New Product

Auto Focus Multi Code Reader
V430-F series

Smallest in class ✻1

- Autofocus to read codes at different distances
- Liquid lens for long life autofocus
- Best in class: 5 Mpix ✻2

✻1. Fixed mount multi code readers with 1.2 Mpix or more.
Based on Omron investigation in March 2018.
✻2. Fixed mount multi code reader. Based on Omron investigation in March 2018.

Ordering Information

Code Readers

Appearance	Number of pixels	Field of view✻	Reading distance✻	Model
	5 million pixels (Color)	Wide View	Autofocus 50 to 300 mm	**V430-F000W50C**
		Middle View		**V430-F000M50C**
	1.2 million pixels (Monochrome)	Wide View	Autofocus 50 to 300 mm	**V430-F000W12M**
		Middle View		**V430-F000M12M**
		Narrow View	Autofocus 40 to 150 mm	**V430-F000N12M**
	0.3 million pixels (Monochrome)	Middle View	Fixed Focus 50 mm	**V430-F050M03M**
			Fixed Focus 81 mm	**V430-F081M03M**
			Fixed Focus 102 mm	**V430-F102M03M**

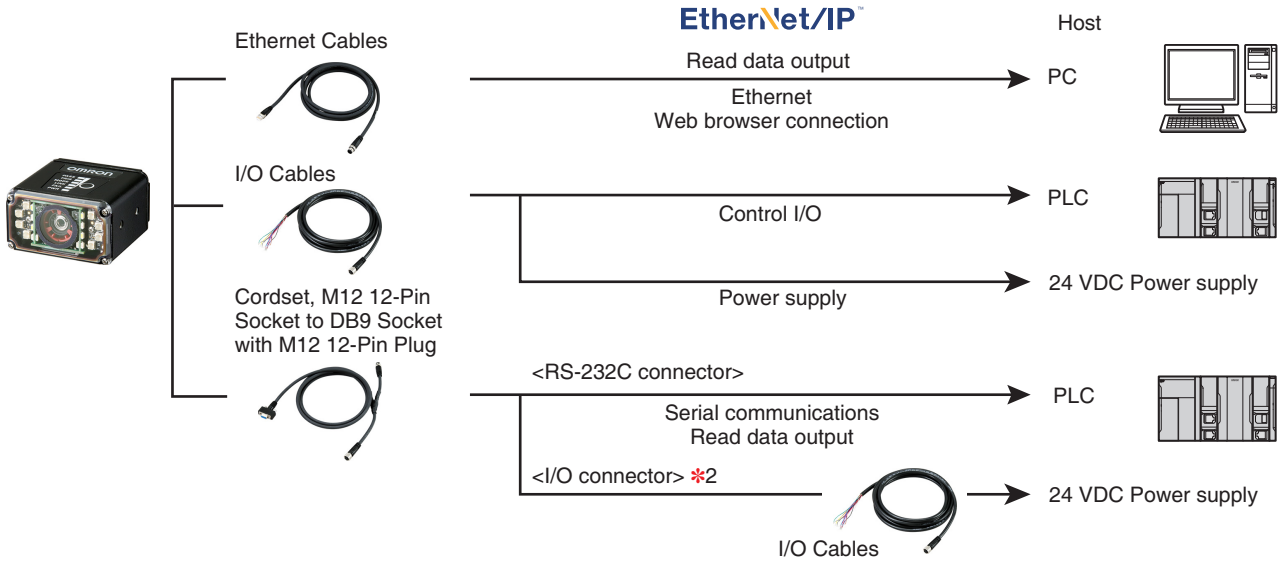
✻ Refer to *Read Ranges* on p.3 for detail.

