



OpreX™ Field Instruments

FIELD EYE II

Weather-proof Surveillance Cameras

Weather-proof Surveillance Cameras

Combining high reliable technologies
Surveillance camera for severe
environmental needs



FIELD EYE II

Compact and robust

- ◆ Adopting the SUS316L stainless steel exterior with excellent strength and corrosion resistance. Industry's top class compact sizes for the rotating radius space. The cast metal housing free of welding points is electrolytically polished for the surface finish, improving durability and corrosion resistance.
- ◆ The system is robust, compact and highly environmentally resistant, enabling 24-hour, high-quality video surveillance of plant facilities and other harsh sites in a variety of industries.
- ◆ The system can be installed in ambient temperatures from -40° C to +60° C, enabling its use in a wide range of locations.
- ◆ The system is equipped with wipers and defrosters, enabling its use in bad weather such as torrential rains and heavy snowfalls.

High-performance camera with high image quality, high sensitivity and high magnification

- ◆ The camera is equipped with a 2-megapixel 1/2.8-inch high-sensitivity CMOS sensor with approximately 2.13 megapixels.
- ◆ The camera is equipped with a 30x optical and 12x digital zoom lens, enabling surveillance from a distance.
- ◆ The minimum object illumination color of 0.0013 Lux is sufficient to see even in starlight. In addition, together with the night surveillance mode, the camera provides reliable surveillance even in low-light environments.



High
Functionality



Excellent
Construction

**High
Reliability**



Worldwide
Approvals



High
Performance

Compatible with multiple standards

- ◆ Explosion-proof standard IECEx, ATEX and Japanese explosion-proof certification. The system has obtained Ex db IIC T5 Gb, which is for being gas and vapor explosion-proof. FC33E has also obtained Ex tb IIC T100°C Db for being dust explosion-proof.
- ◆ Dust-proof and water-proof performance conforms to IP66, enabling installation even in locations exposed to rain and wind.
- ◆ Complies with ONVIF® Profile S, enabling connection to other manufacturers' VMS (video management software).

High performance

- ◆ The system can be configured for Pan Operation 360° endless, Tilt Operation 180° and up to 128 preset positions, and can move to a preset position when an alarm signal is output from the equipment sensor.



Yokogawa's surveillance cameras, combining the reliability technology of field devices, are suitable for all installation environments.

High Reliability

Full HD IP type



Pan Tilt Zoom camera

Explosion-proof type

Outdoor type

FC33E

FC33U

The system is equipped with a high quality, high magnification camera with an effective pixel count of approximately 2.13 million pixels, a resolution of 1920 x 1080 and a zoom factor of 30x optical and 12x digital. Highly sensitive camera capable of Pan Operation 360° endless and Tilt Operation 180° for continuous day and night surveillance.

Specification

Image sensor	1/2.8" CMOS
Resolution	Max. 1920 x 1080
Video compression method	H.264 or MJPEG
Frame rate	Max. 60 fps
Minimum illumination	Color 0.0013 lux (1/4 sec, 1/3 sec, 50%) B/W 0.0008 lux (1/4 sec, 1/3 sec, 30%)
Zoom	30x optical × 12x electronic
Lens	f:4.3mm-129mm, F1.6-4.7
Zoom and focus adjustment	Motorized zoom and auto focus adjustment
Angle of View	63.7° (wide-angle) to 2.3° (tele-angle)
Swing range	Pan Operation 360° endless, Tilt Operation 180°
Turning speed	Max. 40°/sec
Preset point	128 points
Wiper	Option, specify at time of order
Heater	Standard equipment
Defroster	Standard equipment
Cable	Composite cable and power cable 5m each included
LAN communication	10BASE-T/100BASE-TX
Supported OS	Windows 10
Supported Browsers	Microsoft Edge Chromium version (Internet Explorer mode)

