


BOSCH

Invented for life

VG4 Series Pressurized Environmental Housing Module



- ▶ **Maximum environmental protection against dust, smog, salt air and humidity**
- ▶ **Meets IP67 and NEMA 4X specifications**
- ▶ **Maintains a dry, clean atmosphere for camera, lens, and pan/tilt/zoom (PTZ) mechanism**
- ▶ **Extended temperature range**
- ▶ **Compatible with all AutoDome modules and accessories**
- ▶ **Available in 200, 300 and 500i Series configurations**

The Bosch VG4 Series Pressurized Environmental Housing module protects a VG4 AutoDome Modular Camera System from the elements, both natural and manmade. It is the ideal surveillance solution for applications that require frequent wash-down, including traffic, transit, bridges, tunnels and coastal installations where salt, moisture, dust, insects and fumes threaten the long-term operation of the camera. The pressurized housing module is the ultimate way to protect your surveillance camera investment from the environment.

This module is available as part of a VG4 AutoDome assembly (power, mounting, and fiber optic accessories must be ordered separately). In addition, the module can be ordered separately.

Functions

This rugged pressurized housing, combined with the AutoDome Modular Camera System, maintains peak performance in the worst of conditions. The IP67 rated pressurized dome is the ultimate way to protect the camera from harsh environmental conditions.

Image control and quality are integral aspects of any outdoor surveillance system. The VG4 Pressurized Environmental Housing option offers the same lenses from, 18x to 36x, as the standard VG4 series, and offers a full 12x digital zoom (for 300 and 500i Series AutoDomes) once the end of the optical zoom is reached. In addition, the scaling feature ensures optimal control for viewing at all zoom settings.

To enhance sensitivity when night falls, the day/night AutoDome automatically switches from color to monochrome by removing the infrared filter. Whether you program the camera to switch automatically, or use the manual switch, the result is optimal camera function, day or night. This feature automatically reduces the shutter speed to as little as one second, increasing sensitivity by more than 50 times, even in the darkest conditions.

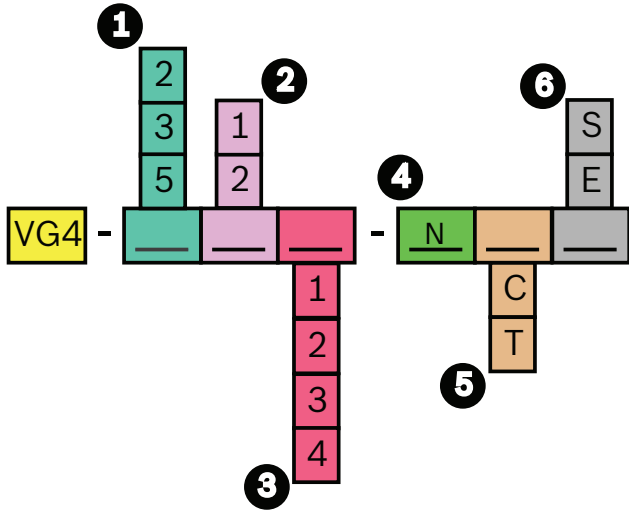
Remote control, configuration and updates can be performed over the video cable (coax or passive UTP) when using Bilinx-compatible control and configuration devices (such as the VP-CFGSFT configuration tool or the LTC 8016 Allegiant Bilinx Interface).

The menu for these devices can display multiple languages, including: English, Czech, Dutch, French, German, Italian, Polish, Portuguese, Spanish and Russian.

