


**BOSCH**

Invented for life

# AutoDome 800 Series HD PTZ Camera System



**HD 1080p resolution at 30 images per second (ips)**

**200x zoom (20x optical, 10x digital)**

**Quad video streaming generates simultaneous H.264, M-JPEG, and JPEG video streams**

**ONVIF conformant; provides interoperability with other conformant systems**

**Embedded Intelligent Video Analytics (IVA) for reliable detection, tracking, analysis, and search capabilities**

**High-impact, heavy-duty, tamper resistant aluminum housing with the protection of a rugged acrylic bubble**

**High-speed 360-degree continuous pan**

**Preset tour and AutoPan modes**

The AutoDome 800 Series is an easy to install, outdoor PTZ camera system with superb HDTV 1080p30 quality video. The camera features day/night functionality for high definition quality images in low light conditions. This discrete, high-speed dome camera has an IP66 rating ensuring reliable uncompromised functionality even in dusty and potentially wet environments.

The AutoDome 800 Series provides direct network connection using H.264 and JPEG compression and bandwidth throttling to efficiently manage bandwidth and storage requirements while delivering outstanding image quality. The AutoDome 800 Series provides complete network-based control of all dome functionality including pan/tilt/zoom operation, presets, tours and alarms as well as web-based configuration of all dome settings.

The AutoDome 800 Series conforms to the ONVIF (Open Network Video Interface Forum) specification guaranteeing interoperability between network video products regardless of manufacturer.

### **AutoDome 800 Series highlights**

The AutoDome 800 Series delivers state-of-the-art technology and features that far exceed other PTZ cameras. The camera streams high-definition video with 20x optical zoom in a field-proven outdoor housing.

720p resolution at 60 images per second provides smooth, detailed video of fast moving objects. 1080p resolution at 30 images per second delivers six times the detail level of standard definition cameras, ensuring crisp video even when zooming in digitally to extend the camera's range. In addition, the 16:9 aspect ratio increases situational awareness by maximizing the field of view without compromising image clarity.

Its variable pan and tilt speeds and AutoPivot ensure optimal camera control and viewing at all zoom levels. The high-performance 200x (20x optical/10x digital) zoom autofocus camera incorporates the latest digital imaging technology with excellent sensitivity and resolution. With 99 user-defined presets as well as tour and AutoPan modes, The AutoDome 800 Series is not small on features.

The AutoDome 800 Series maximizes your security investment by integrating with Bosch video products including the Bosch Video Client and the Bosch Recording Station, as well as the full range of Bosch video over IP products.

And, the AutoDome 800 Series is simple to install and use; available with wall, corner, mast, and pipe mount options.

### System Overview

#### High-performance 200x PTZ day/night camera

The AutoDome 800 Series camera has a 1/3-in.-type CMOS sensor, with 1080p resolution and sensitivity to below 1.0 lux.

The AutoDome 800 Series supports up to 99 user-defined pre-positions, as well as one (1) preset tour and one (1) AutoPan mode. The preset tour can be programmed with up to 99 prepositions and a configurable dwell time between positions.

Pan and tilt preset repeatability are accurate to within  $\pm 0.1$  degrees to ensure that the correct scene is captured every time. The AutoDome 800 Series delivers variable pan/tilt speeds from a crawl speed of only 0.1 degrees per second up to an ultra-quick 120 degrees per second. The dome is capable of pan speeds of 360 degrees per second and tilt speeds of 100 degrees per second between prepositions. The AutoDome 800 Series provides a tilt range of 0 to 94 degrees, and a pan range of up to 360 degrees continuous rotation.

The AutoScaling (proportional zoom) and AutoPivot (automatically rotates and flips the camera) features ensure optimal control.

#### Ultra-efficient H.264 encoding

The AutoDome 800 Series uses an advanced H.264 encoder to create DVD-quality streaming video at ultra-low bit rates. Use of H.264 encoding, bandwidth throttling, and multicasting capabilities, minimizes bandwidth and storage usage to significantly reduce costs. The AutoDome 800 Series supports 1080p30, 720p60, 720p30, 4CIF, and CIF resolutions for 50 Hz and 60 Hz models.

