DINION AN 5000 KIT

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BOSCH
Invented for life

960H | IP66 | WDR

▶ Stylish and sturdy housing (IP66; NEMA 4x)

▶ Ultra-high resolution 960H sensor

▶ Excellent extreme-light performance

▶ Bilinx for bidirectional communication

These pre-packaged camera kits are complete surveillance systems that are quick and easy to install thanks to their plug-and-play design. Each kit includes a housing with a factory-installed high-performance DINION camera and varifocal lens, plus a swivel mount.

The DINION 5000 camera combines high resolution with high dynamic range in a true day/night analog camera. The high performance 960H 1/3-inch CCD sensor with a resolution of 720TVL, the high dynamic range engine, and the advanced image processing technology combine to provide a detailed image with outstanding accuracy in color reproduction even under harsh lighting conditions. True day/night performance ensures the highest image quality possible at any time, day or night. The camera offers the best solution for demanding scene conditions.

System overview

The camera kit is supplied ready to operate – simply connect video and supply power. Six distinct pre-programmed operational modes are stored in the camera. Recall the mode that suits your application for optimized performance. The lens wizard ensures accurate back-focusing for perfectly sharp pictures at all times. For especially challenging situations where

fine tuning or special settings are required, the camera parameters can be individually set using the control buttons on the side of the camera and an Onscreen Display (OSD).

Functions

Secure and easily-installed

The sleek and sturdy housing design meets IP66 and NEMA 4X enclosure standards to protect your video surveillance equipment from adverse elements. A built-in heater and fan keep the internal temperature of the housing within the specified operating temperatures. A permanent low-power window defroster keeps the housing window clear in high humidity and icy condition. A sunshield is fitted to the top of the housing. Tamper-resistant screws for the locking clasps prevent illegitimate access to the housing contents.

Power and video cabling can be routed through external 4-pin power and BNC connectors at the rear of the housing, or through seal-tight cable glands in the foot or rear. The supplied mounting bracket has a swivel and tilt head for maximum mounting flexibility. The unique, hinged, side-opening design in the housing provides easy access to the camera/lens controls when the kit is mounted. The lens levers make it easy

to accurately adjust the camera focal length and focus. A lens wizard helps focus the lens at the maximum opening to ensure proper back-focus is maintained throughout the 24-hour cycle. No special tools or filters are required.

Six independent, pre-programmed operating modes support typical applications, but are fully programmable for individual situations.

Other features to make installation easy are a multi-language On-Screen Display (OSD) and a built-in test pattern generator that produces signals for testing.

Pre-wired
For easy connection, some kit models have the following 1.5 m (5 ft) cables pre-wired through seal-tight cable glands in the housing foot:
- a coaxial cable (terminated with a female BNC connector) from the back of the camera
- a power cable (18 AWG, 3-conductor with flying leads) from the housing PCB

Detail in extreme lighting
In harsh lighting, the difference between the brightest and the darkest parts of a scene can be extreme. To produce a clear picture in these conditions, the CCD sensor in the camera generates two images; one long exposure to resolve details in the scene's darkest areas, and one short exposure to resolve details in the scene's brightest areas. The advanced image processing technology in the camera combines these dual shutter images, mixing pixels from each exposure to produce the most detailed image possible. The superior wide dynamic range for all lighting conditions reveals details previously unseen.

Day/Night mode
The day/night mode provides enhanced night viewing by increasing the IR sensitivity. The IR filter can switch from color to monochrome automatically by either sensing the illumination level or via the alarm input. The filter can be switched manually via the alarm input, through the camera menu or via the Bilinx coaxial control interface. An internal through-the-lens IR detector enhances the monochrome mode stability, as it prevents reverting to the color mode when IR illumination is dominant. IR contrast is also measured and used to handle reflected IR light in outdoor scenes.