Access control	admin/user (password authentication)
Communication specifications	ONVIF® (Profile S)
Supported protocols	IPv4, TCP, UDP, HTTP, HTTPS, RTSP, RTP, NTP, SNMP
Number of streams	Max. 2 streams
Maximum number of connections	Max. 14 simultaneous sessions
Relay output	1 contact (48 V DC, 100 mA)
Power supply	100 V AC to 240 V AC, 50/60 Hz
Maximum power consumption	Approx. 60 VA
Installation style	Upright /Inverted (specified at time of order)
Explosion-proof standard (FC33E only)	Explosion-proof construction (Japan/ATEX/IECEX) Ex db IIC T5 Gb (gas) Ex tb IIIC T100° C Db (dust)
Dust-proof and water-proof performance	IP66
Case material	Stainless steel SUS 316L
Operating temperature	-40° C to +60° C
Dimensions	303 (W) x 294 (H) x 185 (D) mm
Mass	20 kg (excluding cables and additional specifications)
Option	Wiper, Hood, Shade, Name tag plate of stainless steel, Attached cable changed to 10m

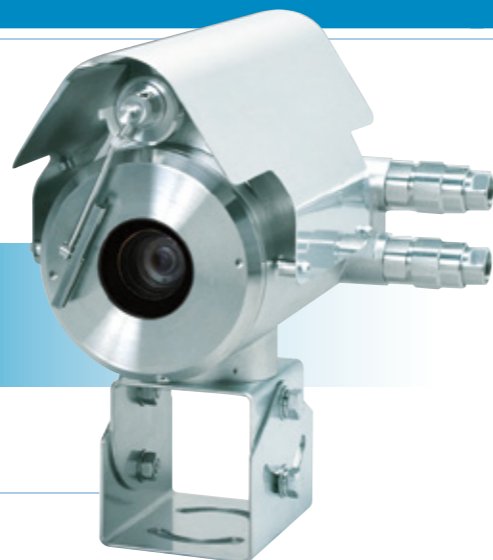
Model Code List

Model	Suffix Code	Option Code	Description
FC33E			Explosion-proof pan tilt zoom camera
FC33U			Weather-proof pan tilt zoom camera
Camera type	-D		Full HD
			High-sensitivity 1/2.8" CMOS, 1920 x 1080 pixels, 30x optical zoom Power cable and composite cable, each 5 m long
Wiper	W		With wiper
	N		Without wiper
Control	E		10BASE-T, 100BASE-TX (Ethernet)
Cable connection (explosion-proof certification) (Note 1)	0		G(PF) 1/2 female thread (Japanese explosion-proof certification)
	1		M20 female thread (ATEX/IECEX certification)
Installation	S		Upright
	U		Inverted
Additional Specification code	/T		Name tag plate of stainless steel Up to 15 letters (alpha-numeral combination code) can be specified
	/SHD		Upright hood
	/UHD		Inverted hood
	/SD		Shade(Only Upright Installation)
	/L10		Power cable and composite cable: 10m each
	/ADP		Mounting adapter plate for the previous FC13

Note 1. For the cable port code of FC33U, specify 0 for Japan and 1 for overseas.

High Reliability

Full HD IP type



Fixed camera

Explosion-proof type

Outdoor type

FC34E

FC34U

The FC34 HD IP fixed camera is a high quality, high magnification camera with an effective pixel count of approximately 2.13 megapixels, a resolution of 1920 x 1080, and a zoom factor of 30x optical and 12x digital. This product is highly sensitive for continuous day and night monitoring and can be connected to IP networks.

Specification

Image sensor	1/2.8" CMOS
Resolution	Max. 1920 x 1080
Video compression method	H.264 or MJPEG
Frame rate	Max. 60 fps
Minimum illumination	Color 0.0013 lux (1/4 sec, 1/3 sec, 50%) B/W 0.0008 lux (1/4 sec, 1/3 sec, 30%)
Zoom Magnification	30x optical x 12x electronic
Lens	f: 4.3mm - 129mm, F1.6 - 4.7
Zoom and focus adjustment	Motorized zoom and auto focus adjustment
Angle of View	63.7° (wide-angle) to 2.3° (tele-angle)
Preset point	128 points
Wiper	Option, specify at time of order
Heater	Standard equipment
Defroster	Standard equipment
Cable	Composite cable and power cable 5m each included (Each cable can be changed to 10 m when ordered)
LAN communication	10BASE-T/100BASE-TX
Supported OS	Windows 10
Supported Browsers	Microsoft Edge Chromium version (Internet Explorer mode)

