

# PYROVIEW 380L protection FDS

Powerful infrared camera for fire detection systems



- ✓ Precise non-contact temperature measurement from  $-20\text{ }^{\circ}\text{C}$  and  $300\text{ }^{\circ}\text{C}$
- ✓ Uncooled microbolometer array with  $384 \times 288$  pixels
- ✓ Spectral range  $8\text{ }\mu\text{m}$  to  $14\text{ }\mu\text{m}$
- ✓ Numerous optics with motor focus
- ✓ Measurement frequency 50 images per second
- ✓ Ethernet interface (real-time, 50 Hz)
- ✓ Large dynamic range and 16 bit A/D converter
- ✓ Camera in industry protection housing „protection FDS“ (IP65)
- ✓ Integration in customized system solutions including hard- and software modifications

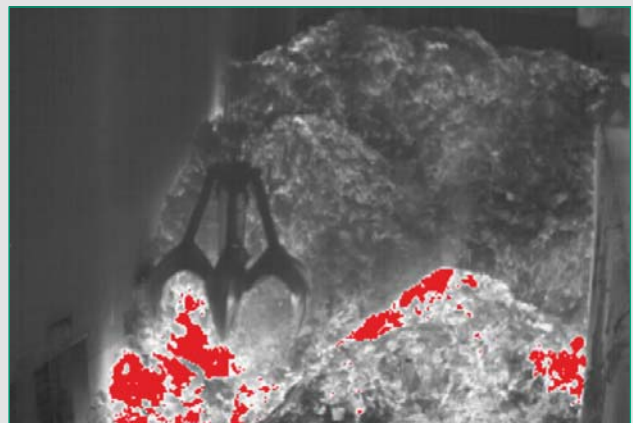
## Overview

The infrared camera PYROVIEW 380L protection FDS that was specifically developed for fire detection measures temperatures without contact exactly and reliably. Also in very fast processes or at temperature changes the data acquisition happens in real-time.

In stationary industrial continuous operation measurement data is recorded with good thermal and spatial resolution on fixed or moving measurement objects. In this way waste bunkers for example are monitored efficiently. Therefore the Ethernet interface guarantees a data acquisition without loss and with no appreciable time delay up to 50 images per second. The maximum image frequency of 50 Hz is adjusted optimally to the thermal time constant of the infrared array.

Numerous motor focus infrared lenses, including wide angle and telephoto lenses, provide a flexible adjustment to different measurement object sizes at different measurement distances.

The infrared camera is built in a stainless steel industry protection housing „protection FDS“ that has an air purge unit and a protection window by default. A combination with a pan-tilt-head is possible. An optional housing with extra sun protection function is available, too.



## Made by DIAS Infrared

DIAS Infrared headquartered in Dresden (Germany) develops and manufactures high-quality precision devices as well as system solutions for non-contact temperature measurement. Challenging projects are a welcoming motivation for us. The customers appreciate the robust make, outstanding accuracy, superb reliability and the high service standard of our equipment technology.

