

# KBN and KBE Series Prepackaged Cameras

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Invented for life



- ▶ Camera and lens pre-wired into a Bosch housing that includes a feed-through mount and 1.5 m (5 ft) of cabling (plug-and-play design)
- ▶ Choice of camera model: IP or Analog. Includes up to 2 MP/HD 1080p, general purpose or Day/Night; with varifocal lens options
- ▶ Flexible transmission modes: IP, coax, fiber and unshielded twisted pair (UTP)
- ▶ IP models offer quad-streaming of multiple H.264 streams and local storage for flexible recording.
- ▶ ONVIF conformant

The KBN and KBE Series Prepackaged Cameras are complete surveillance systems that are quick and easy to install thanks to their plug-and-play design. Each system includes a factory-installed camera (from Bosch's signature line of Dinion HD, DinionXF, or Dinion 2X models), a varifocal lens (with adjusted back-focus), a coax cable (for analog cameras) or Ethernet cable (for IP cameras), and a power cable (1.5 m or 5 ft) pre-wired into the housing. Outdoor housings include IP66 rating.

**EFFECTIVE 20 October 2013:** Some lenses are discontinued. Lens substitutions are as follows:

- LTC 3364/50 is replaced by LVF-4000C-D2812.
- LTC 3664/50 is replaced by LVF-5000C-D2811.

Please refer to the datasheets of the new lenses for more details.

## System overview

Model No.	Lens	Mount	Description
LTC 0455/21			COLOR 1/3 in. HIGH RESOLUTION, 24 VAC, 60 Hz, NTSC

KBN-455V28-20	LTC 3364/50	LTC 9215/00S	Indoor, 2.8-10 mm lens
KBE-455V28-20	LTC 3364/50	LTC 9215/00	Outdoor, 2.8-10 mm lens
KBN-455V55-20	LTC 3374/50	LTC 9215/00S	Indoor, 5-50 mm lens
KBE-455V55-20	LTC 3374/50	LTC 9215/00	Outdoor, 5-50 mm lens

**LTC 0485/21**  
COLOR 1/3 in. HIGH RESOLUTION, HIGH SENSITIVITY,  
24 VAC, 60 Hz, NTSC

KBN-485V28-20	LTC 3364/50	LTC 9215/00S	Indoor, 2.8-10 mm lens
KBE-485V28-20	LTC 3364/50	LTC 9215/00	Outdoor, 2.8-10 mm lens

KBN-485V55-20	LTC 3374/50	LTC 9215/00S	Indoor, 5-50 mm lens
KBE-485V55-20	LTC 3374/50	LTC 9215/00	Outdoor, 5-50 mm lens

**COLOR 1/2 in. HIGH RESOLUTION, HIGH SENSITIVITY,  
24 VAC, 60 Hz, NTSC  
LTC 0610/21**

KBE-610V75-20	LTC 3274/41	LTC 9215/00	Outdoor, 7.5-75 mm lens
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**LTC 0498/21  
DAY/NIGHT 1/3 in. HIGH RESOLUTION,  
24 VAC, 60 Hz, NTSC**

KBN-498V28-20	LTC 3664/40	LTC 9215/00	Indoor, 2.8-10 mm lens
KBE-498V28-20	LTC 3664/40	LTC 9215/00	Outdoor, 2.8-10 mm lens
KBE-498V28-20F	LTC 3664/40	LTC 9215/00	Outdoor, 2.8-10 mm lens, Fiber Optic
KBE-498V28-20U	LTC 3664/40	LTC 9215/00	Outdoor, 2.8-10 mm lens, UTP
KBN-498V75-20	LTC 3674/20	LTC 9215/00	Indoor, 7.5-50 mm lens
KBE-498V75-20	LTC 3674/20	LTC 9215/00	Outdoor, 7.5-50 mm lens
KBE-498V75-20F	LTC 3674/20	LTC 9215/00	Outdoor, 7.5-50 mm lens, Fiber Optic
KBE-498V75-20U	LTC 3674/20	LTC 9215/00	Outdoor, 7.5-50 mm lens, UTP

**LTC 0630/21  
DAY/NIGHT 1/2 in. HIGH RESOLUTION,  
24 VAC, 60 Hz, NTSC**

KBE-630V41-20	LTC 3764/20	LTC 9215/00	Outdoor, 4-12 mm lens
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**NBC-455-21P / NBC-455-22P  
IP COLOR 1/3 in. HIGH RESOLUTION,  
24 VAC, 60 Hz, NTSC, MicroSD slot (card not included), H.264**