Bilinx technology
Bilinx is a bidirectional communication capability embedded in the video signal of this camera. Installers can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate set-up and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Ideal picture performance
There are many settings available to help fine-tune the picture performance to match your installation environment. These include:
- Smart BLC – automatically and dynamically compensates for strong backlight
- Peak White Invert – reduces glare from highlight areas
- Contrast and sharpness – enhance details in bright or misty scenes
- SensUp – sensitivity is dramatically enhanced by a factor of 10
- Default shutter – improves the motion performance in auto exposure mode
- Dynamic noise reduction – dynamically reduces noise in the picture

Privacy masking
Fifteen different privacy zones allow specific parts of a scene to be blocked. Pre-program any part of the scene to be masked.

Video Motion Detection
The built-in video motion detector allows you to select four programmable areas with sensitivity thresholds. When motion is detected, alarms can be displayed in the video signal, the output relay can be closed or an alarm message can be transmitted via Bilinx.

Typical applications:
- Entrance foyer or lobby with glare
- Outdoor perimeters
  - low light
  - IR light
- Traffic monitoring
  - highway
  - traffic intersections
  - emergency response coordination
- Tunnels
- Car parks (outdoor)
- Restricted access locations such as:
  - prisons
  - ports / freight terminals
  - military facilities
  - border control and homeland
- Casino and gambling centers

Lens options
Two 960H IR-corrected lens versions are available for the housing kits:
- One with a 2.8-12 mm varifocal lens
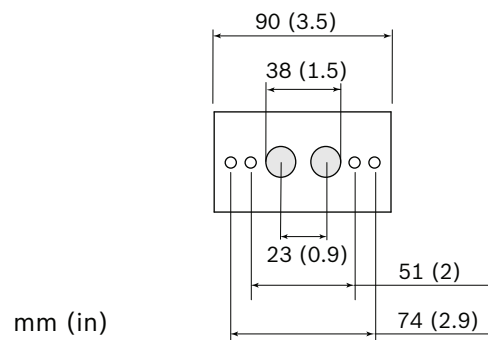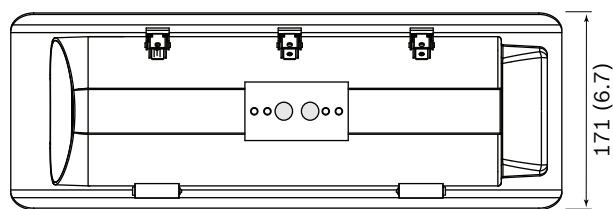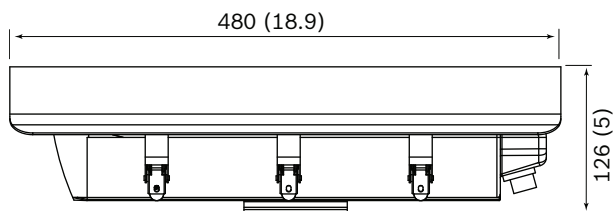- One with a 5-50 mm varifocal lens

Certifications and approvals

Standards	FCC Part15 Subpart B, Class B
	EN 55022 class B
	EN61000-3-2
	EN61000-3-3,
	EN 50130-4

	EN 50121-4
	Camera with 500 g (1.1 lbs) lens according to IEC 60068-2-6
VKN-5085V4-20; VKN-5085V10-20	EN60950-1, UL60950-1 (2ND edition), CSA C22.2 No. 60950-1-07 (2ND edition)
VKN-5085V4-50; VKN-5085V10-50	EN60950-1
Product certifications	CE, FCC, UL, CSA
Marks	CE, cULus, WEEE, PADS, RCM and China RoHS

Region	Certification
Europe	CE
USA	UL
	FCC
Canada	CSA

Installation/configuration notes

Housing dimensions

mm (in)