Mounting Brackets

Appearance	Type	Model
	L Bracket (It's possible to adjust the angle.)	**V430-AM0**
	Mounting Block	**V430-AM1**

Cables (Bending Resistant Cables)

Appearance	Type	Connecter	Length	Model
	I/O Cables	Straight	3 m	**V430-W8-3M**
		Straight	5 m	**V430-W8-5M**
		Right angle down ✻1	3 m	**V430-W8LD-3M**
		Right angle up ✻1	3 m	**V430-W8LU-3M**
	Ethernet Cables	Straight	3 m	**V430-WE-3M**
		Straight	5 m	**V430-WE-5M**
		Right angle down ✻1	3 m	**V430-WELD-3M**
		Right angle up ✻1	3 m	**V430-WELU-3M**
	Cordset, M12 12-Pin Socket to DB9 Socket with M12 12-Pin Plug	Straight	3 m	**V430-W2-3M**



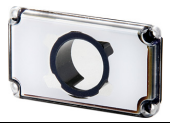
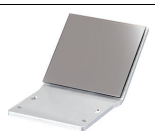
✻1. The orientation of connectors are shown below.

Right angle up

Right angle down

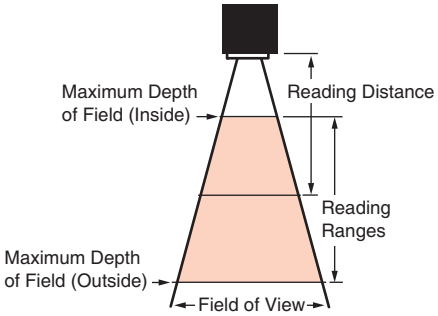
✻2. Connect V430-W8 to I/O connector (M12 12-pin plug) and connect to a power supply.

Optics Options

Appearance	Type	Model
	Front Window (for replacement)	**V430-AF0**
	Diffuser	**V430-AF1**
	Polarizer	**V430-AF2**
	Right Angle Mirror	**V430-AF3**

Read Ranges

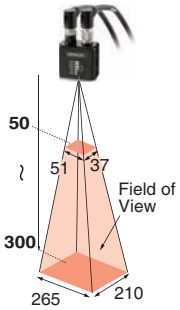
Read range specifications are subject to change.



5 million pixels

Wide View

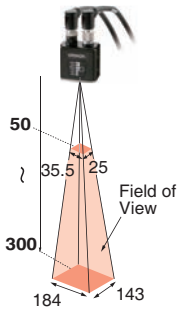
V430-F000W50C



Reading Distance (mm)	Field of View (mm)		Reading Ranges (mm)	
	Horizontal	Vertical	Inside	Outside
50	51	37	43	59
102	96	75	80	124
300	265	210	203	397

Middle View

V430-F000M50C

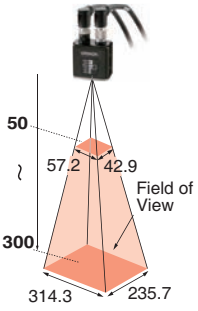


Reading Distance (mm)	Field of View (mm)		Reading Ranges (mm)	
	Horizontal	Vertical	Inside	Outside
50	35.5	25	46.5	54.5
102	66	49	94	110
300	184	143	227	373

1.2 million pixels

Wide View

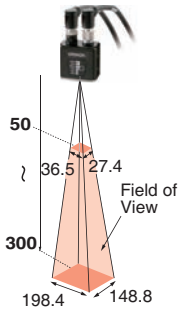
V430-F000W12M



Reading Distance (mm)	Field of View (mm)		Reading Ranges (mm)	
	Horizontal	Vertical	Inside	Outside
50	57.2	42.9	37	64
102	109.5	82.2	74	131
300	314.3	235.7	224	427

Middle View

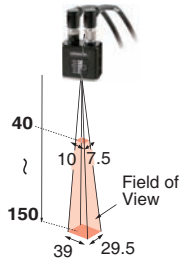
V430-F000M12M



Reading Distance (mm)	Field of View (mm)		Reading Ranges (mm)	
	Horizontal	Vertical	Inside	Outside
50	36.5	27.4	47.5	55
102	71.4	53.6	88	116
300	198.4	148.8	185	400

Narrow View

V430-F000N12M



Reading Distance (mm)	Field of View (mm)		Reading Ranges (mm)	
	Horizontal	Vertical	Inside	Outside
40	10.0	7.5	38.5	41.5
81	20.6	15.4	78.5	83.5
150	39.0	29.5	132	153

0.3 million pixels

Middle View

Model	Reading Distance (mm)	Field of View (mm)		Reading Ranges (mm)	
		Horizontal	Vertical	Inside	Outside
V430-F050M03M	50	35	21.5	43	58
V430-F081M03M	81	49	33	65	97
V430-F102M03M	102	65	41	83	121

Minimum 2D Cell Size

The minimum size is what could be read in ideal conditions.