#### Multiple video streams

Bosch's innovative Quad-streaming feature enables the AutoDome 800 Series to deliver three H.264 streams together with an M-JPEG stream in full and reduced bandwidth modes. During full bandwidth operation (full HD 1080p30 or high frame rate 720p60) the second stream is an exact copy of the first stream. In reduced bandwidth mode (720p30), the second stream is an independently configurable, downscaled-resolution stream. In both modes the third H.264 stream consists of HD I-frames only. These streams facilitate bandwidth-efficient viewing and recording options as well as integration with third-party video management systems.

#### ONVIF conformant

The AutoDome 800 Series conforms to the ONVIF (Open Network Video Interface Forum) specification guaranteeing interoperability between network video products regardless of manufacturer. ONVIF conformant devices are able to exchange live video, audio, metadata and control information and ensure that they are automatically discovered and connected to network applications such as video management systems.

#### Intelligence

With built-in video content analysis, the AutoDome 800 Series reinforces the Intelligence-at-the-Edge concept where edge devices become increasingly intelligent. This camera comes with built-in MOTION+ video motion detection. This motion detection algorithm is based on pixel change and includes object size filtering capabilities and sophisticated tamper detection capabilities.

The AutoDome 800 Series also features Bosch's Intelligent Video Analysis (IVA). IVA is state-of-the-art intelligent video analysis that reliably detects, tracks, and analyzes moving objects while suppressing unwanted alarms from spurious sources in the image.

#### Unsurpassed reliability

The AutoDome 800 outdoor pendant housings are rated to provide IP 66 protection and to provide an operating temperature range down to  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ ). In addition, the pendant housing comes equipped with a low-impact, high-resolution acrylic bubble for enhanced image clarity. All housings feature recessed screws and latches for increased tamper resistance.

As with all Bosch products, the AutoDome 800 Series has been subjected to the industry's most comprehensive and demanding battery of endurance tests such as HALT (highly accelerated life testing) to make sure it will hold up through years of use. And of course, it comes with Bosch's industry-leading 3-year warranty.

### Functions

The following are some of the features that make the AutoDome 800 Series the perfect fit for a variety of surveillance applications.

#### Inputs and outputs

The AutoDome 800 Series can handle two (2) alarm inputs and one (1) open-collector alarm output, which can drive an external device.

### iSCSI device support

Built-in iSCSI support allows the AutoDome 800 Series to stream video directly to an iSCSI RAID array. This enables efficient video storage just like a conventional DVR without streaming high bandwidth video across the network, making system recording performance totally independent from network performance.

### Network-based control and configuration

The AutoDome 800 Series enables full camera control and configuration capabilities over the network. Operators or technicians can control camera pan/tilt/zoom operation, presets, tours, and alarm management functions virtually anywhere without need for additional wiring.

The embedded web server lets the installer access all the user settings, make camera adjustments, and update firmware via a standard web browser.

### Device management

Simple Network Management Protocol (SNMP) support facilitates the remote monitoring and management. The AutoDome 800 Series provides full support for SNMP v3.

### Superior privacy masking

The AutoDome 800 Series provides 24 individual, easy to configure privacy masks, with up to 24 displayed in the same scene. As the camera is zoomed each mask changes size smoothly and quickly ensuring that the covered object cannot be seen. You also have a choice of black or gray masking characteristics.

### Ease of installation and servicing

The AutoDome 800 Series has been designed for quick and easy installation; a key feature from Bosch CCTV products. The dome comes fully assembled and ready for wall or pipe mount applications. Also available are corner, mast, and roof mounting kits which allow the AutoDome 800 Series to be easily adapted for the individual site requirements.

### Viewing

View the video on a PC using a Web browser or via the Bosch Video Client, the Bosch Recording Station, the Bosch Video Management System, or integrate it into another video management system.

