

### Discontinuation Notice of Network-Ready Vision System Series (Digital I/F Camera) / Vision System (Digital I/F Camera) Model F500 and F210 series (partial products).

#### Product Discontinuation

Network-Ready Vision System Series  
(Digital I/F Camera) /  
Vision System (Digital I/F Camera)

**Model F500 series  
(partial products)**  
**Model F210 series  
(partial products)**



#### Recommended Replacement

Vision Sensor

**Model FH series**  
**Model FZ series**  
**Model 3Z4S-LE series**



#### [ Discontinuation date ]

The end of March, 2015

#### [ Caution on recommended replacement ]

Please replace the controller together with the camera, camera cable as the whole system, because these products do not have the compatibility for the connection.

#### [ Difference from discontinued product ]

Recommended replacement Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
FH-1050	*	--	--	--	*	-	--
FH-SM02	**	--	--	--	*	-	-
FH-SM	**	--	--	--	*	-	-
FZ-M08	**	--	--	--	*	-	-
FZ-VS	*	--	--	-	*	-	-
3Z4S-LE VS-1614H1	**	--	**	-	**	-	-
3Z4S-LE VS-2514H1	**	--	**	-	**	-	-
3Z4S-LE VS-5018H1	**	--	**	-	**	-	-

\*\* : Compatible

\* : The change is a little/Almost compatible



-- : Not compatible








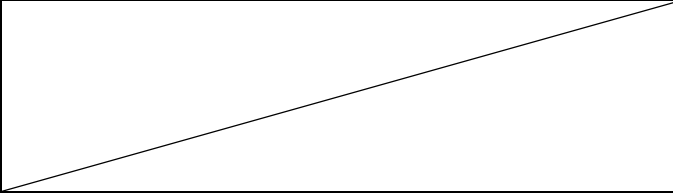



- : No corresponding specification

**[ Product Discontinuation and recommended replacement ]**

Product discontinuation	Recommended replacement
F500-C10	FH-1050
F500-C10-ETN	FH-1050
F500-C15-ETN	FH-1050
F210-C10-ETN	FH-1050
F210-C15-ETN	FH-1050
F500-S1	FH-SM02
F210-S1	FH-SM
F500-M10L	FZ-M08
F500-VS 2M	FZ-VS 2M
F500-VS 5M	FZ-VS 5M
F500-VS 10M	FZ-VS 10M
F500-VS2 2M	FZ-VS 2M
F500-VS2 5M	FZ-VS 5M
F500-VS2 10M	FZ-VS 10M
F500-VSP 2M	FZ-VS 2M
F500-VSP 5M	FZ-VS 5M
F500-LE16	3Z4S-LE VS-1614H1
F500-LE25	3Z4S-LE VS-2514H1
F500-LE50	3Z4S-LE VS-5018H1
F500-CD3	No recommended replacement
F500-CD3E	No recommended replacement

**[ Body color ]**

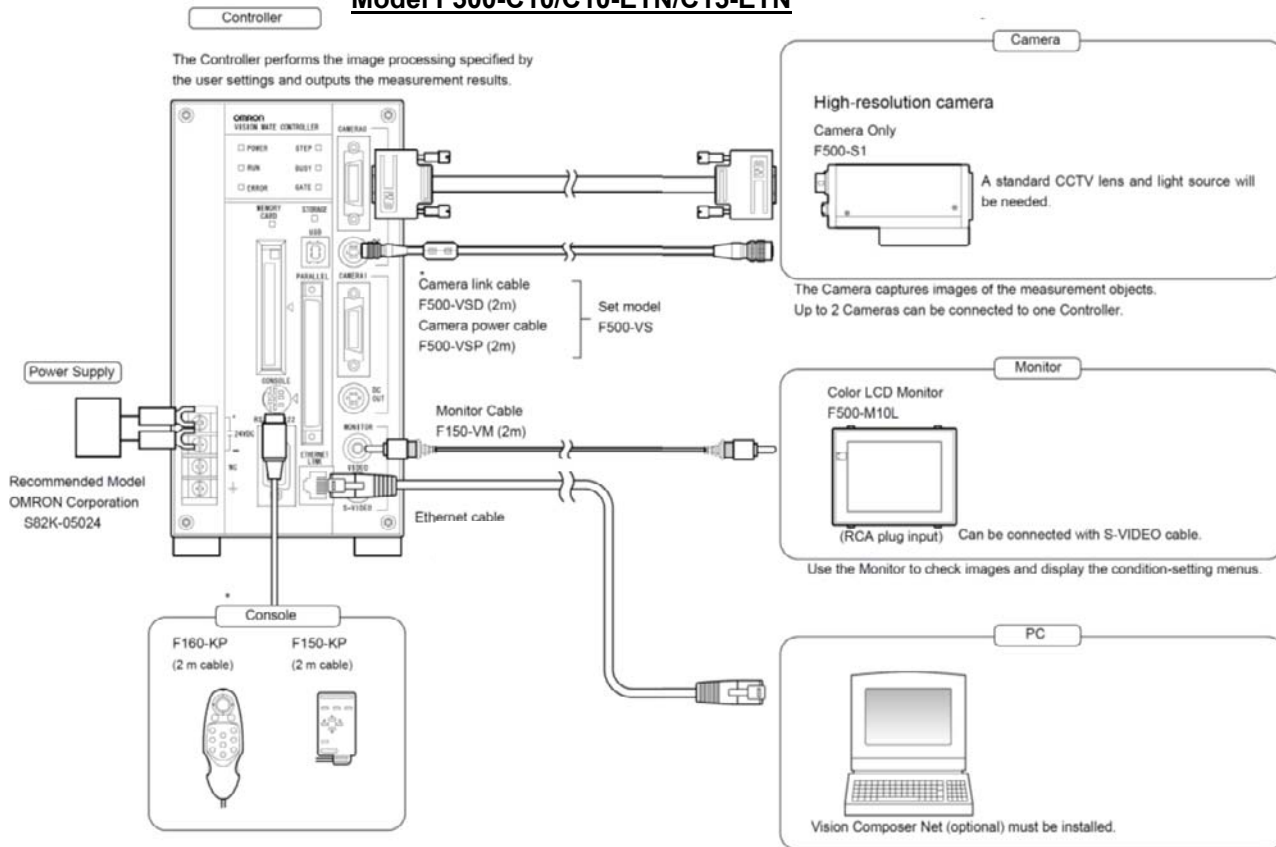
Product discontinuation Model F500-C10/C10-ETN/C15-ETN Model F210-C10-ETN/C15-ETN	Recommendable replacement Model FH-1050
<p>F210-C1[]-ETN      F500-C10/C1[]-ETN</p> 	 <p>Note) This figure is FH-1050-20 (8 cameras type).</p>

<p><b>Product discontinuation</b>  <b>Model F500-S1</b>  <b>Model F210-S1</b></p>	<p><b>Recommendable replacement</b>  <b>Model FH-SM02</b>  <b>Model FH-SM</b></p>
 <p><b>Model F500-S1</b>      <b>Model F210-S1</b></p>	 <p><b>Model FH-SM02</b>      <b>Model FH-SM</b></p>
<p><b>Product discontinuation</b>  <b>Model F500-M10L</b></p>	<p><b>Recommendable replacement</b>  <b>Model FZ-M08</b></p>
	
<p><b>Product discontinuation</b>  <b>Model F500-LE16/LE25/LE50</b></p>	<p><b>Recommendable replacement</b>  <b>Model 3Z4S-LE VS-1614H1/2514H1/5018H1</b></p>
	
<p><b>Product discontinuation</b>  <b>Model F500-CD3/CD3E</b></p>	<p><b>Recommendable replacement</b>  <b>No recommended replacement</b></p>
	
