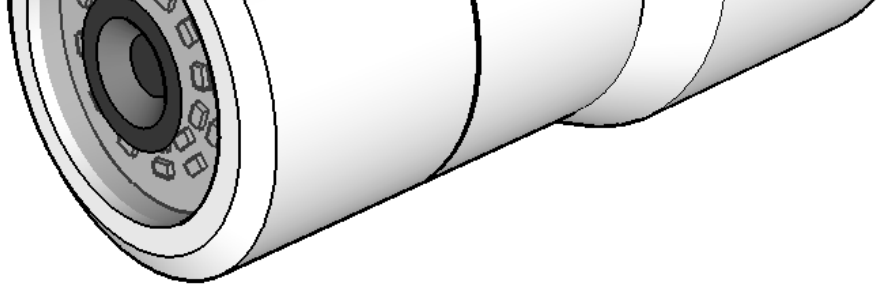


IRIS090-IR

Compact Marine-grade stainless steel camera

User Guide

Contents:

Warnings & Regulatory Information

Do not use harsh chemicals or cleaning solvents to clean the device.

Do not attempt to open the device.

Unauthorized modifications or attachments could damage the device and may violate regulations governing radio devices.

Avoid dropping, knocking or shaking the device. Rough handling can break internal circuit boards and fine mechanics.

Observe correct polarity when connecting power and data. Failure to do so could result in damage to the unit.

Disposal of Waste Equipment by Users in Private Household in the European Union.

This symbol on the product or its packaging indicates that it must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling please contact your local city office, your household waste disposal service or the shop where you purchased the product.

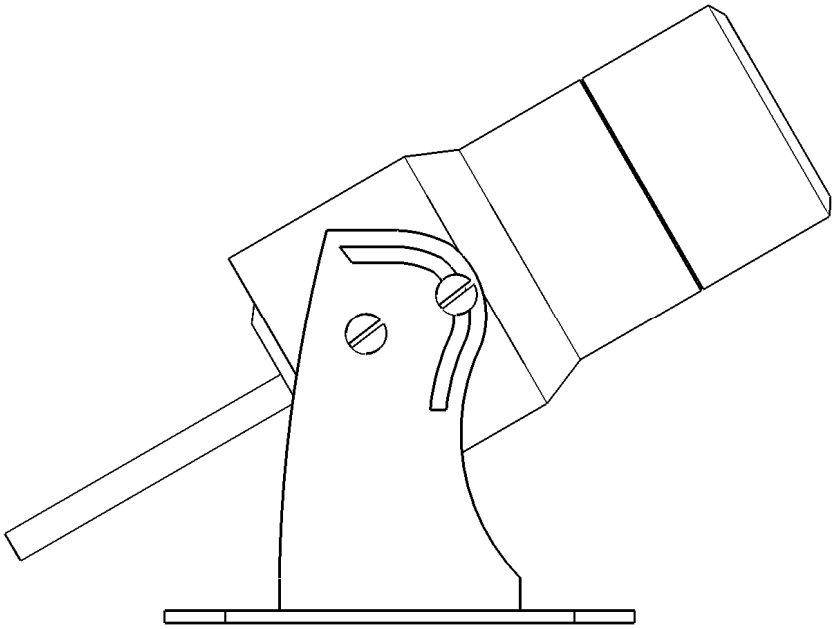
This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Re-orientate or relocate the receiving antenna; Increase the separation between the equipment and the receiver, connect the equipment to an outlet on a different circuit from that to which the receiver is connected; consult the dealer or an experienced radio / TV technician for help.

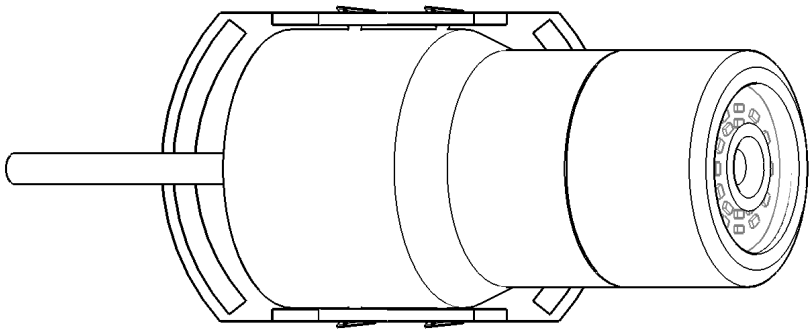
We hereby declare that the product is in compliance with the essential requirements and other relevant provisions of European Directive 1999/5/EC (Radio and telecommunications terminal equipment Directive).