## Certifications and Approvals

### HD standards

Complies with the SMPTE 274M-2008 Standard in:

- Resolution: 1920x1080
- Scan: Progressive
- Color representation: complies with ITU-R BT.709
- Aspect ratio: 16:9
- Frame rate: 25 and 30 frames/s

Complies with the 296M-2001 Standard in:

- Resolution: 1280x720

- Scan: Progressive
- Color representation: complies with ITU-R BT.709
- Aspect ratio: 16:9
- Frame rate: 25, 30, 50 and 60 frames/s

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards
Environmental	IP66

## Technical Specifications

### 20x HD Day/Night Camera

Imager	1/3-in. -type CMOS	
Number of Pixels	Approximately 2 megapixels	
Aspect Ratio	HD: 16:9	
Lens	20x optical zoom, (4.7 to 94 mm)	
Focus	Automatic (normal, low), One-push, Manual	
Iris	Automatic with manual override (F1.6 to F3.5)	
Field of View	3° (tele) to 55° (wide)	
Minimum Working Distance	10 mm (wide) to 150 mm (tele)	
Automatic Gain Control	Automatic/Manual (-3 to 28 dB, 21 steps)	
Synchronization	Internal	
Aperture Correction	Adjustable sharpness	
Digital Zoom	10x	
Sensitivity (typical) <sup>1</sup>	<b>30 IRE<sup>2</sup></b>	<b>50 IRE<sup>2</sup></b>
<b>Day Mode</b>		
SensUP Off (1/30 [1/25] shutter); High Sensitivity Off	0.8 lux (0.074 fc)	1.7 lux (0.158 fc)
SensUP On, max. (0.25 sec. shutter); High Sensitivity On <sup>3</sup>	0.04 lux (0.004 fc)	0.08 lux (0.007 fc)
<b>Night Mode</b>		
SensUP Off (1/30 [1/25] shutter); High Sensitivity Off	0.12 lux (0.011)	0.3 lux (0.028 fc)
SensUP On, max. (0.25 sec. shutter); High Sensitivity On <sup>3</sup>	0.005 lux (.0005 fc)	0.011 lux (.001 fc)
Electronic Shutter Speed (AES)	1/1 to 1/10000 s, 21 steps	
Signal to Noise Ratio	> 50 dB (AGC off)	
Backlight Compensation	On/Off	
White Balance	ATW, Indoor, Outdoor, AWB Hold, Extended ATW, Manual	

Day/Night	Monochrome, Color, Auto
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1. F1.6, maximum AGC. Normal light source (Halogen lamp).
2. Tinted bubble adds 0.8 f-stop loss.
3. Measured using ND1 + ND4 filters and recalculated with the transmission factor at 0.0025.

#### Software Control

Camera Setup/Control	Via Internet Explorer Web browser version 7.0 or later, Bosch Configuration Manager or BVMS
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Software Update	Firmware upload
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#### Network

Standards	H.264 (ISO/IEC 14496-10), M-JPEG, JPEG
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Streaming	Individually configurable streams in H.264 and M-JPEG, configurable frame rate and bandwidth;
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• 1080p30	One (1) H.264 1080p30 stream plus one (1) M-JPEG and one (1) I-frame stream
• 720p60	One (1) H.264 720p60 stream plus one (1) M-JPEG and one (1) I-frame stream
• 720p30	Two (2) independently configurable H.264 streams: One (1) H.264 720p30 stream, One (1) H.264 BP+ or H.264 MP SD stream, plus one (1) M-JPEG and one (1) I-frame stream

GOP Structure	IP, IBP, IBBP
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Data Rate	9.6 kbps to 6 Mbps
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Overall IP Delay	240 ms
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#### Resolutions and Frame Rates

• 1080p30	1920 x 1080
• 720p60	1280 x 720
• 720p30	1280 x 720
• 4CIF/D1 (30 ips)	704 x 480
• CIF (30 ips)	352 x 240

