PYROVIEW 380L
High-performance infrared cameras – powerful in industrial continuous operation

- Precise non-contact temperature measurement between –20 °C and 500 °C
- Uncooled microbolometer array with 384 × 288 pixels
- Spectral range 8 µm to 14 µm
- Numerous optics with motor focus
- Measurement frequency 50 frames per second
- Ethernet interface (real-time, 50 Hz)
- Large dynamic range and 16-Bit analog digital converter
- Camera in small housing “compact+” (IP54) or industry protection housing “protection” (IP65)
- Integration in customized system solutions including hard- and software adjustment

Overview

Whether in quality control, process measurement technology, research and development projects or fire detection for instance – the PYROVIEW 380L 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 flexibly with high thermal and spatial resolution on fixed or moving measurement objects. In this way production processes are monitored and controlled 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 either built in a small aluminium housing “compact+” or in a stainless steel industry protection housing “protection” that has a protection window, an air purge unit and an optional watercooling.

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.
Technical data

Device type | 380L compact+ | 380L protection
---|---|---
Spectral range | 8 µm to 14 µm |
Temperature ranges | range 1: –20 °C to 120 °C, range 2: 50 °C to 500 °C (display range: 0 °C to 500 °C) |
NETD | < 0,06 K (30 °C, 50 Hz, range 1) |
Aperture angle (HFOV × VFOV) | 30° × 23°, optional: 90° × 66°, 60° × 47°, 44° × 34°, 22° × 16°, 15° × 12°, 8° × 6°, macro 30 µm (optics with motor focus) |
Sensor | uncooled microbolometer array (384 × 288 pixels) |
Measurement uncertainty | 2 K (object temperature < 100 °C) or 2 % of measured value °C |
Measurement frequency | internal 50 Hz, selectable: 50 Hz, 25 Hz, 12,5 Hz, … |
Response time | internal 40 ms, selectable: 2 / measurement frequency |
Interfaces | Ethernet (real-time, 50 Hz), galvanically isolated digital inputs (trigger) and digital outputs (alarm) |
Connectors | round plug connector HR10A (12 pin, power supply, digital inputs and outputs), round plug connector M12A (Ethernet) | 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. 1.6 kg | approx. 4.2 kg |
Housing | aluminium compact housing IP54, 65 mm (L) × 160 mm (W) × 79 mm (H), without lens and connectors, optional with weather protection housing with pan-tilt-unit | industry protection housing IP65, stainless steel, with protection window, air purge and optional water cooling, diameter 110 mm, length 280 mm (without mechanical mounting and connectors), 6 bar max. water pressure, 2 bar max. air pressure |
Operating temperature of the camera | –10 °C to 50 °C | –10 °C to 50 °C (without water cooling), –25 °C to 150 °C (with water cooling) |
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, manual, software PYROSOFT Compact | |

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

Lens variants (optics with motor focus)

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<th>D [m]</th>
<th>W [m]</th>
<th>H [m]</th>
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* Together with optics 15° × 12°.
PYROVIEW 380L
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Dimensional drawings
Dimensions: PYROVIEW 380L in compact+ housing

Dimensions: PYROVIEW 380L in protection housing

Connectors

Ethernet (LAN)
- Infrared real-time data up to 50 images per second (TCP/UDP)
- Web interface (status and image bar)
- PYROSOFT software
- GigE Vision® compatible
- Configuration for stand-alone operation

Inputs
- Power supply
- Trigger 1
- Trigger 2

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

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

Accessories

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<th>Part number</th>
<th>Description</th>
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<td>Ethernet cable (8 pin) M12-RJ45/Cross/5 m</td>
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<td>for compact+ housing</td>
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<td>1402A16901</td>
<td>Mounting set for compact+ housing</td>
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</table>

1 More accessories available.
**PYROSOFT**

**Powerful online and offline software for DIAS infrared cameras**

**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
- Bidirectional data interface via PROFIBUS, PROFINET, WAGO, MODBUS, OPC, TCP Socket to process control systems, controllers and other applications

**PYROSOFT DAQ**
For users who want to make an integration into their software environment by themselves, we offer an own online and offline DLL interface for DIAS infrared cameras.
- API (DLL) for direct data access under Windows®
- Support for DIAS IRDX file format
- Setting of data acquisition parameters and object properties
- Query of temperature values and camera information
- Functions for displaying of images and palettes as bitmap
- Online and offline function

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), application specific software like PYROSOFT FDS for DIAS fire detection systems.