



NO: **VS-063** DATE:

July 2015

PRODUCT: FZ4-11 Vision System Controllers TYPE: **Discontinuation Notice**

FZ4-11 Vision System Controllers to be Discontinued; Replace with FZ5-11 C Series and FH-3050

Discontinuation date: September 2015 Note: Date is subject to change based on raw materials and components availability at the factory.

Affected Parts

Product discontinuation	Recommended replacement
FZ4-1100	FZ5-1100
FZ4-1100-10	FZ5-1100-10
FZ4-1105	FZ5-1105
FZ4-1105-10	FZ5-1105-10
FZ4-1150	FH-3050
FZ4-1150-10	FH-3050-10
FZ4-1155	FH-3050
FZ4-1155-10	FH-3050-10





FZ4-1100

FZ4-1150

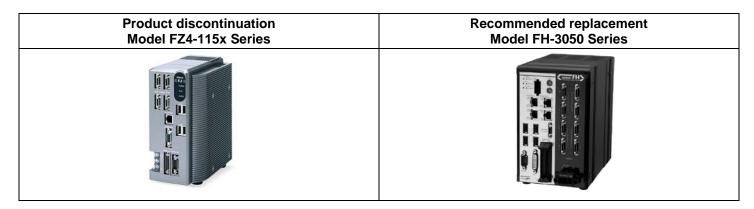
Cautions on Applying Replacements

- The camera, camera cable, lens and illumination, etc. can be used, when FZ4 series are changed to FH series. However, the parallel I/O cable cannot be used with the FH series.
- The FZ4 parallel I/O cables cannot be used with the FH series. If using FZ-VP parallel I/O cable, replace it with 2 each of XW2Z-S013. If using FZ-VPX parallel I/O cable, replace it with 2 each of XW2Z-XXXEE with terminal block XW2R-X34G-T.
- When connecting FH series to an RGB analog monitor, use the DVI-I-RGB Conversion Connector Model FH-VMRGB (for FH Series only).
- Confirm the measuring time etc. before changing over to the FH Series because these series have different CPUs.

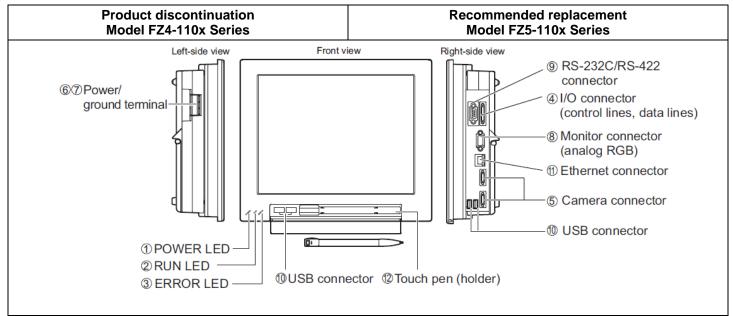
Details of Differences

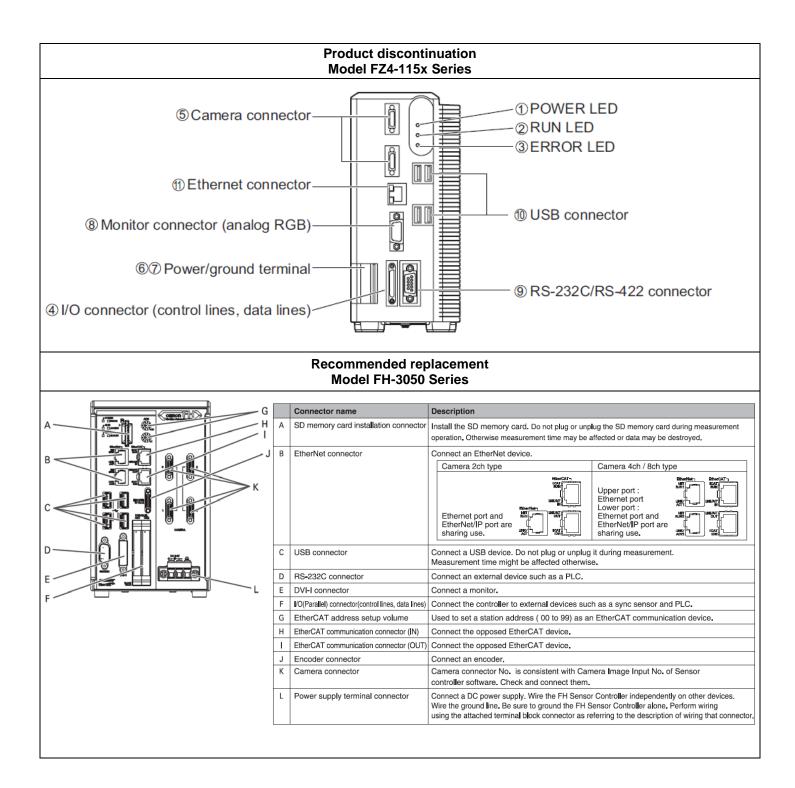
Body Color

Product discontinuation Model FZ4-110x Series	Recommended replacement Model FZ5-110x Series