KBN-455V28-21N	LTC 3364/50	LTC 9215/00S	Indoor, 2.8-10 mm lens
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KBN-455V28-21NV	LTC 3364/50	LTC 9215/00S	Indoor, 2.8-10 mm lens, IVA
KBN-455V55-21N	LTC 3374/50	LTC 9215/00S	Indoor, 5-50 mm lens
KBN-455V55-21NV	LTC 3374/50	LTC 9215/00S	Indoor, 5-50 mm lens, IVA
KBE-455V28-21N	LTC 3364/50	LTC 9215/00	Outdoor, 2.8-10 mm lens
KBE-455V28-21NV	LTC 3364/50	LTC 9215/00	Outdoor, 2.8-10 mm lens, IVA
KBE-455V55-21N	LTC 3374/50	LTC 9215/00	Outdoor, 5-50 mm lens, NTSC, 24VAC,
KBE-455V55-21NV	LTC 3374/50	LTC 9215/00	Outdoor, 5-50 mm lens, IVA

**NBN-498-21P / NBN-498-22P  
IP DAY/NIGHT 1/3 in. HIGH RESOLUTION,  
24 VAC, 60 Hz, NTSC, MicroSD slot (card not included), H.264**

KBN-498V28-20N	LTC 3664/40	LTC 9215/00S	Indoor, 2.8-11 mm lens
KBN-498V28-20NV	LTC 3664/40	LTC 9215/00S	Indoor, 2.8-11 mm lens, IVA
KBN-498V75-20N	LTC 3674/20	LTC 9215/00S	Indoor, 7.5-50 mm lens
KBN-498V75-20NV	LTC 3674/20	LTC 9215/00S	Indoor, 7.5-50 mm lens, IVA
KBE-498V28-20N	LTC 3664/40	LTC 9215/00	Outdoor, 2.8-11 mm lens
KBE-498V28-20NV	LTC 3664/40	LTC 9215/00	Outdoor, 2.8-11 mm lens, IVA
KBE-498V75-20N	LTC 3674/20	LTC 9215/00	Outdoor, 7.5-50 mm lens
KBE-498V75-20NV	LTC 3674/20	LTC 9215/00	Outdoor, 7.5-50 mm lens, IVA

**NBN-832V-P / NBN-832V-IP  
HD 1080p DAY/NIGHT 1/2.7 in. HIGH DEFINITION,  
24 VAC or PoE+, 50/60 Hz, MicroSD slot (card not included), H.264**

KBE-832V18-20N	VLG-2V180 3-MP5	LTC 9215/00	Outdoor, 1.8 - 3 mm lens, 1080p HD
KBE-832V18-20NV	VLG-2V180 3-MP5	LTC 9215/00	Outdoor, 1.8 - 3 mm lens, 1080p HD, IVA
KBE-832V38-20N	VLG-3V381 3-MP3	LTC 9215/00	Outdoor, 3.8-13 mm lens, 1080p HD
KBE-832V38-20NV	VLG-3V381 3-MP3	LTC 9215/00	Outdoor, 3.8-13 mm lens, 1080p HD, IVA
KBE-832V94-20N	VLG-4V094 0-MP5	LTC 9215/00	Outdoor, 9-40 mm lens, 1080p HD
KBE-832V94-20NV	VLG-4V094 0-MP5	LTC 9215/00	Outdoor, 9-40 mm lens, 1080p HD, IVA

## Functions

### Superior image quality

The KBN and KBE Series cameras deliver unsurpassed picture performance under even the most difficult light and scene conditions.

#### 1080p HD Camera

The DinionHD camera is designed to stream a high resolution 1080p video image in true HD format (16:9). The camera now brings the unmatched Dinion Image performance to HD video. With a 1/2.7-inch CMOS HD sensor, the DinionHD Day/ Night IP camera delivers outstanding image details.

#### Standard Definition Camera

The 20-bit digital video processing in the Dinion 2X Day/Night camera series enhances sensitivity; the 2X Dynamic extends the dynamic range. This unique combination provides a sharper, more detailed image with outstanding accuracy in color reproduction even under harsh light conditions.

### Network-based control and configuration

Dinion HD and IP network cameras are designed to ensure the highest possible image quality at all times, providing high-quality MPEG-4 video, at up to 30 images per second. Dinion HD and IP models are ONVIF conformant devices that are able to exchange live video, audio, metadata, and control information.

