



FCB-EX1020/FCB-EX1020P



FCB-EX995E/FCB-EX995EP



FCB-EX985E/FCB-EX985EP



FCB-EX490E/FCB-EX490EP



FCB-EX48E/FCB-EX48EP



FCB-EX15E/FCB-EX15EP



FCB-EX12E/FCB-EX12EP



FCB-EX11D/FCB-EX11DP



FCB-EX20D/FCB-EX20DP

# FCB-EX Series

Color Block Cameras

# INTRODUCTION

Sony's FCB Series of color block cameras offers excellent picture quality, superb flexibility, and easy operation in a variety of applications ranging from surveillance to traffic monitoring, and in many other visual communication environments. These cameras are specifically designed to be integrated into security domes/cameras, police vehicles, photo booths, document stands, and low-vision systems. There are nine cameras in the FCB-EX Series lineup, and each incorporates a wide variety of optical zoom lenses ranging from 10x to 36x. With this breadth of choice, it's never been easier to select the right camera for your specific monitoring applications.

FCB-EX Series Cameras	FCB-EX1020 FCB-EX1020P	FCB-EX995E FCB-EX995EP	FCB-EX985E FCB-EX985EP	FCB-EX490E FCB-EX490EP	FCB-EX48E FCB-EX48EP	FCB-EX15E FCB-EX15EP	FCB-EX12E FCB-EX12EP	FCB-EX11D FCB-EX11DP	FCB-EX20D FCB-EX20DP
Optical Zoom Lens	36x	28x		18x		12x		10x	
Key Features	Progressive Scan Wide D Auto ICR Image Stabilization Digital Output	Progressive Scan Wide D Auto ICR Image Stabilization Digital Output	Auto ICR Image Stabilization Digital Output	Progressive Scan Wide D Auto ICR Digital Output	Digital Output	Progressive Scan Wide D Auto ICR Digital Output	Auto ICR Digital Output		Auto ICR

## FEATURES

### Wide Dynamic Range with New Technology

FCB-EX1020/FCB-EX1020P    FCB-EX995E/FCB-EX995EP  
 FCB-EX490E/FCB-EX490EP    FCB-EX15E/FCB-EX15EP

The Wide Dynamic Range (Wide-D) feature allows for the capture clear of images in extreme lighting environments.

**Auto Mode:** When shooting in high or low contrast lighting situations, these cameras monitor the luminance differences within an image and automatically switch on and off the Wide D feature depending on the visibility of the subjects and background.

**Interlace Wide-D and Progressive Wide-D Modes:** There are two modes to choose from. The Interlace mode is ideally suited for high-contrast lighting environments. The Progressive Scan mode is suited for low-contrast environments.



## Progressive Scan Broadens Capabilities

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
FCB-EX490E/FCB-EX490EP FCB-EX15E/FCB-EX15EP

Ideally suited for IP-ready monitoring applications, these cameras adopt a Progressive Scan mode to provide smooth and clear images when viewing details in a moving image (i.e., license plate of moving vehicle, a person running). Since network cameras typically have backend systems based upon progressive scan, the original picture quality can be maintained without any conversion from interlace scan to progressive scan.

## Digital Output (ITU-R BT656)

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
FCB-EX985E/FCB-EX985EP FCB-EX490E/FCB-EX490EP  
FCB-EX48E/FCB-EX48EP FCB-EX15E/FCB-EX15EP  
FCB-EX12E/FCB-EX12EP

These cameras are equipped with a digital interface (Y/Cb/Cr 4:2:2) which is comparable to ITU-R-BT656. By using the digital interface, the quality of the camera's video signal does not deteriorate. In addition, there is no need for an external analog/digital converter between the camera and other equipment.

## High Resolution & High Sensitivity Images

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
FCB-EX985E/FCB-EX985EP FCB-EX490E/FCB-EX490EP  
FCB-EX48E/FCB-EX48EP FCB-EX15E/FCB-EX15EP  
FCB-EX12E/FCB-EX12EP

These cameras in the FCB E Series deliver exceptional picture quality and high sensitivity – ideal for security applications. These cameras achieve a high horizontal resolution of 550 TV lines enabling the reproduction of amazingly clear and detailed images. The FCB-EX985E/EX985EP camera achieves 0.25 lx (F1.35, 50IRE) by incorporating a Super HAD CCD II sensor and bright 28x lens (f=1.35).

## Auto IR-Cut Filter Removal (Auto ICR)

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
FCB-EX985E/FCB-EX985EP FCB-EX490E/FCB-EX490EP  
FCB-EX15E/FCB-EX15EP FCB-EX12E/FCB-EX12EP

The Auto ICR function incorporated in these cameras offers optimal sensitivity in both day-and-night shooting applications. At a set level of darkness, the IR-cut filter is automatically disabled (ICR ON) and the near-infrared sensitivity is increased. At a set level of brightness, the filter is automatically enabled (ICR OFF). The IR-cut filter automatically engages depending on the ambient light, allowing the cameras 24/7 operation in a variety of lighting conditions.