<p><b>Product discontinuation</b>  <b>Model F500-VS/VS2</b></p>	<p><b>Recommendable replacement</b>  <b>Model FZ-VS</b></p>
<p><b>Model F500-VS</b>  <b>Model F500-VSD</b>  <b>Model F500-VSP</b></p>  <p><b>Model F500-VS2</b>  <b>Model F500-VSD2</b>  <b>Model F500-VSP</b></p>  <p>Note) Model F500-VS/VS2 is a set type consisted of Model F500-VSD/VSD2 and Model F500-VSP.</p>	

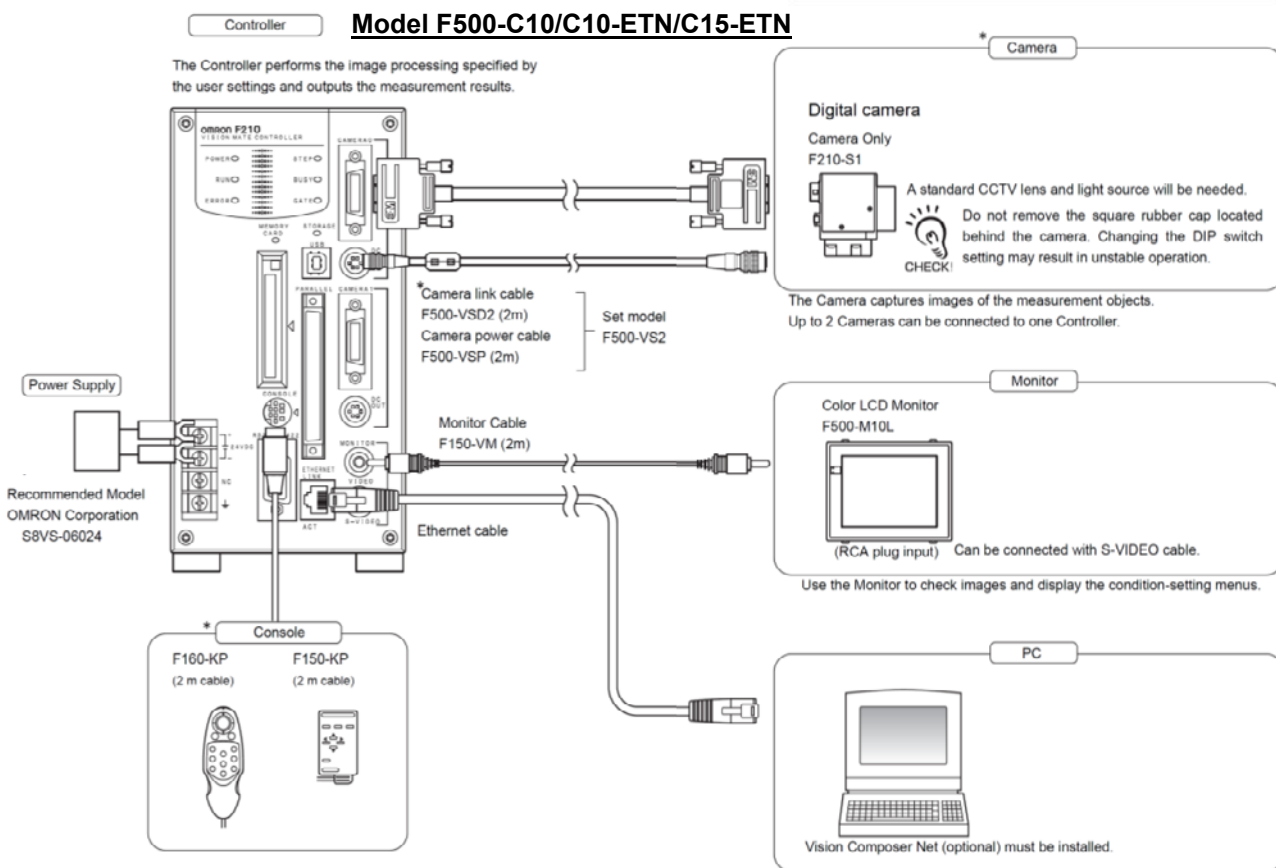
[ System Configuration ]