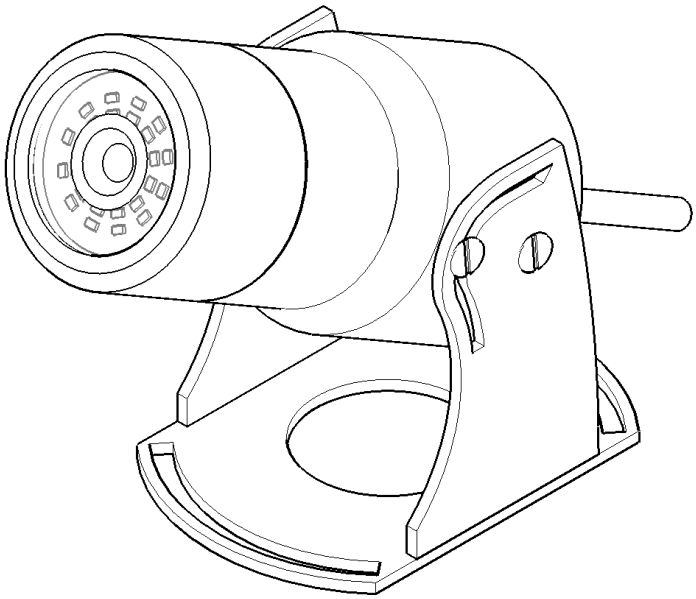
Introduction

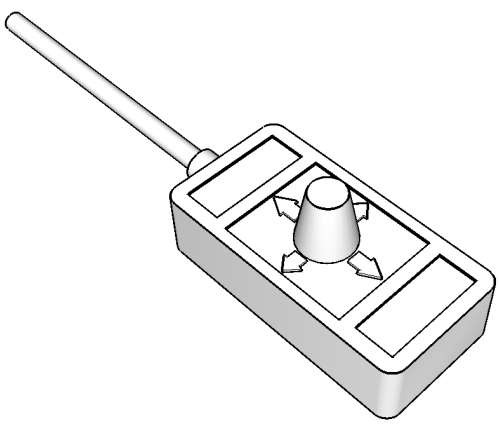
The IRIS066 is a high resolution fixed mini-dome camera and features:

- A316 Marine Grade Stainless Steel Housing
- High Resolution 700TVL Sony Super HAD II Camera Module
- 24 Infra Red LED's for Night Visibility - IR Range around 45~50 feet
- 2.3mm Lens provides 124˚ HFOV
- Day / Night Operation - Camera switches to mono in low light for improved image clarity
- OSD Menu Driven Setup
- Dynamic Noise Reduction
- Wide Dynamic Range Settings
- Standard / Mirror Switchable
- Compatible with Garmin, Raymarine, Furuno, Simrad, Hummingbird
- Compact Form Factor: ø49mm x 114mm
- IP68 Waterproof
- Available in NTSC & PAL Video Systems









The IRIS090-IR is designed to be ceiling, floor or wall / bulk-head mounted and is affixed using the supplied mounting screws to the required surface.

Please use suitable cutting tools and appropriately sized drill bits for the mounting holes

1. Adjust then horizontal viewing angle using the slotted holes in the bracket before the mounting screws are fixed.

2. Loosen up the screws attaching the camera to the bracket to adjust the viewing angle and then tighten up all screws to fix the camera in position and secure the bracket to the wall or ceiling.