## Image Stabilization – StableZoom™ Mode

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
FCB-EX985E/FCB-EX985EP

The FCB-EX1020/EX1020P, FCB-EX995E/EX995EP and FCB-EX985E/EX985EP cameras adopt a new method of Image Stabilization by using the digital zoom. The Image Stabilization function starts naturally without an abrupt change to the horizontal angle of view.

## Bright, Fast and Robust 28x Zoom Lens

FCB-EX995E/FCB-EX995EP FCB-EX985E/FCB-EX985EP

The FCB-EX995/995EP and FCB-EX985E/985EP cameras incorporate a new 28x bright zoom lens with f=1.35. This lens has a fast zooming capability (2.5 seconds from tele end to wide end) and high durability.

## White Balance – New Modes

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
FCB-EX985E/FCB-EX985EP FCB-EX490E/FCB-EX490EP  
FCB-EX48E/FCB-EX48EP FCB-EX15E/FCB-EX15EP  
FCB-EX12E/FCB-EX12EP

**Sodium Vapor Lamp Mode:** When a camera is shooting under a sodium vapor lamp (typically a street lamp or tunnel lamp), images could appear to have a yellowish tint. The new FCB E Version cameras are equipped with a new Sodium Vapor Lamp Mode that automatically compensates for the sodium vapor lamp degree of Kelvin to restore objects to their original color.

**Outdoor Auto Mode:** When a camera is shooting at dawn or dusk, images could appear bluish. The new FCB E Version cameras are equipped with a new Outdoor Auto Mode feature that automatically adjusts the white balance to reduce the dark tones at dawn or dusk.

## Enhanced Noise Reduction

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
FCB-EX985E/FCB-EX985EP FCB-EX490E/FCB-EX490EP  
FCB-EX48E/FCB-EX48EP FCB-EX15E/FCB-EX15EP  
FCB-EX12E/FCB-EX12EP

By combining 2D and 3D noise reduction, the cameras offer a selection of noise-reduction settings (from Level 1 to Level 5) to allow the user to choose the ideal level for shooting conditions.

## Slow AE Response

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
 FCB-EX985E/FCB-EX985EP FCB-EX490E/FCB-EX490EP  
 FCB-EX48E/FCB-EX48EP FCB-EX15E/FCB-EX15EP  
 FCB-EX12E/FCB-EX12EP

These cameras allow the user to set the auto response speed (up to 10 minutes) to enable the cameras to adapt to changes in lighting conditions. For example, when shooting in an underground parking lot, valuable images could otherwise be missed when car headlights cause an abrupt change in lighting conditions.

## Color Enhancement

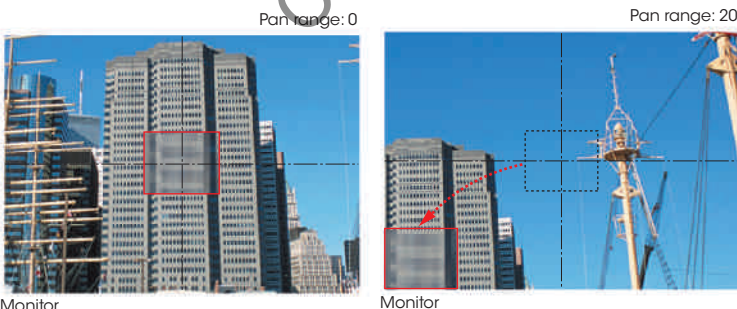
FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
 FCB-EX985E/FCB-EX985EP FCB-EX490E/FCB-EX490EP  
 FCB-EX48E/FCB-EX48EP FCB-EX15E/FCB-EX15EP  
 FCB-EX12E/FCB-EX12EP

Ideally suited for low vision applications, new color enhancement options can make reading text and pictures less challenging. Full color images can be changed to black and white, and then inverted into two selected colors.

## Advanced Spherical Privacy Zone Masking

All Models

With these new cameras, a maximum of eight masking areas can be displayed on the monitoring screen. Also, if these block cameras are integrated into a Pan/Tilt/Zoom (P/T/Z) camera system, masked areas can be interlocked with P/T/Z movement, regardless of the camera angle or camera movement. Up to 24 masking areas can be preset in the entire viewing angle of a P/T/Z camera. In addition, these cameras can mask unwanted or prohibited areas within an image using a mosaic effect on top of the color masking function.



Monitor  
 [Red Box] Masking area  
 [Red Arrow] Movement of masking area

As camera pans and tilts, the masked area moves to maintain the desired covered area.

## Other Features

All Models

- Electronic Flip (E:Flip)
- Multi-line On-Screen Display
- Video Motion Detection
- Picture Freeze
- SMART (Sony Modular Automatic Lens Reset Technology)

## Other Features

FCB-EX1020/FCB-EX1020P FCB-EX995E/FCB-EX995EP  
 FCB-EX985E/FCB-EX985EP FCB-EX490E/FCB-EX490EP  
 FCB-EX48E/FCB-EX48EP FCB-EX15E/FCB-EX15EP  
 FCB-EX12E/FCB-EX12EP

- Gain Limit Setting
- Zoom Limit Setting
- Zoom Speed-up in Zoom Direct Mode (Focus Trace On/Off)
- Focus Compensation in ICR Mode
- Alarm Signal Output in Auto ICR Mode
- Image Stabilization Hold
- Extended Operation Temperature
- Temperature Readout

