



VCC-9400P Colour (PAL)  
VCC-ZM400P Colour (PAL)

DIGITAL

1/4" Colour CCD DSP  
High-resolution  
Day / Night Cameras

Day / Night  
Speed Dome Camera  
VCC-9400P



DAY and NIGHT  
One unit does both

520 TV Lines of  
Horizontal Resolution  
352X  
Power Zoom Captures  
Up-Close Details



Day / Night  
Auto Focus Zoom Camera  
VCC-ZM400P

## VCC-9400P / VCC-ZM400P

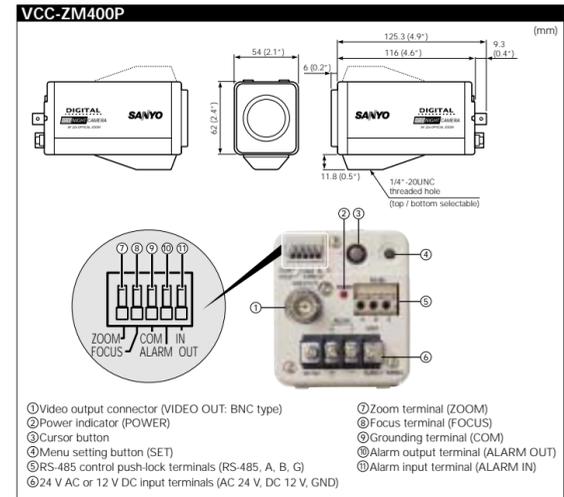
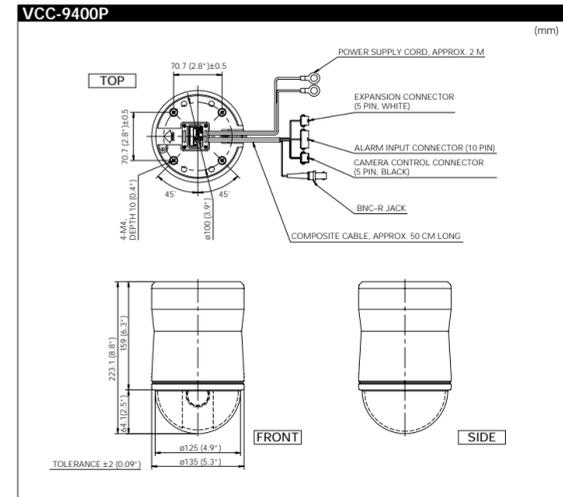
### Specifications

| MODEL                            | VCC-9400P   |
|----------------------------------|---|
| Scanning system                  | PAL standard (625 lines, 50 fields / sec.)  |
| Image sensor                     | 1/4" interline transfer method CCD  |
| Picture elements                 | Total: 795 (H) x 596 (V), Effective: 752 (H) x 582 (V)  |
| Horizontal resolution            | Over 520 TV lines   |
| Lens                             | 22 power zoom lens, f = 3.6 to 79.2 mm (F1.6 to 3.8), Electronic zoom and gearing, zoom speed setting possible  |
| Electronic zoom                  | 16 power (combined with optic zoom give 352 power max.), zoom magnification setting possible  |
| Auto focus                       | AUTO / ONE-PUSH / MANUAL, AF area setting possible (3 sizes)  |
| Iris control                     | AUTO / MANUAL   |
| Synchronization method           | Internal synchronization / Line lock  |
| Minimum illumination             | Colour mode:<br>1.2 lx (F1.6) at max. AGC gain, 0.04 lx (F1.6) at x32 electronic sensitivity boost [50 IRE]<br>0.5 lx (F1.6) at max. AGC gain, 0.015 lx (F1.6) at x32 electronic sensitivity boost [20 IRE]<br>B/W mode:<br>0.06 lx (F1.6) at max. AGC gain, 0.002 lx (F1.6) at x32 electronic sensitivity boost [50 IRE] |
| S/N                              | More than 48 dB   |
| Backlight compensation           | Multi-zone photometry / 5 section photometry / Multi-zone masking   |
| Electronic shutter               | Fast shutter speed mode: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, Slow shutter speed mode: x2, x4, x8, x16, x32  |
| Electronic sensitivity boost     | AUTO / OFF, works with auto iris  |
| White balance                    | ATW / AWC / MWB   |
| Automatic gain control           | ON / OFF / MANUAL   |
| Motion detector                  | ON / OFF, individual settings possible  |
| Aperture                         | H / V setting possible  |
| Privacy masking                  | ON / OFF, max. 8 masks (wide view screen, 1 screen max. 4 masks), password lockable   |
| Alarm input/output               | 8 external inputs, 2 external outputs,<br>Motion detector with external alarm AND/OR output options   |
| Mirror image effect              | Horizontally (H), vertically (V), horizontally and vertically (VH)  |
| Character display                | ON / OFF, screen titles and camera ID max. 8 characters each  |
| View setting                     | 9 settings  |
| Auto mode                        | Sequential pan / Auto pan / Tour (2 tour recordings, 30 seconds each)   |
| Rotation range                   | Horizontal: 360° endless, Vertical: 0 to 180° (digital auto flip)   |
| Rotation speed                   | Horizontal: 360°/second (preset), 0.5 to 120° (manual),<br>Vertical: 360°/second (preset), 0.5 to 120° (manual)   |
| Preset position setting          | 64 settings   |
| Communications                   | Coaxial control, RS-485   |
| Operational temperature/humidity | Temperature: -10° to +50°C [+14° to +122°F], Humidity: below 90% RH   |
| Power source                     | 24 VAC, 50 Hz   |
| Power consumption                | 15W   |
| Weight                           | 2.5 kg [80.7 oz]  |

