

TECHNICAL DATA

RSE300 and RSE600 Infrared Cameras



Mounted infrared cameras for research, science and engineering

- **MATLAB®** and **LabVIEW®** software compatibility allows users to integrate infrared data, images and videos to support R&D analysis
- 320 x 240 and 640 x 480 resolution options
- See the details you need with **optional smart lenses**: 2x and 4x telephoto, wide angle and macro lenses
- Optimize images, generate customizable reports and export images to the format of your choice with **SmartView R&D™** software

SmartView R&D Software included with every camera

- Analyze detailed temperature data with advanced thermography software for research and development applications.
- Real time radiometric data streaming from the camera to the PC software.
- Advanced analysis tools for measuring temperature with the ability to place multiple customizable markers and areas of interest.
- Record data trends and time plots on markers and areas of interest.
- Capture radiometric images and recordings manually or off of preset conditions.
- Reports with customizable templates to present findings and analysis.

SUPERIOR IMAGE QUALITY

SPATIAL RESOLUTION

RSE300
1.85 mRad

RSE600
0.93 mRad

RESOLUTION

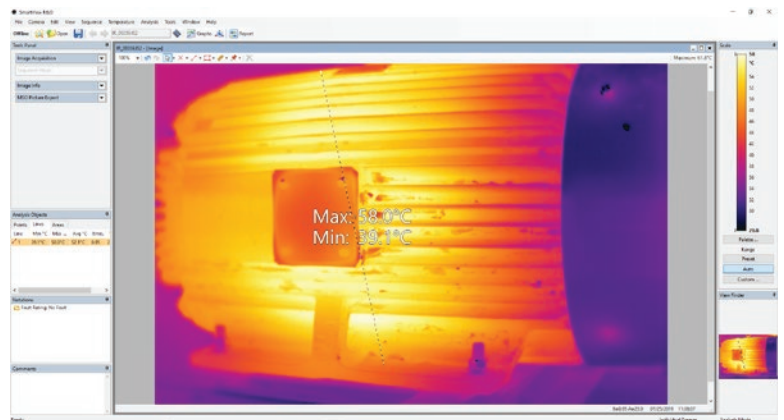
RSE300
320 x 240

RSE600
640 x 480

FIELD OF VIEW

RSE300
34 °H x 24 °V

RSE600
34 °H x 24 °V



Specifications

| Key features | RSE300 | RSE600 |
|---|--|--|
| Infrared resolution | 320 x 240 (76,800 pixels) | 640 x 480 (307,200 pixels)** |
| IFOV with standard lens (spatial resolution) | 1.85 mRad | 0.93 mRad |
| Field of view | 34° H x 24° V | 34° H x 24° V |
| Minimum focus distance | 15 cm (approx. 6 in) | |
| Camera focus options | Focus is adjusted in SmartView R&D™ software | |
| IR-Fusion* technology | Yes, in SmartView R&D™ software. Five modes of image blending (AutoBlend™ mode, Picture-in-Picture (PIP), IR/Visible alarm, Full IR, Full visible light) add the context of the visible details to your infrared image | |
| Interfaces for image/data transfer | Supported in camera data ports: GigE Vision | |
| Thermal sensitivity (NETD) | ≤ 0.030 °C at 30 °C target temp (30 mK)* | ≤ 0.040 °C at 30 °C target temp (40 mK)* |
| Level and span | Smooth auto and manual scaling, in SmartView R&D™ software | |
| Fast auto toggle between manual and auto modes | Yes, in SmartView R&D™ software | |
| Fast auto-rescale in manual mode | Yes, in SmartView R&D™ software | |
| Minimum span (in manual mode) | 0.1 °C (0.18 °F), in SmartView R&D™ software | |
| Minimum span (in auto mode) | <1.0 °C (<1.8 °F), in SmartView R&D™ software | |
| Built-in digital camera (visible light) | 5 megapixel industrial performance | |
| Frame rate | 60 Hz or 9 Hz versions | |
| Digital zoom | Variable up to 16x in SmartView R&D™ software | |
| Data storage and image capture | | |
| Image capture, review, save mechanism | Capture, save and analyze images in SmartView R&D™ software | |
| Image file formats | Non-radiometric (.png) or (.jpeg) or fully-radiometric (.gtsi, .cltsq); no analysis software required for non-radiometric (.png, .jpg and .avi) files | |
| Export file formats | png, jpeg, avi video, ASCII text, CSV, Binary, MATLAB format | |
| IR PhotoNotes™ | Yes | |
| Text annotation | Yes | |
| Video recording | Radiometric | |
| File formats video | Non-radiometric (.AVI) and fully-radiometric (.cltsq) | |
| Remote display viewing | Yes | |
| Remote control operation | Yes, through SmartView R&D™ software | |
| Temperature measurement | | |
| Temperature measurement range (not calibrated below -10 °C) | -10 °C to +1200 °C (14 °F to +2192 °F) | |
| Accuracy | ± 2 °C or ± 2 %, whichever is greater | |
| Autocapture | Yes | |
| Reflected background temperature compensation | Yes | |
| Transmission correction | Yes | |
| Color palettes | | |
| Standard palettes | 11: Rainbow, Iron, Gray, RContrast, Rain900, Rain, Fire, Yellow, GrayRed, MidGray, Y-Glow | |
| Ultra Contrast™ palettes | 3: Histogram equalization, Auto Plateau equalization, Plateau equalization | |