The cameras use H.264 (Main Profile) compression, bandwidth throttling, and multicasting capabilities to manage bandwidth and storage requirements efficiently, while delivering high image quality and resolution.

Bosch's innovative Quad-streaming feature enables the DinionHD to deliver three H.264 streams (a 1080p HD stream, a downscaled resolution stream, and a HD I-frame only stream) together with an M-JPEG stream. For Dinion IP standard definition cameras, quad streaming delivers three H.264 encoded streams (two 4CIF streams and an I-frame only stream) as well as a simultaneous M-JPEG stream.

Each HD and IP model also features the Motion+ video motion analysis system that is based on pixel change and includes object size filtering capabilities and sophisticated tamper-detection capabilities. The Intelligent Video Analysis (IVA) option, activated by a separate license, uses multilevel image analysis of pixels, texture, and object direction. The IP cameras support local recording on a microSD card. This can be used for local alarm recording or for Automatic Network Replenishment (ANR) to improve the overall reliability of video recording.

### Ease of installation and servicing

Each analog camera is equipped with Bosch's Bilinx bi-directional communication for remote programming. Bilinx uses standard video cable to transmit alarm and status messages, providing superior performance and simplified installation.

Camera packages are also available with transmitters for sending video signals over fiber optic or unshielded twisted pair (UTP) cable.

Everything about these Prepackaged Cameras, from the installer-friendly design to the wide range of options, makes them an ideal solution for every surveillance application.

## Certifications and approvals

### Electromagnetic Compatibility

#### Emission

LTC 0435 LTC 0455 LTC 0485 LTC 0610 NBN-832V-P NBN-832V-IP	EN55022 Class B, FCC Part 15 Class B
LTC 0498 LTC 0630	EN55022 Class B, FCC Part 15 Class B, EN61000-3, EN50121-4
NBC-455 NBN-498	EN55022 Class B, EN61000-3-2, EN61000-3-3, FCC Part 15

#### Immunity

LTC 0435 LTC 0455 LTC 0485 LTC 0610	EN50130-4 Alarm Systems, Part 4
LTC 0498 LTC 0630 NBN-832V-P NBN-832V-IP	EN50130-4 (CE), EN50121-4 (CE)
NBC-455 NBN-498	EN50130-4 (PoE, +12 VDC) EN55024 (24 VAC) EN50121-4

#### Safety

LTC 0435 LTC 0455	UL6500
LTC 0498	UL1950-1, CSA 22.2 No. 950-1, EN60950-1 (CE), EN61000-3-2 2000 +A2:2005, EN61000-3-3 1995 +A1:2001 +A2:2005
LTC 0485 LTC 0610	UL6500, UL CAN/CSA E60065-00
LTC 0630	UL1950-1, CSA 22.2 No. 950-1, EN60950-1 (CE), UL60950, CAN/CSA No. 60950
NBC-455 NBN-498 NBN-832V-P NBN-832V-IP	EN60950-1 UL60950-1 (2nd edition) CAN/CSA-C 22.2 No. 60950-1

#### Vibration

Most models	Camera with 500 g (1.1 lb) lens as per IEC60068-2-6 (5 m/s <sup>2</sup> , operational)
LTC 0610	Camera with 500 g (1.1 lb) lens as per IEC60068-2-27 (5 m/s <sup>2</sup> , operational)