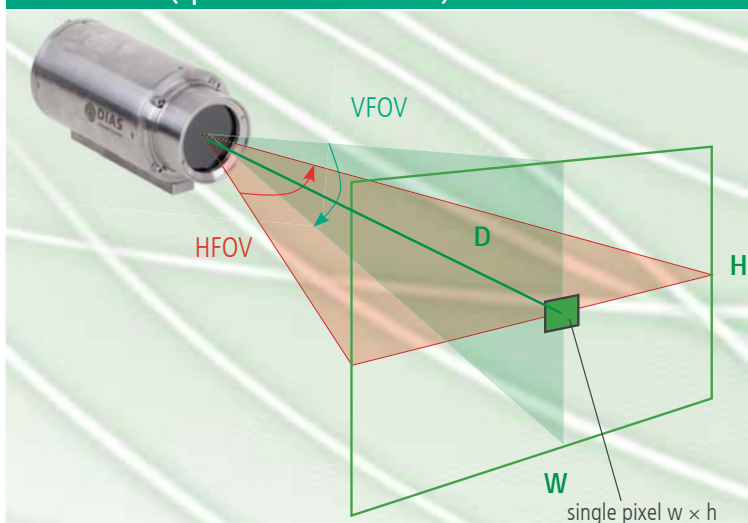
# PYROVIEW 380L protection FDS

## Powerful infrared camera for fire detection systems

Technical data	
Device type	380L protection FDS
Spectral range <sup>1</sup>	8 μm to 14 μm
Temperature range <sup>1</sup>	-20 °C to 300 °C
NETD <sup>2,3</sup>	< 0.1 K (30 °C, 50 Hz)
Aperture angle <sup>4</sup> (HFOV × VFOV)	30° × 23°, optional: 90° × 74°, 60° × 47°, 44° × 34°, 22° × 16°, 11° × 8° <span style="float: right;">(optics with motor focus)</span>
Sensor	uncooled microbolometer array (384 × 288 pixels)
Measurement uncertainty <sup>3</sup>	2 K (object temperature < 100 °C) or 2 % of measured value in °C
Measurement frequency <sup>5</sup>	internal 50 Hz, selectable: 50 Hz, 25 Hz, 12,5 Hz, ...
Response time	internal 40 ms, selectable: 2 / measurement frequency
Interface	Ethernet (real-time, 50 Hz), galvanically isolated digital inputs (trigger) and digital outputs (alarm)
Connectors	round plug connector M23 (16 pin, power supply, digital inputs and outputs), round plug connector M12A (Ethernet)
Power supply	12 V to 36 V DC, typical 10 VA
Weight	approx. 4.2 kg
Housing	industry protection housing „protection FDS“ (IP65), stainless steel, with air purge unit and protection window, diameter 110 mm, length 280 mm (without mechanical mountings and connectors), 2 bar max. air pressure
Operating temperature of the camera	-10 °C to 50 °C
Storage conditions	-20 °C to 70 °C, max. 95 % rel. humidity
Software	control and imaging software PYROSOFT for Windows®, customized modifications on request
Scope of delivery	infrared camera PYROVIEW 380L, calibration certificate, user manual, software PYROSOFT Compact

<sup>1</sup> Others on request. <sup>2</sup> Noise equivalent temperature difference. <sup>3</sup> Specifications for black body radiators and ambient temperature 25 °C. <sup>4</sup> Lens with motor focus.  
<sup>5</sup> Export version with < 9 Hz available.

### Lens variants (optics with motor focus)



HFOV ... Horizontal Field Of View (horizontal aperture angle)  
VFOV ... Vertical Field Of View (vertical aperture angle)  
IFOV ... Instantaneous Field Of View (spatial resolution)  
D ... Measurement distance

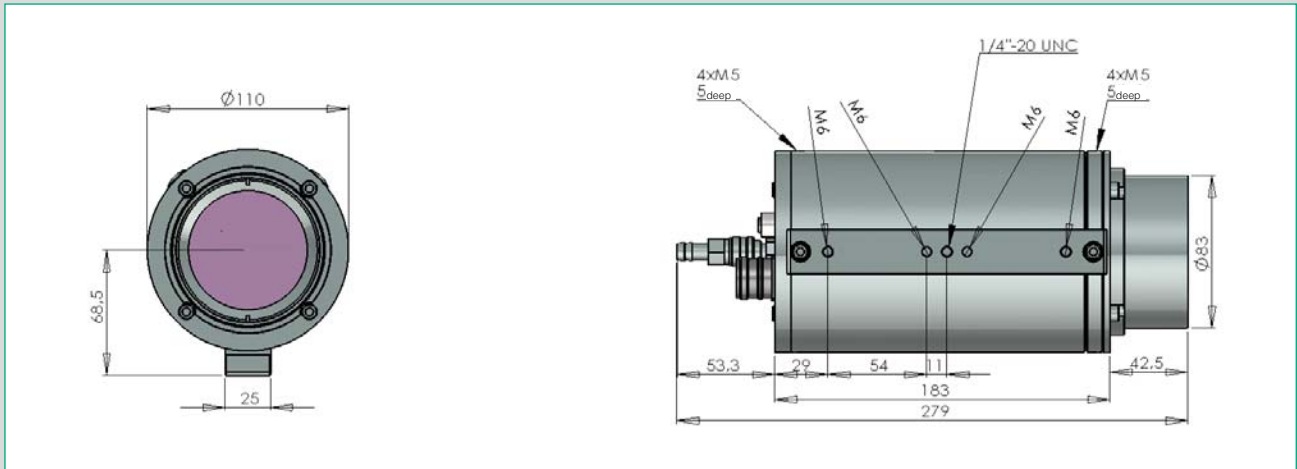
W ... Image width  
H ... Image height  
w ... Pixel width  
h ... Pixel height

HFOV × VFOV	D [m]	W [m]	H [m]	w [mm]	h [mm]
IFOV					
30° × 23°	1	0.54	0.41	1.4	1.4
	3	1.61	1.22	4.2	4.2
1.36 mrad	10	5.36	4.07	14.0	14.0
90° × 74°	1	2.00	1.51	5.2	5.2
	3	6.00	4.52	15.6	15.6
4.09 mrad	10	20.0	15.1	52	52
60° × 47°	1	1.15	0.87	3.0	3.0
	3	3.46	2.61	9.0	9.0
2.73 mrad	10	11.55	8.70	30	30
44° × 34°	1	0.81	0.61	2.1	2.1
	3	2.42	1.83	0.6	0.6
1.99 mrad	10	8.08	6.11	21	21
22° × 16°	1	0.39	0.28	1.0	1.0
	3	1.17	0.84	3.1	3.1
0.99 mrad	10	3.89	2.81	10.1	10.1
11° × 8°	1	0.19	0.14	0.5	0.5
	3	0.58	0.42	1.5	1.5
0.49 mrad	10	1.93	1.40	5.0	5.0