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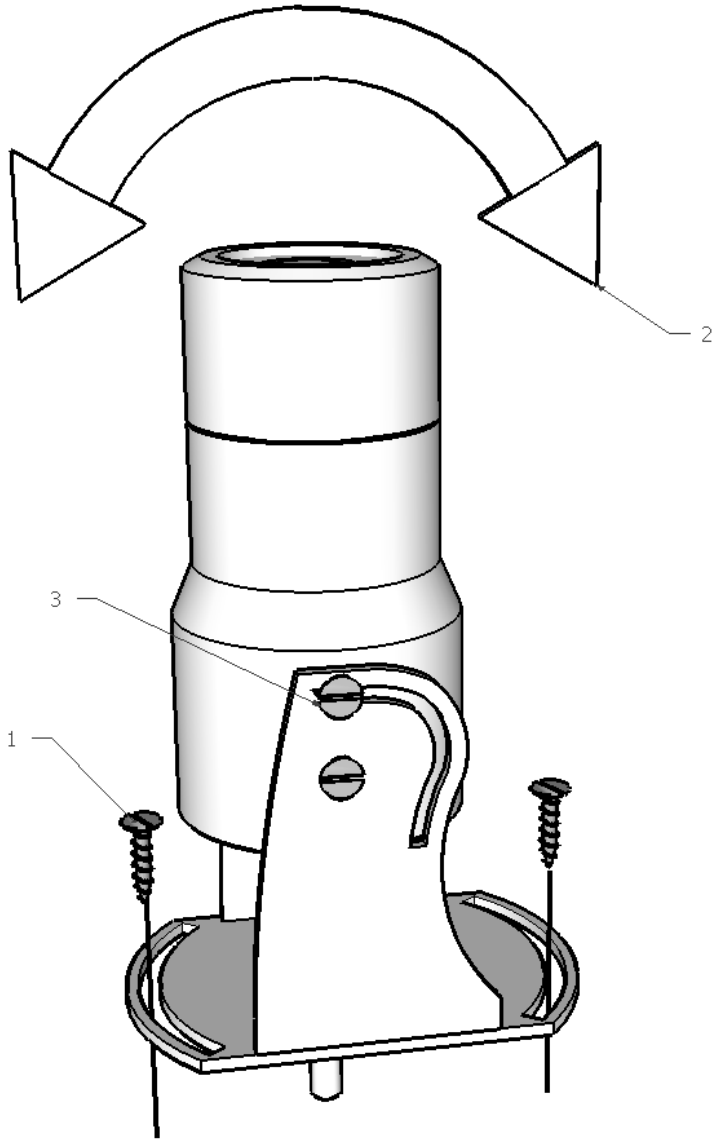


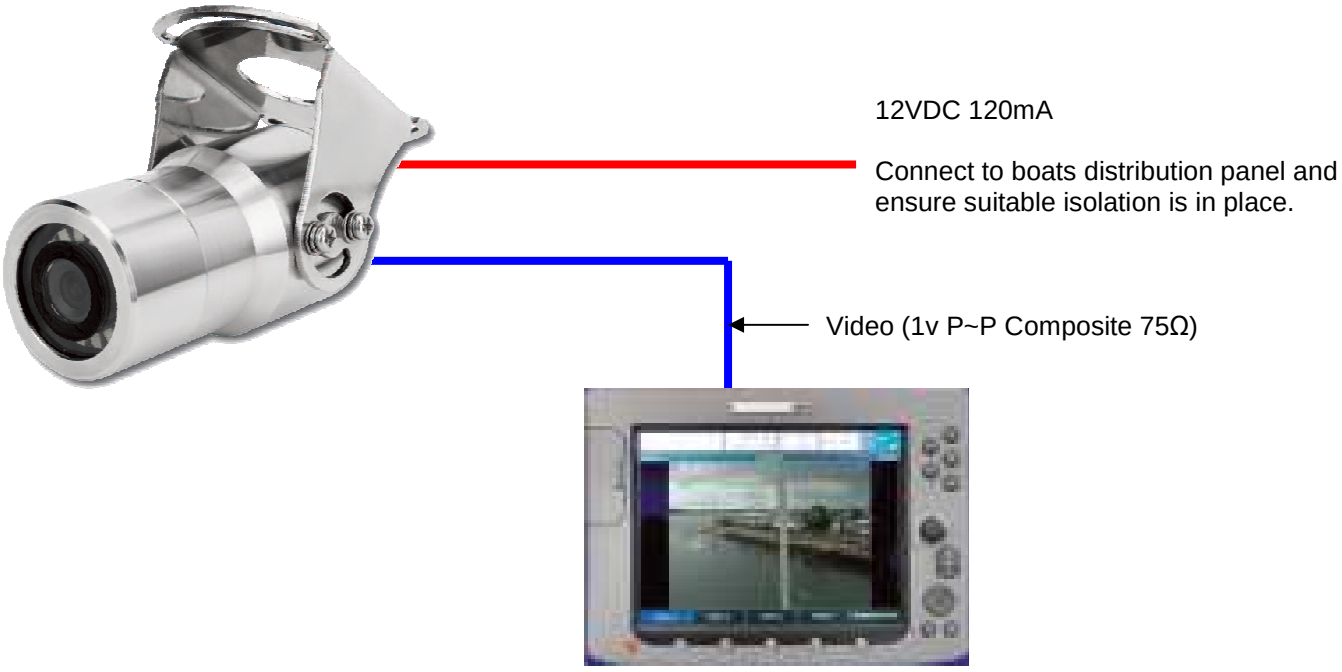
Power and Data Connections

Power your unit from a dedicated fuse / breaker rated at 12VDC / 500mA. The unit operates when power to the breaker / fuse is applied. Ensure suitably rated cable is used to handle the required current and voltage.

