


BOSCH

Invented for life

VDM-3x5 and VDC-4x5 Series Dome Cameras FlexiDome VF and XT+



- ▶ **Low-impact and impact-resistant models**
- ▶ **1/3-inch format CCD imager**
- ▶ **Superior picture clarity in virtually all situations**
- ▶ **540 TVL color resolution**
- ▶ **AC or DC operation**
- ▶ **Patented dome shape for 90° vertical view**
- ▶ **Extended sensitivity with NightSense**
- ▶ **Bilinx bi-directional communication**

The FlexiDome^{VF} and FlexiDome^{XT+} series of dome cameras are an excellent solution for virtually any indoor or outdoor application. The cast aluminum housing, polycarbonate dome and hardened inner liner of the FlexiDome^{XT+} version can withstand the equivalent of 120 lbs of force. The FlexiDome^{VF} utilizes a standard indoor enclosure. These units contain full-featured color and monochrome cameras, with 1/3-inch CCD and integral varifocal lenses.

Installation is quick and easy, since the cameras come completely assembled and ready to use. Using the proprietary pan/tilt/rotation mechanism, installers can select exactly the required field of view. Mounting options are numerous, including surface, 4S, wall, corner and suspended ceiling.

The FlexiDome^{VF} and FlexiDome^{XT+} cameras are an ideal solution for many surveillance applications. Their compact, sleek design and virtually flush-mount appearance complement any decor. The camera enclosure provides the extra protection necessary for applications such as in schools, banks, prisons, parking garages, retail and commercial buildings.

Functions

Technology

The FlexiDome^{VF} and FlexiDome^{XT+} series incorporate the latest technology in imaging, with 540 TVL resolution color cameras. Their superior sensitivity, high resolution and picture quality provide optimal performance in virtually all situations. The choice of lenses makes these cameras very versatile, because they can cover everything from standard and telephoto to low-light applications.

Operation

The lens wizard and focus aid make lens adjustment easy and straightforward, and ensure proper focus throughout the 24-hour cycle. All cameras can operate on both AC and DC. LineLock and phase adjustment are available, when AC power is used. NightSense, available in FlexiDome color versions, is a feature that can extend its excellent sensitivity by a factor of three in monochrome operation. All cameras incorporate Bilinx, a technology that allows technicians to set up and control the camera settings remotely over the video cable.

Controls and Indicators

- OSD
- 5-key operation

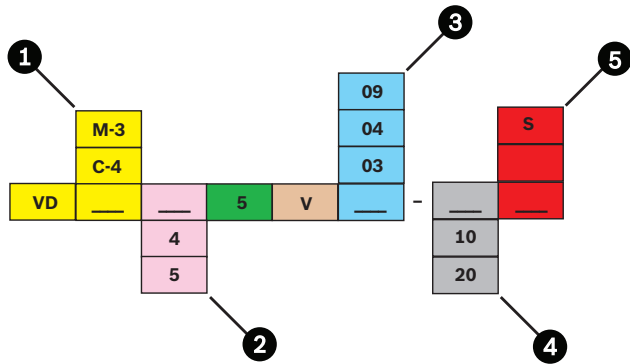
Interconnections

- Video connection BNC on flying lead
- Power connection on flying leads

Certifications and Approvals

| Region | Certification | |
|-----------------------|---|---|
| Europe | CE | Declaration of Conformity VDx 355-455-485-495 |
| USA | FCC | Declaration of Conformity VDx 355-455-485-495 |
| Safety | UL 1950; CSA 22.2 No. 950; EN 60950 (CE) | |
| Immunity | EN 50130-4 (CE) | |
| Emission | EN 50022 class B (CE); FCC, class B part 15 | |
| Water/dust protection | IP 66 and NEMA-4X (VDM-355 and VDC-455 models only) | |

Installation/Configuration Notes



| | | |
|----------|------------|--|
| 1 | M-3 | Monochrome |
| | C-4 | Color (with NightSense) |
| 2 | 4 | Low impact |
| | 5 | High impact |
| 3 | 03 | 2.6 to 6 mm F1.4 |
| | 04 | 4 to 9 mm F1.6 (low impact version) 3.7 to 12 mm F1.6 (high impact version) |
| | 09 | 9 to 22 mm F1.4 |
| 4 | 10 | PAL color or CCIR mono |
| | 20 | NTSC color or EIA mono |
| 5 | | Flush mount |
| | S | Surface mount |