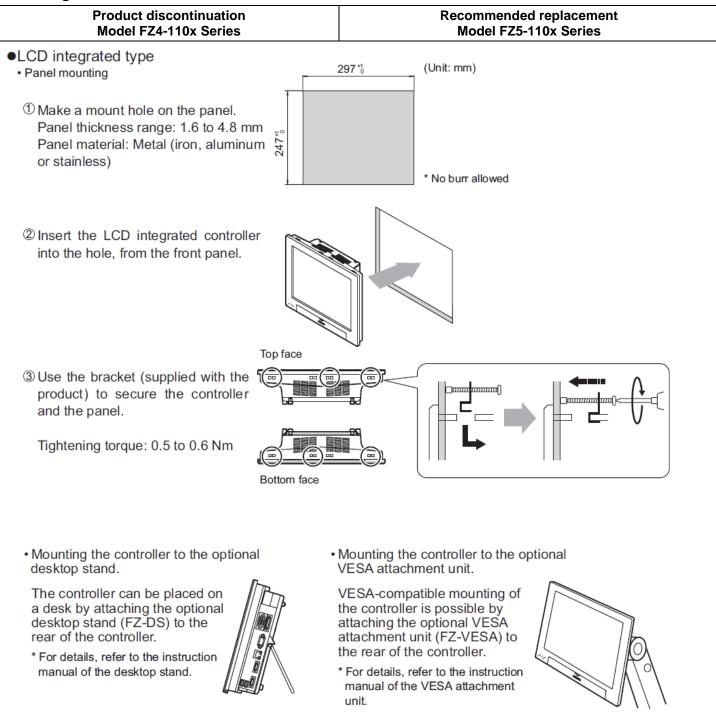


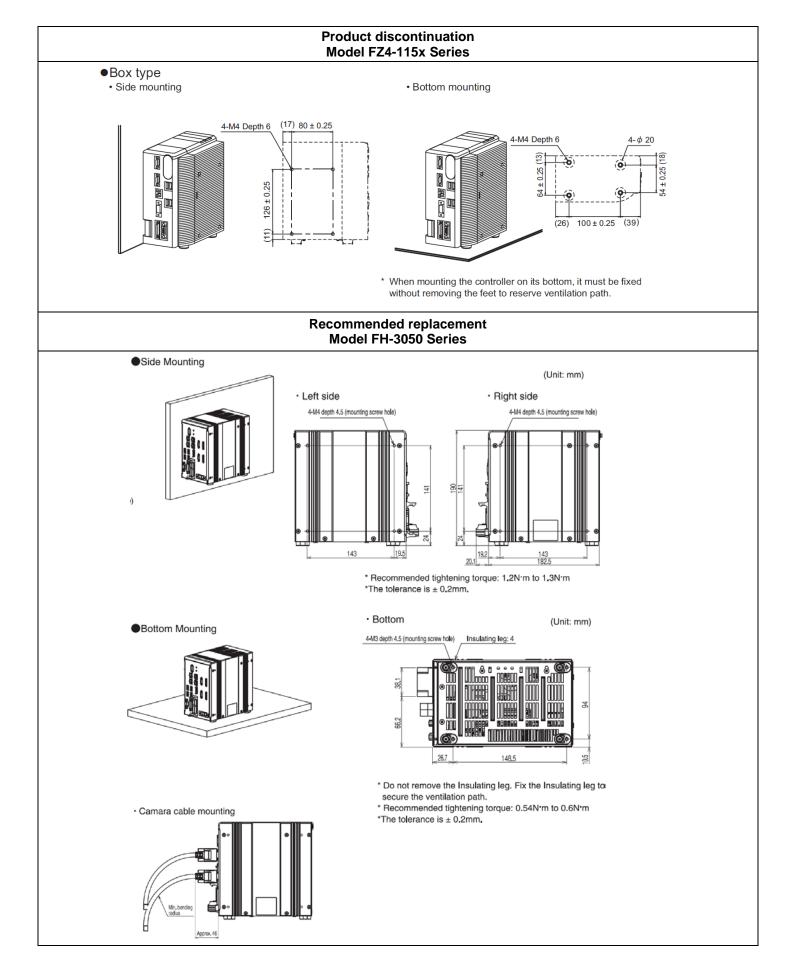
Wire Connection



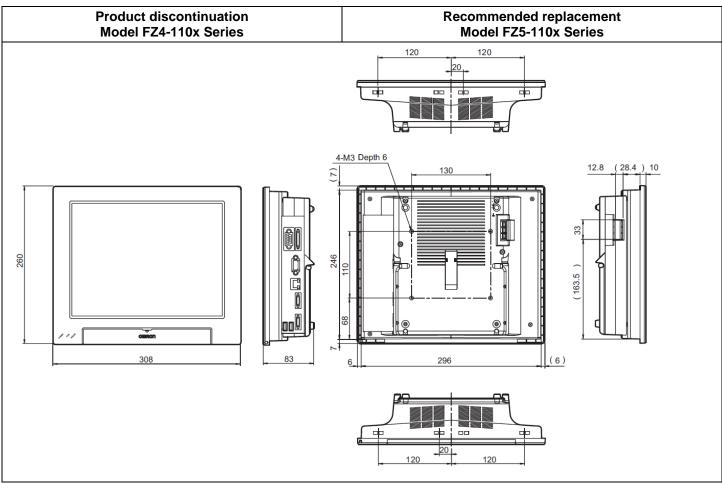


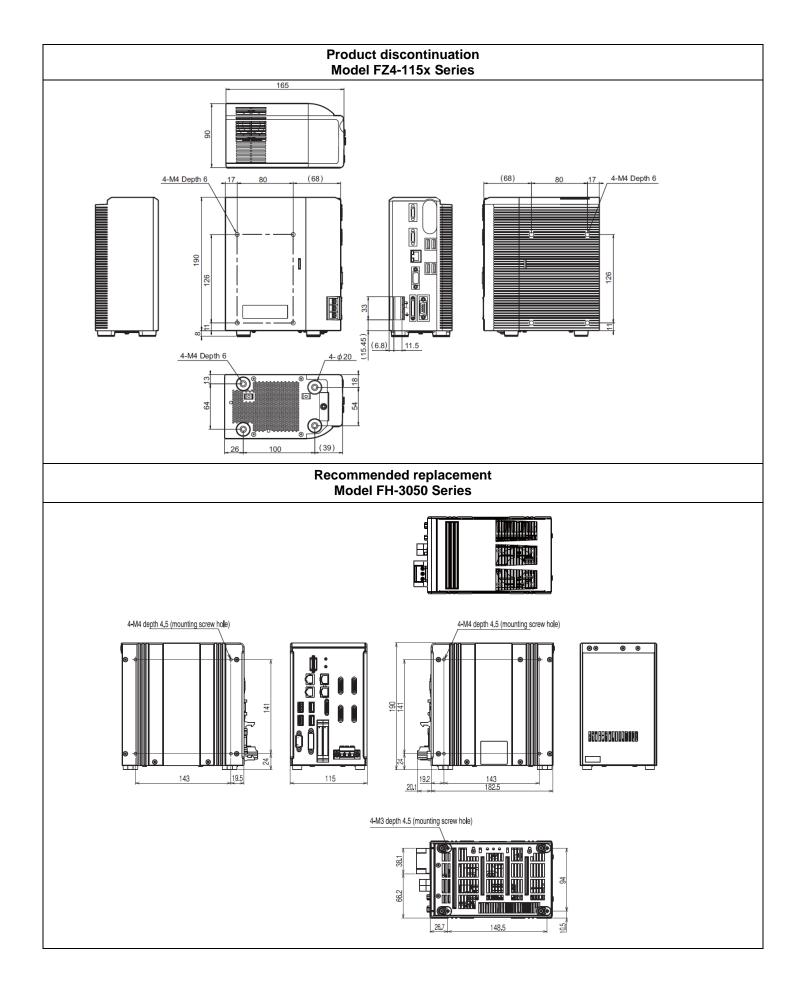
Mounting Dimensions



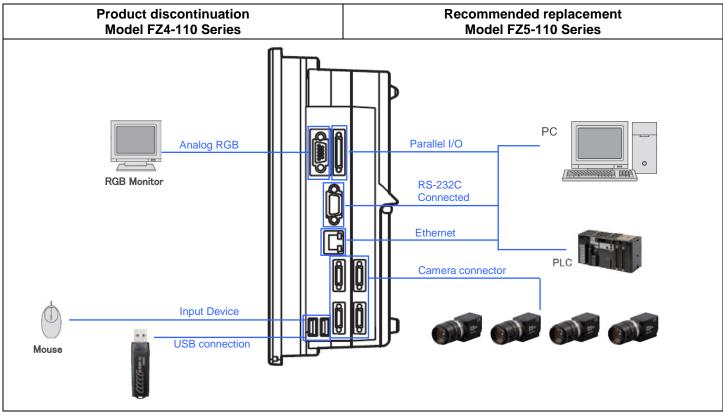


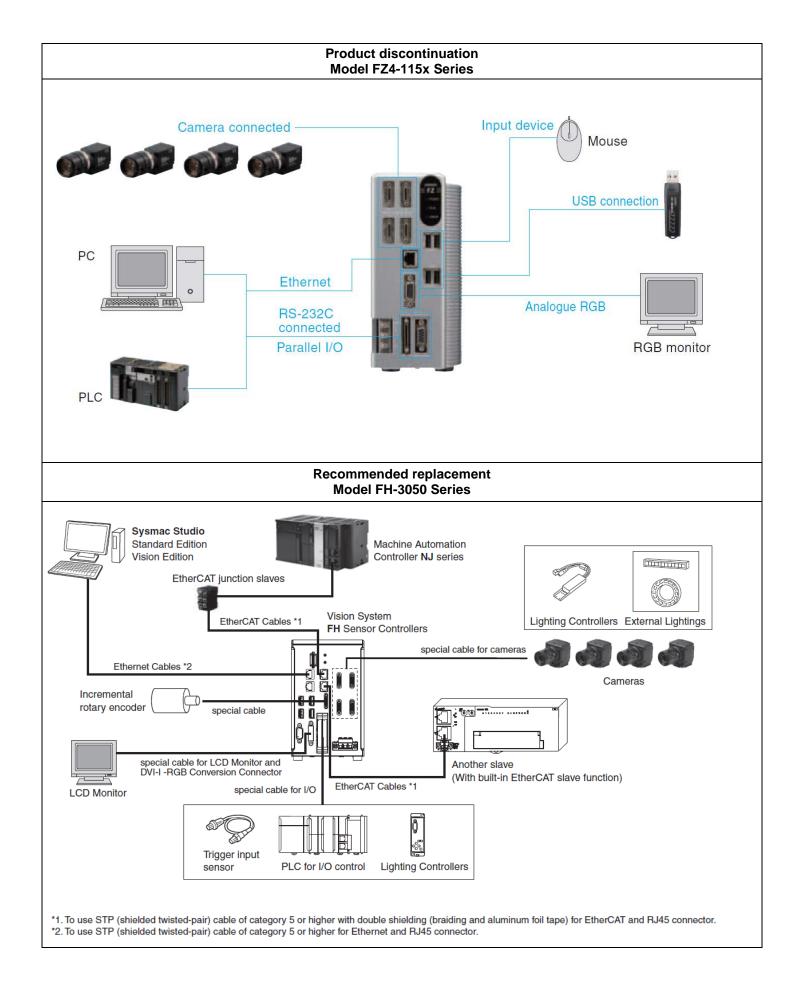
Dimensions





System Configuration





Specifications

lte	m	Product discontinuation Model FZ4-110x Series			nended replacement I FZ5-110x Series			
Medel	NPN	FZ4-1100	FZ4-1100-10	FZ5-1100	FZ5-1100-10			
Model PNP		FZ4-1105	FZ4-1105-10	FZ5-1105	FZ5-1105-10			
Controlle	rs type	LCD integrated type						
No. of ca	meras	2 camera type	4 camera type	2 camera type	4 camera type			
Connecte camera	d	FZ-S series (When connecting 5 million-pixel cameras, up to two cameras can be connected.)						
No. of sce	enes	32		128				
Operation)	Mouse etc.						
Settings		Create series of proc	essing steps by editing t	Create series of processing steps by editing the flowchart (Help messages provided).				

lte	em	Product discontinuation Model FZ4-115x Series		Recommended replacemer Model FH-3050 Series		
Madal	NPN	FZ4-1150	FZ4-1150-10	FH-3050	FH-3050-10	
Model PNP		FZ4-1155	FZ4-1155-10	FH-3050	FH-3050-10	
Controlle	rs type	Box type				
No. of ca	meras	2 camera type 4 camera type		2 camera type	4 camera type	
Connecte camera	ed	· · · · · · · · · · · · · · · · · · ·	FZ-S series (When connecting 5 million-pixel cameras, up to two cameras can be connected.)		es	
No. of sc	enes	32 128				
Operatio	n	Mouse etc.		·		
Settings		Create series of processing steps by editing the flowchart (Help messages provided).				

