutter	Rolling Shutter
	Frames per Second	60 fps	42 fps	5 fps
	Exposure	50 to 100,000 µs		
Image Logging		FTP		
Trigger		Communication Trigger (Ethernet)		
I/O Specifications	Input Signals	Ethernet		
	Output Signals	Ethernet		
Communication	Connectivity	Ethernet TCP/IP		
	Ethernet Specifications	100BASE-TX / 10BASE-T		
Indicator LEDs		PASS (Green), PWR (Green)		
Power Supply Voltage		Source: 44-57 VDC IEEE802.3af POE		
Current Consumption		Max Current: 0.10A		
Environmental Immunity✱4	Ambient Temperature Range	Operating: 0 to 40° C Storage: -50 to 75° C (No Icing or Condensation)		
	Ambient Humidity Range	Operating and Storage: 5% to 95% (Non-Condensing)		
	Ambient Atmosphere	No Corrosive Gases		
	Vibration Resistance (Destructive)	Oscillation Frequency: 10 to 150Hz, Half Amplitude: 0.35 mm, Vibration Direction: X/Y/Z, Sweep Time: 8 minute/count, Sweep Count: 10 times		
	Shock Resistance (Destructive)	Impact Force: 150 m/s2, Test Direction: 6 directions, three times each (up/down, front/back, left/right)		
	Degree of Protection	IEC 60529 IP40		
Weight	Main Body Only	72 g		
	Packaging Weight	Approx. 180 g (including packing)		
Dimensions	Main Body Dimensions	40 (W) × 63 (D) × 24 (H) mm		
	Packaging Dimensions	170 (W) × 117 (D) × 86 (H) mm		
Accessories		ReadMeFirst, CE Compliance Sheet		
LED Safety Standard		IEC 62471-1: 2006 Risk-Exempt Group		
Safety Standards		EN 55024:2010, EN 55032:2015 + AC:2016 FCC Part 15, Subpart B (Class B) UL60950-1 BIS RCM, KC, EAC and BSMI Pending		
Materials	Case	Aluminum Diecast, Alumite (Black)		
	Reading Window	Acrylic		
Software		WebLink		

✱1. These symbologies are supported based on Omron's read capability validation standard. Omron recommends that validation be performed for each application.
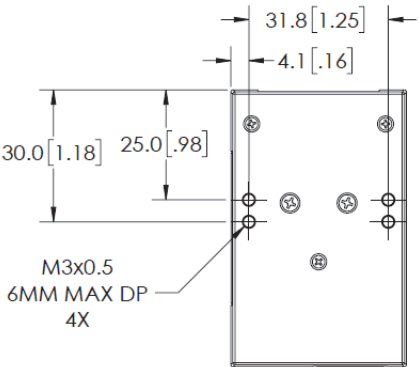**✱2.** Unless otherwise specified, reading performance is defined with center of field of view, angle R=∞.
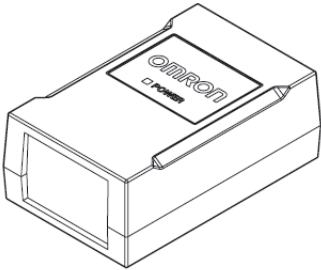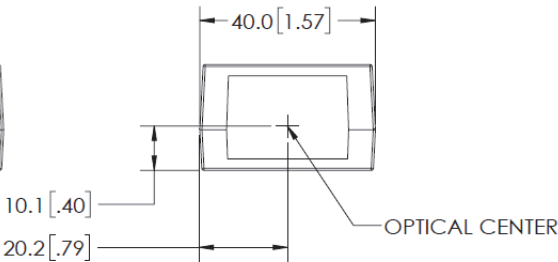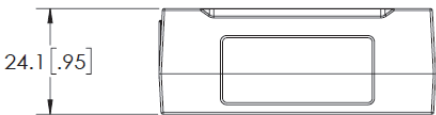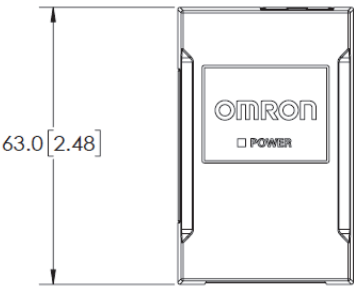**✱3.**