# PIN ASSIGNMENT

## ■ 4-pin for Y/C Video Out

CN500 FCB-EX1020/FCB-EX1020P CN602 FCB-EX20D/FCB-EX20DP  
 FCB-EX995E/FCB-EX995EP CN402 FCB-EX11D/FCB-EX11DP  
 FCB-EX985E/FCB-EX985EP  
 FCB-EX490E/FCB-EX490EP  
 FCB-EX48E/FCB-EX48EP

Pin No.	Name	Level
1	Y_OUT	1.0 Vp-p (75 Ω terminate) Luminance signal
2	GND (for Y signal)	-
3	C_OUT	Chrominance signal
4	GND (for C signal)	-

Connector: JST S4B-ZR-SM4A-TF (LF)

## ■ 9-pin for DC/Video Out

CN501 FCB-EX1020/FCB-EX1020P CN601 FCB-EX20D/FCB-EX20DP  
 FCB-EX995E/FCB-EX995EP CN401 FCB-EX11D/FCB-EX11DP  
 FCB-EX985E/FCB-EX985EP  
 FCB-EX490E/FCB-EX490EP  
 FCB-EX48E/FCB-EX48EP  
 FCB-EX15E/FCB-EX15EP  
 FCB-EX12E/FCB-EX12EP

Pin No.	Name	Level
1	RxD	CMOS 5.0 V (Low: max 0.8 V, High: min 2.0 V) Read Data
2	TxD	CMOS 5.0 V (Low: max 0.1 V, High: min 4.4 V) Send Data
3	GND (for RxD & TxD)	-
4	DC IN	9.0 V ±3.0 V
5	GND (for DC IN)	-
6	VBS OUT	1.0 Vp-p (75 Ω terminate)
7	GND (for VBS OUT)	-
8	V LOCK PULSE	External VD-Lock Pulse (Negative, 3.0 Vp-p 50% duty)
9	GND (for V LOCK PULSE)	-

Connector: KYOCERA ELCO 00 6200 509 130 000+

## ■ 12-pin for Digital Out

CN200 FCB-EX1020/FCB-EX1020P  
 FCB-EX995E/FCB-EX995EP  
 FCB-EX985E/FCB-EX985EP  
 FCB-EX490E/FCB-EX490EP  
 FCB-EX48E/FCB-EX48EP

Pin No.	Name	Level
1	GND	
2	Digital Out 0	0 - 3.3 Vp-p
3	Digital Out 1	0 - 3.3 Vp-p
4	Digital Out 2	0 - 3.3 Vp-p
5	Digital Out 3	0 - 3.3 Vp-p
6	Digital Out 4	0 - 3.3 Vp-p
7	Digital Out 5	0 - 3.3 Vp-p
8	Digital Out 6	0 - 3.3 Vp-p
9	Digital Out 7	0 - 3.3 Vp-p
10	GND	
11	CLOCK	0 - 3.3 Vp-p
12	GND	

Connector: KYOCERA ELCO 08 6222 012 101 848+ [FFC 0.5 mm Pitch]

## ■ 30-pin for Digital Out

CN601 FCB-EX15E/FCB-EX15EP  
 FCB-EX12E/FCB-EX12EP

Pin No.	Name	Level
1	TXOUT3+	
2	TXOUT3-	
3	TXCLKOUT+	
4	TXCLKOUT-	
5	TXOUT2+	
6	TXOUT2-	
7	TXOUT1+	
8	TXOUT1-	
9	TXOUT0+	
10	TXOUT0-	
11	GND	
12	TxD	CMOS 5 V (Low: Max. 0.1 V, High: Min. 4.4 V)
13	RxD	CMOS 5 V (Low: Max. 0.8 V, High: Min. 2.0 V)
14	DC IN	6 to 12 V DC
15	DC IN	6 to 12 V DC
16	DC IN	6 to 12 V DC
17	DC IN	6 to 12 V DC
18	DC IN	6 to 12 V DC
19	GND	
20	GND	
21	GND	
22	GND	
23	GND	
24	GND	
25	GND	
26	GND	
27	VBS OUT	
28	GND	
29	V LOCK PULSE	
30	GND	

Connector: USL00-30L-C (KEL Corp.)

