irisys Thermal Imaging
Red Hot Intelligence

IR16DS

Dual View Thermal Imager

The IR 16DS thermal / visual camera from IRISYS brings to the engineer a maintenance tool with full capability at an affordable price.

Electrical inspection

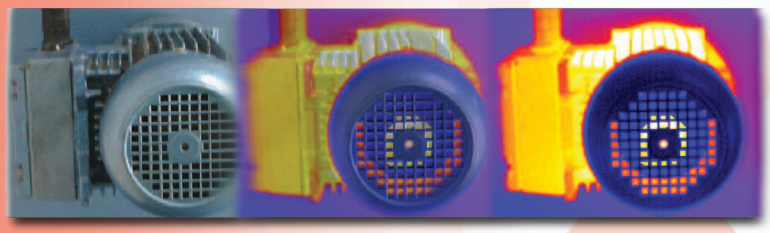
- Loose/tight terminations
- Overloaded circuits
- Uneven voltage distribution
- Failing/Fatigued components

Mechanical inspections

- Overheated bearings
- Poor lubrication
- Shaft misalignment

Energy Efficiency

- Poor or non existent insulation
- Moisture
- Air leakage
- HVAC inspections



Key Features of the Irisys IR16DS

1. **Image Fusion**
   The camera can display a thermal image only, a visual image only or a fusion of both thermal and visual images, or as a fused PIP (picture in picture).
   An LED illuminator is available for dark environments.
2. **Voice annotation**
   Record voice notes to each image saved. Playback on the camera through its speaker or through headphones and on the PC, once the image has been transferred using the supplied software.
3. **Alarms**
   The camera can detect hot & or cold spots and be set to alarm when the temperature is outside the alarm threshold. Alarms are both audible through the camera speaker or headphones and visual via the camera display.
4. **Time Sequencing**
   Allows unattended monitoring of equipment over a period of time to observe changes in equipment performance. This can be at regular timed intervals or on user defined threshold temperatures.
5. **Individual cursor emissivity settings**
   Four moveable cursors allowing easy comparison of components and items in the scene with individual emissivity settings to get a more accurate measure of actual temperatures.
6. **Battery Life**
   Long battery life (5 hours) which is also replaceable, allowing a typical shift to be worked without recharging.

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TECHNICAL SPECIFICATION

PERFORMANCE

Field of View:	20° X 15°
Focus:	Manual
Minimum Focus:	30cm
Spectral response:	8µm to 14µm
Thermal Sensitivity:	NETD ≤80mK (0.08°C) @ 23°C ambient and 30°C scene temperature.
Detector:	160×120 Pixels uncooled microbolometer.

MEASUREMENT

Temperature range:	-10°C to +250°C
Radiometry:	Four moveable temperature measurement cursors giving automatic temperature difference measurement and auto locking onto hottest and coldest points.
Emissivity Correction:	User selectable 0.1 to 1.0 in steps of 0.01 with reflected ambient temperature compensation. The four measurement cursors can have individual emissivity values assigned to them.
Accuracy:	The greater of ±2°C or ±2% of reading in °C for the ambient temperature range of -15°C to +45°C

DISPLAY

3 ½" colour LCD with LED backlight with 8 colour palettes.
Thermal images or visible images or mixed thermal and visible images including picture in picture.
Electronic zoom (IR and visible) up to x4; Image integration up to x4.

IMAGE STORAGE

Over 1000 images on supplied micro SD card.

LASER POINTER

A Built in class 2 laser highlights the central measurement area.

IMAGER POWER SUPPLY

Battery:	Rechargeable Lithium-Ion field replaceable battery with up to 5 hours continuous operation; charge through the USB port.
AC Operation:	USB AC power adaptor supplied.

MECHANICAL

Housing:	Impact resistant plastic with over moulded soft plastic.
Dimensions:	130mm X 95mm X 220mm
Weight:	0.8Kg
Mounting:	Handheld & tripod mounting 1/4" BSW.

Authorised Irisys Distributor:

SETTINGS AND CONTROLS

- Auto/user selectable span and level control.
- Readout in °C or °F
- Four moveable temperature measurement cursors with individual emissivity values and temperature difference between two points.
- User selectable emissivity setting for each measurement cursor.
- Auto hot and cold seeking or hot only or cold only.
- User selectable reflected temperature compensation.
- Area analysis – 3 options.
- X-Y thermal profiles.
- Isotherms with temperature difference.
- Voice and or text annotation.
- Image capture; time and date.
- Visual/audio alarm for above/below set temperature values.
- Palette selection.
- User selectable integration.
- Image fusion control: 0 to 100% adjustment on whole image and on picture in picture.
- Electronic zoom, x2 , x4.
- Multi-language options.
- Battery power indicator.
- Image browser showing thumbnails and voice annotation playback.
- Time or Alarm sequence recording.

INTERFACES

Data transfer direct from micro SD card or over USB.
Jack socket for headphones,
Built-in microphone for voice annotation.
Time sequence recording of images (IR only) to the SD card.

Pack Includes:

Carry case, USB charger, USB cable, CD with user manual and PC software (analysis and report writing) and Quick start guide.

OPTIONAL ACCESSORIES

Light shade, battery, desk top charger, car charger, hard carry case.

COMPUTER REQUIREMENTS (for PC software)

IBM Compatible PC with one of the following operating systems: Windows XP, VISTA and Windows 7.
See Irisys website for currently supported operating systems.

ENVIRONMENT

Temperature operating range:	-15°C to +50°C
Storage range:	-20°C to +70°C
Humidity:	10% to 90% non condensing
IP rating:	IP54
CE mark (Europe)	
Vibration:	MIL-PRF-288000F Class 2 section 4.5.5.3.1
Shock:	MIL-PRF-288000F Class 2 section 4.5.5.4.1
Drop test:	MIL-PRF-288000F Class 2 section 4.5.5.4.2; 2 metres drop test

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