Mount dimensions
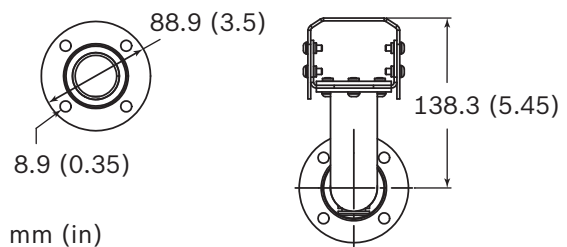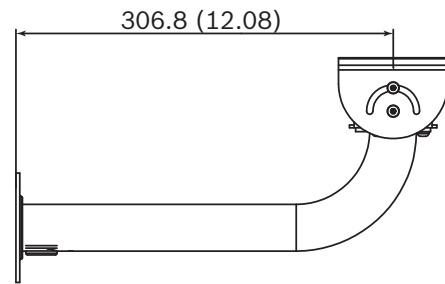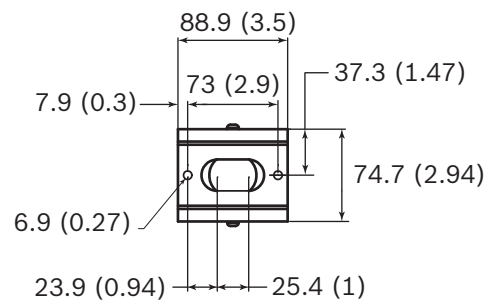
mm (in)

Parts included

	Item
1x	Housing (including built-in camera and lens, sunshield, heater and blower)
1x	Wall mount
1x	Documentation set
1x	Cable mounting package
1x	Identification labels

Technical specifications

Housing

Mechanical	
Dimensions (H x W x L) - closed and including sunshield	126.5 x 171.3 x 480 mm (5 x 6.7 x 18.9 in.)
Weight (including camera and lens)	3.9 kg (8.6 lbs)
Construction	Aluminum casing, neoprene gaskets, all stainless steel hardware, 3.3 mm (1/8 in.) thick glass window

Mechanical

Color	Gray
Locking clasps (3x)	Tamper-resistant screws provided
Camera mounting	Removable camera/lens tray, mounted with two screws
Max camera + lens size (H x W x L)	91 x 81 x 262 mm (3.6 x 3.2 x 10.3 in)
Mounting	2 x pair of tapped holes (1/4-20 thread) • inner pair: 50.8 mm (2.0 in) center spread • outer pair: 73.7 mm (2.9 in) center spread
Rear fittings (-20 models)	1x cable diameter: 3.5 to 8.0 mm (0.14 to 0.32 in) 2x cable diameter: 5.8 to 10 mm (0.23 to 0.39 in)
Rear connectors (-50 models)	1x 4-pin (power) 1x BNC (hybrid analog video)
Bottom fittings (-20 models)	2x cable diameter: 4.5 to 7.9 mm (0.18 to 0.31 in)

Power

Power input (230 VAC)	freq. 50 Hz consumption 45 W fuse 2 A
Power input (24 VAC)	freq. 60 Hz consumption 45 W fuse 4 A

Environmental

Operating temperature	-40°C to +50°C (-40°F to 122°F) for continuous operation; -34 °C to +74 °C (-30 °F to +165 °F) according to NEMA TS 2-2003 (R2008), para 2.1.5.1 using fig. 2.1 test profile
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating humidity	20% to 93% RH
Storage humidity	up to 98% RH
Enclosure protection	IP66, NEMA 4X

Camera

Sensor

Type	960H, 1/3" DS CCD, sensor resolution 720TVL, WDR dual shutter
System	PAL or NTSC

Sensor

Total pixels (H x V)	1020 x 596 (PAL) 1020 x 508 (NTSC)
Effective pixels (H x V)	976 x 582 (PAL) 976 x 494 (NTSC)

Video performance

Sensitivity – (3200K, reflectivity 89%, F1.2)

	Full video (100 IRE)	Usable picture (50 IRE)	Usable picture (30 IRE)
Color	0.5 lx (0.0465 fc)	0.09 lx (0.00837 fc)	0.04 lx (0.00372 fc)
Color + SensUp 10x	0.05 lx (0.00465 fc)	0.009 lx (0.000837 fc)	0.004 l (0.000372 fc)
Monochrome	0.2 lx (0.0186 fc)	0.04 lx (0.00372 fc)	0.02 lx (0.00186 fc)
Monochrome SensUp 10x	0.02 lx (0.00186 fc)	0.004 lx (0.000372 fc)	0.002 lx (0.000186 fc)

