



# OE14-212/213

## COLOUR ZOOM, ROTATE AND TILT CAMERA (ZRAT)

10:1 Zoom Lens

205° Optical Viewing

4500msw Depth Rating

Integrated LED Lighting

The OE14-212 (PAL) and OE14-213 (NTSC) zoom, rotate and tilt colour camera has been designed primarily for use in subsea environments and is ideally suited to inspection & survey tasks, general observation & situational awareness tasks, restricted access applications, internal pipe and flooded caisson inspection.

The OE14-212/3 (ZRAT) zoom, rotate and tilt colour camera has a unique gimbal head design, providing continual rotation and coverage on the pan axis and 205° angular coverage on the tilt axis. With a 10:1 optical zoom lens the OE14-212/3 will focus from as close as 10mm from the front port to infinity, making it the perfect choice for both close up and stand-off inspections.

Packaged within a robust 4500msw depth rated marine grade titanium alloy housing, the OE14-212/3 (ZRAT) camera has been fully qualified to withstand extremes of temperature, shock, vibration and stringent EMC standards, making it suitable for use in the most extreme of marine environments.

Camera functions can be operated via a single wire (tri-state) voltage control system or by using Imenco's proprietary command protocol over an RS485 or RS232 serial link. Camera functions can also be operated using the Pelco-D protocol over an RS485 serial link.

The OE14-212/3 is supplied with a hand held infra-red remote control and GUI (Graphical User Interface) both are included free of charge and have been intuitively designed for ease of use.

Contact us for additional information or to get a quotation. Send an e-mail to [camera.sales.uk@imenco.com](mailto:camera.sales.uk@imenco.com) or find personal contact info on our website.

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## TECHNICAL SPECIFICATIONS

Performance	
Horizontal Resolution	460 TVL/PH (OE14-212) 470 TVL/PH (OE14-213)
Light Sensitivity	100mV video at 15 x10 <sup>-3</sup> lux faceplate 350mV video at 0.3 lux faceplate
Minimum Scene Illumination	0.16 lux (nominal)
Signal to Noise Ratio	>50dB (weighted)
Electrical	
Scan Standards	625 lines 50Hz PAL (OE14-212) 525 lines 60Hz NTSC (OE14-213)
Sensor Elements	752 (H) x 582 (V) (OE14-212) 768 (H) x 494 (V) (OE14-213)
Video Output	1V pk - pk composite video into 75Ω
Power Input	16 - 30 VDC, 650mA (max)
Inrush Current	1.24A at 16 VDC (10 mS)
Control	Single wire (tri-state), RS232, RS485
Lighting	10 gimbal mounted LEDs, illumination at 1m - 129 Lux
Optical	
Lens	4.2mm to 42mm, 10:1 optical zoom, F1.8 to F2.9
AOV in water	Horizontal: 36° (Wide) Vertical: 26° (Wide) Diagonal: 43.7° (Wide)
Iris Control	Automatic (manual control available through GUI)
Focus Range	10mm to infinity (at wide angle), 1200mm to infinity (at tele angle)
Angular Coverage	
Pan & Tilt	Rotate: >360° Tilt: 205° (±102.5°) Both figures include AOV at zoom wide position
Pan & Tilt, Zoom and Focus Control	GUI or optional joystick terminal
Mechanical	
Dimensions	Diameter: 148mm (At widest point), Length: 185mm (excl. connector)
Weight	In air: 5.9 Kg, In water: 4.2 Kg
Housing Material	Titanium alloy 6AL/4V ASTM B3 48
Connector	8 Pin Burton 5506-1508, side or rear entry (other connector options available)
Environmental	
Operating Depth	4500 msw (other depth rated housing options are available)
Temperature	Operating: -5 to 40°C, Storage: -20 to 60°C
Shock	30G peak acceleration, 25ms half sine duration, on all three axes
Vibration	10G, from 20 to 150HZ on all three axes
Electromagnetic Compatibility	BS EN 61000-6-3: 2007 Emission and BS EN 61000-6-1: 2007 Immunity

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