FlexiDome^{VF} model overview

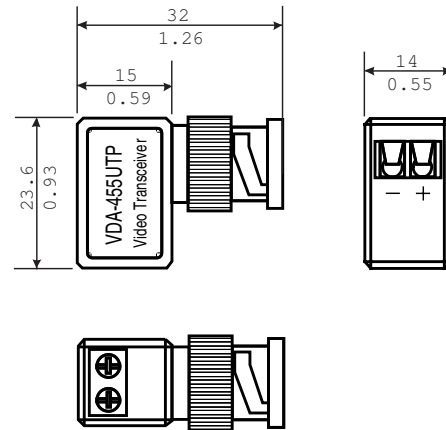
| Model | Standard | Lens |
|-------------------|----------|------------------|
| Monochrome | | |
| VDM-345V03-10 | CCIR | 2.6 to 6 mm F1.4 |
| VDM-345V03-20 | EIA | 2.6 to 6 mm F1.4 |
| VDM-345V04-10 | CCIR | 4 to 9 mm F1.6 |
| VDM-345V04-20 | EIA | 4 to 9 mm F1.6 |
| Color | | |
| VDC-445V03-10 | PAL | 2.6 to 6 mm F1.4 |

| | | |
|---------------|------|------------------|
| VDC-445V03-20 | NTSC | 2.6 to 6 mm F1.4 |
| VDC-445V04-10 | PAL | 4 to 9 mm F1.6 |
| VDC-445V04-20 | NTSC | 4 to 9 mm F1.6 |
| VDC-445V09-10 | PAL | 9 to 22 mm F1.4 |
| VDC-445V09-20 | NTSC | 9 to 22 mm F1.4 |

FlexiDome^{XT+} model overview

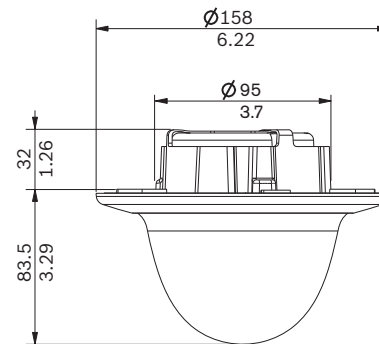
| Model | Standard | Lens |
|-------------------|----------|-------------------|
| Monochrome | | |
| VDM-355V03-10 | CCIR | 2.6 to 6 mm F1.4 |
| VDM-355V03-20 | EIA | 2.6 to 6 mm F1.4 |
| VDM-355V04-10 | CCIR | 3.7 to 12 mm F1.6 |
| VDM-355V04-20 | EIA | 3.7 to 12 mm F1.6 |
| Color | | |
| VDC-455V03-10 | PAL | 2.6 to 6 mm F1.4 |
| VDC-455V03-20 | NTSC | 2.6 to 6 mm F1.4 |
| VDC-455V04-10 | PAL | 3.7 to 12 mm F1.6 |
| VDC-455V04-20 | NTSC | 3.7 to 12 mm F1.6 |
| VDC-455V09-10 | PAL | 9 to 22 mm F1.4 |
| VDC-455V09-20 | NTSC | 9 to 22 mm F1.4 |

BNC to UTP Transceiver



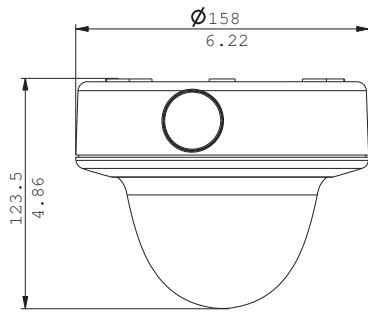
Dimensions in mm (in.)

FlexiDome^{VF} Low Impact, Indoor Flush Mounting Model



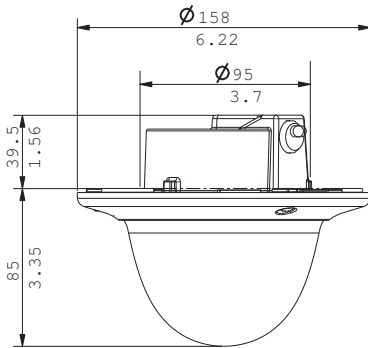
Dimensions in mm (in.)