## ■ 12-pin for Key Switch Control

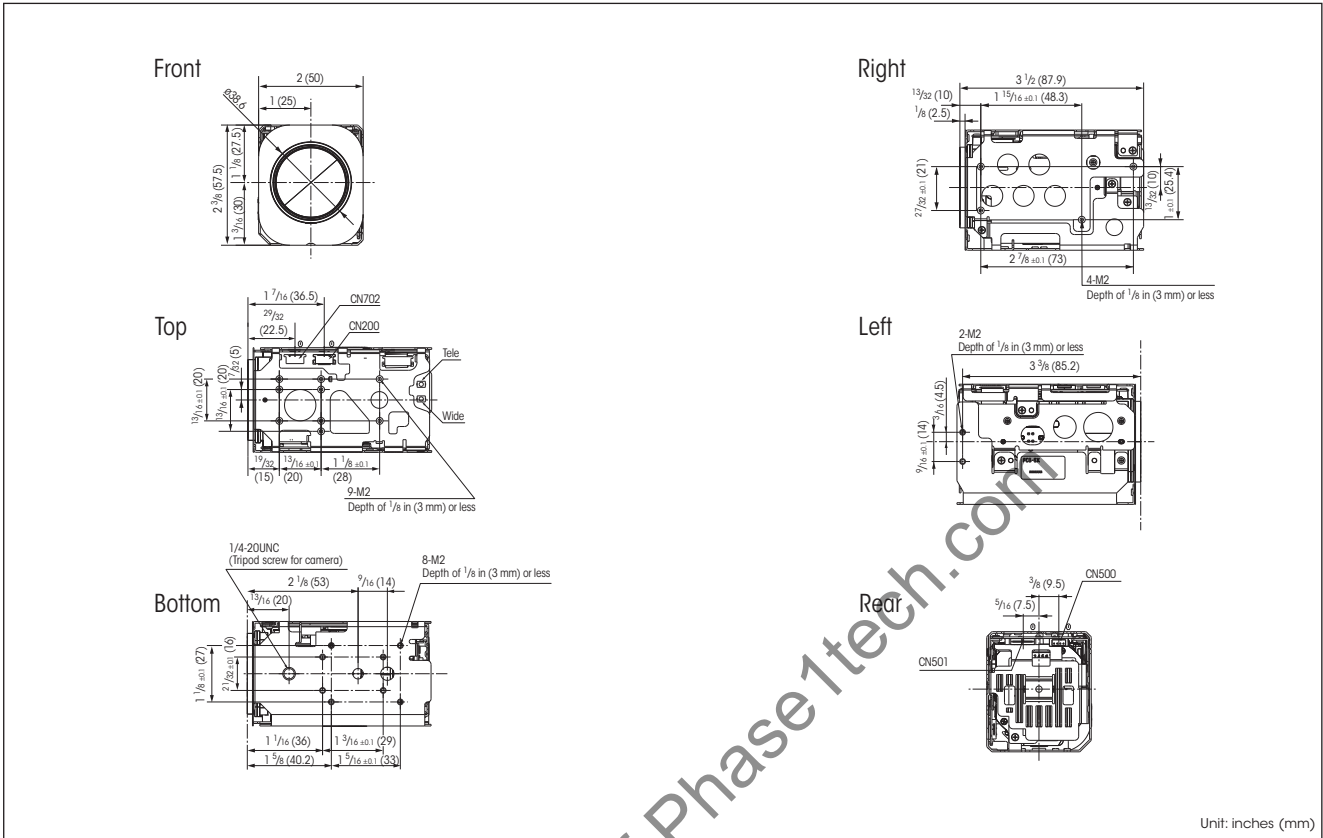
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 FCB-EX995E/FCB-EX995EP  
 FCB-EX985E/FCB-EX985EP  
 FCB-EX490E/FCB-EX490EP  
 FCB-EX48E/FCB-EX48EP

Pin No.	Name	Level
1	GND	-
2	GND	-
3	KEY_AD0	Pull up to 3.0 V by 100 kΩ
4	KEY_AD1	Pull up to 3.0 V by 100 kΩ
5	KEY_AD2	Pull up to 3.0 V by 100 kΩ
6	KEY_AD3	Pull up to 3.0 V by 100 kΩ
7	KEY_AD4	Pull up to 3.0 V by 100 kΩ
8	KEY_AD5	Pull up to 3.0 V by 100 kΩ
9	KEY_AD6	Pull up to 3.0 V by 100 kΩ
10	KEY_AD7	Pull up to 3.0 V by 100 kΩ
11	NC	-
12	Strobe	Strobe timing pulse (0 to 3.0 V)