#### Network

Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNMP, RTSP, 802.1x, iSCSI, DynDNS, UPnP
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Ethernet	10-Base T/100 Base-TX, auto-sensing, half/full duplex, RJ45
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#### Mechanical/Electrical

Pan Range	360° cont.
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Tilt Angle	18° above horizon
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Variable Speed	0.1°/s-120°/s
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Pre-position Speed	Pan: 360°/s Tilt: 100°/s
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Preset Accuracy	± 0.1° typ.
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Rated Voltage	
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- Camera 24 VAC ± 10%, 50/60 Hz
- Heater 24 VAC ± 10%, 50/60 Hz

Power Draw (typical)	55 W
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#### Environmental

Operating Temperature	-40°C to 50°C (-40°F to 122°F)
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Storage Temperature	-40°C to 60°C (-40°F to 140°F)
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Operating Humidity	0% to 100% relative, condensing
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#### Miscellaneous

Sectors/Titling	16 independent sectors with 20-character titles/sector
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Masking	24 individually configurable privacy masks
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Protocol Support	Bosch (OSRD), ONVIF
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Pre-positions	99, each with 20-character titles
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Preset Tours	One (1), consisting of up to 99 scenes, consecutively
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Supported Languages	English, German, Dutch, French, Italian, Spanish, Portuguese, Polish, and Japanese
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#### User Connections

Power, Camera	21-30 VAC, 50/60 Hz
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Power, Heater	21-30 VAC, 50/60 Hz
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Video and Control	RJ-45 100 Base-TX Ethernet
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Audio Line In	9 K Ohm typ, 5.5 Vp-p max
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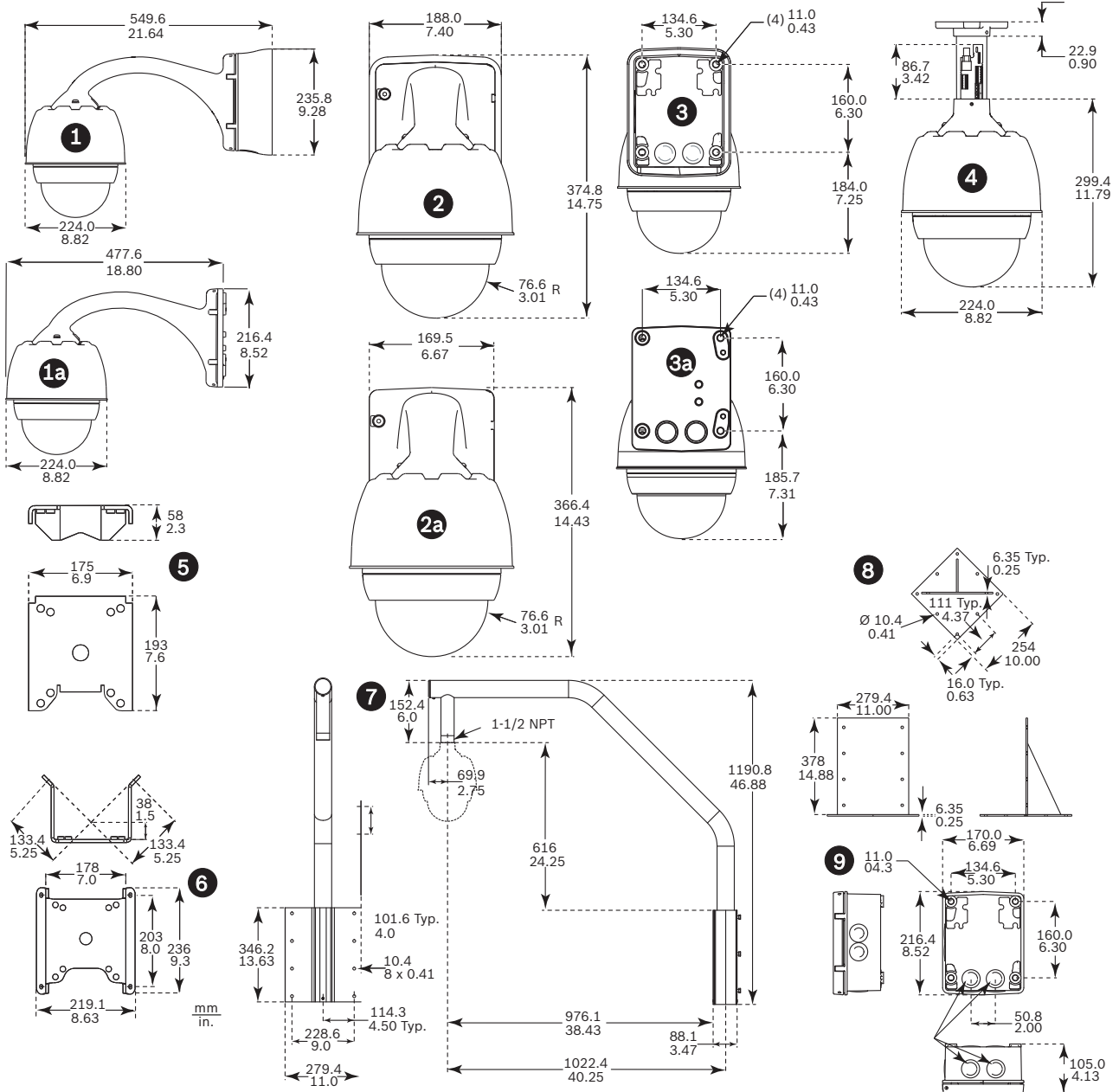
Alarm Inputs (2)	Programmable for "normally open" or "normally closed"
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Open Collector Output (1)	32VDC@150 ma max
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**Construction**