| MODEL                            | VCC-ZM400P  |
|----------------------------------|---|
| Scanning system                  | PAL standard (625 lines, 50 fields / sec.)  |
| Image sensor                     | 1/4" interline transfer method CCD  |
| Picture elements                 | Total: 795 (H) x 596 (V), Effective: 752 (H) x 582 (V)  |
| Horizontal resolution            | Over 520 TV lines   |
| Lens                             | 22 power zoom lens, f = 3.6 to 79.2 mm (F1.6 to 3.8), Electronic zoom and gearing, zoom speed setting possible  |
| Electronic zoom                  | 16 power (combined with optic zoom give 352 power max.), zoom magnification setting possible  |
| Auto focus                       | AUTO / ONE-PUSH / MANUAL, AF area setting possible (3 sizes)  |
| Iris control                     | AUTO / MANUAL   |
| Synchronization method           | Internal synchronization / Line lock  |
| Minimum illumination             | Colour mode:<br>1.2 lx (F1.6) at max. AGC gain, 0.04 lx (F1.6) at x32 electronic sensitivity boost [50 IRE]<br>0.5 lx (F1.6) at max. AGC gain, 0.015 lx (F1.6) at x32 electronic sensitivity boost [20 IRE]<br>B/W mode:<br>0.06 lx (F1.6) at max. AGC gain, 0.002 lx (F1.6) at x32 electronic sensitivity boost [50 IRE] |
| S/N                              | More than 48 dB   |
| Backlight compensation           | Multi-zone photometry / 5 section photometry / Multi-zone masking   |
| Electronic shutter               | Fast shutter speed mode: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, Slow shutter speed mode: x2, x4, x8, x16, x32  |
| Electronic sensitivity boost     | AUTO / OFF, works with auto iris  |
| White balance                    | ATW / AWC / MWB   |
| Automatic gain control           | ON / OFF / MANUAL   |
| Motion detector                  | ON / OFF, individual settings possible  |
| Aperture                         | H / V setting possible  |
| Privacy masking                  | ON / OFF, max. 4 masked locations, password lock possible   |
| Alarm input/output               | 1 alarm input (for external alarm switch), 1 alarm output (for sending signal to system controller or alarm detection device such as a buzzer)  |
| Mirror image effect              | Horizontally (H), vertically (V), horizontally and vertically (VH)  |
| Character display                | ON / OFF, camera ID max. 16 characters  |
| View setting                     | 9 settings  |
| Communications                   | Coaxial control, RS-485   |
| Operational temperature/humidity | Temperature: -10° to +50°C [+14° to +122°F], Humidity: 35 to 90% RH   |
| Power source                     | 24 VAC, 50 Hz / 12 to 15 VDC  |
| Power consumption                | 4.5W  |
| Weight                           | 380g [12.26 oz]   |

NOTE: Specifications subject to change without notice.