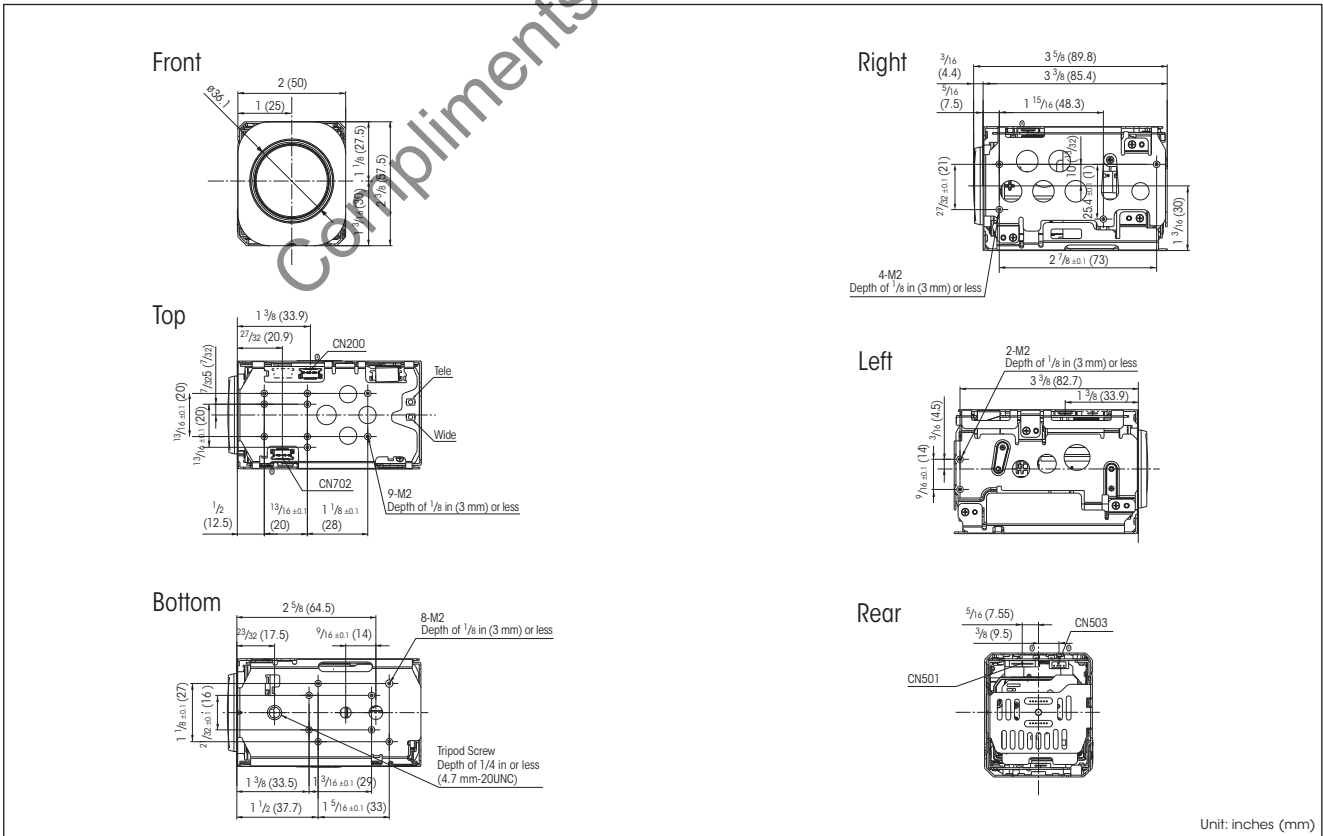
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# DIMENSIONS

## FCB-EX1020/FCB-EX1020P

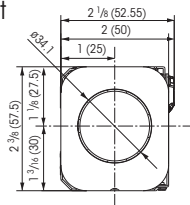


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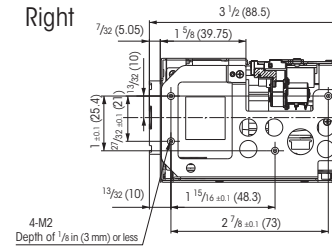


FCB-EX490E/FCB-EX490EP

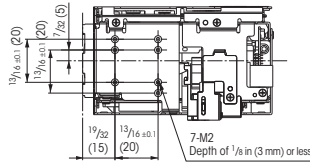
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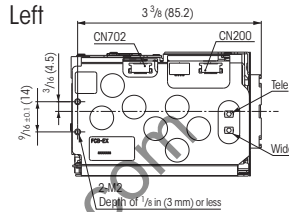
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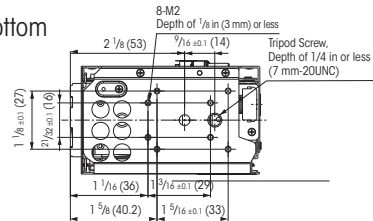
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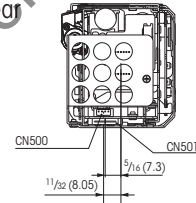
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Bottom



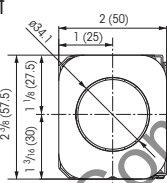
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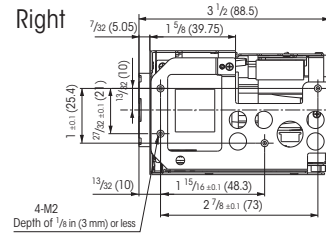
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FCB-EX48E/FCB-EX48EP

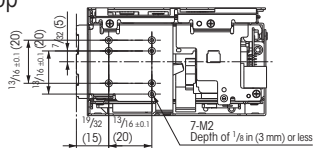
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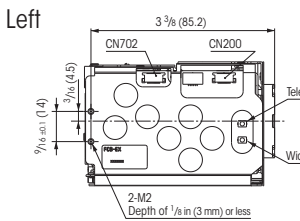
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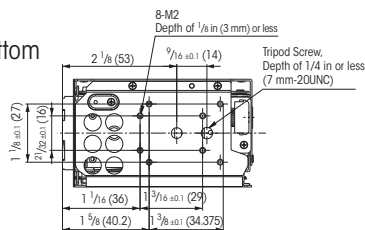
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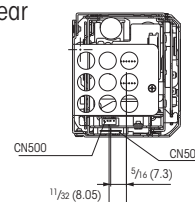
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Bottom