**Product discontinuation**  
**Model F500-C10/C10-ETN/C15-ETN**  
**Model F210-C10-ETN/C15-ETN**

**Model F500-C10/C10-ETN/C15-ETN**



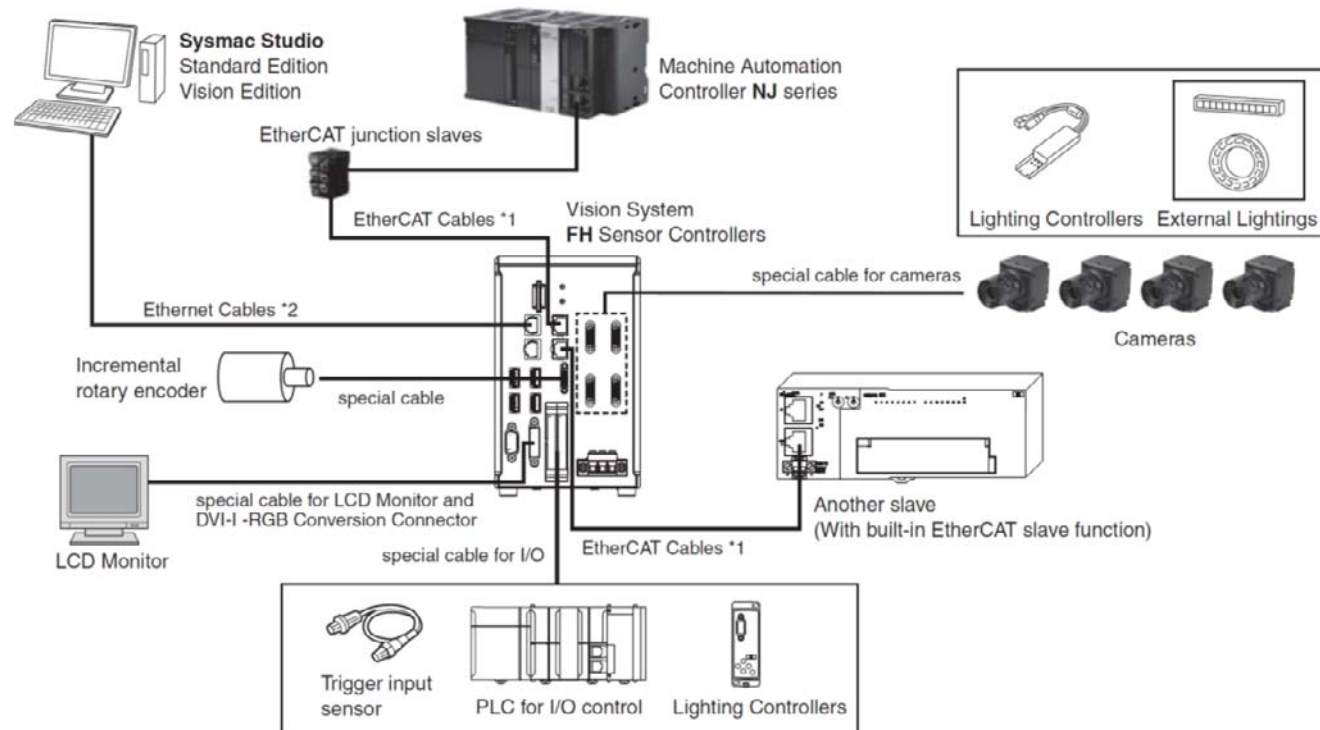
**Model F500-C10/C10-ETN/C15-ETN**



**Recommendable replacement  
Model FH-1050**

**EtherCAT connections for FH series**

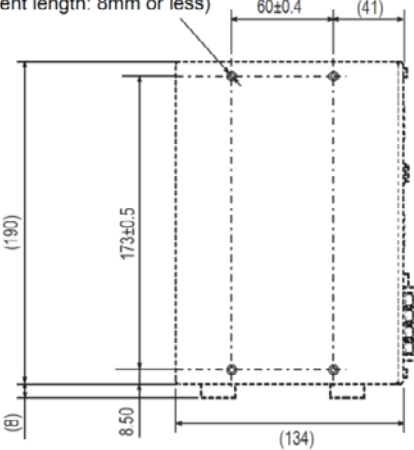
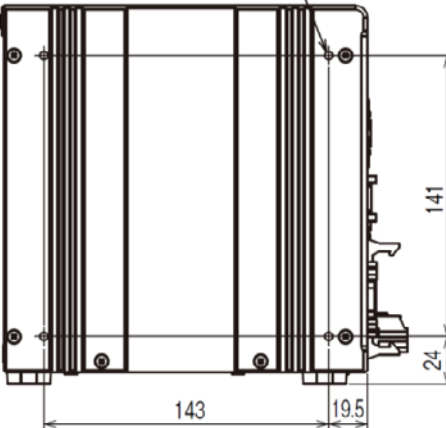
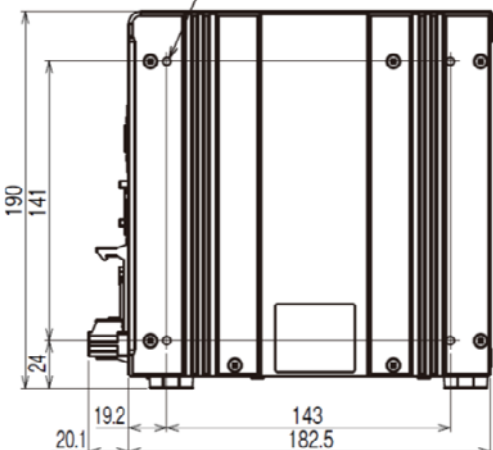
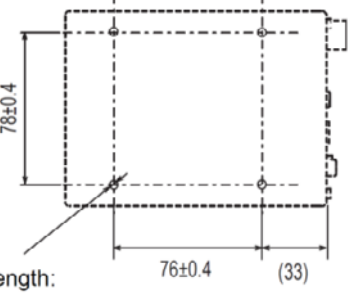
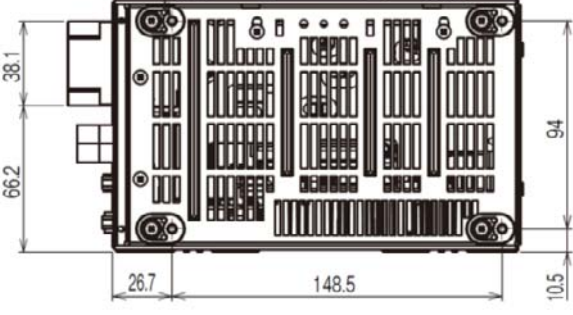
Example of the FH Sensor Controllers (4-camera type)



\*1. To use STP (shielded twisted-pair) cable of category 5 or higher with double shielding (braiding and aluminum foil tape) for EtherCAT and RJ45 connector.

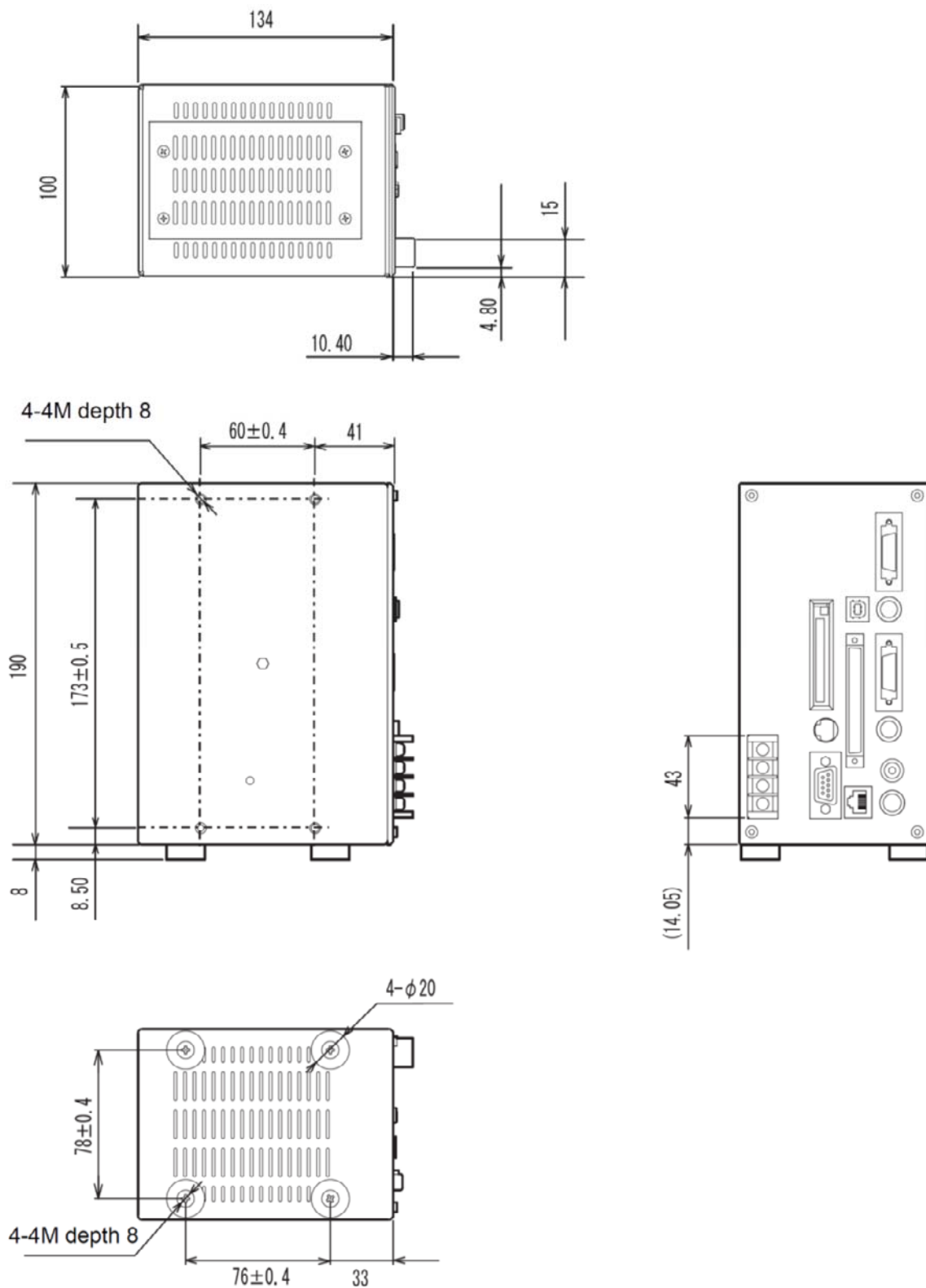
\*2. To use STP (shielded twisted-pair) cable of category 5 or higher for Ethernet and RJ45 connector.