VDA-445SMB–Surface Mount Box



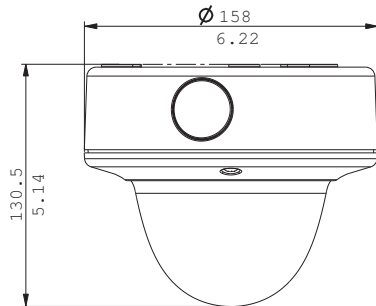
Dimensions in mm (in.) for the FlexiDome^{VF} low-impact, indoor surface mounting model

FlexiDome^{XT+} Impact-resistant, Indoor Flush Mounting Model



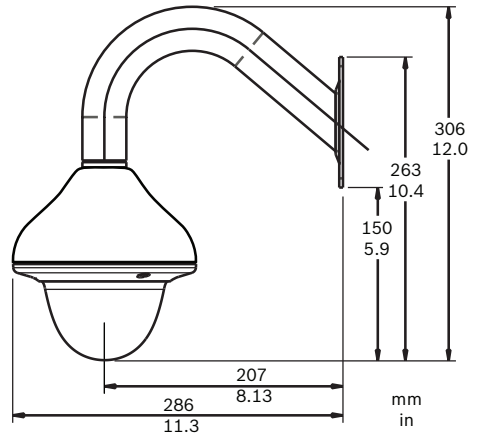
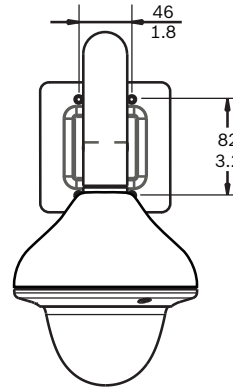
Dimensions in mm (in.)

VDA-455SMB–Hardened Surface Mount Box



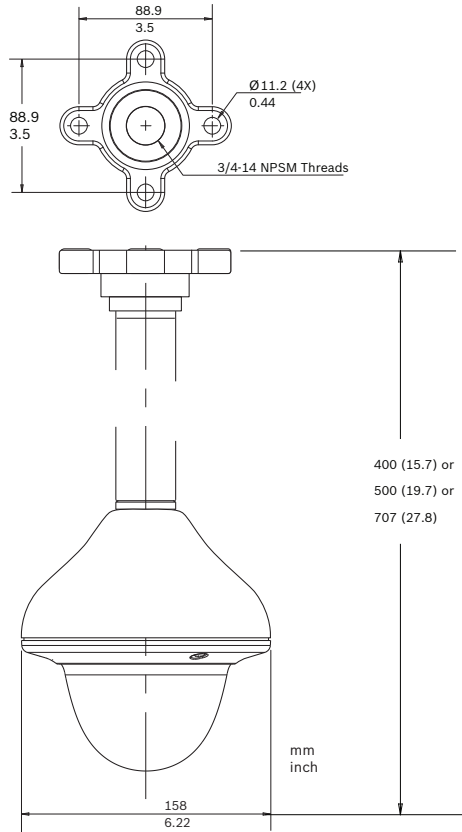
Dimensions in mm (in.) for the FlexiDome^{XT+} impact-resistant, surface mounting model

VDA-445WMT–Pendant Wall Mount



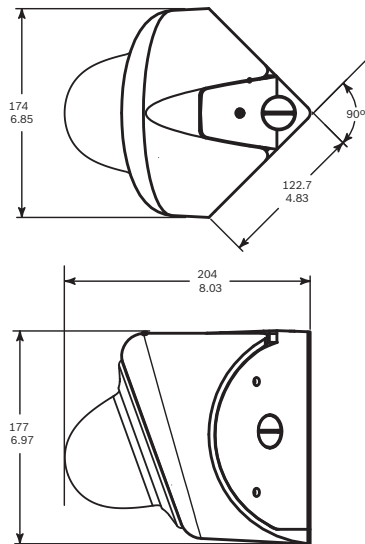
Dimensions in mm (in.) for wall mounting

VDA-455PMT—Pendant Pipe Mount



Dimensions in mm (in.) for pipe mounting

VDA-455CMT—Corner Mount



Dimensions in mm (in.) for corner mounting

Technical Specifications

Electrical

| | |
|-------------------------|---|
| Power Supply | |
| Rated Voltage | 12 VDC or 24 VAC, 50/60 Hz |
| Voltage Range | 10.8 to 39 VDC or 12 to 28 VAC, 45 to 65 Hz |
| Power Consumption | |
| VDM-345 and VDC-445 | 4 W |
| VDM-355 and VDC-455 | 4 W (6 W with heater operation) |
| Imager | Interline transfer CCD, 1/3-inch image format |
| Active Picture Elements | |
| PAL Models | 752 H x 582 V |
| NTSC Models | 768 H x 494 V |

