

Typhoon VMS

Video Measuring System

Features

- High quality camera and laser combination
- Millimetric accuracies
- 470 line resolution, 0.1 lux sensitivity
- Water corrected view port
- Distance and scaling measurements
- User friendly PC software
- 3000m depth rating
- PAL or NTSC options

Applications

- Damage surveys
- Environmental research
- Oceanographic studies



Tritech has developed a laser camera system designed to provide images for capture and subsequent post processing measurements.

The camera has a set of five red laser beams arranged to allow captured images to be calibrated using Tritech's own Video Measuring System (VMS) software.

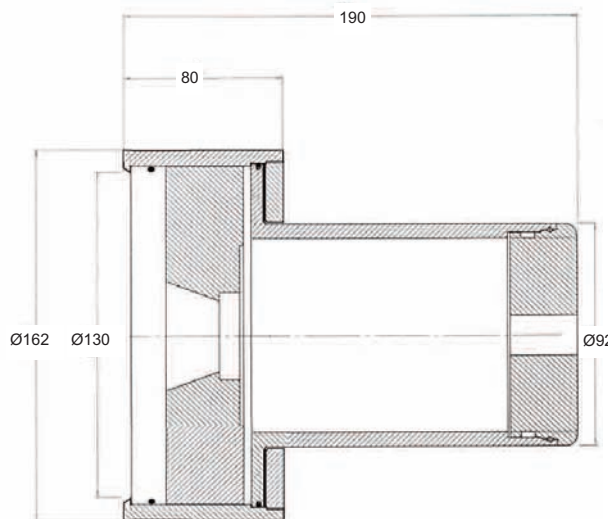
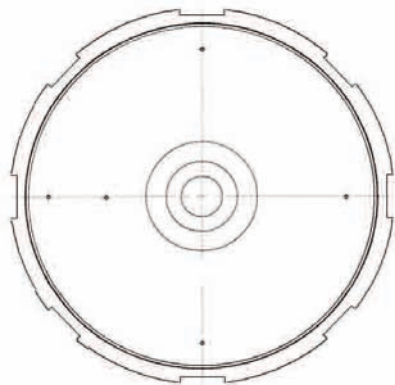
The Typhoon VMS measures planar targets in the camera's field of view. At its heart is Tritech's Typhoon high resolution colour zoom camera. The red laser diodes surrounding the camera are clearly visible on the operator's monitor. The system software is calibrated by selecting each laser image on the display after which the software allows measurement with high accuracy, within a few minutes of any object in the field of view.

The Typhoon VMS encompasses a 22:1 auto focus zoom lens protected by a 3000m rated hard anodised aluminium housing. Manual focus and zoom may be controlled using analogue signals or via the integrated RS232 interface. It has an angular view in air 47deg (wide) or 2.2deg (telephoto). It has 752 horizontal by 582 vertical sensing pixels.

'The importance of a high quality view port is commonly overlooked in underwater cameras,' said a spokesman. 'The acrylic view port is water corrected, which is the preferred type of lens for underwater applications.'

This view port design reduces the effects of refraction and also removes chromatic aberrations, resulting in a camera that provides a clear and sharp picture during close proximity viewing. This is absolutely essential for accurate subsea metrology.

The camera is available in PAL as standard but NTSC can also be provided. The camera has a minimum scene illumination sensitivity requirement of 0.1Lux, and gives a horizontal resolution output of more than 460 TV lines.



Specifications

Optics

Pick-up element Sensor
Number of pixels
Number of sensing Pixels
Scanning
Lens

1/4inch Interline Transfer CCD Image
795H x 596V
752H x 582V
2:1 Interlace PAL CCIR 50hz 625 lines
F1.6 F=4-88mm; High durability
x 22 Zoom lens (x14 usable). Auto Focus option.
47° (Wide); 2.2° (Tele)
More than 470 TV lines
0.1Lux (1/2s), 0.2Lux (1/4s)

Angular view in air
Horizontal resolution
Minimum illumination

Laser Array

Quantity
Class
Wavelength

5
3R
635nm

Electrical

Connector
Power
Video line drive
Focus & zoom control

Burton 1508
Nominal 12 -28VDC @ 10W
3 stage amplifier (max 1500m 75 Ohm low loss coax)
Analog and RS232 serial controls available

Pressure housing

Mechanical
View port
Max Diameter
Length
Weight (Air)
Weight (Water)

Hard Anodised Aluminium
Acrylic, water corrected
165mm
190mm (excluding connector)
3.9Kg
1.4Kg

Environmental

Depth rating
Operating temperature
Storage temperature
Video frame capture

3000m
-5 to +40°C
-10 to +50°C
Customer PC or Laptop and frame capture card

VMS software features

File functions
Picture calibration
Measurement

File recall and save of processed image
Manual computer aided marking, auto calibration
Linear to better than 1mm resolution
Area measurement
Plan view mode
Measurements overlaid and saved to file
Spot enhancement, edge detection, colour balance, contrast

Picture annotation
Image enhancement

"This camera is not designed for use in a helium/oxygen atmosphere"

All specifications are subject to change in line with Tritech's policy of continual product development.

Ref: EDS-LSR-003.3



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