The IRIS090-IR camera is fitted with a cable tail which has a 2.1mm DC Jack for the power and a female BNC connector for the video signal. The polarity of the power connection is centre pin = +12V, connector body = Ground.

Use a suitable coaxial cable with an impedance of 75Ω for the video signal (RG59 or URM 70 for example) or a suitable Video Balun if using Cat 5 cable.

Ready made power, video and combination cables are available from Iris Innovations.

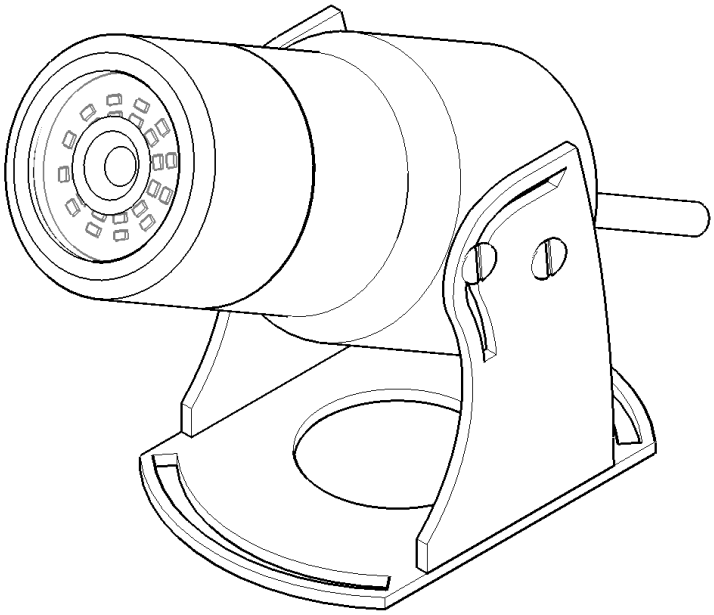


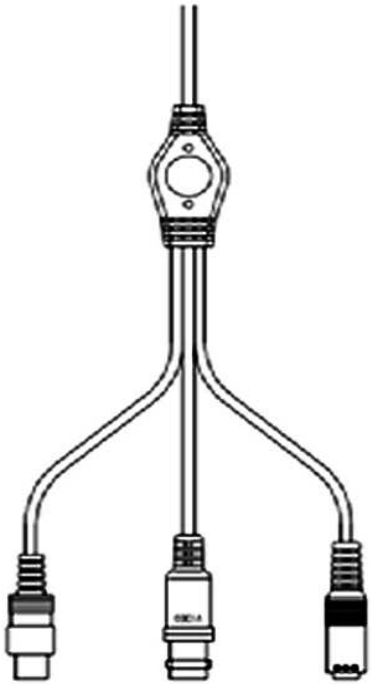
UTC Controller:

During commissioning, you can use the included UTC controller device to modify the video settings of the camera as required.

The controller is fitted with a RCA Phono style connector on the end of the fitted cable, so this simply connects to the matching RCA socket on the breakout tail cable from the camera.

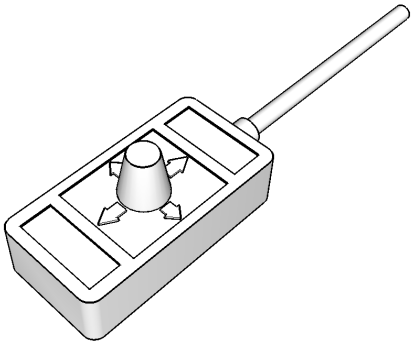
Once powered up, pressing the joystick button down brings up a comprehensive On Screen Menu system through which you can navigate using the controllers direction in order to set the various aspects of the camera, including video to Standard or Mirror image, set colour, contrast, brightness levels, specify Dynamic Noise Reduction (DNR) and Wide Dynamic Range (WDR) levels to achieve the best possible video signal.