Video functions

Signal-to-Noise Ratio	>54 dB
Video Output	Composite video 1 Vpp, 75 ohm
Synchronization	Internal, Line Lock
Shutter	Auto (1/50 [1/60] to 1/100000) selectable, fixed, flickerless, default
Sensitivity Up	Adjustable from Off up to 10x
Day/Night	Color, Mono, Auto
Dynamic Engine	XF-Dynamic, HDR, Smart BLC
Dynamic Range	94 dB (WDR)
Dynamic Noise Reduction	2D-NR, 3D-NR
AGC	AGC On or Off (0 – 40 dB) selectable
Smart BLC	On/Off
Peak White Invert	On/Off
White Balance	ATW Indoor, ATW Outdoor, ATW hold and Manual
Contrast Enhancement	Low, Medium, High
Sharpness	Sharpness enhancement level selectable
Alarm Output	VMD or Bilinx
Alarm Input (TTL)	Profile switching, +3.3 V nominal, +40 VDC max.

Video functions

Alarm Output Relay	30 VAC or +40 VDC, Max 0.5 A continuous, 10 VA
Cable Compensation	Up to 1000 m (3000 ft) coax without external amplifiers (automatic set-up in combination with Bilinx coaxial communication)
Camera ID	17 character editable string, position selectable
Test Pattern Generator	Color bar, Raster, Impulse, Cross Impulse, Cross hatch,
Modes	6 preset programmable modes
Remote Control	Bilinx coaxial bi-directional communication
Video Motion Detection	4 areas, fully programmable
Privacy Masking	15 independent areas, fully programmable
E-Zoom	Up to 16x
Digital Image Stabilizer	On/Off
Controls	OSD with soft-key operation
OSD Language	English, French, German, Spanish, Portuguese, Simplified Chinese, Russian

Lens

	LVF-5000C-D2811 Varifocal Lens	LVF-5000C-D0550 Varifocal Lens
Focal length	2.8 – 11 mm	5.0 – 50 mm
Iris range	F1.4 - 360	F1.6 - 360
Min object distance	0.3 m (1.0 ft)	0.3 m (1.0 ft)
Lens mount	CS	CS
Angle of view (HxV)	W: 97.4 x 72.4 T: 26.2 x 19.7	W: 51.2 x 39.4 T: 5.3 x 4.1
MTF on-axis (lp/mm)	>250 >223 (IR)	>165 >144 (IR)
MTF off-axis (lp/mm)	>145 >131 (IR)	>81 >30 (IR)
Iris control	4-pin, DC control	4-pin, DC control
Focus control	manual	manual
Zoom control	manual	manual
IR corrected	yes	yes

Mount

Mount LTC 9215/00	
Length	300 mm (12 in)
Maximum Load	9 kg (20 lb)

Mount LTC 9215/00	
Mounting Head	Adjustable 360° pan, 180° tilt
Finish	Light gray
Approx. Weight	0.4 kg (0.9 lb)
Mounting	2 x tapped holes Thread: 1/4-20 73.7 mm (2.9 in) center spread

Ordering information

DINION AN 5000 KIT
High-performance 960H analog box camera in 24 VAC (60 Hz) housing. WDR; 720 TVL; 4-zone motion detect; 15-zone privacy mask; NTSC; 2.8-11 mm lens; pre-wired
Order number **VKN-5085V4-20**

DINION AN 5000 KIT
High-performance 960H analog box camera in 24 VAC (60 Hz) housing. WDR; 720 TVL; 4-zone motion detect; 15-zone privacy mask; NTSC; 5-50 mm lens; pre-wired
Order number **VKN-5085V10-20**

DINION AN 5000 KIT
High-performance 960H analog box camera in a 230 VAC (50 Hz) housing. WDR; 720 TVL; 4-zone motion detect; 15-zone privacy mask; PAL; 2.8-11 mm lens
Order number **VKN-5085V4-50**

DINION AN 5000 KIT
High-performance 960H analog box camera in 230 VAC (50 Hz) housing. WDR; 720 TVL; 4-zone motion detect; 15-zone privacy mask; PAL; 5-50 mm lens
Order number **VKN-5085V10-50**