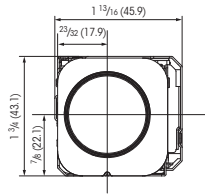
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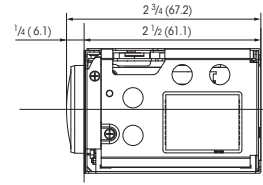
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FCB-EX20D/FCB-EX20DP

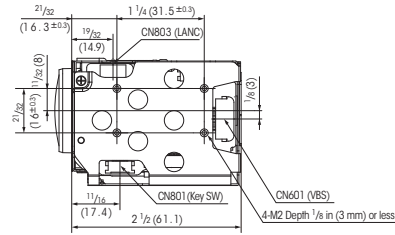
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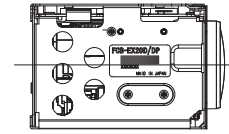
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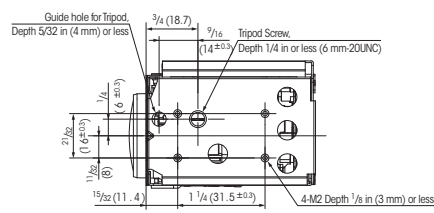
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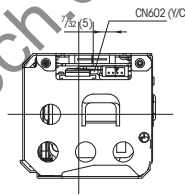
Left



Bottom



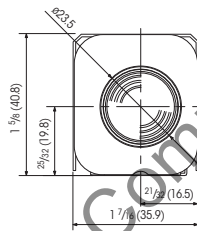
Rear



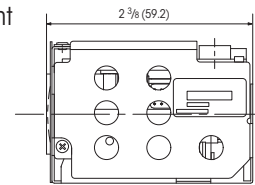
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FCB-EX11D/FCB-EX11DP

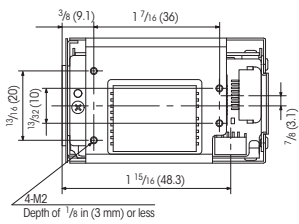
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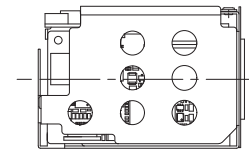
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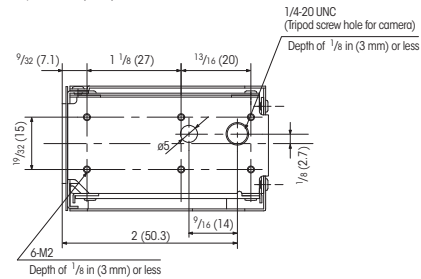
Top



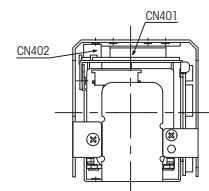
Left



Bottom



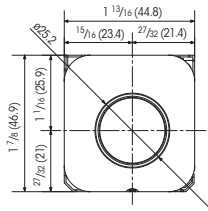
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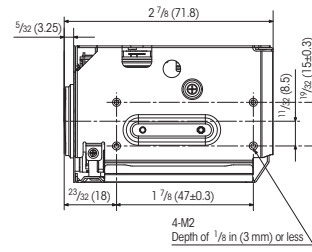
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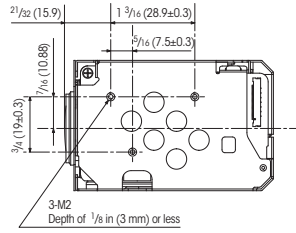
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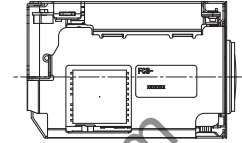
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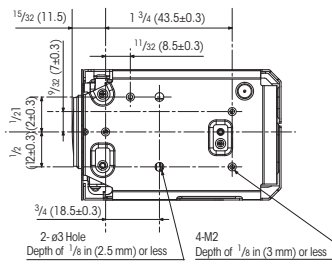
Top



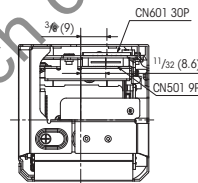
Left



Bottom



Rear



Unit: inches (mm)