UTC Video Power

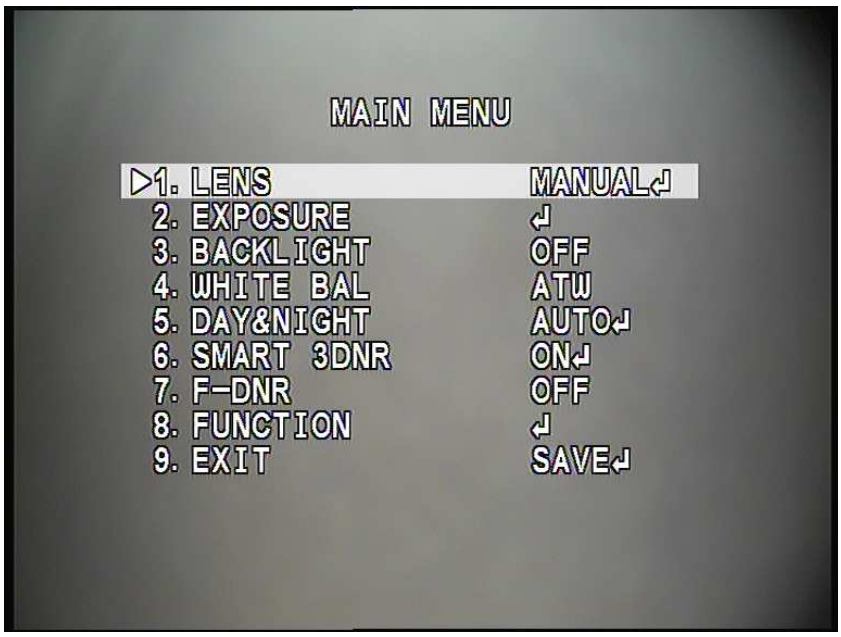
12VDC 300mA



Functions:

Main Menu:-

Immediately from power up then pressing the centre joystick button, the Main Menu screen shown below will be displayed:



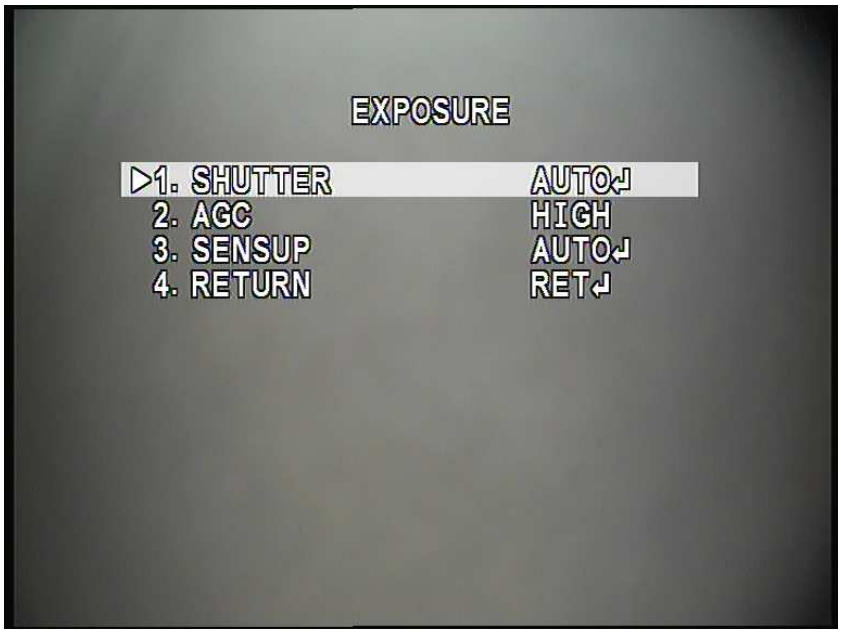
The menu can be navigated using the joystick up, down, left and right, and by clicking the joystick in its centre position to select an item. Any item with an arrow at the end of the text indicates that there is a sub-menu available by clicking the joystick, and anything without the arrow can have it's options changed by simply moving the joystick left or right.
The Return option at the bottom of each menu returns to the previous menu.

The lens feature allows setting of the method for automatic light/brightness and Iris control.

Feature	Options
Lens	Manual (default)
	DC (not applicable on this model)
	Video

The Manual and Video options allow an additional level of fine tuning.

The Exposure feature displays a sub menu and allows fine adjustment of image gain and shutter controls.



Feature	Options
SHUTTER	AUTO/FLK/MANUAL/1/50 (AUTO default)
AGC	HIGH/OFF/LOW/MIDDLE (HIGH default)
SENSUP	AUTO/OFF (AUTO default)

The Backlight feature allows adjustment of apparent image brightness when multiple varying light levels are present.

Feature	Options
Backlight	OFF (default)
	DWDR
	BLC
	HSBLC

Each of the options for BLC (Backlight compensation) and WDR (Wide Dynamic Range) have additional levels of fine tuning. Details for these are outside the scope of this document,

Backlight compensation (BLC) will improve the image when it is required to view something in the foreground that is naturally much darker than the background image by effectively artificially lightening the darker foreground.

Digital Wide Dynamic Range (DWDR) will try to provide the most balanced possible of images even in the presence of large bright areas alongside large dark areas.