Certifications and Approvals

Environmental	IP67, NEMA 4X
Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including EN50130-4 and EN50121-4
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

Installation/Configuration Notes



VG4 Series Ordering Information with Pressurized Environmental Housing
(Power Supply, Mount and Fiber Optic options must be ordered separately)

1 VG4 Series

- 2 200 Series
- 3 300 Series
- 5 500i Series

2 Video Format

- 1 PTZ PAL
- 2 PTZ NTSC

3 Camera Type

- 1 18x Color PTZ¹
- 2 18x Day/Night PTZ
- 3 26x Day/Night PTZ
- 4 36x Day/Night PTZ

4 Enclosure

N Pressurized Environmental Housing

5 Bubble

- C Clear
- T Tinted

6 Communications

- S Standard (Coax/UTP)

1 VG4 Series

- E Ethernet (TCP/IP)

Note: You can order the Pressurized Environmental Housing-as part of a VG4 kit or you can order the housing module (VG4-MHSG-NC or VG4-MHSG-NT) separately.

- 1 Available with the 200 Series only.
- 2 No transformer included. Customer must supply an approved 24 VAC limited power supply (VG4-A-PSUx or equivalent).
- 3 Roof mount mounts to vertical Parapet. For flat roof installation, order an additional LTC 9230/01 Flat Roof Adapter Plate.
- 4 The fiber optic option is multimode with Biphase; requires LTC 4629 at the system.

Technical Specifications

VG4 Pressurized Environmental Housing Module

VG4-MHSG-NC	Pressurized Environmental Housing Module, Clear Bubble
VG4-MHSG-NT	Pressurized Environmental Housing Module, Tinted Bubble

Mechanical

Weight	2.23 kg (4.92 lb)
Pan Range	360° cont.
Tilt Angle	18° above horizon
Variable Speed	0.1°/s-120°/s
Pre-position Speed	Pan: 360°/s Tilt: 100°/s
Preset Accuracy	± 0.1° typ.
Nitrogen Fill Valve	Schrader fill valve
Recommended Internal Pressure	62.05 kPa (9.0 psi) to 75.84 kPa (11.0 psi)
Maximum Internal Pressure	75.84 kPa (11.0 psi) ± 5%
Estimated Pressure Duration	6 months

Electrical

Power	21-30 VAC 50/60 Hz
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Power Draw (typical)

Analog Model	51 W (Add 16 W if using VG4-SHTR-XT kit)
Ethernet Model	55 W (Add 16 W if using VG4-SHTR-XT kit)

Environmental

Humidity	0% to 100% relative, condensing
Ingress Protection	IP67 (NEMA 4X)
Operating Temperature	-40°C to 60°C (-40°F to 140°F)
Storage Temperature	-40°C to 60°C (-40°F to 140°F)

VG4 Series Camera Modules
Camera 36x Day/Night

Imager	1/4 in. Exview HAD CCD (752 x 582 PAL)/(768 x 494 NTSC)
Lens	36x Zoom (3.4 – 122.4 mm) F1.6 to F4.5
Focus	Automatic with manual override
Iris	Automatic with manual override
Field of View	1.7° to 57.8°
Video Output	1.0 Vp-p, 75 Ohm
Gain Control	Off/Auto (with adjustable limit)
Synchronization	Line-Lock (-120° to 120° vertical phase adjust) or internal crystal
Aperture Correction	Horizontal and vertical
Digital Zoom	12x
Horizontal Resolution	540 TVL (NTSC, PAL) typical

Sensitivity (typical) ⁵ **30 IRE** **50 IRE**

Day Mode

SensUp Off	0.66 lx	1.4 lx
SensUp On (1/4) (15x)	0.033 lx	0.083 lx

Night Mode

SensUp Off	0.166 lx	0.33 lx
SensUp On (1/4) (15x)	0.0065 lx	0.0164 lx

Electronic Shutter Speed 1 to 1/10,000

SNR >50 dB

White Balance 2000 K to 10,000 K

⁵ F1.6, 1/60 (1/50) shutter, max AGC.