[ Mounting dimensions ]

<p>Product discontinuation Model F500-C1□(-ETN) Model F210-C1□(-ETN)</p>	<p>Recommendable replacement Model FH-1050</p>
<p><b>Horizontal Mounting</b></p> <p>4-M4 (screw engagement length: 8mm or less)</p>  <p>(190)</p> <p>173±0.5</p> <p>85</p> <p>60±0.4</p> <p>(41)</p> <p>(134)</p>	<p><b>Horizontal Mounting</b> Left side</p> <p>4-M4 depth 4.5 (mounting screw hole)</p>  <p>4-M4 depth 4.5 (mounting screw hole)</p> <p>143</p> <p>19.5</p> <p>141</p> <p>24</p> <p><b>Right side</b></p> <p>4-M4 depth 4.5 (mounting screw hole)</p>  <p>190</p> <p>141</p> <p>24</p> <p>20.1</p> <p>19.2</p> <p>143</p> <p>182.5</p>
<p><b>Vertical Mounting</b></p>  <p>78±0.4</p> <p>76±0.4</p> <p>(33)</p> <p>4-M4 (screw engagement length: 8mm or less)</p> <p>(Unit: mm)</p>	<p><b>Vertical Mounting</b> Bottom</p> <p>4-M3 depth 4.5 (mounting screw hole)</p>  <p>4-M3 depth 4.5 (mounting screw hole)</p> <p>38.1</p> <p>66.2</p> <p>26.7</p> <p>148.5</p> <p>94</p> <p>10.5</p> <p>(Unit: mm)</p>

[ Dimensions ]

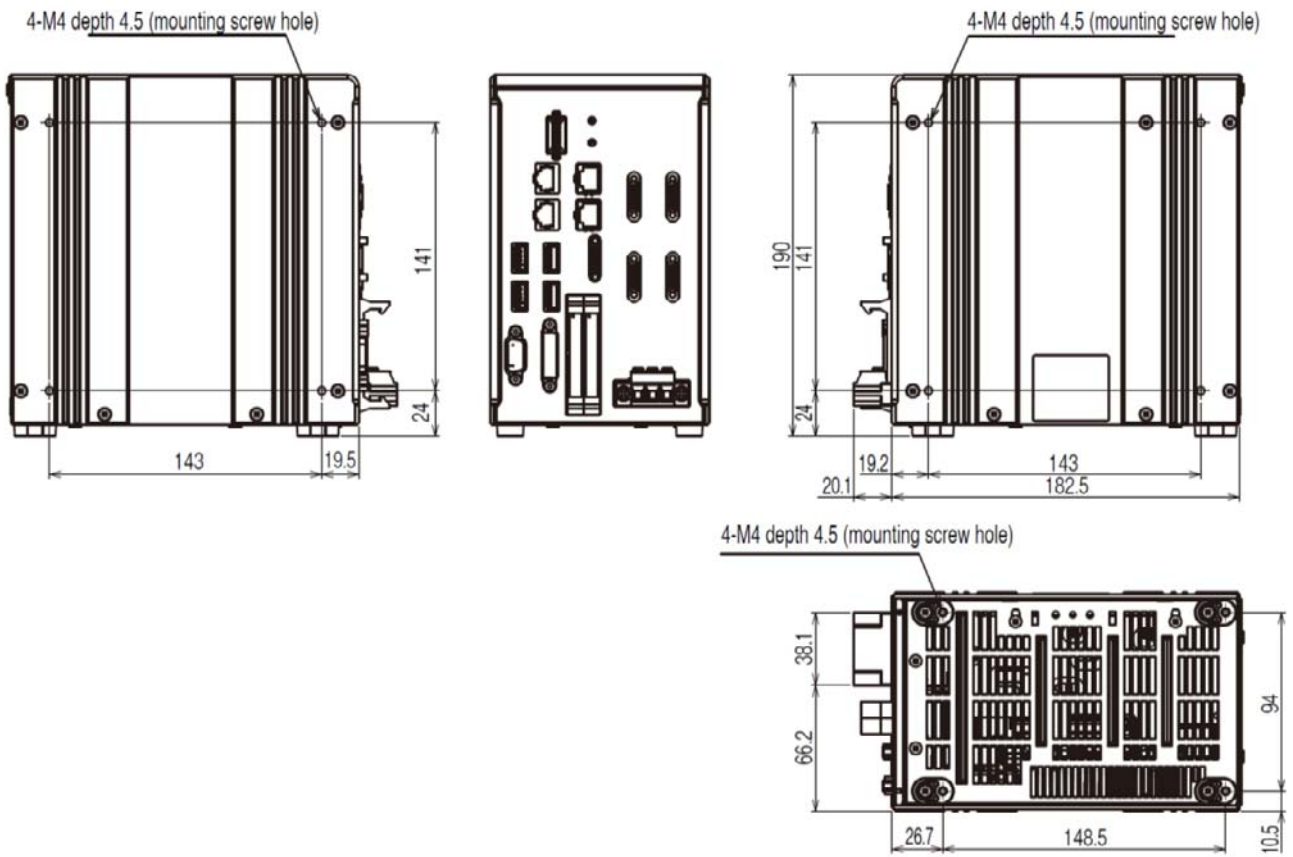
Product discontinuation  
 Model F500-C10/C10-ETN/C15-ETN  
 Model F210-C10-ETN/C15-ETN



Note) Drawing shows Model F500-C1[]-ETN and F210-C1[]-ETN.  
 Model F500-C10 has the difference appearance, but it can be shown by the same dimensions.

(Unit: mm)

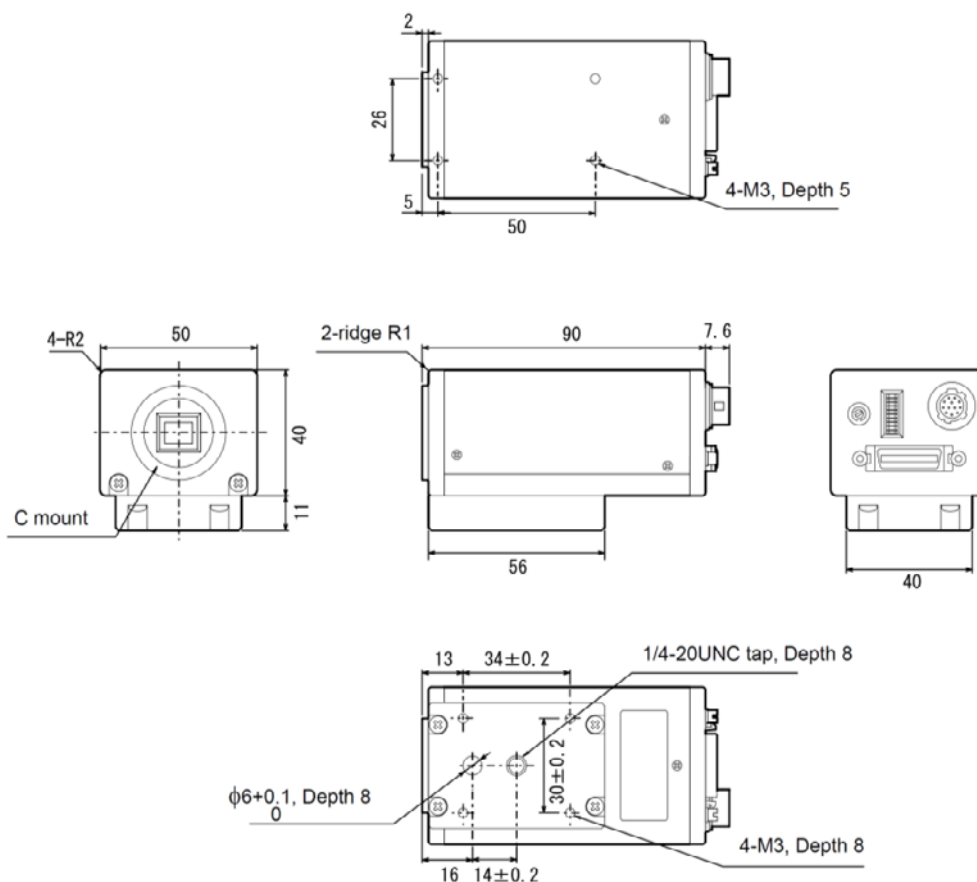
**Recommendable replacement  
Model FH-1050**



(Unit: mm)