#### Installation/configuration notes

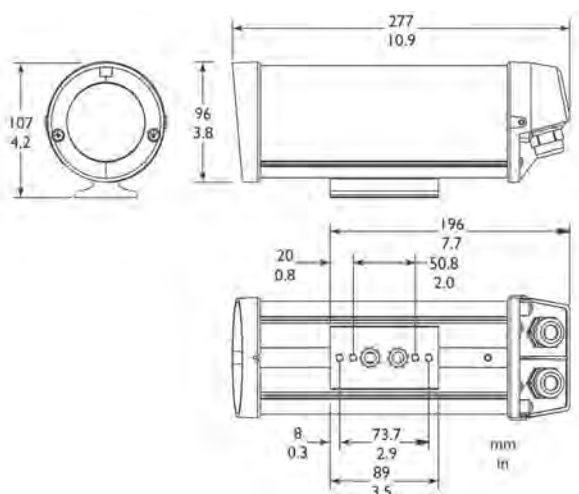


Figure 1: Indoor Models

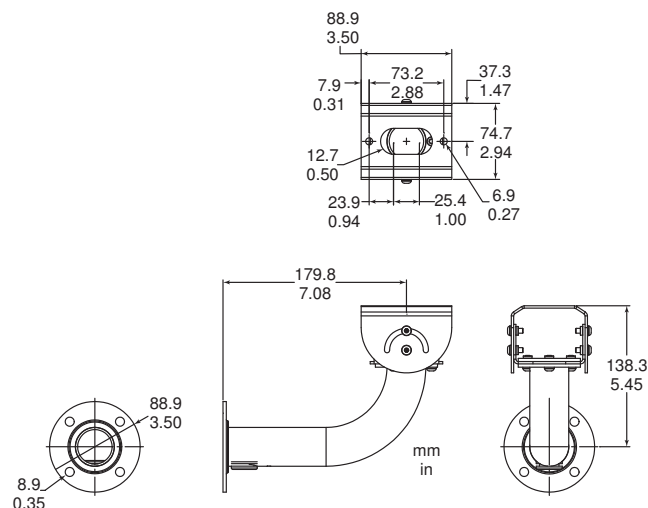


Figure 2: LTC 9215/00S Mount

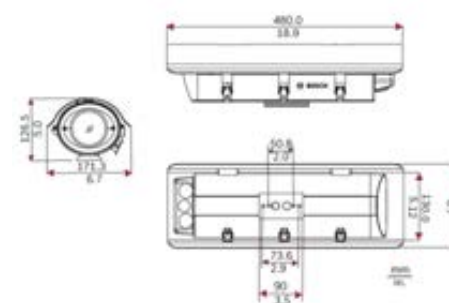


Figure 3: Outdoor Models

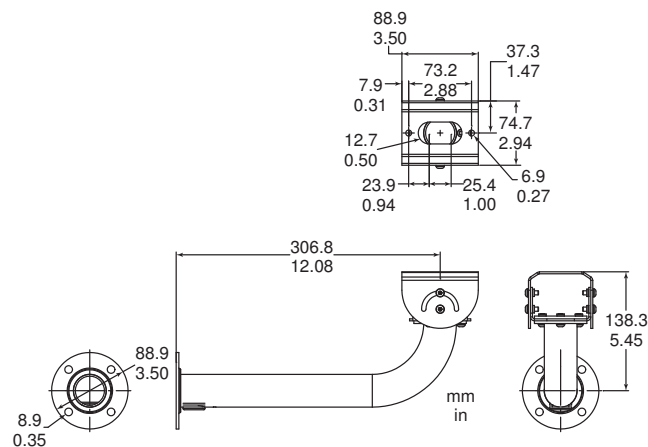


Figure 4: LTC 9215/00 Mount

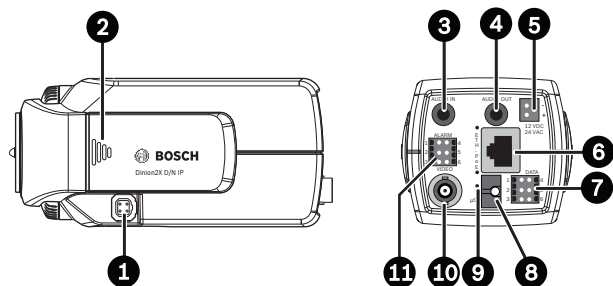


Figure 5: IP Camera Controls with MicroSD Card Slot

1	Lens connector	7	Data (RS485/422/232)
2	Control buttons	8	MicroSD card slot (card not included)
3	Audio in	9	Reset button
4	Audio out	10	BNC video output (service mode)
5	Power supply input	11	Alarm in, relay out
6	10/100 Base-T Fast Ethernet		

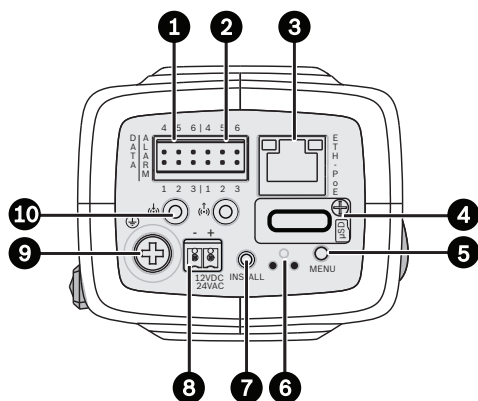


Figure 6: HD Camera Controls with MicroSD Card Slot

1	Data (RS485/422/232)	6	Reset button
2	Alarm in, relay out	7	Service video out
3	10/100 Base-T Fast Ethernet	8	Power supply input
4	MicroSD card slot	9	Earth
5	Menu button	10	Audio in / Audio out

### Technical specifications

For a detailed list of camera technical specifications, refer to the appropriate datasheet for additional information.