Sensitivity (3200 K)

| Model | Usable Picture (30 IRE) | Usable Picture (50 IRE) | Full Video (100 IRE) |
|-------------------|-------------------------|-------------------------|----------------------|
| Monochrome | | | |
| VDM-345V03 | 0.09 lx (0.008 fc) | 0.2 lx (0.019 fc) | 0.78 lx (0.074 fc) |
| VDM-355V03 | | | |
| VDM-345V04 | 0.12 lx (0.011 fc) | 0.26 lx (0.024 fc) | 1.0 lx (0.095 fc) |
| VDM-355V04 | | | |

Color

| | | | | |
|------------|------------|--------------------|--------------------|------------------|
| VDC-445V03 | Color | 0.44 lx (0.041 fc) | 0.98 lx (0.091) | 3.9 lx (0.36) |
| VDC-455V03 | NightSense | 0.18 lx (0.016 fc) | 0.39 lx (0.036 fc) | 1.6 lx (0.15 fc) |
| VDC-445V04 | Color | 0.58 lx (0.053 fc) | 1.3 lx (0.12 fc) | 5.1 lx (0.48 fc) |
| VDC-455V04 | NightSense | 0.23 lx (0.021 fc) | 0.5 lx (0.048 fc) | 2.0 lx (0.19 fc) |
| VDC-445V09 | Color | 0.44 lx (0.041 fc) | 0.98 lx (0.091) | 3.9 lx (0.36) |
| VDC-455V09 | NightSense | 0.18 lx (0.016 fc) | 0.39 lx (0.036 fc) | 1.6 lx (0.15 fc) |

Horizontal Resolution

| | |
|------------------------|---|
| Color Models | 540 TVL |
| Monochrome Models | 570 TVL |
| Signal-to-noise Ratio | >50 dB |
| AGC | 20 dB (max) |
| Auto Black | On/off selectable |
| Electronic Shutter | Flickerless, on/off |
| NightSense | Auto, forced, off selectable |
| Sharpness Correction | Horizontal and vertical, symmetrical |
| Backlight Compensation | Center window weighting, off selectable |
| White Balance | Automatic sensing (2500 to 9000 K) and hold |
| Video Output | Composite video 1.0 Vpp, 75 Ohm |

| | |
|--|--|
| Synchronization | Internal or LineLock* |
| Connector | Flying leads (through the back) |
| * Line-lock (only when AC-powered) synchronizes the camera to the power line zero crossing for roll-free vertical interval switching. Vertical phase delay can be adjusted (from 0° to 358°) to allow vertical synchronization in multi-phase power installations. | |
| Optical | |
| Varifocal | Manual zoom and focus adjustment |
| Iris Control | Automatic iris control |
| Viewing Angle | |
| 2.6 to 6 mm | Wide: 98.5° x 75.3° (H x V) Tele: 48.1° x 36.2° (H x V) |
| 4 to 9 mm | Wide: 68° x 50.2° (H x V) Tele: 32.1° x 24.1° (H x V) |
| 3.7 to 12 mm | Wide: 76.1° x 55.8° (H x V) Tele: 23.8° x 17.9° (H x V) |
| 9 to 22 mm | Wide: 31.2° x 22.8° (H x V) Tele: 12.8° x 9.6° (H x V) |
| Mechanical | |
| Dimensions | See drawings |
| Weight | |
| VDM-345 and VDC-445 | 440 g (1.1 lb) |
| VDM-355 and VDC-455 | 740 g (1.63 lb) |
| Mounting | Flush on hollow surface with three (3) screws in a 4S electrical box |
| Color | White (RAL9010) trim ring with black inner liner |
| Adjustment Range | 360° pan, 90° tilt, ±90° azimuth |
| Dome Bubble | Polycarbonate, clear with UV blocking anti-scratch coating |
| Trim Ring | Vandal resistant models: aluminum Low impact models: polycarbonate |
| Environmental | |
| Operating temperature | |
| VDM-345 and VDC-445 | -10 °C to +45 °C (+14 °F to +113 °F) |
| VDM-355 and VDC-455 | -50 °C to +50 °C (-58 °F to +122 °F) (with heater 'ON') |
| Storage temperature | -40 °C to +70 °C (-40 °F to +158 °F) |
| Humidity | 5% to 93% relative humidity |
| Impact protection | IEC 60068-2-75 test Eh, 50 J; EN 50102, exceeding IK 10 (VDM-355 and VDC-455 models only) |