Processing Resolution

Item	Product discontinuation Model FZ4-110x Series	Recommended replacement Model FZ5-110x Series	
When connected to an intelligent compact camera	752(H) × 480(V)		
When connected to a 300,000-pixel camera	640(H) × 480(V)		
When connected to a 2 million-pixel camera	1600(H) × 1200(V)		
When connected to a 5 million-pixel camera	2448(H) × 2044(V)		

Item	Product discontinuation Model FZ4-115x Series	Recommended replacement Model FH-3050 Series
When connected to a intelligent compact camera	752(H) × 480(V)	FZ-S: 752(H) × 480(V)
When connected to a 300,000-pixel camera	640(H) × 480(V)	FZ-S: 640(H) × 480(V) FH-S: 640(H) × 480(V)
When connected to a 2 million-pixel camera	1600(H) × 1200(V)	FZ-S: 1600(H) × 1200(V) FH-S: 2040(H) × 1088(V)
When connected to a 4 million-pixel camera	-	FH-S: 2040(H) × 2048(V)
When connected to a 5 million-pixel camera	2448(H) × 2044(V)	FZ-S: 2448(H) × 2044(V)
When connected to a 12 million-pixel camera	_	FH-S: 4084(H) × 3072(V)

Number of Logged Images *1

Item			Product discontinuation Model FZ4-110 Series	Recommended replacement Model FZ5-110 Series
When connected	Connected to 1	camera	232	232
to an intelligent	Connected to 2	cameras	116	116
compact camera	Connected to 3	cameras	77	77
	Connected to 4	cameras	58	58
When connected	Connected to	Color	270	270
to a 300,000-	1 camera	Monochrome	272	272
pixel camera	Connected to	Color	135	135
	2 cameras	Monochrome	136	136
	Connected to	Color	90	90
	3 cameras	Monochrome	90	90
	Connected to	Color	67	67
	4 cameras	Monochrome	68	68
When connected	Connected to	Color	43	43
to a	1 camera	Monochrome	43	43
2 million-pixel	Connected to	Color	21	21
camera	2 cameras	Monochrome	21	21
	Connected to	Color	14	14
	3 cameras	Monochrome	14	14
	Connected to	Color	10	10
	4 cameras	Monochrome	10	10
When connected	Connected to	Color	16	16
to a	1 camera	Monochrome	16	16
5 million-pixel	Connected to	Color	8	8
camera	2 cameras	Monochrome	8	8
	Connected to	Color	5	5
	3 camera	Monochrome	5	5
	Connected to	Color	4	4
	4 cameras	monochrome	4	4

* 1. The image logging capacity changes when multiple cameras of different types are connected at the same time.