Model	Minimum 2D Cell Size ✻ (mm)	Measurement conditions		
		Reading Distance (mm)	Field of View (mm)	
			Horizontal	Vertical
V430-F000W50C	0.09	50	51	37
V430-F000M50C	0.09	50	35.5	25
V430-F000W12M	0.13	50	57.2	42.9
V430-F000M12M	0.09	50	36.5	27.4
V430-F000N12M	0.05	40	10	7.5
V430-F050M03M	0.13	50	35	21.5
V430-F081M03M	0.19	81	49	33
V430-F102M03M	0.26	102	65	41

✻ Minimum 1D element is typically 1/2 the size of minimum 2D element.

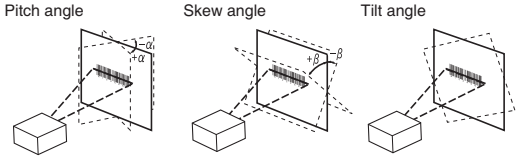
Ratings and Specifications

Model		V430-F000□50C	V430-F000□12M	V430-F□□□M03M
Applicable codes ✻1	Bar code	Code 39, Code 128, BC412, ITF (Interleaved 2 of 5), EAN/UPC, Codabar, Code 93, Pharmacode, PLANET, POSTNET, Japanese Post, Australian Post, Royal Mail, Intelligent Mail, KIX, UPU, GS1 Databar (Composite)		
	2D code	DataMatrix (ECC000-ECC200), GS1 DataMatrix, QR Code, Micro QR Code, Aztec Code, DotCode, PDF417, Micro PDF417, GS1 Databar (Stacked)		
Reading performance ✻2	Number of reading digits	No upper limit (depends on bar width and reading distance)		
	Aiming light	Two Blue LEDs		
	Light source	Inner LEDs: Four White and Four Red LEDs (wave length: 625 nm)		
		Outer LEDs: Eight White LEDs	Outer LEDs: Eight Red LEDs (wave length: 617 nm)	Outer LEDs: Eight Red LEDs (wave length: 617 nm)
	Reading distance/ Field of view	Refer to *Read Ranges* on page 3 for detail.		
	Pitch angle (α) ✻3	±30°		
	Skew angle (β) ✻3	±30°		
	Tilt angle (γ) ✻3	±180°		
Image capture device	Effective pixels	2592 (H) x 1944 (V)	1280 (H) x 960 (V)	752 (H) x 480 (V)
	Color/ Monochrome	Color CMOS	Monochrome CMOS	Monochrome CMOS
	Shutter Method	Rolling shutter	Global shutter	Global shutter
	Frame Rate	5 fps	42 fps	60 fps
	Shutter Speed	50 us to 100 ms		
Image logging		FTP		
Reading trigger		External trigger (edge, level), Trigger by command (Ethernet, RS-232C)		
I/O specifications	Input signals	Trigger, New Master: 4.5 to 28 V rated (10 mA at 28 VDC)		
	Output signals	Output1, Output2, Output3: 1 to 28 V rated (100 mA Max. at 24 VDC)		
	Communication specification ✻4	RS-232C, Ethernet TCP/IP, EtherNet/IP™, PROFINET		
	Ethernet specifications	100BASE-TX/10BASE-T		
Indicator Lamps		PASS (Green), TRIG (Amber), MODE (Amber), LINK (Amber), FAIL (Red), PWR (Green)		
Power voltage		5.0 to 30.0 VDC (including ripple)		
Consumption current		0.18 A (typ.) (at 24 VDC)		
Environmental specifications	Ambient temperature range	Operating: 0 to 40°C, Storage: -50 to +75°C (with no icing or condensation)		
	Ambient humidity range	Operating: 5 to 85%RH, Storage: 5 to 85%RH (with no condensation)		
	Ambient atmosphere	No corrosive gases		
	Vibration Resistance (destruction)	10 to 55 Hz, double amplitude: 0.35 mm, X/Y/Z directions, 10 cycles/axis		
	Shock resistance (destruction)	150 m/s^2, 3 times in each X/Y/Z directions		
	Degree of protection	IEC 60529 IP67		
Weight	Main body only	Approx. 68 g		
	Packing weight	Approx. 174 g (including packing)		
Dimensions	Main body Dimension	44.5 (W) × 44.5 (D) × 25.4 (H) mm		
	Packing Dimension	170 (W) × 117 (D) × 86 (H) mm		
Accessories		Instruction manual ("Read me first"), Compliance Sheet (CE)		
LED class		Risk Group Exempt (IEC 62471-1)		
Safety standards		EN61326-1: 2013 FCC Part 15, Subpart B (Class A) KC CISPR 11, IEC 61000-4-2: 2008 UL60950-1 RCM, EAC, BSMI, BIS		
Material	Case	Aluminum diecast, alumite (black)		
	Reading window	Acrylic		