Access control	admin/user (password authentication)
Communication specifications	ONVIF® (Profile S)
Supported protocols	IPv4, TCP, UDP, HTTP, HTTPS, RTSP, RTP, NTP, SNMP
Number of streams	Max. 2 streams
Maximum number of connections	Max. 14 simultaneous sessions
Relay output	1 contact (48 V DC, 100 mA)
Power supply	100 V AC to 240 V AC, 50/60 Hz
Maximum power consumption	Approx. 60 VA
Installation style	Upright /Inverted (specified at time of order)
Explosion-proof standard (FC34E only)	Explosion-proof construction (Japan/ATEX/IECEX) Ex db IIC T5 Gb (gas)
Dust-proof and water-proof performance	IP66
Case material	Stainless steel SUS 316L
Operating temperature	-40° C to +60° C
Dimensions	182 (W) x 199 (H) x 274 (D) mm
Weight	10 kg or less (Excluding cables, cable glands, wipers, hoods, and shades)
Option	Wiper, Mount base to attach the main body, Hood and Shade, Name tag plate of stainless steel, Attached cable changed to 10m

Model Code List

Model	Suffix Code	Option Code	Description
FC34E			Explosion-proof Fixed Type CCTV Camera
FC34U			Outdoor Fixed Type CCTV Camera
Camera type	-D		Full HD High-sensitivity 1/2.8" CMOS, 1920 x 1080 pixels, 30x optical zoom Power cable and composite cable, each 5 m long
Wiper	W		With wiper
	N		Without wiper
Control	E		10BASE-T, 100BASE-TX (Ethernet)
Cable connection (Note 1)	0		G(PF) 1/2 female thread (Japanese explosion-proof certification)
	1		M20 female thread (ATEX/IECEX certification)
Installation	S		Upright
	U		Inverted:Image upside down for upright image.
Cable gland (Note 2)	EG2		Explosion-proof packing adapter 2 pieces and Sealing plugs of 2. (Female thread G1/2, for an explosion protection in Japan)
	EM2		Explosion-proof packing adapter 2 pieces and Sealing plugs of 2. (Female thread M20x1.5, for ATEX explosion protection overseas)
	UG2		Water-proof gland with union 2 pieces, female thread G1/2 (for Japan)
	UM2		Water-proof gland with union 2 pieces, female thread M20X1.5 (for overseas)
Additional Specification	/A		Mount base to attach the main body
	/T		Name tag plate of stainless steel Up to 15 letters (alpha-numeral combination code) can be specified
	/SHD		Upright hood and shade
	/UHD		Inverted hood and shade
	/L10		Power cable and composite cable: 10m each

Note 1. For the cable connection port of FC34E/U, specify 0 for Japan and 1 for overseas.

Note 2. For FC34E, specify EG2 when the cable connection port is 0 and EM2 when the cable connection port is 1; for FC34U, specify UG2 when the cable connection port is 0 and UM2 when the cable connection port is 1.

High Reliability

Full HD IP type Dedicated option



Explosion-proof Junction Box

Junction Box to Optical Fiber

Junction Box to LAN cable extension

JB-FXA

JB-TXA

The explosion-proof junction box is installed at the contact point of the composite and fiber-optic cables supplied with the full HD IP camera. When "-FX" is selected in the Suffix Code of the User Interface, the IP network medium can be converted from 10/100BASE-TX (RJ-45) to 100BASE-FX (fiber optic).