✱4. In an electrically noisy environment, use only the V430-F in combination with a noise filter cable (V430-W□F-□M) to ensure proper operation.
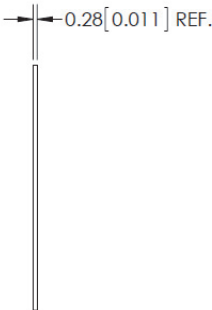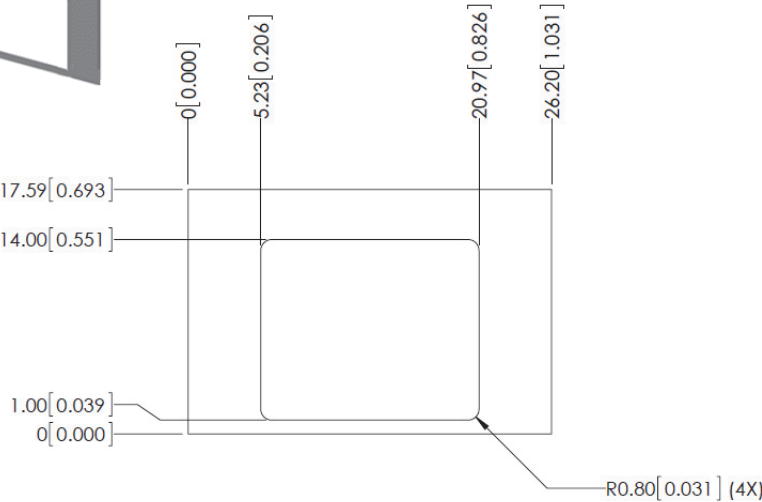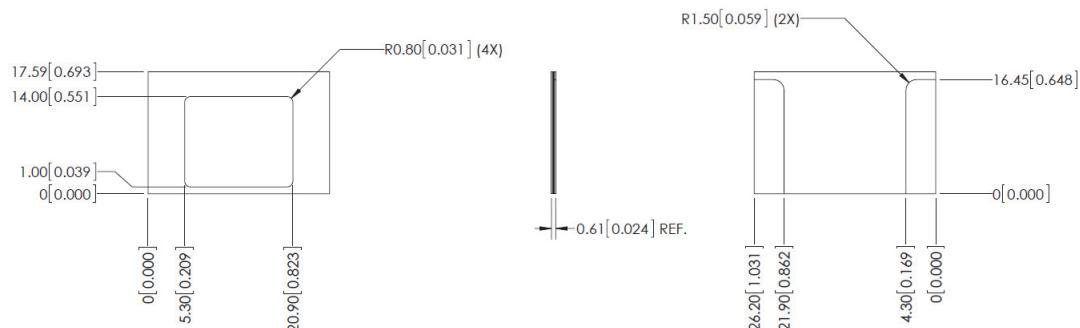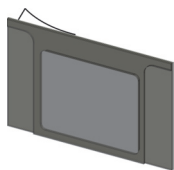
V330-F

Dimensions

63.0 [2.48]

40.0 [1.57]

24.1 [.95]

10.1 [.40]

20.2 [.79]

OPTICAL CENTER

31.8 [1.25]

4.1 [.16]

30.0 [1.18] 25.0 [.98]

M3x0.5
6MM MAX DP
4X

Diffuser Kit – Peel and Stick Accessory. Exterior to unit.
V330-AF1

0 [0.000]

5.23 [0.206]

20.97 [0.826]

26.20 [1.031]

17.59 [0.693]

14.00 [0.551]

1.00 [0.039]

0 [0.000]

0.28 [0.011] REF.

R0.80 [0.031] (4X)

Polarizer Kit – Peel and Stick Accessory. Exterior to unit.
V330-AF2

17.59[0.693]
14.00[0.551]
1.00[0.039]
0[0.000]
R0.80[0.031] (4X)
0[0.000]
5.30[0.209]
20.90[0.823]

0.61[0.024] REF.

R1.50[0.059] (2X)
16.45[0.648]
0[0.000]
26.20[1.031]
21.90[0.862]
4.30[0.169]
0[0.000]

Standard Ethernet Cables, In-Cabinet Use; Standard RJ45 Connectors on Both Ends; Green
XS6W-5PUR8SS100CM-G
**XS6W-5PUR8SS300CM-G**
XS6W-5PUR8SS500CM-G
XS6W-5PUR8SS1000CM-G
XS6W-5PUR8SS1500CM-G
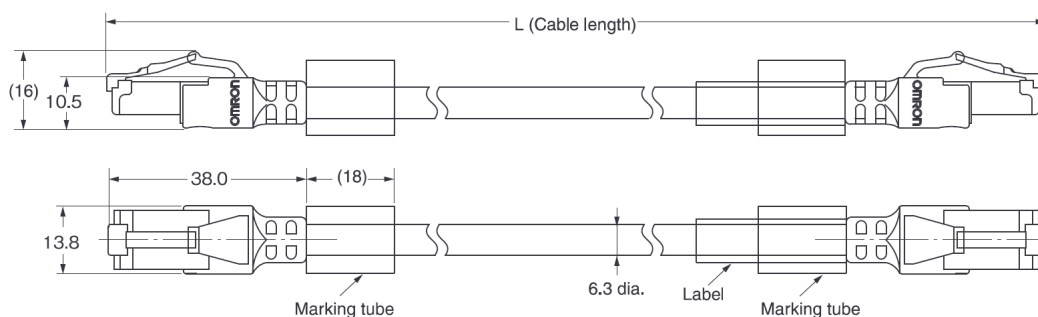
L (Cable length)
(16)
10.5