Camera 26x Day/Night

Imager	1/4 in. Exview HAD CCD (752 x 582 PAL)/(768 x 494 NTSC)
Lens	26x Zoom (3.5 – 91.0 mm) F1.6 to F3.8
Focus	Automatic with manual override
Iris	Automatic with manual override
Field of View	2.3° to 55°
Video Output	1.0 Vp-p, 75 Ohm
Gain Control	Off/Auto (with adjustable limit)
Synchronization	Line-Lock (-120° to 120° vertical phase adjust) or internal crystal
Aperture Correction	Horizontal and vertical
Digital Zoom	12x

Horizontal Resolution NTSC: 470 TVL, typical
PAL: 480 TVL, typical

Sensitivity (typical) ⁶ **30 IRE** **50 IRE**

Day Mode

SensUp Off	0.5 lx	1.0 lx
SensUp On (15x)	0.0052 lx	.013 lx

Night Mode

SensUp Off	0.10 lx	0.26 lx
SensUp On (15x)	0.0013 lx	0.0026 lx

Electronic Shutter Speed 1 to 1/10,000

SNR >50 dB

White Balance 2000 K to 10,000 K

⁶ F1.6, 1/60 (1/50) shutter, max AGC.

18x Day/Night

Imager	1/4 in. Exview HAD CCD (752 x 582 PAL)/(768 x 494 NTSC)
Lens	18x Zoom (4.1 – 73.8 mm) F1.4 to F3.0
Focus	Automatic with manual override
Iris	Automatic with manual override
Field of View	2.7° to 48°
Video Output	1.0 Vp-p, 75 Ohm
Gain Control	Off/Auto (with adjustable limit)
Synchronization	Line-Lock (-120° to 120° vertical phase adjust) or internal crystal
Aperture Correction	Horizontal and vertical
Digital Zoom	12x
Horizontal Resolution	NTSC: 470 TVL, typical PAL: 480 TVL, typical

Sensitivity (typical) ⁷ **30 IRE** **50 IRE**

Day Mode

SensUp Off	0.4 lx	0.7 lx
SensUp On (15x)	0.0041 lx	0.0082 lx

Night Mode

SensUp Off	0.05 lx	0.17 lx
SensUp On (15x)	0.0007 lx	0.0013 lx

Electronic Shutter Speed 1 to 1/10,000

SNR >50 dB

White Balance 2000 K to 10,000 K

⁷ F1.4, 1/60 (1/50) shutter, max AGC.

Camera 18x Color

Imager	1/4 in. Exview HAD CCD (752 x 582 PAL)/(768 x 494 NTSC)	
Lens	18x Zoom (4.1–73.8 mm) F1.4 to F3.0	
Focus	Automatic with manual override	
Iris	Automatic with manual override	
Field of View	2.7° to 48°	
Video Output	1.0 Vp-p, 75 Ohm	
Gain Control	Off/Auto (with adjustable limit)	
Synchronization	Line-Lock (–120° to 120° vertical phase adjust) or internal crystal	
Aperture Correction	Horizontal and vertical	
Horizontal Resolution	NTSC: 470 TVL, typical PAL: 480 TVL, typical	
Sensitivity (typical)	30 IRE	50 IRE
F1.4, 1/60 (1/50) shutter, max AGC	0.5 lx	0.8 lx
Electronic Shutter Speed (AES)	1 to 1/10,000	
SNR	>50 dB	
White Balance	2000 K to 10,000 K	

VG4 Series General Specifications

Surge Suppression

Protection on Video	Peak current 10 kA (Gas Tube Arrester), peak power 1000 W (10/1000 μ)
Protection on RS-232/485, Biphase	Peak current 10 A, peak power 300 W (8/20 μ)
Protection on Alarm Inputs	Peak current 17 A, peak power 300 W (8/20 μ)
Protection on Alarm Outputs	Peak current 2 A, peak power 300 W (8/20 μ)
Protection on Relay Outputs	Peak current 7.3 A, peak power 600 W (10/1000 μ)
Protection on Power Input (Dome)	Peak current 7.3 A, peak power 600 W (10/1000 μ)
Protection on Power Output (Arm Power Supply)	Peak current 21.4 A, peak power 1500 W (10/1000 μ)