Ordering Information

| | |
|--|-----------------------|
| VDM-345V03-10 Indoor Monochrome Model 1/3-inch, B/WCCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white. | VDM-345V03-10 |
| VDM-345V03-10S Indoor Monochrome Model, Surface Mount 1/3-inch, B/WCCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount | VDM-345V03-10S |
| VDM-345V03-20 Indoor Monochrome Model 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white. | VDM-345V03-20 |
| VDM-345V03-20S Indoor Monochrome Model, Surface Mount 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount | VDM-345V03-20S |
| VDM-345V04-10 Indoor Monochrome Model 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/4-9 mm F1.6 Varifocal lens, white. | VDM-345V04-10 |
| VDM-345V04-10S Indoor Monochrome Model, Surface Mount 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/4-9 mm F1.6 Varifocal lens, white, surface mount | VDM-345V04-10S |
| VDM-345V04-20 Indoor Monochrome Model 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/4-9 mm F1.6 Varifocal lens, white. | VDM-345V04-20 |
| VDM-345V04-20S Indoor Monochrome Model, Surface Mount 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/4-9 mm F1.6 Varifocal lens, white, surface mount | VDM-345V04-20S |
| VDC-445V03-10 Indoor Color Model 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white. | VDC-445V03-10 |
| VDC-445V03-10S Indoor Color Model, Surface Mount 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount | VDC-445V03-10S |
| VDC-445V03-20 Indoor Color Model 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white | VDC-445V03-20 |
| VDC-445V03-20S Indoor Color Model, Surface Mount 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount | VDC-445V03-20S |

Ordering Information

| | |
|--|-----------------------|
| VDC-445V04-10 Indoor Color Model 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/4-9 mm F1.6 Varifocal lens, white | VDC-445V04-10 |
| VDC-445V04-10S Indoor Color Model, Surface Mount 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/4-9 mm F1.6 Varifocal lens, white, surface mount | VDC-445V04-10S |
| VDC-445V04-20 Indoor Color Model 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/4-9 mm F1.6 Varifocal lens, white | VDC-445V04-20 |
| VDC-445V04-20S Indoor Color Model, Surface Mount 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/4-9 mm F1.6 Varifocal lens, white, surface mount | VDC-445V04-20S |
| VDM-355V03-10 Vandal Resistant Monochrome Model 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white | VDM-355V03-10 |
| VDM-355V03-10S Vandal Resistant Monochrome Model, Surface Mount 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount | VDM-355V03-10S |
| VDM-355V03-20 Vandal Resistant Monochrome Model 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white | VDM-355V03-20 |
| VDM-355V03-20S Vandal Resistant Monochrome Model, Surface Mount 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount | VDM-355V03-20S |
| VDM-355V04-10 Vandal Resistant Monochrome Model 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/3.7-12 mm F1.6 Varifocal lens, white | VDM-355V04-10 |
| VDM-355V04-10S Vandal Resistant Monochrome Model, Surface Mount 1/3-inch, B/W CCIR, 570 TVL, 12 VDC/24 VAC, 50 Hz, w/3.7-12 mm F1.6 Varifocal lens, white, surface mount | VDM-355V04-10S |
| VDM-355V04-20 Vandal Resistant Monochrome Model 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/3.7-12 mm F1.6 Varifocal lens, white | VDM-355V04-20 |
| VDM-355V04-20S Vandal Resistant Monochrome Model, Surface Mount 1/3-inch, B/W EIA, 570 TVL, 12 VDC/24 VAC, 60 Hz, w/3.7-12 mm F1.6 Varifocal lens, white, surface mount | VDM-355V04-20S |