### Dimensions



**Caution:** Please consult the instruction manual to ensure safe and proper operation of the product.

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### Privacy Masking

When there is a house or even an object as small as a window within the camera frame, it is possible to mask the area so that it will not appear on the monitor screen to protect other people's privacy. Up to 4 rectangular masks of arbitrary size can be set per screen (or as many as 8 using the VCC-9400P when screens are stacked). These masked areas may be protected with passwords (maximum four digits).



Note: Images here may differ from actual camera-generated images.

### Easy On-screen Setup and Customizing of Default Settings

Both the VCC-9400P and VCC-ZM400P can be programmed on-screen and operated using a controller with SANYO's Security Serial Protocol (SSP). Moreover, as an added bonus, with VCC-ZM400P you can even program and customize default and other settings using the cursor and menu setting buttons integrated into the rear panel of the camera.



### Intelligent Digital Motion Detector

The intelligent digital motion detector enables reliable and accurate motion detection by analysing the 'magnitude of movement' and the 'size of object' and other factors from changes in picture brightness. When a moving object is detected, the VCC-9400P can send an alarm signal and/or switch to optical zoom of 1.4X to 6X. Scene elements such as swaying trees and flickering lights, etc., can also be masked to prevent triggering of false alarms.



Zoom range from 1.4X to 6X

Note: Images here may differ from actual camera-generated images.

### 32X Sensitivity Boost for Minimum Illumination of 0.002 Lx

While achieving 0.06 lx minimum subject illumination at maximum gain, sensitivity can be further heightened to 32X for 0.002 lx minimum illumination when the sensitivity boost function is activated at 50 IRE (F1.6). [B/W mode]

### Built-in electronic shutter

A high-speed electronic shutter that is internally switchable for eight modes using a DIP switch allows adjustment increments between 1/50 sec. to 1/10,000 sec.

### Other useful features

- Adjustable gamma correction and aperture settings
- Display of assignable camera ID and titles (16 characters max.)



# Greater Precision and Dependability in Surveillance Technology

## Quality Features the SANYO Brand Is Known For. Extended Features Lending Greater Flexibility.

Super High Resolution of More than **520** TV Lines



With a built-in auto-focus zoom lens, the high-performance VCC-9400P and VCC-ZM400P allow for greater accuracy in monitoring of activities in a wide range of environments. This is combined with the superior clarity and sharpness of digital imaging achieved by SANYO's newly developed digital signal processing system for an industry-leading horizontal resolution of 520 TV lines.

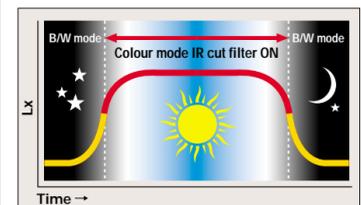
Maximum **352X** Zoom Function in the Top Group of Its Class



The 22X optical zoom and 16X digital zoom can be combined for close-ups at a magnification power of 352X. This allows even distant subjects to be observed in detail, enabling one camera to monitor a wider area.

## DAY / NIGHT Both day and night use in the same camera

Proprietary auto-switching infrared cut filter



As the camera senses the amount of light in the viewing area, it automatically turns the IR CUT FILTER on and off as required. As more precise colour reproduction is

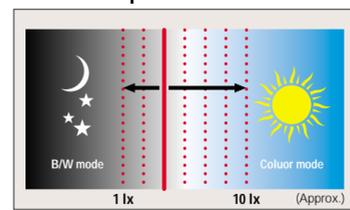
essential in the colour operation mode, the filter is turned on. In the B/W mode, clear, bright images (to a minimum required illumination of 0.04 lx) are produced by switching the filter off and increasing light sensitivity.

Intelligent selectable switching for colour to B/W

The camera's sensitivity to exposed light allows it to automatically switch from colour to B/W mode. The switchover point is selectable within the range of 1-10 lx (approx.) as required for specific applications, and the user is able to set the switchover point easily by OSD menu.

Effectively engineering all the capabilities of two CCD cameras into one, the PAL system VCC-9400P / VCC-ZM400P are ideal 'all-in-one' cost-effective solutions for all surveillance needs.