Size	See dimensional drawings
Bubble Size	153.1 mm diameter (6.03 in.)
Weight	3.03 kg (6.68 lb)
Material	
• Housing	Cast aluminum
• Bubble	Acrylic
Color	White

**Dimensional Drawings**



Outdoor System Dimensions

Reference	Description
1	Wall Mount – Side with power supply and trim skirt
1a	Wall/Mast Mount – Side with VG4-ARMPLATE
2	Wall Mount – Front with power supply and trim skirt
2a	Wall Mount – Front with power supply
3	Wall Mount – Back with power supply and trim skirt
3a	Wall Mount – Back with power supply
4	Pipe Mount
5	Mast Mount
6	Corner Mount
7	Roof Mount
8	Roof Mount Adapter
9	Power Supply for Pipe and Roof Mounts

### Ordering Information

**VG5-825-ECEV Outdoor 20x AutoDome 800 Series HD with IVA, Clear Bubble, 50/60 Hz**      **VG5-825-ECEV**

Outdoor AutoDome 800 Series HD with IVA, 20x day/night, 50/60 Hz camera with clear bubble

**VG5-825-EDEV Outdoor 20x AutoDome 800 Series HD with IVA, Tinted Bubble, 50/60 Hz**      **VG5-825-EDEV**

Outdoor AutoDome 800 Series HD with IVA, 20x day/night, 50/60 Hz camera with tinted bubble

### Accessories

**VG4-SBUB-PCH-A High-resolution Chrome Bubble for Pendant Housing**      **VG4-SBUB-PCH-A**

Chrome high-resolution bubble for a VG4 or VG5 Series AutoDome pendant housing

**VG4-SBUB-PCL-A High-resolution Clear Bubble for a Pendant Housing**      **VG4-SBUB-PCL-A**

Clear high-resolution bubble for a VG4 or VG5 Series AutoDome pendant housing

**VG4-SBUB-PGL-A High-resolution Gold Bubble for Pendant Housing**      **VG4-SBUB-PGL-A**

Gold high-resolution bubble for a VG4 or VG5 Series AutoDome pendant housing

**VG4-SBUB-PTI-A High-resolution Tinted Bubble for a Pendant Housing**      **VG4-SBUB-PTI-A**

Tinted high-resolution bubble for a VG4 or VG5 Series AutoDome pendant housing

**LTC 9230/01 Flat Roof Mount Adapter**      **LTC 9230/01**

For mounting a unit in an upright position on a flat surface for roof parapet mount LTC 9230/00