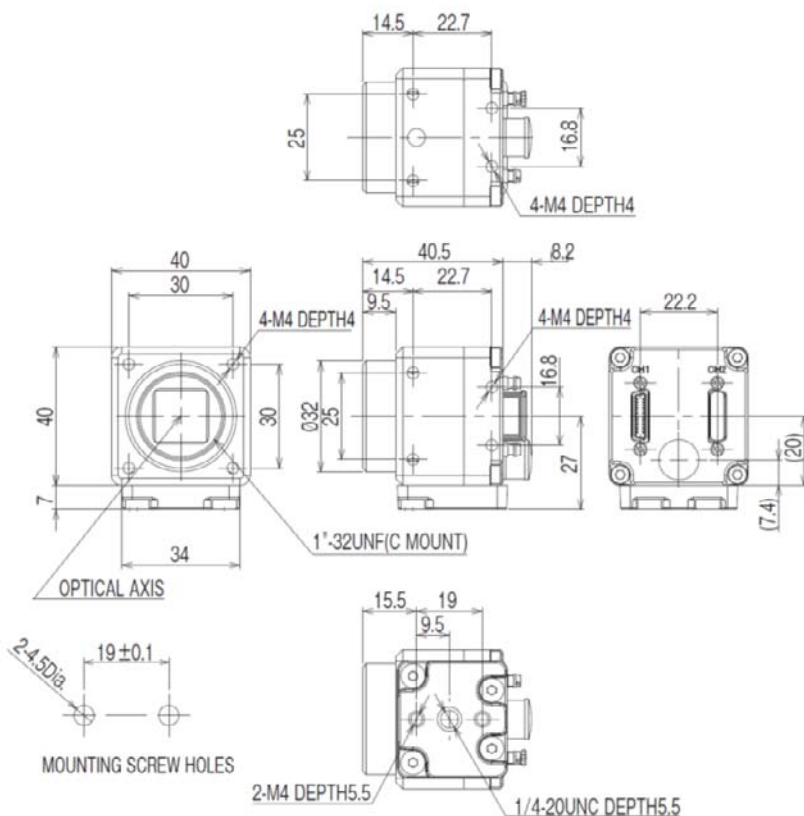


**Product discontinuation  
Model F500-S1**



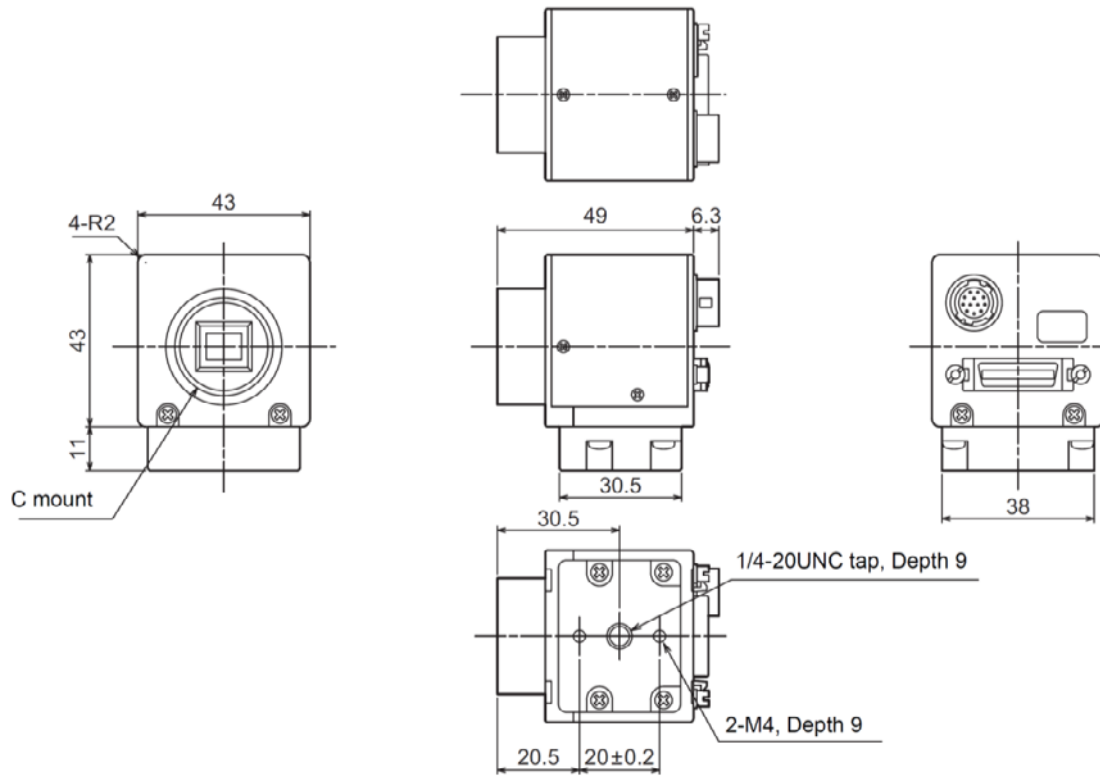
(Unit: mm)

**Recommendable replacement  
Model FH-SM02**



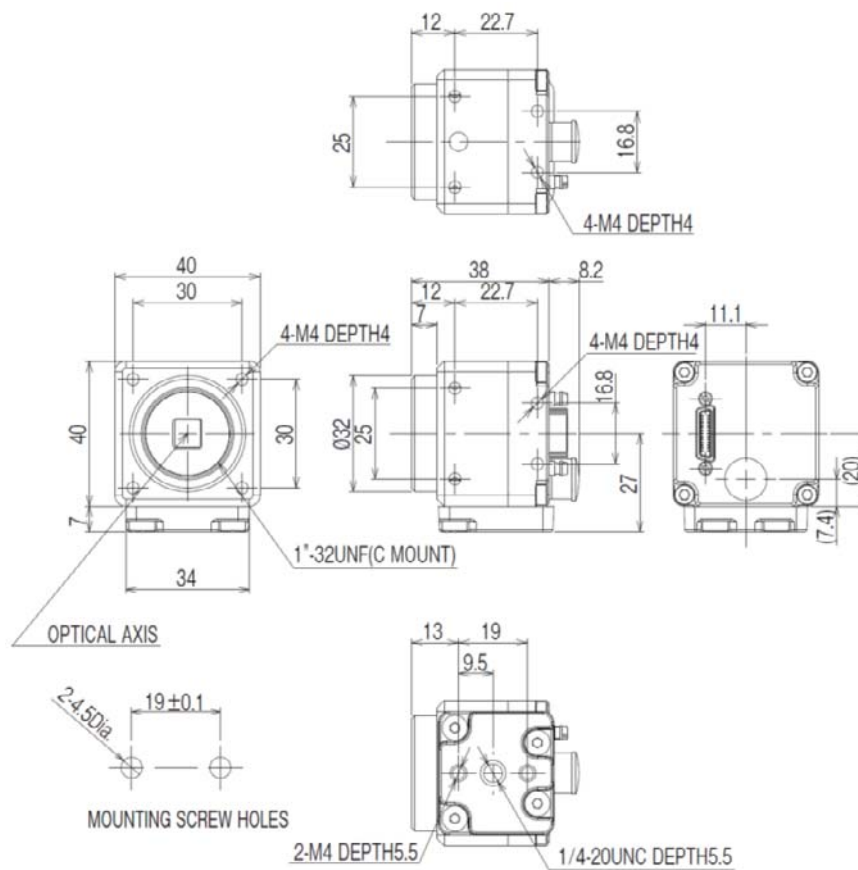
(Unit: mm)

**Product discontinuation  
Model F210-S1**



(Unit: mm)

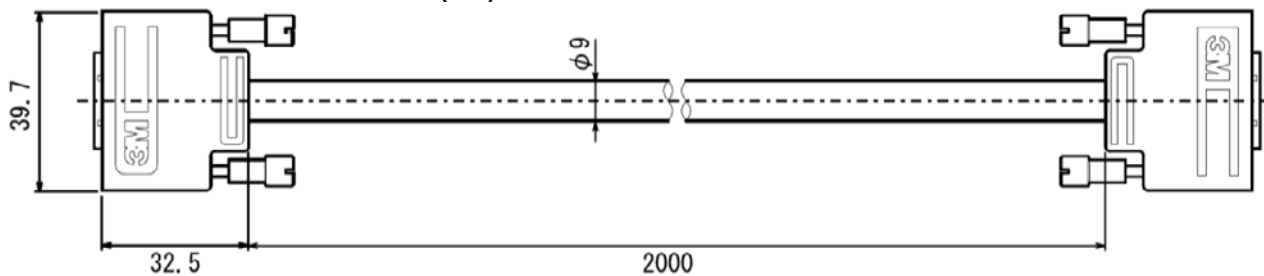
**Recommendable replacement  
Model FH-SM**



