



# User Manual

Code: DH-HAC-HDW2231EMP-02

AHD, HD-CVI, HD-TVI, PAL VANDALPROOF CAMERA **DH-HAC-HDW2231EMP-02** 80B - 1080p  
2.8 mm DAHUA

## Warning!

Please read the user manual included in this work as it contains important information related with safety of installation and use of the device.

Only persons who read the user manual may use the device.

The user manual must be kept because it may be required in the future. The device is to be used exclusively for purposes specified in this user manual.

The device must be unpacked prior to starting-up. After removing the packaging make sure the device is in working order.

If the product has defects, it should not be used until it is repaired.

The product is intended for use at home and commercial use and may not be used for other than intended use.

The manufacturer is not liable for damages resulting from not adhering to the rules contained in the user manual, therefore, we recommend to follow the aforementioned safety rules for operation and maintenance of the device. In this way you will ensure yourself safety and avoid causing damage to the device.

The manufacturer and the supplier are not liable for losses or damages arising out of the product, including financial or intangible losses, loss of profits, income, data, pleasure from use of the product or other products related with it - indirect, incidental or consequential loss or damage. The above provisions apply whether the loss or damage concerns:

1. Deterioration of quality or the lack of operation of the products or products related with it due to damage as well as the lack of access to the product when it is undergoing repair, which results in stoppage the loss of user's time or a break in business activity;
2. Improper results of operation of the product or products related with it;
3. It applies to losses and damages according to any legal category, including negligence and other losses, termination of a contract, expressed or implied guarantee and strict liability (even if the manufacturer or the supplier was notified about the possibility of occurrence of such damages).

### Safety measures:

Particular attention at designing was directed to quality standards of the device where ensuring safety of operation is the most important factor.

The device must be secured against contact with caustic, staining and viscous fluids.

The device was designed in such a way that it restarts operation when power supply is restored after a break.

**Attention! We recommend using protections to further protect the device from possible overvoltages in installations. Surge protectors are effective protection against accidental pass to the device voltages higher than the rated. Damages caused by pass the voltages higher than specified in manual, are not under warranty.**

Turn off the device before transporting it.

Prior to connecting the device to a power source check whether the supplied voltage is consistent with rated voltage specified in the user manual.

### Proper product disposal:

A marking of a crossed out waste bin indicates that the product may not be disposed together with other household waste in the entire EU. To avoid possible damage to the natural environment of health due to uncontrolled waste disposal, therefore, it should be handed over for recycling, propagating in this way sustainable use of natural resources.

To return a worn-out product, use a collection and disposal system of this type of equipment or contact a seller from whom it was purchased. He will then be recycled in an environmentally-friendly way.

Megapixel camera with 1/2.9" CMOS sensor and AHD / HD-CVI / HD-TVI / PAL. Thanks to the "Starlight" technology used, the camera only needs very low lighting to obtain a clear color image.

The AHD / HD-CVI / HD-TVI interface allows to transmission of analog video signal via coaxial cable in 1080p resolution. It enables the transmission of HD resolution images for even 500 m distance with keeping the low costs of the installation. During transmission there are no delays and is maintained the original, high quality image.

In the case of video transmission using a twisted pair cable and matching transformers (balun), be aware of the possibility of signal reflections and interfering signals.

Camera is according to IP67 Index of Protection norm. Attention! The camera default setting is HD-CVI standard. To change the camera standard you need use the PFM820 controller, available separately.