The White Balance feature allows fine adjustment of colour “temperatures”.

Feature	Options
White Bal	ATW (default)
	AWB
	AWC->SET
	MANUAL

The Manual option allows separate adjustment for Red and Blue levels within the image.

The Day/Night feature allows control of the image at different light levels.

Feature	Options
Day/Night	Auto (default)
	Ext (not applicable on this model)
	B/W
	Color

The Auto option will automatically switch to a clearer black and white image after dusk, and has an adjustable delay threshold for when to switch to and from a colour or black and white image.

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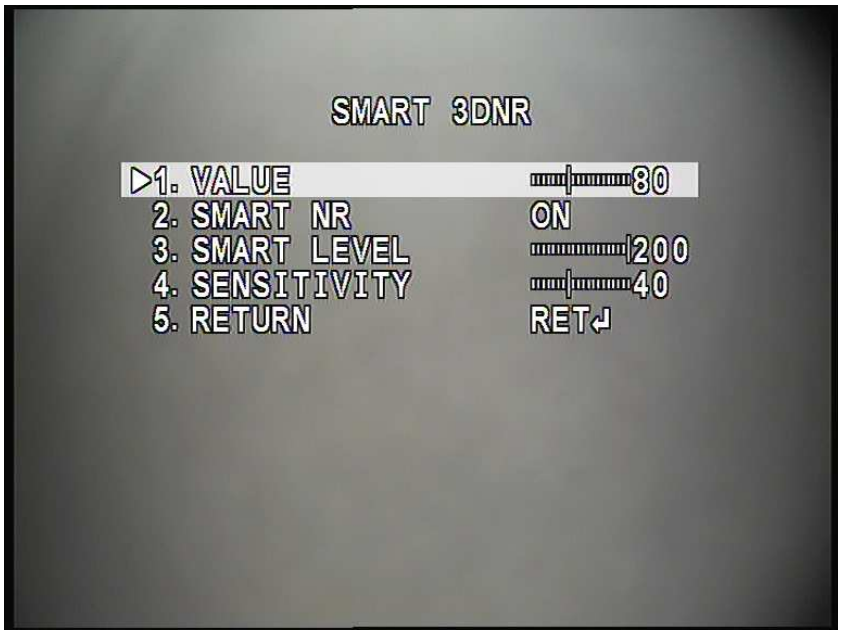
The Smart 3DNR feature provides the ability of reducing apparent ‘noise’ and artefacts on the video image by processing changes over a short period of time.

Feature	Options
Day/Night	ON (default)
	OFF



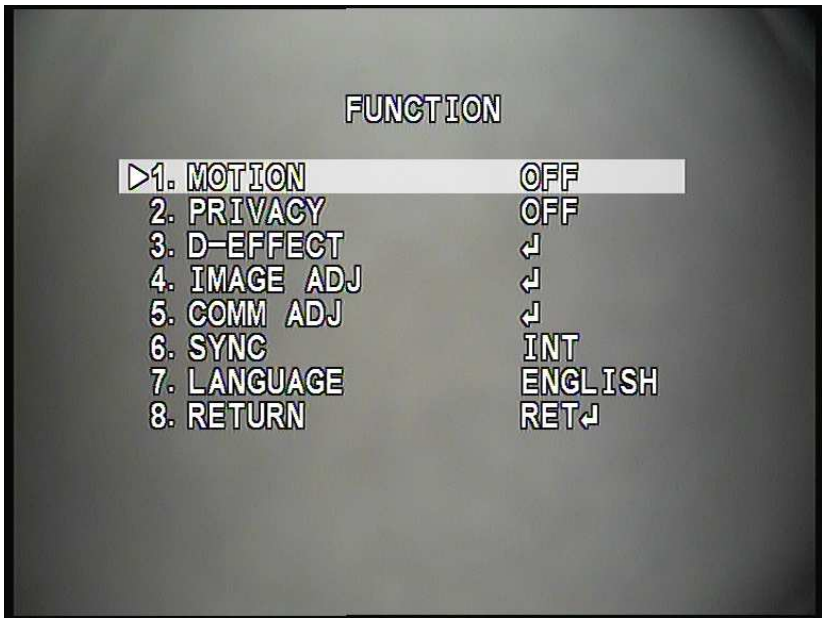
A submenu from the ‘ON’ Setting allows fine tuning of these values.

The F-DNR feature provides additional functionality and fine tuning options relating to advanced digital noise reduction.

Feature	Options
F-DNR	OFF (default)
	MANUAL
	AUTO

The Functions Sub-menu offers the facility to set some video specific features of the camera as well as language options.