Miscellaneous

Sectors/Titling	16 independent sectors with 20-character titles/sector
Camera Setup/Control	Biphase, RS-232, RS-485, Bilinx ⁸ (coax)
Communications Protocols	Biphase, Bilinx ⁸ , Pelco P, and Pelco D

Pre-positions

500/300 Series	99, each with 20-character titles
200 Series	64, each with 20-character titles

Tours

Guard Tours (500/300 Series)	Two (2) types of tours: <ul style="list-style-type: none"> Recorded tours - two (2), total duration 15 minutes Preset tour - one (1), consisting of up to 99 scenes, consecutively and one (1) customized up to 99 scenes
Preset Tour (200 Series)	One (1), consisting of up to 64 scenes, consecutively
Supported Languages	English, Czech, Dutch, French, German, Italian, Polish, Portuguese, Russian and Spanish

8 Bilinx not available on Ethernet models.

Cable Compensation

Max Distance	With Pre-comp OFF	With Pre-comp ON
RG-59/U	1000 ft (300 m)	2000 ft (600 m)
RG-6/U	1500 ft (450 m)	3000 ft (900 m)
RG-11/U	2000 ft (600 m)	4000 ft (1200 m)
Cat 5/UTP (Passive receiver)	750 ft (225 m)	1500 ft (450 m)

User Connections

Power (Camera)	21-30 VAC, 5/60 Hz
Power (Heater)	21-30 VAC, 50/60 Hz
Biphase ±	Control Data
Audio Line In ⁹	9 K Ohm typ, 5.5 Vp-p max
RS-232 RX/TX or RS-485 ± - optional control data (dip switch selectable)	

Video	BNC/UTP ¹⁰
EOLR Alarm Inputs (2)	Programmable for "normally open", "normally closed", "normally open-supervised", "normally closed-supervised"
Alarm Inputs (5)	Programmable for "normally open" or "normally closed"
Relay Out (1)	Dry contact output rating: 2 A @ 30 VAC
Open Collector Outputs (3)	32VDC@150 ma max

9 With Ethernet models, the Biphase ± can optionally be used as the audio line in connector.

10 Ethernet models have no UTP analog output only BNC (coax).

VG4 Series Mounts and Accessories

Pendant Arm Mounts

Wall Arm (No Transformer)	VG4-A-PA0N
Wall Arm (120/230 VAC Transformer)	VG4-A-PA1N/ VG4-A-PA2N
Wall Arm (No Transformer with Fiber Optics)	VG4-A-PA0FN
Wall Arm (120/230 VAC Transformer and Fiber Optics)	VG4-A-PA1FN/ VG4-A-PA2FN

Optional Mounting Plates for Arm Mounts

Corner Mounting Plate	LTC 9542/01
Mast (Pole) Mounting Plate	LTC 9541/01

Pendant Pipe Mounts

Pipe Mount Cap	VG4-A-9543N
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Pendant Roof Mounts

Roof (Parapet) Mount	VG4-A-9230
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Optional Mounting Plates for Roof Mounts

Flat Roof Adapter for Parapet Mount	LTC 9230/01
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Power Supplies

Outdoor Power Supply Box (120/230 VAC Transformer)	VG4-A-PSU1 / VG4-A-PSU2
Outdoor Power Supply Box (120/230 VAC Transformer and Fiber Optics)	VG4-A-PSU1F / VG4-A-PSU2F