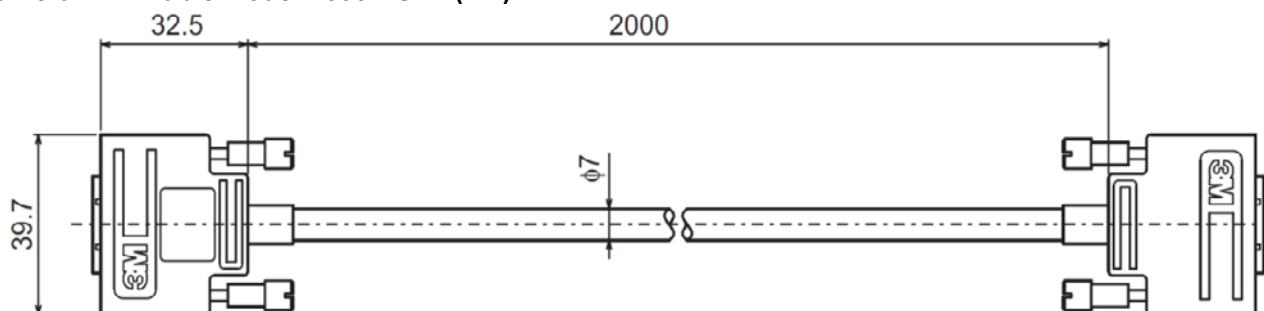
(Unit: mm)

**Product discontinuation  
Model F500-VS/VS2**

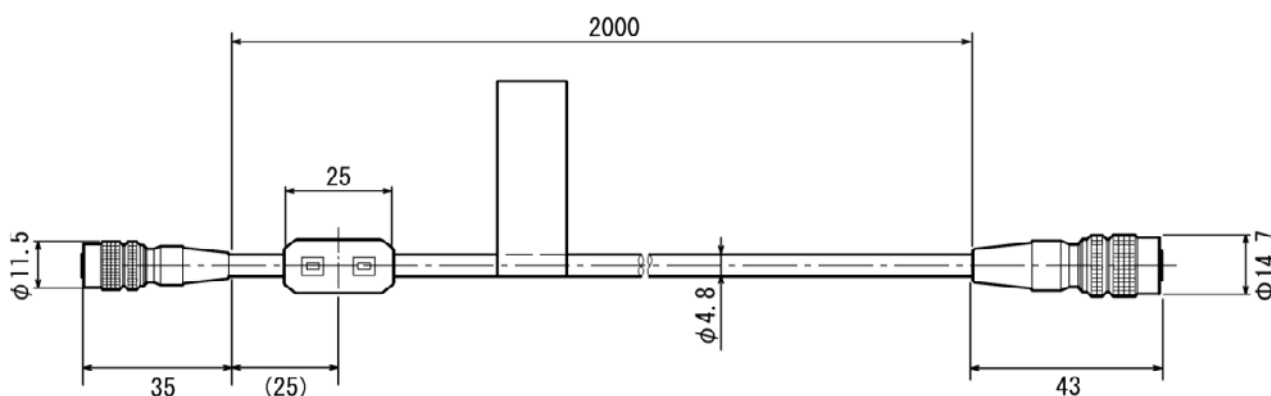
**Camera Link Cable Model F500-VSD (2m)**



**Camera Link Cable Model F500-VSD2 (2m)**

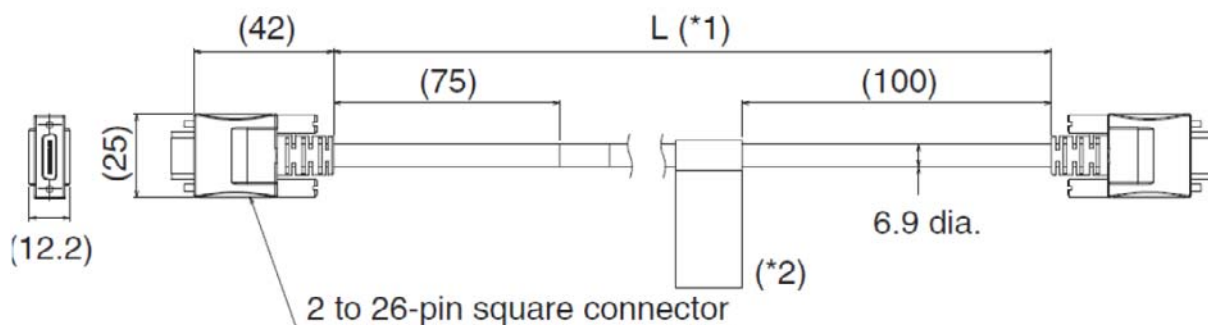


**Camera power cable Model F500-VSP (2m)**



(Unit: mm)

**Recommendable replacement  
Model FZ-VS**



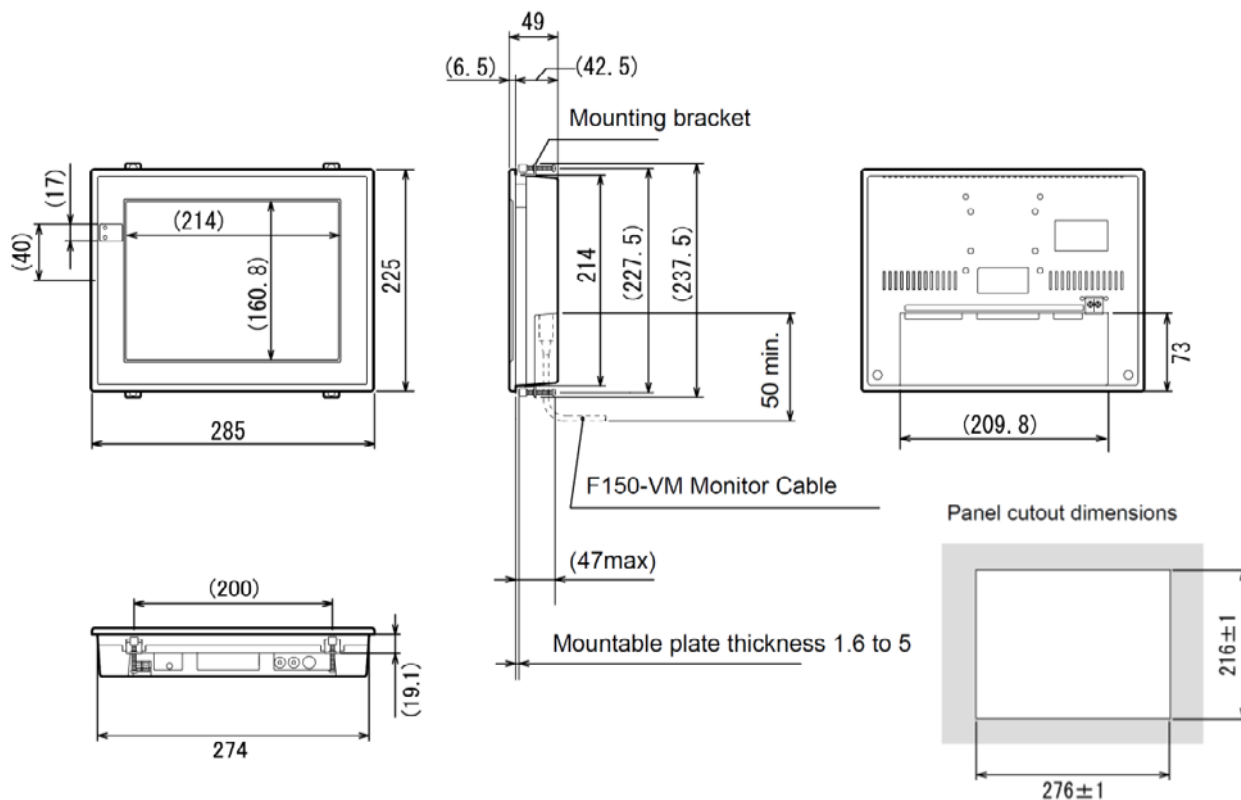
(Unit: mm)

\*1. Cable is available in 2 m/ 5 m/ 10 m.