Please note the Image Adjust and Comm Adjust options are not applicable to this model).



The Motion feature (via the ON submenu) allows adjustment of the areas in which to detect motion within. Details for this are out of the scope of this document.

Feature	Options
Motion	OFF (default)
	ON

The Privacy feature offers the facility to set some video specific features of the camera.

Feature	Options
Privacy	OFF (default)
	ON

This ON submenu allows adjustment of the areas which are to be marked “private” and blanked from the displayed video image. Details for this are beyond the scope of this document.

The D-Effect option offers the facility to manipulate the image layout, which are all set to off as default.

These features include:

- Digital Zoom and Smart Digital Zoom
- Digital Image Stabilisation (DIS) (reduces effects of motion within the image)
- Image Freeze
- Negative Image

- Image Mirror:

Feature	Options
Mirror	OFF (default)
	MIRROR
	V-FLIP
	ROTATE

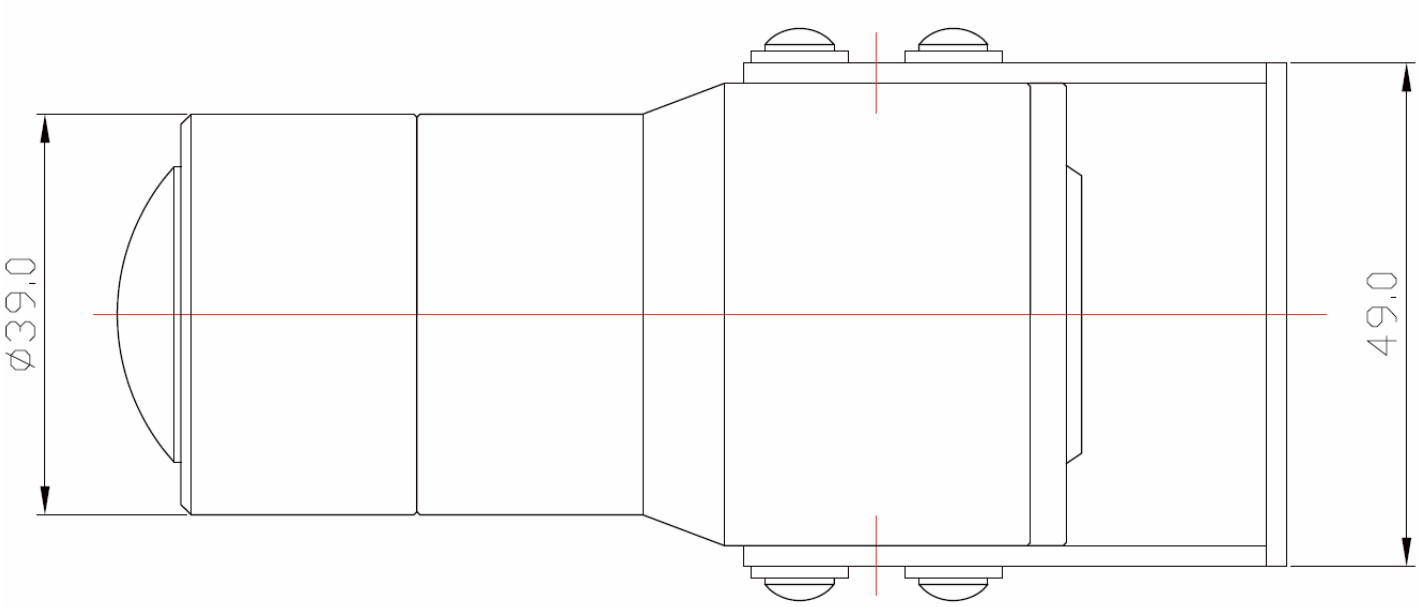
Selecting “**Ret**” on any of the menus will return back to the previous menu.

Once any of the above settings have been altered, selecting “**Save**” from the **Exit** menu item will save these settings permanently onto the cameras memory and apply them. The camera may then be powered down and the UTC controller removed.

At any time, **all** of the camera settings may be restored to their factory default settings by simply selecting “**Reset**” from the **Exit** menu item.