Heater/Blower Module

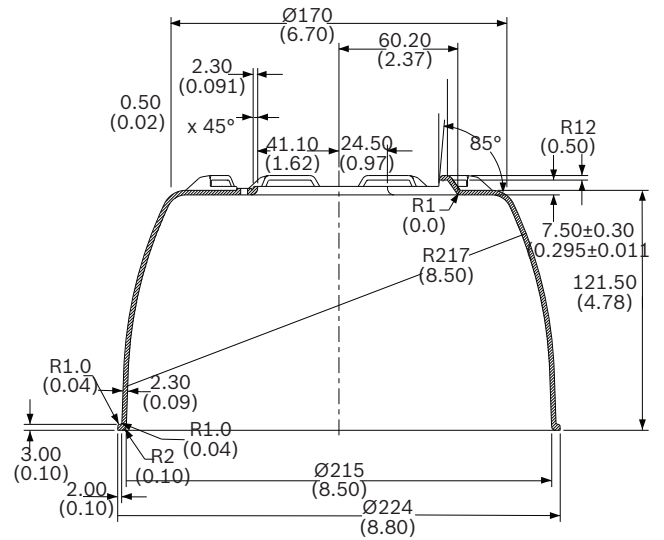
Extended temp heater module extends temperature range to -60°C (-76°F) for EnviroDome only	VG4-SHTR-XT
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Fiber Optic Kit

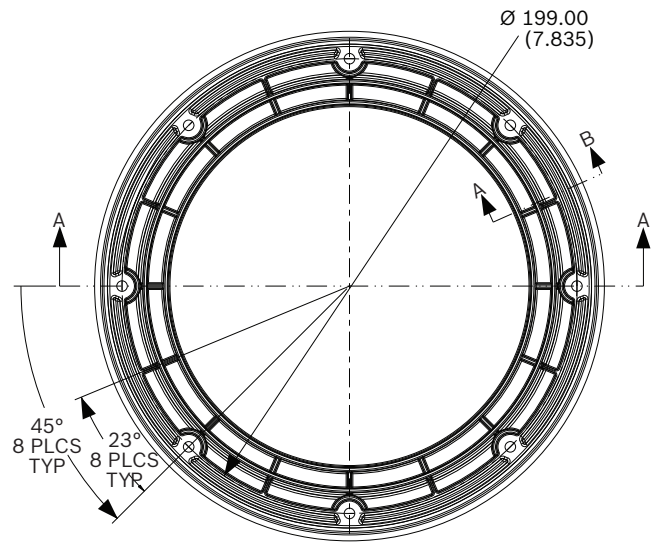
VG4-SFIBER-MM

Description	Multimode Fiber Optic Module
Compatible Receiver	LTC 4629 Series
Optical Fiber Compatibility	50/125 μm, 62.5/125 μm, low loss multimode glass fiber, rated for a minimum system bandwidth of 20 MHz
Max. Distance ¹¹	4.0 km (2.5 miles)
Optical Budget	14 dB
Connector	One (1) ST connector
Wavelength (video/data)	850 nm / 1310 nm

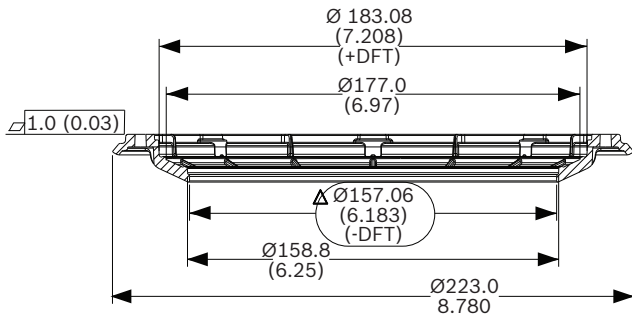
¹¹ Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels.



Pressurized Environmental Housing – Side View



Bubble Support Ring – Bottom View



Bubble Support Ring – Side View

Ordering Information

VG4-MHSG-NC Pressurized Environmental Housing Module **VG4-MHSG-NC**

Pressurized environmental housing for VG4 AutoDome Modular Camera System, includes a clear high-resolution bubble

VG4-MHSG-NT Pressurized Environmental Housing Module **VG4-MHSG-NT**

Pressurized environmental housing for VG4 AutoDome Modular Camera System, includes a tinted high-resolution bubble

VG4 Series Kit with Pressurized Environmental Housing **VG4 Series**

Contact your Bosch Security Systems, Inc. representative for complete ordering information for the VG4 Series AutoDome Modular Camera System with the Pressurized Environmental Housing.

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