\*2. Each camera cables has polarity.

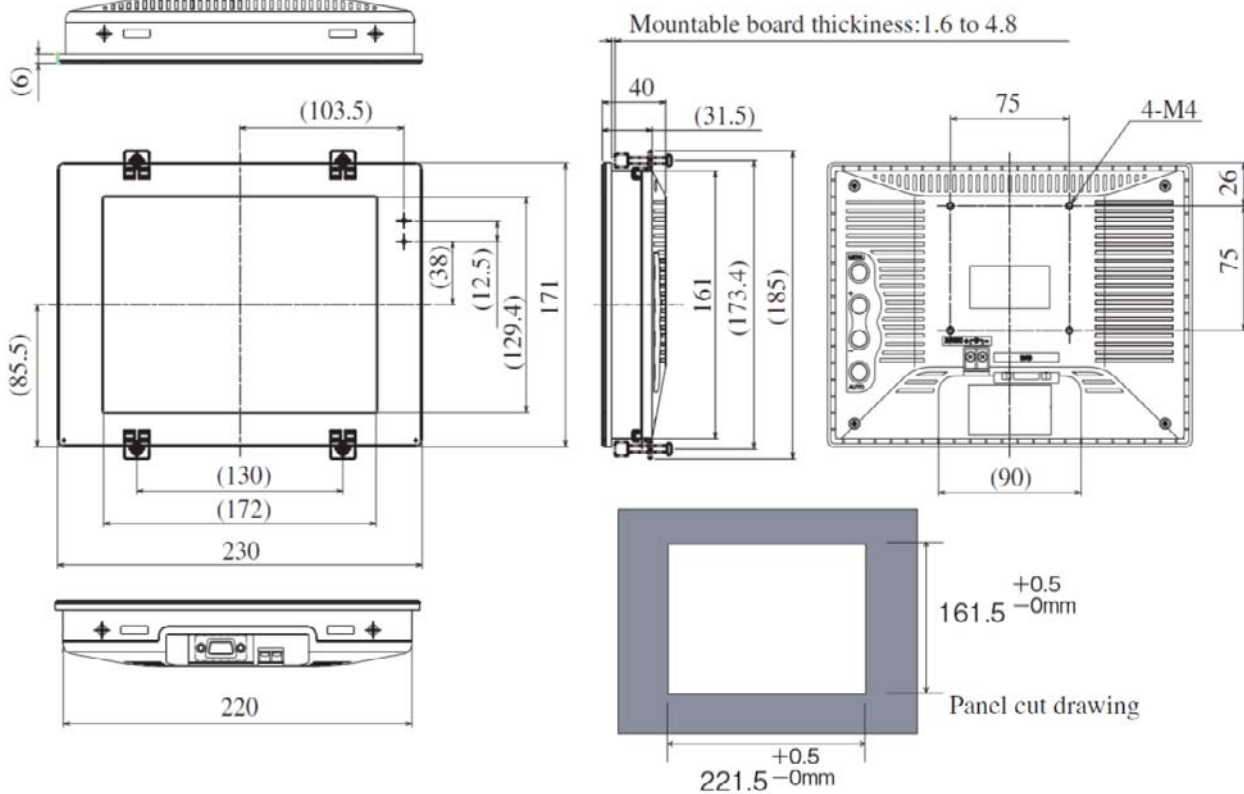
Please ensure that the name plate side of the cable is connected to the controller.

**Product discontinuation  
Model F500-M10L**



(Unit: mm)

**Recommendable replacement  
Model FZ-M08**



(Unit: mm)

[ Characteristics ]  
Controller

Item	Product discontinuation Model F500-C1[](-ETN) Model F210-C1[]-ETN	Recommendable replacement Model FH-1050 Standard Controllers (2 core)
Connected Camera	F500 series: F500-S1 F210 series: F210-S1	Can be connected to all cameras. (FZ-S series/FH-S series)
No. of connectable Cameras	2	
Processing resolution	F500 series: 1024 (H) × 1024 (V) F210 series: 512 (H) × 484 (V)	When connected to a 300,000-pixel camera FH-S: 640 (H) × 480 (V) When connected to a 2 million-pixel camera FH-S : 2040 (H) × 1088 (V)
No. of scenes	32 (Can be increased using Memory Cards.)	128
Image memory function	35 images max.	When connected to a 300,000-pixel camera (FZ-S/FH-S) Connected to 1 camera (Monochrome): 272 Connected to 2 camera (Monochrome): 136 When connected to a 2 million-pixel camera (FH-S) Connected to 1 camera (Color/Monochrome): 37 Connected to 2 camera (Color/Monochrome): 18
Storage	F500 series: 256 MB F210 series: 64 MB non-volatile memory	-
Operation and settings	<ul style="list-style-type: none"> <li>• Measurement items installed using Applications Software.</li> <li>• Menu operations used to combine measurement items.</li> <li>• Vision Composer Net can be used for operation and settings.</li> </ul>	Mouse or similar device Create series of processing steps by editing the flowchart (Help messages provided).
Menu language	Japanese or English (switchable)	Japanese, English, Chinese, German, French, Italian, Spanish, and Korean (switchable)
Serial communications	USB series B: 1 channel RS-232C/422: 1 channel	RS-232C: 1 CH
USB I/F	-	4 channels (supports USB 1.1 and 2.0)
Network communications	Ethernet 100Base-TX/10Base-T (except for F500-C10)	Ethernet 1000BASE-T
EtherCAT communications	-	EtherCAT protocol (100BASE-TX)
Parallel I/O	11 inputs, 22 outputs NPN: F500-C10(-ETN), F210-C10-ETN PNP: F500-C15-ETN, F210-C15-ETN	(In the 2-line random trigger mode) 17 inputs, 37 outputs (In the 5-line to 8-line random trigger mode) 19 inputs, 34 outputs
Encoder interface	-	RS422-A line driver level
Monitor interface	Composite video output: 1 channel, S-VIDEO output: 1 channel	DVI-I output IF × 1 ch
Memory Card interface	Compact Flash card slot, 1 channel	SDHC card of Class4 or higher rating is recommended.

Item	Product discontinuation Model F500-C1[](-ETN) Model F210-C1[]-ETN	Recommendable replacement Model FH-1050 Standard Controllers (2 core)
<b>Power supply voltage</b>	20.4 to 26.4 V DC	
<b>Current consumption</b>	2.1 A max. (with two Cameras connected)	3.6 A max. (with two FH-S Cameras connected)
<b>Ambient temperature</b>	Operating: 0 to +50°C Storage: -25 to +65°C (with no icing or condensation)	Operating: 0 to 50 °C Storage: -20 to 65 °C (with no icing or condensation)
<b>Ambient humidity</b>	Operating/storage: 35% to 85% (with no condensation)	Operating and storage: 35% to 85% (with no condensation)
<b>Weight</b>	Approx. 1.6 kg (Controller only)	Approx. 3.2 kg

Camera

Item	Product discontinuation Model F500-S1	Recommendable replacement Model FH-SM02
Imaging device	2/3-inch interline monochrome CCD (reading all pixels)	CMOS image elements (2/3-inch equivalent)
Color/Monochrome	Monochrome	
Effective pixels	1392 (H) × 1040 (V)	2040 (H) × 1088 (V)
Pixel size	6.45 μm (H) × 6.45 μm (V)	5.5 μm (H) × 5.5 μm (V)
Scanning method	Non-interlace	Progressive
Shutter	Electronic shutter, 10 shutter speeds (1/24 to 1/10,000 s), changed via menu	Electronic shutter; Shutter speeds can be set from 25 μs to 100 ms.
Partial function Number of lines to be read	Four settings 1024, 512, 256, 128 lines	1 to 1088 lines
Synchronization	Internal Sync.	
Video output	Digital (10 bits)	Digital (8 bits)
Lens mounting	C mount	
Ambient temperature	Operating: 0 to +50°C Storage: -25 to +60°C (with no icing or condensation)	Operating: 0 to 40°C, Storage: -25 to 65°C (with no icing or condensation)
Ambient humidity	Operating/storage: 35% to 85% with no condensation	
Weight	Approx. 270 g	Approx. 110 g