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# SPECIFICATIONS

	FCB-EX1020	FCB-EX1020P	FCB-EX995E	FCB-EX995EP	FCB-EX985E	FCB-EX985EP	FCB-EX490E	FCB-EX490EP
<b>Camera</b>								
Signal systems	NTSC		PAL		NTSC		PAL	
Image sensor	1/4-type EXview HAD CCD™ (Progressive Scan)				1/4-type Super HAD CCD II™ (Interlace Scan)		1/4-type EXview HAD CCD™ (Progressive Scan)	
Effective number of pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels
Lens	36x optical zoom lens f=3.4 mm (wide) to 122.4 mm (tele) F1.6 to F4.5		28x optical zoom lens f=3.5 mm (wide) to 98.0 mm (tele) F1.35 to F3.7		18x optical zoom lens f=4.1 mm (wide) to 73.8 mm (tele) F1.4 to F3.0			
Digital zoom	12 x (432x with optical zoom)		12 x (336x with optical zoom)		12 x (216x with optical zoom)			
Angle of view (H)	57.8 degrees (wide) to 1.7 degrees (tele)		55.8 degrees (wide) to 2.1 degrees (tele)		48.0 degrees (wide) to 2.8 degrees (tele)			
Minimum object distance	10 mm (wide) to 1,500 mm (tele), *Default: 320 mm		10 mm (wide) to 1,500 mm (tele) *Default: 300 mm		10 mm (wide) to 800 mm (tele), *Default: 290 mm			
Sync system	Internal/External (V-lock)							
Minimum illumination (50IRE)	1.4 lx (F1.6, 50IRE)		0.65 lx (F1.35, 50IRE)		0.25 lx (F1.35, 50IRE)		0.7 lx (F1.4, 50IRE)	
Recommended illumination	100 lx to 100,000 lx							
S/N ratio	More than 50 dB							
Video output	Analog	VBS: 1.0 Vp-p (sync negative), Y/C						
	Digital	Y/Cb/Cr 4:2:2 (comparable to ITU-R BT.656), VISCA (CMOS 5 V level)						
Camera control interface	Baud rate: 9.6 kbps, 19.2 kbps, 38.4 kbps Stop bit: 1 bit							
Electronic shutter speed	1/1 sec to 1/10,000 sec, 22 steps							
White balance	Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp (fix/auto), One-push, Manual							
Gain	Auto/Manual/Max Gain Limit (-3 dB to +28 dB, 2 dB steps)							
AE control	Auto, Manual, Priority mode (shutter priority & iris priority), Bright, EV compensation, Slow AE							
Focusing system	Auto (Sensitivity: normal, low), One-push AF, Manual, Infinity, Internal AF, Zoom Trigger AF, Focus Compensation in ICR On Mode							
EV compensation	Yes							
Backlight compensation	Yes							
Aperture control	16 steps							
Preset	6 positions							
<b>Camera Features</b>								
Wide-D (*) Auto mode	Yes				No		Yes	
Wide-D IS/PS mode	Yes				No		Yes	
Image stabilization			Yes				No	
StableZoom	Yes (43x)				Yes (33x)		No	
Digital output	Yes							
Enhanced noise reduction	Yes							
Auto ICR	Yes							
Spherical privacy zone masking	Yes							
Motion detection	Yes							
Alarm	Yes							
Slow AE response	Yes (Longer than 10 minutes)							
Picture effects	Yes (E-Flip, Nega Art, Black & White, Mirror image, Color Enhancement)							
Picture freeze	Yes							
Slow shutter	Yes							
Temperature readout	Yes							
Title display	Yes (20 characters/line, max. 11 lines)							
Camera mode display	Yes (English*/Chinese) *default							
Key switch control	Yes							
Multi-line OSD	Yes							
Flicker cancel	Yes (Auto)	-	Yes (Auto)	-	Yes (Auto)	-	Yes (Auto)	-
<b>General</b>								
Storage temperature	-4°F to 140°F (-20°C to +60°C)							
Storage humidity	20% to 95%							
Operating temperature	23°F to 140°F (-5°C to +60°C)							
Operating humidity	20% to 80%							
Power requirements	DC 6.0 V to 12.0 V							
Power consumption	2.4 W (motors active: 5.1 W)		2.6 W (motors active: 5.0 W)		2.2 W (motors active: 4.6 W)		2.4 W (motors active: 4.4 W)	
Weight	8.1 oz (230 g)		8.4 oz (238 g)		8.1 oz (230 g)			
Dimensions (W x H x D)	2 x 2 3/8 x 3 1/2 inches (50.0 x 57.5 x 87.9 mm)		2 x 2 3/8 x 3 5/8 inches (50.0 x 57.5 x 89.8 mm)		2 x 2 3/8 x 3 1/2 inches (50.0 x 57.5 x 88.5 mm)			