Ordering Information

| | |
|---|-----------------------|
| VDC-455V03-10 Vandal Resistant Color Model 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white | VDC-455V03-10 |
| VDC-455V03-10S Vandal Resistant Color Model, Surface Mount 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount | VDC-455V03-10S |
| VDC-455V03-20 Vandal Resistant Color Model 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white | VDC-455V03-20 |
| VDC-455V03-20S Vandal Resistant Color Model, Surface Mount 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/2.6-6 mm F1.4 Varifocal lens, white, surface mount | VDC-455V03-20S |
| VDC-455V04-10 Vandal Resistant Color Model 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/3.7-12 mm F1.6 Varifocal lens, white | VDC-455V04-10 |
| VDC-455V04-10S Vandal Resistant Color Model, Surface Mount 1/3-inch, PAL color, 540 TVL, 12V DC/24 VAC, 50 Hz, w/3.7-12 mm F1.6 Varifocal lens, white, surface mount | VDC-455V04-10S |
| VDC-455V04-20 Vandal Resistant Color Model 1/3-inch, NTSC color, 540 TVL, 12V DC/24 VAC, 60 Hz, w/3.7-12 mm F1.6 Varifocal lens, white | VDC-455V04-20 |
| VDC-455V04-20S Vandal Resistant Color Model, Surface Mount 1/3-inch, NTSC color, 540 TVL, 12V DC/24 VAC, 60 Hz, w/3.7-12 mm F1.6 Varifocal lens, white, surface mount | VDC-455V04-20S |
| VDC-445V09-10 Indoor Color Model 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white. | VDC-445V09-10 |
| VDC-445V09-20 Indoor Color Model 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white. | VDC-445V09-20 |
| VDC-445V09-10S Indoor Color Model, Surface Mount 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white, surface mount. | VDC-445V09-10S |

| Ordering Information | | Ordering Information | |
|--|-----------------------|--|--------------------|
| VDC-445V09-20S Indoor Color Model, Surface Mount 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white, surface mount. | VDC-445V09-20S | UPA-2450-50 Power Supply 220 VAC, 50 Hz, 24 VAC, 50 VA Out | UPA-2450-50 |
| VDC-455V09-10 Vandal Resistant Color Model 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white. | VDC-455V09-10 | VDA-455TBL Tinted bubble Tinted bubble for FlexiDome series | VDA-455TBL |
| VDC-455V09-20 Vandal Resistant Color Model 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white. | VDC-455V09-20 | VDA-455CBL Clear bubble Clear Bubble for FlexiDome series | VDA-455CBL |
| VDC-455V09-10S Vandal Resistant Color Model, Surface Mount 1/3-inch, PAL color, 540 TVL, 12 VDC/24 VAC, 50 Hz, w/9-22 mm F1.4 Varifocal lens, white, surface mount. | VDC-455V09-10S | Software Options | |
| VDC-455V09-20S Vandal Resistant Color Model, Surface Mount 1/3-inch, NTSC color, 540 TVL, 12 VDC/24 VAC, 60 Hz, w/9-22 mm F1.4 Varifocal lens, white, surface mount. | VDC-455V09-20S | VP-CFGSFT Configuration Software for cameras using Bilinx, includes VP-USB Adaptor | VP-CFGSFT |
| Accessories | | | |
| VDA-445DMY-S Flexidome surface mounted indoor dummy camera | VDA-445DMY-S | | |
| VDA-445SMB Surface mount box, indoor for VDM-345 and VDC-445 | VDA-445SMB | | |
| VDA-455SMB Surface mount box, high impact for VDM-345, VDC-445, VDM-355, VDC-455, VDC-485 and VDN-495 (not for FlexiDome VF). | VDA-455SMB | | |
| VDA-445WMT Wall mounting bracket | VDA-445WMT | | |
| VDA-455PMT Pendant pipe mount | VDA-455PMT | | |
| VDA-455CMT Corner mounting bracket for interior corner | VDA-455CMT | | |
| VDA-455UTP Adaptor for UTP twisted pair output | VDA-455UTP | | |
| S1460 Service/Monitor Cable for FlexiDome analog and IP (2.5 mm connector to BNC), 1 m | S1460 | | |
| UPA-1509-60 Power Supply 120 VAC, 60 Hz, 15 VDC, 9 VA Out | UPA-1509-60 | | |
| UPA-1509-50 Power Supply 220 VAC, 50 Hz, 15 VDC, 9 VA Out | UPA-1509-50 | | |
| UPA-2420-50 Power Supply 220 VAC, 50 Hz, 24 VAC, 20 VA Out | UPA-2420-50 | | |

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