**VG4-A-9230 Roof Mount**      **VG4-A-9230**

Roof mount, white, for a VG4 or VG5 Series AutoDome

### Ordering Information

**VG4-A-9541 Pole Mount Adapter**      **VG4-A-9541**

Pole mount adapter for a for a VG4 or VG5 Series AutoDome pendant arm, designed for poles with a diameter from 100-380 mm (4-15 in.), white

**VG4-A-9542 Corner Mount Adapter**      **VG4-A-9542**

Corner mount adapter for a VG4 or VG5 Series AutoDome pendant arm

**VG4-A-9543 Pipe Mount**      **VG4-A-9543**

Pipe mount, white, for a VG4 or VG5 Series AutoDome

**VG4-A-PA0 Pendant Arm Mount**      **VG4-A-PA0**

Pendant arm mount for a VG4 or VG5 Series AutoDome, no transformer, white

**VG4-A-PA1 Pendant Arm Mount with 120 VAC Transformer**      **VG4-A-PA1**

Pendant arm mount for a VG4 or VG5 Series AutoDome with a 120 VAC transformer, white

**VG4-A-PA2 Pendant Arm Mount with 230 VAC Transformer**      **VG4-A-PA2**

Pendant arm mount for a VG4 or VG5 Series AutoDome with a 230 VAC transformer, white

**VG4-A-PSU1 120 VAC Power Supply Unit**      **VG4-A-PSU1**

120 VAC, 100 W, NEMA-rated, white, for a VG4 or VG5 Series AutoDome

**VG4-A-PSU2 230 VAC Power Supply Unit**      **VG4-A-PSU2**

230 VAC, 100 W, NEMA-rated, white, for a VG4 or VG5 Series AutoDome

**VG4-A-ARMPLATE Mounting Plate**      **VG4-A-ARMPLATE**

Mounting plate for VG4-SARM, compatible with a VG4 or VG5 Series AutoDome

**VG4-SARM Pendant Arm with Wiring**      **VG4-SARM**

Compatible with a VG4 or VG5 Series AutoDome

**VG4-SBOX-24VAC Power Supply Box**      **VG4-SBOX-24VAC**

Box without cover or transformer for a VG4 or VG5 Series AutoDome

**VG4-SBOX-120VAC Power Supply Box**      **VG4-SBOX-120VAC**

Box, without cover, with a 120 VAC transformer for a VG4 or VG5 Series AutoDome

**VG4-SBOX-230VAC Power Supply Box**      **VG4-SBOX-230VAC**

Box, without cover, with a 230 VAC transformer for a VG4 or VG5 Series AutoDome

**VG4-SBOX-COVER Cover for Power Supply Box**      **VG4-SBOX-COVER**

Cover for VG4-SBOX-24VAC, VG4-SBOX-120VAC, VG4-SBOX-230VAC, VEI-30, and NEI-30 junction box

**Ordering Information****VG4-A-TSKIRT Trim Skirt for VG4 Series      VG4-A-TSKIRT****Power Supply Boxes**

Trim skirt for the following VG4 and VG5 Series power supply boxes:  
VG4-A-PSU0F, VG4-A-PSU1, VG4-A-PSU1F,  
VG4-A-PSU2, VG4-A-PSU2F,  
VG4-SBOX-24VAC, VG4-SBOX-120VAC, and  
VG4-SBOX-230VAC

**Software Options****MVC-FENC-AES BVIP AES 128 Bit      MVC-FENC-AES****Encryption**

BVIP AES 128-bit encryption site license.  
This license is required only once per installation. It enables encrypted communication between BVIP devices and management stations.

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