\* Wide dynamic range

FCB-EX48E		FCB-EX48EP		FCB-EX15E		FCB-EX15EP		FCB-EX12E		FCB-EX12EP		FCB-EX20D		FCB-EX20DP		FCB-EX11D		FCB-EX11DP	
NTSC		PAL		NTSC		PAL		NTSC		PAL		NTSC		PAL		NTSC		PAL	
1/4-type CCD (Interlace Scan)		1/4-type EXview HAD CCD™ (Progressive Scan)		1/4-type CCD (Interlace Scan)		1/3-type Super HAD CCD II™ (Interlace Scan)		1/4-type EXview HAD CCD™ (Interlace Scan)											
380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels	380,000 pixels	440,000 pixels
18x optical zoom lens f=4.1 mm (wide) to 73.8 mm (tele) F1.4 to F3.0		12x optical zoom f=3.7 mm (wide) to 44.4 mm (tele) F1.6 to F2.5		12x optical zoom f=3.7 mm (wide) to 44.4 mm (tele) F1.6 to F2.5		10x optical zoom lens f = 5.1 mm (wide) to 51.0 mm (tele) F1.8 to F2.1		10x optical zoom lens f = 4.2 mm (wide) to 42.0 mm (tele) F1.8 to F2.9											
12 x (216x with optical zoom)		12x (144x with optical zoom)		12x (144x with optical zoom)		12x (120x with optical zoom)		12x (120x with optical zoom)											
48.0 degrees (wide) to 2.8 degrees (tele)		53.6° (wide end) to 4.6° (tele end)		53.6° (wide end) to 4.6° (tele end)		52.0 degrees (wide) to 5.4 degrees (tele)		46.0 degrees (wide) to 4.6 degrees (tele)											
10 mm (wide) to 800 mm (tele), *Default: 290 mm		300 mm (wide) ~ 1,000 mm (tele)		300 mm (wide) ~ 1,000 mm (tele)		10 mm (wide) to 800 mm (tele), *Default: 150 mm		10 mm (wide) to 800 mm (tele), *Default: 200 mm											
Internal / External (V-lock)																			
0.4 lx (F1.4, 50IRE)				0.95 lx (F1.6, ICR off) 0.02 lx (F1.6, ICR on)				0.6 lx (F1.6, ICR off) 0.01 lx (F1.6, ICR on)				1/60 s, 1/50 s mode: 0.25 lx (typical) (F1.8, 50IRE) 1/4 s, 1/3 s mode: 0.015 lx (typical) (F1.8, 50IRE) 1/4 s, 1/3 s mode & ICR On: 0.0004 lx (typical) (F1.8, 50IRE)				1.0 lx (typical) (F1.8, 50IRE)			
100 lx to 100,000 lx More than 50 dB																			
VBS: 1.0 Vp-p (sync negative), Y/C				VBS: 1.0 Vp-p (sync negative)				VBS: 1.0 Vp-p (sync negative), Y/C				VBS: 1.0 Vp-p (sync negative), Y/C							
Y/Cb/Cr 4:2:2 (comparable to ITU-R BT656)				Y/Cb/Cr 4:2:2 via LVDS (comparable to ITU-R BT656)															
VISCA (CMOS 5 V level) Baud rate: 9.6 kbps, 19.2 kbps, 38.4 kbps Stop bit: 1 bit																			
1/1 sec to 1/10,000 sec, 22 steps																			
Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp (fix/auto), One-push, Manual				Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto), One-push, Manual				Auto, ATW, Indoor, Outdoor, One-push, Manual				Auto, ATW, Indoor, Outdoor, One-push, Manual							
				Auto/Manual (-3 dB to +28 dB, +2 dB step/total 16 steps) Max. Gain Limit (+6 dB to +28 dB, +2 dB step/total 12 steps)				Auto/Manual (-3 dB to +28 dB, 2 dB steps)				Auto/Manual (-3 dB to +28 dB, 2 dB steps)							
Auto, Manual, Priority mode (shutter priority & iris priority), Bright. EV compensation, Slow AE																			
Auto (Sensitivity: normal, low), One-push AF, Manual, Infinity, Interval AF, Zoom Trigger AF, Focus Compensation in ICR On Mode				Auto (Sensitivity: normal, low), One-push AF, Manual, Infinity Interval AF, Zoom Trigger AF, Focus compensation in ICR on				Auto (Sensitivity: normal, low), One-push AF, Manual, Infinity, Interval AF, Zoom Trigger AF				Auto (Sensitivity: normal, low), One-push AF, Manual, Infinity, Interval AF, Zoom Trigger AF							
Yes																			
Yes																			
16 steps																			
6 positions																			
No				Yes				No											
No				Yes				No											
No																			
No																			
Yes				Yes								No							
Yes				Yes								No							
No				Yes								No							
				Yes								No							
Yes (Longer than 10 minutes)				Yes (Longer than 10 minutes)								Yes (Up to 32 times)							
Yes (E-Flip, Nega Art, Black & White, Mirror image, Color Enhancement)				Yes (E-Flip, Nega Art, Black & White, Mirror image, Color enhancement)								Yes (E-Flip, Nega Art, Black & White, Mirror, Image)							
Yes																			
Yes																			
Yes				Yes								No							
Yes (20 characters/line, max. 11 lines)																			
Yes (English*/Chinese) *default																			
Yes				No				Yes				No							
Yes																			
Yes (Auto)		-		Yes (Auto)		-		Yes (Auto)		-		Yes (Auto)		-		Yes (Auto)		-	
-4°F to 140°F (-20°C to +60°C)																			
20% to 95%																			
23°F to 140°F (-5°C to +60°C)																32°F to 122°F (0°C to +50°C)			
20% to 80%																			
DC 6.0 V to 12.0 V				6.0 V to 12.0 V DC				DC 6.0 V to 12.0 V				DC 6.0 V to 12.0 V							
2.0 W (motors active: 3.1 W)				2.4 W (zoom/focus inactive) / 3.6 W (zoom/focus active)				1.9 W (zoom/focus inactive) / 3.2 W (zoom/focus active)				2.8 W (motors active: 6.5 W)				1.9 W (motors active: 2.8 W)			
8.1 oz (230 g)				5.3 oz (150 g)				5 oz (140 g)				3.3 oz (95 g)							
2 x 2 3/8 x 3 1/2 inches (50.0 x 57.5 x 88.5 mm)				1 13/16 x 1 7/8 x 2 7/8 inches (44.8 x 46.9 x 71.8 mm)				1 13/16 x 1 3/4 x 2 3/4 inches (45.9 x 43.1 x 67.2 mm)				1 7/16 x 1 5/8 x 2 3/8 inches (35.9 x 40.8 x 59.2 mm)							

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