✻1. These are the code types supported based on Omron's read capability validation standard. It is recommended that the customer do its own validation in its actual work environment.

✻2. Unless otherwise specified, the reading performance is defined with center of field of view, angle R=∞.

✻3.



✻4. EtherNet/IP and PROFINET are supported in firmware version 1.3.1 and later.

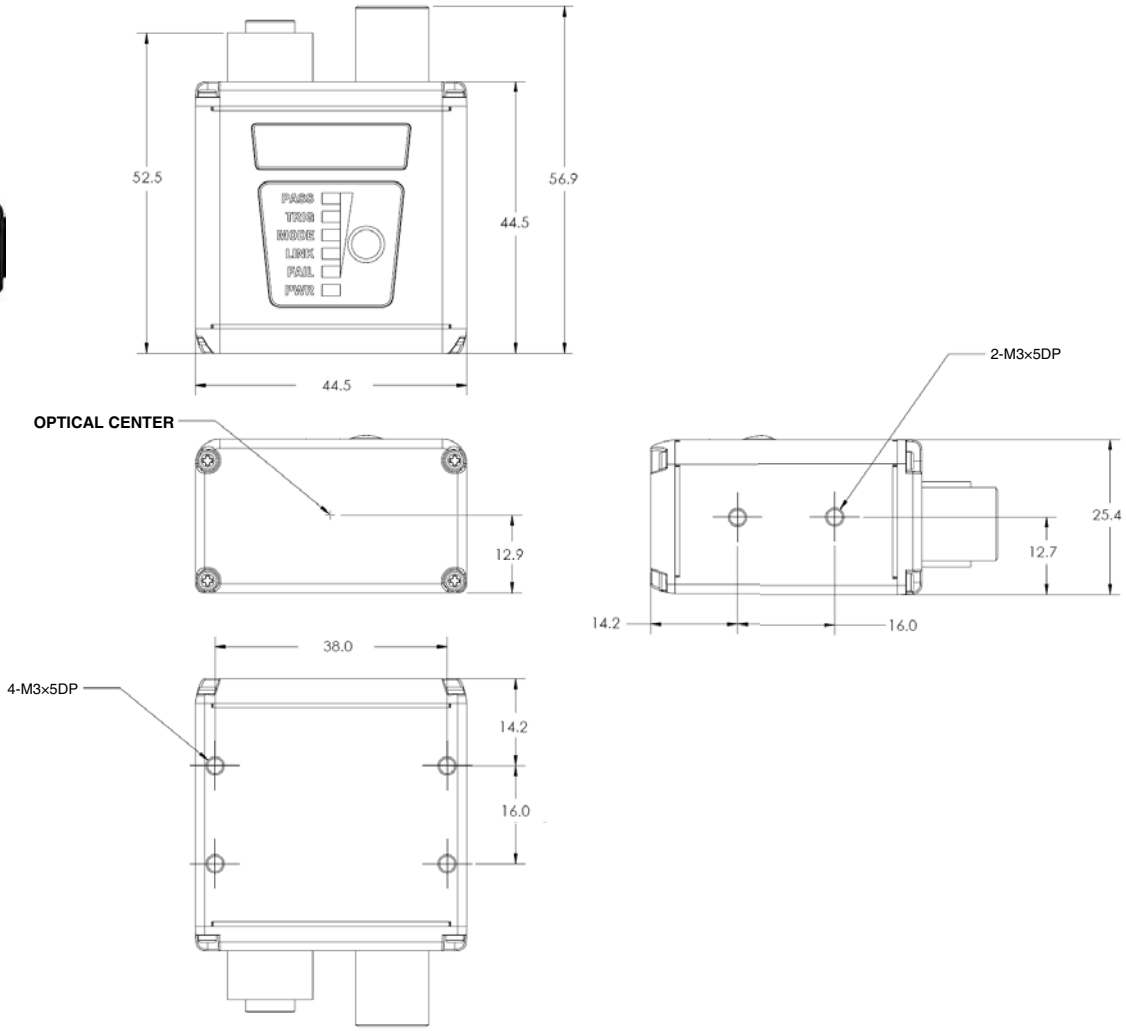
V430-F

Dimensions

(Unit: mm)

Code Readers

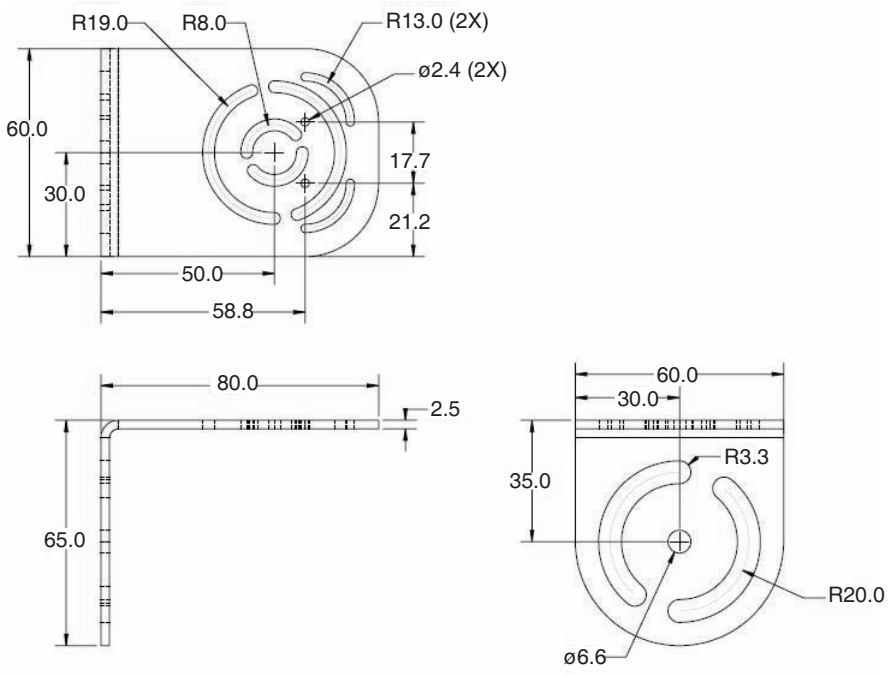
V430-F



Mounting Brackets

L Bracket

V430-AM0



Material: SUS304

Accessories: Phillips-HeadScrews (M3×6) (2)
Washer (2)

The following accessories are not used with the V430-F Series:

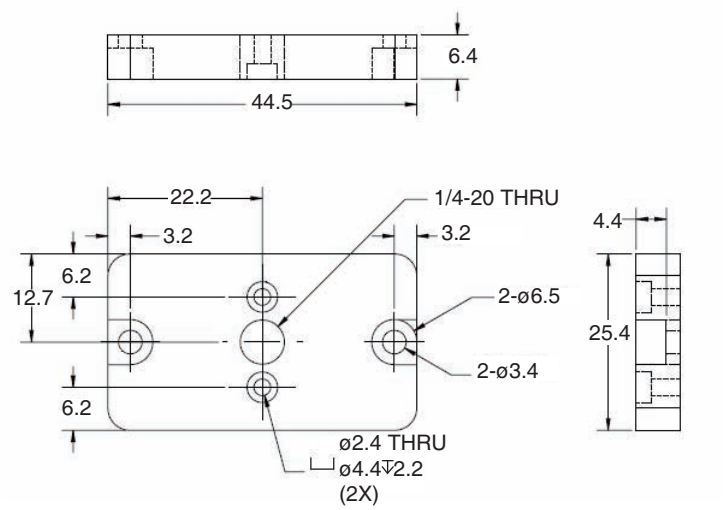
Phillips-Head Screws (M2×6) (2)