Switchover point



## 3 Methods of Intelligent Backlight Compensation

Three backlight compensation methods (multi-zone photometry, 5 section photometry and multi-zone masking) are preset selectable for measurement of center, peripheral or background elements of individual scenes providing sharp, true-colour images in any light situation.



- 1) Multi-zone photometry (48 sections)**  
With multi-zone mode settings, light is measured in areas in the center and at the bottom of the image.
- 2) Five-section photometry mode setting**  
With the 5-section mode settings, the screen is divided into 5 sections to which the user assigns 8-scale weights so that optimum picture brightness is maintained by giving priority to the area with higher weight.
- 3) Multi-zone masking system (48 sections)**  
Areas that do not have photometric measurement performed can be set within a 48-zone grid. The light intensity for the designated area is measured, and the image brightness is adjusted accordingly.



Illustration of multi-zone masking system

## Functions Specific to the VCC-9400P Agile Camera Movements Realizing 360-degree Surveillance



### 64 Preset Positioning and Sequential Monitoring Functions

Up to 64 preset positions (with different settings for pan, tilt, zoom and focus) can be registered for a single VCC-9400P. A simple key entry to a controller allows you to easily switch to the scene you want to monitor. Moreover, the camera can be programmed to monitor up to 64 preset positions in sequential order (including separate settings for white balance, iris and motion sensing for each preset). Auto-pan monitoring can be also be programmed by designating two end points on a horizontal plane.



Panning in random order between preset positions is also possible.

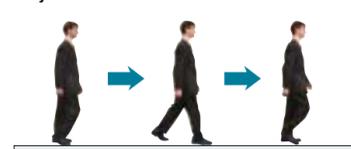
### Auto Flip Function for Monitoring Moving Objects Directly Below

The camera within the dome will automatically flip the image (top/bottom or left/right) into an upright position using a digital processing technique as it tracks a subject passing directly below the dome. This feature allows uninterrupted monitoring of moving objects by simply rotating the camera 180° vertically.

Subject captured on monitor



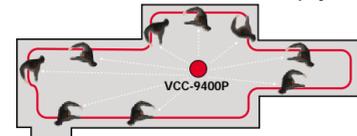
Subject movement



### Tour Mode Stores and Replicates Manually Operated Patrols

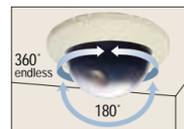
Capable of storing up to 30 or 60 seconds of manual pan, tilt, and zoom operations in memory and recreate the same movement pattern as sequential setting. (The intelligent digital motion detector does not function while the camera is operating in this mode.)

Illustration of movements traced on a display floor.



### Variable Speed Pan and Tilt

Providing endless panning over 360° in the horizontal plane and 180° of tilt in the vertical, the camera can be moved at variable speeds (0.1° to 120° per second for horizontal and vertical planes) by joystick or to pan/tilt to scenes designated for monitoring. When preset positions have been entered, it offers the capability to swiftly pan tilt at a maximum speed of 360° per second between monitoring positions, or immediately respond by showing the location of an external sensor that has triggered an alarm.



### 8 Alarm Inputs

The VCC-9400P comes with eight alarm inputs. Alarm signals will activate the camera to automatically focus on preset locations corresponding to the alarm received.

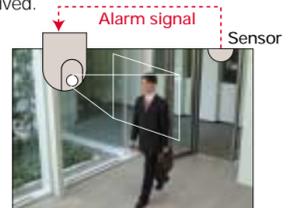


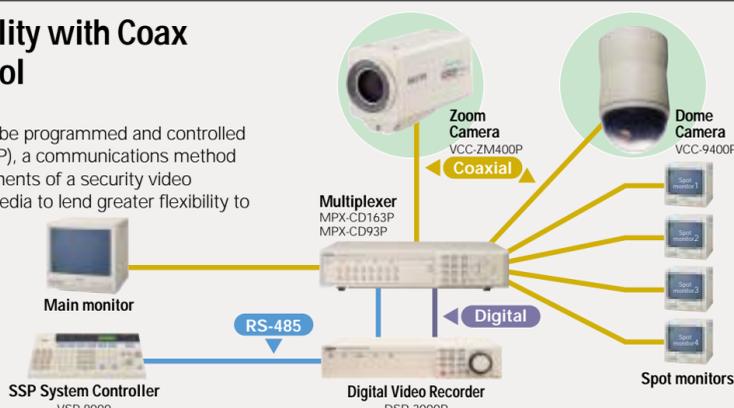
Illustration of VCC-9400P response to external sensor