ltem			Product discontinuation Model FZ4-115x Series	Recommended replacement Model FH-3050 Series
When connected			232	232
to a intelligent	Connected to 2 cameras		116	116
compact camera	Connected to 3 cameras		77	77
(FZ-S)	Connected to 4		58	58
When connected	Connected to	Color	270 (FZ-S)	270 (FZ-S, FH-S)
to a 300,000-	1 camera	Monochrome	270 (FZ-S)	270 (FZ-S, FH-S) 272 (FZ-S, FH-S)
pixel camera	Connected to	Color	135 (FZ-S)	135 (FZ-S, FH-S)
pixer camera	2 cameras	Monochrome	136 (FZ-S)	136 (FZ-S, FH-S)
	Connected to	Color	90 (FZ-S)	90 (FZ-S, FH-S)
	3 cameras	Monochrome	90 (FZ-S)	90 (FZ-S, FH-S)
	Connected to	Color	67 (FZ-S)	67 (FZ-S, FH-S)
	4 cameras	Monochrome	68 (FZ-S)	68 (FZ-S, FH-S)
When connected	Connected to	Color	43 (FZ-S)	37 (FH-S), 43 (FZ-S)
to a	1 camera	Monochrome	43 (FZ-S)	37 (FH-S), 43 (FZ-S)
2 million-pixel	Connected to	Color	21 (FZ-S)	18 (FH-S), 21 (FZ-S)
camera	2 cameras	Monochrome	21 (FZ-S)	18 (FH-S), 21 (FZ-S)
	Connected to	Color	14 (FZ-S)	12 (FH-S), 14 (FZ-S)
	3 cameras	Monochrome	14 (FZ-S)	12 (FH-S), 14 (FZ-S)
	Connected to	Color	10 (FZ-S)	9 (FH-S), 10 (FZ-S)
	4 cameras	Monochrome	10 (FZ-S)	9 (FH-S), 10 (FZ-S)
When connected	Connected to	Color	—	20 (FH-S)
to a	1 camera	Monochrome	—	20 (FH-S)
4 million-pixel	Connected to	Color	-	10 (FH-S)
Camera	2 cameras	Monochrome	-	10 (FH-S)
(FH-S)	Connected to	Color	—	6 (FH-S)
	3 cameras	Monochrome	—	6 (FH-S)
	Connected to	Color	—	5 (FH-S)
	4 cameras	Monochrome	—	5 (FH-S)
When connected	Connected to	Color	16 (FZ-S)	16 (FZ-S)
to a	1 camera	Monochrome	16 (FZ-S)	16 (FZ-S)
5 million-pixel	Connected to	Color	8 (FZ-S)	8 (FZ-S)
Camera	2 cameras	Monochrome	8 (FZ-S)	8 (FZ-S)
(FZ-S)	Connected to	Color	5 (FZ-S)	5 (FZ-S)
	3 cameras	Monochrome	5 (FZ-S)	5 (FZ-S)
	Connected to	Color	4 (FZ-S)	4 (FZ-S)
	4 cameras	Monochrome	4 (FZ-S)	4 (FZ-S)
When connected	Connected to	Color	-	6 (FH-S)
to a	1 camera	Monochrome	_	6 (FH-S)
12 million-pixel	Connected to	Color	—	3 (FH-S)
Camera	2 cameras	Monochrome	—	3 (FH-S)
(FH-S)	Connected to	Color	—	2 (FH-S)
	3 cameras	Monochrome	—	2 (FH-S)
	Connected to	Color	_	2 (FH-S)
	4 cameras	Monochrome	—	2 (FH-S)

* 1. The image logging capacity changes when multiple cameras of different types are connected at the same time.

Ratings

		Product discor	Product discontinuation		replacement
	Item		FZ4-1100-10 FZ4-1105-10	FZ5-1100 FZ5-1105	FZ5-1100-10 FZ5-1105-10
Power supply	voltage	DC20.4	~26.4V	•	•
Current consumption	When connected to a intelligent compact camera	5.0A max.	7.5 max.	5.0A max.	7.5 max.
`*1 ´_	When connected to a 300,000-pixel camera	3.7A max.	4.9A max.	3.7A max.	4.9A max.
	When connected to a 2 million-pixel camera				
	When connected to a 5 million-pixel camera				
Weight	Weight		Approx 3.4kg	Approx 3.2kg	Approx 3.4kg
Accessories		Touch pen ,Instruction manual, 6 mounting brackets			ets

Note 1: The current consumption when the maximum number of cameras supported by each controller is connected. If a strobe controller model is connected to a lamp, the current consumption is as high as when an intelligent camera is connected.

		Product disco	ntinuation	Recommended	replacement
	Item		FZ4-1150-10 FZ4-1155-10	FH-3050	FH-3050-10
Power supply	voltage	DC20.4	~26.4V		
Current consumption (at 24.0 VDC) *1	When connected to a intelligent compact camera	5.0A max.	7.5A max.	5.0A (2 Camera)	5.4A (2 Camera) 7.0A (4 Camera)
	When connected to a 300,000-pixel camera	3.7A max.	4.9A max.		
	When connected to a 2 million-pixel camera	3.7A max.	4.9A max.	к.	4.2A
	When connected to a 4 million-pixel camera			4.1A (2 Camera)	(2 Camera) 4.8A
	When connected to a 5 million-pixel camera	3.7A max.	4.9A max.		(4 Camera)
	When connected to a 12 million-pixel camera				
Weight		Approx 1.8kg	Approx 1.9kg	Approx 3.2kg	Approx 3.4kg
Accessories	s Instruction Sheet Instruction Sheet Terminal block connu- Ferrite core		stallation manual lock connector		

Note 1: The current consumption when the maximum number of cameras supported by each controller is connected. If a strobe controller model is connected to a lamp, the current consumption is as high as when an intelligent camera is connected.