### Cameras

Imager	KBx-4xx: Interline transfer CCD 1/3 in. Format
	KBx-610/630: Interline transfer CCD 1/2 in. Format
	KBx-832Vxx-xxxx: 1/2.7-inch CMOS

	Active Picture Elements (H x V)	Horizontal Resolution
<b>Color</b>		
KBx-435	510 x 494	330 TVL
KBx-455	768 x 494	540 TVL
KBx-485, KBx-610	768 x 492	540 TVL
<b>Day/Night</b>		
KBx-498, KBx-630	768 x 494	540 TVL
KBx-832Vxx-xxxx	1920 x 1080	

Sensitivity (3200 K)	Minimum Illumination (30 IRE)	Scene Illumination (50 IRE)
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<b>Color</b>		
<b>KBx-455V28 Series</b>	0.40 lux (0.040 fc)	0.88 lux (0.088 fc)
NightSense	0.16 lux (0.016 fc)	0.35 lux (0.035 fc)
<b>KBx-455V55 Series</b>	0.40 lux (0.040 fc)	0.88 lux (0.088 fc)
NightSense	0.16 lux (0.016 fc)	0.35 lux (0.035 fc)
<b>KBx-485V28 Series</b>		0.8 lux (0.074 fc)
NightSense		0.0327 lux (0.003 fc)
<b>KBx-485V55 Series</b>		1.18 lux (0.110 fc)
NightSense		0.0482 lux (0.004 fc)
<b>KBx-498V28N Series</b>		0.65 lux (0.065 fc)
NightSense		0.26 lux (0.026 fc)
<b>KBx-498V75N Series</b>		0.65 lux (0.065 fc)
NightSense		0.26 lux (0.026 fc)
<b>KBx-610V41 Series</b>		0.35 lux (0.033 fc)

NightSense		0.018 lux (0.002 fc)
<b>KBx-610V75 Series</b>		0.702 lux (0.065 fc)
NightSense		0.0361 lux (0.003 fc)

**Day/Night****KBE-630V14 Series**

Color	0.13 lux (0.013 fc)	0.42 lux (0.042 fc)
Color + SensUP 10x	0.013 lux (0.0013 fc)	0.421 lux (0.0421 fc)
Monochrome	0.053 lux (0.0053 fc)	0.164 lux (0.0164 fc)
Monochrome + SensUP 10x	0.0053 lux (0.00053 fc)	0.016 lux (0.0016 fc)

**KBE-630V41 Series**

Color	0.0991 lux (0.0097 fc)	0.31 lux (0.029 fc)
Color + SensUP 10x	0.00991 lux (0.0009 fc)	0.031 lux (0.0029 fc)
Monochrome	0.0391 lux (0.0036 fc)	0.121 lux (0.0112 fc)
Monochrome + SensUP 10x	0.00391 lux (0.00036 fc)	0.0121 lux (0.00112 fc)

**KBE-832Vxx-xxxx Series**

Monochrome	0.22 lux (0.022 fc)	
Monochrome + SensUP 10x	0.05 lux (0.005 fc)	

**Connections**

Video	Prewired 1.5 m (5 ft) coax with female BNC connector
Power <sup>2</sup>	1 mm <sup>2</sup> (18 AWG), 3 conductor, 1 m (5 ft) wiring harness with flying leads (Brown/Blue-24 V, Green-Ground)
“N” Models	Ethernet: 10/100 Base-T, auto sensing half/full duplex, RJ-45

<sup>2</sup> Power supply input terminals are isolated from video output terminals.

**UTP “U” Models**

Receiver	UTP Passive Receivers up to 750 ft (NV-213A, NV-213 A-M) UTP Active Receivers(NV-652R) up to 3,000 ft
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**Fiber Optic “F” Models**

Receiver	Bosch LTC 4642/60 Fiber Receiver (requires 24 VAC)
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**IP “N” Models**

Video Standards	MPEG-4; M-JPEG Video, H.264 (ISO/IEC 14496-10)
Data Rate	9.6 Kbps – 6 Mbps constant & variable
Video Resolution	<b>Standard Resolution:</b> 704 x 576/480 (4CIF: 25/30 IPS) 352 x 288/240 (CIF: 25/30 IPS) <b>High Definition:</b> 1080p: 1920 x 1080 720p: 1280 x 720
Frame Rate (Standard Definition)	1 to 60 – H.264 1 to 30 – M-JPEG
Network Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, ICMP, HTTPs, FTP, DHCP, IGMPV2/V3, ARP, SMTP, SNMP, 802.1x, UPnP
Software Update	Flash ROM, remote programmable
Configuration	Using web browser or configuration manager
Local Storage	MicroSD card slot (card not included)