## Greater System Flexibility with Coax and Twisted-pair Control

### SSP Control System

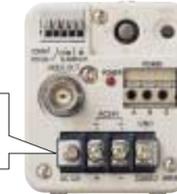
The VCC-9400P and VCC-ZM400P can be programmed and controlled via SANYO Security Serial Protocol (SSP), a communications method for interfacing between various components of a security video system, using different transmission media to lend greater flexibility to the configuration of surveillance and monitoring systems.

These cameras can thus be effectively integrated into systems for desktop control using next-generation or existing peripheral devices connected by coaxial and/or twisting pair cabling.



## Specific to the VCC-ZM400P AC / DC Power Source Compatibility

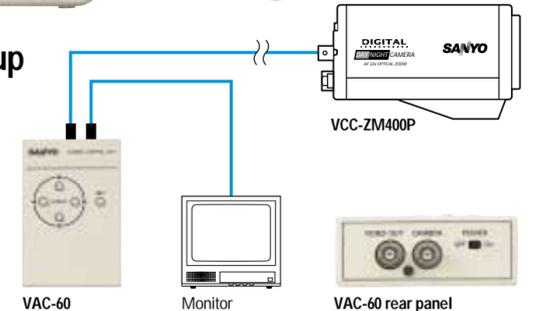
Input terminals on the VCC-ZM400P's rear panel allow you to run it on either 24 V alternating or 12 V direct current power sources. Eliminates the need for specialized electrical work at the point of surveillance to help enable simpler and speedier installation.



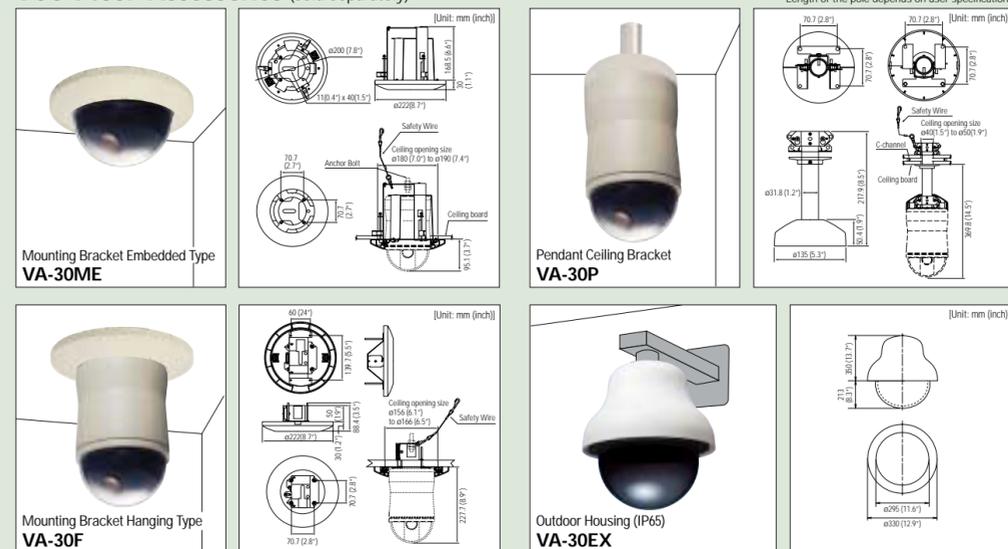
24 V AC / 12 V DC Dual Power Source Operation

### Compatible with Camera Set-up Unit VAC-60 (Sold separately)

Remote set-up makes you feel you have the camera right beside your monitor. Enables setting up of the VCC-ZM400P for all on-screen menu items (intelligent digital motion detector, backlight compensation, white-balance, etc.) For better picture quality, disconnect this unit after settings are completed.



### VCC-9400P Accessories (sold separately)



### Outdoor Housing Brackets