*Best possible

**Option to output 320x240 infrared data through GigE Vision

Specifications continued

| Key features | RSE300 | RSE600 |
|--------------------------------------|--|--------|
| Analysis tools | | |
| Custom markers | Spot, line, box, circle | |
| Color alarms (temperature alarms) | Yes, high temperature, low temperature, and isotherms (within range) | |
| Image analysis tools | Ruler, measure line, measure angle, note, pins | |
| Real-time trend | Point trend, area trend, mix trend, profile trend, boxline trend | |
| Customizable reports | Display the information you need based on your application | |
| Center-point temperature measurement | Yes | |
| Spot temperature | Yes, in SmartView R&D™ software—hot and cold spot markers | |
| User-definable spot markers | Unlimited user-definable spot markers | |
| Center box | Expandable—contractible measurement box with MIN-MAX-AVG temp display | |
| Additional specifications | | |
| Infrared spectral band | 8 μm to 14 μm (long wave) | |
| Operating temperature | -10 °C to +50 °C (14 °F to 122 °F) | |
| Storage temperature | -20 °C to +50 °C (-4 °F to 122 °F) | |
| Relative humidity | 10 % to 95 % non-condensing | |
| Electromagnetic compatibility | EN 61326-1:2013 IEC 61326-1:2013; (Industrial) | |
| US FCC | CFR 47, Part 15 Subpart B Class A | |
| Vibration | IEC 60068-2-26 (sinusoidal vibration): 3G, 11–200 Hz, 3 axis. | |
| Shock | IEC 60068-2-27 (mechanical shock): 50G, 6 ms, 3 axis. | |
| Size (HxWxL) | 8.3 cm x 8.3 cm x 16.5 cm (3.3 in x 3.3 in x 6.5 in) | |
| Weight | 1 kg (2.2 lbs) | |
| Enclosure rating | IEC 60529: IP67 (protected against dust, limited ingress; protection against water spray from all directions) | |
| Warranty | Two years (standard), extended warranties are available | |
| Recommended calibration cycle | Two years (assumes normal operation and normal aging) | |
| Supported languages | English, French, German, Italian, Russian, Simplified Chinese, Spanish | |

Ordering information

- FLK-RSE300/C 60Hz Thermal Imager; 320 x 240
- FLK-RSE300/C 9Hz Thermal Imager; 320 x 240
- FLK-RSE300/C 9Hz/CH Thermal Imager; 320 x 240; 9 Hz, China
- FLK-RSE300/C 60Hz Thermal Imager; 640 x 480
- FLK-RSE300/C 9Hz Thermal Imager; 640 x 480
- FLK-RSE300/C 9Hz/CH Thermal Imager; 640 x 480; 9 Hz, China

What's included

Infrared camera with standard infrared lens; AC power supply; Ethernet cable; SmartView software; lens cover; hard case

Optional accessories

- FLK 0.75X WIDE LENS Infrared Wide Angle Lens
- FLK 2X LENS Infrared Telephoto Lens (2X magnification)
- FLK 4X LENS Infrared Telephoto Lens (4X magnification)
- FLK MACRO LENS Infrared Macro Lens
- FLK-RSE-MB Mounting bracket

Visit your local Fluke website or contact your local Fluke representative for more information.

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