Washers for M2 Screws (2)

Mounting Block
V430-AM1

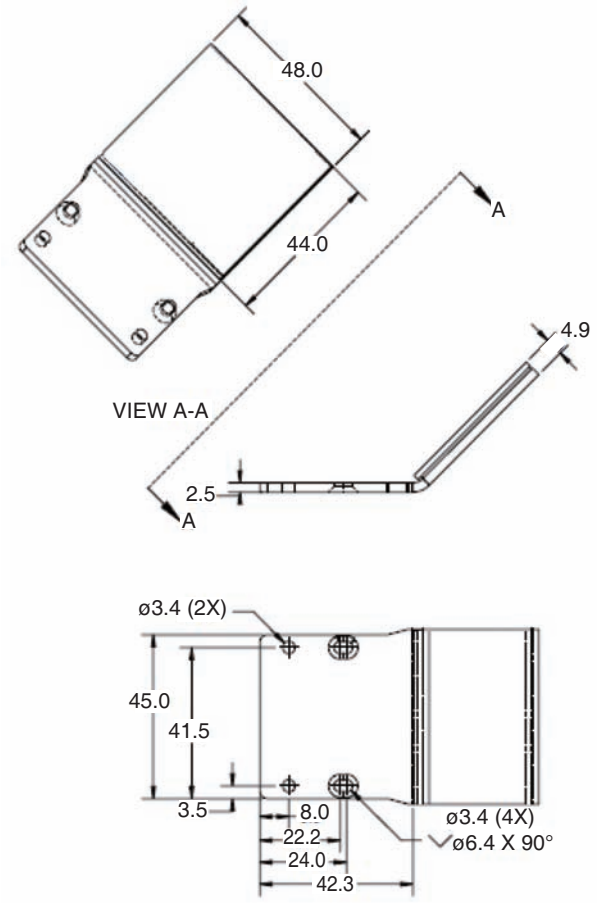
Material: Aluminum alloy
Accessories: Cap Screws (M3×6) (2)

The following accessories are not used with the V430-F Series:
Cap Screws (M2×8) (2)