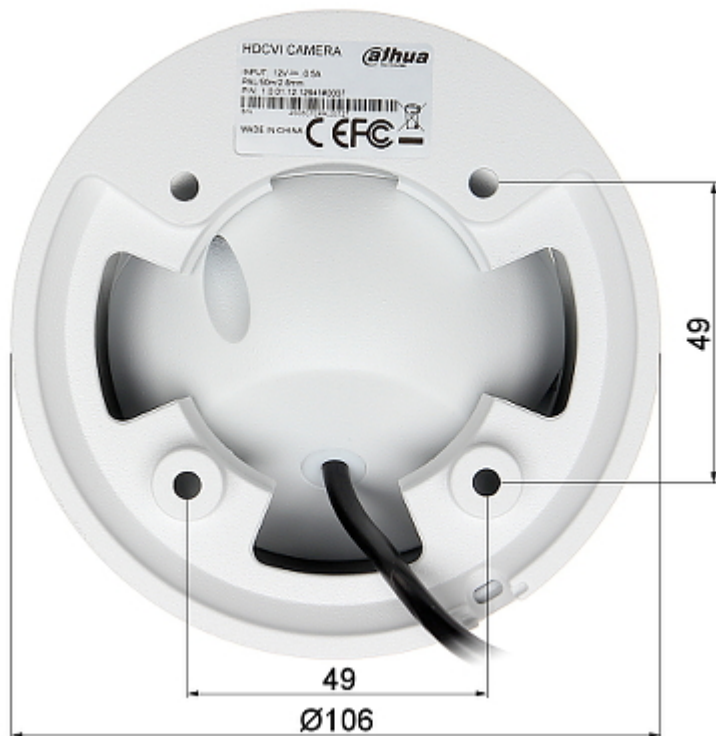
|                                  |   |
|----------------------------------|---|
| Standard:                        | HD-CVI, HD-TVI, AHD, PAL  |
| Sensor:                          | 1/2.8 " CMOS  |
| Matrix size:                     | 2.1 Mpx   |
| Resolution:                      | 1920 x 1080 - 1080p ,<br>1280 x 720 - 720p ,<br>960 x 576 - 960H, PAL   |
| Range of IR illumination:        | 50 m  |
| IR illuminator power adjustment: | Automatic   |
| Lens:                            | 2.8 mm  |
| View angle:                      | <ul style="list-style-type: none"> <li>• 110 ° (manufacturer data)</li> <li>• 107 ° (our tests result)</li> </ul> |
| IR illuminator support:          | ICR - Movable InfraRed filter   |
| S/N ratio:                       | > 65 dB   |
| Video output:                    | HD-CVI / HD-TVI / AHD / PAL, 1 Vpp / 75 Ω   |
| Audio:                           | Microphone built-in - It can operate in CVI mode only   |

|                        |   |
|------------------------|---|
| Main features:         | <ul style="list-style-type: none"> <li>• WDR - 120 dB - Wide Dynamic Range</li> <li>• 2D-DNR / 3D-DNR - Digital Noise Reduction</li> <li>• Sense-UP - (Slow Shutter) - Increase the sensor sensitivity</li> <li>• F-DNR (Defog) - Reduction of image noise caused by precipitation</li> <li>• ICR - Movable InfraRed filter</li> <li>• F-DNR (Defog) - Reduction of image noise caused by precipitation</li> <li>• BLC/HLC - Back Light / High Light Compensation</li> <li>• Auto White Balance</li> <li>• AGC - Automatic Gain Control</li> <li>• Mirror - Mirror image</li> <li>• Motion Detection - max. 4 zones</li> <li>• Privacy zones - max. 8</li> <li>• Sharpness - sharper image outlines</li> <li>• Mirror - Mirror image</li> </ul> |
| OSD menu:              | OSD menu available via DAHUA recorder   |
| Power supply:          | 12 V DC / 320 mA  |
| Power consumption:     | ≤ 3.7 W   |
| Housing:               | Dome, Metal   |
| Color:                 | White   |
| Vandal-proof:          | ✓   |
| "Index of Protection": | IP67  |
| Operation temp:        | -40 °C ... 60 °C  |
| Weight:                | 0.426 kg  |
| Dimensions:            | Ø 106 x 94 mm   |
| Manufacturer / Brand:  | DAHUA   |
| Guarantee:             | <b>3 years</b>  |

Camera is out from clamping ring:



Mounting side view:



In the kit:



PACKAGE

Dimensions (L x W x H): 0x0x0 mm

Gross Weight: 0 kg