Operation Environment

Item		Product discontinuation Model FZ4-110x Series	Recommended replacement Model FZ5-110x Series		
Ambient temperature Operating range Storage		Ambient temperature specifiable. The cooling fan speed can be switched according to the setting. 0 to 45°C :Low speed 0 to 50°C :High speed			
		-20 to 65°C (with no icing or condensation)			
Ambient humidity	Operating	25 to 85% DH (with no condensation)			
range	Storage	- 35 to 85% RH (with no condensation)			

Item		Product discontinuation Model FZ4-115x Series	Recommended replacement Model FH-3050 Series	
Ambiant tomporatura	Operating	0 to 50°C		
Ambient temperature range	Storage	-20 to 65°C (with no icing or condensation)		
Ambient humidity range	Operating	35 to 85% RH (with no condensation)		

External Interface

ltem	Product discontinuation Model FZ4-110x Series	Recommended replacement Model FZ5-110x Series	
Serial communications	RS-232C: 1CH		
EtherNet communications	Ethernet 1000BASE-T/100BASE-TX/10BASE-T		
EtherNet/IP communications	Ethernet port baud rate: 100Mbps (100BASE-TX)		
Parallel I/O interface	17 inputs RESET,STEP0/ENCTRIG_Z0,STEP1/ENCTRIG_Z1,DSA0~1, ENCTRIG_A0~1,ENCTRIG_B0~1,DI0~7 29 outputs RUN/BUSY1,BUSY0,GATE0~1,OR0~1,READY0~1, ERROR,STGOUT0~1,DO0~15 * STGOUT2 to 3 only for camera 4 ch type		
Monitor interface	Integrated Controller and 12.1 inch TFT color LCD (Resolution : XGA 1,024 x 768 dots) Analog RGB video output,1 channel		
USB interface	4 channels (supports USB 1.1 and 2.0)		

ltem	Product discontinuation Model FZ4-115x Series	Recommended replacement Model FH-3050 Series
Serial communications	RS-232C/422: 1CH	RS-232C: 1CH
EtherNet communications	Ethernet 100BASE-TX/10BASE-T	Ethernet 1000BASE-T
EtherNet/IP communications	Use Ethernet port Transmission Speed: 100 Mbps (100BASE-TX)	Use Ethernet port Transmission Speed: 1 Gbps (1000BASE-TX)
EtherCAT communications		EtherCAT dedicated protocol(100BASE-TX)
Parallel I/O interface	17 inputsRESET,STEP0/ENCTRIG_Z0,STEP1/ENCTRIG_Z1,DSA0~1,ENCTRIG_A0~1,ENCTRIG_B0~1,DI0~729 outputsRUN/BUSY1,BUSY0,GATE0~1,OR0~1,READY0~1ERROR,STGOUT0~3,DO0~15* STGOUT2 to 3 only for camera4 ch type	 In the 2-line random trigger mode <u>17 inputs</u> STEP0/ENCTRIG_Z0, STEP1/ENCTRIG_Z1, ENCTRIG_A0~1,ENCTRIG_B0~1, DSA0~1,DI0~7,DI_LINE0 <u>37 outputs</u> RUN0~1,READY0~1,BUSY0~1,OR0~1, ERROR0~1,GATE0~1, STGOUT0/SHTOUT0 STGOUT1/SHTOUT1 STGOUT1/SHTOUT1 STGOUT2~7,D00~15,ACK In the 5-line to 8-line random trigger mode <u>19 inputs</u> STEP0~7,DI_LINE0~2, DI0~7 <u>34 outputs</u> READY0~7,BUSY0~7,OR0~7 ACK,ERROR,STGOUT/SHTOUT0~7
Encoder interface		RS422-A line driver level. Phase A/B :single-phase 4MHz (multiplying phase difference of 1MHz by 4 times), Phase Z :1MHz
Monitor interface	Analog RGB video output,1 channel (Resolution : XGA 1,024 x 768 dots)	DVI-I (Single Link) output IF x 1ch
USB interface	4 channels (supports USB 1.1 and 2.0)	4 channels (supports USB 1.1 and 2.0)
SD card interface		SDHC card of Class4 or higher rating is recommended.