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## Dimensional drawing



## Housings



## Connectors



### Ethernet (LAN)

- Infrared real-time data up to maximum 50 frames per second (TCP/UDP)
- Web interface (status and image bar)
- PYROSOFT software
- GigE Vision™ compatible 
- Konfiguration for stand-alone operation

- ➔ Power supply
- ➔ Trigger 1
- ➔ Trigger 2

- Error signal/
- Alarm 1 ➔
- Synch signal/
- Alarm 2 ➔

### Inputs

### Outputs

**Customized terminal box**  
(with power supply unit, alarm relay, controller, media convertor,...)

## Accessories

Ethernet cable (8-pin) M12-RJ45/Cross/5 m  
System cable RC26, 16 pin, 5 m  
Pan-tilt head, software, cables and more accessories

## Part number

2301A32005  
2301A12005  
on request

# PYROSOFT

Powerful online and offline software for DIAS infrared cameras

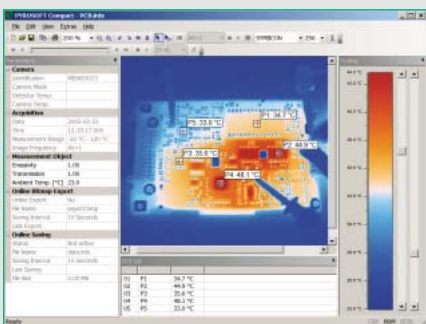
## PYROSOFT FDS for fire detection systems



The software PYROSOFT FDS is easy to handle and offers various possibilities to setup the whole functionality:

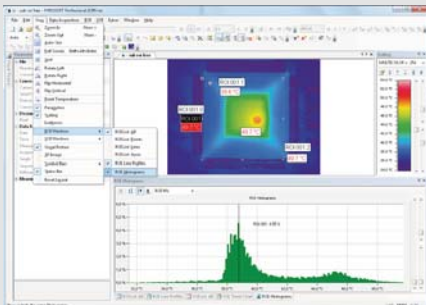
- Displaying of status information of the system
- Displaying of the maximum temperature inside the image
- Definition of ROI (regions of interests)
- Overview images and state of single sectors
- Cyclic changeover for up to 32 cameras
- Current image of the camera setting off an alarm
- Free positioning of the pan-tilt head in manual operation mode
- Map display/panorama display

## PYROSOFT Compact



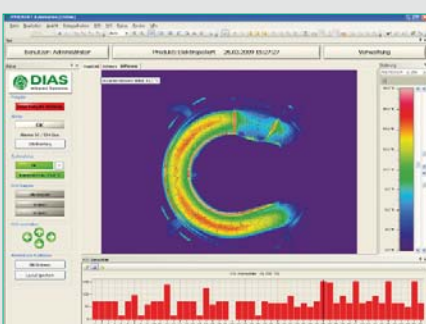
- Online data acquisition of one DIAS infrared camera
- Open and edit archived measured data and sequences
- Bitmap and video export
- Online data storage and online bitmap export
- Definition of regions of interests (ROI): points, lines and rectangle
- Generating of reports in Microsoft® Word format by integrated report function
- Context-sensitive help system (F1 key)
- Included in the scope of delivery of every PYROVIEW infrared camera

## PYROSOFT Professional



- Online data acquisition – Analyze, store and export data in real-time
- Open and edit archived measured data and sequences
- Multi document structure for several documents
- Bitmap, video and text export
- Definition of regions of interests (ROI) and values of interests (VOI) with alarm calculation, histogram and trend chart
- Numerous interface possibilities for processes (PROFIBUS, PROFINET, WAGO, TCP-Socket, Text IO)
- Reporting function, context-sensitive help system (F1 key)
- PYROSOFT Professional IO offers optionally a bidirectional data interface via PROFIBUS, PROFINET, WAGO, MODBUS, OPC, TCP Socket to process control systems, controllers and other applications

## PYROSOFT Automation



DIAS has developed the software PYROSOFT Automation for the integration of infrared cameras in automation processes.

- Comfortable product management with free definable document templates
- Product choice and release control can be made manually or automatically
- Different user levels for operator, tool setter and administrator
- Functionality of PYROSOFT Professional for administrators
- Automatic logging of system messages, measured data and alarms
- Easy to use and configurable user interface for application in fabrication
- Learning functions for automatic adjustment of alarm threshold
- Offline viewer for belated data analysis
- Process connection via I/O Systems (PROFIBUS, PROFINET, WAGO, TCP-Socket)

More software packages are available, for example: PYROSOFT MultiCam (process software for monitoring up to 8 cameras), PYROSOFT CamZone (software for programming a stand-alone camera), PYROSOFT DAQ (integration software with own online and offline DLL interface for DIAS infrared cameras).



We are certified for many years according to ISO 9001

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