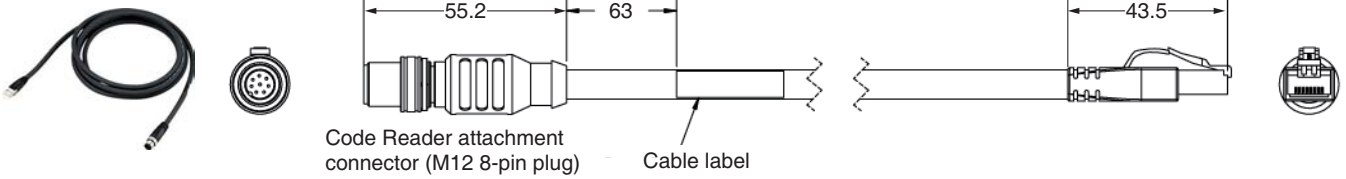
Right Angle Mirror
V430-AF3

Material: Bracket: Aluminum
Mirror

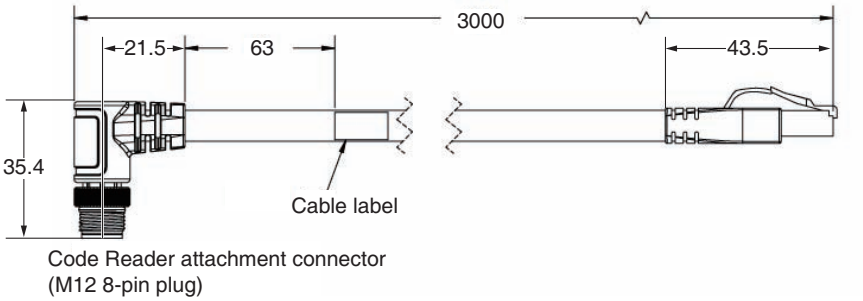


Ethernet Cables

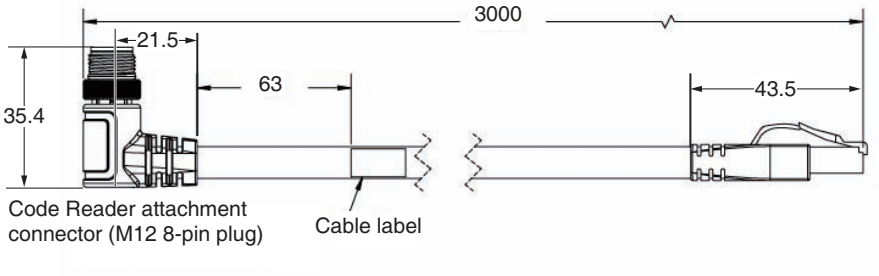
Cordset, M12 8-Pin Plug to RJ45 Ethernet
3 m Straight
V430-WE-3M



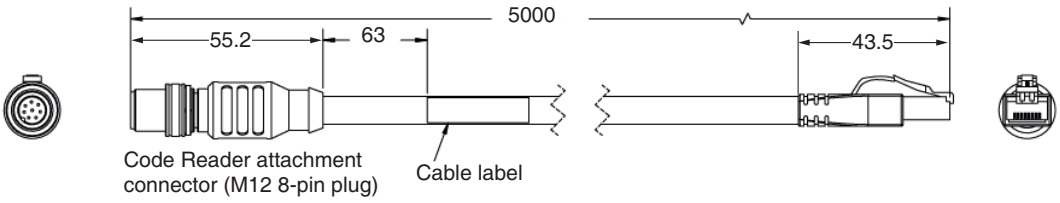
Cordset, M12 8-Pin Plug to RJ45 Ethernet
3 m Right angle down
V430-WELD-3M