Specification

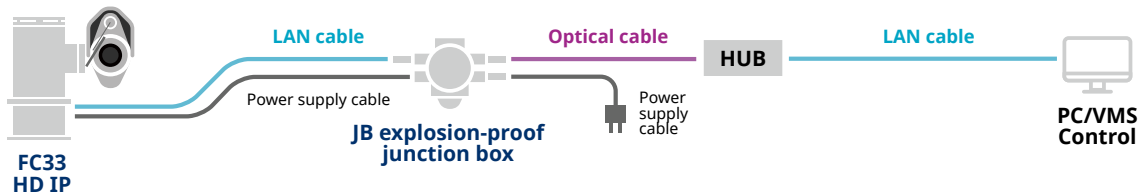
FieldEye interface	Port for FC33E/FC34E Full HD IP only		
USER interface*1	Optical interface (JB-FXA)	Compliant Standards	IEEE 802.3u 100BASE-FX
		Connector	SC connector (2 Core) x 1
		Transmission speed	10 Mbps/100 Mbps
		Center wavelength	1310 nm
	LAN interface (JB-TXA)	Optical fiber specifications	9/125 μm Single mode
		Connector	RJ45 x 1
		Transmission speed	10BASE-T/100BASE-TX
Power supply terminal	100 VAC to 240 VAC, 50/60 Hz With internal relay contact N, O contact x 1 (AC/DC 250V)		
Explosion-proof standard	Explosion-proof construction(Japan/ATEX/IECEX) Ex db IIC T5 Gb (gas)		
Dust-proof and water-proof performance	IP66		
Case material	Stainless steel SUS 316L		
Finish	Electrolytic polishing		
Operating temperature	-40° C to +60° C		
Dimensions	180 (W) x 240 (H) x 185 (D) mm		
Mass	10 kg or less (excluding cable gland and sealing plug)		
Option	Special tool, shade, Side cover, mounting bracket, Name tag plate of stainless steel		

*1 When ordering the system, select either Optical interface or LAN interface.

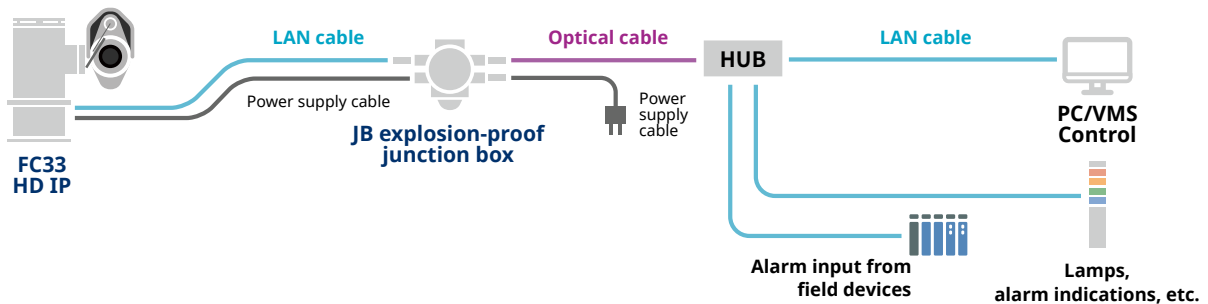
Model Code List

Model	Suffix Code	Option Code	Description
JB			Explosion-proof Junction Box
User Interface	-FX		100BASE-FX (SC connector x2)
	-TX		10/100BASE-TX (RJ45 x1)
Connecting equipment	A		FieldEye II (FC33E/FC34E HD IP)
Explosion-proof		0	Japan certification
		1	ATEX/IECEX Certification
Cable glands		GE2	Set of (G1/2 type) Cable Glands of 2 and Sealing plugs of 2 (Japan only)
		GE3	Set of (G1/2 type) Cable Glands of 3 and Sealing plugs of 1 (Japan only)
		GE4	Set of (G1/2 type) Cable Glands of 4 and Sealing plugs of 0 (Japan only)
		ME2	Set of (M20 type) Cable Glands (ATEX/IECEX) of 2 and Sealing plugs of 2
		ME3	Set of (M20 type) Cable Glands (ATEX/IECEX) of 3 and Sealing plugs of 1
		ME4	Set of (M20 type) Cable Glands (ATEX/IECEX) of 4 and Sealing plugs of 0
	NNN		No cable gland, no sealing plug
Additional Specification		/T	Name tag plate of stainless steel Up to 15 letters (alpha-numeral combination code) can be specified
		/CT	Top lid-Opener for JB
		/SD	Shade
		/SH	Side cover
		/BR	Mounting bracket

01 Surveillance with a PC (VMS)



02 Normal surveillance and interfacing with field devices



* The above configurations omit peripheral devices such as optical media converters for the sake of simplicity

OpreX™ Through the comprehensive OpreX portfolio of products, services, and solutions, Yokogawa enables operational excellence across the enterprise.

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