Item	Product discontinuation Model F210-S1	Recommendable replacement Model FH-SM
Imaging device	1/3-inch interline monochrome CCD (reading all pixels)	CMOS image elements (1/3-inch equivalent)
Color/Monochrome	Monochrome	
Effective pixels	659 (H) × 494 (V)	640 (H) × 480 (V)
Pixel size	7.4 (μm) × 7.4 (μm) (Square pixel)	
Scanning method	Non-interlace	Progressive
Shutter	Electronic shutter, 8 shutter speeds (1/60 to 1/12,000 s), changed via menu	Electronic shutter; Shutter speeds can be set from 20 μs to 100 ms.
Partial function Number of lines to be read	7 settings 484, 235, 104, 54, 38, 26, 14 lines	1 to 480 lines
Synchronization	Internal Sync./External Sync.	Internal Sync.
Video output	Digital (10 bits)	Digital (8 bits)
Lens mounting	C mount	
Ambient temperature	Operating: 0 to +50°C Storage: -25 to +60°C (with no icing or condensation)	Operating: 0 to 40 °C, Storage: -25 to 65 °C (with no icing or condensation)
Ambient humidity	Operating/storage: 35% to 85% with no condensation	
Weight	Approx. 110 g	Approx. 105 g

**Monitor**

Item	Product discontinuation Model F500-M10L	Recommendable replacement Model FZ-M08
<b>Effective display area</b>	10.4 inches	8.4 inches
<b>Panel type</b>	Liquid crystal color TFT	
<b>Resolution</b>	640 × 480	1024 × 768
<b>Contrast</b>	300 : 1 (typical)	600 : 1 (typical)
<b>Viewable angle</b>	45° up, 55° down, 70° left/right (with contrast ratio > 10)	Left and right: each 80° Upward: 60°, Downward: 80° (Contrast ratio 10 : 1 minimum)
<b>Brightness</b>	350 cd/m <sup>2</sup> (typical)	500 cd/m <sup>2</sup> (typical)
<b>Backlight</b>	Cold-cathode tube edge light type	Edge light system, White LEDs
<b>Input signal</b>	NTSC composite video (1.0 V/75 Ω termination) S-Video Y signal (1.0V/75Ω termination), S-Video C signal (0.286V/75Ω termination)	1 channel of analog RGB video input
<b>Power supply voltage</b>	20.4 to 26.4 V DC	21.6 to 26.4 VDC
<b>Current consumption</b>	1.0 A max.	0.7 A max.
<b>Vibration resistance</b>	10 to 150Hz at a single-amplitude of 0.1mm (maximum acceleration: 15m/s <sup>2</sup> ), 10 times for 8 minutes each in 3 directions	
<b>Ambient temperature</b>	Operating: 0 to +50°C Storage: -20 to +65°C (with no icing or condensation)	Operating: 0 to 50°C, Storage: -20 to 60°C
<b>Ambient humidity</b>	Operating/storage: 30% to 80% (with no condensation)	Operating and storage: 20 to 85% RH (No condensation)
<b>Degree of protection</b>	IEC60529 IP20	
<b>Materials</b>	Case: ABS Display surface: PMMA (Acrylic)	Front panel: PC, case: PC/PBT, Buttons: ABS
<b>Weight</b>	Approx. 1.8 kg	Approx. 1.0 kg



### Camera Link Cable

Item	Product discontinuation Model F500-VS/VS2	Recommendable replacement Model FZ-VS
<b>Vibration resistance</b>	10 to 150 Hz at a single-amplitude of 0.15 mm, 4 times for 8 minutes each in 3 directions	
<b>Ambient Temperature</b>	Model F500-VSD/VSD2 Operating and storage: 0 to 65°C (with no icing nor condensation) Model F500-VSP 0 to 50°C at operation, -25 to 65°C at storage (with no icing nor condensation)	Operation and storage: 0 to 65 °C (with no icing or condensation)
<b>Ambient humidity</b>	Model F500-VSD/VSD2 Operating and storage: 40% to 70% (with no condensation) Model F500-VSP Operating and storage: 35% to 85% (with no condensation)	Operation and storage: 40 to 70%RH (with no condensation)
<b>Ambient environment</b>	No corrosive gases	
<b>Materials</b>	Cable sheathing: Heat-resistant chlorinated vinyl Connector: Fiberglass-reinforced PC and PBT	Cable sheath, Connector: PVC
<b>Minimum bending radius</b>	Model F500-VSD/VSD2: 90 mm Model F500-VSP : 75 mm	69 mm
<b>Weight</b>	Model F500-VSD/VSD2: Approx. 400 g (2m) Model F500-VSP : Approx. 120 g (2m)	Approx. 170 g (2 m)

### Lens

Item	Product discontinuation Model F500-LE16/LE25/LE50	Recommendable replacement Model 3Z4S-LE VS-1614H1/ 2514H1/5018H1
<b>Focal length</b>	Model F500-LE16: 16 mm Model F500-LE25: 25 mm Model F500-LE50: 50 mm	Model 3Z4S-LE VS-1614H1: 16 mm Model 3Z4S-LE VS-2514H1: 25 mm Model 3Z4S-LE VS-5018H1: 50 mm
<b>Brightness</b>	Model F500-LE16: F1.4 Model F500-LE25: F1.4 Model F500-LE50: F2.8	F1.4
<b>Maximum outer diameter *1</b>	φ 34 mm	Model 3Z4S-LE VS-1614H1: φ 38 mm Model 3Z4S-LE VS-2514H1: φ 38 mm Model 3Z4S-LE VS-5018H1: φ 44 mm
<b>Total length *2</b>	Model F500-LE16: 35.9 mm Model F500-LE25: 47.1 mm Model F500-LE50: 63.0 mm	Model 3Z4S-LE VS-1614H1: 43.3 mm Model 3Z4S-LE VS-2514H1: 39.1 mm Model 3Z4S-LE VS-5018H1: 49.5 mm
<b>Filter size</b>	M30.5 × P0.5 mm	
<b>Locking</b>	Locking set screws for focus and iris.	
<b>Mount</b>	C Mount	

\*1: Excluding projecting parts

\*2: For infinite focus

**[ System Requirements for F500-CD3/CD3E Vision Composer Net ]**

Item	Product discontinuation Model F500-CD3/CD3E	Recommendable replacement No recommended replacement
<b>Language</b>	F500-CD3: Japanese F500-CD3E: English	/
<b>CPU</b>	Pentium III 600 MHz min. (Pentium III 1 GHz min. recommended)	
<b>OS</b>	Windows 2000 Professional, Service Pack 4 or higher Windows XP Home Edition, Service Pack 2 or higher Windows XP Professional, Service Pack 2 or higher	
<b>Memory</b>	192 MB min. (256 MB min. recommended)	
<b>Hard disk</b>	300 MB min. available space	
<b>Monitor</b>	Resolution: 1,024 × 768 min. Display colors: High Color (16-bit) min. (True Color (32-bit) min. recommended)	
<b>Network</b>	10BaseT-compliant network (100Base-TX recommended)	
<b>Vision Sensor Controller</b>	F210-C10-ETN/F210-C15-ETN, F500-C10-ETN/F500-C15-ETN	
<b>Applications software</b>	F500-UM Version 3.00 or later	

Specifications and prices in this product news are as of the issue date and are subject to change without notice.  
Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.