**Lenses**

Type Number	Focal Length	Iris Control Range	Iris Control
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**Non-IR Corrected Lenses**

LTC 3274/41	2.8 – 12 mm	F1.4 – 360	DC-iris
LTC 3364/50	2.8 – 10 mm	F1.4 – 360	DC-iris
LTC 3374/50	5 – 50 mm	F1.4 – 360	DC-iris

**IR Corrected Lenses**

LTC 3664/40	2.8 – 11 mm	F1.4 – 360	DC-iris
LTC 3674/20	7.5 – 50 mm	F1.4 – 360	DC-iris
LTC 3764/20	4 – 12 mm	F1.2 – 360	DC-iris
LTC 3774/30	10 – 40 mm	F1.4 – 360	DC-iris
VLG-2V1803-MP5	1.8 – 3 mm	F1.8 to close	DC-iris
VLG-3V3813-MP3	3.8 – 13 mm	F1.4 to close	DC-iris
VLG-4V0940-MP5	9 – 40 mm	F1.5 to close	DC-iris

**Power****Indoor Models**

Analog Cameras (KBN-xxxVxx-20)	12 to 28 VAC, 60 Hz, 4 W
IP-enabled Cameras KBN-xxxVxx-20N)	12 to 28 VAC, 60 Hz, 8 W (if not using Power over Ethernet)

**Outdoor Models**

Analog Cameras KBE xxxVxx-20	21 to 28 VAC, 60 Hz, 45 W
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IP-enabled Cameras KBE-xxxVxx-20N	21 to 28 VAC, 60 Hz, 45 W
IP-enabled Cameras using PoE	PoE: IEEE 802.3af compliant (camera only; housing requires 40 W)

## Mechanical

### Housing

Dimensions	See figures 1 and 2.
Weight (approx.)	Indoor model: 2.85 kg (6.28 lb) Outdoor model: 4.1 kg (9.04 lb)
Construction	Aluminum housing casing, neoprene gaskets, UV-resistant polymer end caps, and all stainless steel hardware
Finish	Gray
Window	Indoor model: 3 mm (0.12 in.) thick UV-stabilized polycarbonate Outdoor model: 3 mm (0.12 in) glass
Mounting	Four (4), 8 mm (5/16 in.) diameter fasteners (not included) are required for mounting

### Feed-through Mount

Max Load	9 kg (20 lb)
Size	30 cm (12 in.)
Weight	0.4 kg (0.9 lb)

## Environmental

### Operating Temperature

<b>Indoor Models</b> KBN Series Analog Cameras KBN Series IP Cameras	-20°C to +55°C (-4°F to +131°F) -20°C to +46°C (-4°F to +116°F)
<b>Outdoor Models</b> KBE Series Analog Cameras KBE Series IP Cameras KBE Series HD Cameras KBE Series HD Cameras, with IVA	-40°C to +50°C (-40°F to +122°F) -40°C to +46°C (-40°F to +116°F) -40°C to +55°C (-40°F to 131°F) -40°C to +50°C (-40°F to 122°F)

### Storage Temperature

KBx-455 Series KBx-485 Series KBE-610 Series	-25°C to +70°C (-13°F to +158°F)
KBx-455-Vxx-21N and 21NV Series KBx-498Vxx-20 Series KBx-498-Vxx-20N and 20NV Series KBE-630 Series	-40°C to +70°C (-40°F to +158°F)
KBE Series HD Cameras KBE Series HD Cameras, with IVA	-30°C to +70°C (-22°F to +158°F)

### Operating Humidity

KBN-455 Series KBE-455 Series KBx-498Vxx-20N Series (IP Cameras)	0% to 93% non-condensing
KBx-455 Series	5% to 93% non-condensing
KBx-455-Vxx-21N and 21NV Series KBx-485 Series KBx-498Vxx-20 Series KBx-498-Vxx-20N and 20NV Series KBE-610 Series KBE-630 Series KBE-832V Series	20% to 93% RH
Enclosure Protection	IP66, NEMA 4X

## Accessories

Heater/Blower	Included (outdoor models only)
Sunshield	Included (outdoor models only)
Wall Mount	Included
Pole Mount Adapter	LTC 9213/01 (not included)



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