38.0
(18)
13.8
Marking tube
6.3 dia.
Label
Marking tube

Standard Ethernet Cables, Out-of-Cabinet Use; Rugged RJ45 Connectors on Both Ends; Light Blue
XS5W-T421-CMD-K
XS5W-T421-EMD-K
XS5W-T421-GMD-K
XS5W-T421-JMD-K
XS5W-T421-KMD-K

High Flex Ethernet Cables for Robot and Cable Tray Use; Rugged RJ45 Connectors on Both Ends; Light Blue
XS5W-T421-CMD-KR
XS5W-T421-EMD-KR
XS5W-T421-GMD-KR
XS5W-T421-JMD-KR
XS5W-T421-KMD-KR

L (cable length)
54.7
54.7
RJ45
RJ45
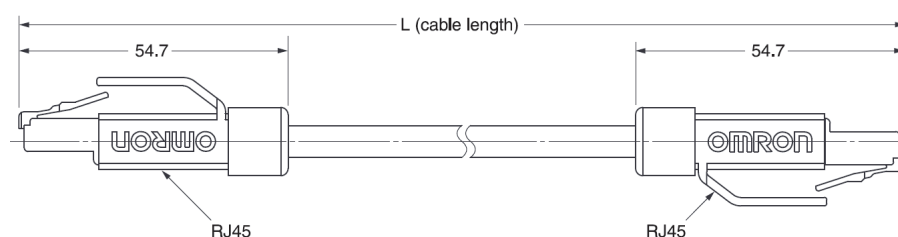
Related Manuals

Man.No.	Model	Manual
84-9007234-02	V320-F, V330-F, V420-F, V430-F	MicroHAWK V320-F / V330-F / V420-F / V430-F User Manual

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• Rotary Encoders • Ultrasonic Sensors

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• Safety Mats and Edges • Safety Door Switches • Emergency Stop Devices
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• Solid State Relays

Software
• Programming & Configuration • Runtime

Mouser Electronics

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V330-F102M50C-NNX   V330-F133W12M-NNX   V330-F300M03M-NNX   V330-F300M12M-NNP   V330-F300M12M-NNX   V330-F081M03M-NNP   V330-F102W03M-NNP   V330-F050W12M-NNP   V330-F064W50C-NNP   V330-F081M03M-NNX   V330-F102M12M-NNX   V330-F300W03M-NNP   V330-F050M50C-NNP   V330-F081M12M-NNX   V330-F102W03M-NNX   V330-F050W03M-NNP   V330-F064W50C-NNX   V330-F050M03M-NNX   V330-F081M12M-NNP   V330-F081M50C-NNP   V330-F133W03M-NNX   V330-F190M03M-NNP   V330-F190W50C-NNX   V330-F133M12M-NNP   V330-F190M50C-NNP   V330-F190M50C-NNX   V330-F190W03M-NNX   V330-F300W12M-NNX   V330-F300W50C-NNX   V330-F081W50C-NNP   V330-F133M03M-NNX   V330-F064M12M-NNP   V330-F064M12M-NNX   V330-F064M50C-NNX   V330-F133M03M-NNP   V330-F133M50C-NNX   V330-F050M03M-NNP   V330-F064M50C-NNP   V330-F081W03M-NNX   V330-F081W12M-NNP   V330-F081W12M-NNX   V330-F300M50C-NNX   V330-F050M12M-NNX   V330-F050W50C-NNP   V330-F064W03M-NNX   V330-F102M03M-NNX   V330-F102W12M-NNP   V330-F133M50C-NNP   V330-F133W03M-NNP   V330-F190M12M-NNX   V330-F190W12M-NNP   V330-F190W50C-NNP   V330-F050W50C-NNX   V330-F064W03M-NNP   V330-F064W12M-NNP   V330-F081M50C-NNX   V330-F102M12M-NNP   V330-F102W12M-NNX   V330-F300W12M-NNP   V330-F050M12M-NNP   V330-F064M03M-NNX   V330-F102M03M-NNP   V330-F190M03M-NNX   V330-F300W03M-NNX   V330-F064W12M-NNX   V330-F081W03M-NNP   V330-F081W50C-NNX   V330-F102W50C-NNP   V330-F190M12M-NNP   V330-F190W12M-NNX   V330-F133W50C-NNP   V330-F133W50C-NNX   V330-F300M03M-NNP   V330-F300M50C-NNP   V330-F050M50C-NNX   V330-F064M03M-NNP   V330-F190W03M-NNP   V330-F300W50C-NNP   V330-F050W03M-NNX   V330-F050W12M-NNX   V330-F102M50C-NNP   V330-F133W12M-NNP   V330-F102W50C-NNX   V330-F133M12M-NNX