Cordset, M12 8-Pin Plug to RJ45 Ethernet
3 m Right angle up
V430-WELU-3M

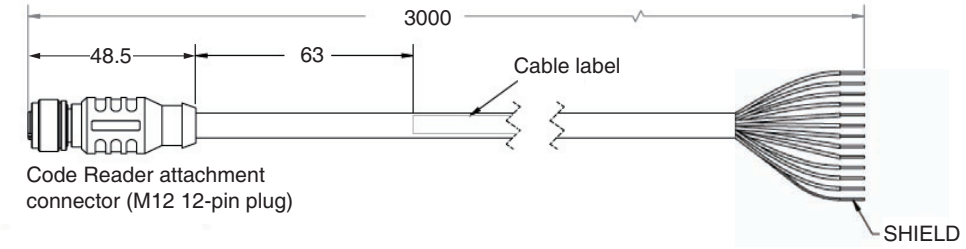


Cordset, M12 8-Pin Plug to RJ45 Ethernet
5 m Straight
V430-WE-5M

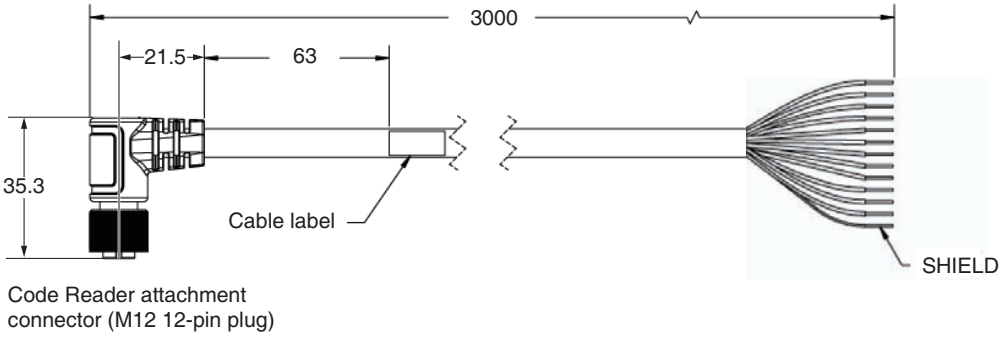


I/O Cables

Cordset, M12 12-Pin Socket to Flying Leads
3 m Straight
V430-W8-3M

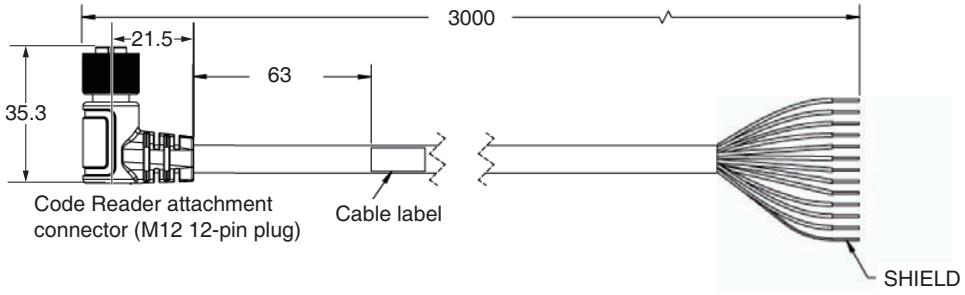


Cordset, M12 12-Pin Socket to Flying Leads
3 m Right angle down
V430-W8LD-3M

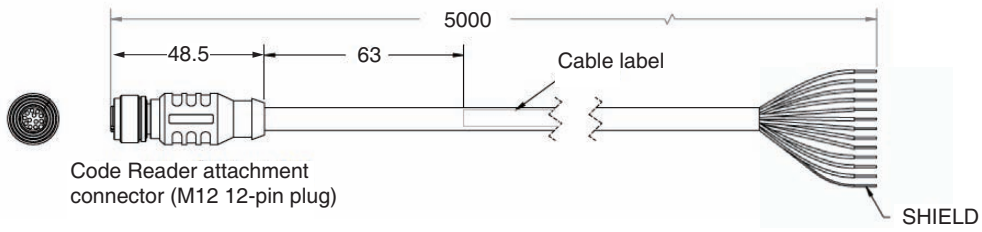


Cordset, M12 12-Pin Socket to Flying Leads
3 m Right angle up

V430-W8LU-3M

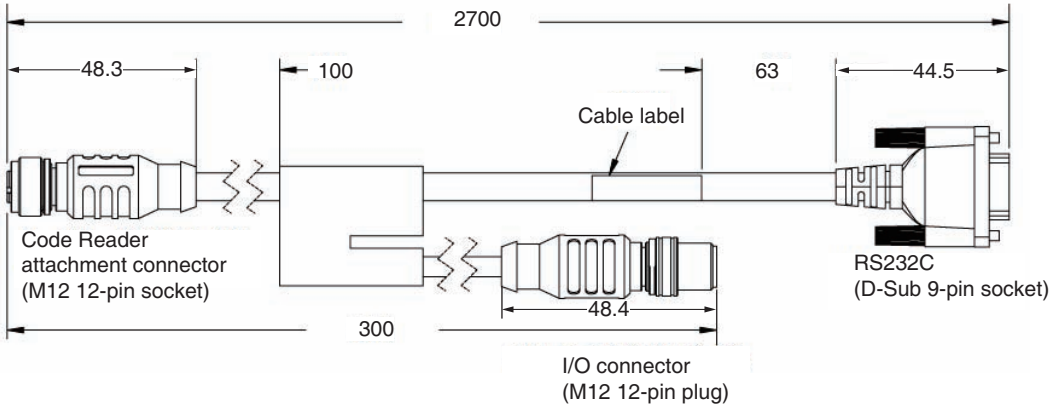


Cordset, M12 12-Pin Socket to Flying Leads
5 m Straight
V430-W8-5M



Cordset, M12 12-Pin Socket to DB9 Socket with M12 12-Pin Plug

3 m Straight
V430-W2-3M



Note: Connect V430-W8 to I/O connector (M12 12-pin plug) and connect to a power supply.

Related Manuals

Man.No.	Model	Manual
Z392	V430	Auto Focus Multi Code Reader V430-F-series User's Manual

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