Processing Items

Item		Product discontinuation Model FZ4-11xx Series	Recommended replacement Model FZ5-110x Series Model FH-3050 Series	
Inspections /	Search	YES	YES	
Measurement	Flexible Search	YES	YES	
	Sensitive Search	YES	YES	
	ECM Search	YES	YES	
	EC Circle Search	YES	YES	
	Shape Search+	YES	NO	
	Shape Search II	YES	YES	
	Shape Search III	NO	YES	
	EC Corner	YES	YES	
	EC Cross	NO	YES	
	Classification	NO	YES	
	Edge Position	YES	YES	
	Edge Pitch	YES	YES	
	Scan Edge Position	YES	YES	
	Scan Edge Width	YES	YES	
	Circular Scan Edge Position	YES	YES	
	Circular Scan Edge Width	YES	YES	
	Intersection	NO	YES	
	Color Data	YES	YES	
	Gravity and Area	YES	YES	
	Labeling	YES	YES	
	Label Data	YES	YES	
	Labeling+	YES	NO	
	Defect	YES	YES	
	Precise Defect	YES	YES	
	Fine Matching	YES	YES	
	Character Inspection	YES	YES	
	Date Verification	YES	YES	
	Model Dictionary	YES	YES	
	Barcode+ *1	YES	NO	
	Barcode *1	YES	YES	
	2D Code *2	YES	YES	
	2D Code+ *2	YES	NO	
	OCR User Dictionary	NO	YES	
	OCR	NO	YES	
	Circle Angle	YES	YES	
	Glue Bead Inspection	NO	YES	
Input image	Camera Image Input	YES	YES	
nputinago	Camera Image Input FH	NO	YES	
	Camera Image Input HDR	YES	YES	
	Camera Image Input HDR Lite	YES	YES	
	Camera Switching	YES	YES	
	Measurement Image Switching	YES	YES	

*1 Bar Codes that can be read: JAN/EAN/UPC (including add-on codes), Code 39, Codabar (NW-7), IFT (Interleaved 2 of 5), Code 93, Code128, GS1 DataBar (RSS-14/RSS Limited/RSS Expanded), PharmaCode

*2 2D Codes that can be read: Data Matrix, QR Code

Processing Items

Item		Product discontinuation Model FZ4-11xx Series	Recommended replacement Model FZ5-110x Series Model FH-3050 Series
Correcting	Position compensation	YES	YES
Images	Trapezoidal Correction	NO	YES
	Trapezoidal Correction+	YES	NO
	Filtering	YES	YES
	Background Suppression	YES	YES
	Brightness Correct filter	YES	YES
	Color Gray filter	YES	YES
	Extract Color Filter	YES	YES
	Anti Color shading	YES	YES
	Stripes Removal Filter+	YES	NO
	Stripes Removal Filter II	YES	YES
	Halation Cut+	YES	NO
	Panorama+	YES	NO
	Polar Transformation	YES	YES
	Machine Simulator	NO	YES
	Image Subtraction	NO	YES
	Advanced Filter	NO	YES
	Panorama	NO	YES
Assisting	Unit Macro	NO	YES
nspections /	Unit calculation macro	NO	YES
Measurement	Calculation	YES	YES
	Line Regression	YES	YES
	Circle Regression	YES	YES
	Calibration+	YES	NO
	Precise Calibration	YES	YES
	User Data	YES	YES
	Set Unit data	YES	YES
	Get Unit Data	YES	YES
	Set Unit Figure	YES	YES
	Get Unit Figure	YES	YES
	Trend Monitor	YES	YES
	Image Logging	YES	YES
	Image Conversion Logging	YES	YES
	Data Logging	YES	YES
	Elapsed Time	YES	YES
	Wait	YES	YES
	focus	YES	YES
	Iris	YES	YES
	Parallelize	NO	YES
	Parallelize Task	NO	YES
	Statistics	NO	YES
	Reference Calib Data	NO	YES
	Position Data calculation	NO	YES
	Robot Data	NO	YES
	Vision Master Calibration	NO	YES
	PLC Master Calibration	NO	YES
	Convert Position Data	NO	YES
	Movement Single Position	NO	YES
	Movement Multi Points	NO	YES
	Detection Point	NO	YES
	Camera calibration	NO	YES
	Data Save	NO	YES
	Stage Data	NO	YES

Processing Items

ltem		Product discontinuation Model FZ4-11xx Series	Recommended replacement Model FZ5-110x Series Model FH-3050 Series
Branching	Conditional Branch	YES	YES
processing	End	YES	YES
	DI branch	YES	YES
	Control Flow Normal	YES	YES
	Control Flow PLC Link	YES	YES
	Control Flow Parallel	YES	YES
	Control Flow Fieldbus	YES	YES
	Selective Branch	NO	YES
Outputting	Data Output	YES	YES
results	Parallel Data Output	YES	YES
	Parallel Judgement Output	YES	YES
	Fieldbus Data Output	YES	YES
Displaying	Result Display	YES	YES
results on the	Display Image File	YES	YES
monitor	Display Last NG Image	YES	YES

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