Specifications:

TV System	NTSC	PAL
Image Sensor	1/3” Sony Super HAD II CCD (960H)	
Number of Pixels (Horizontal)	976	976
Number of Pixels (Vertical)	494	582
Scanning Frequency (Horizontal)	15.734kHz	15.625kHz
Scanning Frequency (Vertical)	59.94Hz	50Hz
Resolution	Colour: 700 TV Lines	
Scanning System	2:1 Interlace	
Sync System	Internal	
Video Output	VBS 1.0V P~P 75Ω	
S/N Ratio	More than 52dB	
Minimum Illumination	0.0001 Lux (Sens-Up On)	
Electronic Shutter	1/60~1/100,000	1/50~1/100,000
Power Source	DC12V ±10%	
Power Consumption	Max 2.5W (300mA)	
Operating Temperature	-20˚C ~ +60˚C	
Operating Humidity	30%~90%	
Lens	Fixed 2.3mm (124˚ HFOV)	
Dimensions	ø49mm x 114mm	
Weight	0.6kg	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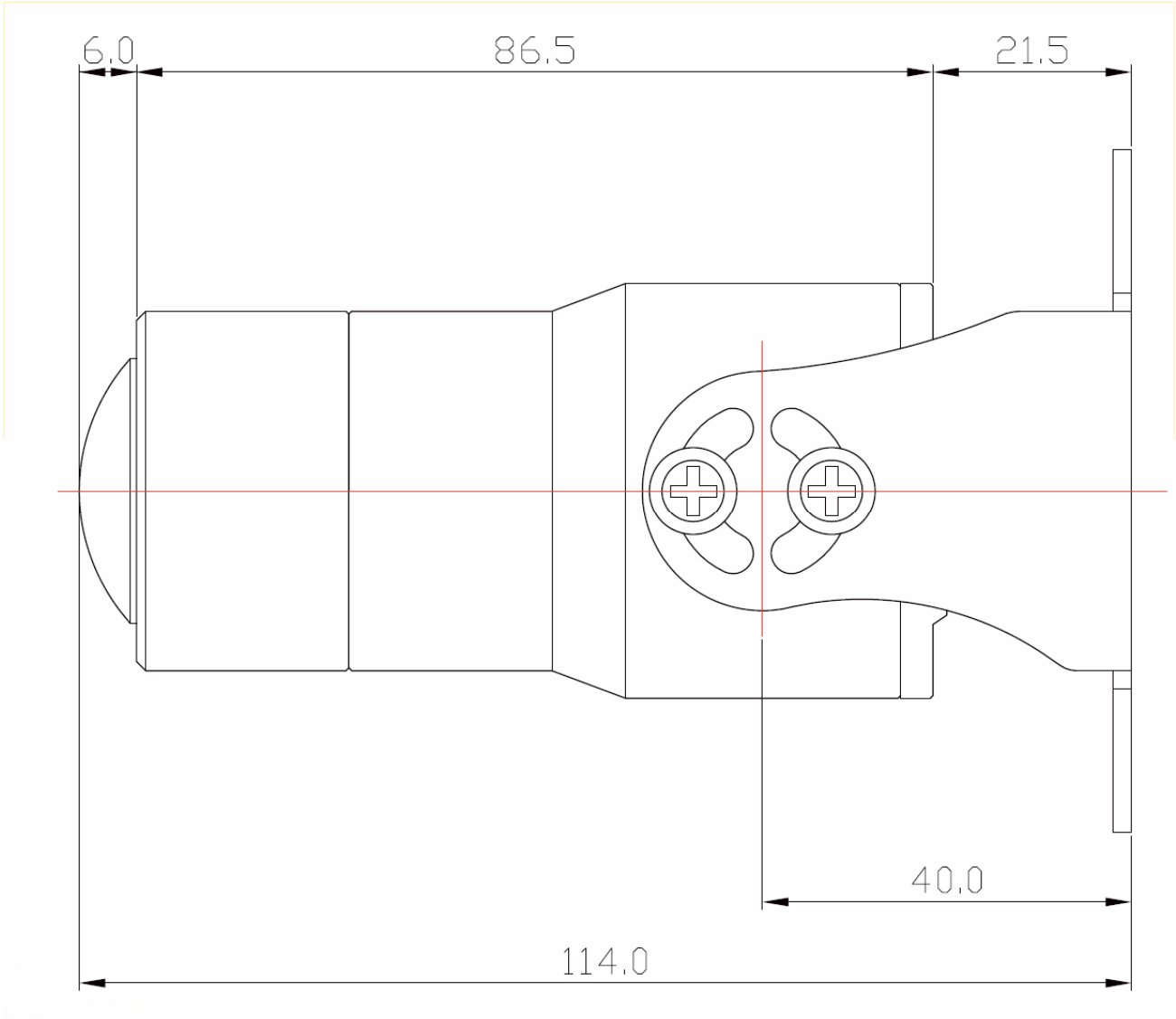
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86.5
21.5
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114.0

Notes:

Notes:

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